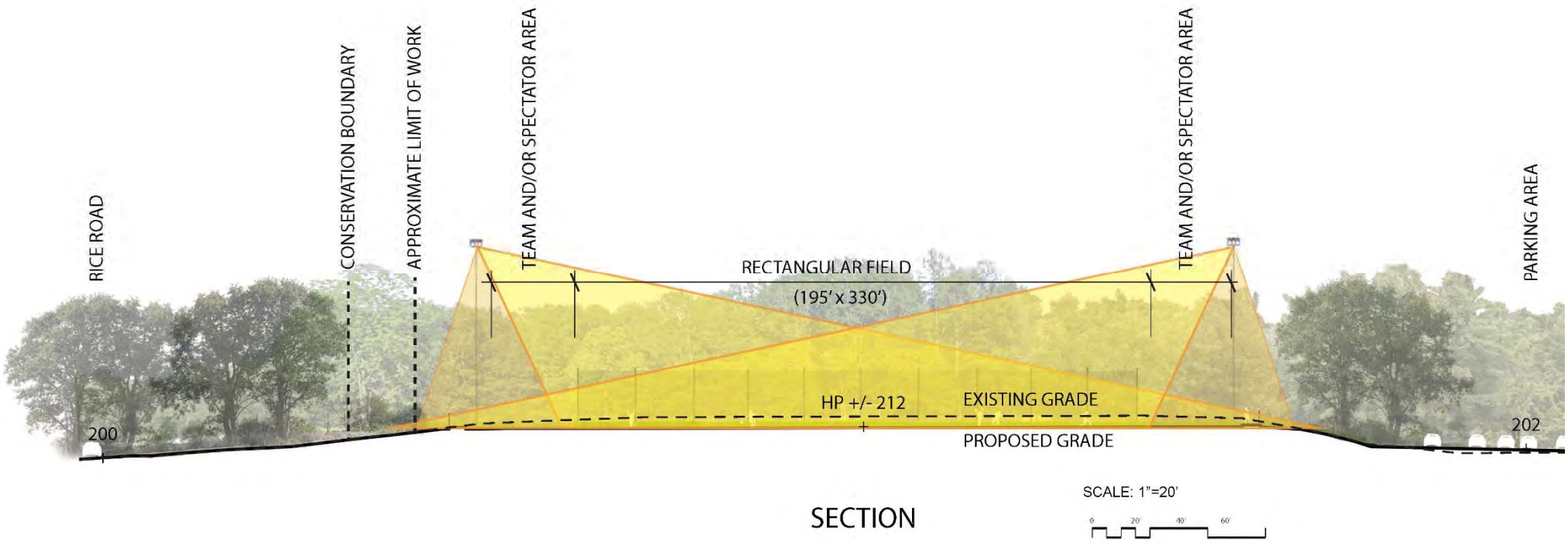
ATTACHMENT A2

Loker Conservation + Recreation Area Field | 2018



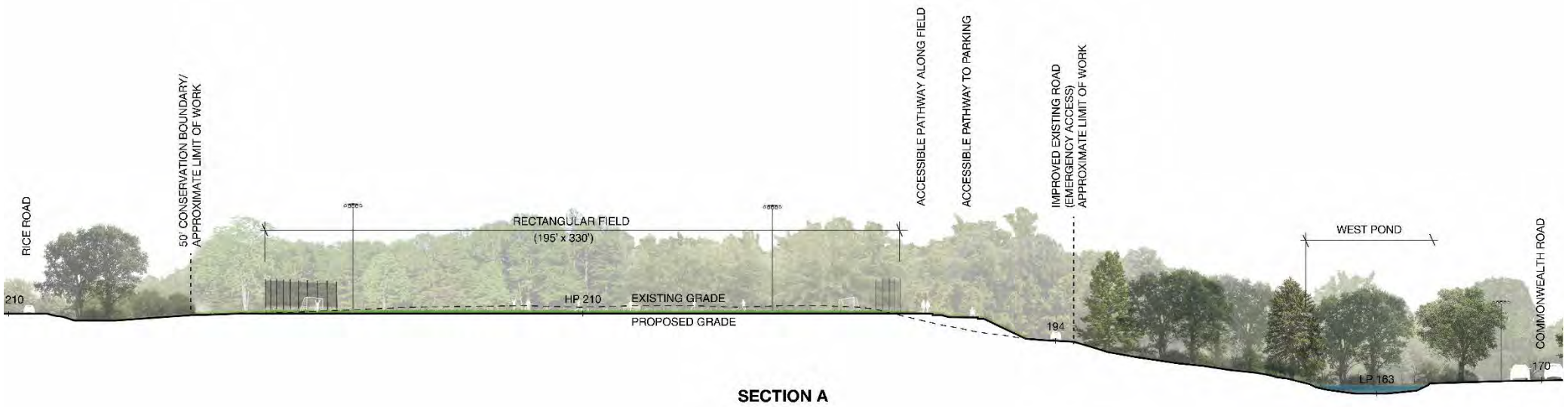
Factors:

1. Topography
2. Mature Vegetation
3. Mixed Deciduous and Evergreen Vegetation
4. Buffer Between Field, Commonwealth Rd, Rice Rd, and Aqueduct
5. Primary Seasons of Use Correspond to Leaves on Trees
6. Period of Usage is Limited

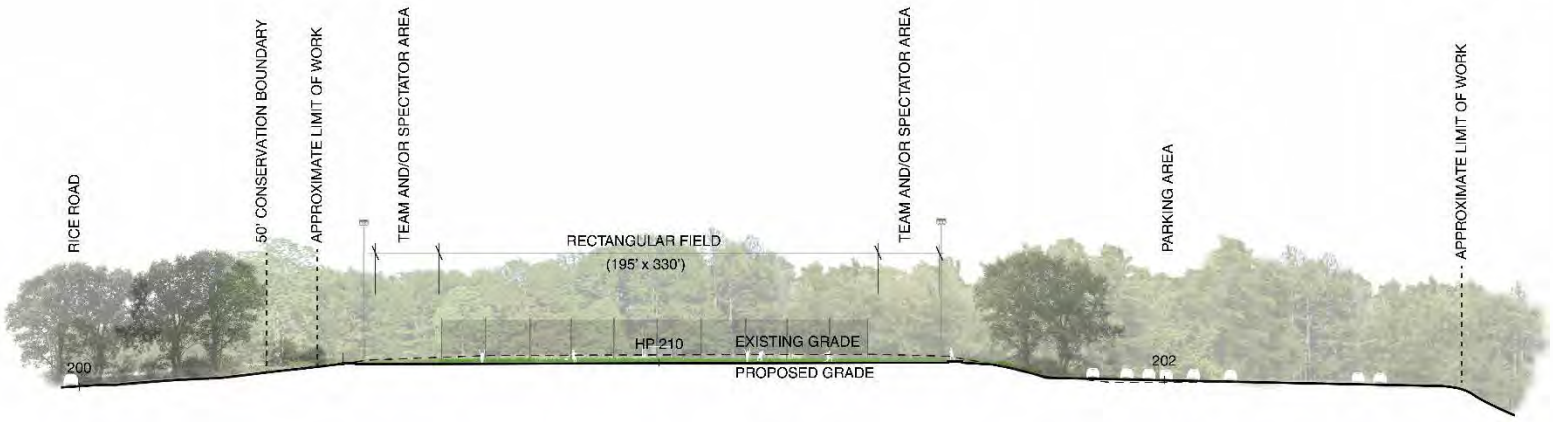
LIGHTING – FACTORS

ATTACHMENT H

Loker Conservation + Recreation Area Field | 2018



SECTION A



SECTION B

SCALE: 1"=20'

SECTION VIEWS

Loker Conservation + Recreation Area Field | 2018

PERSPECTIVE

LIGHT PLAN

Loker Soccer Field

Wayland,MA

GLARE IMPACT

Summary

Map indicates the maximum candela an observer would see when facing the brightest light source from any direction.

A well-designed lighting system controls light to provide maximum useful on-field illumination with minimal destructive off-site glare.

