#### **MEMORANDUM**

#### INFORMAL DISCUSSION #2 MEETING OF 11-12-20

To: Conservation Commission/Inland Wetlands and Watercourses Agency

From: Tom Mocko, Environmental Planner

Re: Proposed site improvements (building modifications, additional paved areas, stormwater management system, site lighting, sidewalks and landscaped areas) and usage as a Motor Freight Transportation Terminal or Garage at 107 Eastern Boulevard – Planned Employment Zone and Groundwater Protection (overlay) Zone 1 – BL Companies, Architecture, Engineering, Environmental, Land Surveying consultants – WE 35 National Drive LLC (c/o Winstanley Enterprises, LLC, 150 Baker Avenue Extension, Concord, Massachusetts 01742), landowner/applicant

**LOCATION:** Please refer to the location map appearing on the cover sheet on the submitted site plans.

PROPOSAL: To utilize a 12.5 acre developed property (best known as the former Nabisco warehouse and distribution facility) as a "delivery station" for Amazon Logistics in which such stations "power the last mile of their customer order process and help speed up deliveries for customers." Modifications to the existing building and constructing expansive pavement areas, along with their related infrastructure, are included in the proposal; some 340 additional parking spaces are proposed for the fleet of Amazon delivery vans and the employees that drive them and otherwise work at the facility. A small wetland area exists in the northwest corner of the site in which a portion of the new pavement comes within some 20 feet of said wetland. The site is served by public MDC water and Town sanitary sewers.

REVIEW:

This project was submitted to the Town on July 15, 2020, had its administrative review on August 19, 2020 and subsequently, the project's proponents submitted applications for a wetlands permit and a groundwater protection permit on October 12, 2020. By the way, the wetlands permit application is incomplete and includes errors. The Commission's November 12, 2020 meeting will be used as an informal review of the project.

An abundant amount of information, involving a plethora of paper, was submitted for the wetlands permit application; why the 500-foot abutters list and the groundwater protection permit application materials were submitted as part of the wetlands permit application is unknown by

me. All items submitted in numbers of ten copies is being distributed to all Commissioners. Excerpts from the submitted Stormwater Management Report are attached to this memorandum, along with the Engineering Department's review comments to date.

Also, following this memorandum is a GIS map of the area which indicates current undeveloped lands, existing conservation easement areas, and the proximity to the Salmon Brook corridor nearby to the south. The northern portion of the subject site is wooded and a utility transmission line runs east-to-west to the north. The northern portion of the site and the abutting transmission corridor serve as a meaningful wildlife corridor and offers other habitat value.

#### My comments and direction at this time are:

- 1. The locations selected for test pits for underground drainage structures were limited to the lower elevation, southern portion of the site; such exploration indicated the presence of finer-grained soil textures and seasonal high groundwater. Let's consider test pits further north and at higher ground elevations to evaluate if any more favorable subsurface conditions exist where some infiltration potential may exist.
- 2. Consider encumbering the remaining woodlands along the northern portion of the site with a conservation easement.
- 3. Provide plantings that will provide shade within and around the pavement areas in order to provide some mitigation of the otherwise heated runoff.
- 4. Other specific comments on soil erosion and sediment control will come later.

TM:gfm

excerpts

# **Stormwater Management Report**

For the Proposed:

### **Development**

Located at:

# 107 Eastern Boulevard Glastonbury, Connecticut

Prepared for Submission to:

Town of Glastonbury, Connecticut

August 24, 2020 Revised: September 30, 2020

Prepared for:

WE Acquisitions, LLC 107 Eastern Boulevard Glastonbury, Connecticut

Prepared by:



BL Companies 100 Constitution Plaza, 10<sup>th</sup> Floor

Hartford, Connecticut 06103 Phone: (860) 249-2200 Fax: (860) 249-2400

BL Project Number: 2000669



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#### Appendix A: Location Maps

Figure 1: USGS Location Map

Figure 2: Aerial Location Map

Figure 3: NRCS Soil Survey Map with Hydrologic Soil Group Data

Figure 4: FEMA Federal Insurance Rate Map

Figure 5: NOAA Atlas 14 Storm Data

Appendix B: Pre-development Hydrology (2-, 10-, 25-, and 100-year storms)

Appendix C: Post-development Hydrology (2-, 10-, 25-, and 100-year storms)

