



Planning Board, ZBA
Loker Hearing 3/2/2021
3/9/2021

Willow Brook Condominium Associations



Loker Conservation
and Recreation Area

Commonwealth Rd



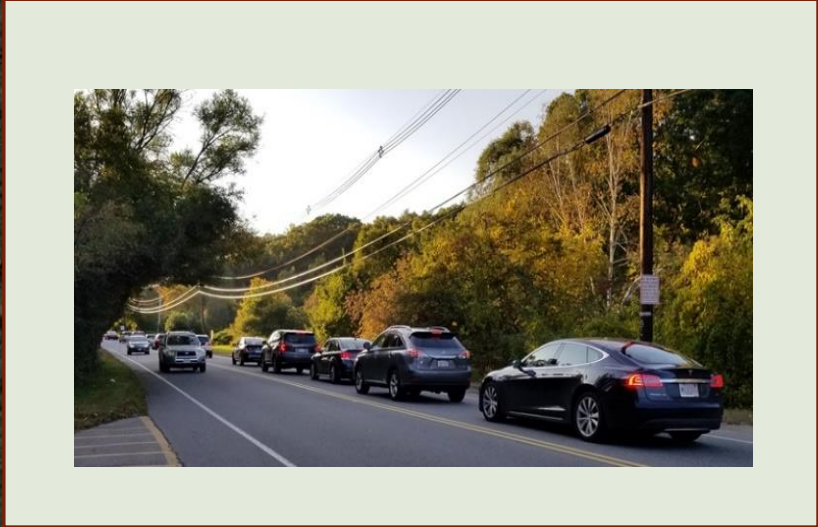
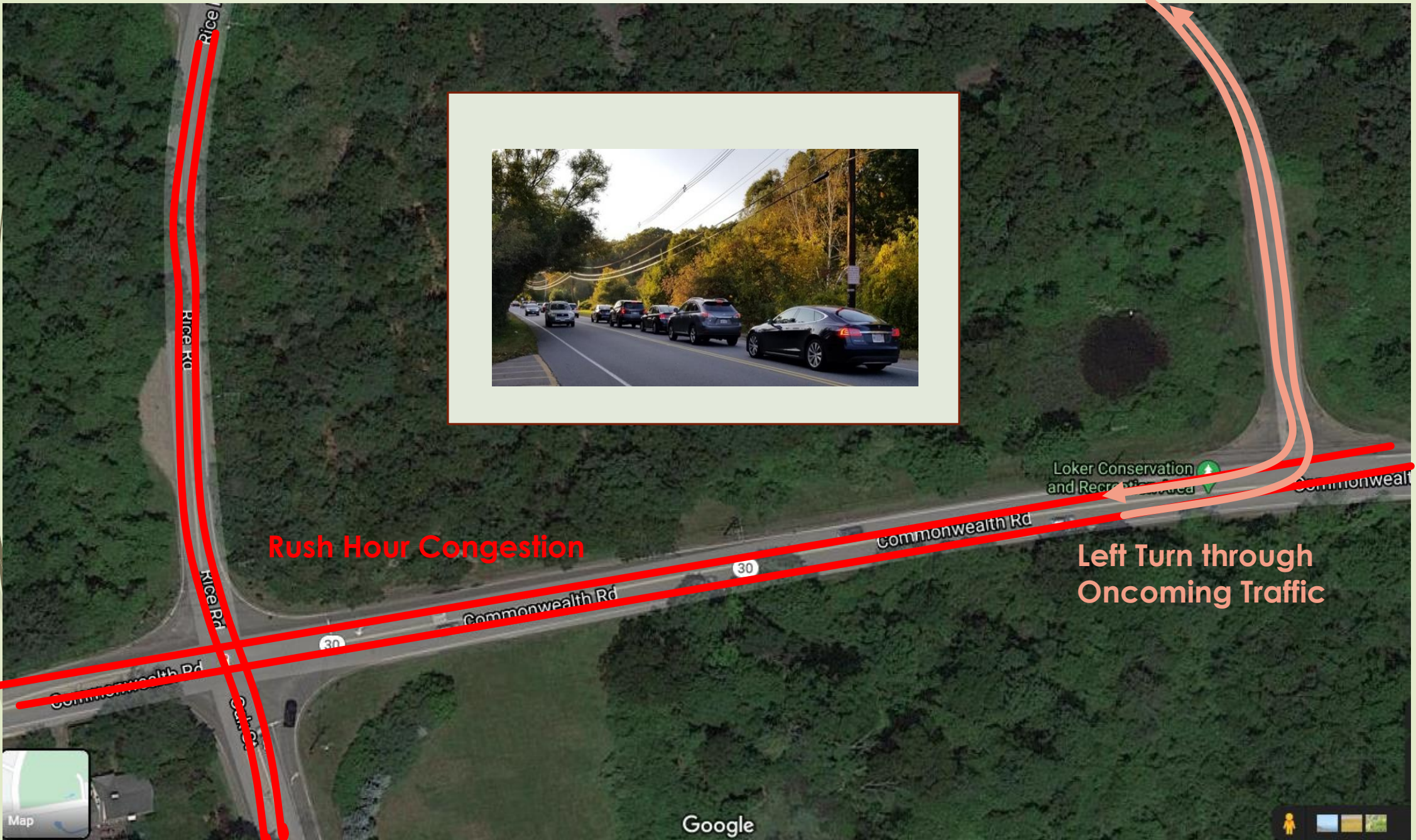
Loker Conservation
and Recreation Area

