City of Newburyport Planning Board
Application for SITE PLAN REVIEW

Applicant: City of Newburyport

Address: Parks Department - City Hall - 60 Pleasant Street

Newburyport, MA 01950

Phone: 978.465.4462

Email: lreid@cityofnewburyport.com

Property Address: Bradley Fuller Track & Field - 40 Low Street

Assessor's Map and Lot(s): Map 37, Lot 1 Zoning District: A/C

Book and Page(s) or Cert.#: Book 5570 - Page 679

Type of Project: ☑ Major ☐ Minor ☐ Amendment (attach previous decision)

Project Description: Construction of a new entry drive, gravel parking area, sidewalks, handicapped access, ticket booth and bleacher.

Engineer: Huntress Associates, Inc.

Address: 17 Tewksbury Street

Andover, MA 01810

Phone: 978.470.8882

Email: chris@huntressassociates.com

Owner: City of Newburyport - Parks Dept

Address: City Hall - 60 Pleasant Street

Newburyport, MA 01950

Phone: 978.465.4462

Owner's Signature: _____

CITY OF NEWBURYPORT, MA
ZONING DETERMINATION

APR# 2019-040

Name: City of Newburyport Parks Department

Address: 40 Low Street (Fuller Field) Zoning District(s): R2

Request: Use 306 Park/Playground - Creation of new parking area including 54 parking spaces and new 500 seat grandstand.

☐ **ZONING BOARD REVIEW REQUIRED**

Variance
- ☐ Dimensional Controls (VI)
  - ☐ Lot Area ☐ Open Space ☐ Front Yard
  - ☐ Lot Frontage ☐ Height ☐ Side Yard
  - ☐ Lot Coverage ☐ Lot Width ☐ Rear Yard
- ☐ Parking (VII)
- ☐ Modification

Sign Variance
- ☐ Signs (VIII)
  - ☐ Type ☐ Size
  - ☐ Lighting ☐ Location

Other
- ☐ _____

Special Permit
- ☐ Table of Use Regulations (V.D) #: _____
- ☐ Spacing (VI.D)
- ☐ In-Law Apartment (XIIA)
- ☐ Bonus for Multifamily Developments (XVI)
- ☐ Personal Wireless Communication Services (XX)
- ☐ Demolition Control Overlay District (XXVIII)*
- ☐ Wind Energy Conversion Facilities (XXVI)
- ☐ Other _____

Special Permit for Non-Conformities
- ☐ Extension or Alteration (IX.B.2)
  - ☐ Parking ☐ Rear Yard
  - ☐ Upward Extension ☐ Lot Coverage
  - ☐ Open Space ☐ Side Yard
  - ☐ Height ☐ Lot Frontage
  - ☐ Lot Area ☐ Front Yard
  - ☐ Use
- ☐ Over 500 sf. increase (IX.B.3.c)
- ☐ Plum Island Overlay District (XXI-G-3)
  - ☐ FAR ☐ Height
  - ☐ Lot Coverage ☐ Setbacks
  - ☐ Open Space

☑ **PLANNING BOARD REVIEW REQUIRED**

Special Permit
- ☐ Table of Use Regulations (V-D) #_____
- ☐ One residential structure per lot (VI.C)
- ☐ Open Space Residential Development (XIV)
- ☐ Water Resource Protection District (XIX)
- ☐ Federal Street Overlay District (XXII)
- ☐ Courts and Lanes (XXIII)
- ☐ Waterfront West Overlay District (XXIV)
- ☐ Towle Complex Redev. Overlay District (XXV)
- ☐ Downtown Overlay District (XXVII)*
- ☐ Other _____

Smart Growth District (XXIX)
- ☐ Plan Approval

Special Permit for Non-Conformities
- ☐ Extension or Alteration (IX.B.2)
  - ☐ Parking ☐ Rear Yard
  - ☐ Upward Extension ☐ Lot Coverage
  - ☐ Open Space ☐ Side Yard
  - ☐ Height ☐ Lot Frontage
  - ☐ Lot Area ☐ Front Yard
  - ☐ Use
- ☐ Over 500 sf. increase (IX.B.3.c)

Site Plan Review (XV)
- ☑ Major ☐ Minor

☐ **HISTORICAL COMMISSION REVIEW REQUIRED**
- ☐ Demo. Delay ☐ *Advisory Review

☑ **CONSERVATION COMMISSION REVIEW REQUIRED**

☐ _____

Newburyport Zoning Administrator

6/11/2019
Date

HUNTRESS ASSOCIATES
Landscape Architecture & Land Planning

January 21, 2020

Bonnie Sontag, Chair
Newburyport Planning Board
City of Newburyport
60 Pleasant Street
Newburyport, MA 01950

Re: Bradley Fuller Track & Field, Phase Two – Site Plan Review

Dear Ms. Sontag;

On behalf of the City of Newburyport, we are pleased to provide the attached Site Plan Review application and design plans for the Phase Two Improvements at Bradley Fuller Track & Field located at 40 Low Street. This Site Plan Review Application has been prepared to meet the requirements of the Newburyport Zoning Bylaw Section XV Site Plan Review. The City of Newburyport is also seeking approval under the City of Newburyport Wetlands Protection Ordinance through the Newburyport Conservation Commission. The intent of this application is to present a thoughtful and ecologically based development plan for the improvements to the existing track and field.

This project will renovate the existing parking areas, walkways and storage building, providing improved access and viewing to the existing athletic facilities on site. This project will also provide ADA handicapped accessibility improvements to all site features including the existing track & field, bathrooms and all viewing areas.

The limit of on-site wetland resource areas were flagged in October 2, 2019 by Hughes Environmental. An updated topographic survey, including the wetland delineation, was completed in October 16, 2019 by Everett Chandler with Winter GEC, LLC. The project is anticipated to break ground in the Spring of 2020, and will be 100% complete by September of the same year. The following is a summary of all proposed improvements

Description of Proposed Project:
This project includes improvements to the circulation, drop-off, pedestrian access and handicapped accessibility to the existing track and field facility.

Specifically, the entry from Low Street has been reconfigured to be slightly wider and better align with the proposed parking area. New walkways have been included to provide improved access for users of the park as they arrive from Low Street and gain access to the balance of the property. Within the site, a total of 41 new parking spaces, a new drop-off area and turnaround have also been proposed. The surface of the propose parking is predominantly gravel while the entry and handicapped parking spaces have been improved with bituminous concrete pavement. The site walkways and handicapped curbcuts have been proposed as poured in place concrete

with vertical granite curbing. Crosswalks have been included at the main entry off Low Street and again within the site to provide access to the existing bathroom and storage building.

Improvements to the existing athletic facilities include a new 340 seat elevated bleacher, and an expansion to the existing storage shed to accommodate a seasonal use ticket function.

The grading plan has been developed to encourage infiltration and a new bio-retention / rain garden has been proposed to capture, clean and infiltrate any anticipated increase in run-off from the proposed improvements. All improvements have been designed to minimize cut and fill requirements during construction, and a significant planting plan has been included in the proposed plans.

We are confident that the plans and supporting information we have submitted are in keeping with the general intent of the Newburyport Zoning Bylaw and are also in the best interest of the neighborhood and the City of Newburyport. For these reasons, we request that the Newburyport Planning Board approve the Site Plan Review application for the proposed project.

We appreciate your time and consideration with regard to this matter and we look forward to working with you throughout the approval process. Please feel free to contact my office with any further questions or concerns.

Sincerely,
Huntress Associates, Inc.

Christian C. Huntress, RLA MA #1178
Landscape Architect

CC: Lise Reid, City of Newburyport

100% PERMITTING DOCUMENTS FOR:

Fuller Field - Track & Field Improvements

Phase Two

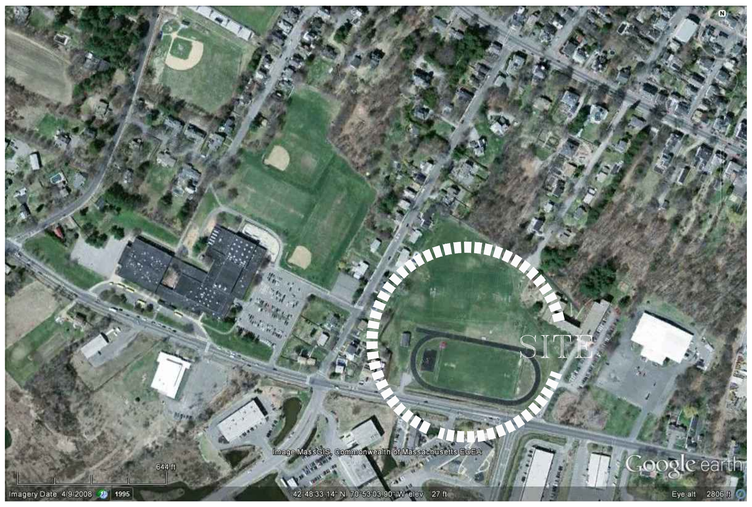
Newburyport, Massachusetts

JANUARY 20, 2020

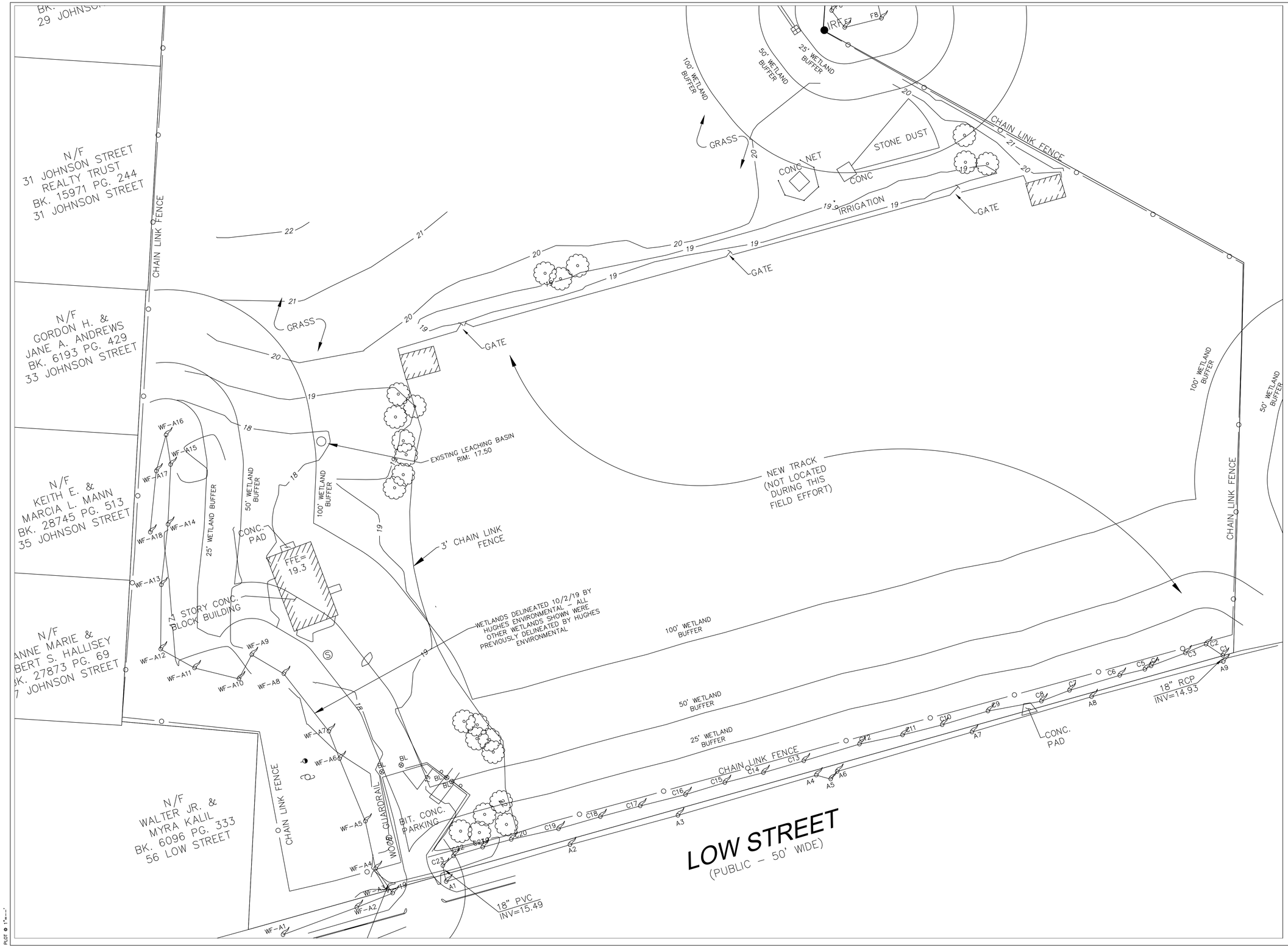
OWNER:
City of Newburyport
60 Pleasant Street
Newburyport, Massachusetts 01950

LIST OF DRAWINGS:

LOCUS:



LANDSCAPE ARCHITECT:
Huntress Associates, Inc.
17 Tewksbury Street
Andover, Massachusetts 01810
978.470.8882



PLOT @ 1"=__'

Huntress Associates, Inc.

Landscape Architecture & Land Planning

17 Tewksbury Street
Andover, Massachusetts 01810
978 470 8882 FAX 978 470 8890

MASSACHUSETTS NO. 1178 REGISTERED LANDSCAPE ARCHITECT

Project:

FULLER FIELD
Track & Field

Newburyport, Massachusetts

Drawing Title:

Existing Conditions

0' 15' 30' 60'

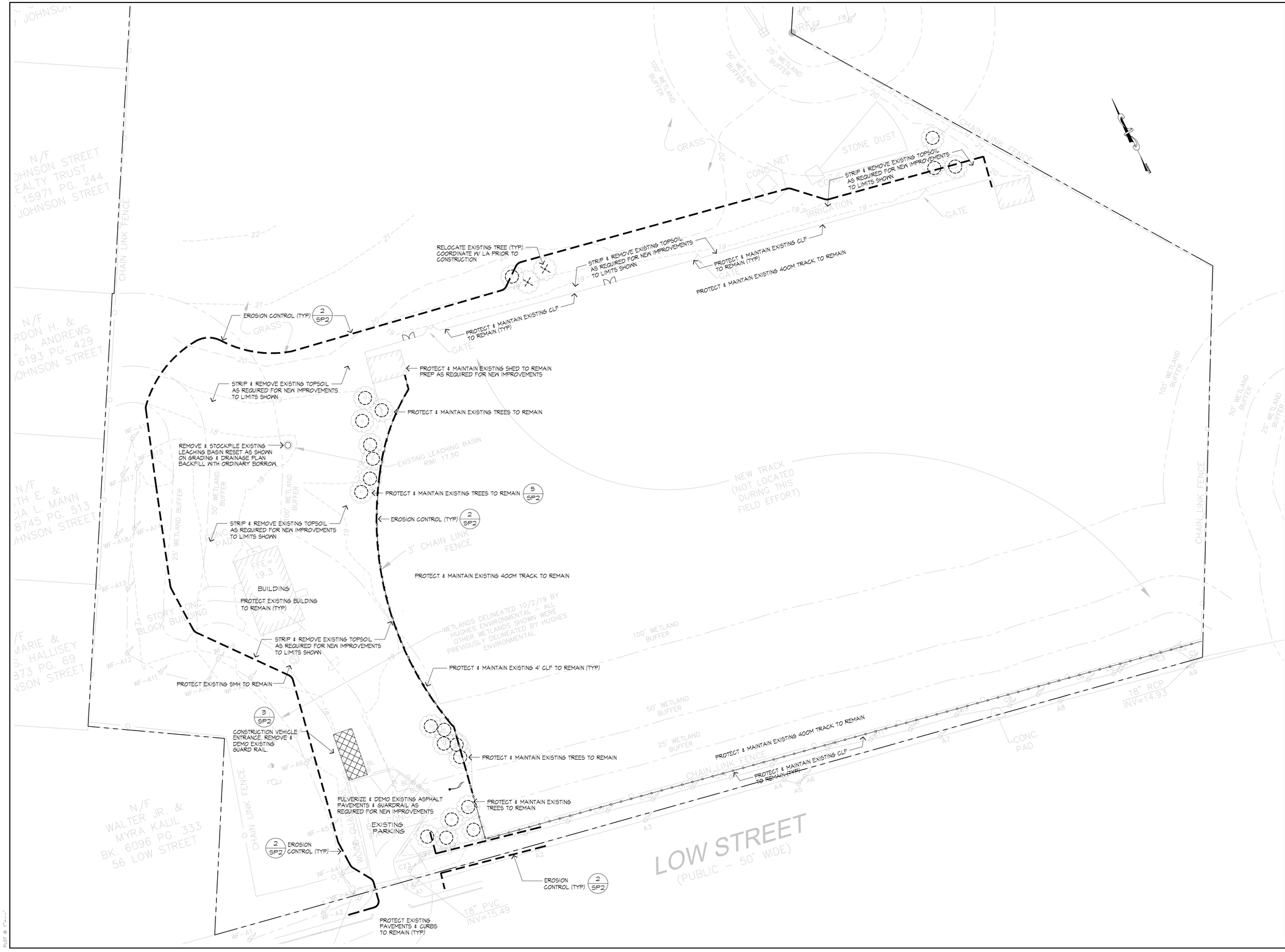
Revision	Date

Scale:	1" = 30'
Date:	01.13.20
Job:	99-107
File:	PR-MP
Drawn:	CCH
Checked:	--

Drawing No.

