



Newton Parks, Recreation + Culture Department  
Newton North & Newton South High Schools  
Sports Lighting Projects  
School Committee Meeting  
April 4<sup>th</sup>, 2022

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[www.newtonma.gov/fieldprojects](http://www.newtonma.gov/fieldprojects)

# AGENDA

1

ATHLETIC FIELD CAPITAL PLAN UPDATE – ESTABLISHED NEED AND SOLUTION

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2

TIGER STADIUM SPORTS LIGHTING DESIGN

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3

BRANDEIS RD FIELD SPORTS LIGHTING DESIGN

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# WHY ARE THE HIGH SCHOOLS IMPORTANT IN MEETING THE CITY'S GOALS FOR ATHLETIC FIELDS?

- # OF SPORTS HAS INCREASED OVER TIME (E.G., SOCCER, LACROSSE)
- # OF TEAMS: NSHS, NNHS HAVE MORE TEAMS I.E., VARSITY, JV, AND FRESH. SPORTS
- MINIMIZE STUDENT ATHLETE OFF-SITE TRAVEL FOR PRACTICES AND HOME GAMES
- FIELDS ARE SYNTHETIC TURF, CAN HANDLE ADDITIONAL USE
- ONSITE AMENITIES INCLUDE LOCKERS, REST ROOMS, SHOWER/CHANGING AREA
- PARKING IS AVAILABLE
- ATHLETIC TRAINER ONSITE AFTER SCHOOL
- REDUCES DISPLACEMENT OF YOUTH SPORTS ACTIVITY AT OTHER FIELDS IN THE CITY
- ATHLETICS ARE GREAT FOR SOCIAL-EMOTIONAL HEALTH
- KEEPS NEWTON HS COMPETITIVE WITH OTHER NEARBY COMMUNITIES AND PROVIDE GREATER EQUITY
- BOTH STADIUM FIELDS HAVE FUNDRAISING EFFORTS BY THE SCHOOLS

## NEWTON SOUTH HS BRANDEIS RD FIELD

### ATHLETIC NEEDS

#### ATHLETIC TEAMS & FIELD NEEDS

- 3 GIRLS SOCCER TEAMS (9<sup>TH</sup>, JV, VARSITY)
- 3 BOYS' SOCCER TEAMS(9<sup>TH</sup>, JV, VARSITY)
- 2 FOOTBALL TEAMS (JV, VARSITY)
- 3 FIELD HOCKEY TEAMS (9<sup>TH</sup>, JV, VARSITY)

UP TO 11 PRACTICES/GAMES EACH WEEKDAY TO SCHEDULE

TEAMS ACCESS FIELDS AT 4:15 (AVERAGE FALL SUNSET IS 4:10-4:15)

## NEWTON NORTH HS TIGER STADIUM

### ATHLETIC NEEDS

#### FALL ATHLETIC TEAMS & FIELD NEEDS:

- 3 GIRLS SOCCER TEAMS (9<sup>TH</sup>, JV, VARSITY)
- 3 BOYS' SOCCER TEAMS(9<sup>TH</sup>, JV, VARSITY)
- 3 FOOTBALL TEAMS (9<sup>TH</sup>, JV, VARSITY)
- 3 FIELD HOCKEY TEAMS (9<sup>TH</sup>, JV, VARSITY)
- 2 CROSS COUNTRY TEAMS ON TRACK

#### WINTER ATHLETIC TEAMS AND NEEDS:

- 2 INDOOR TRACK TEAMS, WEATHER PERMITTING

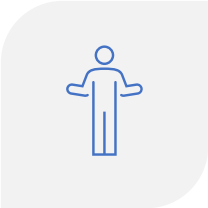
#### SPRING ATHLETIC TEAMS AND NEEDS:

- 3 GIRLS LACROSSE TEAMS(ALL LEVELS)
- 3 BOYS LACROSSE TEAMS(ALL LEVELS)
- 2 OUTDOOR TRACK(VARSITY, JV)