Commonwealth Rd



17 Ft wide access road

- Driveway is barely wide enough for two cars
- Sharp turn with steep slope
- No sidewalk Pedestrians compete with cars
- No lighting at night
- Emergency vehicles use the same access road
- Cars can't move to the side for emergency vehicles



Rush Hour Congestion

Left Turn through Oncoming Traffic



Google



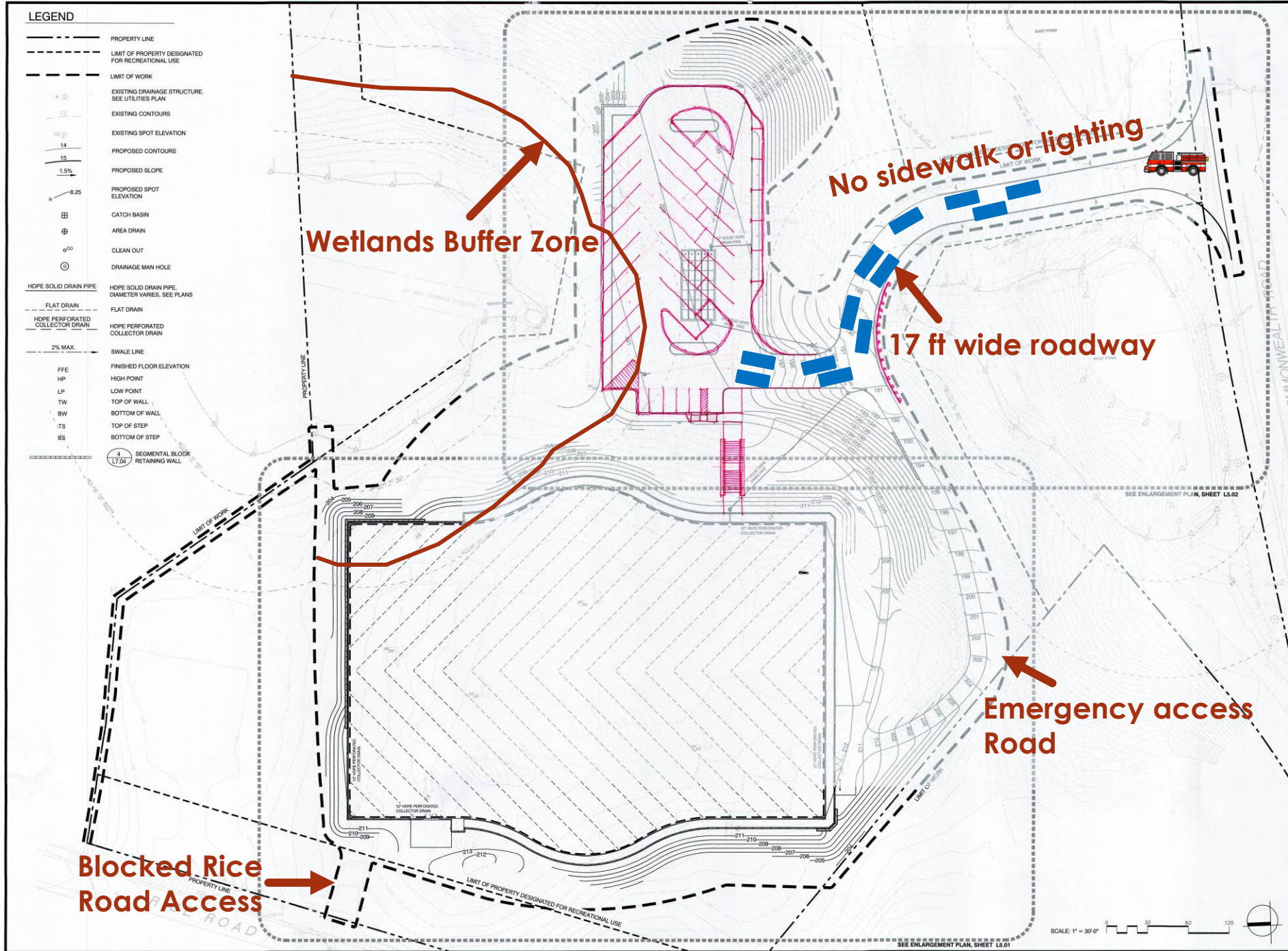


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LEGEND

- PROPERTY LINE
- - - - - LIMIT OF PROPERTY DESIGNATED FOR RECREATIONAL USE
- - - - - LIMIT OF WORK
- ⊕ EXISTING DRAINAGE STRUCTURE. SEE UTILITIES PLAN
- EXISTING CONTOURS
- 14 EXISTING SPOT ELEVATION
- 15 PROPOSED CONTOURS
- 1.5% PROPOSED SLOPE
- 8.25 PROPOSED SPOT ELEVATION
- ⊞ CATCH BASIN
- ⊞ AREA DRAIN
- ⊞ CLEAN OUT
- ⊞ DRAINAGE MAN HOLE
- HDPE SOLID DRAIN PIPE
- HDPE SOLID DRAIN PIPE. DIAMETER VARIES. SEE PLANS
- FLAT DRAIN
- HDPE PERFORATED COLLECTOR DRAIN
- HDPE PERFORATED COLLECTOR DRAIN
- 2% MAX SWALE LINE
- FFE FINISHED FLOOR ELEVATION
- HP HIGH POINT
- LP LOW POINT
- TW TOP OF WALL
- BW BOTTOM OF WALL
- TS TOP OF STEP
- BS BOTTOM OF STEP
- ⊝ SEGMENTAL BLOCK RETAINING WALL



Project: IMPROVEMENTS TO LOKER CONSERVATION AND RECREATION AREA



410 COMMONWEALTH RD,
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Consultants:

Revisions:

No.	Date	Description

Seal:



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BIDDING DOCUMENTS

Scale: AS SHOWN

Date: SEPTEMBER 17, 2018

Drawn By: CCC, DYP

Reviewed By: BMK

Approved By: ERB

W&S Project No: 2180076

W&S File No:

Drawing Title:

OVERALL GRADING, DRAINAGE & UTILITY PLANS

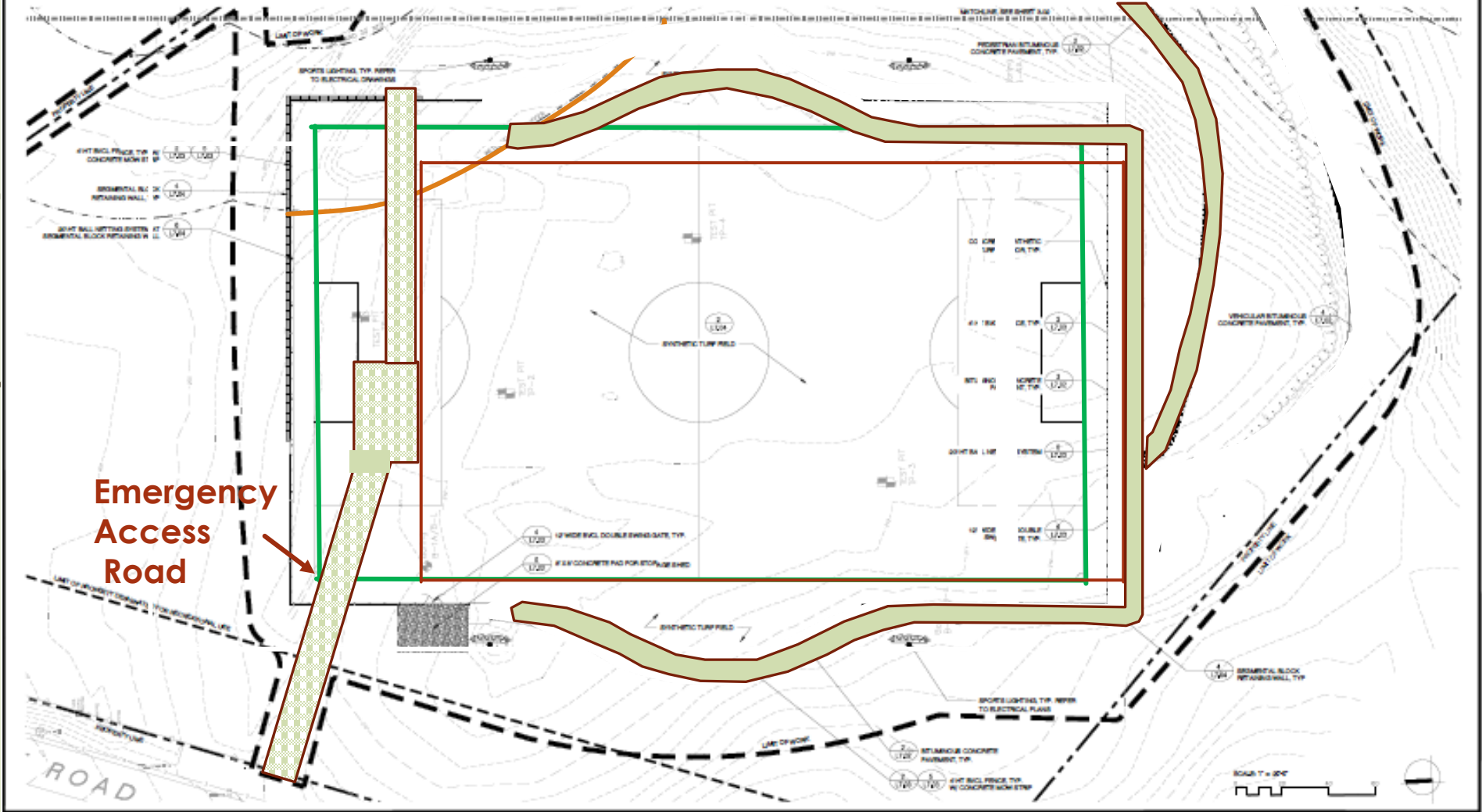
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MATERIALS LEGEND:

- PROPERTY LINE
- LIMIT OF PROPERTY DESIGNATED FOR RECREATIONAL USE
- LIMIT OF WORK
- VEHICULAR BITUMINOUS CONCRETE SIDEWALK, TYP.
- PEDESTRIAN BITUMINOUS CONCRETE SIDEWALK, TYP.
- GRAVITE CURB, TYP.
- 4" BIT. SIG. TRUCK TYP.
- 4" BIT. BALL HITTING SHIELD
- 8" BIT. BALL HITTING SHIELD
- 8" BIT. BALL HITTING SHIELD
- 8" BIT. BALL HITTING SHIELD