Ex-1

of 1



PLOT @ 1"=__'

Huntress Associates, Inc.

Landscape Architecture & Land Planning

17 Tewksbury Street
Andover, Massachusetts 01810
978 470 8882 FAX 978 470 8890

COMMONWEALTH OF MASSACHUSETTS
NO. 1178
REGISTERED LANDSCAPE ARCHITECT

Project:

FULLER FIELD
Track & Field

Newburyport, Massachusetts

Drawing Title:

Site Preparation

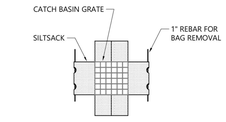
Revision	Date

Scale:	1" = 30'
Date:	4.13.16
Job:	99-107
File:	PR-MP
Drawn:	CCH
Checked:	--

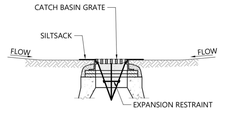
Drawing No.

SP1

of **1**



PLAN VIEW



SECTION VIEW

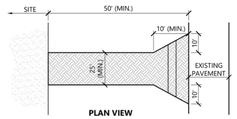
NOTES

1. INSTALL SILTSACK IN ALL CATCH BASINS WHERE INDICATED ON THE PLAN BEFORE COMMENCING WORK OR IN PAVED AREAS AFTER BINDER COURSE IS PLACED AND HAY BALES HAVE BEEN REMOVED.
2. GRATE TO BE PLACED OVER SILTSACK.
3. SILTSACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED. MAINTAIN UNTIL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED

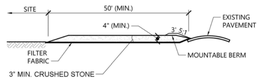
1 CATCH BASIN FILTER DETAIL

SP-CBFIL

SCALE: 1/8"=1'-0"



PLAN VIEW



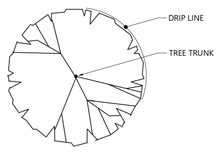
CROSS-SECTION

NOTES

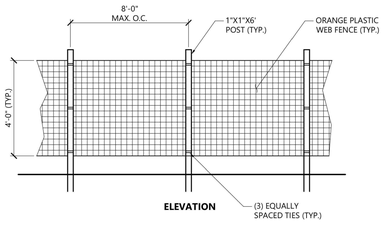
1. EXIT WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
2. THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.
3. STABILIZED CONSTRUCTION EXIT SHALL BE REMOVED PRIOR TO FINAL FINISH MATERIALS BEING INSTALLED.
4. CONTRACTOR TO LOCATE IN THE FIELD.

3 CONSTRUCTION VEHICLE ENTRANCE

SP-HBSL2



PLAN



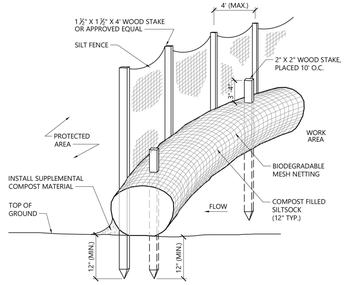
ELEVATION

NOTES

1. INSTALL TREE PROTECTION FENCE AT THE DRIP LINE OF EXISTING TREES TO REMAIN.

5 TREE PROTECTION

SCALE: N.T.S.



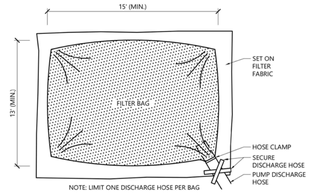
NOTES

1. SILTSOCK SHALL BE FILTREXX SILTSOXX, OR APPROVED EQUAL.
2. SILTSOCKS SHALL OVERLAP A MINIMUM OF 12 INCHES.
3. SILTSOCK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.
4. COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.
5. IF NON BIODEGRADABLE NETTING IS USED THE NETTING SHALL BE COLLECTED AND DISPOSED OF OFFSITE.

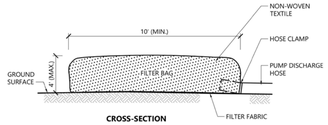
2 MULCH SOCK WITH SILTATION BARRIER

SCALE: N.T.S.

SP-HBSL2



PLAN VIEW



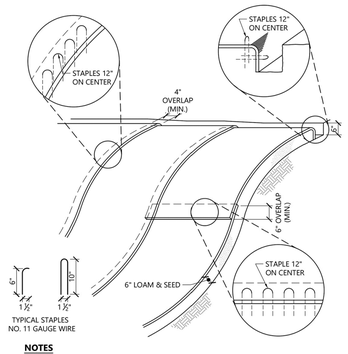
CROSS-SECTION

NOTES

1. BAG TO BE USED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

4 DEWATER - FILTER SACK

SCALE: N.T.S.



NOTES

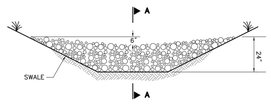
1. BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A 6" DEEP TRENCH BACKFILL AND COMPACT TRENCH AFTER STAPLING.
2. ROLL THE BLANKET DOWN THE SWALE IN THE DIRECTION OF THE WATER FLOW.
3. THE EDGES OF BLANKETS MUST BE STAPLED WITH APPROX. 4 INCH OVERLAP WHERE 2 OR MORE STRIP WIDTHS ARE REQUIRED.
4. WHEN BLANKETS MUST BE SPLICED DOWN THE SWALE, PLACE UPPER BLANKET END OVER LOWER END WITH 6 INCH (MIN.) OVERLAP AND STAPLE BOTH TOGETHER.
5. METHOD OF INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.
6. EROSION CONTROL BLANKETS SHALL BE USED IN ALL AREAS WHERE SLOPES EXCEED 3:1.

6 EROSION CONTROL BLANKETS

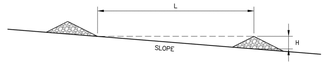
SCALE: N.T.S.

SITE PREPARATION NOTES

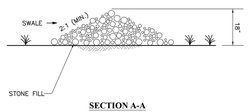
1. EXISTING CONDITIONS INFORMATION IS REPRODUCED FROM THE SURVEY PREPARED BY DESIGN CONSULTANTS, INC OF STONEHAM, MASSACHUSETTS - DATED DECEMBER 1, 2015.
2. WITHIN THE LIMIT OF THE WORK LINE AS NOTED ON THE SITE PREPARATION PLANS, REMOVE AND DISCARD ALL CONCRETE PAVEMENT, BITUMINOUS CONCRETE PAVEMENT, BRICK PAVEMENT, TOP SOIL, MULCH, TRASH, DEAD TREES AND STUMPS, SHRUBBERY, CHAIN LINK FENCE POSTS, RAILS, FABRIC, GATES, FOOTINGS AND ALL APPURTENANCES, BOLLARDS, POSTS, CONCRETE FOOTINGS AND FOUNDATIONS, WALLS AND CURBS UNLESS OTHERWISE NOTED.
3. THE ARCHITECT SHALL BE CONSULTED AND WILL REVIEW THE WORK ON SITE WITH THE CONTRACTOR BEFORE ANY WORK SHALL COMMENCE.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE ARCHITECT PRIOR TO STARTING WORK.
5. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING CONDITIONS TO REMAIN THAT ARE DUE TO CONTRACTOR OPERATIONS AND WHICH ARE INSIDE OR OUTSIDE THE LIMIT OF DEMOLITION.
6. ALL ITEMS TO BE REMOVED THAT ARE NOT STOCKPILED FOR LATER REUSE ON THE PROJECT OR DELIVERED TO THE OWNER SHALL BE LEGALLY DISPOSED OF OFF SITE BY THE CONTRACTOR.
7. THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE DIAGRAMMATIC ONLY. THE CONTRACTOR SHALL CONTACT DIGSAFE AND THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANIES TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS EFFORTS OF THE DEMOLITION WITH ALL TRADES.
9. THE CONTRACTOR SHALL MAINTAIN OR ADJUST TO NEW FINISH GRADE AS NECESSARY ALL UTILITY AND SITE STRUCTURES SUCH AS LIGHT POLES, SIGN POLES, MAN HOLES, CATCH BASINS, HAND HOLES, WATER AND GAS GATES, HYDRANTS, ETC., FROM MAINTAINED UTILITY AND SITE SYSTEMS UNLESS OTHERWISE NOTED OR DIRECTED BY THE OWNER'S REPRESENTATIVE.
10. THE CONTRACTOR SHALL COORDINATE ALL ADJUSTMENT OR ABANDONMENT OF UTILITIES WITH THE RESPECTIVE UTILITY COMPANY.
11. NO STOCKPILING OF MATERIALS OR CONSTRUCTION EQUIPMENT ALLOWED WITH THE 50' WETLAND BUFFER LIMITS.
12. THE CONTRACTOR SHALL DEMO AND CAP EXISTING IRRIGATION SYSTEM.
13. THE CONTRACTOR SHALL HYDRO-JET & CLEAN ALL DRAINAGE LINES TO REMAIN WITHIN LIMIT OF WORK.
14. PROVIDE, INSTALL & MAINTAIN SILT SACKS IN ALL CATCH BASINS TO REMAIN WITHIN LIMIT OF WORK.



ELEVATION



CHECK DAM SPACING



SECTION A-A

Notes:

1. STONE CHECKDAMS ARE NOT SPECIFICALLY SHOWN ON THE PLANS HOWEVER ARE AVAILABLE TO THE CONTRACTOR AS A POTENTIAL MEANS OF EROSION CONTROL DURING CONSTRUCTION.
2. THE CHECK DAMS ARE TO BE TEMPORARY UNLESS OTHERWISE NOTED ON THE PLANS. TEMPORARY CHECK DAMS SHALL BE REMOVED UPON STABILIZATION OF UPSTREAM TRIBUTARY RUNOFF AREAS.
3. THE MAXIMUM SPACING OF THE TEMPORARY CHECK DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM CHECK DAM IS AT THE SAME ELEVATION AS THE OVERFLOW ELEVATION OF THE DOWNSTREAM CHECK DAM, HOWEVER MINIMUM SPACING (L) MAY BE 50 FEET.
4. STONE CHECK DAMS SHOULD BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED STORMS AND ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY.
5. SEDIMENT SHOULD BE REMOVED FROM BEHIND THE CHECK DAMS WHEN IT HAS ACCUMULATED TO ONE HALF OF THE ORIGINAL HEIGHT OF THE CHECK DAM.
6. WHEN CHECK DAMS ARE REMOVED, THE DISTURBED AREA SHOULD BE BROUGHT TO THE EXISTING CHANNEL GRADE, SEEDED AND MULCHED WITH STRAW.

7 EROSION CONTROL - CHECK DAMS

SCALE: N.T.S.

Huntress Associates, Inc.

Landscape Architecture & Land Planning

17 Tewksbury Street
Andover, Massachusetts 01810
978 470 8882 FAX 978 470 8890

Project:

FULLER FIELD
Track & Field

Newburyport, Massachusetts

Drawing Title:

Site Preparation

Revision	Date

Scale:	AS NOTED
Date:	01.13.20
Job:	99-107
File:	PR-MP
Drawn:	CGH
Checked:	--

Drawing No.

SP2

of **2**

PLOT @ 1"=---'

LAYOUT AND MATERIAL NOTES

1. TOPOGRAPHIC PLAN OF LAND IN NEWBURYPORT, MASSACHUSETTS, PREPARED BY DESIGN CONSULTANTS INC, OF SOMERVILLE, MASSACHUSETTS, DATED AUGUST 13, 2013
2. PRIOR TO THE START OF ANY EXCAVATION FOR THE PROJECT BOTH ON AND OFF SITE, THE CONTRACTOR SHALL NOTIFY DIGSAFE AND BE PROVIDED WITH A DIGSAFE NUMBER INDICATING THAT ALL EXISTING UTILITIES HAVE BEEN LOCATED AND MARKED
3. CONTRACTOR(S) SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND SITE CONDITIONS PRIOR TO BIDDING AND PRIOR TO CONSTRUCTION.
4. ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS, AND SITE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT FOR CLARIFICATION AND RESOLUTION PRIOR TO BIDDING OR CONSTRUCTION.
5. ALL DIMENSIONS ARE TAKEN TO THE FIELD CENTERLINE, EXCEPT WHERE OTHERWISE NOTED.
6. SCREENED IMAGES SHOW EXISTING CONDITIONS. WHERE EXISTING CONDITIONS LIE UNDER/OR ARE IMPINGED UPON BY PROPOSED BUILDINGS AND/OR SITE ELEMENTS, THE EXISTING CONDITION WILL BE REMOVED, ABANDONED AND/OR CAPPED OR DEMOLISHED AS REQUIRED.

