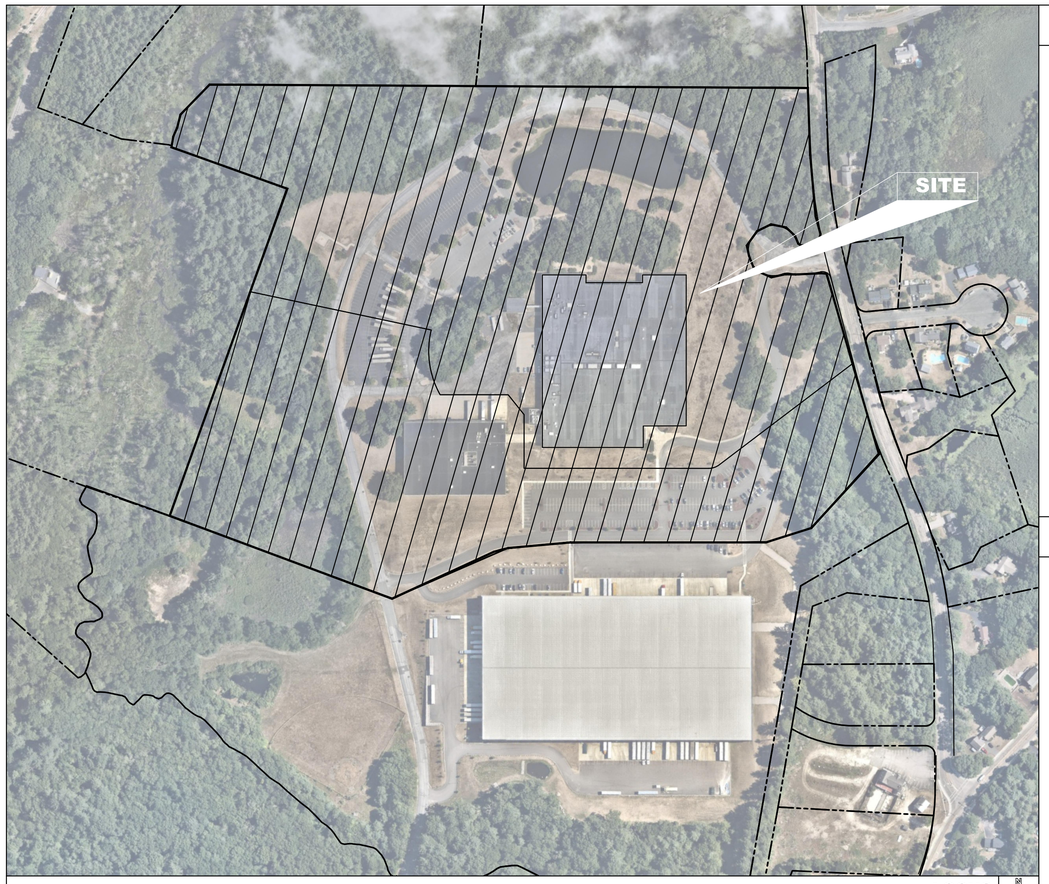
WAREHOUSE/INDUSTRIAL DEVELOPMENT
SITE DEVELOPMENT PLANS

100/200 FINANCIAL PARK
FRANKLIN, MASSACHUSETTS

PERMIT SET: MAY 11, 2023



LOCUS
SCALE: 1" = 200'

PROJECT TEAM

APPLICANT:

BERKELEY PARTNERS
1 WASHINGTON MALL | SUITE 701
BOSTON, MA 02108

OWNER/APPLICANT:

OWNER ICBP IV HOLDINGS 34, LLC
CO-OWNER C/O BERKELEY PARTNERS
ADDRESS 1111 BROADWAY | SUITE 1670
OAKLAND, CA 94607

ASSESSOR'S ID:

100 FRANKLIN STREET
BOOK - 40397
PAGE - 34
MAP - 312
PARCEL 020-000-000

200 FRANKLIN STREET
BOOK - 36923
PAGE - 217
MAP - 312
PARCEL 020-001-000

ZONE INDUSTRIAL

CIVIL ENGINEER:	HIGHPOINT ENGINEERING, INC. 980 WASHINGTON STREET |SUITE 216 DEDHAM, MA 02026 TEL: (781) 770-0970 ATTN: Douglas Hartnett www highpointeng.com
LAND SURVEYOR/ WETLAND CONSULTANT:	HANCOCK ASSOCIATES 315 ELM STREET MARLBOROUGH, MA 01752 TEL: (508) 460-1111
TRAFFIC CONSULTANT:	MDM TRANSPORTATION CONSULTANTS 28 LORD ROAD MARLBOROUGH, MA 01752 TEL: (508) 380-9088
ARCHITECT:	RODE ARCHITECTS 535 ALBANY STREET, #405 BOSTON, MA 02118 www.rodearchitects.com
LANDSCAPE ARCHITECT:	MICHAEL D'ANGELO LANDSCAPE ARCHITECTS 840 SUMMER STREET | SUITE 201A BOSTON, MA 02110

INDEX OF DRAWINGS

ISSUE HISTORY:		PERMIT SET MAY 11, 2023	RESPONSE TO COMMENTS JULY 17, 2023	RESPONSE TO COMMENTS AUGUST 14, 2023	RESPONSE TO COMMENTS AUGUST 25, 2023	RESPONSE TO COMMENTS OCTOBER 5, 2023
GENERAL						
T100	TITLE SHEET	●	●	●		●
EC-1	LIMITED/COMPILED EXISTING CONDITIONS PLAN COVER SHEET (BY OTHERS)	●	●	●		●
EC-1	LIMITED/COMPILED EXISTING CONDITIONS PLAN OF LAND IN FRANKLIN, MA (BY OTHERS)	●	●	●		●
EC-2	LIMITED/COMPILED EXISTING CONDITIONS PLAN OF LAND IN FRANKLIN, MA (BY OTHERS)	●	●	●		●
EC-3	LIMITED/COMPILED EXISTING CONDITIONS PLAN OF LAND IN FRANKLIN, MA (BY OTHERS)	●	●	●		●
EC-4	LIMITED/COMPILED EXISTING CONDITIONS PLAN OF LAND IN FRANKLIN, MA (BY OTHERS)	●	●	●		●
G100	GENERAL NOTES SHEET	●	●	●		●
C100	SITE CONFORMANCE PLAN	●	●	●		●
C101	KEY SHEET	●	●	●		●
C200	SITE PREPARATION & DEMOLITION PLAN	●	●	●		●
C201	SITE PREPARATION & DEMOLITION PLAN	●	●	●		●
C300	LAYOUT & MATERIALS PLAN	●	●	●		●
C301	LAYOUT & MATERIALS PLAN	●	●	●		●
C400	GRADING & DRAINAGE PLAN	●	●	●		●
C401	GRADING & DRAINAGE PLAN	●	●	●		●
C500	UTILITY PLAN	●	●	●		●
C501	UTILITY PLAN	●	●	●		●
C600	SITE DETAILS	●	●	●		●
C601	SITE DETAILS	●	●	●		●
C602	SITE DETAILS	●	●	●		●
C603	SITE DETAILS	●	●	●		●
L100	KEY PLAN	●	●	●	●	●
L101	MATERIALS PLAN	●	●	●	●	●
L102	MATERIALS PLAN	●	●	●	●	●
L103	MATERIALS PLAN	●	●	●	●	●
L104	MATERIALS PLAN	●	●	●	●	●
L105	MATERIALS PLAN	●	●	●	●	●
L106	MATERIALS PLAN	●	●	●	●	●
L107	MATERIALS PLAN	●	●	●	●	●
L108	PLANTING & LIGHTING PLAN	●	●	●	●	●
L109	PLANTING & LIGHTING PLAN	●	●	●	●	●
L110	PLANTING & LIGHTING PLAN	●	●	●	●	●
L111	PLANTING & LIGHTING PLAN	●	●	●	●	●
L112	PLANTING & LIGHTING PLAN	●	●	●	●	●
L113	PLANTING & LIGHTING PLAN	●	●	●	●	●
L114	PLANTING & LIGHTING PLAN	●	●	●	●	●
L115	PLANTING SCHEDULE & DETAILS	●	●	●	●	●
L116	LIGHTING SCHEDULE & CUT SHEETS	●	●	●	●	●
L117	PHOTOMETRIC PLAN	●	●	●	●	●
L118	PHOTOMETRIC PLAN	●	●	●	●	●
L119	PHOTOMETRIC PLAN	●	●	●	●	●
L120	PHOTOMETRIC PLAN	●	●	●	●	●
L121	PHOTOMETRIC PLAN	●	●	●	●	●
L122	PHOTOMETRIC PLAN	●	●	●	●	●
L123	PHOTOMETRIC PLAN	●	●	●	●	●
L124	LANDSCAPE DETAILS			●	●	●

HIGHPOINT ENGINEERING, INC.
LAND PLANNING
PERMIT EXPEDITING
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DEDHAM EXECUTIVE CENTER
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www.HighpointEng.com

CLIENT:
Berkeley Partners
1 WASHINGTON MALL | Suite 701
BOSTON, MA 02108

CONSULTANT:

SEAL
COMMONWEALTH OF MASSACHUSETTS
DOUGLAS J. HARTNETT
CIVIL
No. 37796
REGISTERED PROFESSIONAL ENGINEER
10-05-2023

WAREHOUSE / INDUSTRIAL DEVELOPMENT
100/200 FINANCIAL PARK
FRANKLIN, MA
OWNER/APPLICANT: BERKELEY PARTNERS

REV	DATE	DESCRIPTION
4	10.05.2023	RESPONSE TO COMMENTS
3	08.25.2023	RESPONSE TO COMMENTS
2	08.14.2023	RESPONSE TO COMMENTS
1	07.17.2023	RESPONSE TO COMMENTS

ISSUE TYPE:
PERMIT SET
ISSUE DATE:
05/11/2023
PROJECT NUMBER:
22051

DRAWN BY: JJP / CCL/ WH
CHECKED BY: DJH

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SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
T100

ISSUED FOR : **PERMIT**

LIMITED/COMPLIED EXISTING CONDITIONS PLAN

FOR

100 & 200 FINANCIAL PARK

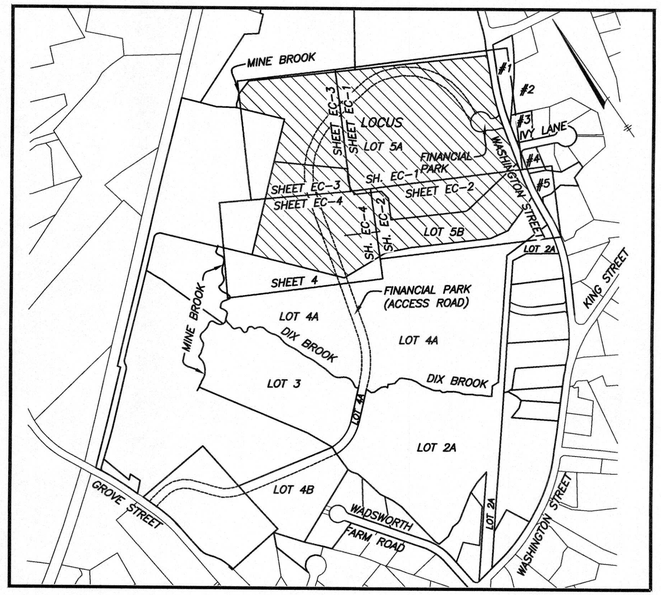
FRANKLIN, MA

OCTOBER 24, 2022

REV. JULY 24, 2023

LEGEND

- E — ELECTRIC MANHOLE & UNDERGROUND ELECTRIC LINES
- T — TELEPHONE MANHOLE & UNDERGROUND
- FO — FIBER OPTIC LINES
- IR — IRON ROD
- BIT. — BITUMINOUS
- (C) — CALCULATED
- CONC. — CONCRETE
- (F) — FOUND
- (R) — RECORD
- POST INDICATOR VALVE
- CAMERA
- DRY WELL
- LIGHT POLE
- BOLLARD
- SIGN
- DH — DRILL HOLE
- DHCB — DRILL HOLE IN CONCRETE BOUND
- DHSB — DRILL HOLE IN STONE BOUND
- CB — CATCH BASIN
- SMH — SEWER MANHOLE
- W — 6"CI — WATER MANHOLE, WATER MAIN WITH SIZE, TEE, GATE VALVE & FIRE HYDRANT
- G — 10"DI — GAS MAIN WITH SIZE & GATE VALVE
- OHW — EXISTING UTILITY POLE WITH DESIGNATION OVERHEAD WIRES AND GUY POLE
- AREA OF FLOOD ZONES (SEE NOTE 10)
- STONE WALL
- METAL GUARDRAIL
- EDGE OF PAVEMENT
- WIRE FENCE
- EDGE OF GRAVEL ROAD
- T/C — TELECOMMUNICATIONS EASEMENT
- 208.8 WFA2 — LIMIT OF BORDERING VEGETATED WETLAND WITH FLAG NUMBER AND ELEVATION
- LIMIT OF 25-FOOT NO DISTURB WETLAND BUFFER ZONE
- LIMIT OF 50-FOOT NO BUILD ZONE WETLAND BUFFER ZONE
- LIMIT OF 100-FOOT WETLAND BUFFER ZONE
- S — SEWERLINE & MANHOLE
- D — DRAINLINE WITH CATCHBASIN, MANHOLE & ROUND CATCHBASIN
- LIMIT OF 100-YEAR FLOOD PLAIN (SEE NOTE 10 & 11)
- LIMIT OF FEMA FLOOD WAY (SEE NOTE 10)
- LIMIT OF 100-FOOT INNER RIPPARIAN ZONE
- LIMIT OF 200-FOOT OUTER RIPPARIAN ZONE



LOCUS MAP

1"=500'

RECORD OWNERS:

ICBP IV HOLDINGS 34, LLC
C/O BERKELEY PARTERS
1 SANSOME STREET, SUITE 1500
SAN FRANCISCO, CALIFORNIA

ASSESSORS' PARCEL ID:

LOT 5A: 312-020-000-000
LOT 5B: 312-020-001-000
W/R/T EASEMENT OVER LOT 4A
LOT 4A: 321-060-000-000

REFERENCES:

DEED BOOK 36923, PAGE 217
PLAN BOOK 56, PLAN 2653 & 2654
PLAN BOOK 107, PAGE 253
PLAN BOOK 117, PAGES 388 & 389
PLAN BOOK 190, PAGE 1305
PLAN 262 OF 1977, PLAN BOOK 259
PLAN BOOK 281, PLAN 323 OF 1980
PLAN 322 OF 1980, PLAN BOOK 281
PLAN BOOK 665, PAGES 8 & 9
PLAN BOOK 672, PAGE 97 & 98
PLAN BOOK 675, PAGE 39
PLAN BOOK 676, PAGE 49
PLAN BOOK 678, PAGES 8 & 9
PLAN BOOK 701, PAGE 31
PLAN BOOK 281, PLAN 323 OF 1980

ZONING:

INDUSTRIAL

ABUTTERS EAST OF WASHINGTON STREET:

#1: 312-006-000-000
HALLIE WETZELL & NICHOLAS PAONE
394 WASHINGTON STREET, FRANKLIN, MA
DEED BOOK 31636, PAGE 270

#2: 312-011-000-000
TOWN OF FRANKLIN
DEED BOOK 9381, PAGE 124

#3: 312-007-000-000
MICHAEL CARUSO & VANESSA CARUSO
2 IVY LANE, FRANKLIN, MA
DEED BOOK 35089, PAGE 415

#4: 312-016-000-000
KEVIN & KATIE BOYCE
1 IVY LANE, FRANKLIN, MA
DEED BOOK 36017, PAGE 305

#5: 312-017-000-000
SUZANNA & AMBER SARKAR
JOANNE HEBERT SARKAR
460 WASHINGTON STREET, FRANKLIN, MA
DEED BOOK 40155, PAGE 457

NOTES:

1) PROJECT SOURCE BENCHMARK IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988

2) THE PURPOSE OF THIS PLAN IS TO FACILITATE CONCEPT DESIGN ONLY. IT COMPILES INFORMATION FROM THE FOLLOWING SOURCES:
- A: TOPOGRAPHY AND WETLANDS (SERIES F&G) NEAR WASHINGTON STREET FROM 2016 ANRAD BY THIS OFFICE.
- B: REMAINDER OF WETLANDS FROM 2019 WETLANDS PLAN OF LOT 5 BY THIS OFFICE.
- C: 2020 SITE "AS-BUILT" BY THIS OFFICE OF LOT 4A (TO THE SOUTH) WHICH INCLUDES PARKING EASEMENT ON LOT 5A AND ACCESS EASEMENT TO FINANCIAL PARK CUL-DE-SAC.
- D: UTILITY LOCATIONS FROM 2021 ALTA PLAN FOR LOT 5A AND LOT 5B.
- E: PORTIONS OF CONTOURS FROM NOAA 2011 LIDAR.
- F: GPS FILL IN CONTOURS IN AREA SOUTH OF SMALL WAREHOUSE.

3) UNDERGROUND UTILITIES SHOWN HEREON ARE FROM A DECEMBER 15, 2021 ALTA BY THIS OFFICE (AND HAVE NOT BEEN UPDATED). THEY WERE COMPILED FROM FIELD LOCATIONS OF STRUCTURES, CONTRACTOR PAINT MARKS, AND AVAILABLE RECORD INFORMATION ON FILE AT THE TOWN ENGINEERING OFFICES, TOWN D.P.W., MASS HIGHWAY DEPT. AND UTILITY COMPANIES. OTHER UNDERGROUND UTILITIES MAY EXIST. IT SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER AND THE CONTRACTOR TO VERIFY THE LOCATION, SIZE & ELEVATION OF ALL UTILITIES WITHIN THE AREA OF ANY FUTURE PROPOSED WORK AND TO CONTACT "DIG-SAFE" AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION, DEMOLITION OR CONSTRUCTION.

4) THE LOCATION OF UNDERGROUND STORAGE TANKS, IF ANY, ARE UNKNOWN.

5) THIS PLAN IS A COMPILATION OF SEVERAL TOPOGRAPHIC SURVEYS PREPARED AT VARIOUS SCALES, AS SUCH, SCALES OF SOME SYMBOLS ARE NOT CONSISTENT.

6) ELECTRIC EASEMENT CROSSING LOCUS IS DEPICTED APPROXIMATELY PER 2-19-15 ALTA PLAN PREPARED FOR CRE MANAGEMENT, LLC. AND PLAN BOOK 56, PLAN #2653.

7) INTENTIONALLY OMITTED

8) A TWO LOT DEFINITIVE SUBDIVISION PLAN WAS APPROVED FOR PREVIOUS OWNERS BUT NOT REFERENCED ON THE CURRENT DEED. THE COVER SHEET (ONLY) WAS RECORDED IN PLAN BOOK 428, PLAN 163 OF 1995 AT THE NORFOLK COUNTY REGISTRY OF DEEDS. THE LOTTING SHEETS, NOT RECORDED, ARE ON FILE AT THE FRANKLIN PLANNING BOARD. THE LOCATION OF THE "FINANCIAL PARK" CUL-DE-SAC IS SHOWN FROM SAID PLANS.

9) LOCATION OF IRRIGATION SYSTEM COMPONENTS NOT INCLUDED IN THIS SURVEY.

10) FEMA FLOOD ZONE LINES FOR "ZONE X-SHADED" ARE SHOWN APPROXIMATELY FROM MASS GIS.

11) THE 100 YEAR FLOOD PLAIN (FLOOD ZONE AE) WAS FIELD LOCATED ON LOT 4A AND PARTIALLY ONTO THE SOUTHERLY PORTION OF LOT 5 ON AUGUST 19, 2019. THE FLOOD ZONE LINE IS SHOWN PER FIELD LOCATION BETWEEN WETLAND FLAG 3105 (SHEETS 4 & 5) AND MEAN ANNUAL HIGH WATER FLAG 215. ALL OTHER PORTIONS OF FLOOD ZONE AE LINES ARE SHOWN APPROXIMATELY PER INTERPOLATION OF THE NOAA LIDAR CONTOURS THAT ARE PART OF THIS COMPILATION PLAN AND ARE NOT FIELD LOCATED.

12) MEAN ANNUAL HIGH WATER (MAHW) HAS BEEN FIELD DELINEATED AT THE NORTHWEST CORNER OF LOT 5A AND SEVERAL HUNDRED FEET SOUTH OF THERE. ON LOT 4A, ALONG MINE BROOK AND THE PORTION OF DIX BROOK THAT HAS NOT BEEN FIELD DELINEATED, MAHW HAS BEEN APPROXIMATED BASED ON DIGITIZED CENTERLINE OF SAID BROOKS AND MAHW WIDTHS FROM USGS STREAMSTATS BANKFULL STATISTICS.

13) BVW (BORDERING VEGETATED WETLANDS) HAS NOT BEEN FLAGGED WEST OF THE DETENTION POND ON ABUTTING LOT 4A, BETWEEN DIX BROOK AND ROUGH WF-J85. THIS LINE WOULD NOT IMPACT THE 100' SETBACK LINE ON LOT 4A AS THE DETENTION POND BROADCASTS A 100' BUFFER FARTHER EAST AS DEPICTED.

14) OFF-SITE ACCESS EASEMENTS AND UTILITY EASEMENTS EXIST BUT ARE NOT SHOWN AS THEY ARE OUTSIDE THE SCOPE OF THIS SURVEY.

15) WATER LINE SHOWN HEREON FOR WELL PUMP IS COMPLIED FROM A SKETCH SUPPLIED BY HIGHPOINT ENGINEERING AND IS SHOWN APPROXIMATE ONLY. A WELL PUMP EXISTS ON SITE BUT HAS NOT BEEN LOCATED AS OF THE DATE OF THIS PLAN.

16) REVISED AND ADDITIONAL WETLAND FLAGS WERE FIELD LOCATED ON JUNE 29, 2023 BY THIS OFFICE AND ARE SHOWN HERE ON (SHEET EC-1) NEW FLAGS LOCATED ARE WF-114A, WF-114B, WF-114C, WF-114D, WF-B100, WF-B101, W-FB102, WF-B103, WF-BA200, WF-BA201B WF-BA202, WF-BA203 & WF-BA204. WETLAND FLAGS WF BA-103A, WF BA-102A, WF BA-101A, WF BA-100A, WF BA-200A, WF BA-201 & WF BA-202A WERE LOCATED ON JULY 17, 2023.

17) IN PARAGRAPH 1.2 OF DOCUMENT IN DEED BOOK 36923, PAGE 202 A 20'X20' SIGNAGE EASEMENT IS DESCRIBED BUT REFERENCES A SKETCH ON ITS EXHIBIT B THAT DEPICTS TWO STRAIGHT LINES AND A CURVE WITH NO MATH. A BEST GUESS OF INTENT IS DRAFTED HEREON.

SHEET INDEX:

COVER SHEET
LIMITED/COMPILED EXISTING CONDITIONS PLANS.....EC-1 THRU EC-4

▲	ELEVATION BENCH MARKS **DATUM:** (SEE NOTE 1)	
NO.	DESCRIPTION	ELEV.
L	MAGNETIC NAIL IN PAVEMENT	266.93
M	MAGNETIC NAIL IN PAVEMENT	254.42
N	MAGNETIC NAIL IN PAVEMENT	251.92

SURVEYOR

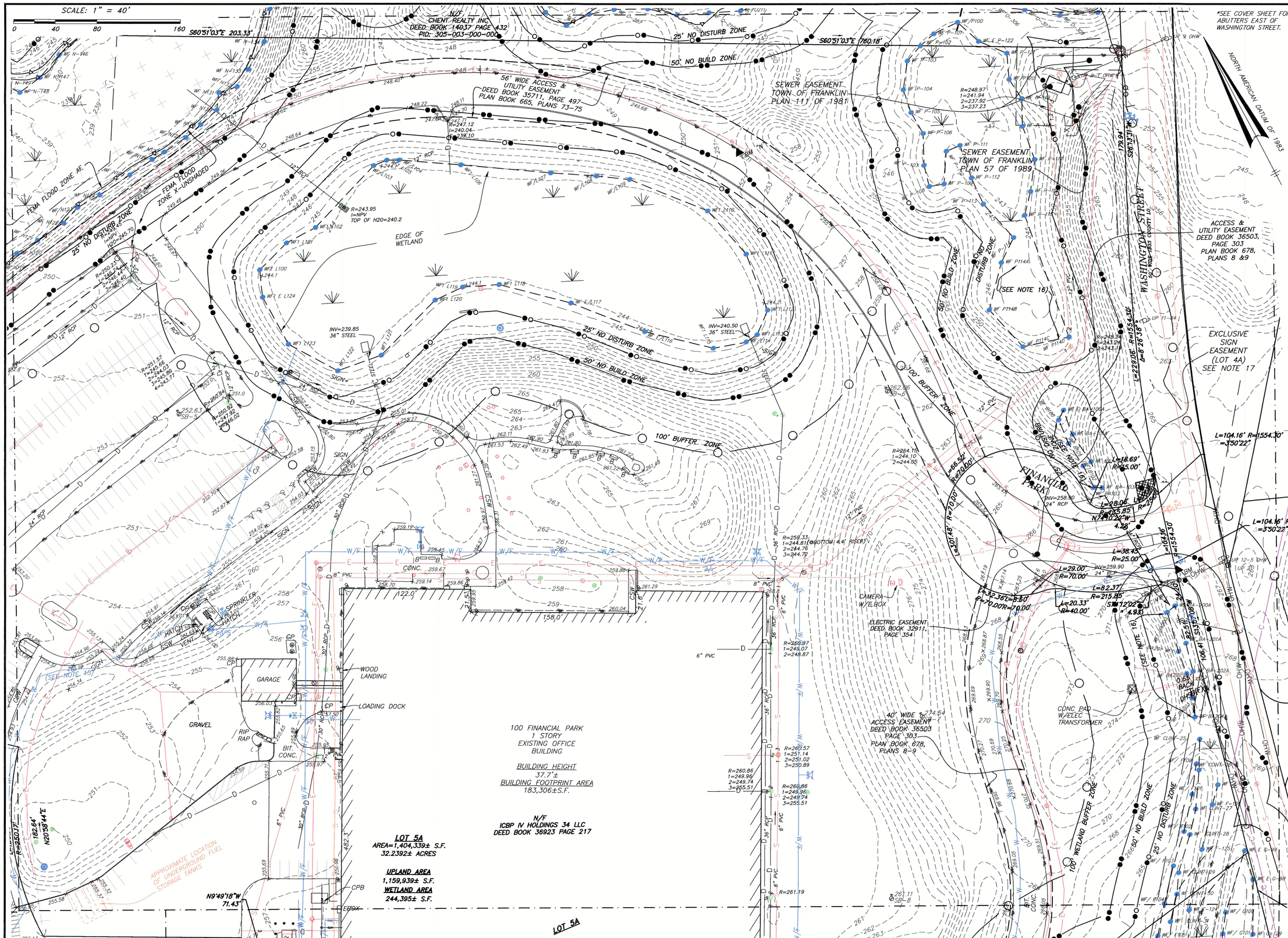
HANCOCK ASSOCIATES
315 ELM STREET
MARLBOROUGH, MA 01752
PHONE (508) 460-1111

CIVIL ENGINEER

HIGHPOINT ENGINEERING, INC.
980 WASHINGTON STREET
DEDHAM, MA 02026
PHONE (781) 770-0973

COMMONWEALTH OF MASSACHUSETTS
JOHN D. BREMSER NO. 35390 REGISTERED PROFESSIONAL LAND SURVEYOR

7-24-23



LOCUS MAP SCALE: 1" = 1500'

SITE ADDRESS:

#100 & #200
FINANCIAL PARK
(F/K/A 431 WASHINGTON ST.)