Appendix D: Water Quality Calculations

CTDEEP Water Quality Volume Calculations
CTDEEP Water Quality Flow Calculations
Groundwater Recharge Calculations
Nitrogen Loading Calculations
Treatment Train Efficiency Worksheet

#### Appendix E: Drainage Maps

ED-1 – Existing Drainage Mapping

PD-1 – Proposed Drainage Mapping

GD-1 – Grading and Drainage Plan

Appendix F: Stormwater System Operation and Maintenance Manual



#### **Executive Summary**

This report has been prepared in support of a Permit Application by WE Acquisitions, LLC to the Town of Glastonbury for the proposed development at 107 Eastern Boulevard. The project parcel is approximately 12.5 acres in size and is currently a developed lot with a warehouse and associated paved parking areas and driveways, landscaped areas, and site utilities. The remaining site area is wooded and lawn area. The property is located at the northeastern corner of the intersection of National Drive and Eastern Boulevard. It is roughly bordered by the Planned Employment Zone (PE) on all sides. There is a small portion of wetland located on site towards the northwest of the site.

In general, the existing topography generally slopes from the north to the south of the site and eventually offsite to Salmon Brook. Elevations on site range from 70' to 110'. There are currently eatch basins and drainage piping on site for the existing development but no stormwater management system located within the project parcel.

Proposed site improvements will include minor building modifications, additional paved parking areas and driveways, landscaped areas, pedestrian sidewalks, site lighting, and a stormwater management system.

The proposed stormwater management system is designed to be in compliance with the 2002 State of Connecticut <u>Guidelines for Soil Erosion and Sediment Control</u>, and the 2004 State of Connecticut Stormwater Quality Manual.

A HydroCAD model, using TR-55 methodology, was developed to evaluate the existing and proposed drainage conditions of the property. The results of the analysis demonstrate that there will not be an increase in peak stormwater runoff rates for the 2-, 10-, 25-, and 100-year storm events.

The proposed stormwater management system has been designed to attenuate the increased flows generated by the proposed development. The project site is located in the Town of Glastonbury Groundwater Protection Zone 1 (GW-1). All proposed development will be in conformance with the Town of Glastonbury regulations including nitrogen loading and watertight sanitary sewer construction. Due to high groundwater, infiltration has been omitted from the stormwater management design. Stormwater quality is being addressed by a formalized street sweeping program, deep sumps and hooded outlet catch basins, and a sediment isolator row. These features will provide the minimum required 80% TSS removal as required in the CT Stormwater Quality Manual.



#### **Existing Site Conditions and Hydrologic Conditions**

#### General Site Information

The site soils identified by the United States Department of Agriculture (USDA) Natural Resources Conservation Services (NRCS) are Ellington silt loam, 0 to 5 percent slopes, Hartford sandy loam, 3 to 8 percent slopes, and udorthents-urban land complex. Per the USDA, the NRCS Hydrologic Soil Group ratings for soils within the project area are B, A, and B respectively. A copy of the USDA NRCS Hydrologic Soil Group Map is included in Appendix A for reference.

Per the FEMA Flood Insurance Rate Map Number 09003C0527F and 09003C0529F for the Town of Glastonbury, Connecticut, maps revised date: September 26, 2008, the site resides in FEMA Flood Hazard Area X (unshaded). Zone X (unshaded) is defined as "areas determined to be outside the 0.2% annual chance floodplain". A copy of the FEMA Flood insurance rate Map is included in Appendix A for reference.

#### Existing Hydrologic Conditions

The existing site drainage area that was analyzed totals 20.32 acres and is approximately 43% impervious. This area includes the portions of the properties to the north and west that sheet flow to the design points within the town roads. There is currently no existing stormwater management system onsite. Stormwater from the subject property enters the onsite drainage system by means of catch basins and flows untreated into the town drainage system or sheet flows untreated town drainage system or offsite. Below is a description of that area.

The following is a brief analysis of the existing design points as shown on the enclosed Existing Drainage Mapping (ED-1) Map, in Appendix E.

Existing Drainage Area 1 (EDA-1): This drainage area consists of the southeastern portion of the project parcel and portions of Eastern Boulevard that drain into the closed Town drainage system which flows towards the southeast of the site within eastern boulevard (DP-1). It is 1.67 acres and is approximately 61% impervious. EDA-1 consists of impervious parking, road, and building area, and lawn areas.