UP TO 12 PRACTICES/GAMES EACH WEEKDAY TO SCHEDULE

**LATER SCHOOL DISMISSAL TIME: SAME NEEDS, LESS TIME**

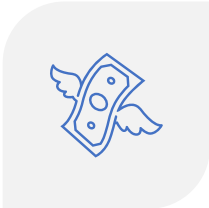
# ISSUES WITH TEMPORARY LIGHTS



USED AT FIELDS WITH  
RECURRING ISSUES



NEED IS INCREASING



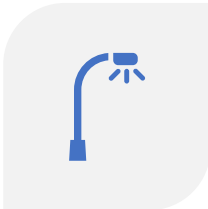
RENTAL COST +  
MAINTENANCE



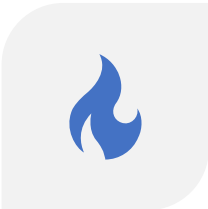
NOISE POLLUTION



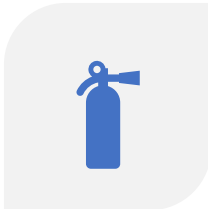
EXHAUST  
POLLUTION



LIGHT POLLUTION



FOSSIL FUEL  
CONSUMPTION



SAFETY



BRANDEIS RD. TEMP. LIGHTS



TIGER STADIUM TEMP. LIGHTS

# PROPOSED LIGHT SYSTEM

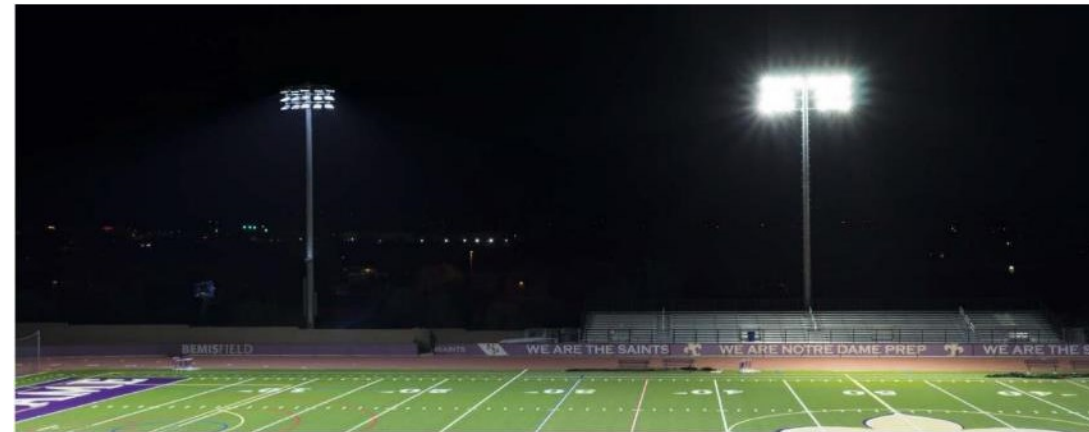
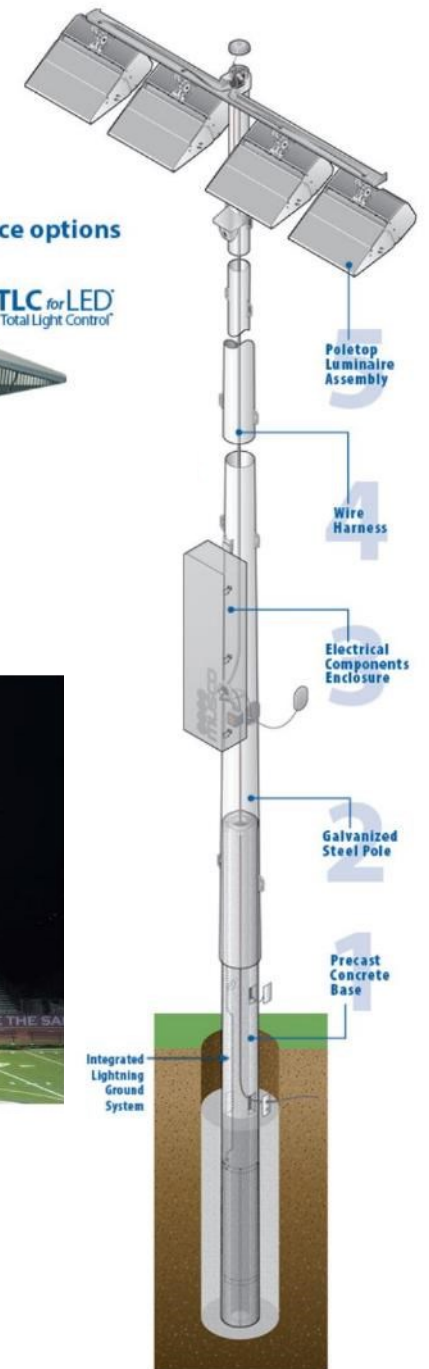
## SITE SPECIFIC LIGHTING DESIGN CONSIDERATIONS:

- ALL DESIGNS VARY BY PROJECT OBJECTIVES
- ADJACENCY AND ABUTTING PROPERTIES + CITY LIGHTING ORDINANCE
- MINIMUM SPILLAGE
- POST-INSTALL LIGHTING ANALYSIS

## OVERARCHING GOALS:

- BEST LIGHT QUALITY WHILE MINIMIZING ABUTTER IMPACTS
  - LIGHT QUALITY
    - UNIFORMITY, INTENSITY, LOW-SPILLAGE
    - ABILITY TO MEET AND EXCEED THE CITY'S LIGHT SPILLAGE ORDINANCE

Two light source options



PROPOSED SPORTS LIGHTING

TYPICAL LED SPORTS LIGHTING

### LIGHT LEVEL

75 horizontal footcandles (750 lux)	75 horizontal footcandles (750 lux)
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### ENERGY CONSUMPTION

103.5 kW	127 kW
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## LIGHTING SYSTEM STANDARDS:

- LIGHT FIXTURES ARE FACTORY AIMED AND SHIELDED TO ILLUMINATE THE PLAYING SURFACE
- INSTALLATION IS LASER AIMED TO CENTER FIELD
- REMOTE ACCESS FOR MAXIMUM FLEXIBILITY IN SCHEDULING, AND ON/OFF
- COST EFFECTIVE SOLUTION FOR MEETING SCHOOL AND CITY ATHLETIC FACILITY AND PROGRAMMING NEEDS
- DESIGNED TO MEET DARK SKIES CERTIFICATION (IDA – INTERNATIONAL DARK SKIES ASSOCIATION)