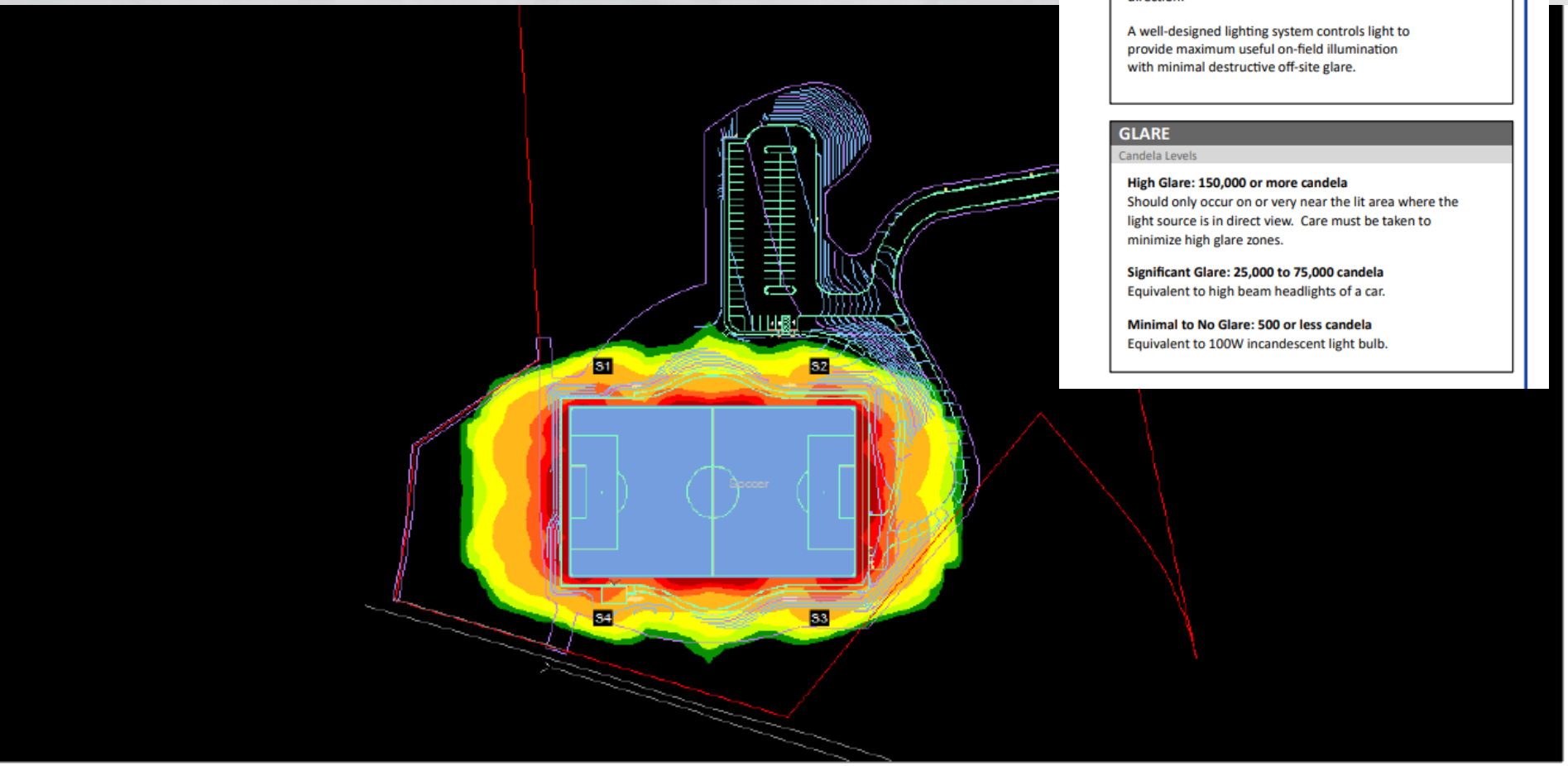
GLARE

Candela Levels

High Glare: 150,000 or more candela
Should only occur on or very near the lit area where the light source is in direct view. Care must be taken to minimize high glare zones.

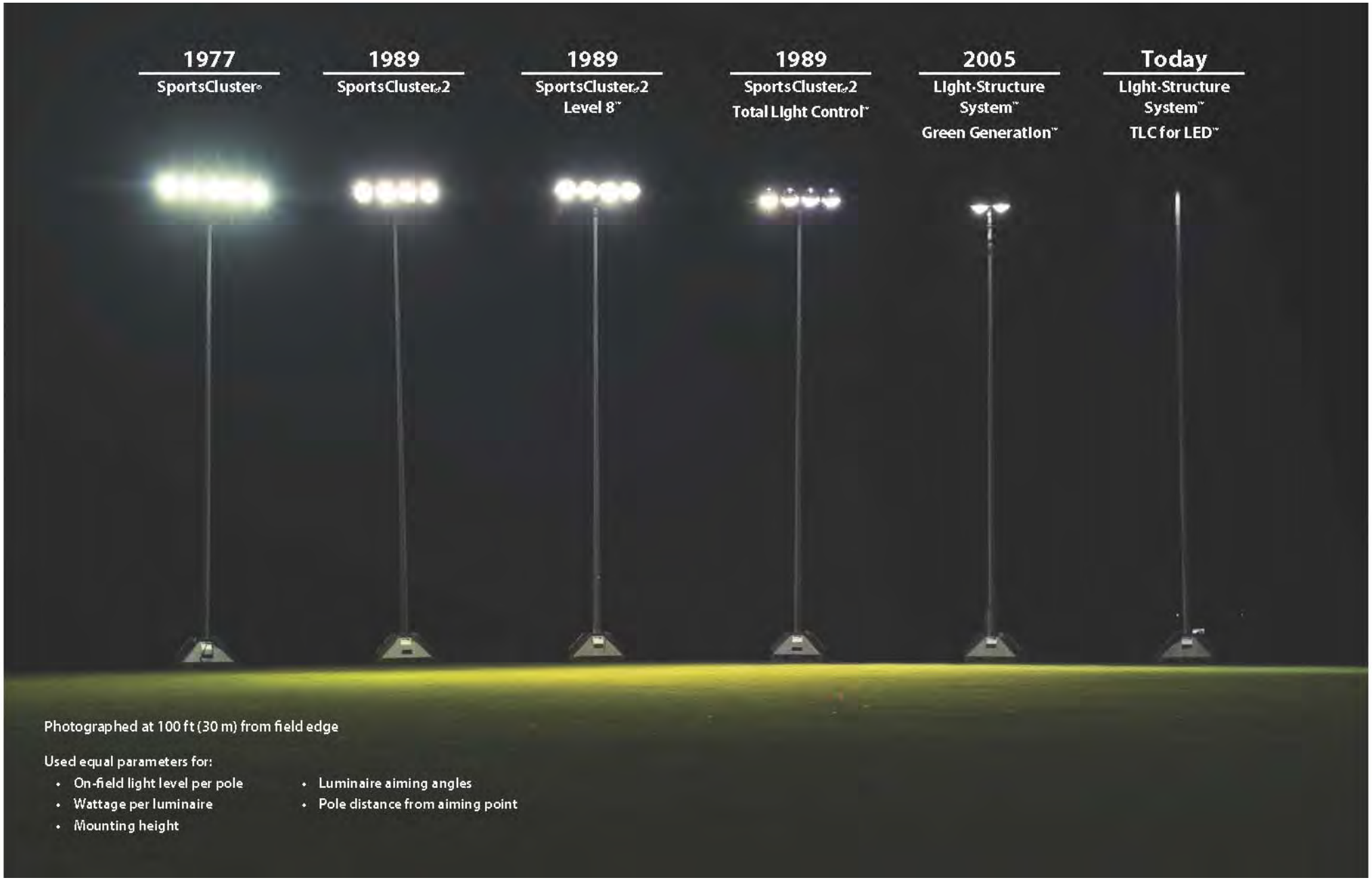
Significant Glare: 25,000 to 75,000 candela
Equivalent to high beam headlights of a car.

Minimal to No Glare: 500 or less candela
Equivalent to 100W incandescent light bulb.



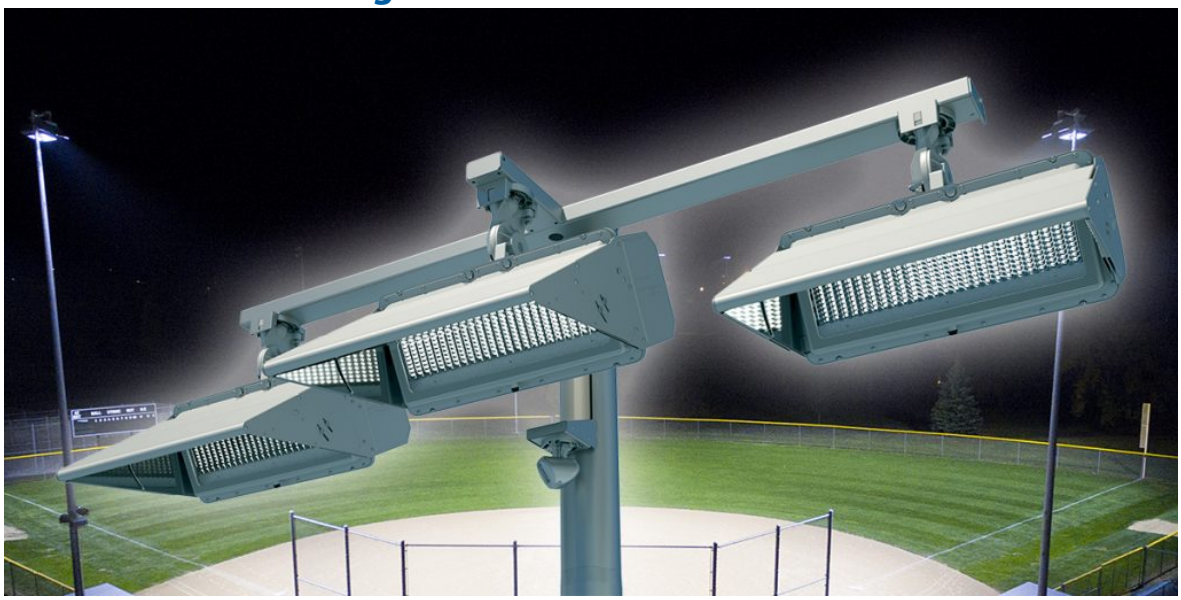
ENVIRONMENTAL GLARE IMPACT

Loker Conservation + Recreation Area Field | 2018



LIGHTING – TECHNOLOGICAL IMPROVEMENTS

TLC for LED® - Total Light Control



For nearly a decade, Musco has been testing the Light Emitting Diode (LED) light source and applying it on projects in which it was the best option. While LED saved energy, for a typical recreational facility the hours of operation weren't great enough to offset the higher cost.