Franklin, Massachusetts

PREPARED FOR:

BERKELEY PARTNERS GROUP, LLC

HANCOCK ASSOCIATES

Civil Engineers

Land Surveyors

Environmental Consultants

315 Elm Street, Marlborough, MA 01752
Voice (508) 460-1111, Fax (508) 460-1121
www.hancockassociates.com

COMMONWEALTH OF MASSACHUSETTS
JOHN D. BREMSER
NO. 35390
REGISTERED PROFESSIONAL LAND SURVEYOR

7-24-23

NO.	BY	APP	DATE	ISSUE/REVISION DESCRIPTION
12	CMC	JDB	7/24/23	ADD HYDRANT AT FINANCIAL PARK & WASHINGTON STREET
11	CMC	JDB	7/19/23	REV. WET. LINES/BUFF. AT WASH & FIN. PARK; NOTES & CULVERT
10	CMC	JDB	5/5/23	ADD WATER LINE
9	CMC	JDB	4/17/23	GENERAL REVISIONS
8	CMC	JDB	4/4/23	GENERAL REVISIONS
6	CMC	JDB	3/6/23	REVISE NOTES 10-13, ADD 13; ADD MAHW FLAGS ON LOT 4A
5	CMC	JDB	2/3/23	REVISE FLOOD ZONE AREAS & ADD MAHW FLAG SERIES 100
1	CMC	JDB	11/2/22	GENERAL REVISIONS

DATE:	10/24/22	DRAWN BY:	CMC
SCALE:	1" = 40'	CHECK BY:	JDB

LIMITED/COMPILED EXISTING CONDITIONS PLAN OF LAND IN FRANKLIN, MA

PLOT DATE: Jul 24, 2023 7:15 pm

DWG: 26609-LIM-EC-LOT-5A&B-2023.dwg

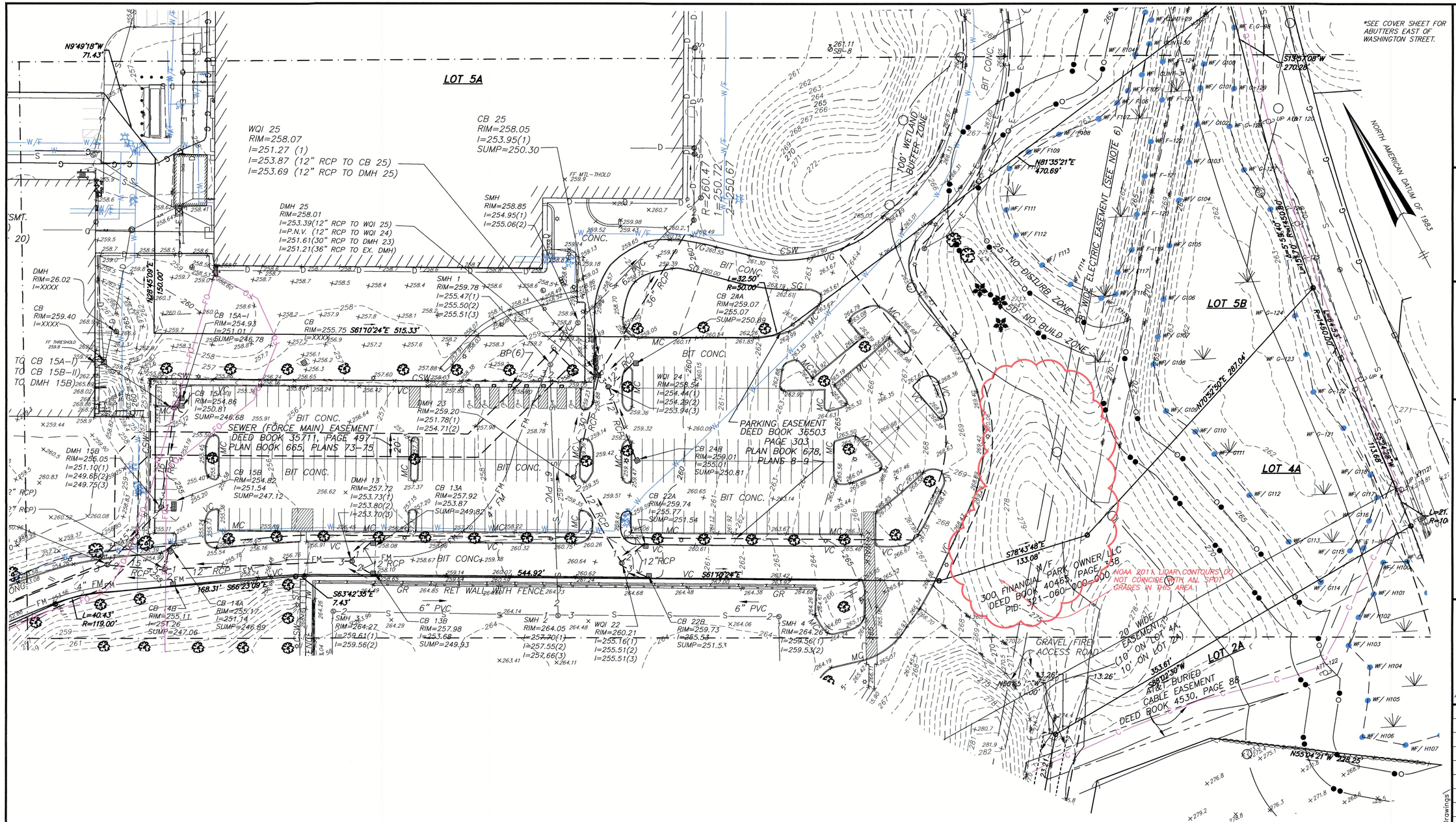
LAYOUT: EC-1

SHEET: 2 OF 5

EC-1

PROJECT NO.: 22387

PATH: V:\Vol1\HSA\Civil 3D Projects\19675-ANR\Source Drawings\



*NOTE:
LEGEND AND NOTES LOCATED ON SHEET 4.

LOCUS MAP SCALE: 1" = 1500'

SITE ADDRESS:

#100 & #200 FINANCIAL PARK

(F/K/A 431 WASHINGTON ST.)

Franklin, Massachusetts

PREPARED FOR:

BERKELEY PARTNERS GROUP, LLC

HANCOCK ASSOCIATES

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COMMONWEALTH OF MASSACHUSETTS JOHN D. BREMSER NO. 35390 REGISTERED PROFESSIONAL LAND SURVEYOR

John D Bremser 7-24-23

NO.	BY	APP	DATE	ISSUE/REVISION DESCRIPTION
12	CMC	JDB	7/24/23	ADD HYDRANT AT FINANCIAL PARK & WASHINGTON STREET
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1	CMC	JDB	11/2/22	GENERAL REVISIONS

DATE: 10/24/22 DRAWN BY: CMC
SCALE: 1" = 40' CHECK BY: JDB

LIMITED/COMPILED EXISTING CONDITIONS PLAN OF LAND IN FRANKLIN, MA

PLOT DATE: Jul 24, 2023 7:10 pm

DWG: 26609-LIM-EC-LOT-5A&B-2023.dwg
LAYOUT: EC-2
SHEET: 3 OF 5
PROJECT NO.: 26609

EC-2

PATH: V:\Vol1\HSA\Civil 3D Projects\19675-ANR\Source Drawings\

SCALE: 1" = 40'

0 40 80 160

THE UNITED STATES OF AMERICA
DEED BOOK 5912 PAGE 595
PID: 305-011-000-000

S60°51'03"E 221.00'

S60°51'03"E 487.47'

S60°51'03"E 203.33'

N/F
CHENT REALTY INC.
DEED BOOK 14037 PAGE 432
PID: 305-003-000-000

212'±(C) BY THE BROOK
"MINE BROOK"

N60°11'57"E 205.09'

200' RIVERFRONT SETBACK

EDGE OF WETLAND

USA EASEMENT
2110-E-3
AREA = 4.2± ACRES
DEED BOOK 5779 PAGE 406

(SEE NOTE 10) FEMA FLOODWAY AREA

FEMA FLOOD ZONE AE

FEMA FLOOD ZONE X-UNSHADED

25' NO DISTURB ZONE

50' NO BUILD ZONE

100' BUFFER ZONE

N41°24'14"W 344.2'

N48°35'46"E 388.85'

200' RIVERFRONT SETBACK

100' WETLAND BUFFER ZONE

100' INNER RIPARIAN ZONE

THE TOWN OF FRANKLIN
DEED BOOK 5328 PAGE 216
TAX MAP 312 PARCEL 21

35' NO DISTURB ZONE

50' NO BUILD ZONE

56' WIDE ACCESS & UTILITY EASEMENT

LOT 5A

N49°14'04"W 517.11'

LOT 5B

BM "M" EL=251.31

R=251.19
l=248.44
S=247.50

R=253.22
l=246.79
2=245.97
3=246.97
4=245.67

R=252.12
1=246.92
2=247.66
3=247.42
4=246.49

R=251.67
1=224.66
2=244.09
3=245.99
4=243.77

R=230.24
1=246.44
2=246.44
3=246.40

R=243.95
l=NPV
TOP OF H20=240.2

R=245.70
l=NPV
H20=245.70

INV=239.85
36" STEEL

INV=239.85
48" RCP

INV=239.85
30" RCP

INV=239.85
24" RCP

INV=239.85
12" RCP

Le=186.05'
R=250.17'

N20°58'44"E
182.64'

N9°49'18"W
71.43'

APPROXIMATE LOCATION OF UNDERGROUND FUEL STORAGE TANKS

GARAGE

WOOD LANDING

LOADING DOCK

GRAVEL

RIP RAP

BIT. CONC.

SIGN

8" PVC

6" PVC

CPB

ELEC

LOT 5A
AREA=1,404,339± S.F.
32.2392± ACRES

UPLAND AREA
1,159,939± S.F.

WETLAND AREA
244,395± S.F.

NORTH AMERICAN DATUM OF 1983

LOCUS MAP
SCALE: 1" = 1500'

LOT 5A&B
GROVE STREET
WASHINGTON STREET
EAST CENTRAL STREET

SITE ADDRESS:

#100 & #200 FINANCIAL PARK

(F/K/A 431 WASHINGTON ST.)

Franklin, Massachusetts

PREPARED FOR:

BERKELEY PARTNERS GROUP, LLC

HANCOCK ASSOCIATES

Civil Engineers

Land Surveyors

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315 Elm Street, Marlborough, MA 01752
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JOHN D. BREMSER NO. 35390 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS
7/24/23

NO.	BY	APP	DATE	ISSUE/REVISION DESCRIPTION
12	CMC	JDB	7/24/23	ADD HYDRANT AT FINANCIAL PARK & WASHINGTON STREET
11	CMC	JDB	7/19/23	REV. WET. LINES/BUFF. AT WASH & FIN. PARC; NOTES & CULVERT
10	CMC	JDB	5/5/23	ADD WATER LINE
9	CMC	JDB	4/17/23	GENERAL REVISIONS
8	CMC	JDB	4/4/23	GENERAL REVISIONS
6	CMC	JDB	3/6/23	REVISE NOTES 10-13, ADD 13; ADD MAHW FLAGS ON LOT 4A
5	CMC	JDB	2/3/23	REVISE FLOOD ZONE AREAS & ADD MAHW FLAG SERIES 100
1	CMC	JDB	11/2/22	GENERAL REVISIONS

DATE: 10/24/22 DRAWN BY: CMC
SCALE: 1" = 40' CHECK BY: JDB

LIMITED/COMPILED EXISTING CONDITIONS PLAN OF LAND IN FRANKLIN, MA

PLOT DATE: Jul 24, 2023 7:13 pm

DWG: 26609-LIM-EC-LOT-5A&B-2023.dwg

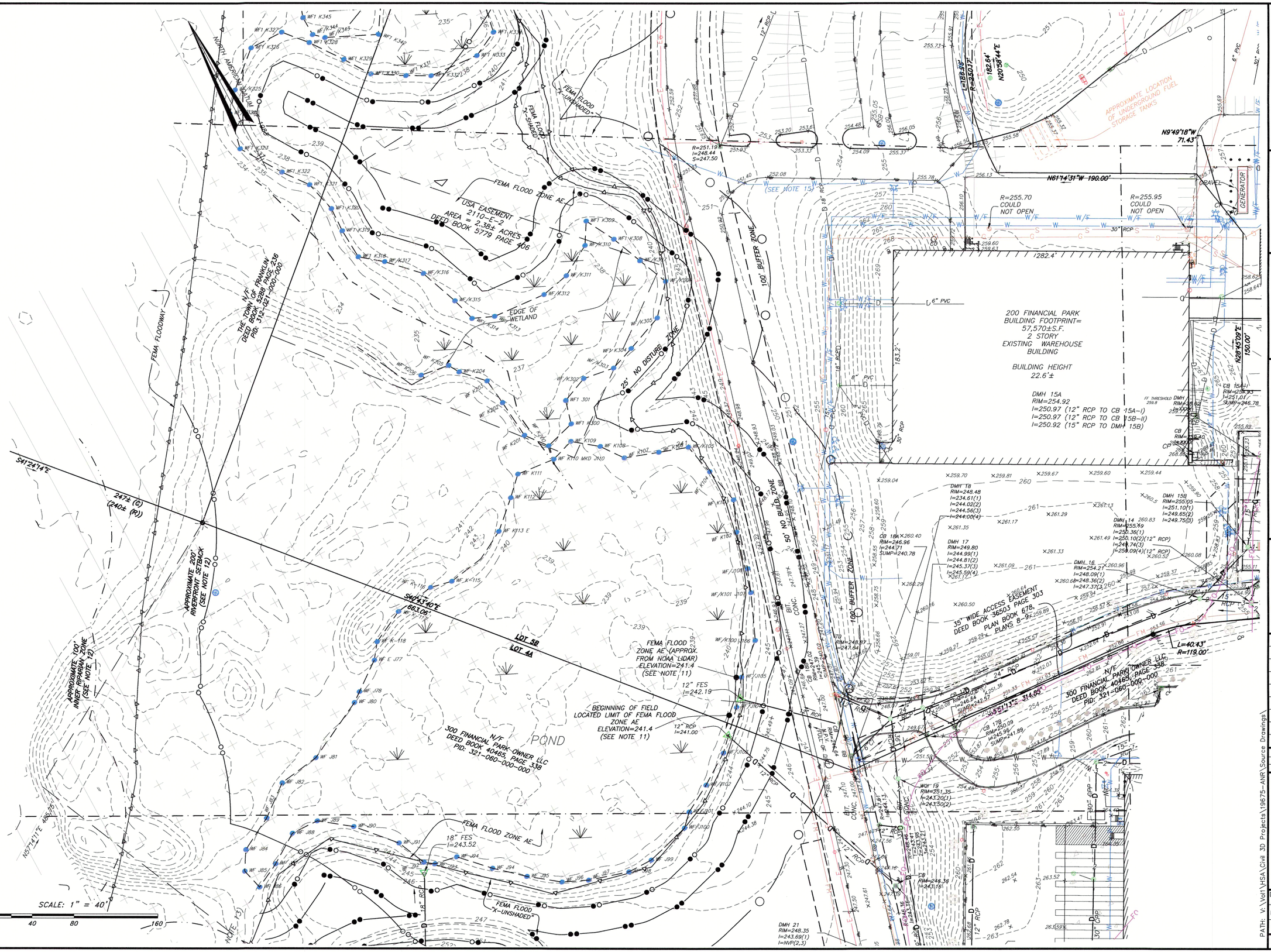
LAYOUT: EC-3

SHEET: 4 OF 5

EC-3

PROJECT NO.: 26609

PATH: V:\Vol1\HSA\Civil 3D Projects\19675-ANR\Source Drawings\



LOCUS MAP SCALE: 1" = 1500'

SITE ADDRESS:

#100 & #200 FINANCIAL PARK

(F/K/A 431 WASHINGTON ST.)

Franklin, Massachusetts

PREPARED FOR:

BERKELEY PARTNERS GROUP, LLC

HANCOCK ASSOCIATES

Civil Engineers

Land Surveyors

Environmental Consultants

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www.hancockassociates.com

COMMONWEALTH OF MASSACHUSETTS JOHN D BRENSER NO. 38380 REGISTERED PROFESSIONAL ENGINEER
7-24-23

12	CMC	JDB	7/24/23	ADD HYDRANT AT FINANCIAL PARK & WASHINGTON STREET
11	CMC	JDB	7/19/23	REV. WET. LINES/BUFF. AT WASH & FIN. PARK; NOTES & CULVERT
10	CMC	JDB	5/5/23	ADD WATER LINE
9	CMC	JDB	4/17/23	GENERAL REVISIONS
8	CMC	JDB	4/4/23	GENERAL REVISIONS
6	CMC	JDB	3/6/23	REVISE NOTES 10-13, ADD 13; ADD MAHW FLAGS ON LOT 4A
5	CMC	JDB	2/3/23	REVISE FLOOD ZONE AREAS & ADD MAHW FLAG SERIES 100
1	CMC	JDB	11/2/22	GENERAL REVISIONS
NO.	BY	APP	DATE	ISSUE/REVISION DESCRIPTION

DATE: 10/25/22	DRAWN BY: CMC
SCALE: 1" = 40'	CHECK BY: JDB

LIMITED/COMPILED EXISTING CONDITIONS PLAN OF LAND IN FRANKLIN, MA

PLOT DATE: Jul 24, 2023 7:14 pm

DWG: 26609-LIM-EC-LOT-5A&B-2023.dwg

LAYOUT: EC-4

SHEET: 5 OF 5

EC-4

PROJECT NO.: 26609

PATH: V:\Vol1\HSA\Civil 3D Projects\19675-ANR\Source Drawings\

GENERAL NOTES

THE CONTRACTOR SHALL REPORT TO THE OWNER AND ENGINEER ANY SIGNIFICANT VARIATIONS IN EXISTING SITE CONDITIONS FROM THOSE SHOWN ON THESE PLANS. ANY PROPOSED REVISIONS TO THE WORK, IF REQUIRED BY THESE SITE CONDITIONS, SHALL NOT BE UNDERTAKEN UNTIL REVIEWED AND APPROVED BY THE OWNER AND THE ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTITUTE ANY AND ALL SAFETY MEASURES NECESSARY TO PROTECT THE PUBLIC SAFETY DURING CONSTRUCTION. THESE SHALL INCLUDE SIGNS, BARRICADES, FENCES, POLICE OFFICERS, ETC. AS IS NECESSARY, OR AS DIRECTED BY THE PUBLIC AUTHORITIES AND THE OWNER. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.

THE EXISTING SITE CONDITIONS SHOWN ON THESE PLANS WERE DETERMINED BY A FIELD SURVEY AND COMPILATION OF PLANS OF RECORD. ANY VARIATIONS FROM THE CONDITIONS SHOWN ON THESE PLANS SHOULD BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE PROPOSED WORK.

UNLESS OTHERWISE SPECIFIED ON THE PLANS AND SPECIFICATIONS ALL SITE CONSTRUCTION MATERIALS AND METHODOLOGIES ARE TO CONFORM TO THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988 EDITION OR THE LATEST EDITION.

WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS. WORK WITHIN THE STATE RIGHTS-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE STATE HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.

THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INCLUDING (BUT NOT LIMITED THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS.

CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND ALL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND ALL CONSTRUCTION MEANS AND METHODS.

LIMIT OF WORK SHALL BE EROSION CONTROL BARRIERS, LIMIT OF GRADING AND SITE LIMIT OF WORK SHALL BE EROSION CONTROL BARRIERS, LIMIT OF GRADING AND SITE PROPERTY LINES AND/OR AS INDICATED ON DRAWINGS.

CONTRACTOR TO VERIFY UTILITY STUB LOCATIONS AND ELEVATIONS IN THE FIELD PRIOR TO COMMENCING WORK.

ANY ALTERATION TO THESE DRAWINGS MADE IN THE FIELD DURING CONSTRUCTION RECORDED BY THE CONTRACTOR ON RECORD DOCUMENTS.

ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO OWNER.

ALL WORK TO BE DONE WITHIN PUBLIC RIGHT-OF-WAYS SHALL CONFORM TO TOWN/CITY LOCAL STANDARD CONSTRUCTION REQUIREMENTS FOR THE INSTALLATION OF AND/OR REPAIR OF UNDERGROUND FACILITIES, EXCAVATIONS AND PAVING IN THE PUBLIC WAY.

IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL AND SHALL NOTIFY THE OWNER/ENGINEER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.

SEDIMENTATION/EROSION CONTROL NOTES

UNLESS DIRECTED OTHERWISE, ALL EXISTING TURF OR VEGETATED AREAS WITHIN THE PROPOSED LIMITS OF WORK FOR EXCAVATION, GRADING, OR IMPROVEMENT SHALL BE CLEARED AND GRUBBED. WITHIN THE CLEARING AND GRUBBING AREA, REMOVE ALL TREES, SHRUBS AND ROOTS UNLESS DESIGNATED OTHERWISE. CLEARING SHALL INCLUDE THE FELLING, CUTTING AND OFF-SITE DISPOSAL OF ALL TREES, SHRUBS, STUMPS AND VEGETATIVE DEBRIS PRODUCED THROUGH THE CLEARING OPERATIONS.

THE LOCATION OF EROSION CONTROL BARRIERS SHOWN ON DRAWINGS ARE INTENDED TO THE LOCATION OF EROSION CONTROL BARRIERS SHOWN ON DRAWINGS ARE INTENDED TO BE MINIMUM REQUIREMENTS AND A GUIDE FOR THE PLACEMENT OF THESE BARRIERS. OTHER MEASURES MAY BE WARRANTED BASED UPON EXPERIENCE AT THE SITE. WHEN NO SEDIMENTATION CONTROL SYSTEM IS SHOWN ON THE DRAWING, THE CONTRACTOR SHALL BE REQUIRED TO ESTABLISH A SYSTEM TO PREVENT SILTATION OR POLLUTION OF ADJACENT PROPERTY. THE SYSTEMS SHOWN SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF PLACING ADDITIONAL BARRIERS OR REPLACING BARRIERS AS REQUIRED BY SITE CONDITIONS. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT AND ADDITIONS TO THESE SYSTEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. AS CONSTRUCTION PROGRESSES AND SEASONAL CONDITIONS DICTATE, MORE SILTATION CONTROL FACILITIES MAY BE REQUIRED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS NEW CONDITIONS THAT MAY BE CREATED.

THE CONTRACTOR SHALL REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEAN UP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE. ALL DEMOLITION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE SITE TO A LEGAL DUMP SITE. ALL TRUCKS LEAVING THE SITE SHALL BE COVERED.

AT THE END OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND SURPLUS MATERIALS FROM THE SITE. A THOROUGH INSPECTION OF THE WORK PERIMETER IS TO BE MADE AND ALL DISCARDED MATERIALS, BLOWN OR WATER CARRIED DEBRIS, SHALL BE COLLECTED AND REMOVED FROM THE SITE. THE CONTRACTOR SHALL NOT REMOVE ANY SILTATION CONTROLS UNTIL AUTHORIZED (IN WRITING) BY THE OWNER OR OWNER'S REPRESENTATIVE.

PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTITUTE EROSION CONTROL MEASURES ON AN AS NECESSARY BASIS, SUCH THAT EXCESSIVE SOIL EROSION DOES NOT OCCUR. MEASURES SHALL INCLUDE HAY BALE DIKES AROUND DRAINAGE INLETS, MULCHING, AND PLANTING OF DISTURBED AREAS.

AN EROSION CONTROL BARRIER IS TO BE INSTALLED AT THE PROPOSED DOWN GRADIENT TOE OF SLOPE AT ALL LOCATIONS WHERE EARTHWORK IS PROPOSED.

DURING CONSTRUCTION THE EROSION CONTROL MEASURES SHALL BE INSPECTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORM EVENT GENERATING MORE THAN 1/2" OF RAINFALL. THE EROSION CONTROL MEASURES SHALL BE CLEANED REGULARLY AND ADJUSTED IF NECESSARY, TO ENSURE THAT NO SILT OR DEBRIS LEAVES THE SITE.

ALL POINTS OF CONSTRUCTION EGRESS OR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADS. ANY SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS SHALL BE SWEPT AT THE END OF EACH WORKING DAY.

EXPOSED SLOPES GREATER THAN 50' IN LENGTH ARE TO HAVE CHECK DAMS, TERRACES AND/OR MULCHING INSTALLED IN ORDER TO REDUCE EROSION AND TO ENHANCE SURFACE STABILIZATION. IF CHECK DAMS ARE USED, THEY SHOULD BE PLACED APPROXIMATELY 50' O/C PARALLEL WITH THE FACE OF THE SLOPE.

UNTIL DRIVEWAYS ARE PAVED, TEMPORARY DIKES ARE TO BE STAKED ACROSS DRIVEWAYS AS REQUIRED TO DIRECT RUNOFF WATER TO CATCH BASINS. SILT SCREENS ARE TO BE INSTALLED AT CATCH BASIN GRATES (SEE DETAIL) AND SUMPS OF BASINS ARE TO BE CLEANED AS NECESSARY TO PREVENT SILT FROM ENTERING THE SUBSURFACE DRAINAGE SYSTEM.

AFTER INSTALLATION OF EACH DRAINAGE INLET A HAY BALE DIKE SHALL BE INSTALLED AROUND THE INLET TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM.

AT THE END OF CONSTRUCTION ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS. EROSION CONTROL BARRIERS ARE TO BE REMOVED AND DISPOSED OF IN ACCORDANCE TO LOCAL REQUIREMENTS.

CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP. REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS. ANY DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.

ALL AREAS DISTURBED DURING CONSTRUCTION AND NOT LEFT IN A NATURAL CONDITION SHALL RECEIVE SIX (6) INCHES OF LOAM AND SEED.

AREAS NOT DISTURBED BY CONSTRUCTION SHALL BE LEFT NATURAL. CARE SHALL BE TAKEN TO PRESERVE EXISTING TREES, GROUND COVER AND OTHER NATURAL FEATURES WHENEVER POSSIBLE.

AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL STATE AT THE CONTRACTOR'S EXPENSE.

CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.

ALL STOCKPILE AREAS SHALL BE LOCATED WITHIN LIMIT OF WORK LINE AND STABILIZED ALL STOCKPILE AREAS SHALL BE LOCATED WITHIN LIMIT OF WORK LINE AND STABILIZED TO PREVENT EROSION.

ALL DEBRIS GENERATED DURING SITE PREPARATION ACTIVITIES SHALL BE LEGALLY ALL DEBRIS GENERATED DURING SITE PREPARATION ACTIVITIES SHALL BE LEGALLY DISPOSED OF OFF-SITE.

PROVIDE CRIBBING AS NECESSARY TO PROTECT EXISTING UTILITY LINES DURING CONSTRUCTION.

SITE ELEMENTS TO REMAIN MUST BE PROTECTED FOR DURATION OF PROJECT.

ALL TOPSOIL ENCOUNTERED WITHIN WORK AREA SHALL BE STRIPPED TO ITS FULL DEPTH AND STOCKPILED FOR REUSE. EXCESS TOPSOIL SHALL BE DISPOSED OF ON-SITE AS DIRECTED BY OWNER. TOPSOIL PILES SHALL REMAIN SEGREGATED FROM EXCAVATED SUBSURFACE SOIL MATERIALS.

ALL AREAS IDENTIFIED AS CRITICAL AREA SEEDING SHALL BE STABILIZED DURING CONSTRUCTION BY SEEDING WITH ANNUAL RYE GRASS AT THE RATE OF FORTY (40) LBS/ACRE.

DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHODS AS DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE.

EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING ENVIRONMENTALLY SENSITIVE OR JURISDICTIONAL RESOURCE AREAS.

ALL DISTURBED SLOPES EITHER NEWLY CREATED OR EXPOSED PRIOR TO OCTOBER 15 ALL DISTURBED SLOPES EITHER NEWLY CREATED OR EXPOSED PRIOR TO OCTOBER 15 SHALL BE SEEDED OR PROTECTED BY THAT DATE.

LOAMING AND SEEDING OR MULCHING OF NON-PAVEMENT AREAS SHALL TAKE PLACE AS LOAMING AND SEEDING OR MULCHING OF NON-PAVEMENT AREAS SHALL TAKE PLACE AS SOON AS PRACTICABLE.

ALL SLOPES WITH SURFACE GRADES STEEPER THAN 3:1 SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS.

COIR FIBER ROLLS, HAYBALES, SILT FENCE OR OTHER SILTATION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.

SITE LAYOUT AND MATERIALS NOTES

CONTRACTOR SHALL REPORT SIGNIFICANT CONFLICTS TO THE OWNER OR OWNER'S REPRESENTATIVE FOR RESOLUTION.

ACCESSIBLE ROUTES, PARKING SPACES, RAMPS SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).

TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

CROSSWALKS SHALL BE STRIPED WITH 12" WIDE LINES OF WHITE THERMO PLASTIC SPACED 3' ON CENTER. STOP LINES SHALL BE STRIPED WITH 12" WIDE LINES OF WHITE THERMO PLASTIC. ALL OTHER STRIPING SHALL BE 4" WIDE LINES OF THERMO PLASTIC IN COLORS INDICATED HEREON.

PAVEMENT MARKINGS SHALL CONFORM TO SECTION M7.01.05 OF THE COMMONWEALTH OF PAVEMENT MARKINGS SHALL CONFORM TO SECTION M7.01.05 OF THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS "STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES".

ALL NEW CURBS SHALL BE VERTICAL GRANITE CURBING (VGC) WITH 6" REVEAL UNLESS OTHERWISE INDICATED HEREON. INSTALL 6' LONG TRANSITION CURB STONES AT ALL TRANSITIONS FROM VERTICAL TO FLUSH GRANITE.

EXISTING CURBS TO REMAIN AS SHOWN HEREON ARE ASSUMED TO BE IN SATISFACTORY CONDITION BUT ARE TO BE PARGED OR REPLACED IN KIND IN LOCATIONS OF DAMAGE.

INSTALL EXPANSION AND CONTROL JOINTS IN SIDEWALKS AT INTERVALS OF 5 FEET AND 25 FEET, RESPECTIVELY. PROVIDE BROOM FINISH IN TRANSVERSE DIRECTION ON ALL WALKS.

SIDEWALK WIDTHS INDICATED HEREON ARE MEASURED FROM BACK OF CURB TO BACK IF SIDEWALK. 6" WIDTH OF CURBS NOT INCLUDED.

ALL CURB RADIUS DIMENSIONS SHOWN HEREON ARE MEASURED ALONG FACE OF CURB.

REFER TO LAYOUT PLAN FOR EXTENTS OF MILL AND OVERLAY AND FULL DEPTH PAVEMENT CONSTRUCTION AND PATCHING WHERE APPLICABLE.

ALL WORK CONDUCTED WITHIN PUBLIC RIGHT-OF-WAYS SHALL CONFORM TO THE LOCAL REQUIREMENTS AND SPECIFICATIONS.

ALL ACCESSIBLE ROUTES, RAMPS AND PARKING SPACES TO COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES AND THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (AAB).

THE FOLLOWING LAYOUT CRITERIA SHALL CONTROL UNLESS OTHERWISE NOTED ON THE PLAN:

DIMENSIONS FROM BUILDING ARE FROM FACE OF BUILDING.