Proposed Turf field 110yds by 63yds
Smaller Field 100yds by 60yds



**Emergency
Access
Road**

APPENDIX

- Conservation Commission Presentation



Conservation Commission Loker Hearing 3/3/2021


Willow Brook Condominium Association

What We Will Present

- ▶ Loker project storm water management infiltration system design will not meet MASSDEP requirements
- ▶ Documents cited
 - ▶ BSC group review of the Loker project design 8/31/2018
 - ▶ Weston and Sampson Response letter to BSC comments 8/23/2018
 - ▶ BSC Group response to comments 9/26/2018
 - ▶ DEP appeal denial appeal of by Windsor Place LLC of Order of Conditions by Wayland Conservation Commission of 10/4/2018

BSC questions the storm water diffusion system design


























- ▶ **The Loker field storm water management system consists of a set of perforated pipes under the field which will drain into diffusion chambers located under the proposed parking lot.**
- ▶ **BSC Letter dated 8/31/2018 Section II Technical Items subsection a.** “ The proposed design of the infiltration system in this area will have a surface grade of approximately elevation 200, with the bottom of stone within these infiltration chambers at elevation 193.5 Per the MassDEP Stormwater Regulations, the minimum distance from the anticipated groundwater elevation to the bottom of the infiltration system is 2.0'. Based on the current available soils information, **the proposed design does not meet the DEP groundwater separation criteria.**”
 - ▶ *Developer never dug test holes to see if there is adequate soil below the diffusion chambers.*
- ▶ Weston and Sampson response 7/2018 – “Item addressed in a satisfactory manner”
 - ▶ *We will figure it out after we start the project*

- 
- ▶ **BSC response 9/26/2018** “BSC respectfully disagrees” “If the test pi(-s) find groundwater or bedrock less than 2’ below the proposed infiltration system, the system will need to be redesigned, resulting in a delay in construction as the redesign will need to be reviewed by the Commission. This redesign would likely increase overall project cost, **BSC has seen conditions like the one suggested by W&S used on other projects where adequate soils information has been previously obtained , but not within the exact area of the infiltration system.**”
 - ▶ *You are taking a severe cost and schedule risk if you just assume the will be 2’ of soil where you plan to put the storm water diffusion chambers”*