BUILDING CODE REQUIREMENTS - BATHROOMS

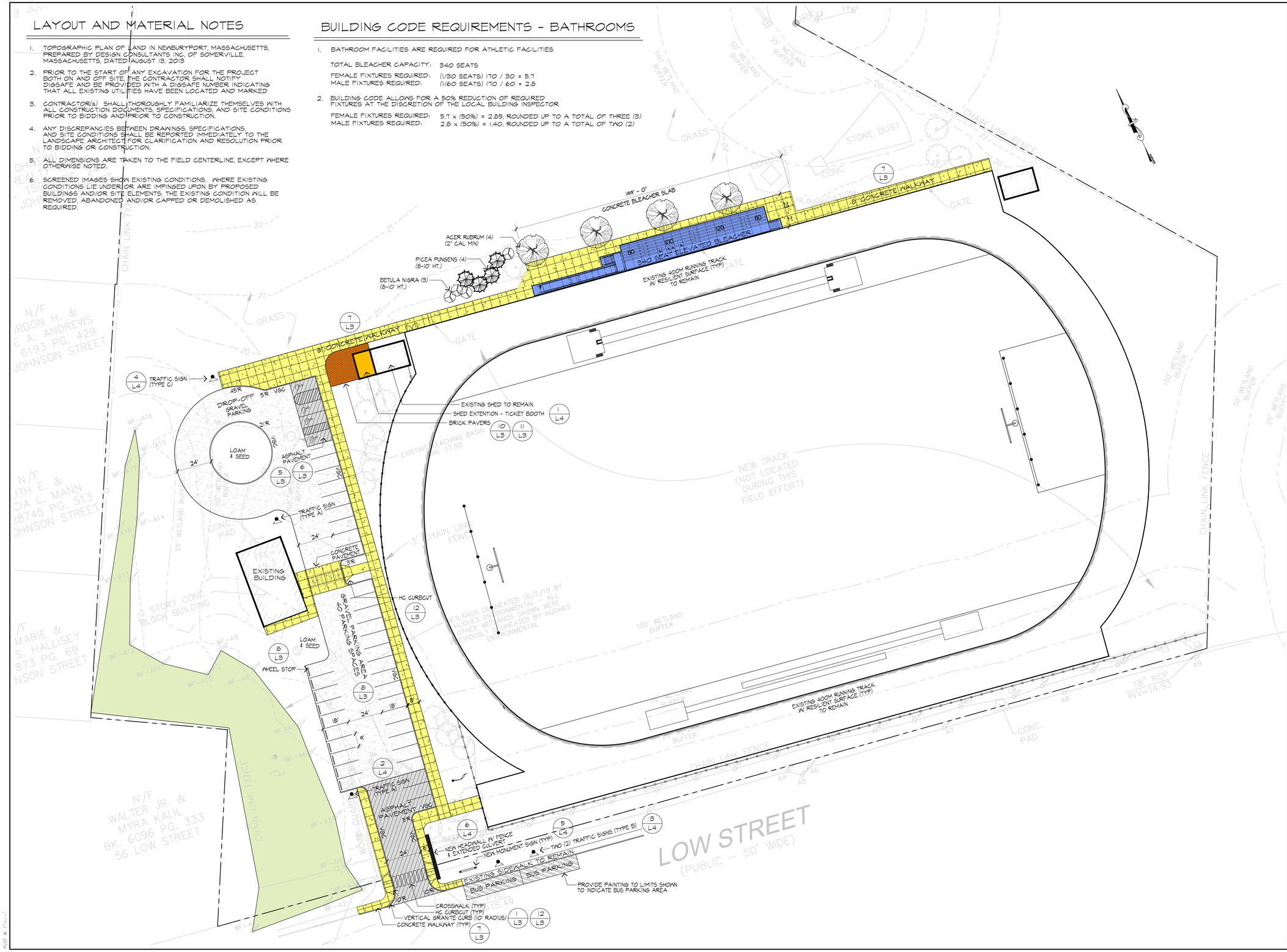
1. BATHROOM FACILITIES ARE REQUIRED FOR ATHLETIC FACILITIES

   TOTAL BLEACHER CAPACITY: 340 SEATS

   FEMALE FIXTURES REQUIRED: (1/30 SEATS) 170 / 30 = 5.7
   MALE FIXTURES REQUIRED: (1/60 SEATS) 170 / 60 = 2.8

2. BUILDING CODE ALLOWS FOR A 50% REDUCTION OF REQUIRED FIXTURES AT THE DISCRETION OF THE LOCAL BUILDING INSPECTOR

   FEMALE FIXTURES REQUIRED: 5.7 x (50%) = 2.85, ROUNDED UP TO A TOTAL OF THREE (3)
   MALE FIXTURES REQUIRED: 2.8 x (50%) = 1.40, ROUNDED UP TO A TOTAL OF TWO (2)



Huntress Associates, Inc.

Landscape Architecture & Land Planning

17 Tewksbury Street
Andover, Massachusetts 01810
978 470 8882 FAX 978 470 8890

COMMONWEALTH OF MASSACHUSETTS — NO. 1178 — REGISTERED LANDSCAPE ARCHITECT

Project:

FULLER FIELD
Track & Field
Phase Two

Newburyport, Massachusetts

Drawing Title:

Layout & Materials

0' 15' 30' 60'

Revision	Date

Scale:	1" = 30'
Date:	01.20.20
Job:	99-107
File:	PR-MP
Drawn:	CGH
Checked:	--

Drawing No.

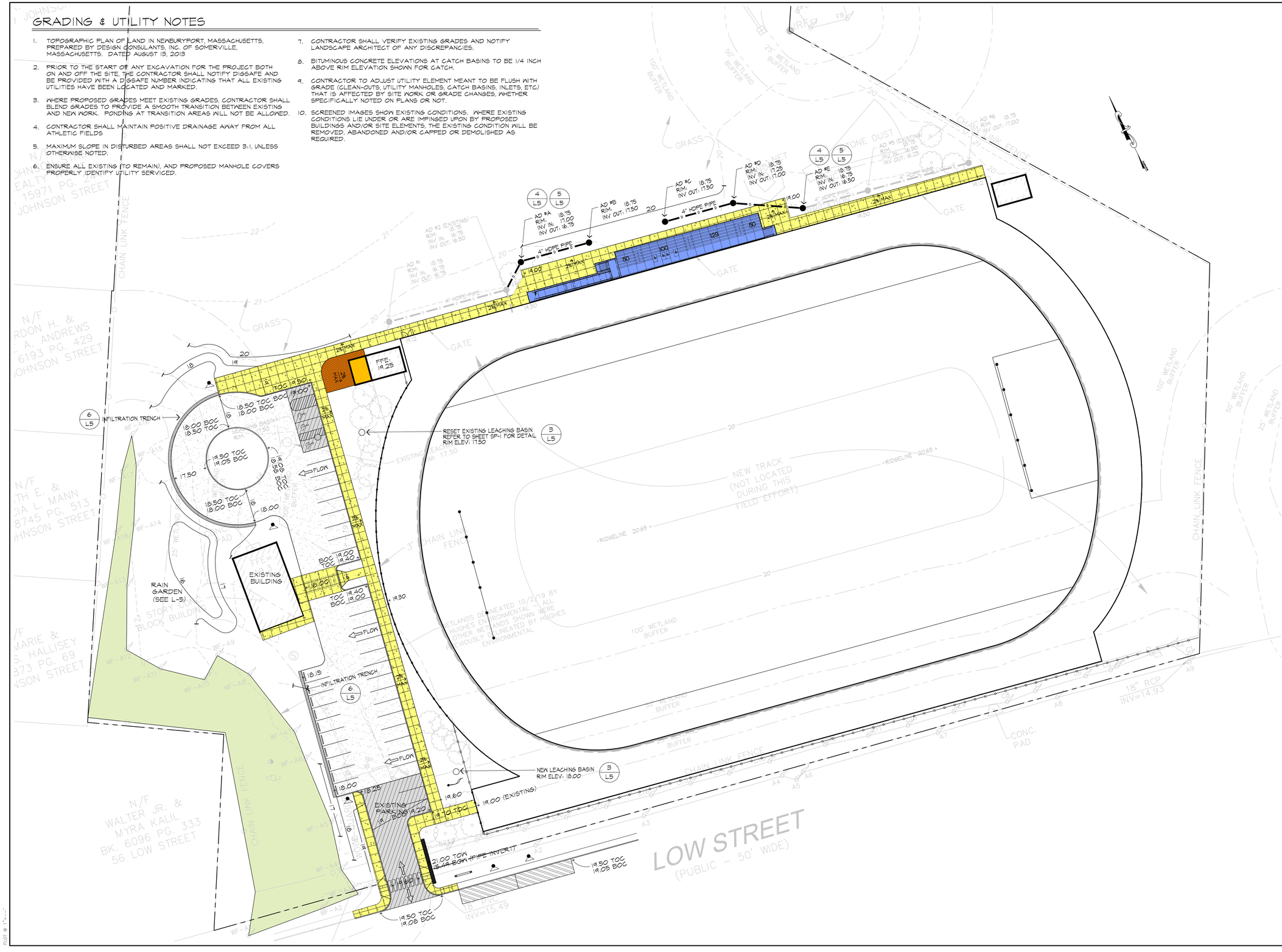
L-1

of **6**

PLOT @ 1"=--'

GRADING & UTILITY NOTES

1. TOPOGRAPHIC PLAN OF LAND IN NEWBURYPORT, MASSACHUSETTS, PREPARED BY DESIGN CONSULTANTS, INC. OF SOMERVILLE, MASSACHUSETTS. DATED AUGUST 13, 2019
2. PRIOR TO THE START OF ANY EXCAVATION FOR THE PROJECT BOTH ON AND OFF THE SITE, THE CONTRACTOR SHALL NOTIFY DIGSAFE AND BE PROVIDED WITH A DIGSAFE NUMBER INDICATING THAT ALL EXISTING UTILITIES HAVE BEEN LOCATED AND MARKED.
3. WHERE PROPOSED GRADES MEET EXISTING GRADES, CONTRACTOR SHALL BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND NEW WORK. PONDING AT TRANSITION AREAS WILL NOT BE ALLOWED.
4. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL ATHLETIC FIELDS
5. MAXIMUM SLOPE IN DISTURBED AREAS SHALL NOT EXCEED 3:1, UNLESS OTHERWISE NOTED.
6. ENSURE ALL EXISTING (TO REMAIN), AND PROPOSED MANHOLE COVERS PROPERLY IDENTIFY UTILITY SERVICED.
7. CONTRACTOR SHALL VERIFY EXISTING GRADES AND NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
8. BITUMINOUS CONCRETE ELEVATIONS AT CATCH BASINS TO BE 1/4 INCH ABOVE RIM ELEVATION SHOWN FOR CATCH.
9. CONTRACTOR TO ADJUST UTILITY ELEMENT MEANT TO BE FLUSH WITH GRADE (CLEAN-OUTS, UTILITY MANHOLES, CATCH BASINS, INLETS, ETC) THAT IS AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT.
10. SCREENED IMAGES SHOW EXISTING CONDITIONS. WHERE EXISTING CONDITIONS LIE UNDER OR ARE IMPINGED UPON BY PROPOSED BUILDINGS AND/OR SITE ELEMENTS, THE EXISTING CONDITION WILL BE REMOVED, ABANDONED AND/OR CAPPED OR DEMOLISHED AS REQUIRED.



Huntress Associates, Inc.

Landscape Architecture & Land Planning

17 Tewksbury Street
Andover, Massachusetts 01810
978 470 8882 FAX 978 470 8890

MASSACHUSETTS REGISTERED LANDSCAPE ARCHITECT NO. 1178

Project:

FULLER FIELD
Track & Field
Phase Two

Newburyport, Massachusetts

Drawing Title:

Grading & Drainage

0' 15' 30' 60'

Revision	Date

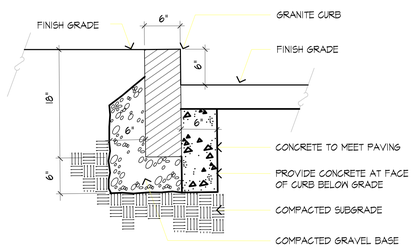
Scale:	1" = 30'
Date:	01.13.20
Job:	99-107
File:	PR-MP
Drawn:	CCH
Checked:	--

Drawing No.

L-2

of **6**

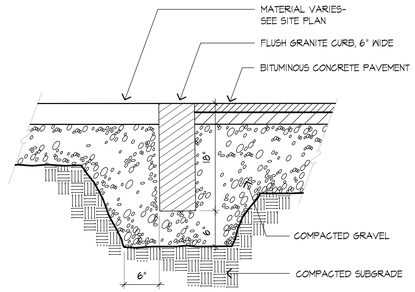
PLOT @ 1"=__'



1 VERTICAL GRANITE CURB

SCALE: 1" = 1'-0"

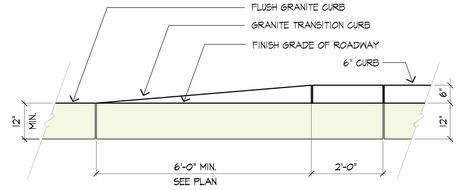
C-GRANIT



2 FLUSH GRANITE CURB

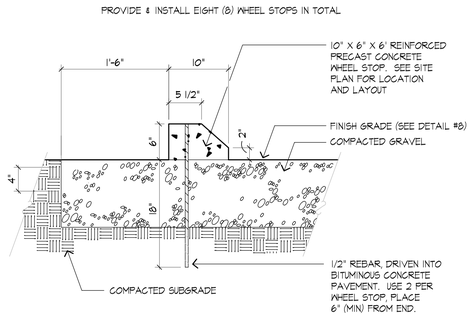
SCALE: 1" = 1'-0"

C-FLSHG 94068



3 TRANSITION CURB

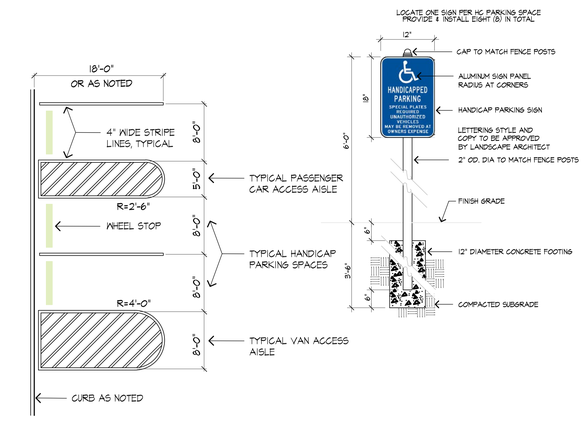
SCALE: 1/2" = 1'-0"



4 PRECAST CONCRETE WHEEL STOP

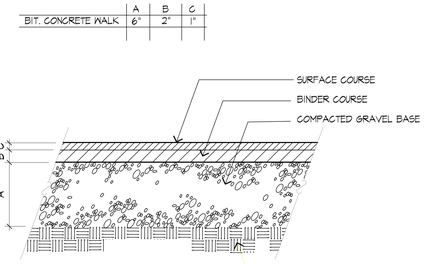
SCALE: N.T.S.

C-WHSTOP



5 HANDICAP PARKING SPACE AND SIGN DETAIL

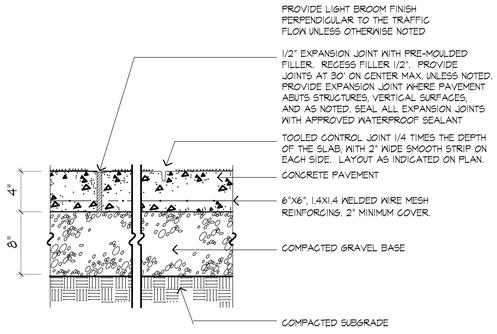
SCALE: 1" = 10'-0"



6 BITUMINOUS CONCRETE PAVEMENT

SCALE: N.T.S.

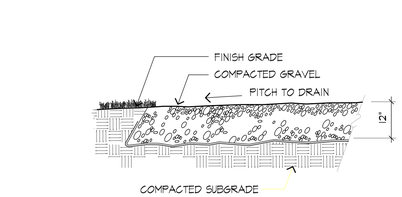
PA-BTC



7 CONCRETE PAVEMENT

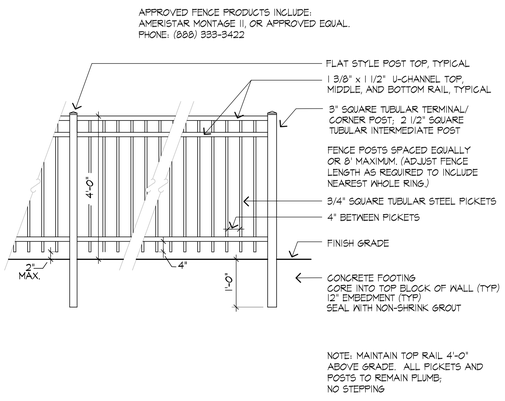
SCALE: N.T.S.