Existing Drainage Area 2 (EDA-2): This drainage area consists of the majority of the project parcel which drains into the closed Town drainage system which crosses National Drive to the south of the project parcel (DP-2). It is 9.45 acres and is approximately 40% impervious. EDA-2 consists of impervious parking, road, and building area, wooded, and lawn areas.



Existing Drainage Area 3 (EDA-3): This drainage area consists of the western portion of the project parcel and a portion of the adjacent parcel which drains into the closed Town drainage system which flows west along National Drive to the west of the project parcel (DP-3). It is 6.15 acres and is approximately 39% impervious. EDA-3 consists of impervious parking, road, and building area, wooded, and lawn areas.

Existing Drainage Area 4 (EDA-4): This drainage area consists of the northwestern portion of the project parcel which sheet flows offsite to the north (DP-4). It is 0.48 acres and is approximately 0% impervious. EDA-4 consists of wooded areas.

Table 1 – Pre-Development (Existing Conditions) Drainage Characteristics.

| Drainage Area                            | Area<br>(square<br>feet) | Composite<br>Curve<br>Number | Impervious<br>Cover (%) | Time of Concentration (minutes) |
|--|--------------------------|------------------------------|-------------------------|---------------------------------|
| EDA-1 (Area to CBs Southeast of site)    | 184,485                  | 86                           | 61                      | 9.7                             |
| EDA-2 (Area to CBs Southwest of site)    | 411,817                  | 74                           | 40                      | 22.6                            |
| EDA-3 (Area to CBs West of site)         | 267,870                  | 76                           | 39                      | 21.8                            |
| EDA-4 (Area sheet flowing north offsite) | 21,119                   | 36                           | 0                       | 15.0                            |

Table 2 - Pre-Development Conditions Peak Flows

| 1 1 1 1 1 1                            | Peak Flow (cfs) |                     |       |        |  |
|--|-----------------|---------------------|-------|--------|--|
| Analysis Point                         | 2-yr            | 2-yr 10-yr 25-yr 10 |       | 100-yr |  |
| Design Point 1 (CBs Southeast of site) | 8.72            | 16.26               | 21.00 | 28.25  |  |
| Design Point 2 (CBs Southwest of site) | 6.42            | 15.71               | 22.06 | 32.25  |  |
| Design Point 3 (CBs West of site)      | 4.83            | 11.21               | 15.50 | 22.32  |  |
| Design Point 4 (Offsite to the North)  | 0.00            | 0.00                | 0.02  | 0.13   |  |



## **Developed Site Conditions and Hydrologic Conditions**

In the proposed condition, a site stormwater management system will be installed to mitigate any increase in peak flow from the site. Two subsurface stormwater detention systems will be installed on-site. The site stormwater system will connect to the existing town drainage system by means of pipe connections to existing catch basins. The stormwater system will also provide stormwater detention and quality improvements through the implementation of a formalized street sweeping program for the impervious surfaces and the installation of deep sump and hooded outlet catch basins, and a subsurface sediment isolator row. These measures will treat the stormwater quality flow through structural means to provide water quality treatment in conformance with the State of Connecticut Water Quality Manual.



The Town of Glastonbury Groundwater Protection Zone regulations state that nitrogen loading to groundwater shall be less than 10 mg/L. Nitrogen Loading Calculations were performed, and included in Appendix D, adapted from the Cape Cod Commission Water Resources Office Nitrogen Loading manual from the Technical Bulletin 91-001 (FINAL) dated April 1992, using Town of Glastonbury constants. The calculations for nitrogen loading from the site include concentrations from impervious surface runoff and lawn area fertilizer applications, which result in a total nitrogen load to groundwater of 1.625 mg/L. The Town of Glastonbury Groundwater Protection Zone regulations also state that the proposed development shall not decrease the site's groundwater infiltration potential by more than 50%. As demonstrated by the Groundwater Recharge Calculations in Appendix D, the proposed site will provide water quality volumes for potential infiltration to groundwater that exceed the minimum required volume to meet the existing condition groundwater infiltration potential. Additionally, the pre development and post development outflow volume comparison Table 8 below shows a decrease to total outflow volume from the site in all storm events to the town drainage system, demonstrating that a greater volume of stormwater is infiltrated into groundwater in the proposed condition.

The proposed site drainage area analyzed totals 20.32 acres and is approximately 63% impervious. The intent of the proposed site drainage is to match existing drainage patterns to the maximum extent practical. For the hydrologic analysis, the developed site retained the same Design Points as the existing model. The following drainage areas were developed to model the proposed site improvements.

