



**TOWN OF ACTON**  
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Engineering Department

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**INTERDEPARTMENTAL COMMUNICATION**

**To:** Board of Selectmen

**Date:** 8/1/2014

**From:** Engineering Department

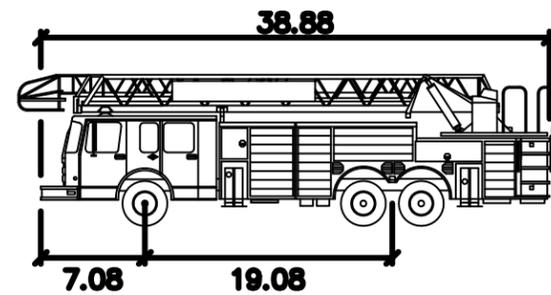
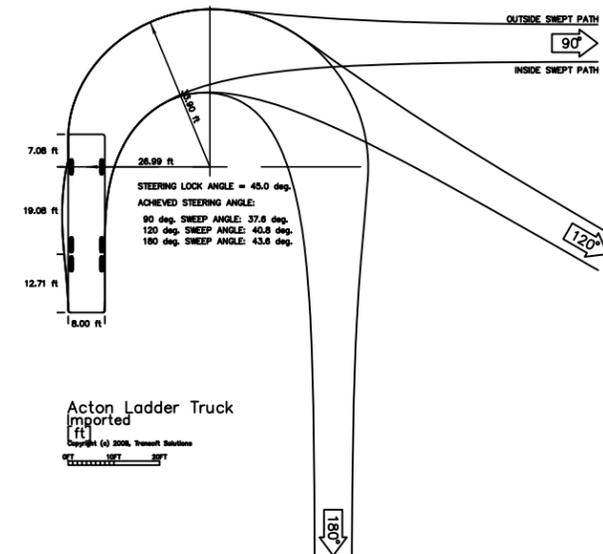
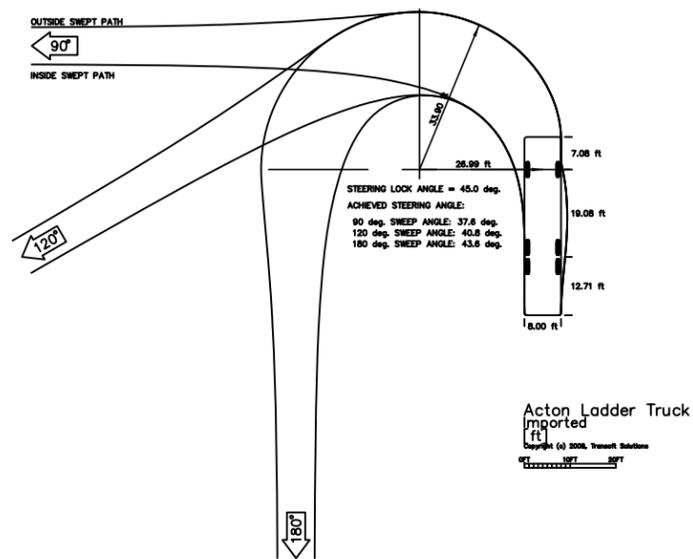
**Subject:** Site Plan Special Permit #07/03/14 - #450 – Concord Public Schools – 37 Knox Trail

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We have reviewed the plans titled “37 Knox Trail, Acton, Massachusetts” dated July 3, 2014 for the above mentioned special permit and have the following comments:

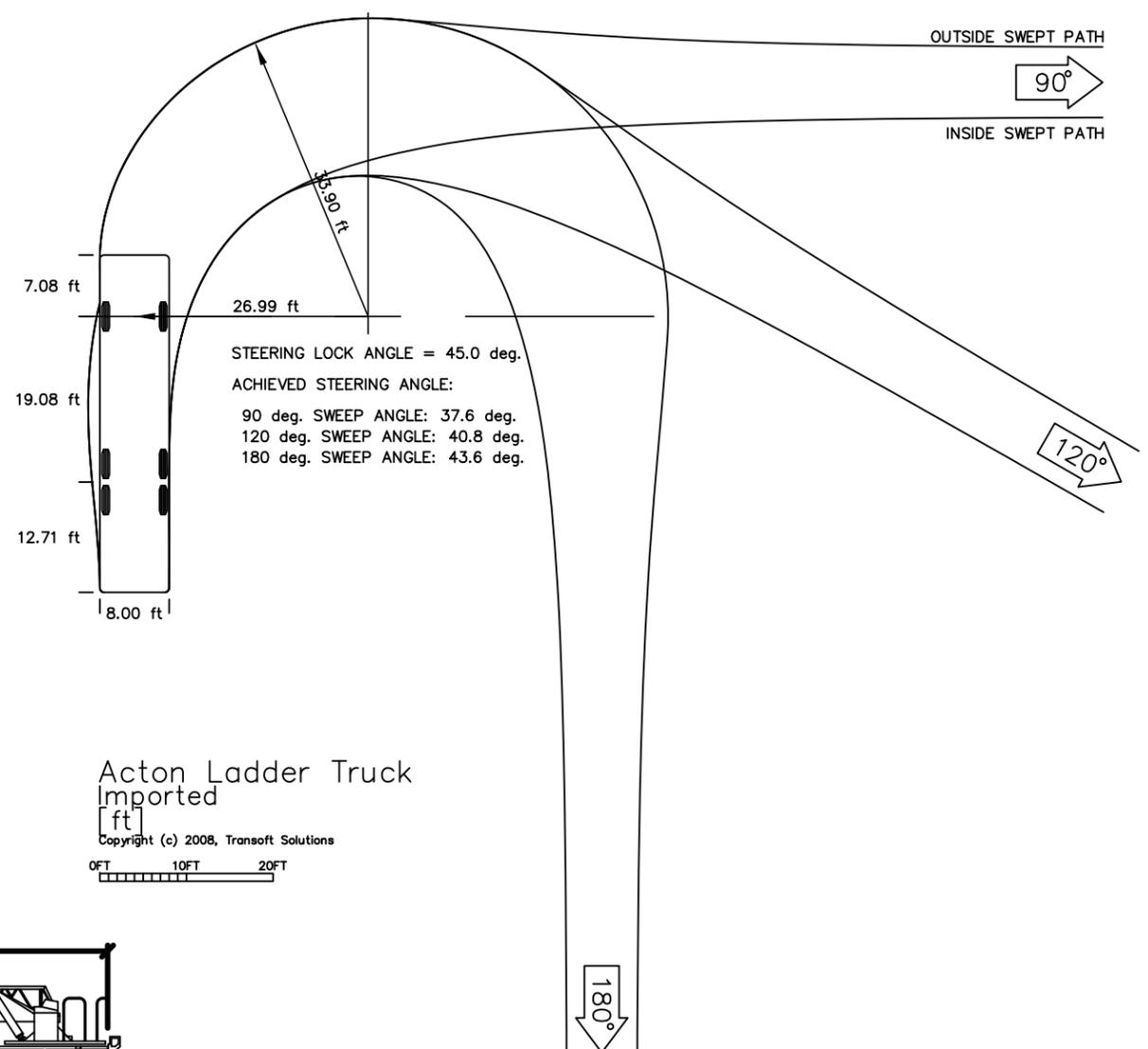
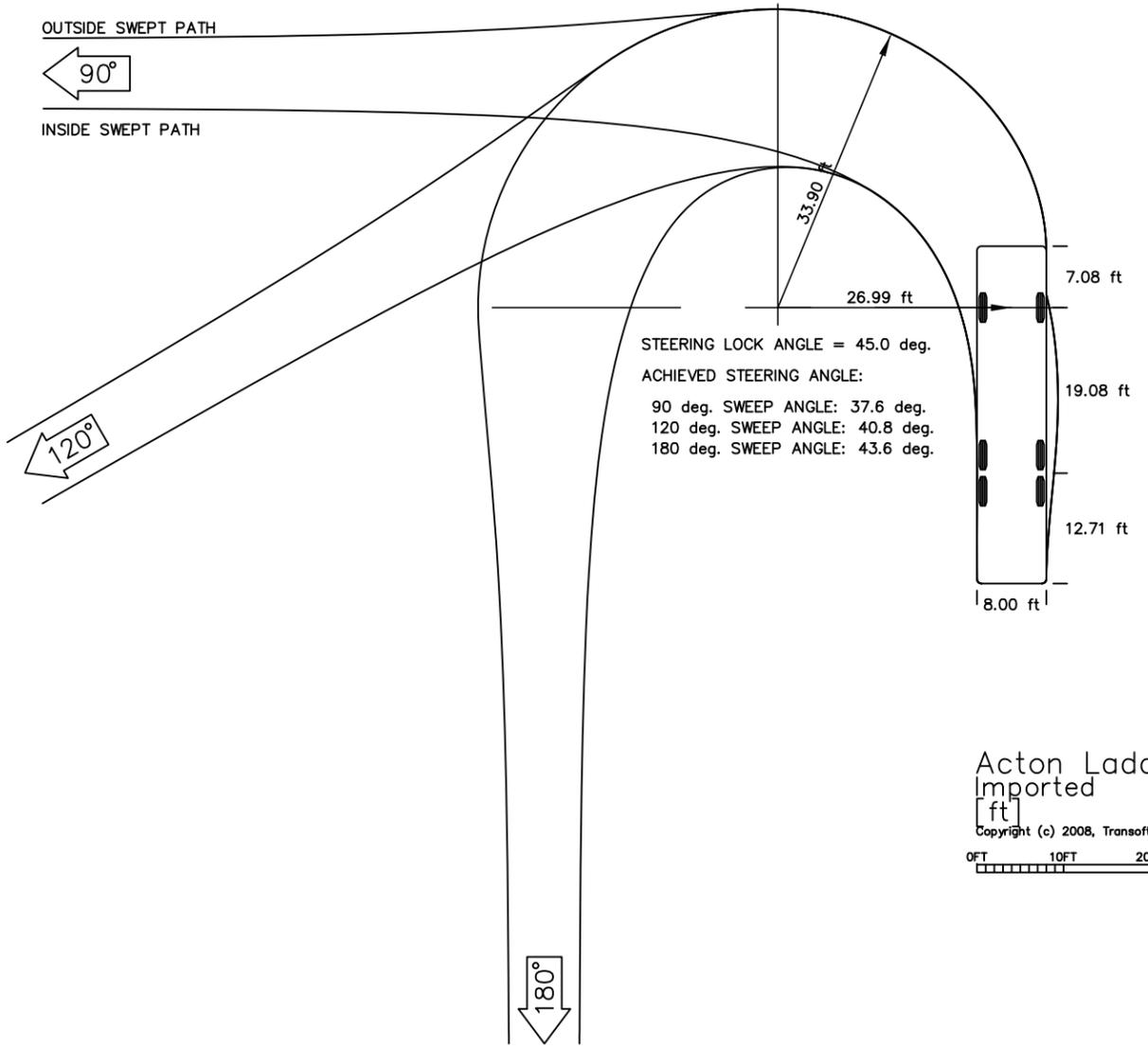
1. The property is located in both Zones 3 of the Groundwater Protection District. The drainage design does not utilize gas trap catch basins and clay lined detention basins required in the Groundwater District regulations however the use of a raingarden meets the intent of the regulations.
2. The drainage design does not address any pollution safeguards as required in section 4.3.6.4 of the Zoning Bylaw
3. The plans should show the location of the field test used to determine the maximum groundwater elevation as required by section 3.9.4 of the Rules and Regulations for Site Plan Special Permits. The applicant has estimated the groundwater elevation using USGS well data which is a good start to approximate the groundwater elevation. Given that the site is in Zone 3 of the Groundwater Protection District and that Acton’s sole water supply is its groundwater, design standards for detention basins in Acton are similar to septic systems where the groundwater elevation is estimated by a qualified soil professional at a test pit location to ensure the design meets the minimum distance requirements to groundwater.
4. We request the applicant provide a post-development watershed map. Based on the proposed grading it appears that some of the runoff from existing site will enter into the raingarden. The drainage calculations do not model the post-development condition this way. The raingarden is sized to handle the runoff from the new pavement only. The raingarden should be sized appropriately to handle runoff from the existing site as well as the new pavement.