PA-CONC



8 GRAVEL PARKING SECTION

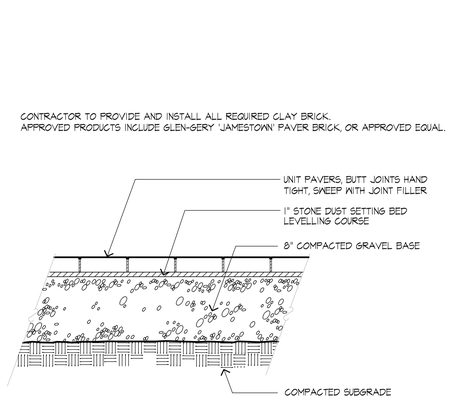
SCALE: 1" = 1'-0"



9 4' HIGH METAL PICKET FENCE

SCALE: 1/2" = 1'-0"

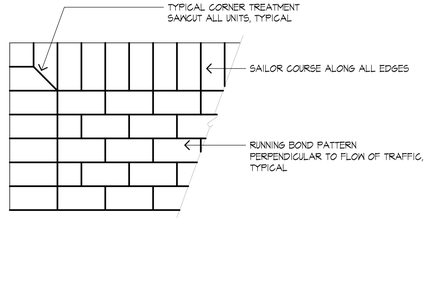
FE-4MF 94089



10 BRICK PAVERS

SCALE: N.T.S.

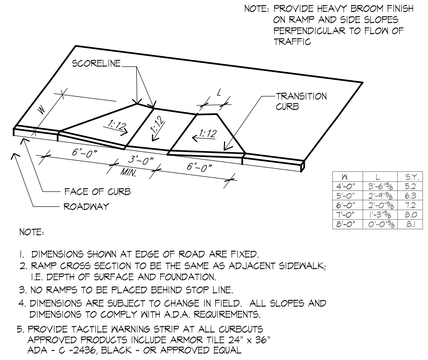
PA-UNIT



11 UNIT PAVER PATTERN- PLAN VIEW

SCALE: 1" = 1'-0"

PA-PATN



W	L	S.Y.
4'-0"	3'-6"	5.2
5'-0"	2'-9"	6.3
6'-0"	2'-0"	7.2
7'-0"	1'-3"	8.0
8'-0"	0'-0"	8.1

NOTE:

1. DIMENSIONS SHOWN AT EDGE OF ROAD ARE FIXED.
2. RAMP CROSS SECTION TO BE THE SAME AS ADJACENT SIDEWALK; I.E. DEPTH OF SURFACE AND FOUNDATION.
3. NO RAMPS TO BE PLACED BEHIND STOP LINE.
4. DIMENSIONS ARE SUBJECT TO CHANGE IN FIELD. ALL SLOPES AND DIMENSIONS TO COMPLY WITH A.D.A. REQUIREMENTS.
5. PROVIDE TACTILE WARNING STRIP AT ALL CURBCUTS APPROVED PRODUCTS INCLUDE ARMOR TILE 24" x 36" ADA - C -2436, BLACK - OR APPROVED EQUAL

12 CURB CUT AND RAMP

SCALE: N.T.S.

Huntress Associates, Inc.

Landscape Architecture & Land Planning

17 Tewksbury Street
Andover, Massachusetts 01810
978 470 8882 FAX 978 470 8890

COMMONWEALTH OF MASSACHUSETTS — NO. 1178 — REGISTERED LANDSCAPE ARCHITECT

Project:

FULLER FIELD
Track & Field
Phase Two

Newburyport, Massachusetts

Drawing Title:

Track & Field Construction Details

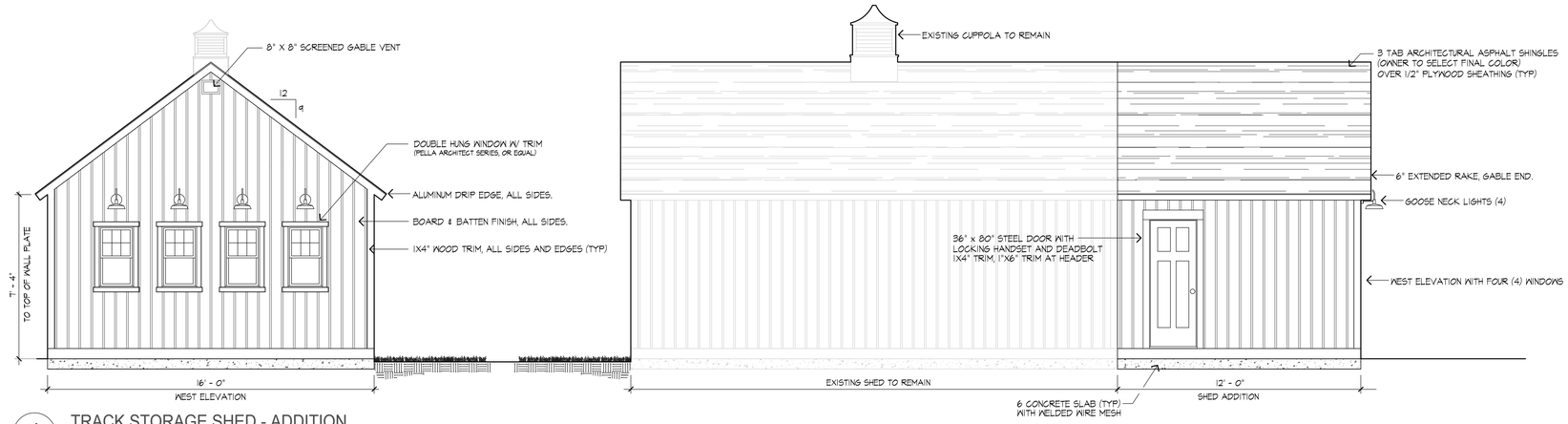
Revision	Date

Scale:	AS NOTED
Date:	01.13.20
Job:	99-107
File:	PR-MP
Drawn:	CCH
Checked:	--

Drawing No.

L-3

of **6**

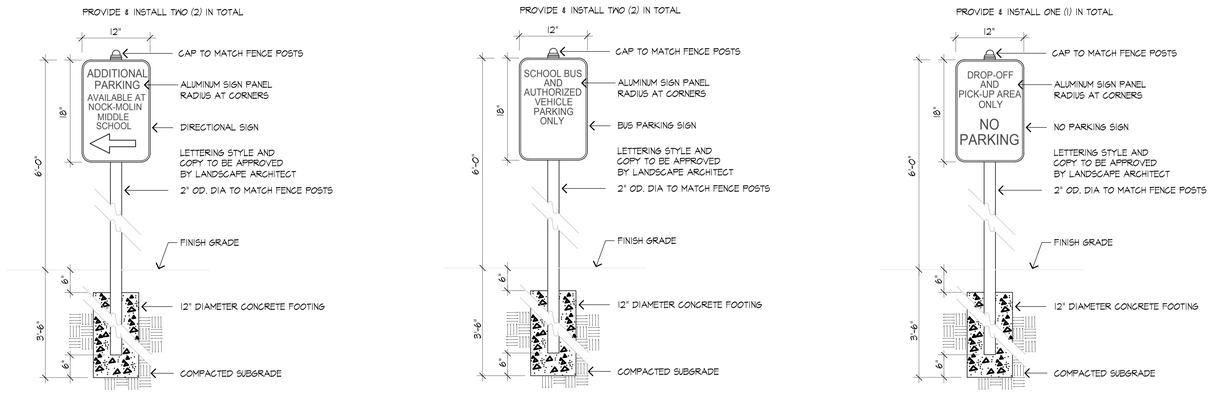


STORAGE BUILDING NOTES:

1. GC RESPONSIBLE FOR ANY REQUIRED BUILDING PERMIT.
2. CONCRETE SLAB TO SERVE AS FLOOR (TYP)
3. 2"X4" WALL CONSTRUCTION 16" O.C., DOUBLE TOP PLATE
4. 2X6" ROOF RAFTERS 16" O.C.
5. ALL INTERIOR WALLS TO RECIEVE 5/8" PLYWOOD
6. EXTERIOR COLORS:
   BOARD & BATTEN - COLOR TO MATCH EXISTING
   TRIM - COLOR TO MATCH EXISTING
   DOORS & WINDOWS - COLOR TO MATCH TRIM
7. ALL EXTERIOR PAINTED SURFACES TO RECEIVE PRIMER AND TWO (2) COATS OF PAINT, AS RECOMMENDED BY MANUFACTURER. BOTH EXISTING AND PROPSOED STRUCTURE TO BE PAINTED.
8. PROVIDE PT WOOD RAMP, 6'X6'X FULL WIDTH OF GARAGE DOOR.
9. COORDINATE SIZE OF CUPOLAS PRIOR TO FABRICATION.
10. PROVIDE & INSTALL FOUR (4) GOOSENECK STYLE LIGHTS AS SHOWN APPROVED PRODUCTS INCLUDE 14" BLACK GOOSENECK BARN LIGHT LED FIXTURE W/ PHOTOCELL, 42W3800LM - ENERGY STAR RATED 3000K WARM WHITE LIGHT, AS MANUFACTURED BY HTM LIGHTING SOLUTIONS.

1 TRACK STORAGE SHED - ADDITION

SCALE: NTS 16' X 12' LEXINGTON SHED EXTENTION, AS MANUFACTURED BY POST WOODWORKERS, OR APPROVED EQUAL. (866) 794-7433 - SUBMIT SHOP DRAWING FOR APPROVAL PRIOR TO INSTALLATION.



2 TRAFFIC SIGN - TYPE A

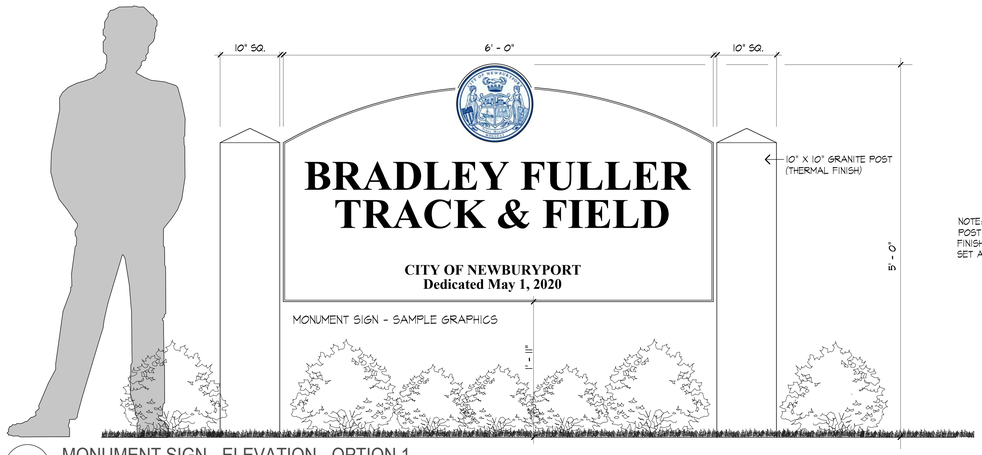
SCALE: N.T.S.

3 TRAFFIC SIGN - TYPE B

SCALE: N.T.S.

4 TRAFFIC SIGN - TYPE C

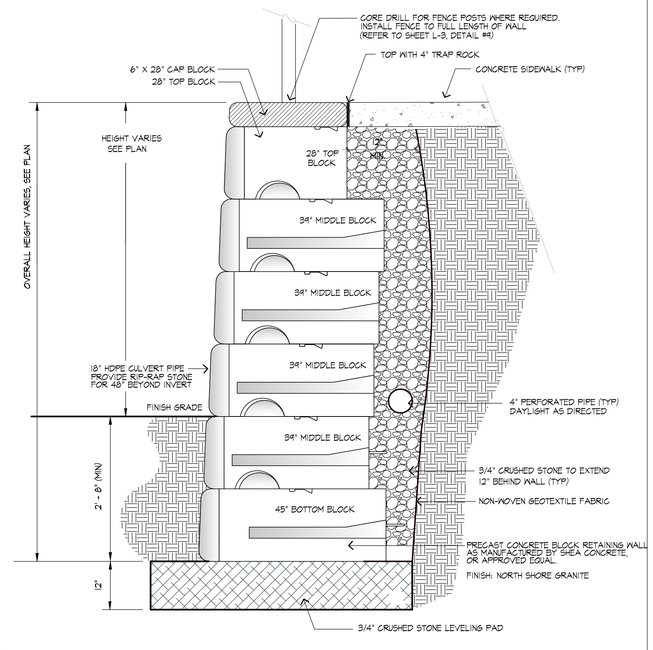
SCALE: N.T.S.



NOTE:
POST SIZE TO BE 10" x 10" x 7' (MIN).
FINISH AS SHOWN.
SET AS DIRECTED BY LANDSCAPE ARCHITECT IN THE FIELD.

5 MONUMENT SIGN - ELEVATION - OPTION 1

SCALE: 1" = 1'



6 CONCRETE BLOCK HEADWALL DETAIL (TYP)

SCALE: 1"=1'-0"

Huntress Associates, Inc.

Landscape Architecture & Land Planning

17 Tewksbury Street
Andover, Massachusetts 01810
978 470 8882 FAX 978 470 8890

MASSACHUSETTS REGISTERED LANDSCAPE ARCHITECT NO. 1178

Project:

FULLER FIELD
Track & Field
Phase Two

Newburyport, Massachusetts

Drawing Title:

Track & Field Construction Details

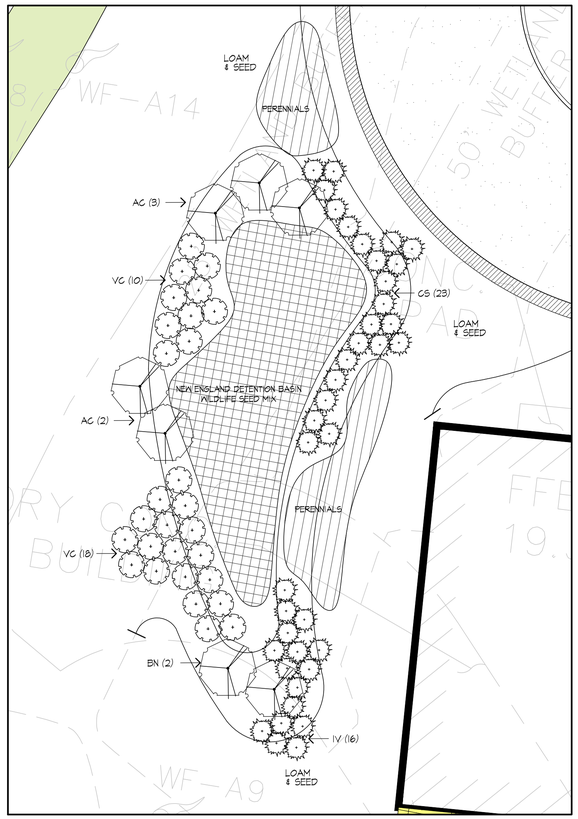
Revision	Date

Scale:	AS NOTED
Date:	01.13.20
Job:	99-107
File:	PR-MP
Drawn:	CCH
Checked:	--

Drawing No.