MassDEP agrees with BSC

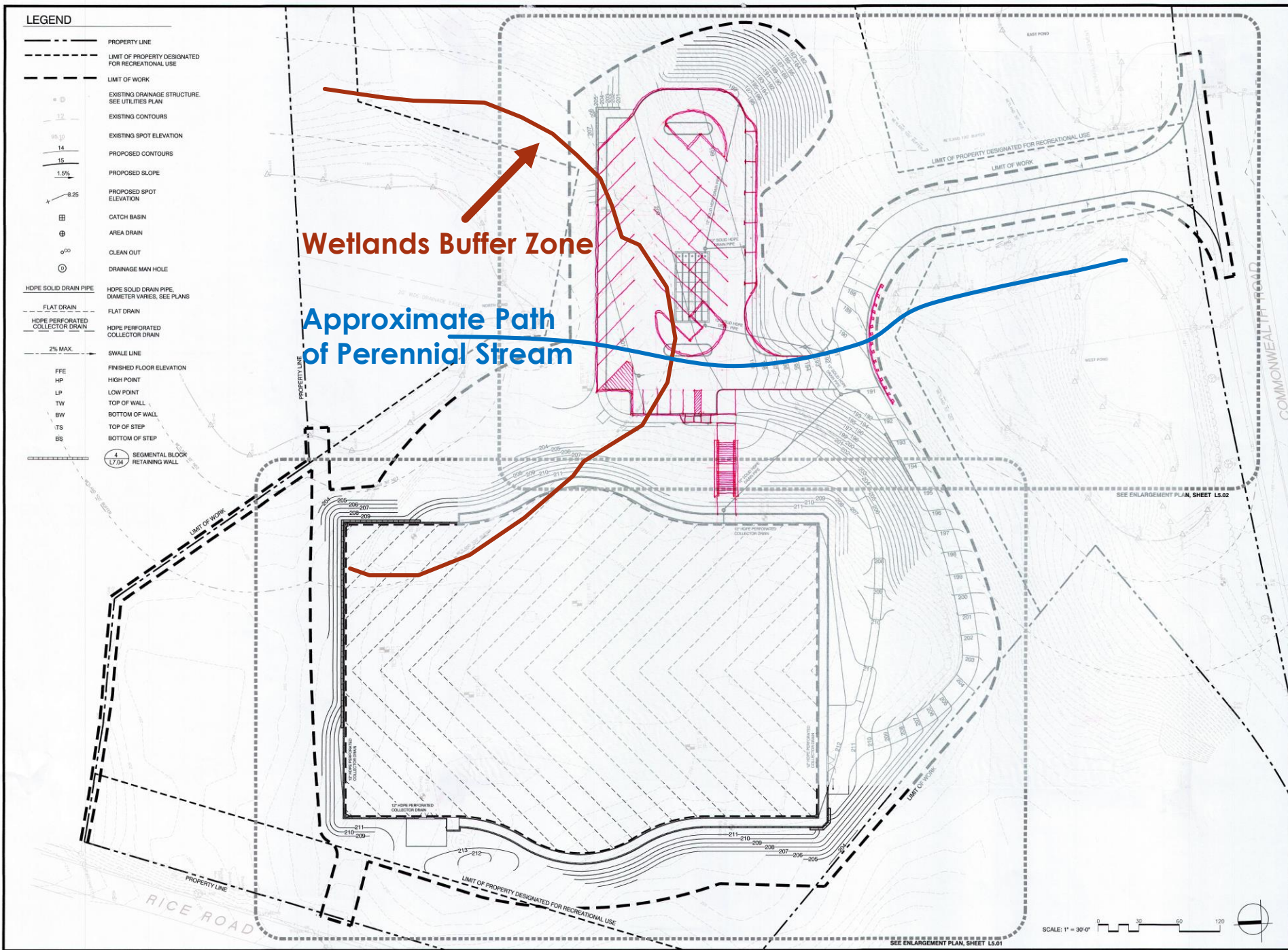
- ▶ **DEP 24 School Street appeal denial 8/16/2018 Page 2 last paragraph**
 - ▶ “in accordance with the MA Stormwater Handbook (Volume 2, Chapter 2), two (2) feet of separation is required between the seasonal high groundwater and the bottom of the infiltration system. In addition, at least six(6) of crushed, washed stone layer is required between the infiltrative surface and the o bottom of the galleys”
- ▶ **While the requirement is unproven the design might still work for Loker except the DEP 24 School Street denial also states**
 - ▶ “ The proposed subsurface infiltration system will be located under the driveway” MassDEP is also concerned about the impact of dead and live loads on the galleys and they surface they sit upon.” “Live loads such as the weight of a loaded moving truck are usually variable and have the potential to church galleys or to push them into the subsurface soils. Especial as no crushed stone layer is proposed”
- ▶ **The placement of the stormwater diffusion chambers under the Loker parking will also require a layer of crushed stone to prevent damage for constant car traffic.**
 - ▶ The depth of the gravel, the height of the chambers, and the 2 feet of soil below the chambers will require that there will be approximately 10 feet space before hitting ledge below the parking lot.
 - ▶ **All of the test holes dug anywhere on the hit ledge between 2 and 4 feet below the surface**

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-  LOW POINT
-  TOP OF WALL
-  BOTTOM OF WALL
-  TOP OF STEP
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-  SEGMENTAL BLOCK RETAINING WALL

Wetlands Buffer Zone

Approximate Path of Perennial Stream



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Likely Construction Scenario

- ▶ Cut down all of the trees
- ▶ Use the parking lot as a staging area while excavating the field area
- ▶ Dig holes required to bury the diffusion chambers after field grading is completed
- ▶ Pave the parking lot
- ▶ If there is not enough soil above the ledge level under the parking lot
 - ▶ Option 1 redesign the storm water management system – But because the field is so large compared to the available space there is really no other place to put the diffusion chambers.
 - ▶ Option 2 “Oxbow strategy” – Ignore the problem complete construction and hope no one notices the problem.
- ▶ You can only guard against a major financial loss if the developer must dig a test hole large enough and deep for all the stormwater diffusion chambers before any other construction is started.