With our Total Light Control—TLC for LED® technology, we've paired our expertise in light control with the advancing output of LED to the point where it's a cost-effective option for recreational facilities.

The result is a system that makes Musco's great lighting even better.

Better for Players… who want to perform their best and be able to track the entire flight of the ball.

Better for Neighbors… who don't want glare in or around their homes or lights left on when not in use.

Better for the Night Sky… with bright, uniform light directed onto the field and not spilling above it.

Better for Your Budget… an affordable system that's built to last and control operating costs.

And with Musco's long-term parts and labor warranty, you can mark maintenance costs off your list for 25 years.

Control
from foundation to poletop…

from the light source to the field, preserving the night sky…

assuring the results you expect, day 1… year 1… and for 25 years.

Click here to learn more about Musco's Light-Structure System™

Loker Conservation + Recreation Area Field | 2018

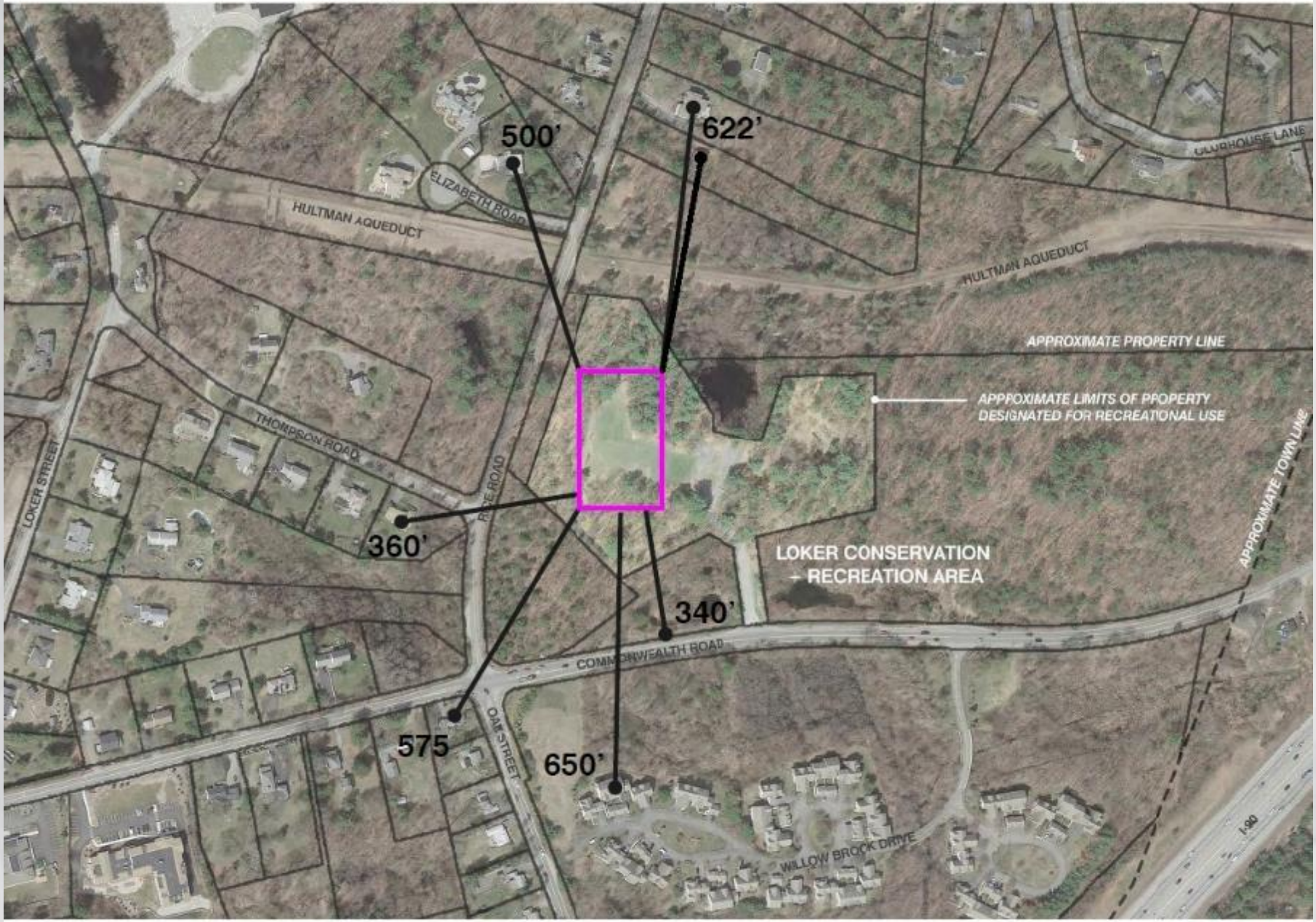
LIGHTING – CONTROL

ATTACHMENT A3

Loker Conservation + Recreation Area Field | 2018

EXISTING CONDITIONS

Loker Conservation + Recreation Area Field | 2018



SITE CONTEXT

ATTACHMENT B1

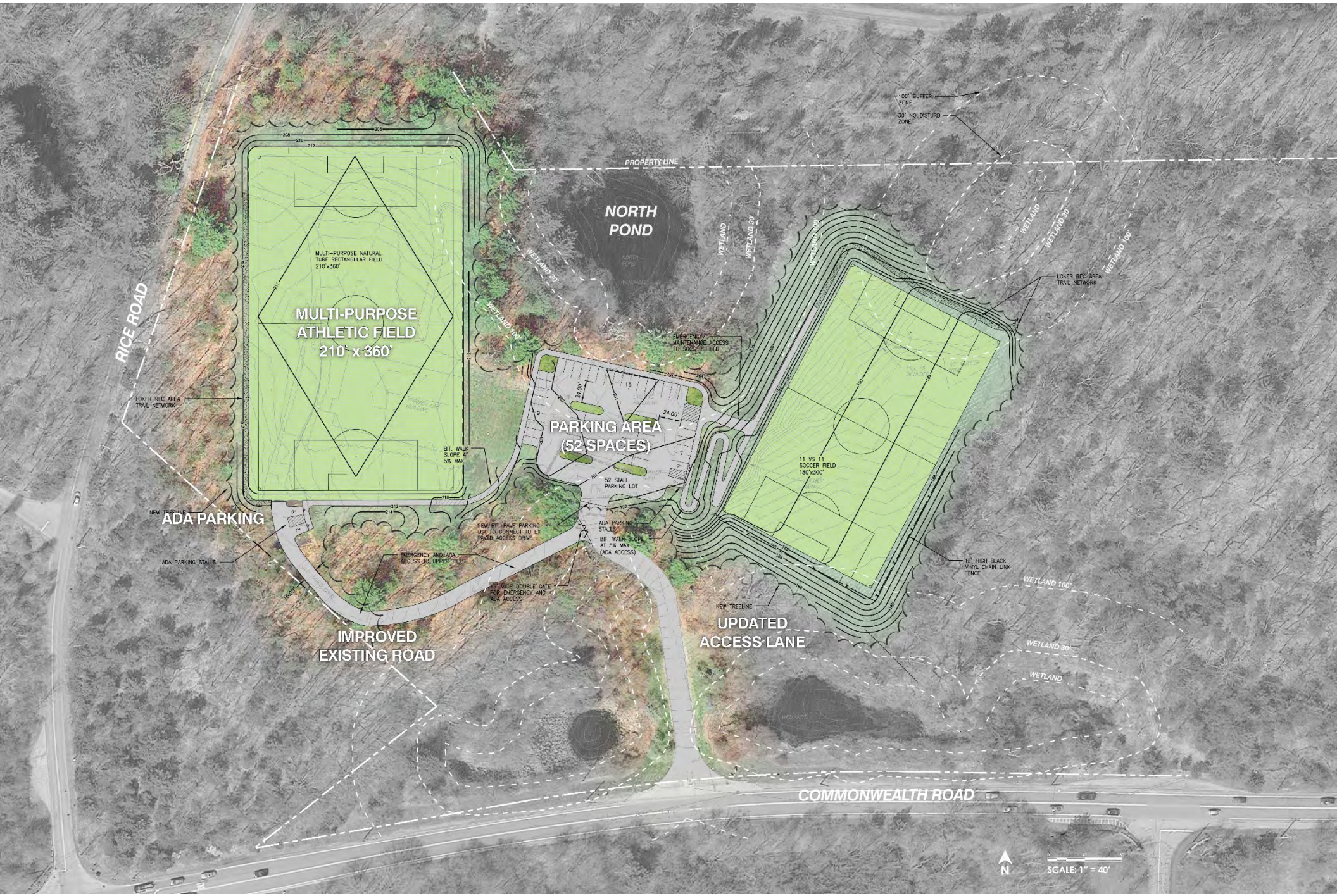
Loker Conservation + Recreation Area Field | 2018