L-4

of **6**



1 BIO-RETENTION AREA - PLANTING PLAN

SCALE: 1" = 10'

BIORETENTION / RAIN GARDEN PLANT LIST (P-M3, P-13)

1. ALL PLANT MATERIAL SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

PLANT MATERIAL	SIZE	QUANTITY
TREES:		
(AC) AMELANCHIER CANDENSIS - SHADBLOW	4-5' HT.	5
(BN) BETULA NIGRA - RIVER BIRCH	4-5' HT.	2
SHRUBS:		
(CS) CORNUS SERICEA - RED OSIER DOGWOOD	2-3 GAL.	23
(IV) ILEX VERTICILLATA - WINTERBERRY	2-3 GAL.	16
(VC) VACCINUM CORYMBOSUM - HIGHBUSH BLUEBERRY	2-3 GAL.	28
PERENNIALS & GRASSES:		
(AI) ASCLEPIAS INCARNATA - SWAMP MILKWEED	1 GAL.	5
(AST) ASTILBE	1 GAL.	12
(RF) RUDBECKIA FULGILDA - BLACK EYED SUSAN	1 GAL.	18
(EP) ENCHINACEA PALLIDA - PURPLE CONE FLOWER	1 GAL.	8
(LS) LIATRIS SPICATA - SPIKED GAY FEATHER	1 GAL.	12
(CC) CALAMOGROSTIS CANADENSIS - BLUE JOINT	2 GAL.	12
(MS) MISCANTHUS SINENSIS 'SILBERFEDER'	2 GAL.	9

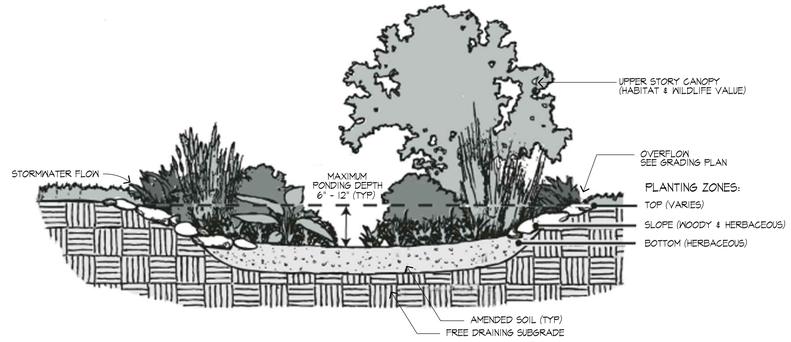
BIO-RETENTION / WILDLIFE SEED MIXTURES

1. NEW ENGLAND DETENTION BASIN / WILDLIFE SEED MIX

BIG BLUESTEM (ANDROPOGAN GERARDII), LITTLE BLUESTEM SCHIZACHYRIUM SCOPARIUS)
SWITCHGRASS (PANICUM VIRGATUM), DEERTONGUE (PANICUM CLANDESTINUM), FOWL BLUEGRASS
(POA PALUSTRIS) CANADA WILD-RYE (ELYMUS CANADENSIS), PENNSYLVANIA SMARTWEED
(POLYGONUM PENSYLVANICUM), PARTRIDGE PEA (CHAMAECRISTA FASCICULATA), ANNUAL
SUNFLOWER (HELIANTHUS ANUUS), SHOWY TICK-TREFOIL (DESDMODIUM CANADENSE), COMMON MILKWEED
(ASCLEPIAS SYRIACA), NEW YORK ASTER (ASTER NOVI-BELGII), NODDING BUR-MARIGOLD (BIDENS CERNUA)

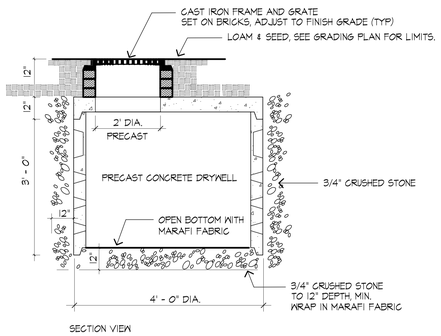
APPLICATION RATE: 25 LBS/ACRE 1148 SQ FT/LB

NOTE: THIS SEED MIX IS INTENDED TO BE MOWN TWICE ANNUALLY.

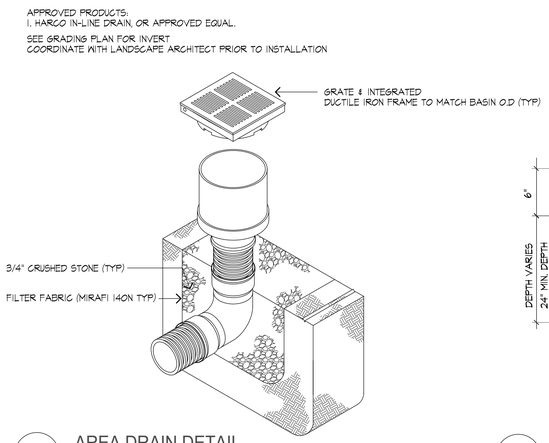


2 BIO-RETENTION AREA - TYPICAL PLANTING CROSS-SECTION

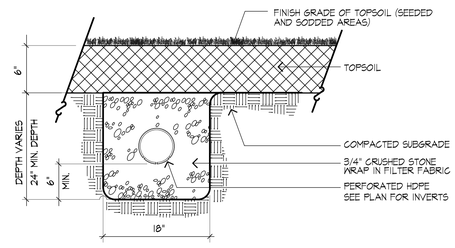
SCALE: N.T.S.



3 LEACHING BASIN

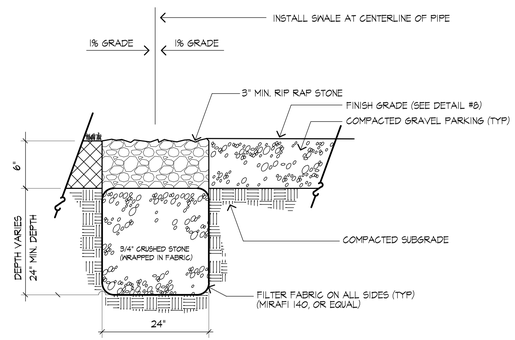


4 AREA DRAIN DETAIL



5 PERFORATED DRAIN LINE

DR-PVC



6 INFILTRATION TRENCH

SCALE: 1" = 1'

DR-PVC

Huntress Associates, Inc.

Landscape Architecture & Land Planning

17 Tewksbury Street
Andover, Massachusetts 01810
978 470 8882 FAX 978 470 8890

Project:

FULLER FIELD
Track & Field
Phase Two
Newburyport, Massachusetts

Drawing Title:

Bio-Retention Area & Drainage Details

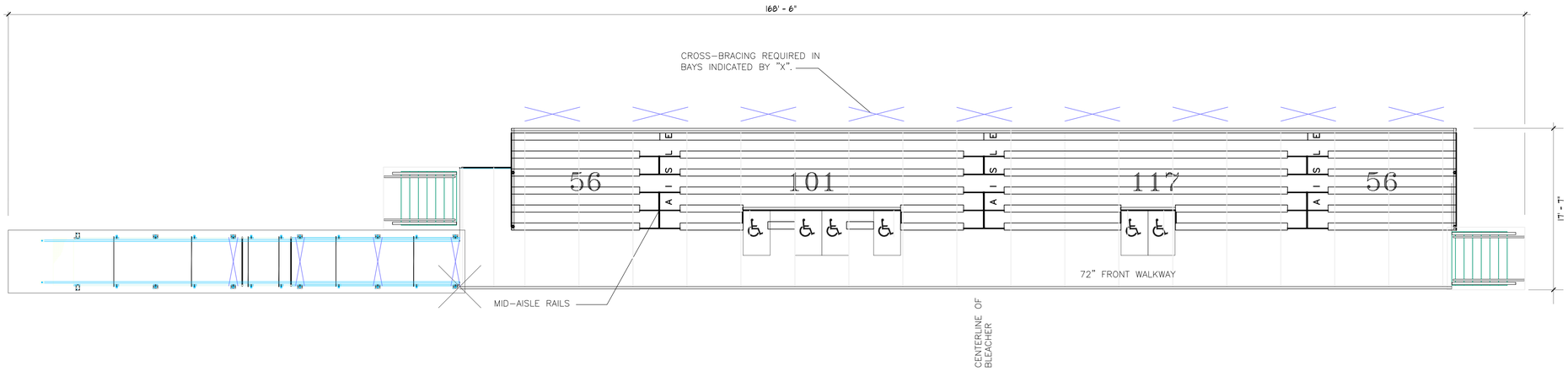
Revision	Date

Scale:	AS NOTED
Date:	01.13.20
Job:	99-107
File:	PR-MP
Drawn:	CCH
Checked:	--

Drawing No.

L-5

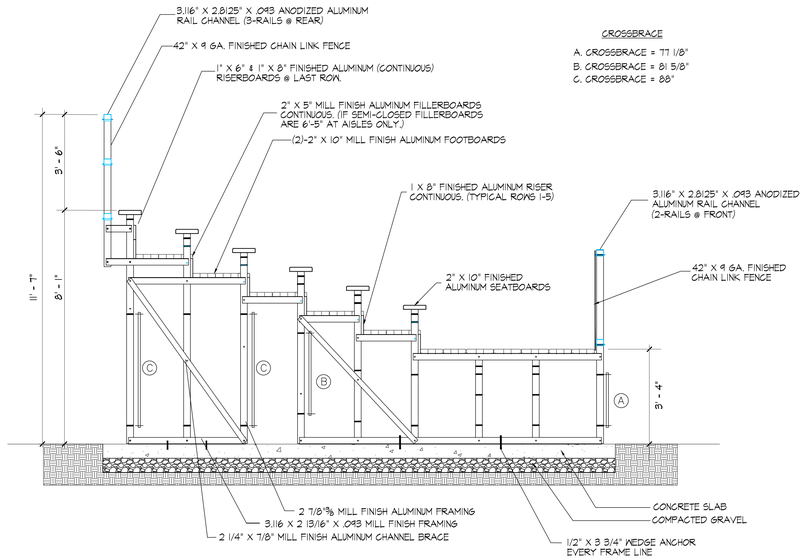
of **6**



1 ELEVATED BLEACHER SEATING LAYOUT

SCALE: NTS

SEATING SUMMARY	
ROWS	6
RISE / RUN	8" / 24"
ELEVATION	40"
DECK SYSTEM	CLOSED
BENCH SEATING CAPACITY	330
WHEELCHAIR SEATING CAPACITY	6
COMPANION SEATING	4
TOTAL SEATING CAPACITY	340



2 ELEVATED BLEACHER CROSS-SECTION

SCALE: NTS

Huntress Associates, Inc.

Landscape Architecture & Land Planning

17 Tewksbury Street
Andover, Massachusetts 01810
978 470 8882 FAX 978 470 8890

Project:

FULLER FIELD Track & Field Phase Two

Newburyport, Massachusetts

Drawing Title:

Bleacher Layout & Cross-section

Revision	Date

Scale:	AS NOTED	Drawing No.
Date:	1.20.20	L-6
Job:	99-107	
File:	PR-MP	of
Drawn:	CCH	6
Checked:	--	

GEOTECHNICAL REPORT

BRADLEY FULLER FIELD

NEWBURYPORT, MASSACHUSETTS

January 5, 2016

GSI Project No. 215300

Prepared for:

Mr. Chris Huntress
Huntress Associates, Inc.
17 Tewksbury Street
Andover, MA 01810

Prepared by:

Geotechnical Services, Inc.
55 North Stark Highway
Weare, NH 03281

Geotechnical Services Inc.
Geotechnical Engineering ◣ Environmental Studies ◣ Materials Testing ◣ Construction Monitoring

GEOTECHNICAL SERVICES INC.
Geotechnical Engineering ◢ Environmental Studies ◢ Materials Testing ◢ Construction Monitoring

January 5, 2016

Mr. Chris Huntress
Huntress Associates, Inc.
17 Tewksbury Street
Andover, MA 01810

Advanced via Email: chris@huntressassociates.com

RE: Geotechnical Investigation Report
Bradley Fuller Field
Newburyport, Massachusetts
GSI Project No. 215300

Dear Mr. Huntress:

Geotechnical Services, Inc. (GSI) is pleased to submit this report on the proposed design-redevelopment of the track and grass turf athletic field at the Bradley Fuller Field off of Low Street in Newburyport, MA. The report consists of the subsurface data obtained through implementation of an exploration program, evaluation of the subsurface data, a summary of our understanding of the proposed development, and the results of an assessment for earthwork design options. The content of this report is subject to the **Limitations** stated in Appendix A.

PROJECT UNDERSTANDING

The project site is located at 89 to 107 Low Street in Newburyport, MA (See Figure 1, Project Locus). We understand that the planned redevelopment will include the renovation of both the existing grass turf field located within the limits of the track and replace and reconfigure the existing track.

SUBSURFACE INVESTIGATION

Thirteen (13) soil probes, designated as GP-1 to GP-13, were performed at the site on December 14, 2015 by New England Boring Contractors, Inc. located in Derry, NH. The probes were conducted using a Geoprobe soil probing machine which collects continuous 5-ft long soil samples. Soil samples were collected to depths ranging from 5 to 10-ft below the existing grade. The Geoprobes were observed by the GSI engineer and the soils encountered were classified in accordance with the Burmister Classification system. The approximate locations of the Geoprobes are shown on Figures 2, Exploration Location Plan. The finalized logs for the Geoprobes are included in Appendix B. Representative portions of each sample retrieved were saved in plastic bags with identification, and delivered to the GSI Soils Laboratory. The samples were re-examined and field classifications were reviewed.

SUBSURFACE CONDITIONS

The subsurface conditions encountered in the investigation indicate that the site is underlain by the following soil units/deposits, described in order of increasing depth:

Topsoil: All of the probes encountered the Topsoil layer at the ground surface. The Topsoil layer generally consists of organic silty soils. The thickness of this soil unit varies from less than 6-in in proximity to the existing track to 8 to 18-in. within the limits of the grass turf field.

Sand Fill: The Sand Fill was encountered with all the geoprobes immediately beneath the topsoil layer. The Sand Fill generally consists of brown fine to medium SAND with varying amounts of gravel and coarse sand. The thickness of the Filter Sand layer varies from about 12-in. (GP-6) to 38-in. (GP-13) and was about 24-in. (on average) in thickness across the project site.

Fill: Fill soils, consisting of gray, CLAY and fine to coarse SAND with little gravel, was encountered in GP-6 between 1.8 to 5.5-ft below the existing grade.

Silt Deposits: An isolated pocket of Silt was encountered in GP-9 from 2.5 to 5.5-ft below the existing grade which generally consists of brown Silt.

Marine Deposits: Marine Deposits were encountered in all of the geoprobes beneath the Sand Fill, Fill and Silt Deposits. The Marine Deposits generally consist of gray, CLAY with varying amounts of silt or fine to medium sand. All the geoprobes were terminated within this soil unit at depth of 5 to 10-ft below the existing grade.

Groundwater: Groundwater was not encountered upon completion of the probes. Groundwater levels should be expected to vary with season, precipitation, snowmelt, and other factors. As a result, groundwater levels encountered during construction may differ from those encountered in the explorations. It should be anticipated that perched groundwater above the Marine Deposits should be anticipated during construction due to seasonal groundwater conditions and weather.

GEOTECHNICAL DESIGN RECOMMENDATIONS

General

As a general guideline, foundation design and construction must conform to the applicable provisions of the Massachusetts Building Code, 8th Edition (Building Code).

Track and Grass Field Subgrades

We anticipate that the construction of the new track and renovation of the existing grass field will involve the following; stripping off the track pavement, stripping off or amending the existing Topsoil, removing/relocating any existing utilities (irrigation, drainage pipes, electric utilities and any other utilities), grading the field to the planned rough grade, proof-rolling the subgrade and reconstructing the turf system, and construction of the re track to the planned configuration. The existing Sand Fill, Fill, Silt and Marine Deposit soils are suitable for support of the grass turf field and track provided the subgrade is prepared using the recommendation provided herein. It should be anticipated that the new track configuration will require some additional engineered fill beneath the track where the footprint of the track extends beyond the area where the geoprobe investigation was conducted where Sand Fill may not be present.

CONSTRUCTION CONSIDERATIONS

General

In general, all excavation work, any construction dewatering, and other construction activities should conform to the requirements of OSHA and all other applicable regulations. The site soils would typically be classified as Type C based on OSHA 29 CFR 1926.

Excavation

Construction will involve clearing and grubbing of vegetation, stripping off the Topsoil and Track Asphalt, adding or cutting fill to achieve design grades (if needed), and constructing the planned turf field and track improvements. We anticipate that most of the site grading can be accomplished with conventional earth-moving equipment.

Construction Dewatering

Based on the available subsurface data it is anticipated that during the general site work, no significant dewatering measures will be necessary to conduct the construction "in-the-dry." The Contractor should take measures to prevent stormwater from entering into excavated areas, and be prepared to remove ponded surface water by means of localized sumps and pumps. The Contractor should select whichever dewatering procedures may be effective to maintain dry, stable excavation bottoms.