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## TIGER STADIUM

### SPORTS LIGHTING ANALYSIS

#### WHAT TO KNOW:

- TOTAL OF 4 POLES
- POLES ARE 80 FEET TALL

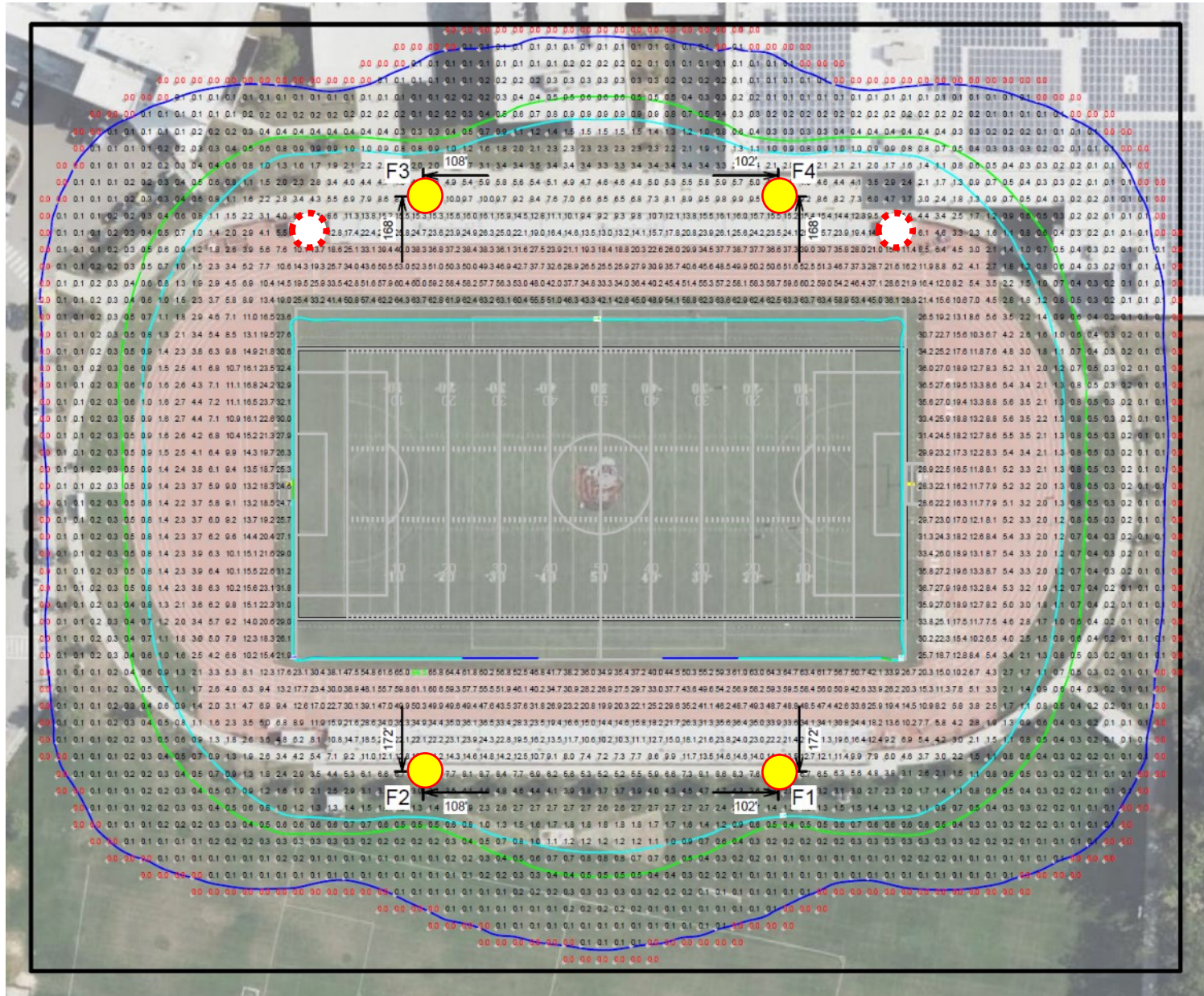
## BRANDEIS RD FIELD

### SPORTS LIGHTING ANALYSIS

#### WHAT TO KNOW:

- TOTAL OF 6 POLES PROPOSED TO REDUCE LATERAL SPILL AND IMPACTS TO ABUTTERS
- POLES ARE 60 AND 70 FEET TALL

# NNHS TIGER STADIUM LIGHT SPILLAGE LEVEL SUMMARY



## WHAT TO KNOW:

- **RED #S** = DARKNESS
- **BLUE & GREEN** = CITY LIGHTING
- **ORDINANCE THRESHOLD**
- **PROPOSED POLE LOCATIONS**
- **ALT. POLE LOCATIONS**