Proximity to Residential Properties

Locus

412 Commonwealth

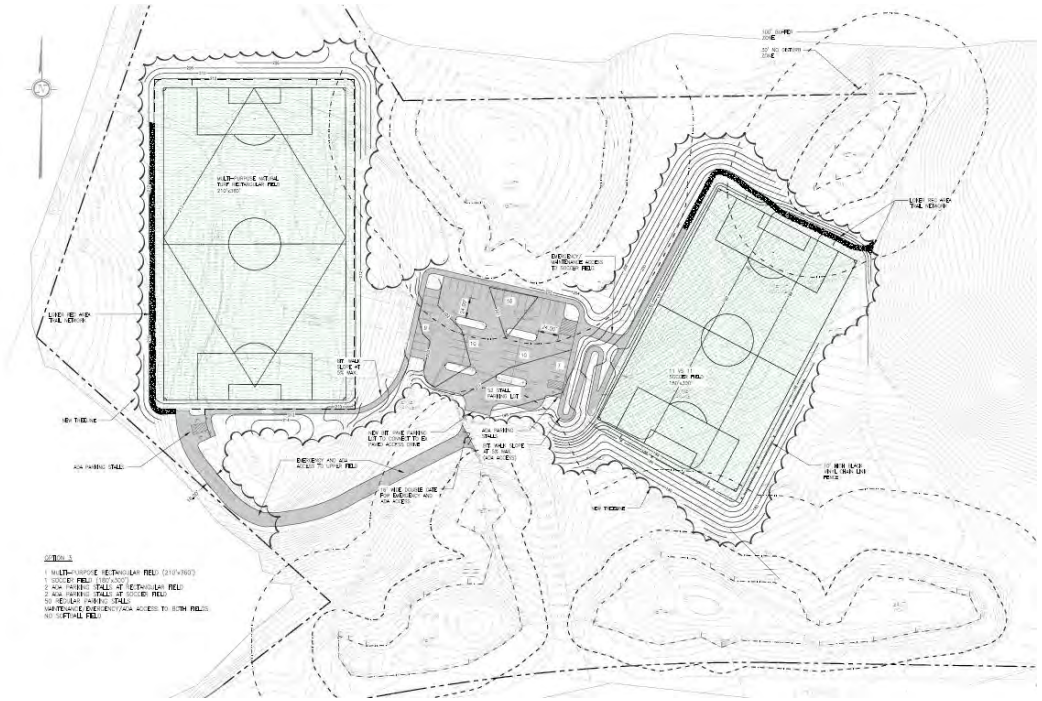
Loker Conservation + Recreation Area Field | 2018

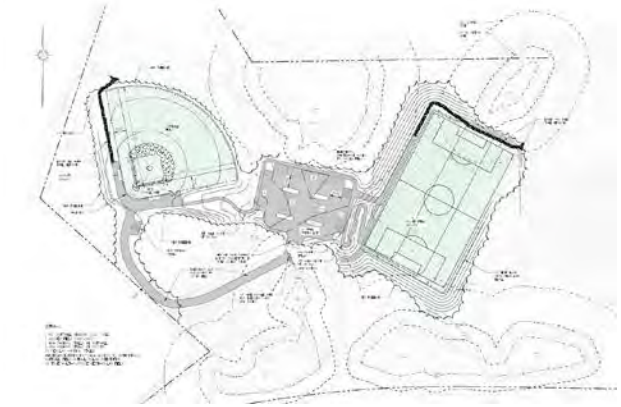


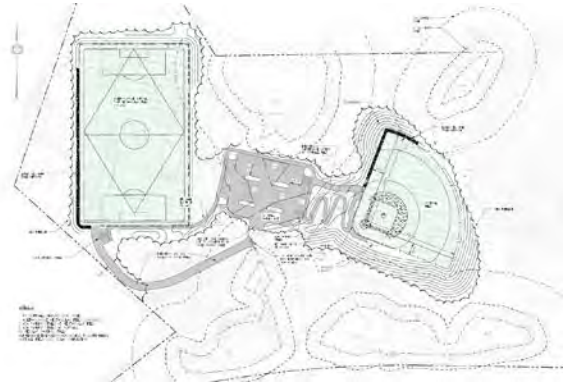
PREVIOUS SCHEMATIC PLAN(S)

ATTACHMENT C

Loker Conservation + Recreation Area Field | 2018







PREVIOUS SCHEMATIC PLAN(S)

1. Schematic plan options were previously explored in 2014
2. All options maximized recreational use in its respective area

PLANTING SCHEDULE

TREES					
ABRV.	QTY	BOTANICAL NAME	COMMON NAME	SIZE	NOTES
AR	17	ACER RUBRUM	RED MAPLE	2"-2.5" CAL.	B&B
AC	8	ACER SACCHARUM	SUGAR MAPLE	2"-2.5" CAL.	B&B
QA	13	QUERCUS ALBA	WHITE OAK	2"-2.5" CAL.	B&B
QR	28	QUERCUS RUBRA	RED OAK	2"-2.5" CAL.	B&B
QV	16	QUERCUS VELUTINA	BLACK OAK	2"-2.5" CAL.	B&B
SHRUBS					
ABRV.	QTY	BOTANICAL NAME	COMMON NAME	SIZE	NOTES
AA	10	ARONIA ARBUTIFOLIA	RED CHOKEBERRY	#3 CONT.	
ME	5	ARONIA MELANOCARPA	BLACK CHOKEBERRY	#3 CONT.	
CA	7	CLETHRA ALNIFOLIA	SWEET PEPPER BUSH	#3 CONT.	
HV	7	HAMEMALIS VIRGINIANA	WITCH HAZEL	#3 CONT.	
IG	14	ILEX GLABRA 'SHAMROCK'	INKBERRY 'SHAMROCK'	#3 CONT.	
IV	10	ILEX VERTICILLATA	WINTERBERRY	#3 CONT.	
MP	16	MYRICA PENSYLVANICA	BAYBERRY	#3 CONT.	
RA	46	RHUS AROMATICA 'GRO-LOW'	FRAGRANT SUMAC 'GRO-LOW'	#3 CONT.	
SS	18	SCHIZACHYRIUM SCOPARIUM 'STANDING OVATION'	LITTLE BLUESTEM	#3 CONT.	
VD	6	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	#3 CONT.	

LEGEND:

- PROPERTY LINE
- LIMIT OF WORK
- WETLAND DELINEATION
- WETLAND BUFFER
- CONSERVATION SEED MIX
- GRASS SEED MIX
- PROPOSED TREES
- PROPOSED SHRUBS
- TREELINE OF EXISTING TREES TO REMAIN

TREELINE OF EXISTING TREES TO REMAIN

LOAM AND SEED DISTURBED AREAS WITH CONSERVATION SEED MIX, TYP., SEE SPECIFICATIONS (1 / L7.12)

LIMIT OF PROPERTY DESIGNATED FOR RECREATIONAL USE

LIMIT OF WORK

PLANTING AREA INCLUDED IN EXISTING PROJECT SCOPE

LOAM AND SEED DISTURBED AREAS WITH GRASS SEED MIX, SEE SPECIFICATIONS (1 / L7.12)

PROPERTY LINE

SCALE: 1" = 30'-0"

0 30 60 90

Weston & Sampson

85 Devonshire Street,
3rd Floor, Boston, MA 02109
617.412.4480 800.SAMPSON
www.westonandsampson.com

Project:

IMPROVEMENTS TO LOKER CONSERVATION AND RECREATION AREA

410 COMMONWEALTH RD, WAYLAND, MA 01778

Consultants:

Revisions:

No.	Date	Description

Seal:

Issued For:

BIDDING DOCUMENTS

Scale:	AS SHOWN
Date:	SEPTEMBER 17, 2018
Drawn By:	CCC, DYF
Reviewed By:	BMK
Approved By:	ERB
W&S Project No:	2180076
W&S File No:	

Drawing Title:

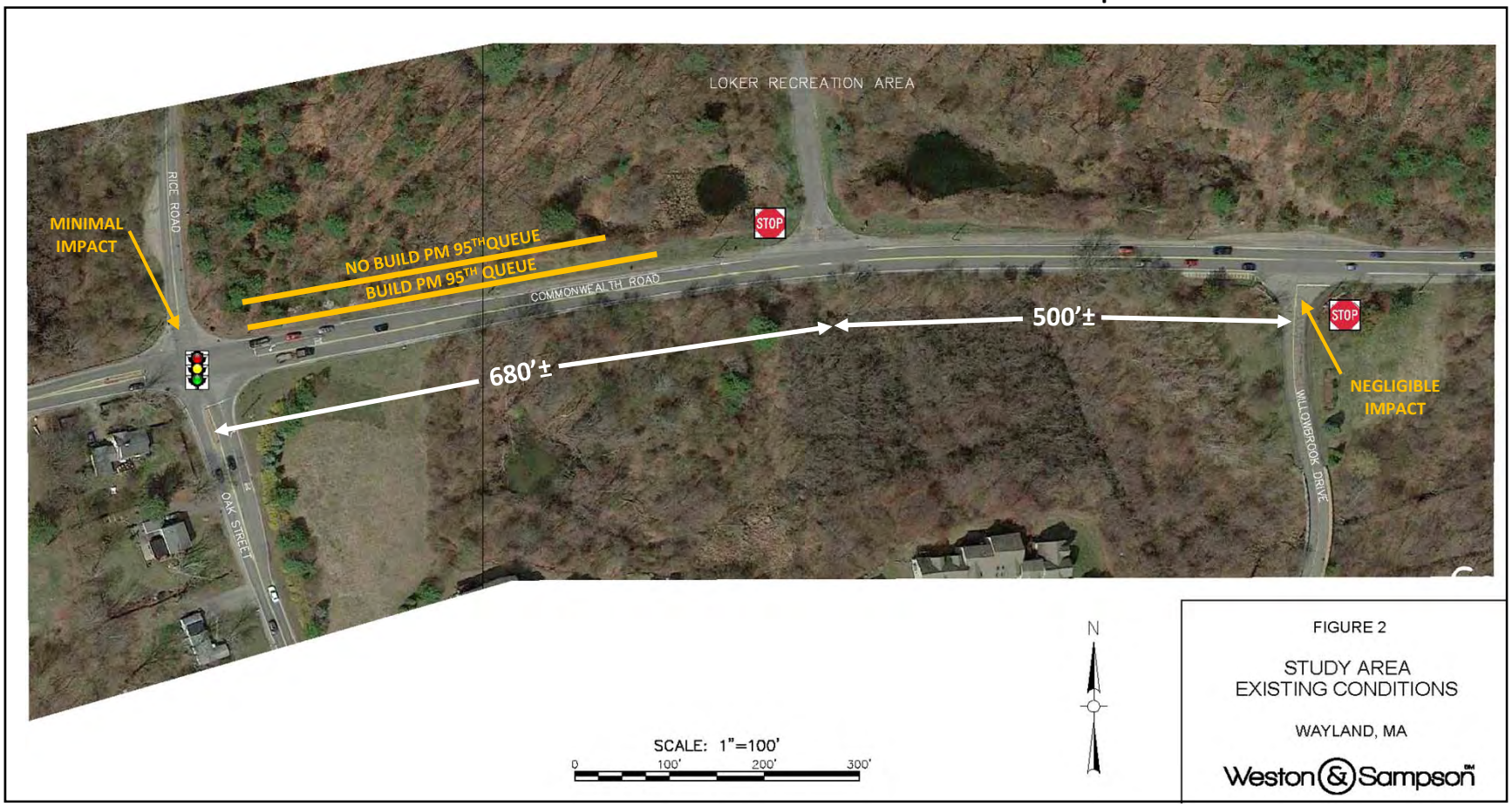
OPTION 5
TREE REPLACEMENT STRATEGY

Sheet Number:

Tree removal

	LOKER	POOR CONDITION	XS <6"	SM 6"-12"	MED 12"-24"	LRG 24"+	TOTAL
2	UPLANDS	46	71	122	86	10	218
3	WETLANDS	2	9	15	26	4	45
4		**48**	**80**	**137**	**112**	**14**	**263**

Loker Conservation + Recreation Area Field | 2018



- Evaluation prepared in response to public comments
- Typically traffic studies are not conducted for projects this size
- Evaluation included:
  - Weekday PM and Saturday Midday
  - Traffic counts conducted in March 2018 (schools in session)
  - 2018 Existing, 2019 No Build, 2019 Build Conditions

TRAFFIC EVALUATION

Property Edges - Commonwealth Road

Loker Conservation + Recreation Area Field | 2018

Property Entrance - Commonwealth Road

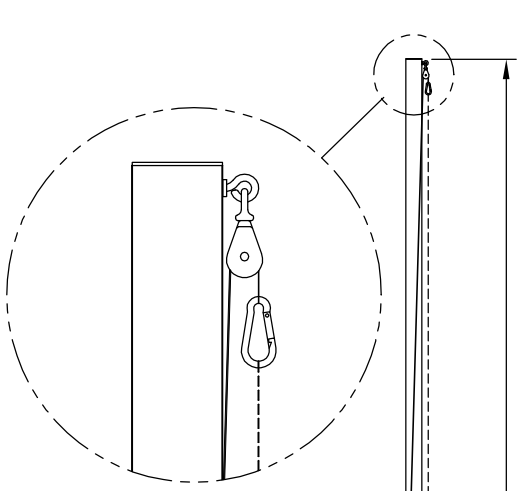
Property Edges - Rice Road

PARKING

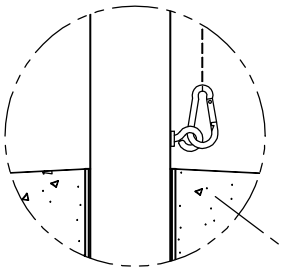
PARKING COMPARISON

Recreation Sites Similar to Loker Rec Area (non-school sites)	# of Parking Spaces	Description
Alpine Soccer Field	23	Single 11v11 field, with small Tee Ball field, Playground
Cochituate Ball Park	43	Two Softball Diamonds, Basketball Court, Playground
Oxbow Meadows Field	55	Single 11v11 field with walking trails
Loker Turf Project (proposed)	63	Single 11v11 Turf Field, walking trails
Town Building Field / Back Lot	91	Single 11v11 Footprint, 1 Baseball Diamond, 1 Playground, Town Hall

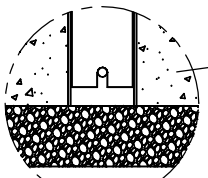
PLANNING BOARD REQUEST	STATUS	SUPPORTING INFORMATION
1. Provide a set of stairs from the parking lot directly to the field area.	Complete	See Plan L3.00 and L7.06
2. Consider an alternate layout(s) of the proposed parking lot with angle parking for the first row of the parking lot. This may be an opportunity to save a group of trees.	Complete	Redesign of the parking lot was considered by the applicant and the PB in 2019. The result would greatly reduce the number of parking spaces. See Sheet L5.00
3. Provide greater detail on the driveway and emergency access road from Rice Road.	Complete	The access from Rice Road is not intended to be used by the public. It will have a barrier (bollard and swing gate) with existing pavement to remain for emergency vehicle access only. “No Parking” "No Drop-Off" and "Fire Lane" sign can be posted.
4. Provide a plan sheet(s) of the Project showing proposed improvements overlaid on existing conditions.	Complete	See L3.00-OVERALL SITE PLAN OVERLAY, dated January 18, 2109
5. Provide a detail of the lighting plan (pole details, photometric plans, etc.).	Complete	Reference Musco Lighting Photometric Plans Poles: Plan E3.00 Fixtures: https://www.musco.com/tlcled/
6. Clarify how crumb rubber under the proposed field will be contained and collected.	Complete	The crumb rubber infill is contained within the field limits by way of a cast-in place concrete turf anchor flush curb at the surrounds of the synthetic turf field. Refer to detail 5/L7.01-CONSTRUCTION DETAILS, dated September 17, 2018.
7. Provide details on the concrete pad and fencing for the proposed porta johns.	Complete	The concrete pad is a 6’-6” x 8’-6” x 4” thick slab at finished grade elevation. An 8’ ht. solid screen fence will be provided on three sides of the port a john and constructed of solid wood cedar slat fence with access from the parking lot side. See L5.00-OVERALL GRADING, DRAINAGE & UTILITY PLAN sketch, dated January 18, 2019.
8. The Board stressed the importance of collecting groundwater elevation and soils data in the location of the proposed drainage infiltration system below the parking lot to ensure adequate soils and separation to groundwater. This was also noted by the Wayland Board of Health.	Complete	Should the Conservation Commission require them under an order of conditions for the permit and in compliance with the Massachusetts Stormwater Handbook and Standards, The Town and Weston & Sampson will coordinate and provide additional test pits to ensure adequate soil separation between the stormwater infiltration chamber invert and groundwater.
9. Provide a guardrail at the rounding curve of the access road to the parking lot. Consider widening this entrance road and providing lighting for safety purposes.	Complete	A vehicular rated wood guardrail is provided. See L5.00-OVERALL GRADING, DRAINAGE & UTILITY PLAN sketch, dated January 18, 2019. Entrance is 22 feet