Existing Utilities and Foundations of Former Structures

Unknown and/or undocumented subsurface features, structures, and utilities may be present within the project site. The unknown structures and piping, should be anticipated during excavation work, and will need to be carefully removed to limit disturbance to underlying soil deposits and backfilled with compacted Granular Fill prior to construction of the planned field and track.

Preparation and Protection of Bearing Surfaces

Final excavation should be conducted in a manner that minimizes disturbance to the subgrade soils when excavating for bearing surfaces. All final excavation and footing construction should be conducted in-the-dry. We recommend that the exposed subgrade soils be observed in the field by a geotechnical engineer to confirm the projected soil

bearing conditions. It may be necessary to over-excavate and replace weak, disturbed or otherwise unacceptable foundation bearing materials.

Following excavation to bearing grades, exposed soil surfaces should be re-compacted (proof-rolled) prior to placing engineered fill, or constructing foundations, with a minimum of four passes with a heavy vibratory roller or other heavy vibratory compaction equipment.

If subgrade protection difficulties are encountered due to surface or groundwater, various methods can be utilized:

- Leave subgrades high until immediately before forming and concreting to minimize the time the subgrade is exposed.
- Over excavate footings by 8 in. using a smooth edged bucket and backfill to the design bearing elevation using compacted Granular Fill.

Each such encounter is probably best resolved individually in the field upon observation of the subgrade conditions.

Compaction

Minimum compaction requirements refer to percentages of the maximum dry density determined in accordance with ASTM D1557. Recommended compaction requirements are as follows:

Location	Minimum Compaction Requirements
Beneath the track & field	95 %
Landscaped areas	90 % nominal compaction

Filling and Backfilling

Placement of compacted soil fills should not be conducted when air temperatures are low enough (approximately 30 degrees F, or below) to cause freezing of the moisture in the fill during or before placement. Fill materials should not be placed on snow, ice or uncompacted frozen soil. Compacted fill should not be placed on frozen soil. No fill should be allowed to freeze prior to compaction. At the end of each day's operations, the last lift of fill, after compaction, should be rolled by a smooth-wheeled roller to eliminate ridges of uncompacted soil.

CONSTRUCTION MONITORING

It is recommended that a geotechnical engineer or technician qualified by training and experience be present during construction to:

- Confirm that soils used as fill and backfill are in accordance with the contract requirements.
- Observe and test placement and compaction of Granular Fill and other compacted fills.
- Observe preparation of field and pavement bearing surfaces.

Monitoring by experienced personnel will be important to the efficiency and integrity of the geotechnical aspects of the project construction. It is recommended that GSI be retained to provide the recommended monitoring services during construction. This will enable us to observe compliance with the design concepts, help resolve construction problems and to facilitate design changes in the event that subsurface conditions differ from those anticipated prior to the start of construction.

PLAN REVIEW

It is recommended that GSI be provided the opportunity to review the final plans in order to confirm that the recommendations made in this report were interpreted and implemented as intended.

CLOSURE

GSI appreciates the opportunity for participating in this early phase of the project, and looks forward to our continuing association during its subsequent phases towards its successful completion. In the mean time, please do not hesitate to contact us, if you have any questions on the content of this report.

Very truly yours,

GEOTECHNICAL SERVICES, INC.

Glen V. Zolad, P.E.
Project Manager

Harry K. Wetherbee, P.E.
Principal Engineer

Figure 1. Project Locus
Figure 2. Exploration Location Plan

Appendix A. Limitations
Appendix B. Geoprobe Logs

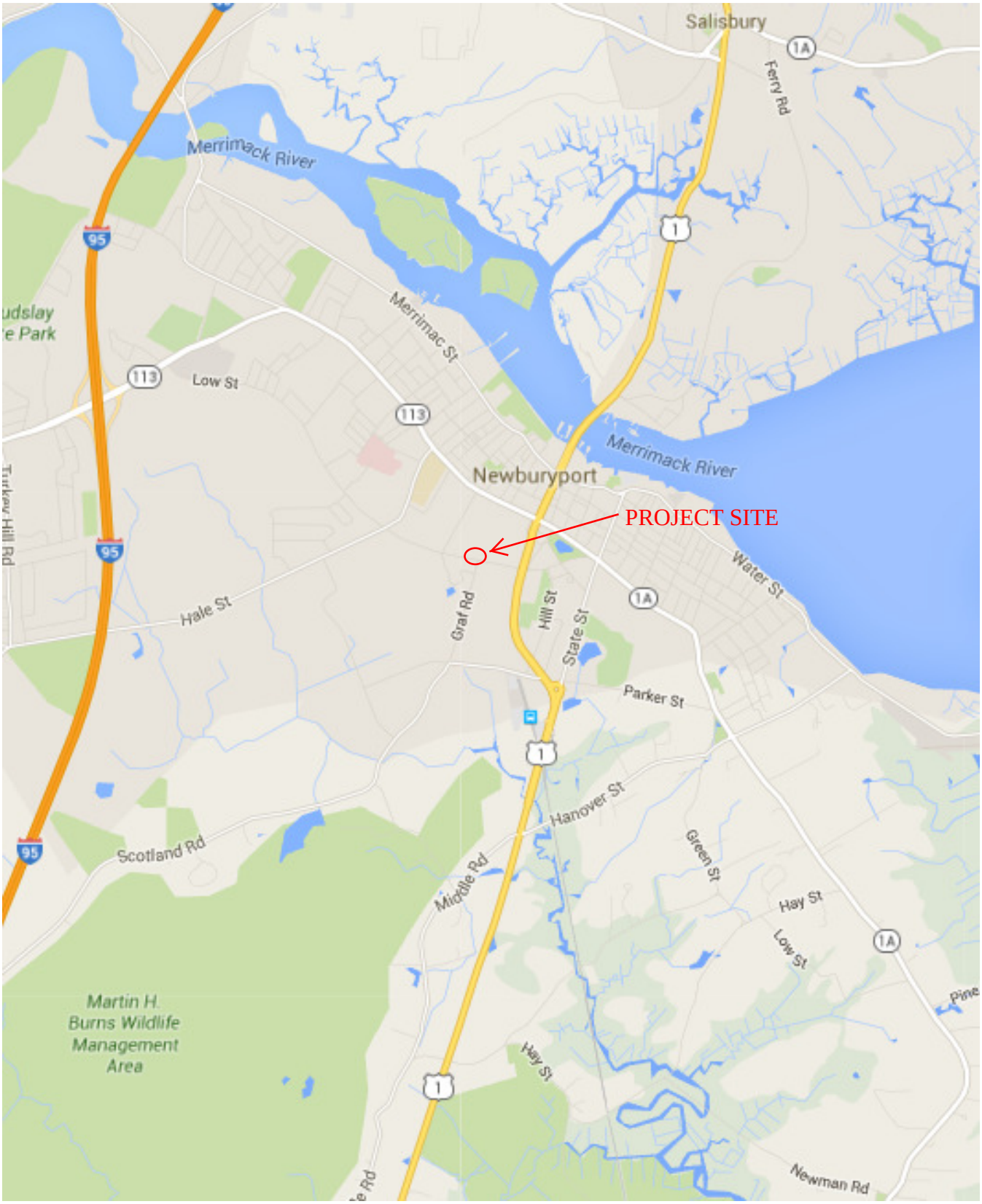
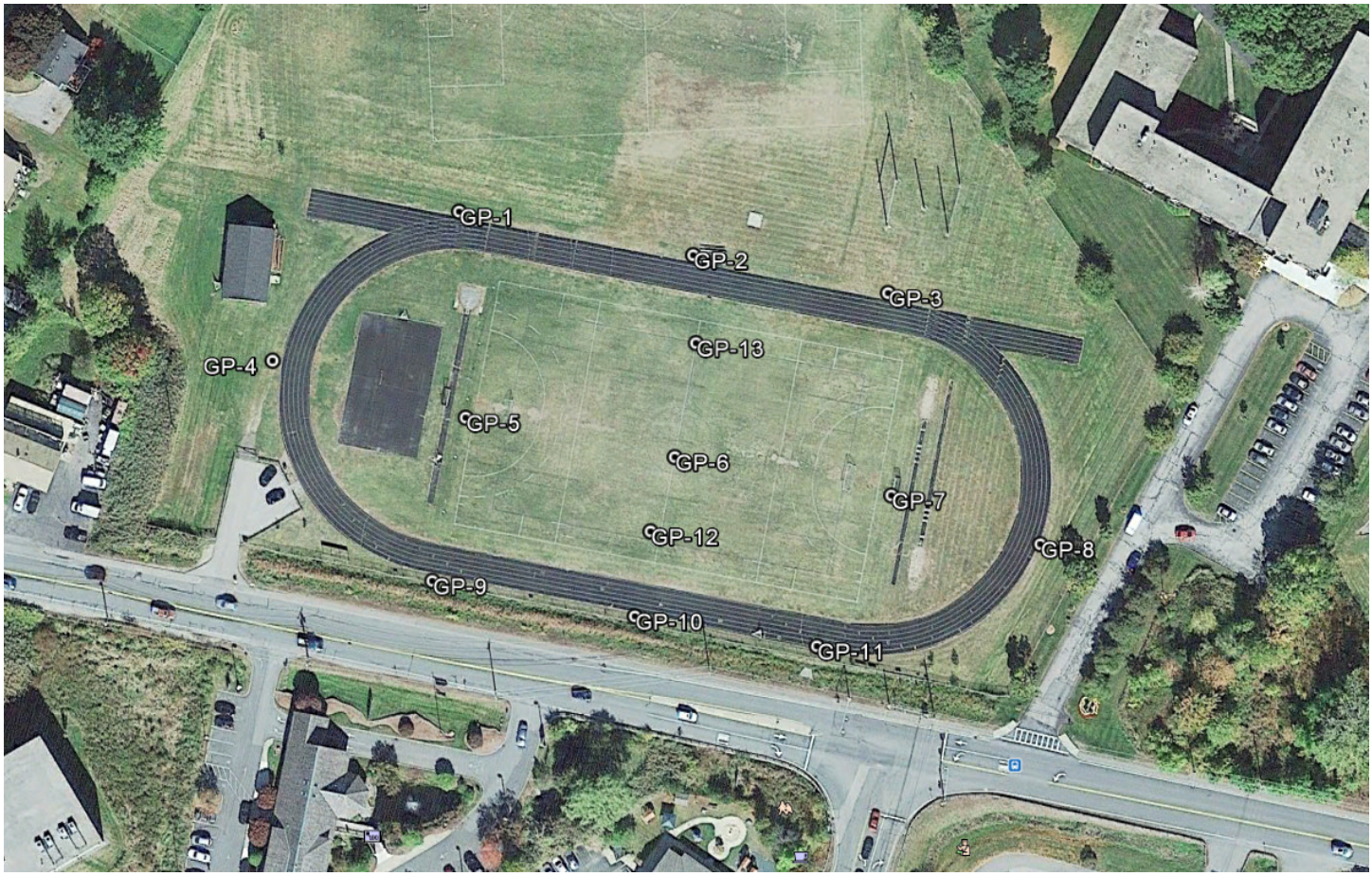


FIGURE 1–PROJECT LOCUS

BRADLEY FULLER FIELD
NEWBURYPORT, MA
GSI PROJECT NO. 215300

N



NOT TO SCALE

LEGEND:

○ GP-1 GEOPROBE I.D. AND APPROXIMATE LOCATION

FIGURE 2–EXPLORATION LOCATION PLAN

BRADLEY FULLER FIELD
NEWBURYPORT, MA
GSI PROJECT NO. 215300

APPENDIX A

LIMITATIONS

LIMITATIONS

Explorations

1. The analyses, recommendations and designs submitted in this report are based in part upon the data obtained from preliminary subsurface explorations. The nature and extent of variations between these explorations may not become evident until construction. If variations then appear evident, it will be necessary to re-evaluate the recommendations of this report.

2. The generalized soil profile described in the text is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized and have been developed by interpretation of widely spaced explorations and samples; actual soil transitions are probably more gradual. For specific information, refer to the individual test pit and/or boring logs.

3. Water level readings have been made in the test pits and/or test borings under conditions stated on the logs. These data have been reviewed and interpretations have been made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, and other factors differing from the time the measurements were made.

Review

4. It is recommended that this firm be given the opportunity to review final design drawings and specifications to evaluate the appropriate implementation of the recommendations provided herein.

5. In the event that any changes in the nature, design, or location of the proposed areas are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions of the report modified or verified in writing by Geotechnical Services, Inc.

Construction

6. It is recommended that this firm be retained to provide geotechnical engineering services during the earthwork phases of the work. This is to observe compliance with the design concepts, specifications, and recommendations and to allow design changes in the event that subsurface conditions differ from those anticipated prior to the start of construction.

Use of Report

7. This report has been prepared for the exclusive use of Huntress Associates, Inc. in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made.

8. This report has been prepared for this project by Geotechnical Services, Inc. This report was completed for preliminary design purposes and may be limited in its scope to complete an accurate bid. Contractors wishing a copy of the report may secure it with the understanding that its scope is limited to evaluation considerations only.

APPENDIX B

GEOPROBE LOGS

TEST BORING LOG

Boring No. GP-1

Page 1 of 1

Project	Bradley Fuller Field	Project No.	215300	Elevation	N/A
Location	Newburyport, MA	Inspector	G. Zoladz	Datum	See Plan
Client	Huntress Associates	Project Manager	G. Zoladz	Start	12/14/2015
Contractor	NEBC	Checked By		Finish	12/14/2015
Driller	C. Downing	Drill Rig	Geoprobe	Model	

Item:	Auger	Casing	Sampler	Core Barrel
Type	-	-	-	-
Inside Diameter (in.)	-	-	-	-
Hammer Weight (lb)	-	-	-	
Hammer Fall (in.)	-	-	-	

☐ Truck ☐ Skid
☑ Track ☐ ATV
☐ Bomb. ☐ Geophone
☐ Tripod ☐ Other

Hammer Type:
☐ Safety Hammer
☐ Doughnut
☐ Automatic

☐ Winch ☐ Cat Head ☐ Roller Bit ☐ Cutting Head

Depth (ft)	Casing (Blows/ft)	Sample Data No.	Depth (ft)	Rec. (in.)	SPT (Blows/ 6-in.)	Rock RQD (%)	PID Rdg. (ppm)	Stratum Change (ft)	Soil-Rock Visual Classification and Description (Soils - Burmister System) (Rock - U.S. Corps of Engineers System)
0		G1	0-5	43				0.4	Topsoil
								1.7	Brown, f/c SAND (wet) **-SAND FILL-**
									Gray CLAY **-MARINE DEPOSITS-**
5		G2	5-10	51					Gray, CLAY with occasional seams of silt
10									Bottom of Exploration at 10-ft. No groundwater encountered.
15									
20									
25									

Water Level Data

Date	Time	Depth (ft) to: Bott. of Casing	Bott. of Hole	Water

Sample Identification
O = Open Ended
U = Undisturbed
S = Split Spoon
C = Rock Core
GP = Geoprobe

Cohesive Soils N-Value
0 to 2: Very Soft
2 to 4: Soft
4 to 8: Medium Stiff
8 to 15: Stiff
15 to 30 Very Stiff
Over 30: Hard

Granular Soils N- Value
0 to 4: Very Loose
4 to 10: Loose
11 to 30: Medium Dense
31 to 50: Dense
Over 50: Very Dense

Trace (0 to 5%), Little (10 to 20%), Some (20 to 35%), And (35 to 50%)

Notes:

GP-1

Geotechnical Services, Inc. ¨ 55 North Stark Highway Tel. 603.529.7766 Fax. 603.529.7080 ¨ 30 Newbury Street, Boston, MA 02116 Tel. 617.455.4248 Fax. 617.745.4308