DIMENSIONS ARE TO FACE OF CURB AT GUTTER LINE.

DIMENSIONS ARE TO THE CENTER OF PAVEMENT MARKINGS.

ALL LINES AND DIMENSIONS AND TIES TO PROPERTY LINES ARE PERPENDICULAR TO THE PROPERTY LINE UNLESS OTHERWISE NOTED.

COORDINATE THE LOCATION OF ALL SITE LIGHT STANDARDS WITH IMPROVEMENTS SHOWN ON THESE DRAWINGS.

CONTRACTOR SHALL FURNISH AND SET ALL LINES AND GRADES REQUIRED AND PROTECT ALL PERMANENT BENCHMARKS OR MONUMENTS. DAMAGED MONUMENTS SHALL BE REPLACED BY A LICENSED SURVEYOR AT NO COST TO THE OWNER.

ALL BITUMINOUS CONCRETE PAVING SHALL COMPLY WITH THE MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988 EDITION AS AMENDED. THE CONTRACTOR SHALL SUBMIT A JOB MIX FORMULA DEMONSTRATING COMPLIANCE WITH THESE SPECIFICATIONS. THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH A CERTIFICATE OF COMPLIANCE SUPPLIED BY THE PAVING CONTRACTOR.

BITUMINOUS CONCRETE PAVEMENT: CLASS I, TYPE I-1 CONFORMING TO THE STANDARD SPECIFICATIONS, SECTIONS 420 AND 460, AND M3.11.03 FOR BINDER COURSE AND TOP COURSE JOB MIX FORMULAS.

ALL CONCRETE WORK SHALL COMPLY WITH ACI301, "SPECIFICATION FOR STRUCTURAL CONCRETE," AND ACI 316R, UNLESS MODIFIED BY THE CONTRACT DOCUMENTS. COMPLY WITH CRSI'S "MANUAL OF STANDARD PRACTICE" FOR FABRICATING, PLACING, AND SUPPORTING REINFORCEMENT. COMPLY WITH ACI 306.1 FOR COLD WEATHER PROTECTION, AND FOLLOW RECOMMENDATIONS IN ACI 350R FOR HOT WEATHER PROTECTION DURING CURING. COMPLY WITH ACI 304 "GUIDE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE."

SAW-CUT EXISTING PAVEMENT WHERE NEW BITUMINOUS CONCRETE PAVEMENT IS TO COME IN CONTACT. PRIME COAT THE CUT EDGE PRIOR TO PLACEMENT.

CONTRACTOR(S) SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.

OUT OF FUNCTION OR SCREENED IMAGES REPRESENT EXISTING CONDITIONS. WHERE EXISTING CONDITIONS LIE UNDER OR ARE IMPACTED BY PROPOSED BUILDINGS AND/OR SITE ELEMENTS, THE EXISTING CONDITION WILL BE REMOVED, ABANDONED AND/OR CAPPED OR DEMOLISHED AS REQUIRED.

GRADING NOTES

THE CONTRACTOR SHALL VERIFY EXISTING GRADES IN THE FIELD AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE OWNER OR HIS REPRESENTATIVE.

ALL STUMPS, PEAT, CONSTRUCTION DEBRIS AND OTHER DELETERIOUS MATERIALS ON THE SITE AT THE TIME OF CONSTRUCTION ARE TO BE REMOVED FROM THE SITE TO AN APPROVED LANDFILL. NO SUCH MATERIALS ARE TO BE BURIED OR OTHERWISE DISPOSED OF ON THE SITE. MATERIAL FOR BACKFILL SHALL NOT INCLUDE UNSUITABLE MATERIAL SUCH AS PEAT, TRASH, STUMPS, DEBRIS OR HAZARDOUS WASTE.

FILL MATERIAL SHALL BE AS SPECIFIED BY THE ARCHITECT/ENGINEER AND SELECTED FROM ON-SITE EXCAVATION MATERIAL WHERE POSSIBLE.

AT ALL LOCATIONS WHERE EXISTING CURBING OR PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE. BLEND NEW PAVEMENT, CURBS AND EARTHWORK SMOOTHLY INTO EXISTING BY MATCHING LINES, GRADES AND JOINTS. PITCH EVENLY BETWEEN SPOT GRADES. GRADE ALL AREAS TO DRAIN.

CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING FOUNDATIONS, STRUCTURES AND PLANTING BEDS.

THE CONTRACTOR SHALL SCHEDULE HIS WORK TO ALLOW THE FINISHED SUBGRADE ELEVATIONS TO DRAIN PROPERLY WITHOUT PUDDLING. SPECIFICALLY, ALLOW WATER TO ESCAPE WHERE PROPOSED CURB MAY RETAIN RUNOFF PRIOR TO APPLICATION OF THE FINISH SUBGRADE AND/OR SURFACE PAVING. PROVIDE TEMPORARY POSITIVE DRAINAGE AS REQUIRED.

PITCH EVENLY BETWEEN SPOT GRADES. GRADE ALL AREAS TO DRAIN. ALL PAVED AREAS MUST PITCH TO DRAIN AT A MINIMUM OF 1/8" PER FOOT UNLESS OTHERWISE SPECIFIED. ANY DISCREPANCIES NOT ALLOWING THIS MINIMUM PITCH SHALL BE REPORTED TO THE OWNER OR HIS REPRESENTATIVE PRIOR TO CONTINUING WORK.

ACCESSIBLE CURB RAMPS, RAMP, LANDINGS, WALKWAYS, CROSSWALKS, PATIOS/PLAZAS AND PARKING AREAS SHALL BE PER THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (AAB) AND THE AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY REQUIREMENTS. WALKWAY AND CROSSWALK ALONG ACCESSIBLE ROUTE(S) SHALL HAVE 5% MAX. LONGITUDINAL SLOPE AND 2% MAX CROSS SLOPE. LANDINGS, PATIOS/PLAZAS, AND ACCESSIBLE PARKING SPACES SHALL BE 2% MAX IN ALL DIRECTIONS. RAMPS SHALL BE 8.3% MAXIMUM.

A GEOTECHNICAL ENGINEER MAY BE RETAINED BY THE OWNER TO OBSERVE PERFORMANCE OF WORK, FOR CONFORMANCE WITH THESE CONTRACT DOCUMENTS, IN CONNECTION WITH EXCAVATING, TRENCHING, FILLING, BACKFILLING AND GRADING, AND TO PERFORM ASSOCIATED FIELD TESTS.

DURING THE PROGRESS OF THE WORK, THE CONTRACTOR MAY BE REQUIRED TO EXCAVATE ADDITIONAL TEST PITS FOR THE PURPOSE OF LOCATING UNDERGROUND UTILITIES OR STRUCTURES AS AN AID IN ESTABLISHING THE PRECISE LOCATION OF NEW WORK. THIS WORK IS TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER. TEST PITS SHALL BE BACKFILLED, AS SOON AS THE DESIRED INFORMATION HAS BEEN OBTAINED.

PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT AND OTHER HAZARDS CREATED BY CONTRACTOR OPERATIONS.

STOCKPILED TOPSOIL SHALL BE PLACED NEATLY IN AN AREA INDICATED BY THE OWNER.

EXISTING TREES AND SHRUBS OUTSIDE THE LIMITS OF GRADING SHALL BE REMOVED ONLY UPON PRIOR APPROVAL OF THE OWNER.

FILL DEPRESSIONS CAUSED BY TEST PITS AND CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY SOIL MATERIAL UNLESS FURTHER EXCAVATION OR EARTHWORK IS INDICATED.

THE CONTRACTOR SHALL PREVENT SURFACE WATER AND SUBSURFACE OR GROUNDWATER FROM FLOWING INTO EXCAVATIONS OR EARTHWORK AREAS WHICH WOULD CAUSE FLOODING OF THE PROJECT SITE AND SURROUNDING AREA, OR SOFTENING OR LOOSENING OF THE SOIL AT EXCAVATION OR EARTHWORK SUB-GRADES.

THE CONTRACTOR SHALL PROVIDE, INSTALL, OPERATE, MAINTAIN AND REMOVE ADEQUATE AND SATISFACTORY DEWATERING SYSTEMS AND DRAINAGE OF EXCAVATIONS TO PERMIT CONSTRUCTION TO PROCEED "IN THE DRY". THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR THE ADEQUACY OF THE METHODS, MATERIALS AND EQUIPMENT EMPLOYED. THE CONTRACTOR SHALL BEAR THE FULL COST OF PROVIDING ALL NECESSARY DEWATERING.

THE CONTRACTOR SHALL PROHIBIT SEEPAGE, GROUNDWATER FLOW OR SURFACE INFILTRATION AND RUNOFF FROM UNDERMINING OR OTHERWISE DAMAGING ADJACENT STRUCTURES AND UTILITIES.

PAVING, CONCRETE WORK AND BASE COURSE PREPARATION SHALL BE DONE ONLY AFTER EXCAVATION AND CONSTRUCTION WORK WHICH MIGHT INJURE THEM HAS BEEN COMPLETED. DAMAGE CAUSED DURING CONSTRUCTION SHALL BE REPAIRED BEFORE ACCEPTANCE.

PAVEMENT OR BASE MATERIALS SHALL NOT BE PLACED ON A MUDDY OR FROZEN SUBGRADE.

ESTABLISHMENT OF GRADES, GRADE CONTROL, AND CONFORMANCE TO REQUIRED GRADE TOLERANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

PROTECT GRADED, FINISHED OR PAVED AREAS FROM DAMAGE AND KEEP THEM FREE OF TRASH AND DEBRIS RESULTING FROM CONSTRUCTION OPERATIONS. REPAIR AND RE-ESTABLISH GRADES IN SETTLED, ERODED AND RUTTED AREAS.

PAVEMENT, LAWN OR PLANTING AREAS EXCAVATED DURING UTILITY CONSTRUCTION, WHETHER ON THE SITE OR ADJACENT PROPERTIES, SHALL BE RESTORED AND MATCHED WITH EXACTLY THE SAME MATERIALS AND TOLERANCES AS PRIOR TO DISRUPTION, AT NO ADDITIONAL COST TO THE OWNER, OR ADJACENT PROPERTY OWNERS.

DRAINAGE NOTES

ALL STORM DRAIN SHALL BE REINFORCD CONCRETE PIPE (RCP) PIPE UNLESS OTHERWISE NOTED. INSTALLATION OF ALL UTILITY STRUCTURES SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION.

REINFORCED CONCRETE PIPE SHALL CONFORM TO ASTM DESIGNATION C-76, CLASS III. REINFORCED CONCRETE PIPE SHALL CONFORM TO ASTM DESIGNATION C-76, CLASS III, WALL B WITH JOINTS AND GASKETS IN CONFORMANCE WITH ASTM C 443.

MANHOLES SHALL BE 48-INCH DIAMETER (UNLESS OTHERWISE SPECIFIED). CAST-IN-PLACE MANHOLES SHALL BE 48-INCH DIAMETER (UNLESS OTHERWISE SPECIFIED). CAST-IN-PLACE BASES SHALL BE USED WHERE MANHOLES ARE CONSTRUCTED OVER EXISTING PIPES.

FRAMES AND COVERS FOR DRAINAGE STRUCTURES SHALL PROVIDE A 24-INCH MINIMUM FRAMES AND COVERS FOR DRAINAGE STRUCTURES SHALL PROVIDE A 24-INCH DRAINAGE STRUCTURE COVERS SHALL HAVE THE WORD "DRAIN" CENTERED ON THE DRAINAGE STRUCTURE COVERS SHALL HAVE THE WORD "DRAIN" CENTERED ON THE COVER IN 3-INCH HIGH LETTERS.

MINIMUM CLEAR OPENING AND SHALL BE LEBARON TYPE LK110 OR APPROVED EQUAL.

SINGLE CATCHBASIN FRAMES AND GRATES SHALL BE LEBARON TYPE LF 248-2 OR AS SINGLE CATCHBASIN FRAMES AND GRATES SHALL BE LEBARON TYPE LF 248-2 OR AS REQUIRED BY TOWN OF WELLESLEY DPW.

DOUBLE CATCH BASIN FRAMES SHALL BE LEBARON ONE-PIECE LV2448-1 FRAMES OR DOUBLE CATCH BASIN FRAMES SHALL BE LEBARON ONE-PIECE LV2448-1 FRAMES OR APPROVED EQUAL. FOR DOUBLE CATCH BASIN GRATES, USE TWO LEBARON TYPE LF 248-2 OR APPROVED EQUAL.

FRAMES, GRATES AND COVERS SHALL BE SET FIRM AND TRUE TO GRADE, ADJUST FOR FRAMES, GRATES AND COVERS SHALL BE SET FIRM AND TRUE TO GRADE, ADJUST FOR GRADE WITH BRICK MASONRY.

ALL ON-SITE DRAIN LINES SHALL BE SMOOTH INTERIOR WALLED CORRUGATED ALL ON-SITE DRAIN LINES SHALL BE SMOOTH INTERIOR WALLED CORRUGATED POLYETHYLENE PIPE UNLESS OTHERWISE NOTED.

PRE-CAST CONCRETE STRUCTURES INCLUDING TANKS, BARREL SECTIONS, CATCHBASINS AND BASES SHALL CONFORM TO ASTM C478 AND AASHTO HS20-44. PLACEMENT SHALL BE IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS. ALL PRE-CAST STRUCTURES INCLUDING JOINTS, SEALS, OPENINGS, ETC. MUST BE WATERTIGHT.

AT THE END OF CONSTRUCTION, AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE CONTRACTOR SHALL CLEAN THE SUMPS OF ALL CATCH BASINS AND THE INVERTS OF ALL DRAIN MANHOLES.

ALL DRAIN LINES SHOWN SHALL BE 12" DIAMETER UNLESS OTHERWISE NOTED.

UTILITY NOTES

THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON EXISTING CONDITIONS PLANS AND POTENTIALLY INFORMATION PROVIDED BY THE LOCAL MUNICIPALITIES. ADDITIONAL INFORMATION MAY BE SUPPLEMENTED BY FIELD INVESTIGATIONS WHEREVER POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL CONTACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. DIG SAFE TELEPHONE NUMBER IS 1-888-DIG-SAVE.

UNDERGROUND UTILITIES WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY UNDERGROUND UTILITIES WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE AND ASSUMED.

ALL PVC SANITARY SEWER SHALL BE SDR 35 WITH RUBBER RING JOINTS.

REFER TO PLUMBING PLANS FOR EXACT SIZE AND LOCATION OF SANITARY CONNECTIONS.

THE LOCAL MUNICIPAL WATER AND FIRE DEPARTMENTS SHALL BE NOTIFIED PRIOR TO THE START OF ANY WORK ON THE WATER SYSTEM.

THE PROPOSED WATER MAIN IS TO BE CL 52 CLDI. ALL FITTINGS, HYDRANTS, VALVES, ETC., USED ON THE SITE ARE TO BE IN ACCORDANCE WITH THE LOCAL UNCIAL WATER DEPARTMENT SPECIFICATIONS.

HYDRANTS AND MINIMUM SIZING OF WATER PIPES SHALL BE SUBJECT TO THE APPROVAL OF THE (TOWN/CITY) FIRE CHIEF

THE CONTRACTOR SHALL NOTIFY THE LOCAL MUNICIPAL DEPARTMENT OF PUBLIC WORKS AT LEAST 48 HOURS IN ADVANCE OF ANY REQUIRED INSPECTIONS.

UNDERGROUND INFRASTRUCTURE LOCATED IN THE PUBLIC WAY SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL MUNICIPAL DEPARTMENT OF PUBLIC WORKS.

NO LEDGE, BOULDERS, OR OTHER UNYIELDING MATERIALS SHALL BE LEFT WITHIN 6" OF THE WATER AND SEWER IN THE TRENCH, NOR ARE THEY TO BE USED FOR BACKFILL FOR THE FIRST 12" ABOVE THE PIPES.

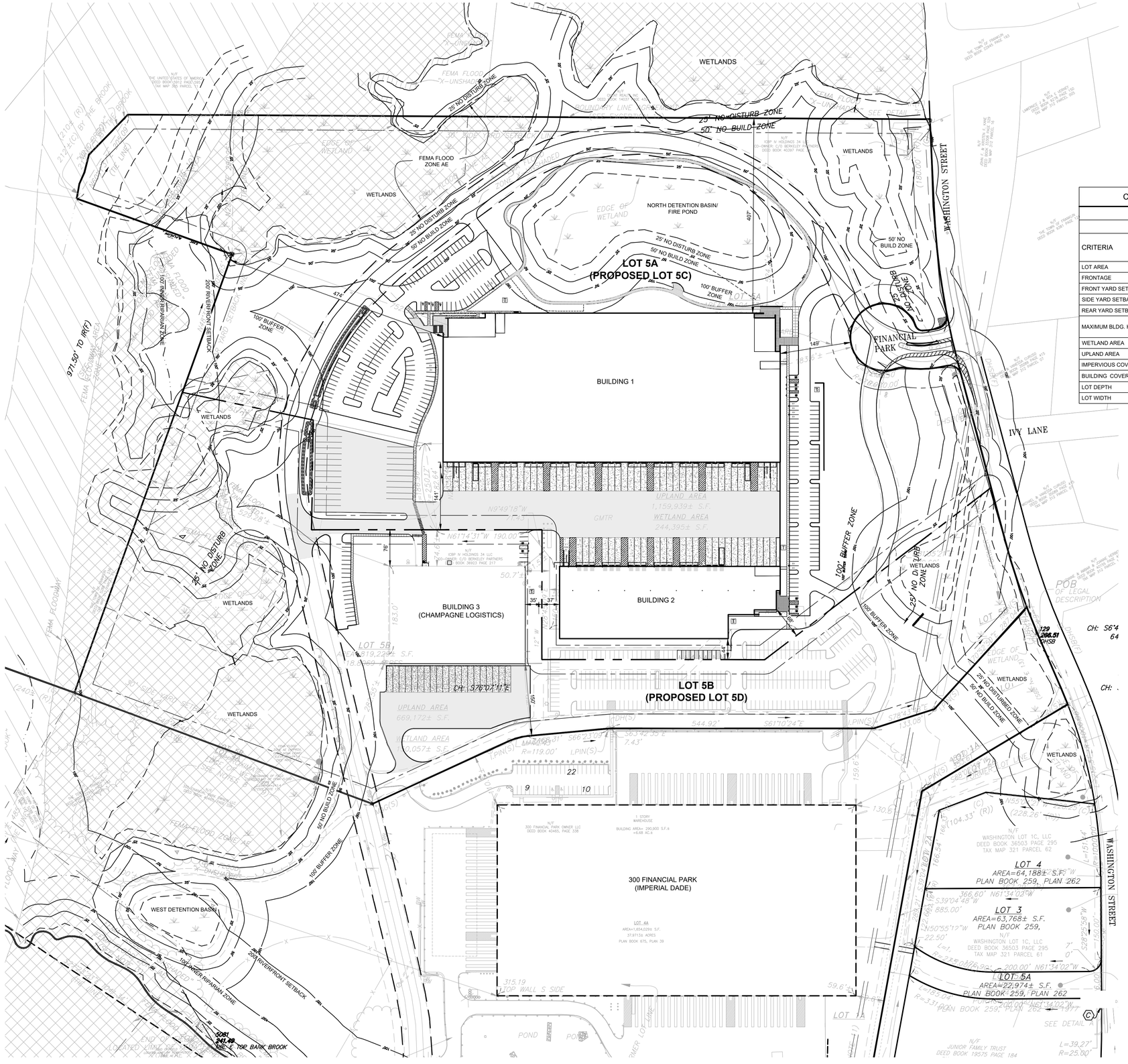
THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO TAPPING INTO, CROSSING OR EXTENDING THEM. IF THE NEW WORK POSES A CONFLICT WITH EXISTING UTILITIES, THE ENGINEER IS TO BE NOTIFIED PRIOR TO THE CONTRACTOR CONTINUING.

EXCAVATION SHALL BE TO THE LINES AND ELEVATIONS AS SHOWN ON THE PLANS.

ALL MATERIALS FOR INSTALLATION OF WATER, SEWER, DRAIN, GAS, DATA/TELECOM. AND ELECTRICITY SHALL BE IN ACCORDANCE WITH LOCAL STATE AND UTILITY COMPANY STANDARDS AND REGULATIONS AS THEY APPLY.

ALL BENDS, TEES, VALVES, AND HYDRANTS ARE TO BE SECURED BY MEANS OF THREADED TIE RODS.

THREE CUBIC FEET OF C



COMPLIANCE SUMMARY - BUILDING AND SITE DIMENSIONAL REQUIREMENTS					
ZONING DISTRICT: INDUSTRIAL (I)					
OVERLAY DISTRICT: WATER RESOURCE DISTRICT					
CRITERIA	REQUIRED	EXISTING LOTS 5A / 5B	LOT 5A (PROPOSED LOT 5C)	LOT 5B (PROPOSED LOT 5D)	COMPLIANCE
LOT AREA	40,000 SF	32.24 / 18.81 ± AC	34.12 +/- AC	16.92 +/- AC	YES
FRONTAGE	175 FT	1219 / 260 ± FT	890 ± FT	260 ± FT	YES
FRONT YARD SETBACK	40 FT	183.6 / >40 FT	149 FT	>40 FT	YES
SIDE YARD SETBACK	30 FT	50.8 / 50.7 FT	37 FT	35 FT	YES
REAR YARD SETBACK	30 FT	752.3 / 529.3 FT	474 FT	529 FT	YES
MAXIMUM BLDG. HEIGHT	3 STORIES	1 / 2 STORIES	≤ 2 STORIES	≤ 2 STORIES	YES
	----	24 / 40 FT	40 FT	40 FT	----
WETLAND AREA	----	250,998 / 139,809 SF	250,998 SF	139,809 SF	----
UPLAND AREA	----	1,153,336 / 679,420 SF	1,235,466 SF	597,302 SF	----
IMPERVIOUS COVERAGE	80%	31% / 69%	52%	45%	YES
BUILDING COVERAGE	70%	16% / 9%	23%	10%	YES
LOT DEPTH	200 FT	>200 FT	>200 FT	>200 FT	YES
LOT WIDTH	157.5 FT	>157.5 FT	>157.5 FT	>157.5 FT	YES

NOTES:

1. IMPERVIOUS COVERAGE PERCENTAGE IS CALCULATED AS IMPERVIOUS AREA / UPLAND AREA AS DEFINED IN THE FRANKLIN ZONING BYLAW.
2. THE FINANCIAL PARK CUL-DE-SAC (RIGHT-OF-WAY) IS EXCLUDED FROM THE AREAS USED FOR THE CALCULATIONS IN THIS CHART.
3. BUILDING COVERAGE PERCENTAGE IS CALCULATED AS BUILDING FOOTPRINT AREA / UPLAND AREA AS DEFINED IN THE FRANKLIN ZONING BYLAW.
4. EXISTING LOTS 5A & 5B SHALL BE RECONFIGURED AND RENAMED TO PROPOSED LOTS 5C & 5D, RESPECTIVELY TO MAINTAIN ZONING COMPLIANCE FOR THE DEVELOPMENT PLAN. APPROVAL OF AN ANR PLAN BY THE PLANNING BOARD IS REQUIRED.

PARKING SUMMARY			
	GROSS FLOOR AREA	REQUIRED	PROVIDED
BUILDING 1			
PROPOSED WAREHOUSE	206,500 GSF	207 SP.	-
PROPOSED OFFICE	13,500 GSF	54 SP.	
SUBTOTAL		261 SP.	
			-
BUILDING 2			
PROPOSED WAREHOUSE	57,750 GSF	58 SP.	-
PROPOSED OFFICE	7,250 GSF	29 SP.	
SUBTOTAL		87 SP.	
BUILDING 3			
EXISTING WAREHOUSE	65,000 GSF ±	65 SP.	
PROPOSED TOTAL	350,000 GSF ±	413 SP.	262 SP.

VEHICULAR PARKING REQUIREMENTS	
DESCRIPTION	CALCULATION
OFFICE SPACE	1 PARKING SPACE PER 250 GSF
WAREHOUSE	1 PARKING SPACE PER 1,000 GSF

NOTES:

1. A PARKING WAIVER IS REQUIRED FROM THE FRANKLIN PLANNING BOARD.

SYMBOL LEGEND	
	PROPOSED HEAVY DUTY BIT. CONC.
	PROPOSED BIT. CONC.
	PROPOSED CONCRETE
FEMA LEGEND	
	FLOOD ZONE "X"
	FLOOD ZONE "AE"
	FLOOD WAY

▲ ELEVATION BENCH MARKS DATUM:	
NO. DESCRIPTION	ELEV.
L MAGNETIC NAIL IN PAVEMENT	266.93
M MAGNETIC NAIL IN PAVEMENT	254.42
N MAGNETIC NAIL IN PAVEMENT	251.92

100 0 50 100 200 400
GRAPHIC SCALE 1 inch = 100 ft.

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CONSULTANT:

SEAL

WAREHOUSE/INDUSTRIAL DEVELOPMENT

100/200 FINANCIAL PARK
FRANKLIN, MA

OWNER/APPLICANT: BERKELEY PARTNERS

REV	DATE	DESCRIPTION
4	10.05.2023	RESPONSE TO COMMENTS
3	08.25.2023	RESPONSE TO COMMENTS
2	08.14.2023	RESPONSE TO COMMENTS
1	07.17.2023	RESPONSE TO COMMENTS

ISSUE TYPE:
PERMIT SET

ISSUE DATE:
05/11/2023

PROJECT NUMBER:
22051

DRAWN BY: JJP/CCL/WH

CHECKED BY: DJH

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SHEET TITLE:
SITE CONFORMANCE PLAN

SHEET NUMBER:
C100

ISSUED FOR : PERMIT

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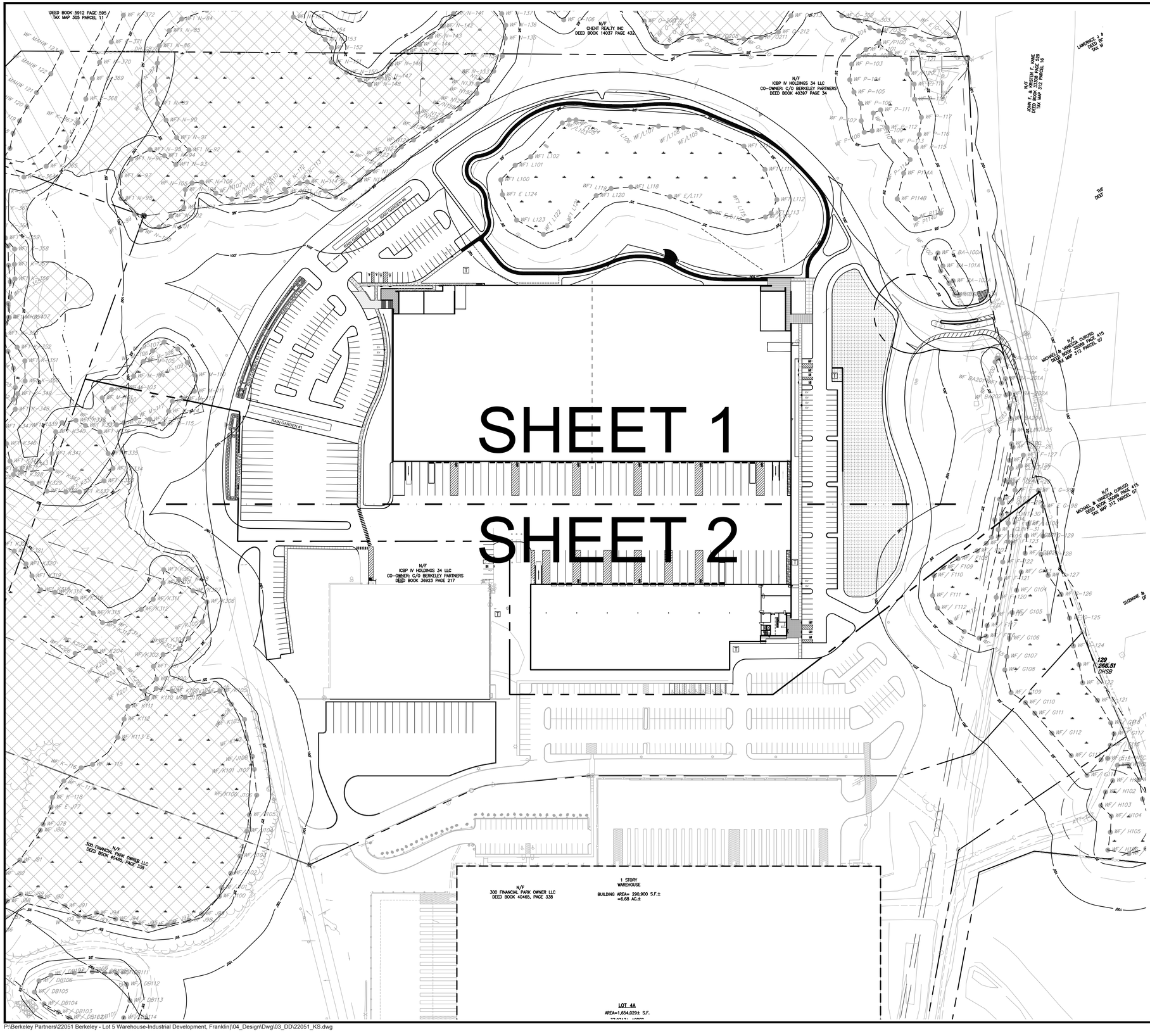

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CONSULTANT:

SEAL
COMMONWEALTH OF MASSACHUSETTS
DOUGLAS J. MARTINETT
CIVIL
No. 37796
REGISTERED PROFESSIONAL ENGINEER
10-05-2023

WAREHOUSE/INDUSTRIAL DEVELOPMENT

100/200 FINANCIAL PARK
FRANKLIN, MA

OWNER/APPLICANT: BERKELEY PARTNERS

REV	DATE	DESCRIPTION
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SHEET TITLE:
KEY SHEET

SHEET NUMBER:
C101

ISSUED FOR : **PERMIT**

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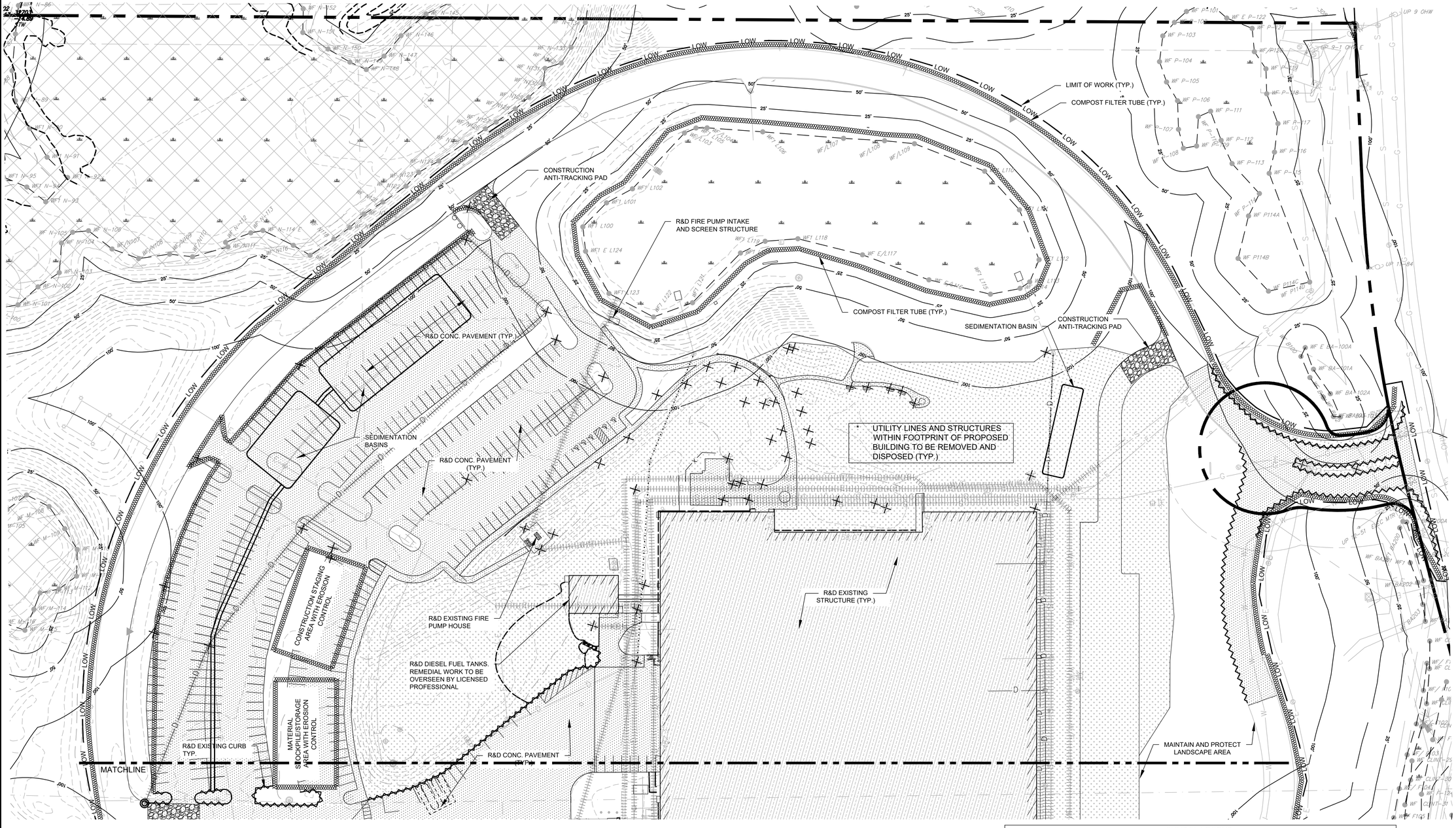

NOTE:

1. SEE SHEET G100 FOR GENERAL SOIL EROSION AND SEDIMENTATION CONTROL & SITE PREPARATION NOTES
2. ALL SLOPES WITH A GRADE OF 3:1 (H:V, 33.3%) OR STEEPER, ARE TO BE TREATED WITH JUTE MESH FOR STABILIZATION CONTROL. (TYP.) REFER TO DETAIL
3. NO DISCHARGES FROM TEMPORARY SEDIMENTATION BASINS ARE TO BE CONNECTED TO THE MUNICIPAL STORM WATER SYSTEM.
4. PRIOR TO COMMENCEMENT OF CONSTRUCTION, ANY RELOCATED AND RECONSTRUCTED EXISTING PUBLIC WATER AND SEWER UTILITIES THAT RUN THROUGH THE SITE SHALL BE COORDINATED WITH FRANKLIN UTILITIES.
5. BUILDING DEMOLITION AND ANY REQUIRED ABATEMENT SHALL BE COMPLETED UNDER THE SUPERVISION OF A LICENSED SITE PROFESSIONAL IN ACCORDANCE WITH MASSACHUSETTS STATE LAWS.

SYMBOL LEGEND

	STRAW WATTLE EROSION CONTROL BARRIER	M&P	MAINTAIN AND PROTECT
	SILTSACK CATCH BASIN INSERT	R&D	REMOVE AND DISPOSE
	CONSTRUCTION ANTI-TRACKING PAD		DENOTES TREE TO BE REMOVED
	R&D EXISTING UTILITY LINE		
	R&D EXISTING CURB		
	R&D EXISTING STRUCTURE		
	R&D PAVEMENT/CONCRETE AND GRAVEL BASE LAYER		
	STRIP LOAM AND STOCKPILE ON SITE		
	SEAL COAT CRACKS & PATCH		
	REMOVE & DISPOSE EXISTING OBJECT		

GRAPHIC SCALE 50 0 25 50 100 200 — 1 inch = 50 ft.

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No. 37796
REGISTERED PROFESSIONAL ENGINEER
10-05-2023

WAREHOUSE/INDUSTRIAL DEVELOPMENT

100/200 FINANCIAL PARK
FRANKLIN, MA

OWNER/APPLICANT: BERKELEY PARTNERS

REV	DATE	DESCRIPTION
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3	08.25.2023	RESPONSE TO COMMENTS
2	08.14.2023	RESPONSE TO COMMENTS
1	07.17.2023	RESPONSE TO COMMENTS

ISSUE TYPE: PERMIT SET
ISSUE DATE: 05/11/2023
PROJECT NUMBER: 22051

DRAWN BY: WAH/JRO/CCL
CHECKED BY: DJH

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SHEET TITLE:
SITE PREPARATION & EROSION CONTROL PLAN

SHEET NUMBER:
C200

ISSUED FOR : PERMIT

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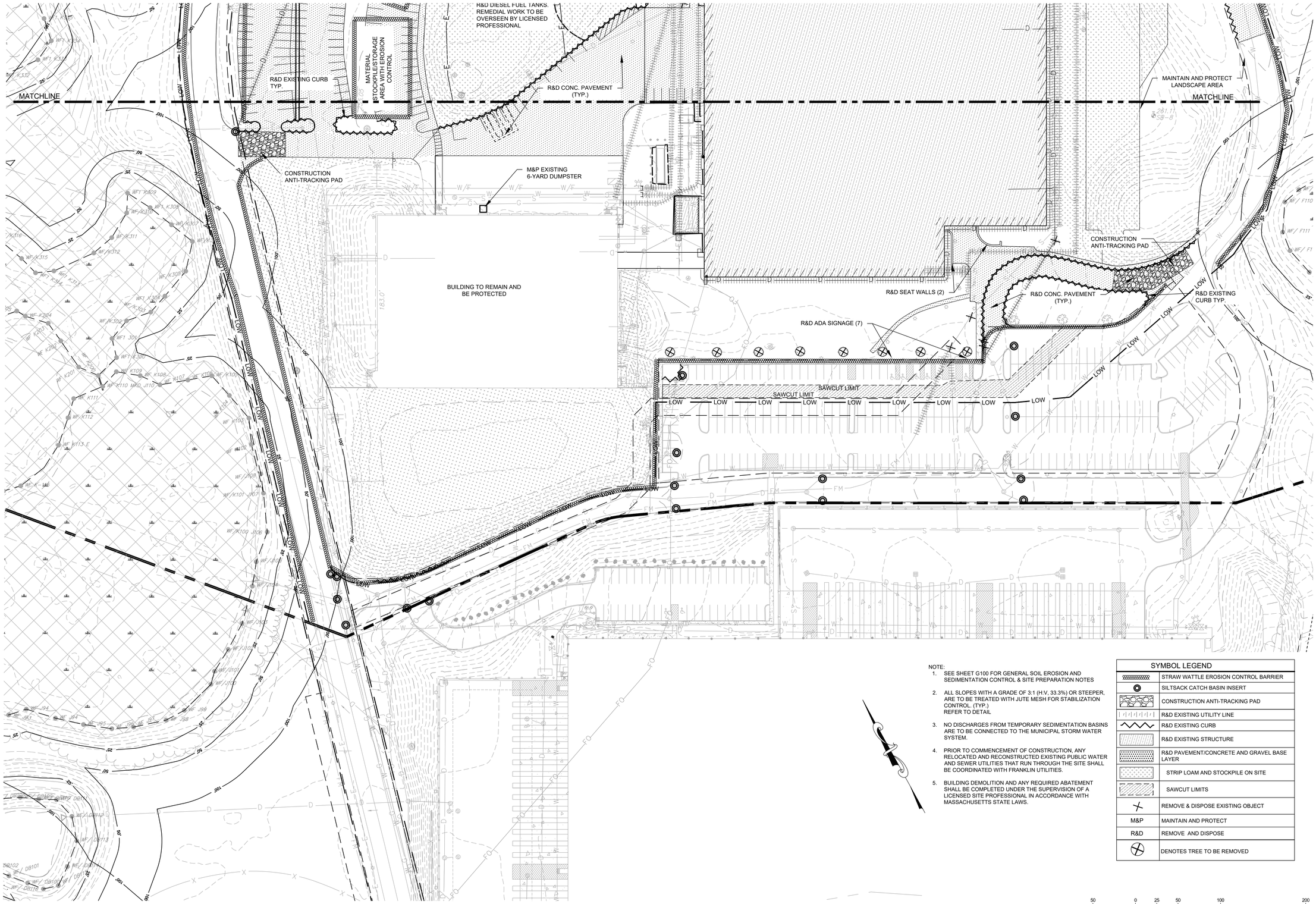

NOTE:

1. SEE SHEET G100 FOR GENERAL SOIL EROSION AND SEDIMENTATION CONTROL & SITE PREPARATION NOTES
2. ALL SLOPES WITH A GRADE OF 3:1 (H:V, 33.3%) OR STEEPER, ARE TO BE TREATED WITH JUTE MESH FOR STABILIZATION CONTROL. (TYP.) REFER TO DETAIL
3. NO DISCHARGES FROM TEMPORARY SEDIMENTATION BASINS ARE TO BE CONNECTED TO THE MUNICIPAL STORM WATER SYSTEM.
4. PRIOR TO COMMENCEMENT OF CONSTRUCTION, ANY RELOCATED AND RECONSTRUCTED EXISTING PUBLIC WATER AND SEWER UTILITIES THAT RUN THROUGH THE SITE SHALL BE COORDINATED WITH FRANKLIN UTILITIES.
5. BUILDING DEMOLITION AND ANY REQUIRED ABATEMENT SHALL BE COMPLETED UNDER THE SUPERVISION OF A LICENSED SITE PROFESSIONAL IN ACCORDANCE WITH MASSACHUSETTS STATE LAWS.

SYMBOL LEGEND	
	STRAW WATTLE EROSION CONTROL BARRIER
	SILTSACK CATCH BASIN INSERT
	CONSTRUCTION ANTI-TRACKING PAD
	R&D EXISTING UTILITY LINE
	R&D EXISTING CURB
	R&D EXISTING STRUCTURE
	R&D PAVEMENT/CONCRETE AND GRAVEL BASE LAYER
	STRIP LOAM AND STOCKPILE ON SITE
	SAWCUT LIMITS
	REMOVE & DISPOSE EXISTING OBJECT
M&P	MAINTAIN AND PROTECT
R&D	REMOVE AND DISPOSE
	DENOTES TREE TO BE REMOVED

50 0 25 50 100 200

GRAPHIC SCALE 1 inch = 50 ft.

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REGISTERED PROFESSIONAL ENGINEER
10-05-2023

WAREHOUSE/INDUSTRIAL DEVELOPMENT

100/200 FINANCIAL PARK
FRANKLIN, MA

OWNER/APPLICANT: BERKELEY PARTNERS

REV	DATE	DESCRIPTION
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ISSUE TYPE:
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ISSUE DATE:
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PROJECT NUMBER:
22051

DRAWN BY: WAH/JRO/CCL

CHECKED BY: DJH

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SHEET TITLE:
SITE PREPARATION & EROSION CONTROL PLAN

SHEET NUMBER:
C201

ISSUED FOR : **PERMIT**

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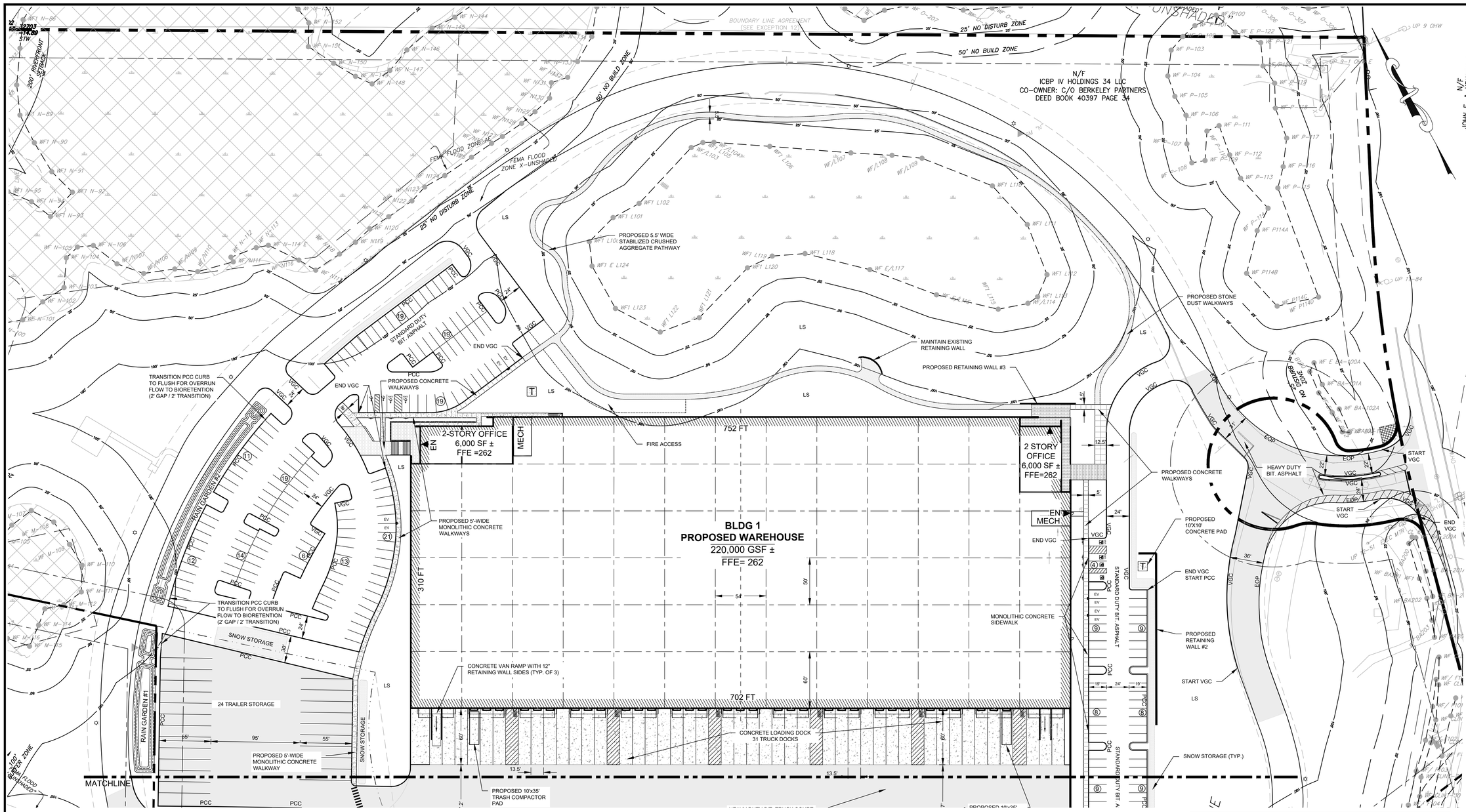

SYMBOL LEGEND	
EOP	EDGE OF PAVEMENT
CCB	CAPE COD BERM
PCC	PRECAST CONCRETE CURB
VGC	VERTICAL GRANITE CURB
SGC	SLOPED GRANITE CURB
(14)	PARKING SPACE COUNT
	PATCH, CRACK SEAL, AND SEALCOAT EXISTING BIT. CONC.
	PROPOSED HEAVY DUTY BIT. CONC.
	PROPOSED BIT. CONC.
	PROPOSED CONCRETE
LS	PROPOSED LANDSCAPE
EN	PROPOSED BUILDING EGRESS
RW	PROPOSED RETAINING WALL
T	PROPOSED ELECTRICAL PADS
	PROPOSED ACCESSIBLE STALL

NOTES

1. PROPOSED RETAINING WALLS SHALL MATCH EXISTING SEGMENTAL RETAINING WALL SYSTEM ON SITE. USE STONE STRONG SEGMENTAL RETAINING WALL SYSTEM OR EQUAL.
2. PROPOSED DRIVEWAYS AND PARKING AREAS SHALL BE CONSTRUCTED WITH STANDARD DUTY PAVEMENT SYSTEM UNLESS OTHERWISE DEPICTED ON THIS PLAN.

GRAPHIC SCALE 1 inch = 50 ft. (50 0 25 50 100 200)

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10-05-2023

WAREHOUSE / INDUSTRIAL DEVELOPMENT

100/200 FINANCIAL PARK
FRANKLIN, MA

OWNER/APPLICANT: BERKELEY PARTNERS

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ISSUE DATE: 05/11/2023
PROJECT NUMBER: 22051

DRAWN BY: JJP/CCL/WH
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SHEET TITLE:
LAYOUT & MATERIALS PLAN

SHEET NUMBER:
C300

ISSUED FOR : **PERMIT**

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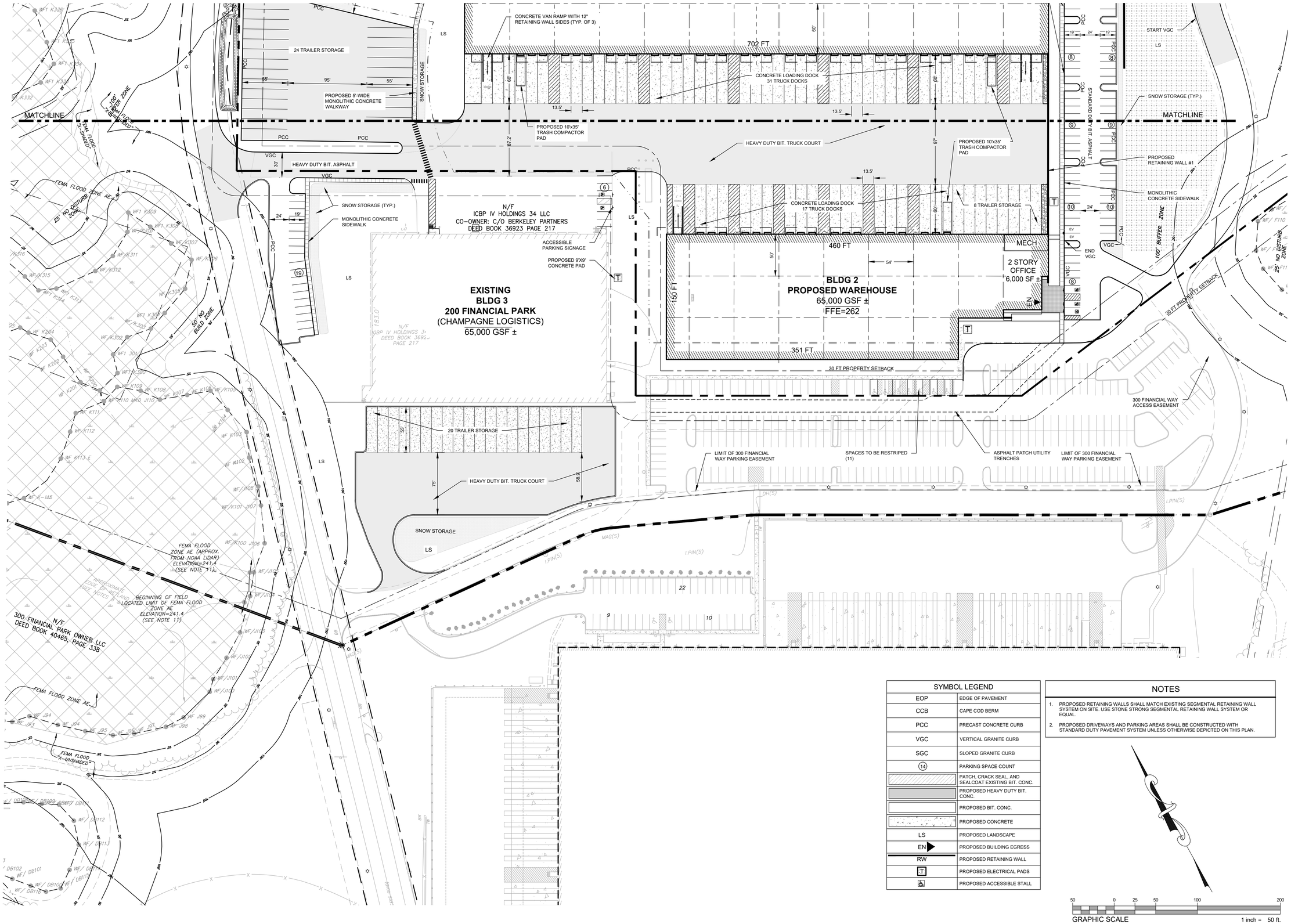

SYMBOL LEGEND	
EOP	EDGE OF PAVEMENT
CCB	CAPE COD BERM
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VGC	VERTICAL GRANITE CURB
SGC	SLOPED GRANITE CURB
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	PATCH, CRACK SEAL, AND SEALCOAT EXISTING BIT. CONC.
	PROPOSED HEAVY DUTY BIT. CONC.
	PROPOSED BIT. CONC.
	PROPOSED CONCRETE
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EN	PROPOSED BUILDING EGRESS
RW	PROPOSED RETAINING WALL
T	PROPOSED ELECTRICAL PADS
	PROPOSED ACCESSIBLE STALL

NOTES

1. PROPOSED RETAINING WALLS SHALL MATCH EXISTING SEGMENTAL RETAINING WALL SYSTEM ON SITE. USE STONE STRONG SEGMENTAL RETAINING WALL SYSTEM OR EQUAL.
2. PROPOSED DRIVEWAYS AND PARKING AREAS SHALL BE CONSTRUCTED WITH STANDARD DUTY PAVEMENT SYSTEM UNLESS OTHERWISE DEPICTED ON THIS PLAN.

50 0 25 50 100 200

GRAPHIC SCALE 1 inch = 50 ft.

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10-05-2023

WAREHOUSE/INDUSTRIAL DEVELOPMENT

100/200 FINANCIAL PARK
FRANKLIN, MA

OWNER/APPLICANT: BERKELEY PARTNERS

REV	DATE	DESCRIPTION
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ISSUE TYPE:
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ISSUE DATE:
05/11/2023

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22051

DRAWN BY: JJP/CCL/WH

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SHEET TITLE:
LAYOUT & MATERIALS PLAN

SHEET NUMBER:
C301

ISSUED FOR : PERMIT

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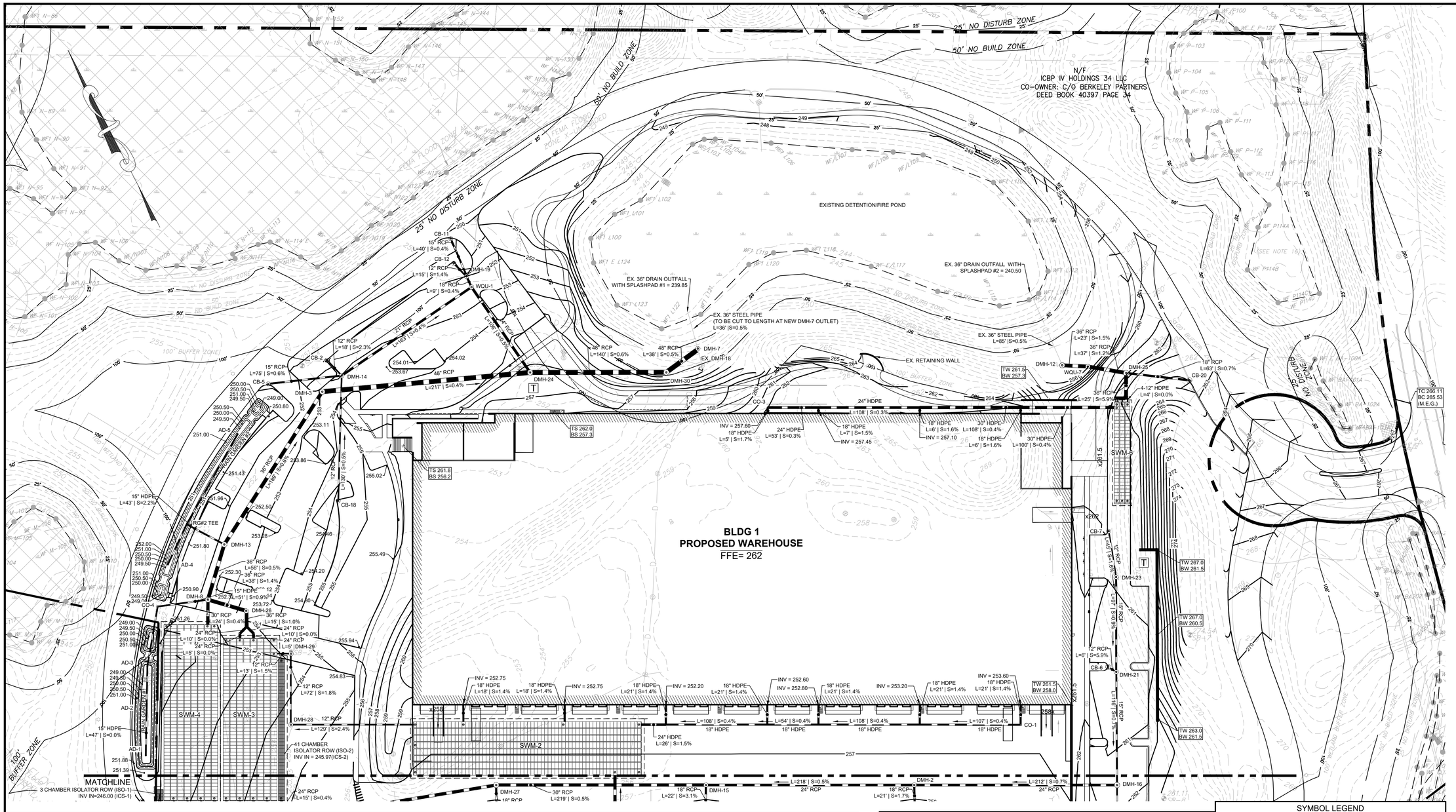

DRAIN SCHEDULE	
STRUCTURE	ELEV.
AD-1 15" AREA DRAIN	RIM = 250.50 INV OUT = 247.50 (AD-2)
AD-2 15" AREA DRAIN	RIM = 249.35 INV IN = 247.50 (AD-1) INV OUT = 247.50 (AD-3)
AD-3 15" AREA DRAIN	RIM = 250.50 INV IN = 247.50 (AD-2) INV OUT = 247.50 (CO-4)
AD-4 15" AREA DRAIN	RIM = 250.50 INV OUT = 247.50 (RG#2 TEE)
AD-5 15" AREA DRAIN	RIM = 249.97 INV IN = 247.50 (RG#2 TEE)
CB-2 SINGLE GRATE	RIM = 252.16 INV OUT = 247.80 (DMH-14)
CB-5 SINGLE GRATE	RIM = 251.60 INV OUT = 247.80 (DMH-14)

DRAIN SCHEDULE	
STRUCTURE	ELEV.
CB-6 DOUBLE GRATE	RIM = 260.01 INV OUT = 255.70 (DMH-21)
CB-7 SINGLE GRATE	RIM = 261.47 INV OUT = 256.80 (DMH-23)
CB-11 SINGLE GRATE	RIM = 250.89 INV OUT = 247.15 (DMH-19)
CB-12 SINGLE GRATE	RIM = 251.14 INV OUT = 248.00 (DMH-19)
CB-18 SINGLE GRATE	RIM = 254.59 INV OUT = 248.40 (DMH-14)
CB-20 DOUBLE GRATE	RIM = 262.68 INV OUT = 257.50 (DMH-25)
CO-1 18" NYLOPLAST CLEANOUT	RIM = 257.59 INV IN = 253.30 (Bldg 1 - South 1) INV OUT = 253.30 (RL TEE 1)