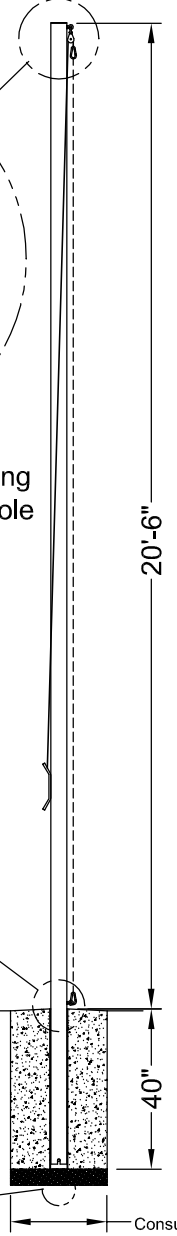
Eyebolt, Swivel Pulley & Spring Snap Anchor Net at Top of Pole



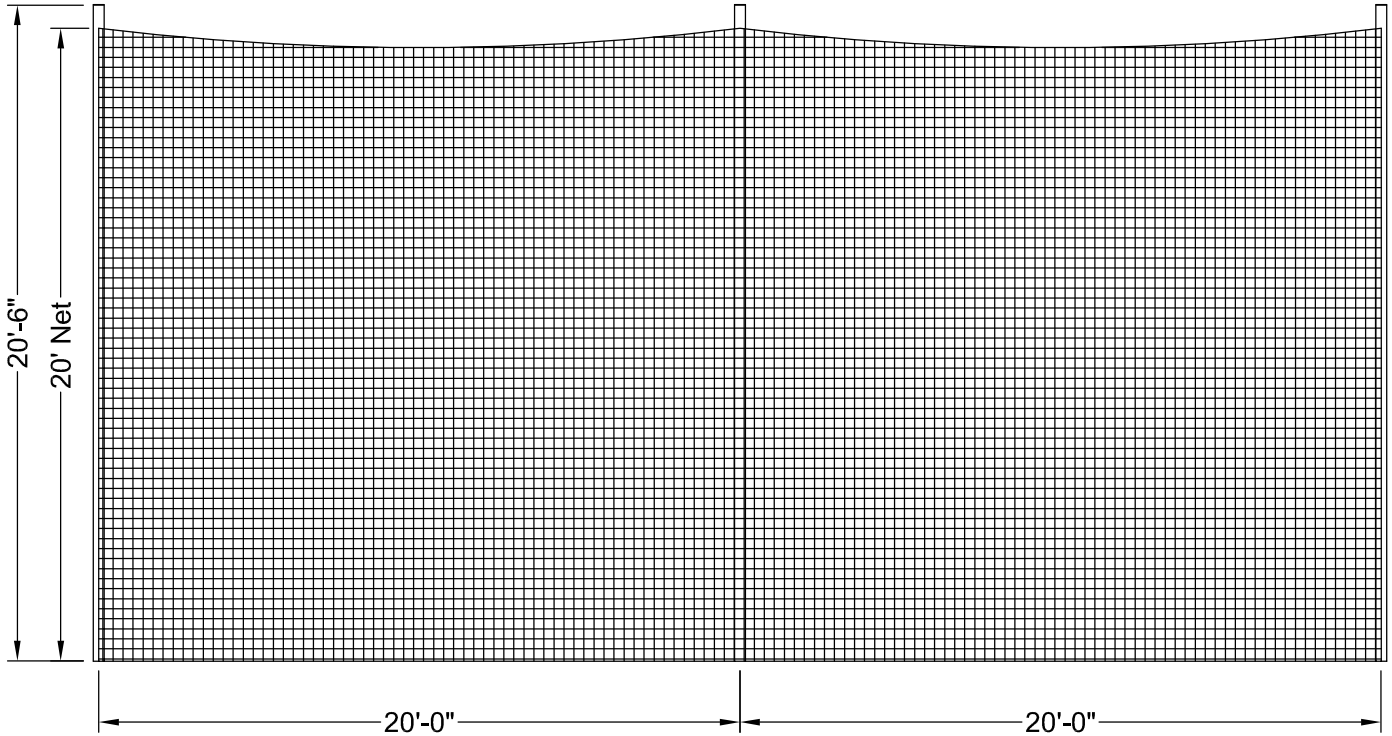
Eyebolt & Spring Snap Anchor Net at Bottom of Pole



Ø1/2" Stainless Stop-Bolt in Aluminum Ground Sleeve



24" Minimum
Consult Local Codes and Project Plans for Exact Requirements



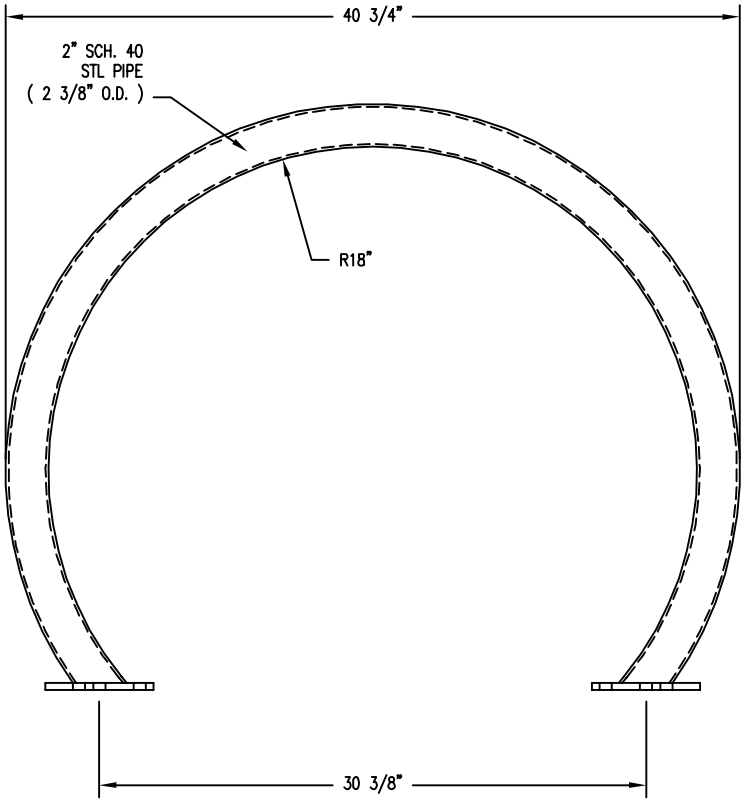
The **SEBS20 STRAIGHT Ball Stop** is sold in units of 20 feet. These nets are custom manufactured to the length required as per the specific project. The poles are 4" diameter 6061-T6 aluminum and have a wall thickness of 0.125". Each pole rests in a 40" deep Aluminum ground sleeve that includes a stainless steel stop-bolt to prevent pole spin. The net is supported by a vinyl coated galvanized steel 7x7 Aircraft Cable at the top and bottom. The 1 3/4" square mesh net has a break strength of 180 lbf and is knotless high tenacity polyproplylene (HTPP), extra UV stabilizers are added for extended service life. The net is anchored straight down to the bottom of the poles with stainless eyebolts, cable and spring snaps. Includes Rope Pulley System for raising and lowering the net; all attaching hardware is stainless steel or marine grade and is provided.

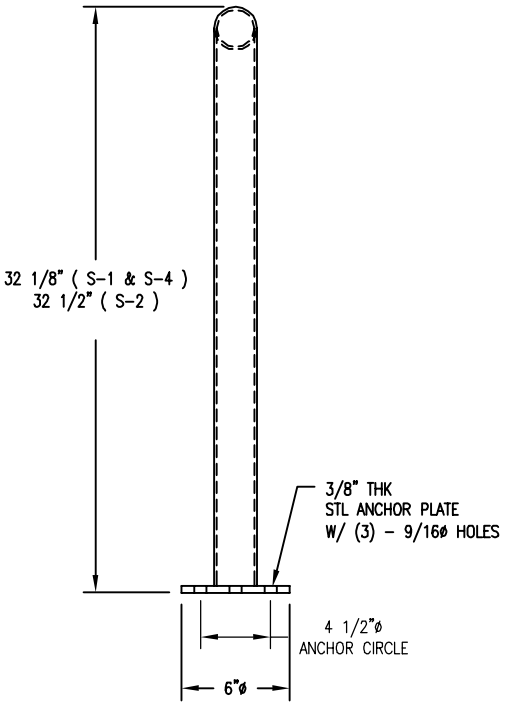
Important Note: Maximum distance between poles may not exceed 20 feet.