TEST BORING LOG

Boring No. GP-2

Page 1 of 1

Project	Bradley Fuller Field	Project No.	215300	Elevation	N/A
Location	Newburyport, MA	Inspector	G. Zoladz	Datum	See Plan
Client	Huntress Associates	Project Manager	G. Zoladz	Start	12/14/2015
Contractor	NEBC	Checked By		Finish	12/14/2015
Driller	C. Downing	Drill Rig	Geoprobe	Model	

Item:	Auger	Casing	Sampler	Core Barrel
Type	-	-	-	-
Inside Diameter (in.)	-	-	-	-
Hammer Weight (lb)	-	-	-	
Hammer Fall (in.)	-	-	-	

☐ Truck ☐ Skid
☑ Track ☐ ATV
☐ Bomb. ☐ Geophone
☐ Tripod ☐ Other

Hammer Type:
☐ Safety Hammer
☐ Doughnut
☐ Automatic

☐ Winch ☐ Cat Head ☐ Roller Bit ☐ Cutting Head

Depth (ft)	Casing (Blows/ft)	Sample Data: No.	Depth (ft)	Rec. (in.)	SPT (Blows/ 6-in.)	Rock RQD (%)	PID Rdg. (ppm)	Stratum Change (ft)	Soil-Rock Visual Classification and Description (Soils - Burmister System) (Rock - U.S. Corps of Engineers System)
0		G1	0-5	37				0.2	Topsoil Brown, f/m SAND, tr. c-sand
								3	**-SAND FILL-**
5									**-MARINE DEPOSITS-**
									Bottom of Exploration at 5-ft. No groundwater encountered.
10									
15									
20									
25									

Water Level Data

Date	Time	Depth (ft) to: Bott. of Casing	Bott. of Hole	Water

Sample Identification
O = Open Ended
U = Undisturbed
S = Split Spoon
C = Rock Core
GP = Geoprobe

Cohesive Soils N-Value
0 to 2: Very Soft
2 to 4: Soft
4 to 8: Medium Stiff
8 to 15: Stiff
15 to 30 Very Stiff
Over 30: Hard

Granular Soils N- Value
0 to 4: Very Loose
4 to 10: Loose
11 to 30: Medium Dense
31 to 50: Dense
Over 50: Very Dense

Trace (0 to 5%), Little (10 to 20%), Some (20 to 35%), And (35 to 50%)

Notes:

GP-2

Geotechnical Services, Inc. ¨ 55 North Stark Highway Tel. 603.529.7766 Fax. 603.529.7080 ¨ 30 Newbury Street, Boston, MA 02116 Tel. 617.455.4248 Fax. 617.745.4308

TEST BORING LOG

Boring No. GP-3

Page 1 of 1

Project	Bradley Fuller Field	Project No.	215300	Elevation	N/A
Location	Newburyport, MA	Inspector	G. Zoladz	Datum	See Plan
Client	Huntress Associates	Project Manager	G. Zoladz	Start	12/13/2015
Contractor	NEBC	Checked By		Finish	12/13/2015
Driller	C. Downing	Drill Rig	Geoprobe	Model	

Item:	Auger	Casing	Sampler	Core Barrel
Type	-	-	-	-
Inside Diameter (in.)	-	-	-	-
Hammer Weight (lb)	-	-	-	
Hammer Fall (in.)	-	-	-	

☐ Truck ☐ Skid
☑ Track ☐ ATV
☐ Bomb. ☐ Geophone
☐ Tripod ☐ Other

Hammer Type:
☐ Safety Hammer
☐ Doughnut
☐ Automatic

☐ Winch ☐ Cat Head ☐ Roller Bit ☐ Cutting Head

Depth (ft)	Casing (Blows/ft)	Sample Data No.	Depth (ft)	Rec. (in.)	SPT (Blows/ 6-in.)	Rock RQD (%)	PID Rdg. (ppm)	Stratum Change (ft)	Soil-Rock Visual Classification and Description (Soils - Burmister System) (Rock - U.S. Corps of Engineers System)
0		G1	0-5	41				0.3	Topsoil
									Brown, f/m SAND, some c-sand, tr. gravel
								2	**-SAND FILL-**
									Gray CLAY
									-MARINE DEPOSITS-
5		G2	5-10	60					Gray, CLAY (6-in seam of br., f/c SAND from 5 to 5.5-ft.)
10									Bottom of Exploration at 10-ft.
									No groundwater encountered.
15									
20									
25									

Water Level Data

Date	Time	Depth (ft) to: Bott. of Casing	Bott. of Hole	Water

Sample Identification
O = Open Ended
U = Undisturbed
S = Split Spoon
C = Rock Core
GP = Geoprobe

Cohesive Soils N-Value
0 to 2: Very Soft
2 to 4: Soft
4 to 8: Medium Stiff
8 to 15: Stiff
15 to 30 Very Stiff
Over 30: Hard

Granular Soils N- Value
0 to 4: Very Loose
4 to 10: Loose
11 to 30: Medium Dense
31 to 50: Dense
Over 50: Very Dense

Trace (0 to 5%), Little (10 to 20%), Some (20 to 35%), And (35 to 50%)

Notes:

GP-3

Geotechnical Services, Inc. ¨ 55 North Stark Highway Tel. 603.529.7766 Fax. 603.529.7080 ¨ 30 Newbury Street, Boston, MA 02116 Tel. 617.455.4248 Fax. 617.745.4308

TEST BORING LOG

Boring No. GP-4

Page 1 of 1

Project	Bradley Fuller Field	Project No.	215300	Elevation	N/A
Location	Newburyport, MA	Inspector	G. Zoladz	Datum	See Plan
Client	Huntress Associates	Project Manager	G. Zoladz	Start	12/14/2015
Contractor	NEBC	Checked By		Finish	12/14/2015
Driller	C. Downing	Drill Rig	Geoprobe	Model	

Item:	Auger	Casing	Sampler	Core Barrel
Type	-	-	-	-
Inside Diameter (in.)	-	-	-	-
Hammer Weight (lb)	-	-	-	
Hammer Fall (in.)	-	-	-	

☐ Truck ☐ Skid
☑ Track ☐ ATV
☐ Bomb. ☐ Geophone
☐ Tripod ☐ Other

Hammer Type:
☐ Safety Hammer
☐ Doughnut
☐ Automatic

☐ Winch ☐ Cat Head ☐ Roller Bit ☐ Cutting Head

Depth (ft)	Casing (Blows/ft)	Sample Data No.	Depth (ft)	Rec. (in.)	SPT (Blows/ 6-in.)	Rock RQD (%)	PID Rdg. (ppm)	Stratum Change (ft)	Soil-Rock Visual Classification and Description (Soils - Burmister System) (Rock - U.S. Corps of Engineers System)
0		G1	0-5	42				0.2	Topsoil
									Brown, f/m SAND, trace gravel, c-sand, silt
									-SAND FILL-
								2.8	
									Gray, CLAY
5									**-MARINE DEPOSITS-**
									Bottom of Exploration at 5-ft.
									No groundwater encountered.
10									
15									
20									
25									

Water Level Data

Date	Time	Depth (ft) to: Bott. of Casing	Bott. of Hole	Water

Sample Identification
O = Open Ended
U = Undisturbed
S = Split Spoon
C = Rock Core
GP = Geoprobe

Cohesive Soils N-Value
0 to 2: Very Soft
2 to 4: Soft
4 to 8: Medium Stiff
8 to 15: Stiff
15 to 30 Very Stiff
Over 30: Hard

Granular Soils N- Value
0 to 4: Very Loose
4 to 10: Loose
11 to 30: Medium Dense
31 to 50: Dense
Over 50: Very Dense

Trace (0 to 5%), Little (10 to 20%), Some (20 to 35%), And (35 to 50%)

Notes:

GP-4

Geotechnical Services, Inc. ¨ 55 North Stark Highway Tel. 603.529.7766 Fax. 603.529.7080 ¨ 30 Newbury Street, Boston, MA 02116 Tel. 617.455.4248 Fax. 617.745.4308

TEST BORING LOG

Boring No. GP-5

Page 1 of 1

Project	Bradley Fuller Field	Project No.	215300	Elevation	N/A
Location	Newburyport, MA	Inspector	G. Zoladz	Datum	See Plan
Client	Huntress Associates	Project Manager	G. Zoladz	Start	12/14/2015
Contractor	NEBC	Checked By		Finish	12/14/2015
Driller	C. Downing	Drill Rig	Geoprobe	Model	

Item:	Auger	Casing	Sampler	Core Barrel
Type	-	-	-	-
Inside Diameter (in.)	-	-	-	-
Hammer Weight (lb)	-	-	-	
Hammer Fall (in.)	-	-	-	

☐ Truck ☐ Skid
☑ Track ☐ ATV
☐ Bomb. ☐ Geophone
☐ Tripod ☐ Other

Hammer Type:
☐ Safety Hammer
☐ Doughnut
☐ Automatic

☐ Winch ☐ Cat Head ☐ Roller Bit ☐ Cutting Head

Depth (ft)	Casing (Blows/ft)	Sample Data No.	Depth (ft)	Rec. (in.)	SPT (Blows/ 6-in.)	Rock RQD (%)	PID Rdg. (ppm)	Stratum Change (ft)	Soil-Rock Visual Classification and Description (Soils - Burmister System) (Rock - U.S. Corps of Engineers System)
0		G1	0-5	48					Topsoil
								1.5	Brown, f/m SAND, little c-sand **-SAND FILL-**
								3.5	Gray, CLAY **-MARINE DEPOSITS-**
5									Bottom of Exploration at 5-ft. No groundwater encountered.
10									
15									
20									
25									

Water Level Data

Date	Time	Depth (ft) to: Bott. of Casing	Bott. of Hole	Water

Sample Identification
O = Open Ended
U = Undisturbed
S = Split Spoon
C = Rock Core
GP = Geoprobe

Cohesive Soils N-Value
0 to 2: Very Soft
2 to 4: Soft
4 to 8: Medium Stiff
8 to 15: Stiff
15 to 30 Very Stiff
Over 30: Hard

Granular Soils N- Value
0 to 4: Very Loose
4 to 10: Loose
11 to 30: Medium Dense
31 to 50: Dense
Over 50: Very Dense

Trace (0 to 5%), Little (10 to 20%), Some (20 to 35%), And (35 to 50%)

Notes:

GP-5

Geotechnical Services, Inc. ¨ 55 North Stark Highway Tel. 603.529.7766 Fax. 603.529.7080 ¨ 30 Newbury Street, Boston, MA 02116 Tel. 617.455.4248 Fax. 617.745.4308

TEST BORING LOG

Boring No. GP-6

Page 1 of 1

Project	Bradley Fuller Field	Project No.	215300	Elevation	N/A
Location	Newburyport, MA	Inspector	G. Zoladz	Datum	See Plan
Client	Huntress Associates	Project Manager	G. Zoladz	Start	12/14/2015
Contractor	NEBC	Checked By		Finish	12/14/2015
Driller	C. Downing	Drill Rig	Geoprobe	Model	

Item:	Auger	Casing	Sampler	Core Barrel
Type	-	-	-	-
Inside Diameter (in.)	-	-	-	-
Hammer Weight (lb)	-	-	-	
Hammer Fall (in.)	-	-	-	

☐ Truck ☐ Skid
☑ Track ☐ ATV
☐ Bomb. ☐ Geophone
☐ Tripod ☐ Other

Hammer Type:
☐ Safety Hammer
☐ Doughnut
☐ Automatic

☐ Winch ☐ Cat Head ☐ Roller Bit ☐ Cutting Head

Depth (ft)	Casing (Blows/ft)	Sample Data No.	Depth (ft)	Rec. (in.)	SPT (Blows/ 6-in.)	Rock RQD (%)	PID Rdg. (ppm)	Stratum Change (ft)	Soil-Rock Visual Classification and Description (Soils - Burmister System) (Rock - U.S. Corps of Engineers System)
0		G1	0-5	47				0.8	Topsoil
								1.8	Brown, fine SAND **-SAND FILL-**
									Gray, CLAY and f/c SAND, little gravel **-FILL-**
5		G2	5-10	51				5.5	Gray, CLAY **-MARINE DEPOSITS-**
10									Bottom of Exploration at 10-ft. No groundwater encountered.
15									
20									
25									

Water Level Data

Date	Time	Depth (ft) to: Bott. of Casing	Bott. of Hole	Water

Sample Identification
O = Open Ended
U = Undisturbed
S = Split Spoon
C = Rock Core
GP = Geoprobe

Cohesive Soils N-Value
0 to 2: Very Soft
2 to 4: Soft
4 to 8: Medium Stiff
8 to 15: Stiff
15 to 30 Very Stiff
Over 30: Hard

Granular Soils N- Value
0 to 4: Very Loose
4 to 10: Loose
11 to 30: Medium Dense
31 to 50: Dense
Over 50: Very Dense

Trace (0 to 5%), Little (10 to 20%), Some (20 to 35%), And (35 to 50%)

Notes:

GP-6

Geotechnical Services, Inc. ¨ 55 North Stark Highway Tel. 603.529.7766 Fax. 603.529.7080 ¨ 30 Newbury Street, Boston, MA 02116 Tel. 617.455.4248 Fax. 617.745.4308

TEST BORING LOG

Boring No. GP-7

Page 1 of 1

Project	Bradley Fuller Field	Project No.	215300	Elevation	N/A
Location	Newburyport, MA	Inspector	G. Zoladz	Datum	See Plan
Client	Huntress Associates	Project Manager	G. Zoladz	Start	12/14/2015
Contractor	NEBC	Checked By		Finish	12/14/2015
Driller	C. Downing	Drill Rig	Geoprobe	Model	

Item:	Auger	Casing	Sampler	Core Barrel
Type	-	-	-	-
Inside Diameter (in.)	-	-	-	-
Hammer Weight (lb)	-	-	-	
Hammer Fall (in.)	-	-	-	

☐ Truck ☐ Skid
☑ Track ☐ ATV
☐ Bomb. ☐ Geophone
☐ Tripod ☐ Other

Hammer Type:
☐ Safety Hammer
☐ Doughnut
☐ Automatic

☐ Winch ☐ Cat Head ☐ Roller Bit ☐ Cutting Head

Depth (ft)	Casing (Blows/ft)	Sample Data: No.	Depth (ft)	Rec. (in.)	SPT (Blows/ 6-in.)	Rock RQD (%)	PID Rdg. (ppm)	Stratum Change (ft)	Soil-Rock Visual Classification and Description (Soils - Burmister System) (Rock - U.S. Corps of Engineers System)
0		G1	0-5	39				0.8	Topsoil Brown, f/m SAND, little gravel, c-sand, tr. silt
								3	**-SAND FILL-**
5									**-MARINE DEPOSITS-**
									Bottom of Exploration at 5-ft. No groundwater encountered.
10									
15									
20									
25									

Water Level Data

Date	Time	Depth (ft) to: Bott. of Casing	Bott. of Hole	Water

Sample Identification
O = Open Ended
U = Undisturbed
S = Split Spoon
C = Rock Core
GP = Geoprobe

Cohesive Soils N-Value
0 to 2: Very Soft
2 to 4: Soft
4 to 8: Medium Stiff
8 to 15: Stiff
15 to 30 Very Stiff
Over 30: Hard

Granular Soils N- Value
0 to 4: Very Loose
4 to 10: Loose
11 to 30: Medium Dense
31 to 50: Dense
Over 50: Very Dense

Trace (0 to 5%), Little (10 to 20%), Some (20 to 35%), And (35 to 50%)

Notes:

GP-7

Geotechnical Services, Inc. ¨ 55 North Stark Highway Tel. 603.529.7766 Fax. 603.529.7080 ¨ 30 Newbury Street, Boston, MA 02116 Tel. 617.455.4248 Fax. 617.745.4308