# NSHS BRANDEIS RD FIELD LIGHT SPILLAGE LEVEL SUMMARY

## WHAT TO KNOW:

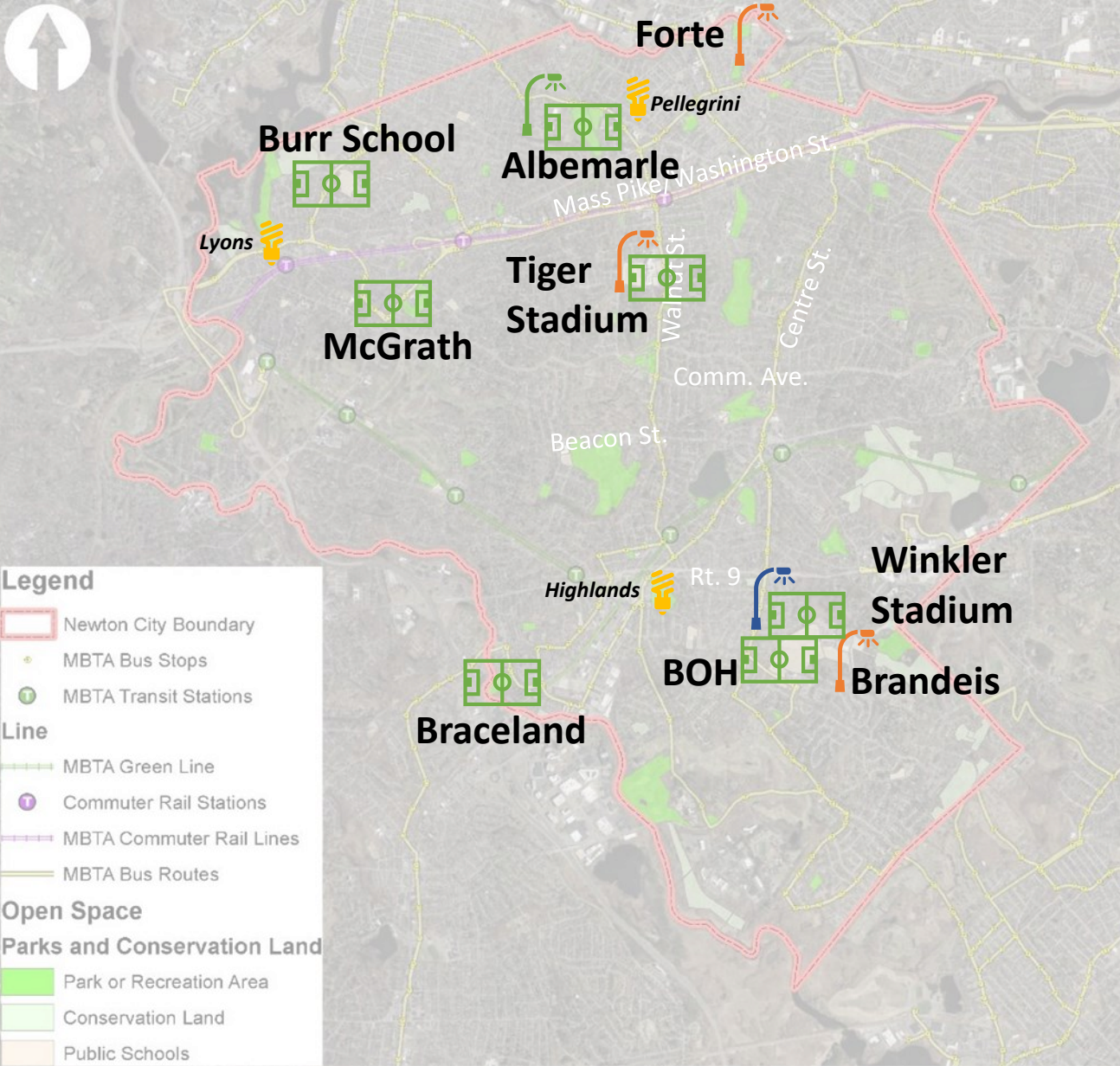
- RED #S = DARKNESS
- PROPOSED POLE LOCATIONS



# Questions and Discussion

For additional questions and input please contact: [athleticfields@newtonma.gov](mailto:athleticfields@newtonma.gov)

For Presentation, please got to [www.newtonma.gov/fieldprojects](http://www.newtonma.gov/fieldprojects)



**5-YEAR ATHLETIC FIELD CAPITAL PROJECTS:**

- ALBEMARLE PARK
- FORTE PARK RELIGHTING
- BURR SCHOOL
- BROWN/OAK HILL FIELDS (BOH)
- MCGRATH PARK
- BOBBY BRACELAND
- NEWTON SOUTH BRANDEIS RD. FIELD LIGHTING
- NEWTON NORTH TIGER STADIUM LIGHTING
- NSHS SYNTHETIC STADIUM + BRANDEIS TURF REPLACEMENT
- NNHS SYNTHETIC TURF REPLACEMENT

TOTAL: 10 PROJECTS

- EXISTING SPORTS FIELD LIGHTING (NOT CURRENTLY ON 5-YEAR PROJECT LIST)
- COMPLETED SPORTS FIELD LIGHTING PROJECTS
- SPORTS FIELD LIGHTING PROJECTS: 2022-2023 CONSTRUCTION
- ATHLETIC FIELD/ PARK PROJECTS – PLANNING PHASE

Newton Parks, Recreation and Culture Department  
**Athletic Fields Capital Improvement Plan**