Proposed Drainage Area 11 (PDA-11): This drainage area consists of the southeastern portion of the project parcel and portions of Eastern Boulevard that drain into the closed Town drainage system which flows towards the southeast of the site within eastern boulevard (DP-1). It is 3.37 acres and is approximately 57% impervious. PDA-11 consists of impervious parking, road, and building area, and lawn areas. This area's runoff is clean or unchanged.

3

Proposed Drainage Area 12 (PDA-12): This drainage area consists of the eastern portion of the project parcel that drains into Subsurface Detention System #1 with an isolator row and eventually into the closed Town drainage system within eastern boulevard (DP-1). It is 1.02 acres and is approximately 80% impervious. The subsurface stormwater detention system has been designed to mitigate the increase in peak flows for all storm events. PDA-12 consists of impervious parking area and lawn area.

Proposed Drainage Area 21 (PDA-21): This drainage area consists of the southern portion of the project parcel which sheet flows or flows to catch basins which drain into the closed Town drainage system which crosses National Drive to the south of the project parcel (DP-2). It is 1.55 acres and



is approximately 67% impervious. PDA-21 consists of impervious parking, road, and building area, and lawn areas. This area's runoff is clean or unchanged.

Proposed Drainage Area 22 (PDA-22): This drainage area consists of the majority of the project parcel that drains into Subsurface Detention System #2 with an isolator row and eventually into the closed Town drainage system which crosses National Drive to the south of the project parcel (DP-2). It is 8.64 acres and is approximately 76% impervious. The subsurface stormwater detention system has been designed to mitigate the increase in peak flows for all storm events. PDA-22 consists of impervious parking and building area, wooded, and lawn area.

Proposed Drainage Area 31 (PDA-31): This drainage area consists of the western portion of the project parcel and a portion of the adjacent parcel which drains into the closed Town drainage system which flows west along National Drive to the west of the project parcel (DP-3). It is 5.26 acres and is approximately 47% impervious. PDA-31 consists of impervious parking, road, and building area, wooded, and lawn areas. This area's runoff is clean or unchanged.

Proposed Drainage Area 41 (PDA-41): This drainage area consists of the northwestern portion of the project parcel which sheet flows offsite to the north (DP-4). It is 0.48 acres and is approximately 0% impervious. PDA-41 consists of wooded areas. This area's runoff is clean or unchanged.

Table 3 – Post-Development Drainage Characteristics.

| Drainage Area                             | Area<br>(square<br>feet) | Composite<br>Curve<br>Number | Impervious<br>Cover (%) | Time of Concentration (minutes) |
|---|--------------------------|------------------------------|-------------------------|---------------------------------|
| PDA-11 (Area to CBs Southeast of site)    | 146,902                  | 85                           | 57                      | 9.7                             |
| PDA-12 (Area to SSDS #1)                  | 44,319                   | 92                           | 80                      | 6.8                             |
| PDA-21 (Area to CBs Southwest of site)    | 67,486                   | 88                           | 67                      | 18.1                            |
| PDA-22 (Area to SSDS #1)                  | 376,167                  | 86                           | 76                      | 21.8                            |
| PDA-31 (Area to CBs West of site)         | 229,298                  | 78                           | 47                      | 21.8                            |
| PDA-41 (Area sheet flowing north offsite) | 21,119                   | 36                           | 0                       | 15.0                            |



Table 4 – Post-Development Conditions Peak Flows

| Analysis Daint                         | Peak Flow (cfs) |       |       |        |  |
|--|-----------------|-------|-------|--------|--|
| Analysis Point                         | 2-yr            | 10-yr | 25-yr | 100-yr |  |
| Design Point 1 (CBs Southeast of site) | 8.46            | 15.23 | 19.62 | 28.20  |  |
| Design Point 2 (CBs Southwest of site) | 5.95            | 10.72 | 13.21 | 28.81  |  |
| Design Point 3 (CBs West of site)      | 4.68            | 10.33 | 14.07 | 19.95  |  |
| Design Point 4 (Offsite to the North)  | 0.00            | 0.00  | 0.02  | 0.13   |  |

| Table 5 – | Existing vs Propos | sed Peak Rates of Runo | ff∯ |
|-----------|--------------------|------------------------|-----|