SEBS20 - 20' BALL STOP (STRAIGHT)
4" OD ALUMINUM POLES

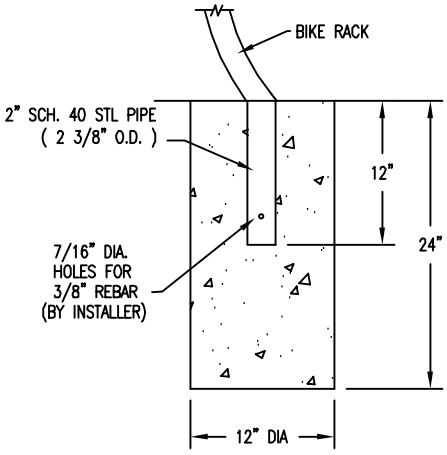
SEBS20_specif-00
04/21/14

SportsEdge®
A Division of ABT, Inc.
P.O. Box 837 * 259 Murdock Road
Troutman, NC 28166
800-334-6057

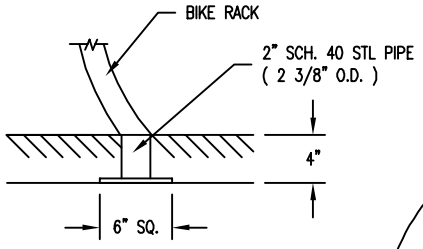




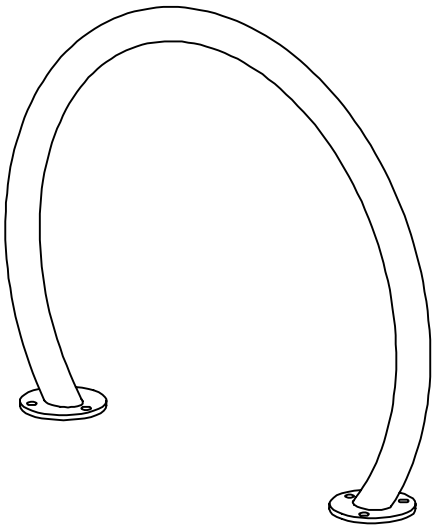
☐ S-2 SURFACE MOUNT



☐ S-1 EMBEDMENT



☐ S-4 SUB FLOOR



NOTE:

1.) ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.

2.) 1/2" X 3 3/4" EXPANSION ANCHOR BOLTS PROVIDED FOR OPTIONS S-2 & S-4.

DuMor, inc.	BIKE RACK	DATE DRAWN : 01/21/15 DRAWN BY : RDH DATE REV. : REV. BY :	REV. A	DRAWING NUMBER 292 SERIES	SHEET 1 OF 2

NOTES:

1.) MOUNT AND ANCHOR AS SPECIFIED.

TOOLS REQ'D

3/4" WRENCH
1/2" MASONRY DRILL BIT
DRILL

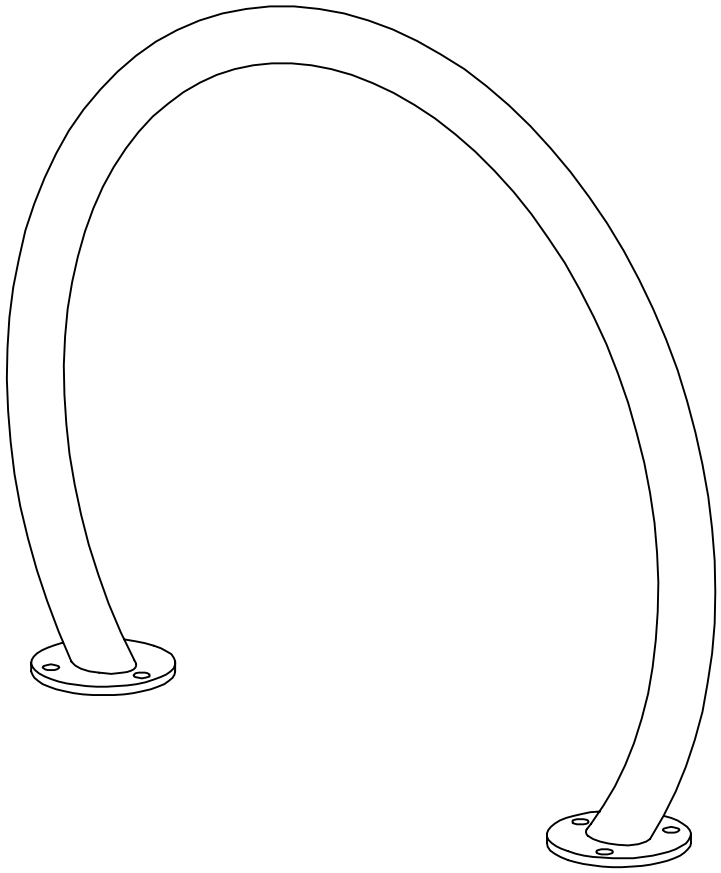
PARTS LIST FOR S-2

ITEM	QTY	PART NO	DESCRIPTION
1	1	0-292-00-01/S-2	36" I.D. BIKE LOOP FOR SURFACE MOUNT

KITS PROVIDED FOR S-2

ITEM	QTY	PART NO	DESCRIPTION
2	2	K-ANC0860-3	1/2" X 3 3/4" SS ANCHOR KIT (3PCS)

(1)



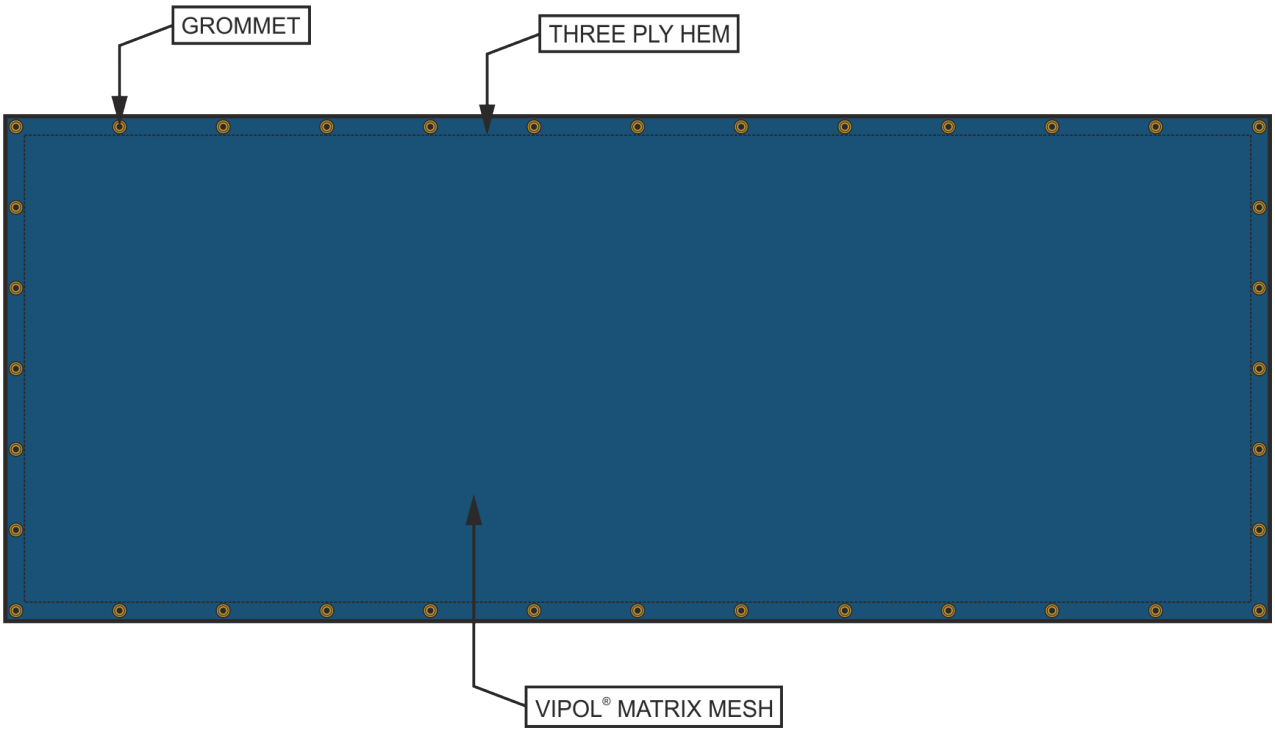
DuMor, inc.	ASSEMBLY INSTRUCTIONS	DATE DRAWN : 01/21/15 DRAWN BY : RDH DATE REV. : REV. BY :	REV. A	DRAWING NUMBER 292 SERIES	SHEET 2 OF 2

TUFFY® Windscreen

Fabric and Construction

Construction:	1000d X 800d Vipol® Matrix Mesh (18 X 14 ends/inch)**.**
Fabric Weight:	10.0 oz. per square yard.
Shading:	78% Shading
Tensile Strength:	375 X 330 pounds
Sewn Hems:	Three-Ply hem with ends and corners sewn finished with two rows of ***lock-stitched*** thread.
Thread:	High heat bonded polyester with UV inhibitors built into yarn.
Grommets:	#2 brass grommets every 12'' on all four sides.
Seams:	6' Screens are solid panel (no seams).
	9' screens are prayer seamed with RF weld and one row of black UV treated ***lock-stitched*** thread at center of screen (4 ½') with grommets every 12''. RF welding takes the place of any reinforcing tapes providing a stronger seam.
Colors:	Midnight Green, Black, Navy and Royal Blue. 16 other colors are available.
Logos:	Yes. (Single or Multi-color)
Warranty:	Pro-rated 60 months on material and workmanship.

Tuff-Shade® Windscreen



SPECIFICATIONS:

Construction: 1,000 denier x 800 denier Vipol® Matrix Mesh (18 x 14 ends/inch).

Fabric Weight: 10oz./sq. yd.

Shading: 78% Shading.

Tensile Strength: 360 x 320 lbs.

Sewn Hems: Three-Ply hem with ends and corners sewn and finished with two rows of lock stitched thread.