DRAIN SCHEDULE	
STRUCTURE	ELEV.
CO-3 18" NYLOPLAST CLEANOUT	RIM = 262.00 INV IN = 257.50 (Bldg 1 - North 1) INV OUT = 257.50 (BLDG 1 TEE 1 N)
CO-4 18" NYLOPLAST CLEANOUT	RIM = 251.16 INV IN = 247.50 (AD-3) INV OUT = 247.50 (DMH-8)
DMH-2 4' DIA. DMH	RIM = 256.31 INV IN = 250.00 (DMH-16) INV IN = 250.50 (CB-8) INV OUT = 249.90 (DMH-15)
DMH-3 5' DIA. DMH	RIM = 253.15 INV IN = 243.20 (DMH-13) INV OUT = 243.10 (DMH-24)
DMH-7 4' DIA. DMH	RIM = 248.80 INV IN = 241.00 (DMH-30) INV OUT = 240.17 (EX. SPLASH PAD #1)
DMH-8 5' DIA. DMH	RIM = 252.23 INV IN = 244.90 (SWM-4 OUT) INV IN = 245.30 (DMH-26) INV IN = 247.00 (CO-4) INV OUT = 244.80 (DMH-13)
DMH-12 5' DIA. DROP DMH	RIM = 255.00 INV IN = 249.60 (WQU-7) INV OUT = 241.00 (EX. SPLASH PAD #2)

DRAIN SCHEDULE	
STRUCTURE	ELEV.
DMH-13 5' DIA. DMH	RIM = 252.17 INV IN = 246.50 (RG#2 TEE) INV IN = 244.50 (DMH-8) INV OUT = 244.40 (DMH-3)
DMH-14 4' DIA. DMH	RIM = 253.01 INV IN = 247.30 (CB-2) INV IN = 247.30 (CB-5) INV IN = 247.70 (CB-18) INV OUT = 247.20 (WQU-1)
DMH-15 4' DIA. DMH	RIM = 256.32 INV IN = 248.70 (DMH-2) INV IN = 248.70 (CB-9) INV OUT = 248.60 (DMH-27)
DMH-16 5' DIA. DMH	RIM = 261.56 INV IN = 254.00 (DMH-21) INV IN = 256.30 (DMH-5) INV OUT = 251.50 (DMH-2)
DMH-19 4' DIA. DMH	RIM = 252.01 INV IN = 247.75 (CB-12) INV IN = 247.00 (CB-11) INV OUT = 246.90 (WQU-1)
DMH-21 4' DIA. DMH	RIM = 260.17 INV IN = 255.10 (CB-6) INV IN = 255.00 (DMH-23) INV OUT = 254.90 (DMH-16)
DMH-23 4' DIA. DMH	RIM = 261.16 INV IN = 256.00 (CB-7) INV OUT = 255.90 (DMH-21)

DRAIN SCHEDULE	
STRUCTURE	ELEV.
DMH-24 5' DIA. DMH	RIM = 256.22 INV IN = 242.20 (DMH-3) INV IN = 246.00 (WQU-1) INV OUT = 242.10 (DMH-30)
DMH-25 5' DIA. DROP DMH	RIM = 261.88 INV IN = 257.00 (CB-20) INV IN = 255.50 (SWM-6 OUT) INV OUT = 251.00 (WQU-7)
DMH-26 4' DIA. DMH	RIM = 253.20 INV IN = 246.00 (SWM-3 OUT) INV OUT = 245.90 (DMH-8)
DMH-27 5' DIA. DMH	RIM = 256.32 INV IN = 247.50 (DMH-15) INV IN = 247.50 (CB-19) INV OUT = 247.40 (ICS-2)
DMH-28 4' DIA. DMH	RIM = 254.31 INV IN = 249.40 () INV OUT = 249.10 (DMH-29)
DMH-29 4' DIA. DMH	RIM = 254.28 INV IN = 247.80 (DMH-28) INV OUT = 247.70 (SWM-3 IN (2))
DMH-30 5' DIA. DMH	RIM = 252.62 INV IN = 241.30 (DMH-24) INV OUT = 241.20 (DMH-7)

DRAIN SCHEDULE	
STRUCTURE	ELEV.
WQU-1 CASCADE CS-4	RIM = 252.43 INV IN = 246.60 (DMH-14) INV IN = 246.85 (DMH-19) INV OUT = 246.50 (DMH-24)
WQU-7 SciCloneX SCX-6	RIM = 257.07 INV IN = 250.50 (DMH-25) INV OUT = 250.00 (DMH-12)

SUB-SURFACE INFILTRATION SYSTEM SCHEDULE		
STRUCTURE	SYSTEM ELEV.	SYSTEM CONNECTIONS
SWM-2:CULTEC R902HD 249.03' x 63.25' 528 TOTAL CHAMBERS (8 ROWS x 66 CHAMBERS)	TOP OF STONE = 255.25 TOP OF SYSTEM = 254.25 BOTTOM OF SYSTEM = 250.25 BOTTOM OF STONE = 249.50 ESHGW = 247.30* WELL = 246.00 FRIMPTER = 1.30	INV OUT = 252.75 (12" HDPE - DMH-28) INV IN = 251.40 (30" RCP - DMH-17) INV IN = 251.50 (30" HDPE - DMH-8) INV IN = 251.50 (30" HDPE - BLDG 1- SOUTH-1)
SWM-3: CULTEC R902HD 179.37' x 63.25' 376 TOTAL CHAMBERS (8 ROWS x 47 CHAMBERS)	TOP OF STONE = 249.75 TOP OF SYSTEM = 248.75 BOTTOM OF SYSTEM = 244.75 BOTTOM OF STONE = 244.00 ESHGW = 241.30* WELL = 240.00 FRIMPTER = 1.30	INV OUT = 246.16 (2-24" RCP - DMH-26) INV IN = 246.50 (18" HDPE - SWM-2) INV IN = 245.85 (30" RCP - WQU-4)
SWM-4: CULTEC R902HD 194.03' x 63.25' 408 TOTAL CHAMBERS (8 ROWS x 51 CHAMBERS)	TOP OF STONE = 248.75 TOP OF SYSTEM = 247.75 BOTTOM OF SYSTEM = 243.75 BOTTOM OF STONE = 243.00 ESHGW = 240.30* WELL = 239.00 FRIMPTER = 1.30	INV OUT = 245.00 (30" RCP - DMH-28) INV IN = 245.00 (30" RCP - DMH-31) INV IN = 246.50 (12" HDPE HEADER - ICS-1)
SWM-6: CULTEC R360HD 114.83' x 22.50' 87 TOTAL CHAMBERS (3 ROWS x 29 CHAMBERS)	TOP OF STONE = 259.50 TOP OF SYSTEM = 259.00 BOTTOM OF SYSTEM = 256.00 BOTTOM OF STONE = 255.50 ESHGW = 253.30* WELL = 252.00 FRIMPTER = 1.30	INV OUT = 257.10 (4 - 12" HDPE - DMH -25) INV IN = 256.25 (30" RCP - DMH-19)

* ESHGW DATA INTERPRETED FROM EXISTING MONITOR WELL READING TAKEN ON MARCH 26, 2023 BY McARDLE GANNON ASSOCIATES WITH A 1.3 FT FRIMPTER ADJUSTMENT APPLIED TO THE WELL READINGS.

SYMBOL LEGEND

118	EXISTING ELEVATION CONTOUR
118	PROPOSED ELEVATION CONTOUR
255.45 x	PROPOSED SPOT ELEVATION
TC 263.0 BC 261.5 x	PROPOSED TC/BC ELEVATIONS
TW 263.0 BW 261.5 x	PROPOSED TW/BW ELEVATIONS
	PROPOSED CATCH BASIN
	PROPOSED DRAIN MANHOLE
	DOUBLE GRATE CATCH BASIN
	PROPOSED STORM DRAIN
T	PROPOSED ELECTRICAL TRANSFORMER
	PROPOSED RIP RAP
	PROPOSED SEWER MANHOLE
	PROPOSED RETAINING WALL
TP-1	TEST PIT LOCATION

GRAPHIC SCALE 50 0 25 50 100 200 — 1 inch = 50 ft.

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CONSULTANT:

SEAL

WAREHOUSE / INDUSTRIAL DEVELOPMENT

100/200 FINANCIAL PARK
FRANKLIN, MA

OWNER/APPLICANT: BERKELEY PARTNERS

REV	DATE	DESCRIPTION
4	10.05.2023	RESPONSE TO COMMENTS
3	08.25.2023	RESPONSE TO COMMENTS
2	08.14.2023	RESPONSE TO COMMENTS
1	07.17.2023	RESPONSE TO COMMENTS

ISSUE TYPE:
PERMIT SET

ISSUE DATE:
05/11/2023

PROJECT NUMBER:
22051

DRAWN BY: JJP/JMP

CHECKED BY: DJH

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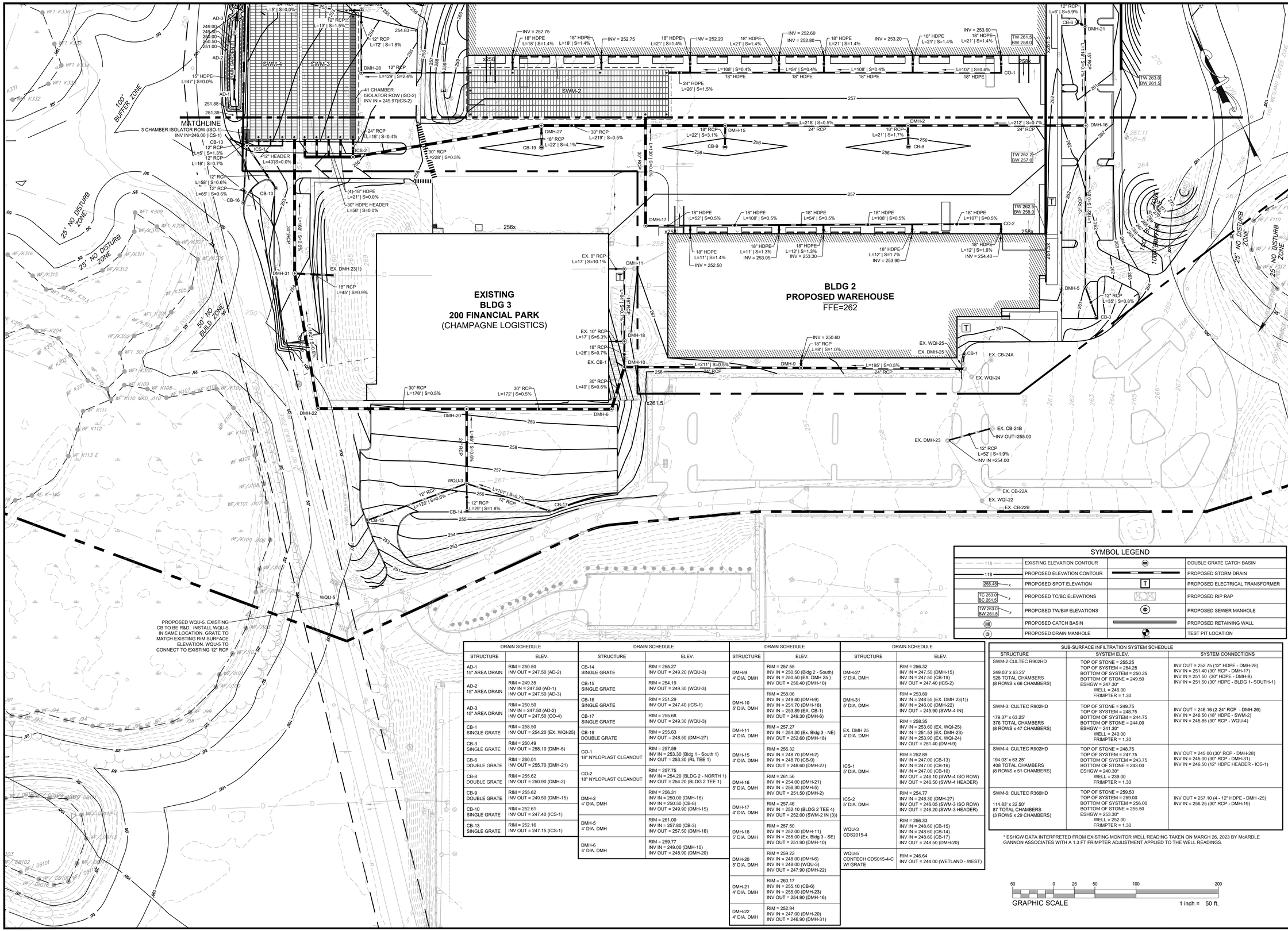
SHEET TITLE:
GRADING & DRAINAGE PLAN

SHEET NUMBER:
C400

ISSUED FOR : PERMIT



PROPOSED WQU-5. EXISTING CB TO BE R&D. INSTALL WQU-5 IN SAME LOCATION. GRATE TO MATCH EXISTING RIM SURFACE ELEVATION. WQU-5 TO CONNECT TO EXISTING 12" RCP

SYMBOL LEGEND

118	EXISTING ELEVATION CONTOUR		DOUBLE GRATE CATCH BASIN
118	PROPOSED ELEVATION CONTOUR		PROPOSED STORM DRAIN
255.45 x	PROPOSED SPOT ELEVATION	T	PROPOSED ELECTRICAL TRANSFORMER
TC 263.0 BC 261.5 x	PROPOSED TC/BC ELEVATIONS		PROPOSED RIP RAP
TW 263.0 BW 261.5 x	PROPOSED TW/BW ELEVATIONS		PROPOSED SEWER MANHOLE
	PROPOSED CATCH BASIN		PROPOSED RETAINING WALL
	PROPOSED DRAIN MANHOLE	TEST PIT	TEST PIT LOCATION

DRAIN SCHEDULE

STRUCTURE	ELEV.
AD-1 15" AREA DRAIN	RIM = 250.50 INV OUT = 247.50 (AD-2)
AD-2 15" AREA DRAIN	RIM = 249.35 INV IN = 247.50 (AD-1) INV OUT = 247.50 (AD-3)
AD-3 15" AREA DRAIN	RIM = 250.50 INV IN = 247.50 (AD-2) INV OUT = 247.50 (CO-4)
CB-1 SINGLE GRATE	RIM = 258.50 INV OUT = 254.20 (EX. WQI-25)
CB-3 SINGLE GRATE	RIM = 260.49 INV OUT = 258.10 (DMH-5)
CB-6 DOUBLE GRATE	RIM = 260.01 INV OUT = 255.70 (DMH-21)
CB-8 DOUBLE GRATE	RIM = 255.62 INV OUT = 250.90 (DMH-2)
CB-9 DOUBLE GRATE	RIM = 255.62 INV OUT = 249.50 (DMH-15)
CB-10 SINGLE GRATE	RIM = 252.61 INV OUT = 247.40 (ICS-1)
CB-13 SINGLE GRATE	RIM = 252.16 INV OUT = 247.15 (ICS-1)

DRAIN SCHEDULE

STRUCTURE	ELEV.
CB-14 SINGLE GRATE	RIM = 255.27 INV OUT = 249.30 (WQU-3)
CB-15 SINGLE GRATE	RIM = 254.19 INV OUT = 249.30 (WQU-3)
CB-16 SINGLE GRATE	RIM = 251.29 INV OUT = 247.40 (ICS-1)
CB-17 SINGLE GRATE	RIM = 255.68 INV OUT = 249.30 (WQU-3)
CB-19 DOUBLE GRATE	RIM = 255.63 INV OUT = 248.50 (DMH-27)
CO-1 18" NYLOPLAST CLEANOUT	RIM = 257.59 INV IN = 253.30 (Bldg 1 - South 1) INV OUT = 253.30 (RL TEE 1)
CO-2 18" NYLOPLAST CLEANOUT	RIM = 257.75 INV IN = 254.20 (BLDG 2 - NORTH 1) INV OUT = 254.20 (BLDG 2 TEE 1)
DMH-2 4' DIA. DMH	RIM = 256.31 INV IN = 250.00 (DMH-16) INV IN = 250.50 (CB-9) INV OUT = 249.90 (DMH-15)
DMH-5 4' DIA. DMH	RIM = 261.00 INV IN = 257.80 (CB-3) INV OUT = 257.50 (DMH-16)
DMH-6 4' DIA. DMH	RIM = 259.77 INV IN = 249.00 (DMH-10) INV OUT = 248.90 (DMH-20)

DRAIN SCHEDULE

STRUCTURE	ELEV.
DMH-9 4' DIA. DMH	RIM = 257.55 INV IN = 250.50 (Bldg 2 - South) INV IN = 250.50 (EX. DMH 25) INV OUT = 250.40 (DMH-10)
DMH-10 5' DIA. DMH	RIM = 258.06 INV IN = 249.40 (DMH-9) INV IN = 251.70 (DMH-18) INV IN = 253.89 (EX. CB-1) INV OUT = 249.30 (DMH-6)
DMH-11 4' DIA. DMH	RIM = 257.27 INV IN = 254.30 (Ex. Bldg 3 - NE) INV OUT = 252.60 (DMH-18)
DMH-15 4' DIA. DMH	RIM = 256.32 INV IN = 248.70 (DMH-2) INV IN = 248.70 (CB-9) INV OUT = 248.60 (DMH-27)
DMH-16 5' DIA. DMH	RIM = 261.56 INV IN = 254.00 (DMH-21) INV IN = 256.30 (DMH-5) INV OUT = 251.50 (DMH-2)
DMH-17 4' DIA. DMH	RIM = 257.46 INV IN = 252.10 (BLDG 2 TEE 4) INV OUT = 252.00 (SWM-2 IN (3))
DMH-18 5' DIA. DMH	RIM = 257.50 INV IN = 252.00 (DMH-11) INV IN = 255.00 (Ex. Bldg 3 - SE) INV OUT = 251.90 (DMH-10)
DMH-20 5' DIA. DMH	RIM = 259.22 INV IN = 248.00 (DMH-6) INV IN = 248.00 (WQU-3) INV OUT = 247.90 (DMH-22)
DMH-21 4' DIA. DMH	RIM = 260.17 INV IN = 255.10 (CB-6) INV IN = 255.00 (DMH-23) INV OUT = 254.90 (DMH-16)
DMH-22 4' DIA. DMH	RIM = 252.94 INV IN = 247.00 (DMH-20) INV OUT = 246.90 (DMH-31)

DRAIN SCHEDULE

STRUCTURE	ELEV.
DMH-27 5' DIA. DMH	RIM = 256.32 INV IN = 247.50 (DMH-15) INV IN = 247.50 (CB-19) INV OUT = 247.40 (ICS-2)
DMH-31 5' DIA. DMH	RIM = 253.89 INV IN = 248.55 (EX. DMH 23(1)) INV IN = 246.00 (DMH-22) INV OUT = 245.90 (SWM-4 IN)
EX. DMH 25 4' DIA. DMH	RIM = 258.35 INV IN = 253.60 (EX. WQI-25) INV IN = 251.53 (EX. DMH-23) INV IN = 253.90 (EX. WQI-24) INV OUT = 251.40 (DMH-9)
ICS-1 5' DIA. DMH	RIM = 252.89 INV IN = 247.00 (CB-13) INV IN = 247.00 (CB-16) INV IN = 247.00 (CB-10) INV OUT = 246.10 (SWM-4 ISO ROW) INV OUT = 246.50 (SWM-4 HEADER)
ICS-2 5' DIA. DMH	RIM = 254.77 INV IN = 246.30 (DMH-27) INV OUT = 246.05 (SWM-3 ISO ROW) INV OUT = 246.20 (SWM-3 HEADER)
WQU-3 CDS2015-4	RIM = 256.33 INV IN = 248.60 (CB-15) INV IN = 248.60 (CB-14) INV IN = 248.60 (CB-17) INV OUT = 248.50 (DMH-20)
WQU-5 CONTECH CDS015-4-C W/ GRATE	RIM = 246.64 INV OUT = 244.00 (WETLAND - WEST)

SUB-SURFACE INFILTRATION SYSTEM SCHEDULE

STRUCTURE	SYSTEM ELEV.	SYSTEM CONNECTIONS
SWM-2:CULTEC R902HD 249.03' x 63.25' 528 TOTAL CHAMBERS (8 ROWS x 66 CHAMBERS)	TOP OF STONE = 255.25 TOP OF SYSTEM = 254.25 BOTTOM OF SYSTEM = 250.25 BOTTOM OF STONE = 249.50 ESHGW = 247.30* WELL = 246.00 FRIMPTER = 1.30	INV OUT = 252.75 (12" HDPE - DMH-28) INV IN = 251.40 (30" RCP - DMH-17) INV IN = 251.50 (30" HDPE - DMH-8) INV IN = 251.50 (30" HDPE - BLDG 1- SOUTH-1)
SWM-3: CULTEC R902HD 179.37' x 63.25' 376 TOTAL CHAMBERS (8 ROWS x 47 CHAMBERS)	TOP OF STONE = 249.75 TOP OF SYSTEM = 248.75 BOTTOM OF SYSTEM = 244.75 BOTTOM OF STONE = 244.00 ESHGW = 241.30* WELL = 240.00 FRIMPTER = 1.30	INV OUT = 246.16 (2-24" RCP - DMH-26) INV IN = 246.50 (18" HDPE - SWM-2) INV IN = 245.85 (30" RCP - WQU-4)
SWM-4: CULTEC R902HD 194.03' x 63.25' 408 TOTAL CHAMBERS (8 ROWS x 51 CHAMBERS)	TOP OF STONE = 248.75 TOP OF SYSTEM = 247.75 BOTTOM OF SYSTEM = 243.75 BOTTOM OF STONE = 243.00 ESHGW = 240.30* WELL = 239.00 FRIMPTER = 1.30	INV OUT = 245.00 (30" RCP - DMH-28) INV IN = 245.00 (30" RCP - DMH-31) INV IN = 246.50 (12" HDPE HEADER - ICS-1)
SWM-6: CULTEC R360HD 114.83' x 22.50' 87 TOTAL CHAMBERS (3 ROWS x 29 CHAMBERS)	TOP OF STONE = 259.50 TOP OF SYSTEM = 259.00 BOTTOM OF SYSTEM = 256.00 BOTTOM OF STONE = 255.50 ESHGW = 253.30* WELL = 252.00 FRIMPTER = 1.30	INV OUT = 257.10 (4 - 12" HDPE - DMH -25) INV IN = 256.25 (30" RCP - DMH-19)

* ESHGW DATA INTERPRETED FROM EXISTING MONITOR WELL READING TAKEN ON MARCH 26, 2023 BY McARDLE GANNON ASSOCIATES WITH A 1.3 FT FRIMPTER ADJUSTMENT APPLIED TO THE WELL READINGS.

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CONSULTANT:

SEAL
COMMONWEALTH OF MASSACHUSETTS
DOUGLAS J. MAHONEY
CIVIL
No. 37786
REGISTERED PROFESSIONAL ENGINEER
10-05-2023

WAREHOUSE / INDUSTRIAL DEVELOPMENT

100/200 FINANCIAL PARK
FRANKLIN, MA

OWNER/APPLICANT: BERKELEY PARTNERS

REV	DATE	DESCRIPTION
4	10.05.2023	RESPONSE TO COMMENTS
3	08.25.2023	RESPONSE TO COMMENTS
2	08.14.2023	RESPONSE TO COMMENTS
1	07.17.2023	RESPONSE TO COMMENTS

ISSUE TYPE:
PERMIT SET

ISSUE DATE:
05/11/2023

PROJECT NUMBER:
22051

DRAWN BY: JJP/JMP

CHECKED BY: DJH

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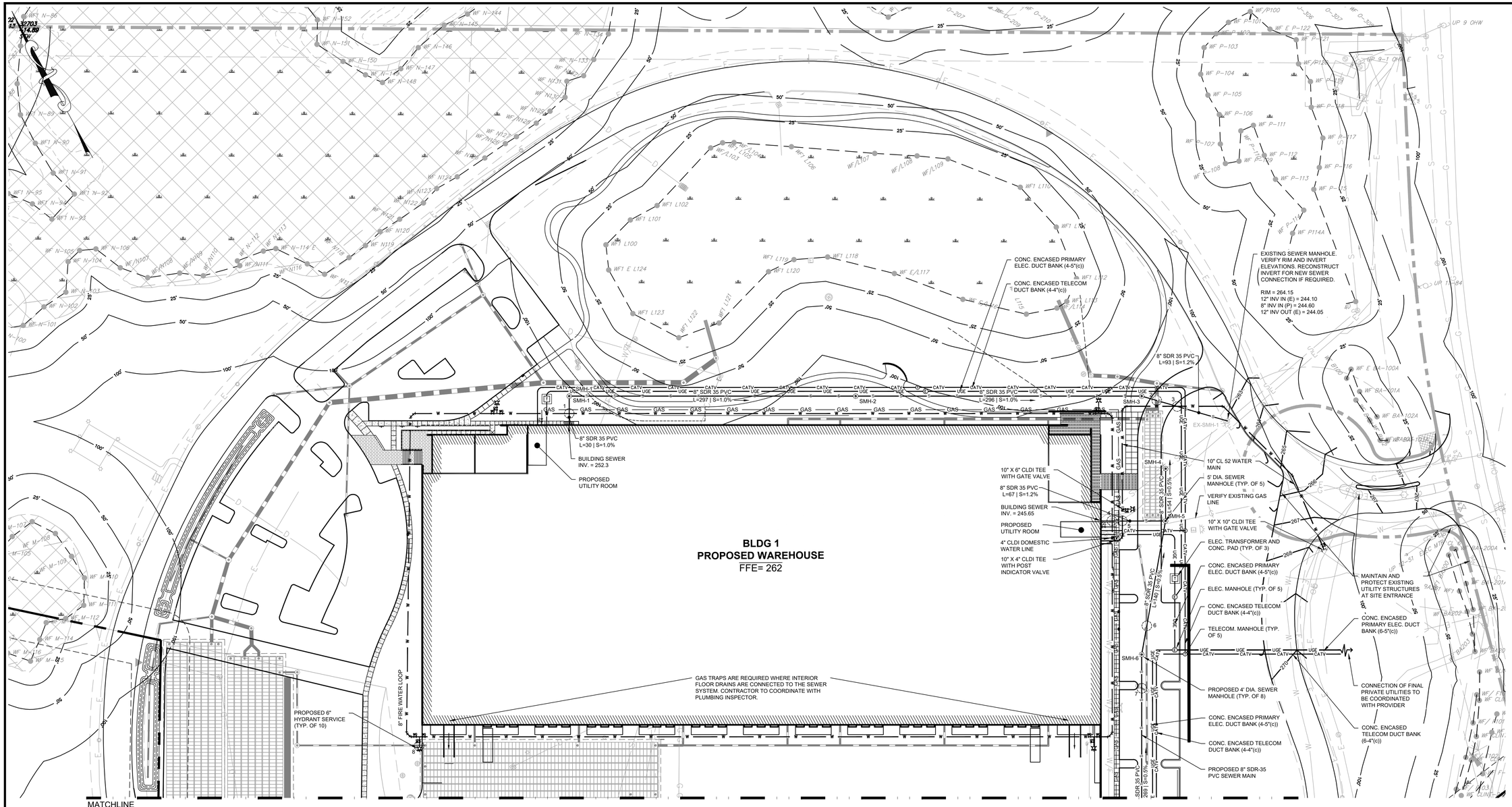
SHEET TITLE:

GRADING & DRAINAGE PLAN

SHEET NUMBER:

C401

ISSUED FOR : **PERMIT**



SEWER SCHEDULE	
STRUCTURE	ELEV.
SMH-1	RIM = 255.49 INV IN = 251.97 (BUILDING 1 WEST) INV OUT = 251.87 (SMH-2)
SMH-2	RIM = 262.38 INV IN = 248.90 (SMH-1) INV OUT = 248.80 (SMH-3)
SMH-3	RIM = 262.01 INV IN = 245.84 (SMH-2) INV OUT = 245.74 (EX-SMH-1)
SMH-4	RIM = 261.99 INV IN = 244.48 (SMH-5) INV OUT = 244.38 (EX-SMH-1)
SMH-5	RIM = 262.00 INV IN = 244.85 (SMH-6) INV IN = 244.85 (BUILDING 1 EAST) INV OUT = 244.75 (SMH-4)
SMH-6	RIM = 260.06 INV IN = 245.61 (SMH-7) INV OUT = 245.51 (SMH-5)

SANITARY/WATER AND SANITARY/ STORMWATER CROSSINGS	
1	FG = 257.5± INVERT OF WATER PIPE = 254.3± TOP OF SANITARY SEWER = 252.82± CLEARANCE = 1.5±
2	FG = 261.9± INVERT OF STORMWATER PIPE = 256.54± TOP OF SANITARY SEWER = 246.21± CLEARANCE = 10.33±
3	FG = 262.4± INVERT OF WATER PIPE = 256.3± TOP OF SANITARY SEWER = 245.94± CLEARANCE = 10.4±
4	FG = 262.0± INVERT OF WATER PIPE = 256.3± TOP OF SANITARY SEWER = 246.18± CLEARANCE = 10.2±
5	FG = 261.9± INVERT OF WATER PIPE = 256.3± TOP OF SANITARY SEWER = 246.05± CLEARANCE = 10.3±
6	FG = 260.9± INVERT OF STORMWATER PIPE = 255.30± TOP OF SANITARY SEWER = 246.04± CLEARANCE = 9.26±
7	FG = 261.1± INVERT OF STORMWATER PIPE = 255.35± TOP OF SANITARY SEWER = 246.45± CLEARANCE = 8.90±
8	FG = 258.5± INVERT OF WATER PIPE = 254.5± TOP OF STORMWATER PIPE = 253.41± CLEARANCE = 1.1±

SITE UTILITY LEGEND	
W	PROPOSED WATER SERVICE OR MAIN
S S	PROPOSED SEWER SERVICE OR MAIN
UGE	PROPOSED CONC. ENCASED ELECTRIC DUCT BANK
CATV	PROPOSED CONC. ENCASED TELECOM DUCT BANK
GAS	PROPOSED GAS SERVICE
	PROPOSED FIRE HYDRANT
WG	PROPOSED WATER GATE VALVE
S	PROPOSED SEWER MANHOLE
T	PROPOSED ELECTRIC TRANSFORMER
E	PROPOSED ELECTRIC MANHOLE (6'X8')
T	PROPOSED TELECOM MANHOLE
GG	PROPOSED GAS GATE VALVE

50 0 25 50 100 200

GRAPHIC SCALE 1 inch = 50 ft.