TEST BORING LOG

Boring No. GP-8

Page 1 of 1

Project	Bradley Fuller Field	Project No.	215300	Elevation	N/A
Location	Newburyport, MA	Inspector	G. Zoladz	Datum	See Plan
Client	Huntress Associates	Project Manager	G. Zoladz	Start	12/14/2015
Contractor	NEBC	Checked By		Finish	12/14/2015
Driller	C. Downing	Drill Rig	Geoprobe	Model	

Item:	Auger	Casing	Sampler	Core Barrel
Type	-	-	-	-
Inside Diameter (in.)	-	-	-	-
Hammer Weight (lb)	-	-	-	
Hammer Fall (in.)	-	-	-	

☐ Truck ☐ Skid
☑ Track ☐ ATV
☐ Bomb. ☐ Geophone
☐ Tripod ☐ Other

Hammer Type:
☐ Safety Hammer
☐ Doughnut
☐ Automatic

☐ Winch ☐ Cat Head ☐ Roller Bit ☐ Cutting Head

Depth (ft)	Casing (Blows/ft)	Sample Data No.	Depth (ft)	Rec. (in.)	SPT (Blows/ 6-in.)	Rock RQD (%)	PID Rdg. (ppm)	Stratum Change (ft)	Soil-Rock Visual Classification and Description (Soils - Burmister System) (Rock - U.S. Corps of Engineers System)
0		G1	0-5	36				0.4	Topsoil
									Brown, f/m SAND, some c-sand, tr. gravel
									-SAND FILL-
								2.2	
									Gray, CLAY little to trace f/m sand
5		G2	5-10	58					**-MARINE DEPOSITS-**
									Gray, CLAY little to trace f/m sand
10									Bottom of Exploration at 10-ft.
									No groundwater encountered.
15									
20									
25									

Water Level Data

Date	Time	Depth (ft) to: Bott. of Casing	Bott. of Hole	Water

Sample Identification
O = Open Ended
U = Undisturbed
S = Split Spoon
C = Rock Core
GP = Geoprobe

Cohesive Soils N-Value
0 to 2: Very Soft
2 to 4: Soft
4 to 8: Medium Stiff
8 to 15: Stiff
15 to 30 Very Stiff
Over 30: Hard

Granular Soils N- Value
0 to 4: Very Loose
4 to 10: Loose
11 to 30: Medium Dense
31 to 50: Dense
Over 50: Very Dense

Trace (0 to 5%), Little (10 to 20%), Some (20 to 35%), And (35 to 50%)

Notes:

GP-8

Geotechnical Services, Inc. ¨ 55 North Stark Highway Tel. 603.529.7766 Fax. 603.529.7080 ¨ 30 Newbury Street, Boston, MA 02116 Tel. 617.455.4248 Fax. 617.745.4308

TEST BORING LOG

Boring No. GP-9

Page 1 of 1

Project	Bradley Fuller Field	Project No.	215300	Elevation	N/A
Location	Newburyport, MA	Inspector	G. Zoladz	Datum	See Plan
Client	Huntress Associates	Project Manager	G. Zoladz	Start	12/14/2015
Contractor	NEBC	Checked By		Finish	12/14/2015
Driller	C. Downing	Drill Rig	Geoprobe	Model	

Item:	Auger	Casing	Sampler	Core Barrel
Type	-	-	-	-
Inside Diameter (in.)	-	-	-	-
Hammer Weight (lb)	-	-	-	
Hammer Fall (in.)	-	-	-	

☐ Truck ☐ Skid
☑ Track ☐ ATV
☐ Bomb. ☐ Geophone
☐ Tripod ☐ Other

Hammer Type:
☐ Safety Hammer
☐ Doughnut
☐ Automatic

☐ Winch ☐ Cat Head ☐ Roller Bit ☐ Cutting Head

Depth (ft)	Casing (Blows/ft)	Sample Data No.	Depth (ft)	Rec. (in.)	SPT (Blows/ 6-in.)	Rock RQD (%)	PID Rdg. (ppm)	Stratum Change (ft)	Soil-Rock Visual Classification and Description (Soils - Burmister System) (Rock - U.S. Corps of Engineers System)
0		G1	0-5	39				0.3	Topsoil Brown, f/m SAND, tr. gravel, coarse sand **-SAND FILL-**
								2.5	Brown, SILT **-SILT DEPOSITS-**
5		G2	5-10	58				5.5	Gray, CLAY **-MARINE DEPOSITS-**
10									Bottom of Exploration at 10-ft. No groundwater encountered.
15									
20									
25									

Water Level Data

Date	Time	Depth (ft) to: Bott. of Casing	Bott. of Hole	Water

Sample Identification
O = Open Ended
U = Undisturbed
S = Split Spoon
C = Rock Core
GP = Geoprobe

Cohesive Soils N-Value
0 to 2: Very Soft
2 to 4: Soft
4 to 8: Medium Stiff
8 to 15: Stiff
15 to 30 Very Stiff
Over 30: Hard

Granular Soils N- Value
0 to 4: Very Loose
4 to 10: Loose
11 to 30: Medium Dense
31 to 50: Dense
Over 50: Very Dense

Trace (0 to 5%), Little (10 to 20%), Some (20 to 35%), And (35 to 50%)

Notes:

GP-9

Geotechnical Services, Inc. ¨ 55 North Stark Highway Tel. 603.529.7766 Fax. 603.529.7080 ¨ 30 Newbury Street, Boston, MA 02116 Tel. 617.455.4248 Fax. 617.745.4308

TEST BORING LOG

Boring No. **GP-10**

Page 1 of 1

Project	Bradley Fuller Field	Project No.	215300	Elevation	N/A
Location	Newburyport, MA	Inspector	G. Zoladz	Datum	See Plan
Client	Huntress Associates	Project Manager	G. Zoladz	Start	12/14/2015
Contractor	NEBC	Checked By		Finish	12/14/2015
Driller	C. Downing	Drill Rig	Geoprobe	Model	

Item:	Auger	Casing	Sampler	Core Barrel
Type	-	-	-	-
Inside Diameter (in.)	-	-	-	-
Hammer Weight (lb)	-	-	-	
Hammer Fall (in.)	-	-	-	

☐ Truck ☐ Skid
☑ Track ☐ ATV
☐ Bomb. ☐ Geophone
☐ Tripod ☐ Other

Hammer Type:
☐ Safety Hammer
☐ Doughnut
☐ Automatic

☐ Winch ☐ Cat Head ☐ Roller Bit ☐ Cutting Head

Depth (ft)	Casing (Blows/ft)	Sample Data No.	Depth (ft)	Rec. (in.)	SPT (Blows/ 6-in.)	Rock RQD (%)	PID Rdg. (ppm)	Stratum Change (ft)	Soil-Rock Visual Classification and Description (Soils - Burmister System) (Rock - U.S. Corps of Engineers System)
0		G1	0-5	40				0.3	Topsoil
									Brown, f/m SAND, little c-sand
									-SAND FILL-
								3.1	
									Gray CLAY
5									**-MARINE DEPOSITS-**
									Bottom of Exploration at 5-ft.
									No groundwater encountered.
10									
15									
20									
25									

Water Level Data

Date	Time	Depth (ft) to: Bott. of Casing	Bott. of Hole	Water

Sample Identification
O = Open Ended
U = Undisturbed
S = Split Spoon
C = Rock Core
GP = Geoprobe

Cohesive Soils N-Value
0 to 2: Very Soft
2 to 4: Soft
4 to 8: Medium Stiff
8 to 15: Stiff
15 to 30 Very Stiff
Over 30: Hard

Granular Soils N- Value
0 to 4: Very Loose
4 to 10: Loose
11 to 30: Medium Dense
31 to 50: Dense
Over 50: Very Dense

Trace (0 to 5%), Little (10 to 20%), Some (20 to 35%), And (35 to 50%)

Notes:

GP-10

Geotechnical Services, Inc. ¨ 55 North Stark Highway Tel. 603.529.7766 Fax. 603.529.7080 ¨ 30 Newbury Street, Boston, MA 02116 Tel. 617.455.4248 Fax. 617.745.4308

TEST BORING LOG

Boring No. **GP-11**

Page 1 of 1

Project	Bradley Fuller Field	Project No.	215300	Elevation	N/A
Location	Newburyport, MA	Inspector	G. Zoladz	Datum	See Plan
Client	Huntress Associates	Project Manager	G. Zoladz	Start	12/14/2015
Contractor	NEBC	Checked By		Finish	12/14/2015
Driller	C. Downing	Drill Rig	Geoprobe	Model	

Item:	Auger	Casing	Sampler	Core Barrel
Type	-	-	-	-
Inside Diameter (in.)	-	-	-	-
Hammer Weight (lb)	-	-	-	
Hammer Fall (in.)	-	-	-	

☐ Truck ☐ Skid
☑ Track ☐ ATV
☐ Bomb. ☐ Geophone
☐ Tripod ☐ Other

Hammer Type:
☐ Safety Hammer
☐ Doughnut
☐ Automatic

☐ Winch ☐ Cat Head ☐ Roller Bit ☐ Cutting Head

Depth (ft)	Casing (Blows/ft)	Sample Data No.	Depth (ft)	Rec. (in.)	SPT (Blows/ 6-in.)	Rock RQD (%)	PID Rdg. (ppm)	Stratum Change (ft)	Soil-Rock Visual Classification and Description (Soils - Burmister System) (Rock - U.S. Corps of Engineers System)
0		G1	0-5	34				0.3	Topsoil Brown, f/m SAND, little coarse sand, tr. gravel **-SAND FILL-**
								2.8	Gray CLAY **-MARINE DEPOSITS-**
5		G2	5-10	53					Gray, CLAY with seams of silt (wet from 5 to 6-ft below grade)
10									Bottom of Exploration at 10-ft. No groundwater encountered.
15									
20									
25									

Water Level Data

Date	Time	Depth (ft) to: Bott. of Casing	Bott. of Hole	Water

Sample Identification
O = Open Ended
U = Undisturbed
S = Split Spoon
C = Rock Core
GP = Geoprobe

Cohesive Soils N-Value
0 to 2: Very Soft
2 to 4: Soft
4 to 8: Medium Stiff
8 to 15: Stiff
15 to 30 Very Stiff
Over 30: Hard

Granular Soils N- Value
0 to 4: Very Loose
4 to 10: Loose
11 to 30: Medium Dense
31 to 50: Dense
Over 50: Very Dense

Trace (0 to 5%), Little (10 to 20%), Some (20 to 35%), And (35 to 50%)

Notes:

GP-11

Geotechnical Services, Inc. ¨ 55 North Stark Highway Tel. 603.529.7766 Fax. 603.529.7080 ¨ 30 Newbury Street, Boston, MA 02116 Tel. 617.455.4248 Fax. 617.745.4308

TEST BORING LOG

Boring No. **GP-12**

Page 1 of 1

Project	Bradley Fuller Field	Project No.	215300	Elevation	N/A
Location	Newburyport, MA	Inspector	G. Zoladz	Datum	See Plan
Client	Huntress Associates	Project Manager	G. Zoladz	Start	12/14/2015
Contractor	NEBC	Checked By		Finish	12/14/2015
Driller	C. Downing	Drill Rig	Geoprobe	Model	

Item:	Auger	Casing	Sampler	Core Barrel
Type	-	-	-	-
Inside Diameter (in.)	-	-	-	-
Hammer Weight (lb)	-	-	-	
Hammer Fall (in.)	-	-	-	

☐ Truck ☐ Skid
☑ Track ☐ ATV
☐ Bomb. ☐ Geophone
☐ Tripod ☐ Other

Hammer Type:
☐ Safety Hammer
☐ Doughnut
☐ Automatic

☐ Winch ☐ Cat Head ☐ Roller Bit ☐ Cutting Head

Depth (ft)	Casing (Blows/ft)	Sample Data: No.	Depth (ft)	Rec. (in.)	SPT (Blows/ 6-in.)	Rock RQD (%)	PID Rdg. (ppm)	Stratum Change (ft)	Soil-Rock Visual Classification and Description (Soils - Burmister System) (Rock - U.S. Corps of Engineers System)
0		G1	0-5	46				0.7	Topsoil Brown, f/m SAND **-SAND FILL-**
								3.8	Gray CLAY **-MARINE DEPOSITS-**
5									Bottom of Exploration at 5-ft. No groundwater encountered.
10									
15									
20									
25									

Water Level Data

Date	Time	Depth (ft) to: Bott. of Casing	Bott. of Hole	Water

Sample Identification
O = Open Ended
U = Undisturbed
S = Split Spoon
C = Rock Core
GP = Geoprobe

Cohesive Soils N-Value
0 to 2: Very Soft
2 to 4: Soft
4 to 8: Medium Stiff
8 to 15: Stiff
15 to 30 Very Stiff
Over 30: Hard

Granular Soils N- Value
0 to 4: Very Loose
4 to 10: Loose
11 to 30: Medium Dense
31 to 50: Dense
Over 50: Very Dense

Trace (0 to 5%), Little (10 to 20%), Some (20 to 35%), And (35 to 50%)

Notes:

GP-12

Geotechnical Services, Inc. ¨ 55 North Stark Highway Tel. 603.529.7766 Fax. 603.529.7080 ¨ 30 Newbury Street, Boston, MA 02116 Tel. 617.455.4248 Fax. 617.745.4308

TEST BORING LOG

Boring No. **GP-13**

Page 1 of 1

Project	Bradley Fuller Field	Project No.	215300	Elevation	N/A
Location	Newburyport, MA	Inspector	G. Zoladz	Datum	See Plan
Client	Huntress Associates	Project Manager	G. Zoladz	Start	12/14/2015
Contractor	NEBC	Checked By		Finish	12/14/2015
Driller	C. Downing	Drill Rig	Geoprobe	Model	

Item:	Auger	Casing	Sampler	Core Barrel
Type	-	-	-	-
Inside Diameter (in.)	-	-	-	-
Hammer Weight (lb)	-	-	-	
Hammer Fall (in.)	-	-	-	

☐ Truck ☐ Skid
☑ Track ☐ ATV
☐ Bomb. ☐ Geophone
☐ Tripod ☐ Other

Hammer Type:
☐ Safety Hammer
☐ Doughnut
☐ Automatic

☐ Winch ☐ Cat Head ☐ Roller Bit ☐ Cutting Head

Depth (ft)	Casing (Blows/ft)	Sample Data No.	Depth (ft)	Rec. (in.)	SPT (Blows/ 6-in.)	Rock RQD (%)	PID Rdg. (ppm)	Stratum Change (ft)	Soil-Rock Visual Classification and Description (Soils - Burmister System) (Rock - U.S. Corps of Engineers System)
0		G1	0-5	47				0.7	Topsoil Brown, f/m SAND **-SAND FILL-**
								3.9	Gray CLAY **-MARINE DEPOSITS-**
5									Bottom of Exploration at 5-ft. No groundwater encountered.
10									
15									
20									
25									

Water Level Data

Date	Time	Depth (ft) to: Bott. of Casing	Bott. of Hole	Water

Sample Identification
O = Open Ended
U = Undisturbed
S = Split Spoon
C = Rock Core
GP = Geoprobe

Cohesive Soils N-Value
0 to 2: Very Soft
2 to 4: Soft
4 to 8: Medium Stiff
8 to 15: Stiff
15 to 30 Very Stiff
Over 30: Hard

Granular Soils N- Value
0 to 4: Very Loose
4 to 10: Loose
11 to 30: Medium Dense
31 to 50: Dense
Over 50: Very Dense

Trace (0 to 5%), Little (10 to 20%), Some (20 to 35%), And (35 to 50%)

Notes:

GP-13

Geotechnical Services, Inc. ¨ 55 North Stark Highway Tel. 603.529.7766 Fax. 603.529.7080 ¨ 30 Newbury Street, Boston, MA 02116 Tel. 617.455.4248 Fax. 617.745.4308