Thread: High heat bonded polyester with UV inhibitors built into yarn.

Grommets: #2 brass Grommets every 12".

Seams: 6' Screens are a solid panel with no horizontal seams.
9' Screens are two panels prayer seamed together with a reinforced weld and one row of black UV treated thread at the center of the screen. They include grommets every 12".

Colors: Midnight Green, Black, Navy and Royal Blue. 19 other colors are available.

WAYLAND RECREATION

Warrant Article for ATM 2021

LOKER TURF FIELD

OVERVIEW

1. WHAT IS THE LOKER PROJECT
2. WHY 412 COMMONWEALTH RD?
3. SITE HISTORY
4. FINAL DESIGN & PERMITS
5. THE ISSUES TRAFFIC, ACCESS, EMERGENCY ACCESS, PARKING, FIELD AND LOT LIGHTING
6. DOES WAYLAND NEED IT? NOW?

What is the Loker Turf Project?

A 195′ x 330′ multi-purpose, synthetic turf, athletic field including:

- **all playing surfaces**
- **stormwater drainage**
- **ADA accessible spectator areas**
- **sports lighting**
- **221 trees and shrubs for landscaping**
- **recreational amenities**
- **access driveway**
- **63 space parking area, and**
- **enhancements to the trailhead that provides access to existing network of trails.**

Why 412 Commonwealth Site?

Studies show Wayland needs 1-2 more turf fields OR up to 7-10 grass fields

- Recreation assessed 12+ other sites
- Unique opportunity to develop the vacant Loker Area
- Town already owns the parcel (purchased for $1.7M in 2000)
- Formerly Dow Chemical Company, required clean-up
- Land is designated for Recreation only
- Land has already been surveyed for historical significance
- Voters have already approved design of this site
- Nearest neighbors average over 300 ft away and area is heavily wooded
- Accessible by vehicles and pedestrians
- Abuts existing network of conservation areas and trails

Loker's Long History

YEAR	ARTICLE	RESULTS	INFO
2000 ATM	PURCHASE LAND FROM DOW	PASSED	$1.7 MILLION
2013 ATM	STUDY & DESIGN LOKER SITE 3 GRASS BASEBALL FIELDS	PASSED	CPA FUNDS LATER RETURNED TO CPC
2017 FTM	**LOKER TURF DESIGN**	**PASSED BY ⅔ VOTE**	**DESIGNED FROM 2017 TO FEB 2019**
2018 ATM	LOKER TURF CONSTRUCTION	PASSED OVER	PENDING DESIGN
2018 FALL TM	PETITIONER GRASS FIELD	DID NOT PASS	
2019 BALLOT	**DEBT EXCLUSION FOR TURF**	**PASSED**	
2019 ATM	LOKER TURF CONSTRUCTION	DID NOT PASS BY ⅔	YEA: 894 NAY: 468 (65.6%)
2019 ATM	PETITIONER GRASS FIELD	DID NOT PASS	
2020 ATM	LOKER TURF CONSTRUCTION	PASSED OVER	GLOBAL PANDEMIC
2021 ATM	**LOKER TURF CONSTRUCTION**	**TBD**	**MAY 15, 2021**

Design Stage

TOWN
Town of Wayland Recreation Commission
Recreation Department, Facilities Department

OPM
LeftField, Inc.

PMBC
Permanent Municipal Building Committee

DESIGN & REVIEW
Landscape Architects & Engineers
Weston & Sampson

PENDING PERMITS (EARLY 2021)
ZBA – Special Permit for Lights and Site Plan Approval
Conservation – Chapter 193 & 194

CONSTRUCTION
TBD – if passes at Town Meeting!

THE ISSUES – ASKED AND ANSWERED

- **TRAFFIC**
  - The Town conducted a comprehensive traffic study, it was peer-reviewed.
  - Concluded that the traffic in this area of Wayland is rated D, and will not worsen
  - Plan has 63 parking spaces

- **NOISE & LIGHTS**
  - Loker Turf averages over 300 feet from nearest neighbors.
  - The sports lighting photometric show that light will not reach roadways.

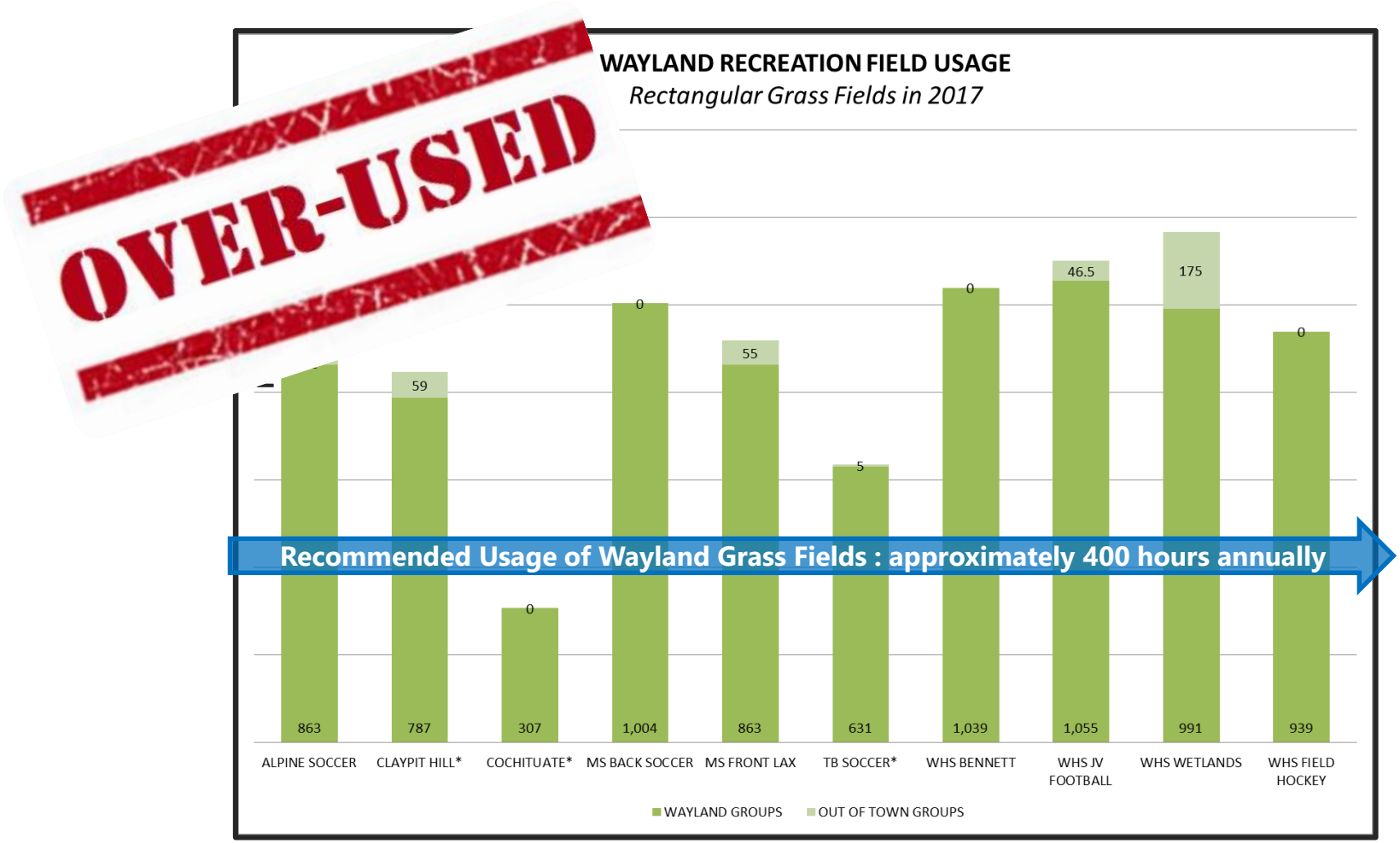
- **TREE REMOVAL**
  - Every tree was inventoried and assessed for size and health conditions
  - Approximately 45 trees in the wetlands area are planned to be removed and require replacement.
  - An additional 218 in upland areas will be removed.
  - Only 14 total trees are considered “large” or more than 24” dbh
  - Construction will include re-planting 221 new trees and shrubs.

- **HISTORICAL SIGNFICANCE OF THE AREA**
  - 2013, Loker Area was surveyed for ceremonially and historically significant areas
  - The field project was designed to avoid the identified per the Historical Commission's directive

Current Recreation Facilities

Fields are deteriorating. Wayland is usually the last town to open each Spring

Need For Loker Turf Field



NEW FIELD TIME CHALLENGES

- School Dismissal times adjusted
    - Causes youth groups to need lighted play areas
- COVID-19 Restrictions (25 players per field)
    - Causes WHS Athletics to use more school fields
    - more hours and days -- to spread out
    - which is displacing youth sports
- Two fields at Claypit Hill School did not survive the drought of 2020
- Youth Soccer, Youth Lacrosse and Youth Baseball already rent fields in other towns because Wayland cannot meet the demand

LOKER TURF FAQ & DATA

https://www.wayland.ma.us/node/39/faq