5. The elevations are referenced to the 1988 NAVD datum. Acton standards call for the datum to be the 1929 NGVD. A conversion factor on the plans would suffice in meeting this requirement.
6. Based on our turning templates, an emergency SU-30 vehicle (fire truck) can maneuver within the site. Recently on another development the Fire Department has commented that the Acton ladder trucks are a different size than the SU-30 vehicle. Our office was given a copy of the ladder truck template by the applicant of the other development and we will supply that template with this memo. It appears the ladder truck would be able to maneuver within the parking area. We will defer further comment to the Fire Department.
7. There should be an erosion & sedimentation control note that states the contractor is responsible to clean-up any sand, dirt or debris which erodes from the site onto Great Road or private property and to remove silt or debris that enters any existing drainage system immediately upon discovery.
8. There should be a note on the plan forbidding the use of fill containing hazardous materials, require the cleaning of the catch basin sumps and stormwater basins following construction and annually thereafter and restrict the hauling of earth to or from the site to the hours between 9 a.m. and 4 p.m. on weekdays.
9. The pavement standards in Acton call for 3.5-inches of pavement in two courses: 2-inch for the binder and 1.5-inch for the wearing course.
10. The applicant has not addressed the sidewalk requirement in the application.
11. An as-built plan certified by a Massachusetts Licensed Surveyor showing the buildings, pavement, drainage, utilities, etc. should be required at the conclusion of construction. A Professional Engineer should also stamp the as-built plan to certify that the site has been completed in accordance with the approved site plan and that all features required on the site by the approved plans, decisions, etc... have been field inspected by the PE and conform with the approved design. Any non-conforming features shall be clearly noted.



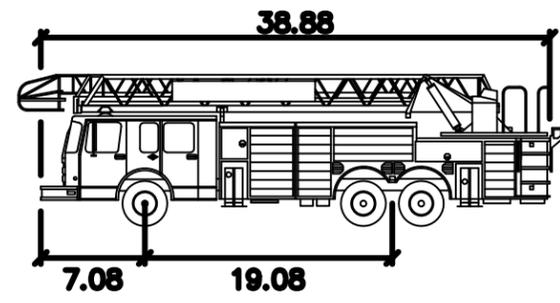
**Acton Ladder Truck**  
 feet  
 Width : 8.00  
 Track : 7.46  
 Lock to Lock Time : 6.00  
 Steering Angle : 45.0

40 SCALE



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