|                       | Peak Flow Rate in Cubic Feet per Second (cfs) |         |         |         |  |
|-----------------------|---|---------|---------|---------|--|
| Drainage Area         | 2-yr  | 10-yr   | 25-yr   | 100-yr  |  |
| Design Point 1        | -   | ~       | 3       |         |  |
| Existing              | 8.72  | 16.26   | 21.00   | 28.25   |  |
| Proposed              | 8.46  | 15.23   | 19.62   | 28.20   |  |
| Percent Change        | -2.98%  | -6.33%  | -6.57%  | -0.18%  |  |
| <b>Design Point 2</b> | 127   |         |         |         |  |
| Existing              | 6.42  | 15.71   | 22.06   | 32.25   |  |
| Proposed              | 5.95  | 10.72   | 13.21   | 28.81   |  |
| Percent Change        | -7.32%  | -31.76% | -40.12% | -10.67% |  |
| Design Point 3        |   |         | 8       |         |  |
| Existing              | 4.83  | 11.21   | 15.50   | 22.32   |  |
| Proposed              | 4.68  | 10.33   | 14.07   | 19.95   |  |
| Percent Change        | -3.11%  | -7.85%  | -9.23%  | -10.62% |  |
| <b>Design Point 4</b> |   |         |         |         |  |
| Existing              | 0.00  | 0.00    | 0.02    | 0.13    |  |
| Proposed              | 0.00  | 0.00    | 0.02    | 0.13    |  |
| Percent Change        | 0.00%   | 0.00%   | 0.00%   | 0.00%   |  |

#### **Stormwater Management**

Hydrologic Modeling of the Entire Site

The hydrologic analysis to determine peak stormwater discharge rates was performed using the HydroCAD stormwater modeling system computer program, version 10.00 developed by HydroCAD Software Solutions, LLC. Hydrographs for each watershed were developed using the SCS Synthetic Unit Hydrograph Method. Rainfall depths and distribution per the NOAA Atlas 14 for Glastonbury, CT were used for the calculation of peak flow rates and are listed in Table 6. The



drainage areas, or subcatchments as labeled by the program, are depicted by hexagons on the attached drainage diagrams. Pre-development HydroCAD output can be found in Appendix B and Post-development HydroCAD output can be found in Appendix C.

Table 6 – Rainfall Depths per NOAA Atlas 14
Appendix B - 24 hour Rainfall Data

| <b>Return Period</b> | 24-hour Rainfall Depth |
|----------------------|------------------------|
| 2-year               | 3.09"                  |
| 10-year              | 4.87"                  |
| 25-year              | 5.98"                  |
| 100-year             | 7.69"                  |



## Summary

The post-development peak discharge rates for the total developed site have been maintained or decreased for all storm events. All post development stormwater will be discharged offsite to match existing drainage patterns. The proposed underground stormwater detention systems have been designed to attenuate peak flows for the 2-, 10-, 25-, and 100-year storm events. Due to high groundwater on site, infiltration has been omitted from the stormwater management design. Stormwater quality is being addressed by a formalized street sweeping program, deep sump and hooded outlet catch basins, and a sediment isolator row. These features will provide the minimum required 80% TSS removal as required in the CT Stormwater Manual. The proposed stormwater management system will meet the stormwater quality requirements of the State of Connecticut.

To:

Matthew J. Bruton, P.E., BL Companies

From:

Greg Mahoney, Senior Engineering Technician

Stephen M. Braun P.E., Assistant Town Engineer

Date:

November 5, 2020

**Subject:** 

**Conservation Commission Review Comments** 

Re:

**Amazon Logistics** 

107 Eastern Boulevard

Glastonbury, Connecticut 06033

Plan Date:

09/30/2020

Revised To:

Designer:

**BL** Companies

100 Constitution Plaza, 10th Floor Hartford, Connecticut 06103

1-860-249-2400

1. Final plans and stormwater report are to be signed and stamped by the Professional Engineer, Land Surveyor, or Architect, as appropriate to the plan sheet.

2. The existing property is greater than 40% impervious and therefore qualifies as a redevelopment parcel under the Town's MS4 Permit. As such, the storm drainage system can be designed to retain onsite 50% of the Water Quality Volume for the entire site.

3. Provide test pit data in the vicinity of the underground detention systems to verify groundwater elevation. Provide data on applicable plans and label locations. A standpipe should be installed and monitored throughout the approval process to verify groundwater done

4. Indicate WQV provided by the various underground detention systems in the stormwater report below the low flow orifice. Review and revise both OCS orifice elevations to retain the required WQV below the initial orifice for the time duration required.