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BOSTON, MA 02108

CONSULTANT:

SEAL

WAREHOUSE/INDUSTRIAL DEVELOPMENT

100/200 FINANCIAL PARK
FRANKLIN, MA

OWNER/APPLICANT: BERKELEY PARTNERS

REV	DATE	DESCRIPTION
4	10.05.2023	RESPONSE TO COMMENTS
3	08.25.2023	RESPONSE TO COMMENTS
2	08.14.2023	RESPONSE TO COMMENTS
1	07.17.2023	RESPONSE TO COMMENTS

ISSUE TYPE:
PERMIT SET

ISSUE DATE:
05/11/2023

PROJECT NUMBER:
22051

DRAWN BY: JJP/CCL

CHECKED BY: DJH

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SHEET TITLE:

UTILITY PLAN

SHEET NUMBER:

C500

ISSUED FOR : **PERMIT**

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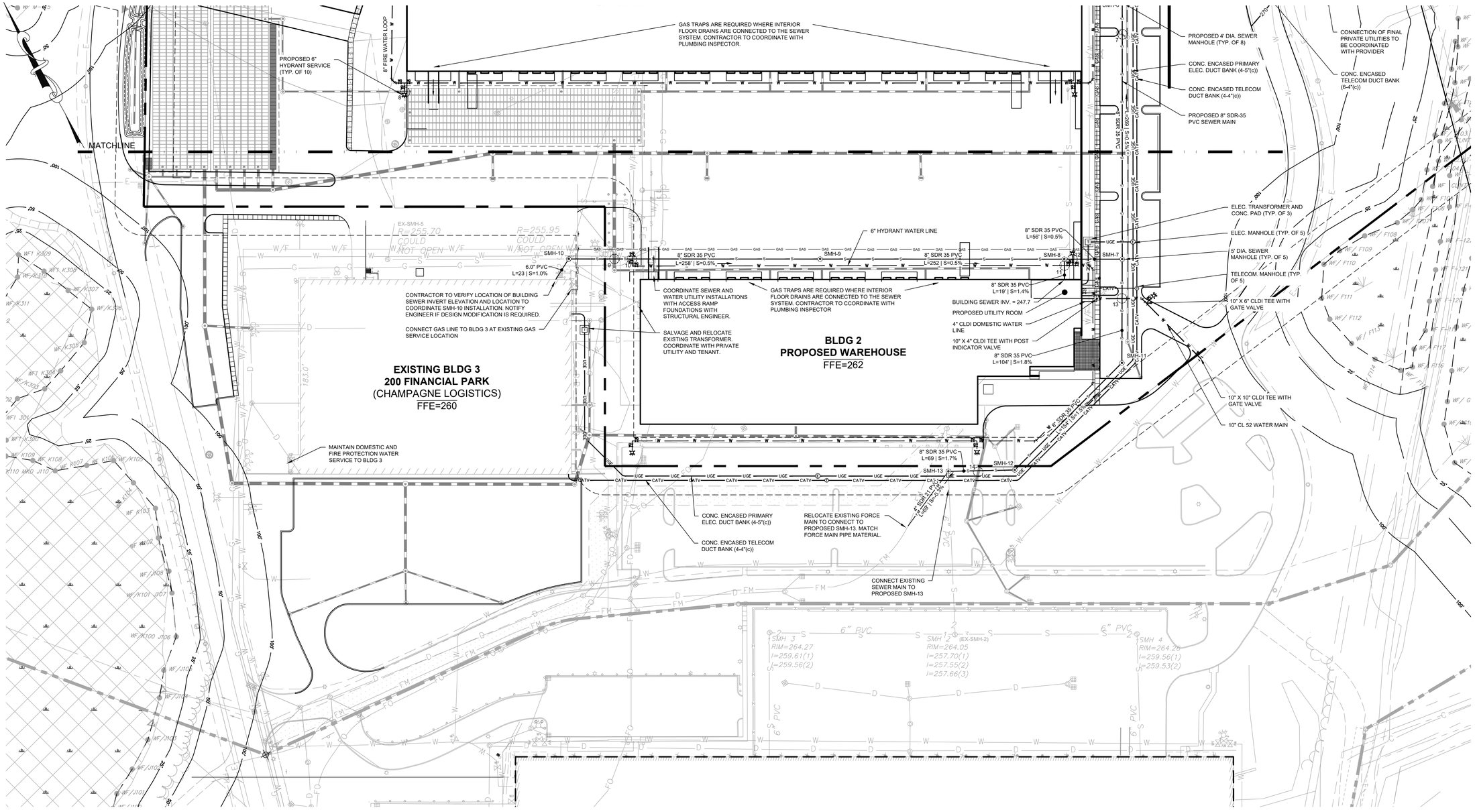

SEWER SCHEDULE	
STRUCTURE	ELEV.
SMH-6	RIM = 260.06 INV IN = 245.61 (SMH-7) INV OUT = 245.51 (SMH-5)
SMH-7	RIM = 262.19 INV IN = 247.84 (SMH-11) INV IN = 247.01 (SMH-8) INV OUT = 246.91 (SMH-6)
SMH-8	RIM = 257.99 INV IN = 247.41 (BUILDING 2) INV IN = 247.38 (SMH-9) INV OUT = 247.28 (SMH-7)
SMH-9	RIM = 257.53 INV IN = 248.64 (SMH-10) INV OUT = 248.54 (SMH-8)
SMH-10	RIM = 256.10 INV IN = 249.93 (EX-SMH-5) INV IN = 250.07 (BUILDING 3) INV OUT = 249.83 (SMH-9)

SEWER SCHEDULE	
STRUCTURE	ELEV.
SMH-11	RIM = 261.28 INV IN = 250.70 (SMH-12) INV OUT = 249.80 (SMH-7)
SMH-12	RIM = 261.97 INV IN = 253.80 (SMH-13) INV OUT = 253.00 (SMH-11)
SMH-13	RIM = 261.99 INV IN = 255.10 (EX. FORCE MAIN) INV IN = 255.90 (EX-SMH-2) INV OUT = 255.00 (SMH-12)

SANITARY/WATER AND SANITARY/ STORMWATER CROSSINGS	
7	FG = 261.1± INVERT OF STORMWATER PIPE = 255.35± TOP OF SANITARY SEWER = 246.45± CLEARANCE = 8.90±
8	FG = 258.5± INVERT OF WATER PIPE = 254.5± TOP OF STORMWATER PIPE = 253.41± CLEARANCE = 1.1±
9	FG = 257.3± INVERT OF STORMWATER PIPE = 251.95± TOP OF SANITARY SEWER = 250.28± CLEARANCE = 1.67±
10	FG = 257.5± INVERT OF WATER PIPE = 251.9± TOP OF SANITARY SEWER = 250.19± CLEARANCE = 1.7±
11	FG = 257.8± INVERT OF WATER PIPE = 252.2± TOP OF SANITARY SEWER = 248.15± CLEARANCE = 4.1±
12	FG = 257.7± INVERT OF WATER PIPE = 252.1± TOP OF SANITARY SEWER = 247.91± CLEARANCE = 4.2±
13	FG = 261.4± INVERT OF WATER PIPE = 255.8± TOP OF SANITARY SEWER = 249.3± CLEARANCE = 6.5±
14	FG = 259.0± INVERT OF SANITARY SEWER = 254.46± TOP OF STORMWATER PIPE = 253.64± CLEARANCE = 0.62±

SITE UTILITY LEGEND	
W	PROPOSED WATER SERVICE OR MAIN
FM	PROPOSED FORCE MAIN
S	PROPOSED SEWER SERVICE OR MAIN
UGE	PROPOSED CONC. ENCASED ELECTRIC DUCT BANK
CATV	PROPOSED CONC. ENCASED TELECOM DUCT BANK
GAS	PROPOSED GAS SERVICE
	PROPOSED FIRE HYDRANT
WG	PROPOSED WATER GATE VALVE
S	PROPOSED SEWER MANHOLE
T	PROPOSED ELECTRIC TRANSFORMER
E	PROPOSED ELECTRIC MANHOLE (6'X8')
T	PROPOSED TELECOM MANHOLE
GG	PROPOSED GAS GATE VALVE

50 0 25 50 100 200

GRAPHIC SCALE 1 inch = 50 ft.

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SEAL

WAREHOUSE / INDUSTRIAL DEVELOPMENT

100/200 FINANCIAL PARK
FRANKLIN, MA

OWNER/APPLICANT: BERKELEY PARTNERS

REV	DATE	DESCRIPTION
4	10.05.2023	RESPONSE TO COMMENTS
3	08.25.2023	RESPONSE TO COMMENTS
2	08.14.2023	RESPONSE TO COMMENTS
1	07.17.2023	RESPONSE TO COMMENTS

ISSUE TYPE:
PERMIT SET
ISSUE DATE:
05/11/2023
PROJECT NUMBER:
22051

DRAWN BY: JJP/CCL
CHECKED BY: DJH

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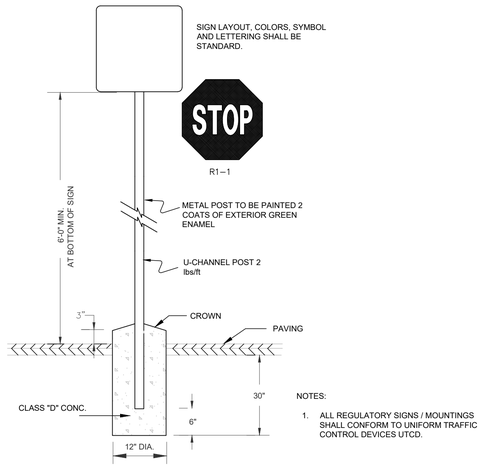
SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
C501

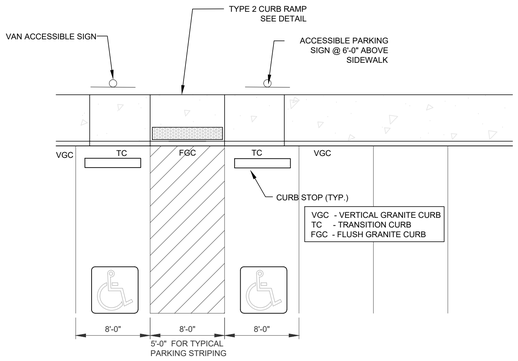
ISSUED FOR : **PERMIT**



NOTES:

1. ALL REGULATORY SIGNS / MOUNTINGS SHALL CONFORM TO UNIFORM TRAFFIC CONTROL DEVICES UTCD.

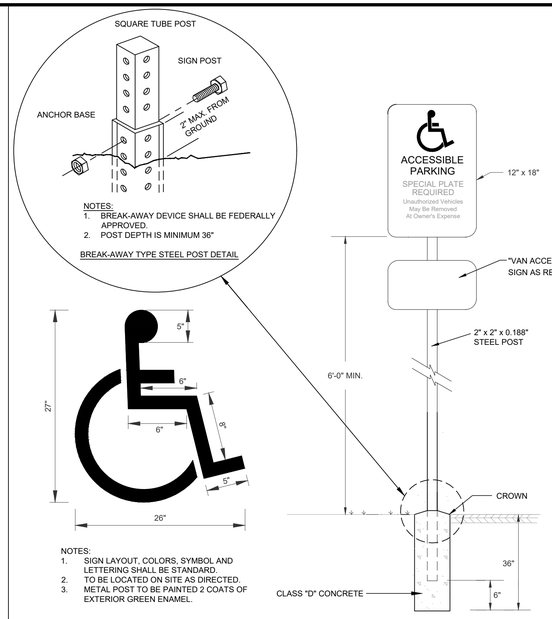
TYPICAL SIGN DETAIL C5
NOT TO SCALE



NOTES:

1. STRIPING SHALL BE 4" WIDE STRAIGHT LINES OF WHITE TRAFFIC PAINT
2. STALL WIDTH VARIES. SEE "LAYOUT & MATERIALS PLAN" SHEET *C400* FOR FOR STALL WIDTHS.

TYPICAL ACCESSIBLE VAN PARKING STRIPING C4
NOT TO SCALE



NOTES:

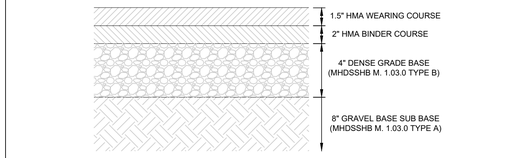
1. BREAK-AWAY DEVICE SHALL BE FEDERALLY APPROVED.
2. POST DEPTH IS MINIMUM 36"

BREAK-AWAY TYPE STEEL POST DETAIL

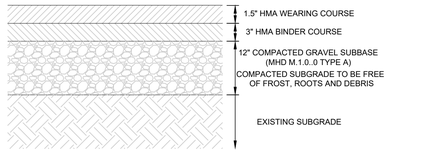
NOTES:

1. SIGN LAYOUT, COLORS, SYMBOL AND LETTERING SHALL BE STANDARD.
2. TO BE LOCATED ON SITE AS DIRECTED.
3. METAL POST TO BE PAINTED 2 COATS OF EXTERIOR GREEN ENAMEL.

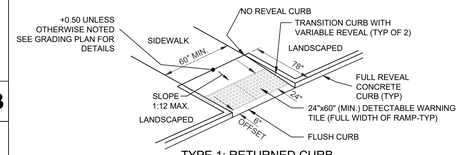
ACCESSIBLE PARKING SIGN AND PAVEMENT MARKING C3
NOT TO SCALE



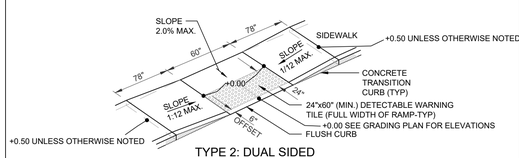
BITUMINOUS CONCRETE PAVEMENT C2
NOT TO SCALE



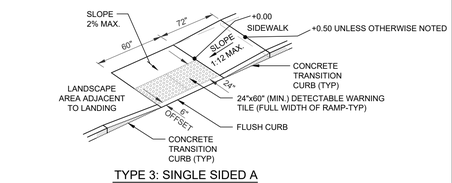
HEAVY DUTY BITUMINOUS CONCRETE PAVEMENT C1
NOT TO SCALE



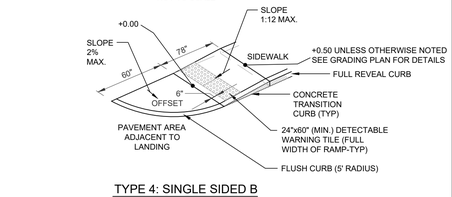
TYPE 1: RETURNED CURB
NOT TO SCALE



TYPE 2: DUAL SIDED
NOT TO SCALE



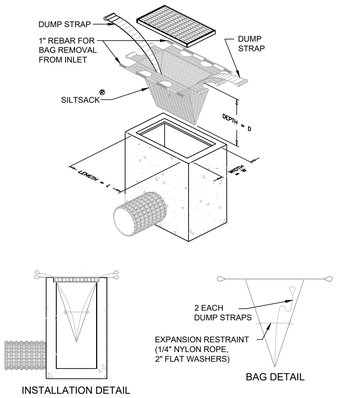
TYPE 3: SINGLE SIDED A
NOT TO SCALE



TYPE 4: SINGLE SIDED B
NOT TO SCALE

1. IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 2.0% EXCEPT THE RAMP AREA PROPER WHICH IS EXEMPT.
2. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 36" SHALL BE MAINTAINED.
3. THE WHEELCHAIR RAMP SLOPE AND SIDE OF SLOPES (TRANSITIONS), MUST NOT EXCEED 8.33%.
4. ALL REQUIREMENTS OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (MAAB) AND THE AMERICANS WITH DISABILITIES ACT (ADA) SHALL GOVERN OVER THESE REGULATIONS.
5. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH ROADWAY.
6. 24"x48" DETECTABLE WARNING TILE SHALL BE BRICK RED, EMBEDMENT PANEL, SOUND ATTENUATING CURB RAMP TILE BY ADS SOLUTIONS, INC., PART NO. 2460IDPAV2 OR APPROVED EQUAL.
7. DETECTABLE WARNING TILE SHALL HAVE DOME SPACING OF 2.35 INCHES.
8. DETECTABLE WARNING TILE SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND INSTALLATION INSTRUCTIONS. (PER MASSDOT E107.65)
9. ALL CURB RAMPS TO RISE 6" FROM BASE TO TOP UNLESS OTHERWISE NOTED. SEE GRADING PLAN FOR ELEVATIONS.

CURB RAMPS A1
NOT TO SCALE



SILTSACK ®
SPECIFICATIONS

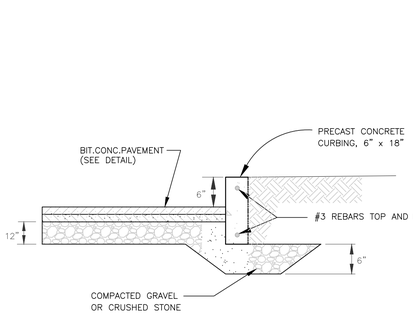
NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE SPECIFICATIONS PROVIDED.

REGULAR FLOW SILTSACK ®

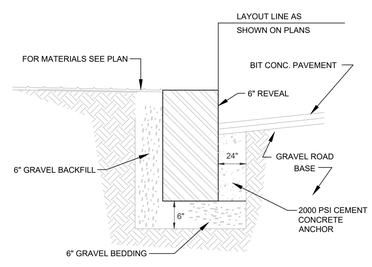
(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

SILTSACK INLET PROTECTION DEVICE B3
NOT TO SCALE



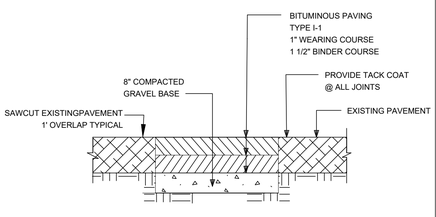
PRECAST CONCRETE CURB B2
NOT TO SCALE



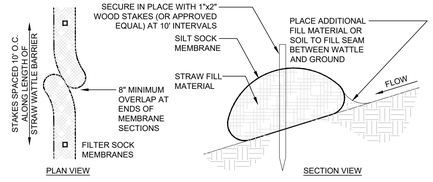
GRANITE CURBING TO CONFORM TO VA.4 TYPE PER DEPT. OF PUBLIC WORKS, MASS. STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES. M6-03-1

REFER TO SHEET G100 FOR ADDITIONAL CURBING NOTES

VERTICAL GRANITE CURB B1
NOT TO SCALE



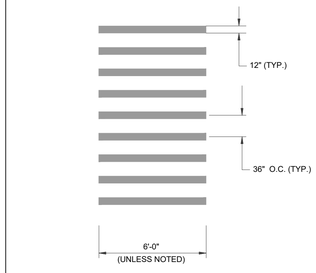
PAVEMENT MATCH SAWCUT A5
NOT TO SCALE



NOTES

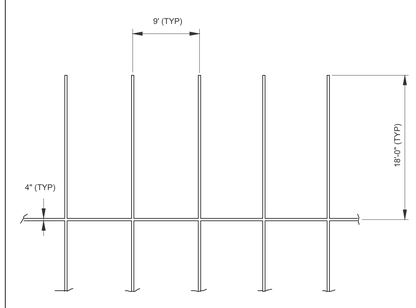
1. WATTLES SHALL BE USED IN UPLAND AREAS ONLY.
2. WATTLES SHALL BE 8" MINIMUM DIAMETER.
3. WATTLES SHALL BE INSTALLED PRIOR TO START OF CONSTRUCTION ACTIVITIES AND LEFT IN PLACE TO BIODEGRADE AFTER FINAL STABILIZATION.
4. WATTLE SECTIONS SHALL BE LAID OUT TO PROVIDE AN 8-INCH MINIMUM OVERLAP AT ENDS.
5. WATTLES SHALL BE LAID IN SINGLE ROWS EXCEPT AS INDICATED OTHERWISE ON PLANS.

STRAW WATTLE EROSION CONTROL BARRIER A4
NOT TO SCALE



CROSSWALK SHALL BE STRAIGHT LINES OF REFLECTIVE WHITE TRAFFIC PAINT, TO BE INSTALLED AS SHOWN ON LAYOUT AND MATERIALS PLAN

STRIPED PEDESTRIAN CROSSWALK A3
NOT TO SCALE



STRIPING SHALL BE 4" WIDE STRAIGHT LINES OF REFLECTIVE WHITE TRAFFIC PAINT, TO BE INSTALLED AS SHOWN ON LAYOUT AND MATERIALS PLAN

TYPICAL PARKING SPACE STRIPING A2
NOT TO SCALE

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CONSULTANT:

SEAL
COMMONWEALTH OF MASSACHUSETTS
DOUGLAS J. MARTINETT
CIVIL
No. 37796
REGISTERED PROFESSIONAL ENGINEER
10-05-2023

WAREHOUSE/INDUSTRIAL DEVELOPMENT

100/200 FINANCIAL PARK
FRANKLIN, MA

OWNER/APPLICANT: BERKELEY PARTNERS

REV	DATE	DESCRIPTION
4	10.05.2023	RESPONSE TO COMMENTS
3	08.25.2023	RESPONSE TO COMMENTS
2	08.14.2023	RESPONSE TO COMMENTS
1	07.17.2023	RESPONSE TO COMMENTS

ISSUE TYPE:
PERMIT SET

ISSUE DATE:
05/11/2023

PROJECT NUMBER:
22051

DRAWN BY: JMP

CHECKED BY: DH

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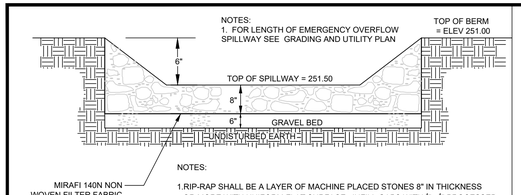
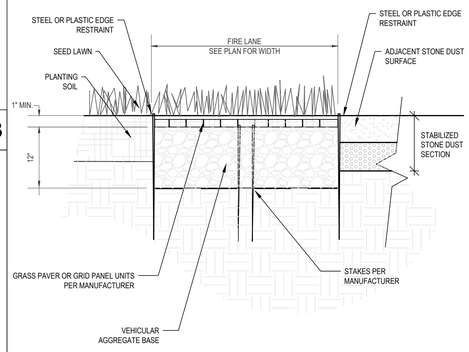
SHEET TITLE:
DETAIL SHEET

SHEET NUMBER:
C600

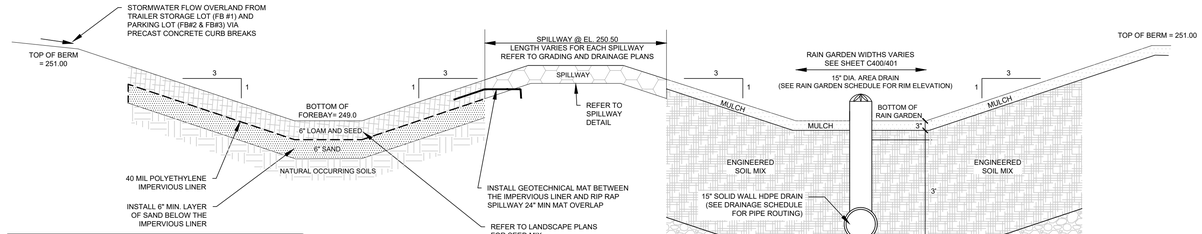
ISSUED FOR : **PERMIT**



SPILLWAY BETWEEN FOREBAY AND RAINGARDEN — C3
NOT TO SCALE



REINFORCED TURF FIRE LANE SURFACE — C2
NOT TO SCALE



RAIN GARDEN SCHEDULE		
SUB-SURFACE SYSTEM	RAIN GARDEN #1	RAIN GARDEN #2
TOP POND	250.50	250.50
BOTTOM POND	249.00	249.50
BOTTOM MULCH	248.75	249.25
BOTTOM SOIL	245.75	246.25
BOTTOM STONE	243.00	242.50
UNDERDRAIN INVERT	243.50	243.50
AREA DRAIN RIM	3 AT 249.85	2 AT 249.85
AREA DRAIN CONNECTED TO	15" HDPE TO DMH-8	15" HDPE TO DMH-13

NOTE:
1. THE "ENGINEERED SOIL MIX" FOR THE RAIN GARDEN IS TO BE USED FOR THE 3 FEET OF PLANTING SOIL AS FOLLOWS:
   40% SAND
   20-30% TOPSOIL
   30-40% COMPOST
2. SEE RAIN GARDEN SCHEDULE FOR ALL ELEVATIONS

RAIN GARDEN SECTION — C1
NOT TO SCALE

BACKFILL MATERIAL SHALL BE WELL GRADED WITHIN THE SPECIFIED LIMITS. GRADATION OF MATERIALS SHALL BE DETERMINED IN ACCORDANCE WITH ASTM C 136.

GRANULAR FILL **(FOR OVER-EXCAVATION)** SHALL BE SAND-GRAVEL MIXTURE, GRADED WITHIN THE FOLLOWING LIMITS:

SIEVE SIZE	% PASSING BY WEIGHT
1-1/2 IN.	100
NO. 4	20-80
NO. 40	10-35
NO. 200	0-8

GRAVEL BEDDING **(FOR UTILITIES)** SHALL BE GRAVEL, CRUSHED QUARRY ROCK OR CRUSHED GRAVEL, FROM OFF-SITE SOURCES GRADED WITHIN THE FOLLOWING LIMITS:

SIEVE SIZE	% PASSING BY WEIGHT
1 IN.	100
3/4 IN.	90-100
3/8 IN.	20-55
NO. 4	0-10
NO. 8	0-5

STONE **(FOR UTILITIES)** SHALL BE A DURABLE, CRUSHED STONE OR GRAVEL FROM OFF-SITE SOURCES, GRADED WITHIN THE FOLLOWING LIMITS:

SIEVE SIZE	% PASSING BY WEIGHT
2-1/2 IN.	100
2 IN.	60-90
1-1/4 IN.	25-50
3/4 IN.	0

SELECT FILL SHALL BE A COARSE GRANULAR MATERIAL CONSISTING OF HARD, DURABLE, ANGULAR MATERIAL, GRADED WITHIN THE FOLLOWING LIMITS. MATERIAL PASSING THE NO. 40 SIEVE SHALL HAVE A PLASTICITY INDEX OF NOT MORE THAN 10 AND A LIQUID LIMIT NOT TO EXCEED 35%.

SIEVE SIZE	% PASSING BY WEIGHT
4 IN.	100
1 IN.	60-100
NO. 4	30-80
NO. 40	5-30
NO. 200	0-8

COMMON FILL (IN **LANDSCAPED AREAS)** SHALL BE BANK RUN SAND, GRAVEL, OR MIXTURE THEREOF, GRADED WITHIN THE FOLLOWING LIMITS:

SIEVE SIZE	% PASSING BY WEIGHT
6 IN.	100
NO. 4	30-95
NO. 200	0-15

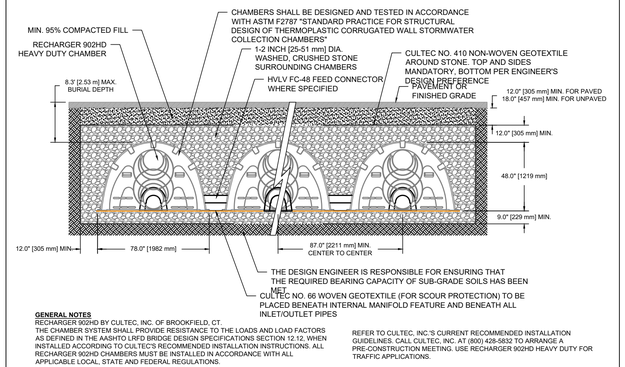
DENSE GRADED CRUSHED STONE SHALL CONSIST OF CRUSHER-RUN COARSE AGGREGATES OF CRUSHED STONE OR GRAVEL AND FINE AGGREGATES OF NATURAL SAND OR STONE SCREENINGS, UNIFORMLY PRE-MIXED WITH A PREDETERMINED QUANTITY OF WATER. COARSE AGGREGATE SHALL HAVE A PERCENTAGE OF WEAR OF NOT MORE THAN 45 BY THE LOS ANGELES TEST.