5. Provide additional information on the location of the existing roof drainage and how it is tied into the proposed storm drainage system. Are the existing drywells westerly of the building utilized for roof drainage and are they going to be abandoned? All roof drainage should be routed through UG detention system.

6. Provide a label for the Stormtech system on sheet GU-1 labeling the WQV required and WQV provided for each underground detention system

7. Provide a cross section detail for both UG detention systems labeling all critical elevations ie bottom of stone, bottom of system, etc.

8. Provide a detail for each OCS clearly labeling all pipes, orifices, and inverts corresponding to the storm drainage report.

9. Provide a detailed Maintenance Schedule for all proposed stormwater features ie. Catch Basins, Underground Detention System on sheet GU-1.

OCS = outlet control structure

- 10. Provide a table depicting Pre and Post Directly/Indirectly Connected Impervious Cover onsite for MS4 Tracking purposes on sheet GU-1.
- 11. Provide Community Development approval block on all sheets to be filed.
- 12. Provide our standard inspection note to all applicable plans. See below. **NOTE:**

THE CONTRACTOR SHALL NOTIFY THE TOWN OF GLASTONBURY ENGINEERING DIVISION 24 HOURS PRIOR TO BEGINNING ANY STORM DRAINAGE, SANITARY SEWER INSTALLATION, ROADWAY PREPARATION, PAVING, SIDEWALK, CURBING, OR ANY EXCAVATION IN THE TOWN RIGHT-OF-WAY TO SCHEDULE INSPECTIONS. THE DIVISION CAN BE REACHED BETWEEN 8:00 AM-4:30 PM MONDAY THRU FRIDAY AT (860) 652-7735.

- 13. Provide an Approval Letter sheet in the plan set.
- 14. Provide coordinate labels for all lot corners.
- 15. Depict and label building setback lines and building offset dimensions on all applicable plans. Label FF elevations of existing building.
- √ 16. Label TW and BW at the ends and middle of the proposed retaining wall.
- / 17. Provide soil scientist signature block and label 150° upland review buffer limits on all applicable plans.
- √18. Provide and label silt sacs to be installed in existing catch basin on National Drive and Eastern Boulevard.
- √19. Label proposed roof canopy on all applicable plans and depict and label roof drainage connections.
- $\sqrt{20}$ . Verify if tree root protection trench is required along the existing trees in the vicinity of the proposed sidewalk within the right of way. Provide a detail and label.
- √21. Plans mention sidewalk to a bus stop near the corner of National Drive and Eastern Boulevard, provide additional information on location.
  - 22. Verify if the existing hydrant needs to be relocated near the center driveway entrance off of National Drive.
- √23. Verify if any conflicts exist with the installation of 24" RCP to CB-222 with the existing gas utility and existing 8" CMP.
  - 24. Label existing CB on National Drive located at the westerly entrance to be converted to a type C-L catch basin.
- √ 25. Verify conflicts with the installation of the proposed light pole bases and the UG detention system (SSDS #2). Revise plans accordingly.
  - 26. A Waiver of Claim must be filed by the owner through the Engineering Division for the drainage connections to the street prior to construction.
- √27. Provide limits and label 8" reinforced concrete sidewalk required through all driveways. Eliminate all proposed driveway sidewalk ramps and revise plans accordingly.
  - 28. Submit final approval stamped and signed PDF copies of the Stormwater Management Report and Final plans to <a href="mailto:greg.mahoney@glastonbury-ct.gov">greg.mahoney@glastonbury-ct.gov</a> in the Engineering Division.
  - 29. Provide construction details for the following items listed below:
    - Driveway Apron Detail-T.O.G.
    - Storm Sewer Trench
    - Clean-out detail for roof drainage

Note: Revised plans may generate more comments based on plan changes reflected from this review.

To:

Matthew J. Bruton, P.E., BL Companies

From:

Greg Mahoney, Senior Engineering Technician

Stephen M. Braun P.E., Assistant Town Engineer

Date:

November 5, 2020

Subject:

**Conservation Commission Review Comments** 

Re:

**Amazon Logistics** 

107 Eastern Boulevard

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Plan Date:

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100 Constitution Plaza, 10<sup>th</sup> Floor Hartford, Connecticut 06103

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- 1. Final plans and stormwater report are to be signed and stamped by the Professional Engineer, Land Surveyor, or Architect, as appropriate to the plan sheet.
- 2. The existing property is greater than 40% impervious and therefore qualifies as a redevelopment parcel under the Town's MS4 Permit. As such, the storm drainage system can be designed to retain onsite 50% of the Water Quality Volume for the entire site.
- 3. Provide test pit data in the vicinity of the underground detention systems to verify groundwater elevation. Provide data on applicable plans and label locations. A standpipe should be installed and monitored throughout the approval process to verify groundwater depth.
- 4. Indicate WQV provided by the various underground detention systems in the stormwater report below the low flow orifice. Review and revise both OCS orifice elevations to retain the required WQV below the initial orifice for the time duration required.
- 5. Provide additional information on the location of the existing roof drainage and how it is tied into the proposed storm drainage system. Are the existing drywells westerly of the building utilized for roof drainage and are they going to be abandoned? All roof drainage should be routed through UG detention system.
- 6. Provide a label for the Stormtech system on sheet GU-1 labeling the WQV required and WQV provided for each underground detention system
- 7. Provide a cross section detail for both UG detention systems labeling all critical elevations ie bottom of stone, bottom of system, etc.
- 8. Provide a detail for each OCS clearly labeling all pipes, orifices, and inverts corresponding to the storm drainage report.
- 9. Provide a detailed Maintenance Schedule for all proposed stormwater features ie. Catch Basins, Underground Detention System on sheet GU-1.

- 10. Provide a table depicting Pre and Post Directly/Indirectly Connected Impervious Cover onsite for MS4 Tracking purposes on sheet GU-1.
- 11. Provide Community Development approval block on all sheets to be filed.
- 12. Provide our standard inspection note to all applicable plans. See below. **NOTE:**

THE CONTRACTOR SHALL NOTIFY THE TOWN OF GLASTONBURY ENGINEERING DIVISION 24 HOURS PRIOR TO BEGINNING ANY STORM DRAINAGE, SANITARY SEWER INSTALLATION, ROADWAY PREPARATION, PAVING, SIDEWALK, CURBING, OR ANY EXCAVATION IN THE TOWN RIGHT-OF-WAY TO SCHEDULE INSPECTIONS. THE DIVISION CAN BE REACHED BETWEEN 8:00 AM-4:30 PM MONDAY THRU FRIDAY AT (860) 652-7735.

- 13. Provide an Approval Letter sheet in the plan set.
- 14. Provide coordinate labels for all lot corners.
- 15. Depict and label building setback lines and building offset dimensions on all applicable plans. Label FF elevations of existing building.
- 16. Label TW and BW at the ends and middle of the proposed retaining wall.
- 17. Provide soil scientist signature block and label 150' upland review buffer limits on all applicable plans.
- 18. Provide and label silt sacs to be installed in existing catch basin on National Drive and Eastern Boulevard.
- 19. Label proposed roof canopy on all applicable plans and depict and label roof drainage connections.
- 20. Verify if tree root protection trench is required along the existing trees in the vicinity of the proposed sidewalk within the right of way. Provide a detail and label.
- 21. Plans mention sidewalk to a bus stop near the corner of National Drive and Eastern Boulevard, provide additional information on location.
- 22. Verify if the existing hydrant needs to be relocated near the center driveway entrance off of National Drive.
- 23. Verify if any conflicts exist with the installation of 24" RCP to CB-222 with the existing gas utility and existing 8" CMP.
- 24. Label existing CB on National Drive located at the westerly entrance to be converted to a type C-L catch basin.
- 25. Verify conflicts with the installation of the proposed light pole bases and the UG detention system (SSDS #2). Revise plans accordingly.
- 26. A Waiver of Claim must be filed by the owner through the Engineering Division for the drainage connections to the street prior to construction.
- 27. Provide limits and label 8" reinforced concrete sidewalk required through all driveways. Eliminate all proposed driveway sidewalk ramps and revise plans accordingly.
- 28. Submit final approval stamped and signed PDF copies of the Stormwater Management Report and Final plans to <a href="mailto:greg.mahoney@glastonbury-ct.gov">greg.mahoney@glastonbury-ct.gov</a> in the Engineering Division.
- 29. Provide construction details for the following items listed below:
  - Driveway Apron Detail-T.O.G.
  - Storm Sewer Trench
  - Clean-out detail for roof drainage

Note: Revised plans may generate more comments based on plan changes reflected from this review.