THE COMPOSITE MATERIAL SHALL BE FREE FROM CLAY, LOAM AND ALL OTHER PLASTIC MATERIALS, AND SHALL CONFORM TO THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE DESIGNATION	PERCENTAGE BY MASS PASSING SQUARE MESH SIEVES
2 inches	100
1 1/2 inches	70-100
3/4 inch	50-85
No. 4	30-55
No. 50	8-24
No. 200	3-10

SAMPLING AND TESTING SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARD AASHTO METHODS:
- SIEVE ANALYSIS: AASHTO T27
- PASSING No. 200 SIEVE: AASHTO T11

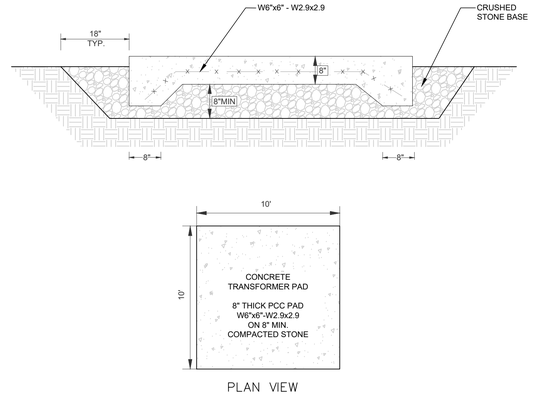
BACKFILL MATERIAL GRADATION REQUIREMENTS — B4
NOT TO SCALE



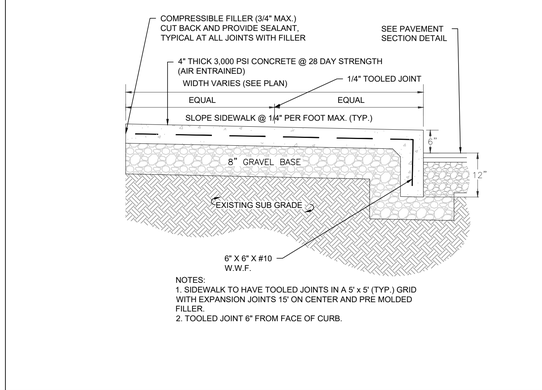
GENERAL NOTES
RECHARGER 902HD BY CULTEC, INC. OF BROOKFIELD, CT.
THE CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12. WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. ALL RECHARGER 902HD CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES. CALL CULTEC, INC. AT (800) 428-5832 TO ARRANGE A PRE-CONSTRUCTION MEETING. USE RECHARGER 902HD HEAVY DUTY FOR TRAFFIC APPLICATIONS.

CULTEC RECHARGER 902HD SUBSURFACE INFILTRATION SYSTEM — B3
NOT TO SCALE

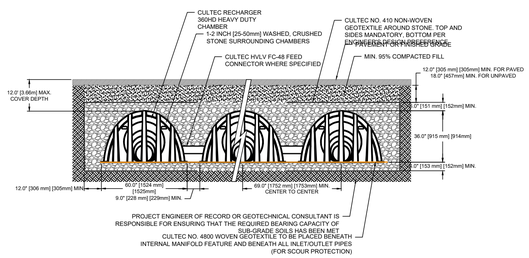


TYPICAL ELECTRICAL TRANSFORMER PAD — B2
NOT TO SCALE



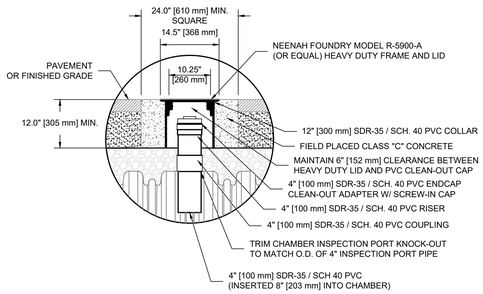
NOTES:
1. SIDEWALK TO HAVE TOOLED JOINTS IN A 5' x 5' (TYP.) GRID WITH EXPANSION JOINTS 15' ON CENTER AND PRE MOLDED FILLER.
2. TOOLED JOINT 6" FROM FACE OF CURB.

MONOLITHIC CONCRETE SIDEWALK — B1
NOT TO SCALE



NOTES:
1. THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS." THE LOAD CONFIGURATION SHALL INCLUDE:
   1.a. INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
   1.b. MAXIMUM PERMANENT (50-YEAR) COVER LOAD
   1.c. 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
2. THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"
3. THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12. WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
   3.a. THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
   3.b. THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
   3.c. THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95

CULTEC RECHARGE 360HD SUBSURFACE INFILTRATION SYSTEM — A4
NOT TO SCALE

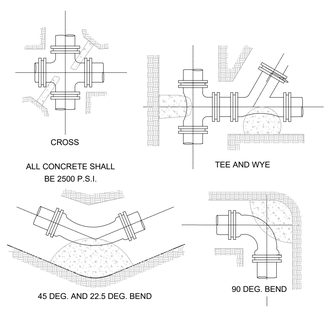


TYPICAL CULTEC INSPECTION PORT — A3
NOT TO SCALE

TABLE OF MINIMUM BEARING AREA IN SQ. IN. AGAINST UNDISTURBED SOIL FOR 8 IN. DIA. PIPE

SOIL BEARING CAPACITY(PSF)	90 DEGREE BEND	TEE	45 DEGREE BEND
1000	945	674	516
1500	630	450	344
2000	473	337	258
3000	315	225	172

NOTE: FOR FITTINGS W/LESS THAN 45 DEGREES DEFLECTION USE BEARING AREA FOR 45 DEGREE BEND BASED ON INTERNAL PRESSURE OF 80 PSI



WATER THRUST BLOCK — A2
NOT TO SCALE

VALVE SPECIFICATIONS

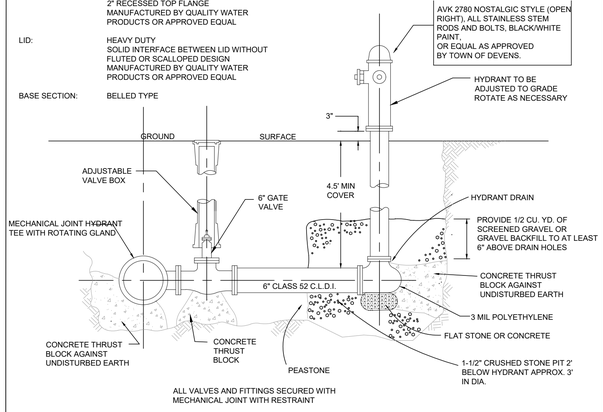
GATE VALVES: OPEN LEFT (COUNTERCLOCKWISE)
200 PSI RESILIENT WEDGE
AWWA APPROVED

VALVE BOX SPECIFICATIONS

TOP: HEAVY DUTY
2" RECESSED TOP FLANGE
MANUFACTURED BY QUALITY WATER PRODUCTS OR APPROVED EQUAL

LID: HEAVY DUTY
SOLID INTERFACE BETWEEN LID WITHOUT FLUTED OR SCALLOPED DESIGN
MANUFACTURED BY QUALITY WATER PRODUCTS OR APPROVED EQUAL

BASE SECTION: BELLED TYPE



ALL VALVES AND FITTINGS SECURED WITH MECHANICAL JOINT WITH RESTRAINT

FIRE HYDRANT & GATE VALVE — A1
NOT TO SCALE

HIGHPOINT ENGINEERING, INC.
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BOSTON, MA 02108

CONSULTANT:

SEAL
COMMONWEALTH OF MASSACHUSETTS
DOUGLAS J. MAYHNETT
CIVIL
No. 37796
REGISTERED PROFESSIONAL ENGINEER
10-05-2023

WAREHOUSE / INDUSTRIAL DEVELOPMENT

100/200 FINANCIAL PARK
FRANKLIN, MA

OWNER/APPLICANT: BERKELEY PARTNERS

REV	DATE	DESCRIPTION
4	10.05.2023	RESPONSE TO COMMENTS
3	08.25.2023	RESPONSE TO COMMENTS
2	08.14.2023	RESPONSE TO COMMENTS
1	07.17.2023	RESPONSE TO COMMENTS

ISSUE TYPE:
PERMIT SET

ISSUE DATE:
05/11/2023

PROJECT NUMBER:
22051

DRAWN BY: JMP

CHECKED BY: DH

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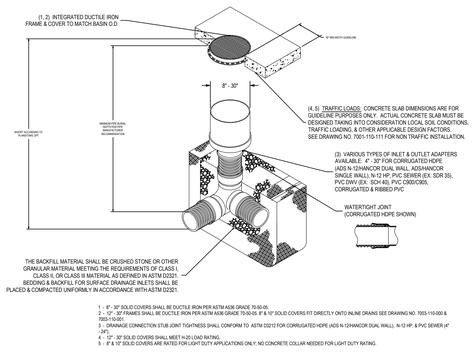
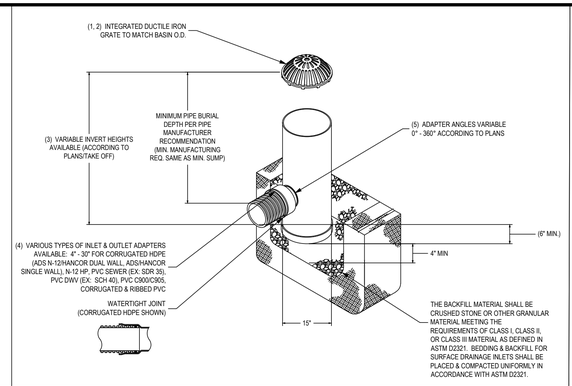
SHEET TITLE:
DETAIL SHEET

SHEET NUMBER:
C601

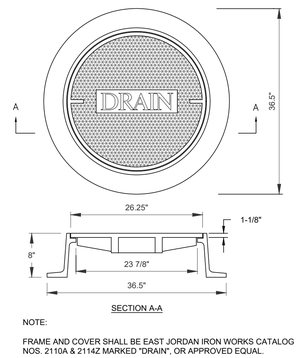
ISSUED FOR : **PERMIT**



NYLOPLAST DRAIN CLEANOUT
NOT TO SCALE **C3**



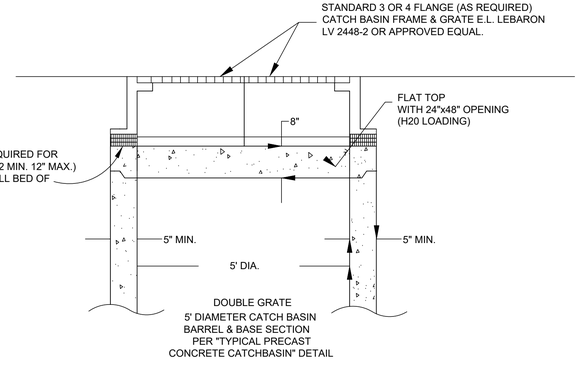
NYLOPLAST DOME GRATE
NOT TO SCALE **C2**



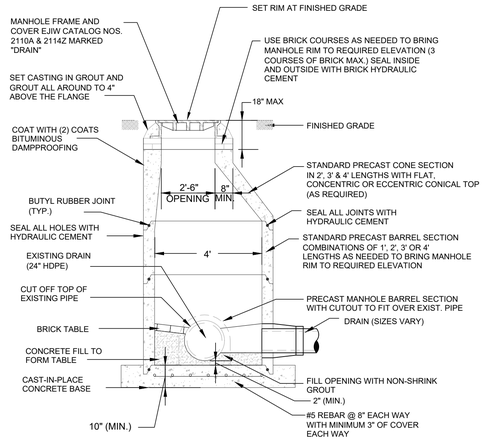
NOTE:

FRAME AND COVER SHALL BE EAST JORDAN IRON WORKS CATALOG NOS. 2110A & 2114Z MARKED "DRAIN", OR APPROVED EQUAL.

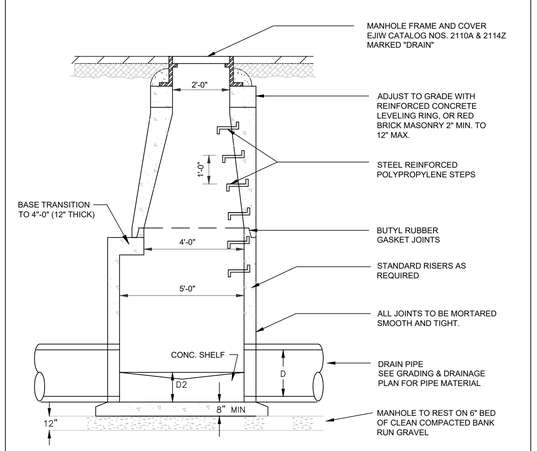
DRAIN MANHOLE FRAME AND COVER
NOT TO SCALE **C1**



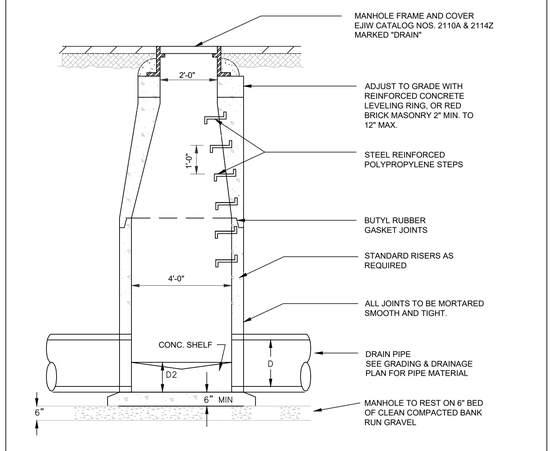
NOTE: ALL CATCH BASINS SHALL MEET THE REQUIREMENTS OF THE TOWN OF FRANKLIN DEPARTMENT OF PUBLIC WORKS. ANY CATCH BASINS INSTALLED ADJACENT TO GRANITE CURBING MUST RECEIVE GRANITE THROAT STONES.



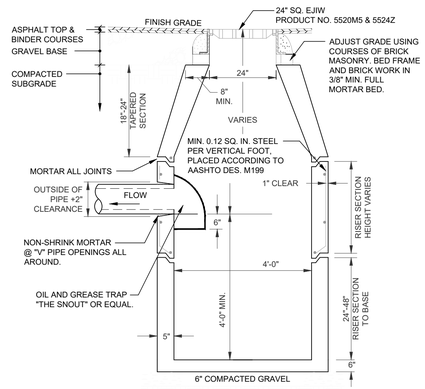
DOGHOUSE MANHOLE
NOT TO SCALE **B4**



5' PRECAST CONCRETE DRAIN MANHOLE
NOT TO SCALE **B3**



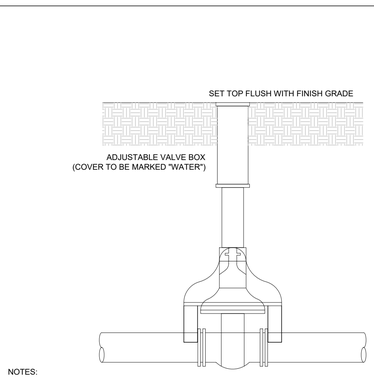
4' PRECAST CONCRETE DRAIN MANHOLE
NOT TO SCALE **B2**



NOTES:

1. ALL STRUCTURES SHALL BE SUITABLE FOR H-20 LOADING AND SHALL MEET THE REQUIREMENTS OF ASTM C478.
2. ALL BLOCKS TO BE LAID IN A FULL BED OF MORTAR.
3. OUTSIDE OF BASIN TO BE COATED WITH 2" OF MORTAR CEMENT PARGING.
4. FACE OF PIPE FLUSH OR NOT TO PROJECT MORE THAN 4" FROM FACE OF WALL ALONG CENTERLINE OF PIPE.
5. PIPE OPENING COVERED WITH 23 GAUGE GALVANIZED WIRE MESH.
6. PLACE 2 C.F. OF 2" CRUSHED STONE OVER WIRE MESH.
7. BACKFILL SHALL CONSIST OF CLEAN SOIL MATERIALS UNIFORMLY PLACED IN 6-INCH LAYERS AROUND THE STRUCTURE AND THOROUGHLY COMPACTED WITH HAND TAMPERS OR MECHANICAL EQUIPMENT.

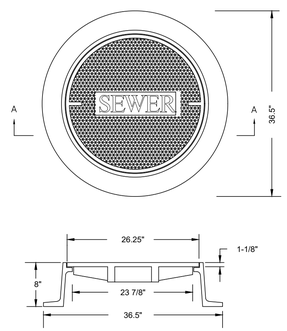
SINGLE & DOUBLE GRATE CATCH BASIN
NOT TO SCALE **B1**



NOTES:

1. VALVE BOXES SHALL BE PROVIDED FOR EACH GATE VALVE AND TAPPING SLEEVE AND VALVE.
2. VALVE BOXES SHALL BE CAST IRON AND OF THE TELESCOPIC DESIGN WITH TWO PIECE CONSTRUCTION, TOP WITH A COVER AND A BOTTOM. THE TOP SECTION SHALL HAVE A TOP FLANGE TO INCREASE THE STABILITY OF THE BOX TO REMAIN AT PRESENT HEIGHT. THE LOWER SECTION OF THE BOX SHALL HAVE A BELL SHAPED BOTTOM DESIGNED TO ENCLOSE THE OPERATING NUT AND STUFFING BOX OF THE VALVE WITHOUT SETTLING.
3. THE GATE BOX SHALL COME COMPLETE WITH COVER ON WHICH THE WORD "WATER" SHALL BE CAST. THE COVER OF THE GATE BOX SHALL BE CLOSE FITTING AND SUBSTANTIALLY TIGHT AND FLUSH WITH THE TOP OF THE BOX RIM.
4. GATE BOXES SHALL BE INSTALLED FOR EACH BURIED VALVE.
5. VALVE BOXES SHALL BE CP TEST SERVICES, INC, OR EQUAL.
6. CAST IRON BOXES SHALL BE GENERAL FOUNDRY BUFFALO BOXES OR EQUAL. VALVE SHALL OPEN RIGHT.

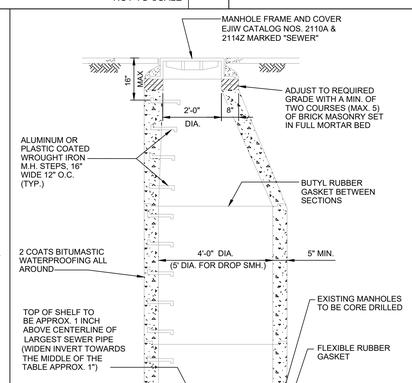
WATER GATE BOX
NOT TO SCALE **A5**



NOTE:

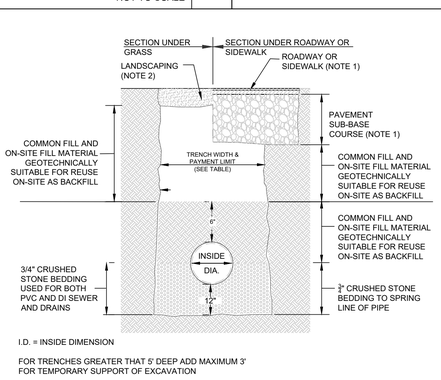
1. FRAME AND COVER SHALL BE EAST JORDAN IRON WORKS CATALOG NOS. 2110A & 2114Z MARKED "SEWER", OR APPROVED EQUAL.
2. MANHOLE FRAME AND COVER TO BE LOCKABLE TYPE WITH GASKET. (WATER TIGHT)

SEWER MANHOLE FRAME & COVER
NOT TO SCALE **A4**



NOTE:
1. ALL NEW SEWER MANHOLES ARE SUBJECT TO VACUUM TESTING.
2. ALL BRICK MASONRY TO BE SOLID ASTM C-32, GRADE SM MOLDED (NON-FROGGED) AS MANUFACTURED BY STILES & HART BRICK CO., OR EQUAL.

SANITARY SEWER MANHOLE
NOT TO SCALE **A3**



I.D. = INSIDE DIMENSION

FOR TRENCHES GREATER THAT 5' DEEP ADD MAXIMUM 3' FOR TEMPORARY SUPPORT OF EXCAVATION

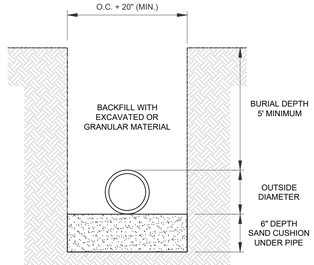
NOTES:

1. REFER TO PAVING AND SURFACING, AND CURBS, WALKS AND DRIVEWAYS REQUIREMENTS.
2. REFER TO LANDSCAPING REQUIREMENTS
3. REFER TO "TRENCH PAY LIMIT TABLE FOR PIPES" FOR PAYMENT OF ALL ITEMS IN WHICH PAY TRENCH WIDTH IS A VARIABLE FOR CALCULATIONS OF QUANTITIES EXCEPT FOR TRENCH PAVEMENT
4. REFER TO TRENCH PAVEMENT DETAIL FOR PAVEMENT PAYMENT WIDTHS

TRENCH PAY LIMIT TABLE FOR PIPES

PIPE SIZE (DIA.)	MAX TRENCH WIDTH
LESS THAN 2"	2'-0"
2" TO 6"	3'-0"
8" TO 22"	4'-0"
24" & GREATER	I.D. + 2'-0"

DRAINAGE AND SEWER TRENCH
NOT TO SCALE **A2**



NOTE:
1. TRENCHING, BACKFILLING, COMPACTION, AND GRANULAR FILL MATERIALS SHALL CONFORM TO THE TOWN OF FRANKLIN DPW STANDARD
2. SPECIFICATIONS FOR EXCAVATION WITHIN PUBLIC RIGHT OF WAY BACKFILL TRENCH WITH EXCAVATEABLE CONTROLLED DENSITY FILL

WATER TRENCH
NOT TO SCALE **A1**

HIGHPOINT ENGINEERING, INC.
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CLIENT:
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BOSTON, MA 02108

CONSULTANT:

SEAL

10-05-2023

WAREHOUSE/INDUSTRIAL DEVELOPMENT

100/200 FINANCIAL PARK
FRANKLIN, MA

OWNER/APPLICANT: BERKELEY PARTNERS

REV	DATE	DESCRIPTION
4	10.05.2023	RESPONSE TO COMMENTS
3	08.25.2023	RESPONSE TO COMMENTS
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1	07.17.2023	RESPONSE TO COMMENTS

ISSUE TYPE:
PERMIT SET

ISSUE DATE:
05/11/2023

PROJECT NUMBER:
22051

DRAWN BY: JMP

CHECKED BY: DH

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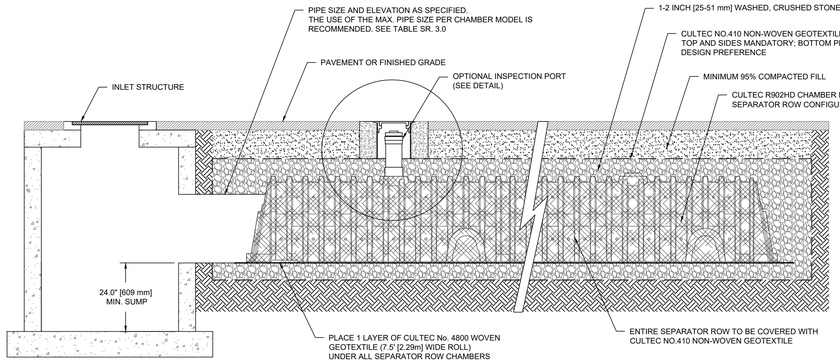
SHEET TITLE:

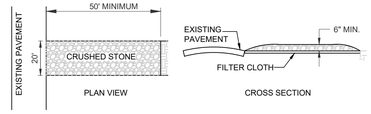
DETAIL SHEET

SHEET NUMBER:
C602

ISSUED FOR : **PERMIT**



TYPICAL CULTEC SEPARATOR (ISOLATOR) ROW CONFIGURATION
NOT TO SCALE **C3**



TRACKING PAD NOTES

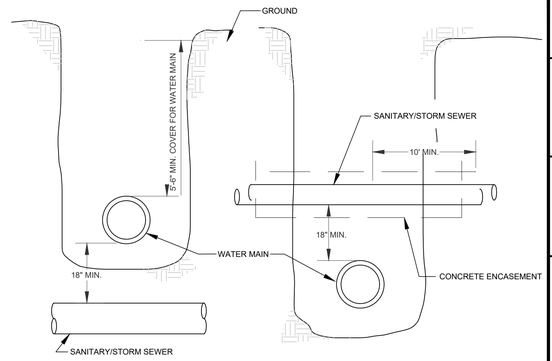
1. STONE SIZE - USE 6" ANGULAR CRUSHED STONE

2. FILTER CLOTH - SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.

3. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHOULD BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM SHOULD BE PERMITTED.

4. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH PREVENTS 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 CLEANING OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

CRUSHED STONE TRACKING PAD
NOT TO SCALE **C2**



TYPICAL WATER-SEWER CROSSING
NOT TO SCALE **C1**

SEPARATOR ROW™ SPECIFICATIONS

GENERAL

1. CULTEC'S SEPARATOR ROW IS USED AS AN INEXPENSIVE MEANS OF REMOVING TOTAL SUSPENDED SOLIDS FROM THE CHAMBER SYSTEM, AS WELL AS PROVIDING EASIER ACCESS FOR INSPECTION AND MAINTENANCE.

2. THE SEPARATOR ROW PERFORMANCE SHALL BE TESTED AND VERIFIED TO THE PROTOCOLS AND PROCEDURES AS DEFINED BY ENVIRONMENTAL TECHNOLOGY VERIFICATION (ETV) CANADA TO ACHIEVE 80% TSS REMOVAL.

INSTALLATION INSTRUCTIONS

A SEPARATOR ROW IS INSTALLED ON A 1-2 INCH [25-51 mm] WASHED, CRUSHED STONE BASE. TYPICALLY, THE CULTEC CHAMBER MODEL USED FOR THE SEPARATOR ROW IS THE SAME CHAMBER USED THROUGHOUT THE ENTIRE CHAMBER BED.

STORMWATER IS DISTRIBUTED TO THE SEPARATOR ROW BY A PRIMARY FEED SYSTEM THAT DIVERTS FLOW TO THE SEPARATOR ROW AND A SECONDARY BYPASS FEED SYSTEM THAT DIVERTS THE FLOW OF CLEAN WATER TO THE OTHER PARTS OF THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM. THE DISTRIBUTION SYSTEM MAY BE BY PIPES SET AT A LOWER ELEVATION THAT PERMIT THE FIRST FLUSH TO THE SEPARATOR ROW VERSUS OTHER PARTS OF THE UNDERGROUND STORMWATER SYSTEM. THIS INITIAL FLOW MAY BE MANAGED BY A BAFFLE OR WEIR. THE SIZING OF THE PIPE(S) THAT PROVIDE STORM WATER TO THE SEPARATOR ROW IS TO BE DETERMINED BY THE DESIGN ENGINEER AND IS BASED UPON THE REQUIREMENT TO ACCOMMODATE THE DESIGN FLOW AND SERVICE CONVENIENCE.

THE CHAMBERS UTILIZED IN THE SEPARATOR ROW ARE TO BE COMPLETELY WRAPPED WITH CULTEC NO. 410 NON-WOVEN GEOTEXTILE. THIS CREATES A PASS-THROUGH FILTER ARRANGEMENT TO SEPARATE TOTAL SUSPENDED SOLIDS IN THE TRANSFER OF STORM WATER TO OTHER CHAMBERS THROUGHOUT THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM.

ONCE WRAPPED, THE SEPARATOR ROW IS TO THEN PLACED ENTIRELY OVER 1 LAYER OF CULTEC No. 4800 WOVEN GEOTEXTILE. THIS WOVEN GEOTEXTILE PROVIDES A DURABLE SURFACE WITHIN THE ROW FOR MAINTENANCE PROCEDURES AS WELL AS TO PREVENT ANY SCOURING OF THE STONE BASE DURING HIGH PRESSURE JETTING.

THE RECOMMENDED INSTALLATION OF SEPARATOR ROW CHAMBERS, IN REGARD TO STONE SEPARATION AND STONE ABOVE THE UNIT, ALONG WITH OTHER MINIMUM BURIAL, MATERIALS AND METHOD SPECIFICATIONS DETAILED FOR THE PROPER INSTALLATION, IS THE SAME AS CULTEC'S REQUIREMENT DETAILED IN THE COMPANY'S INSTALLATION GUIDELINES WITH THE EXCEPTION OF THE PLACEMENT OF THE REQUIRED FILTERING FABRICS. PLEASE REFER TO CULTEC'S CURRENT INSTALLATION INSTRUCTIONS FOR STORMWATER CHAMBERS AS A GUIDE.

MAINTENANCE PROCEDURES

CULTEC RECOMMENDS INSPECTIONS OF THE SEPARATOR ROW TO BE PERFORMED EVERY SIX MONTHS FOR THE FIRST YEAR. THE FREQUENCY OF INSPECTION CAN THEN BE ADJUSTED BASED UPON PREVIOUS OBSERVATION OF SEDIMENT DEPOSITION.

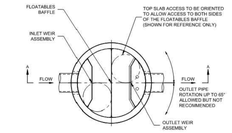
WHILE CLEANING IS POSSIBLE FROM A SINGLE MANHOLE IN SHORTER LINES, A CLEAN-OUT OPTION FROM EITHER END OF A LINE IS PREFERABLE, PARTICULARLY FOR LONGER RUNS. CLEANING INVOLVES FLUSHING SEDIMENT FROM THE BASE FABRIC OF THE SEPARATOR ROW.

ACCESS WILL BE PROVIDED VIA A MANHOLE(S) LOCATED AT THE END(S) OF THE ROW FOR CLEAN OUT.

MAINTENANCE OF THE SEPARATOR ROW IS TO BE ACCOMPLISHED WITH A JETVAC PROCESS.

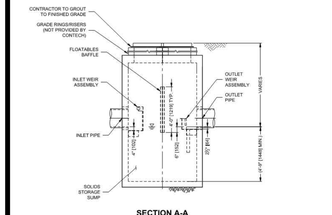
THE JETVAC IS TO BE SENT DOWN THE ENTIRE LENGTH OF THE SEPARATOR ROW. AS THE HIGH PRESSURE WATER NOZZLE IS RETRIEVED, THE CAPTURED SEDIMENTS ARE PUSHED BACK INTO THE MANHOLE FOR VACUUMING.

CULTEC SEPARATOR (ISOLATOR) ROW NOTES
NOT TO SCALE **A3**



PLAN VIEW
TOP SLAB NOT SHOWN

FRAME AND COVER
(MAY VARY)
NOT TO SCALE



SECTION A-A

SciCloneX

SCICLONEX DESIGN NOTES

THE STANDARD SCX-06 CONFIGURATION IS SHOWN. **SCX-06 RATED TREATMENT CAPACITY IS 0.22 CFS OR PER LOCAL REGULATIONS**

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	
WATER QUALITY FLOW RATE (cfs [L/s])	
PEAK FLOW RATE (cfs [L/s])	
RETURN PERIOD OF PEAK FLOW (yrs)	
RIM ELEVATION	

PIPE DATA	INVERT	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			

NOTES / SPECIAL REQUIREMENTS:

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE, www.ContechES.com.
3. SCICLONEX WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. SCICLONEX STRUCTURE SHALL MEET AASHTO H20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. SCICLONEX STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE SCICLONEX MANHOLE STRUCTURE(S).
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH ENGINEERED SOLUTIONS LLC
www.contechES.com
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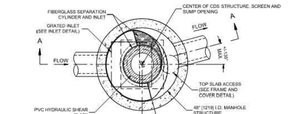
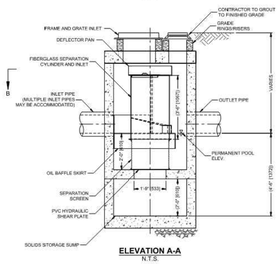
800-338-1122 513-645-7000 513-645-7993 FAX

SCX-06
SCICLONEX
STANDARD DETAIL

SCICLONEX SCX-06 (WQU-7)
NOT TO SCALE **B2**



PLAN VIEW B-B
N.T.S.



ELEVATION A-A
N.T.S.

CDS

CDS2015-4-C DESIGN NOTES

CDS2015-4-C RATED TREATMENT CAPACITY IS 1.4 CFS [19.8 L/s], OR PER LOCAL REGULATIONS.

THE GRATE INLET CDS2015-4-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION

GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES
SEPARATE OIL BAFFLE (SINGLE INLET PIPE REQUIRED FOR THIS CONFIGURATION)
SEDIMENT WEIR FOR NJDEP / NJCAT CONFORMING UNITS

24" X 24" FRAME AND GRATE
(MAY VARY)
NOT TO SCALE

FRAME AND COVER
(MAY VARY)
NOT TO SCALE

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	
WATER QUALITY FLOW RATE (CFS OR L/s)	*
PEAK FLOW RATE (CFS OR L/s)	*
RETURN PERIOD OF PEAK FLOW (YRS)	*
SCREEN APERTURE (2400 OR 4700)	*

PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	*	*	*
INLET PIPE 2	*	*	*
OUTLET PIPE	*	*	*

RIM ELEVATION	*

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
*	*	*

NOTES/SPECIAL REQUIREMENTS:
* PER ENGINEER OF RECORD

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE, www.ContechES.com.
4. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO H20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
7. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE. (LIFTING LUGS PROVIDED).
C. CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH ENGINEERED SOLUTIONS LLC
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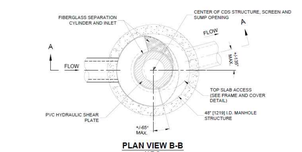
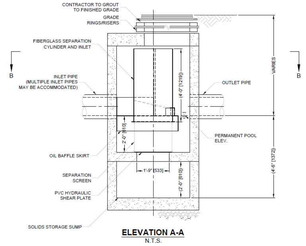
800-338-1122 513-645-7000 513-645-7993 FAX

CDS2015-4-C WITH GRATED INLET
INLINE CDS
STANDARD DETAIL

CONTECH CDS2015-4-C WITH GRATED INLET (WQU-5)
NOT TO SCALE **B1**



PLAN VIEW B-B
N.T.S.



ELEVATION A-A
N.T.S.

CDS

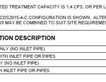
CDS2015-4-C DESIGN NOTES

CDS2015-4-C RATED TREATMENT CAPACITY IS 1.4 CFS, OR PER LOCAL REGULATIONS.

THE STANDARD CDS2015-4-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION

GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	
WATER QUALITY FLOW RATE (CFS OR L/s)	*
PEAK FLOW RATE (CFS OR L/s)	*
RETURN PERIOD OF PEAK FLOW (YRS)	*
SCREEN APERTURE (1000 OR 2000)	*

PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	*	*	*
INLET PIPE 2	*	*	*
OUTLET PIPE	*	*	*

RIM ELEVATION	*

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
*	*	*

NOTES/SPECIAL REQUIREMENTS:
* PER ENGINEER OF RECORD

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE, www.ContechES.com.
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO H20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE. (LIFTING LUGS PROVIDED).
C. CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

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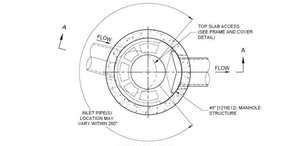
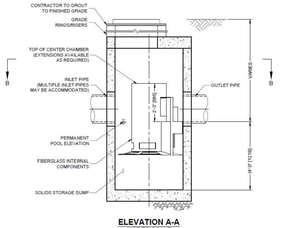
CDS2015-4-C
ONLINE CDS
STANDARD DETAIL

CONTECH CDS2015-4-C (WQU-3)
NOT TO SCALE **A2**



PLAN VIEW B-B
NOT TO SCALE



ELEVATION A-A
NOT TO SCALE

CASCADE
separator™

CASCADE SEPARATOR DESIGN NOTES

CS-4 RATED TREATMENT CAPACITY IS 2.3 CFS, OR PER LOCAL REGULATIONS.
THE STANDARD CS-4 CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION

GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES

FRAME AND COVER
(DIAMETER VARIES)
NOT TO SCALE

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	
WATER QUALITY FLOW RATE (cfs [L/s])	
PEAK FLOW RATE (cfs [L/s])	
RETURN PERIOD OF PEAK FLOW (yrs)	
RIM ELEVATION	

PIPE DATA	INVERT	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			

NOTES / SPECIAL REQUIREMENTS:

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE, www.ContechES.com.
3. CASCADE WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. CASCADE SEPARATOR STRUCTURE SHALL MEET AASHTO H20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. CASCADE SEPARATOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR STRUCTURE(S).
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

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CS-4
CASCADE SEPARATOR
STANDARD DETAIL

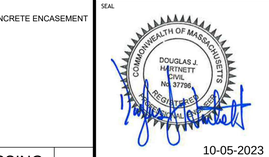
CONTECH CASCADE CS-4 (WQU-1)
NOT TO SCALE **A1**

HIGHPOINT ENGINEERING, INC.
LAND PLANNING
PERMIT EXPEDITING
CIVIL ENGINEERING
CONSULTING
DEDHAM EXECUTIVE CENTER
980 WASHINGTON STREET, SUITE 216
DEDHAM, MA 02026
www.HighpointEng.com

CLIENT:
Berkeley Partners
1 WASHINGTON MALL | Suite 701
BOSTON, MA 02108

CONSULTANT:

SEAL



10-05-2023

WAREHOUSE / INDUSTRIAL DEVELOPMENT

100/200 FINANCIAL PARK
FRANKLIN, MA

OWNER / APPLICANT: BERKELEY PARTNERS

REV	DATE	DESCRIPTION
4	10.05.2023	RESPONSE TO COMMENTS
3	08.25.2023	RESPONSE TO COMMENTS
2	08.14.2023	RESPONSE TO COMMENTS
1	07.17.2023	RESPONSE TO COMMENTS

ISSUE TYPE:
PERMIT SET

ISSUE DATE:
05/11/2023

PROJECT NUMBER:
22051

DRAWN BY: JMP

CHECKED BY: DH

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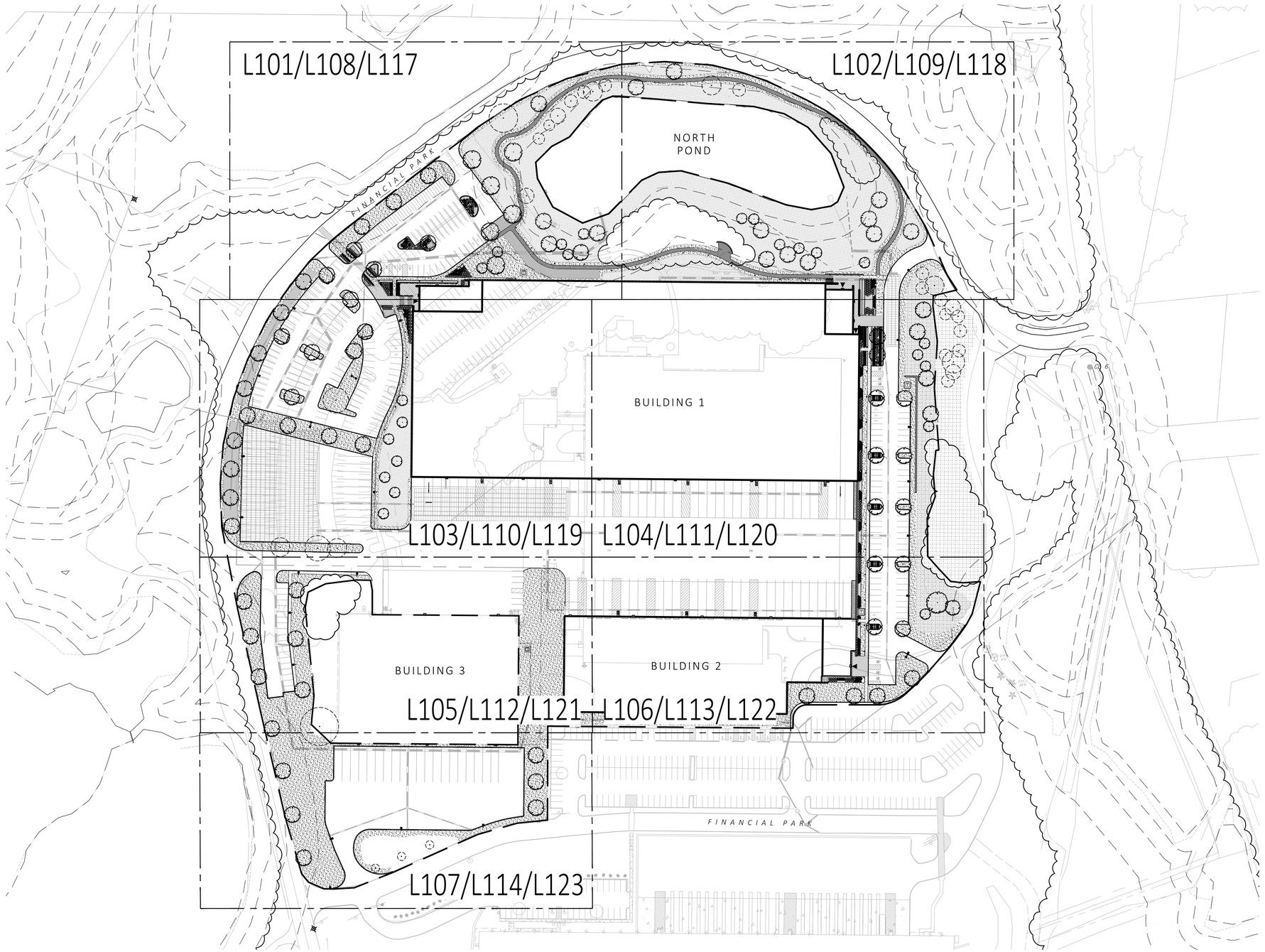
SHEET TITLE:

DETAIL SHEET

SHEET NUMBER:
C603

ISSUED FOR : **PERMIT**

FOR PERMIT ONLY
NOT FOR CONSTRUCTION



1 SHEET LAYOUT KEY PLAN
SCALE: 1" = 80'-0"

0 40 80 160
SCALE IN FEET

MDLA
MICHAEL D'ANGELO landscape architecture

MICHAEL D'ANGELO
LANDSCAPE ARCHITECTURE LLC

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BOSTON, MA 02127
t. 203.592.4788
www.m-d-l-a.com

CLIENT
BERKELEY PARTNERS
1 WASHINGTON MALL, SUITE 701
BOSTON, MA

PROJECT
WAREHOUSE / INDUSTRIAL DEV.
100 / 200 FINANCIAL PARK
FRANKLIN, MA

STAMP
MASSACHUSETTS
MICHAEL D'ANGELO
NO. 4095
REGISTERED LANDSCAPE ARCHITECT

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

KEY PLAN

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L100

SHEET 01 OF 24

plot date: 8/25/2023

FOR PERMIT ONLY
NOT FOR CONSTRUCTION

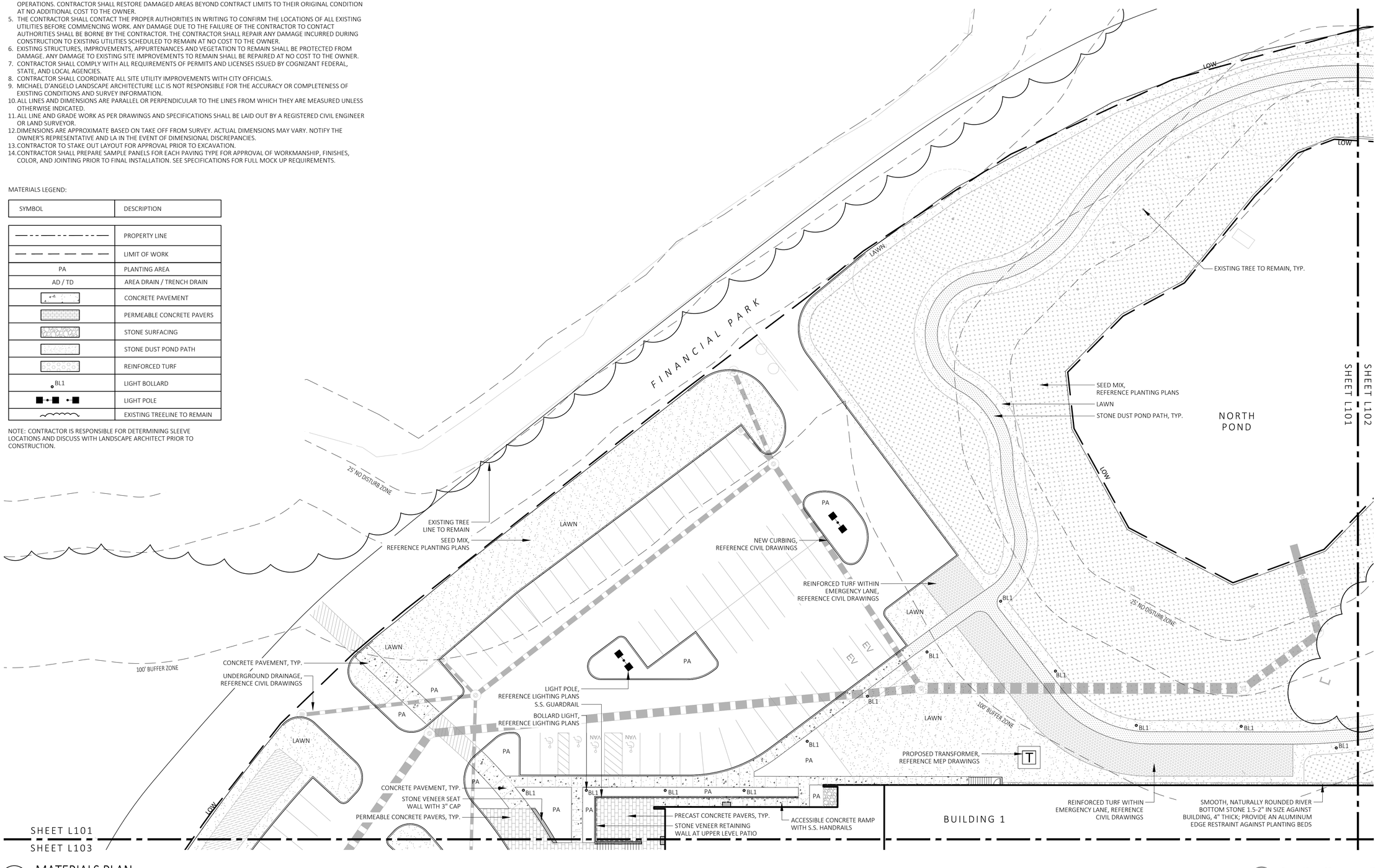
MATERIALS NOTES:

1. CONSULT ALL DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BETWEEN ALL TRADES PRIOR TO COMMENCING NEW CONSTRUCTION.
2. CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD AND REPORT ANY AND ALL DISCREPANCIES TO THE ENGINEER. ANY ALTERATIONS TO THESE DRAWINGS MADE IN THE FIELD SHALL BE PROMPTLY REPORTED BY THE CONTRACTOR TO THE LANDSCAPE ARCHITECT (LA) AND RECORDED ON RECORD DRAWINGS.
3. CONTRACTOR SHALL NOTIFY THE LA OF ANY AND ALL CONFLICTS BETWEEN PROPOSED SITE WORK AND WORK OF ALL OTHER TRADES.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE INSIDE AND OUTSIDE THE LIMIT OF WORK LINE DUE TO CONTRACT OPERATIONS. CONTRACTOR SHALL RESTORE DAMAGED AREAS BEYOND CONTRACT LIMITS TO THEIR ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR SHALL CONTACT THE PROPER AUTHORITIES IN WRITING TO CONFIRM THE LOCATIONS OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE DUE TO THE FAILURE OF THE CONTRACTOR TO CONTACT AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY DAMAGE INCURRED DURING CONSTRUCTION TO EXISTING UTILITIES SCHEDULED TO REMAIN AT NO COST TO THE OWNER.
6. EXISTING STRUCTURES, IMPROVEMENTS, APPURTENANCES AND VEGETATION TO REMAIN SHALL BE PROTECTED FROM DAMAGE. ANY DAMAGE TO EXISTING SITE IMPROVEMENTS TO REMAIN SHALL BE REPAIRED AT NO COST TO THE OWNER.
7. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF PERMITS AND LICENSES ISSUED BY COGNIZANT FEDERAL, STATE, AND LOCAL AGENCIES.
8. CONTRACTOR SHALL COORDINATE ALL SITE UTILITY IMPROVEMENTS WITH CITY OFFICIALS.
9. MICHAEL D'ANGELO LANDSCAPE ARCHITECTURE LLC IS NOT RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF EXISTING CONDITIONS AND SURVEY INFORMATION.
10. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE INDICATED.
11. ALL LINE AND GRADE WORK AS PER DRAWINGS AND SPECIFICATIONS SHALL BE LAID OUT BY A REGISTERED CIVIL ENGINEER OR LAND SURVEYOR.
12. DIMENSIONS ARE APPROXIMATE BASED ON TAKE OFF FROM SURVEY. ACTUAL DIMENSIONS MAY VARY. NOTIFY THE OWNER'S REPRESENTATIVE AND LA IN THE EVENT OF DIMENSIONAL DISCREPANCIES.
13. CONTRACTOR TO STAKE OUT LAYOUT FOR APPROVAL PRIOR TO EXCAVATION.
14. CONTRACTOR SHALL PREPARE SAMPLE PANELS FOR EACH PAVING TYPE FOR APPROVAL OF WORKMANSHIP, FINISHES, COLOR, AND JOINTING PRIOR TO FINAL INSTALLATION. SEE SPECIFICATIONS FOR FULL MOCK UP REQUIREMENTS.

MATERIALS LEGEND:

SYMBOL	DESCRIPTION
	PROPERTY LINE
	LIMIT OF WORK
PA	PLANTING AREA
AD / TD	AREA DRAIN / TRENCH DRAIN
	CONCRETE PAVEMENT
	PERMEABLE CONCRETE PAVERS
	STONE SURFACING
	STONE DUST POND PATH
	REINFORCED TURF
BL1	LIGHT BOLLARD
	LIGHT POLE
	EXISTING TREELINE TO REMAIN

NOTE: CONTRACTOR IS RESPONSIBLE FOR DETERMINING SLEEVE LOCATIONS AND DISCUSS WITH LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.



1 MATERIALS PLAN
SCALE: 1" = 20'-0"

0 10 20 40
SCALE IN FEET

MDLA
MICHAEL D'ANGELO landscape architecture

MICHAEL D'ANGELO
LANDSCAPE ARCHITECTURE LLC

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BOSTON, MA

PROJECT
WAREHOUSE / INDUSTRIAL DEV.
100 / 200 FINANCIAL PARK
FRANKLIN, MA

STAMP

MASSACHUSETTS
MICHAEL D'ANGELO
NO. 4006
REGISTERED LANDSCAPE ARCHITECT

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

MATERIALS PLAN

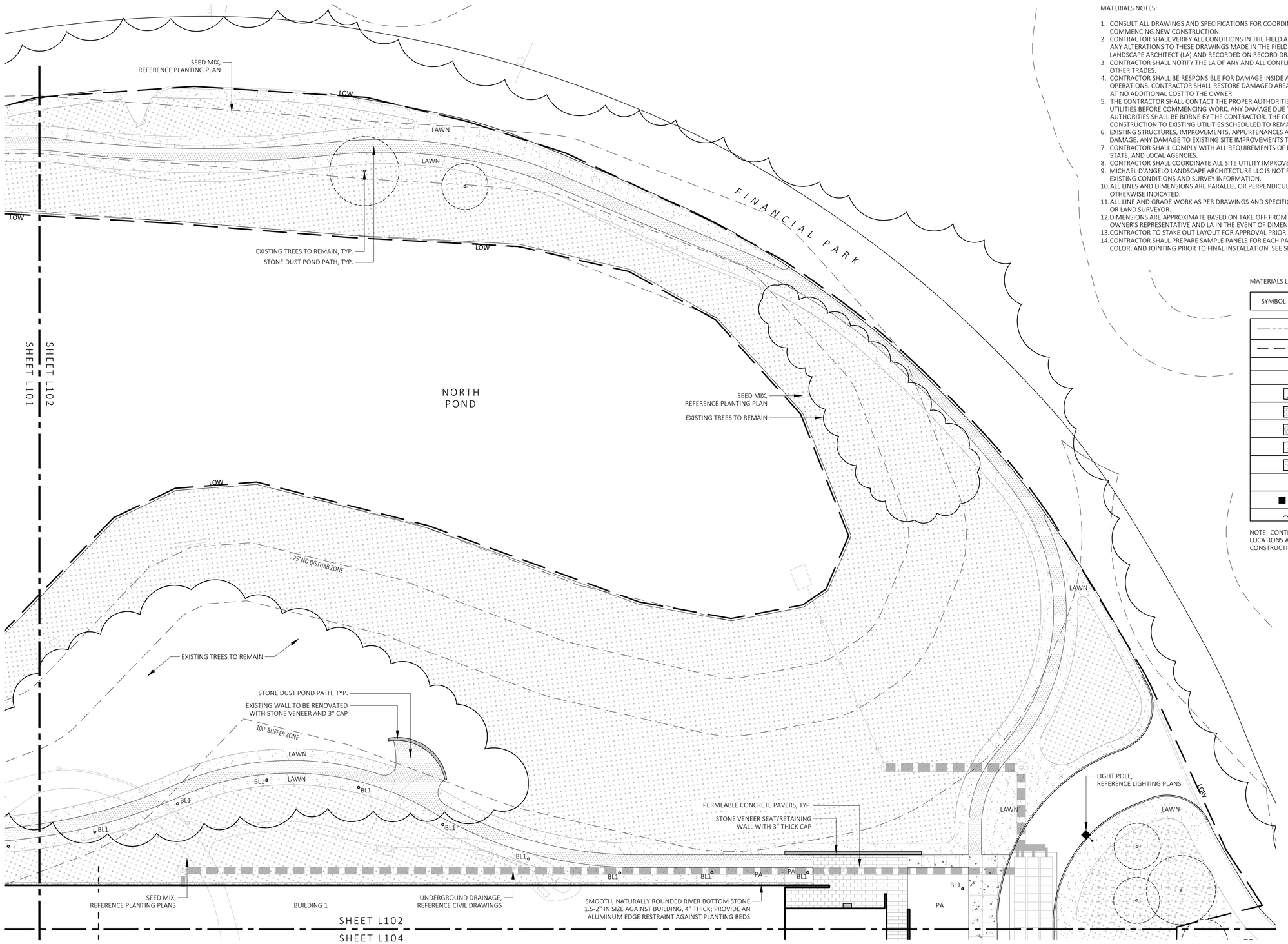
DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L101

SHEET 02 OF 24

plot date: 8/25/2023

FOR PERMIT ONLY
NOT FOR CONSTRUCTION



1 MATERIALS PLAN
SCALE: 1" = 20'-0"

0 10 20 40
SCALE IN FEET

MATERIALS NOTES:

1. CONSULT ALL DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BETWEEN ALL TRADES PRIOR TO COMMENCING NEW CONSTRUCTION.
2. CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD AND REPORT ANY AND ALL DISCREPANCIES TO THE ENGINEER. ANY ALTERATIONS TO THESE DRAWINGS MADE IN THE FIELD SHALL BE PROMPTLY REPORTED BY THE CONTRACTOR TO THE LANDSCAPE ARCHITECT (LA) AND RECORDED ON RECORD DRAWINGS.
3. CONTRACTOR SHALL NOTIFY THE LA OF ANY AND ALL CONFLICTS BETWEEN PROPOSED SITE WORK AND WORK OF ALL OTHER TRADES.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE INSIDE AND OUTSIDE THE LIMIT OF WORK LINE DUE TO CONTRACT OPERATIONS. CONTRACTOR SHALL RESTORE DAMAGED AREAS BEYOND CONTRACT LIMITS TO THEIR ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR SHALL CONTACT THE PROPER AUTHORITIES IN WRITING TO CONFIRM THE LOCATIONS OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE DUE TO THE FAILURE OF THE CONTRACTOR TO CONTACT AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY DAMAGE INCURRED DURING CONSTRUCTION TO EXISTING UTILITIES SCHEDULED TO REMAIN AT NO COST TO THE OWNER.
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8. CONTRACTOR SHALL COORDINATE ALL SITE UTILITY IMPROVEMENTS WITH CITY OFFICIALS.
9. MICHAEL D'ANGELO LANDSCAPE ARCHITECTURE LLC IS NOT RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF EXISTING CONDITIONS AND SURVEY INFORMATION.
10. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE INDICATED.
11. ALL LINE AND GRADE WORK AS PER DRAWINGS AND SPECIFICATIONS SHALL BE LAID OUT BY A REGISTERED CIVIL ENGINEER OR LAND SURVEYOR.
12. DIMENSIONS ARE APPROXIMATE BASED ON TAKE OFF FROM SURVEY. ACTUAL DIMENSIONS MAY VARY. NOTIFY THE OWNER'S REPRESENTATIVE AND LA IN THE EVENT OF DIMENSIONAL DISCREPANCIES.
13. CONTRACTOR TO STAKE OUT LAYOUT FOR APPROVAL PRIOR TO EXCAVATION.
14. CONTRACTOR SHALL PREPARE SAMPLE PANELS FOR EACH PAVING TYPE FOR APPROVAL OF WORKMANSHIP, FINISHES, COLOR, AND JOINTING PRIOR TO FINAL INSTALLATION. SEE SPECIFICATIONS FOR FULL MOCK UP REQUIREMENTS.

MATERIALS LEGEND:

SYMBOL	DESCRIPTION
	PROPERTY LINE
	LIMIT OF WORK
PA	PLANTING AREA
AD / TD	AREA DRAIN / TRENCH DRAIN
	CONCRETE PAVEMENT
	PERMEABLE CONCRETE PAVERS
	STONE SURFACING
	STONE DUST POND PATH
	REINFORCED TURF
BL1	LIGHT BOLLARD
	LIGHT POLE
	EXISTING TREELINE TO REMAIN

NOTE: CONTRACTOR IS RESPONSIBLE FOR DETERMINING SLEEVE LOCATIONS AND DISCUSS WITH LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

MDLA
MICHAEL D'ANGELO landscape architecture

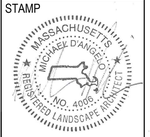
MICHAEL D'ANGELO
LANDSCAPE ARCHITECTURE LLC

840 SUMMER STREET
SUITE 201A
BOSTON, MA 02127
t. 203.592.4788
www.m-d-l-a.com

CLIENT
BERKELEY PARTNERS
1 WASHINGTON MALL, SUITE 701
BOSTON, MA

PROJECT
WAREHOUSE / INDUSTRIAL DEV.
100 / 200 FINANCIAL PARK
FRANKLIN, MA

STAMP



REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

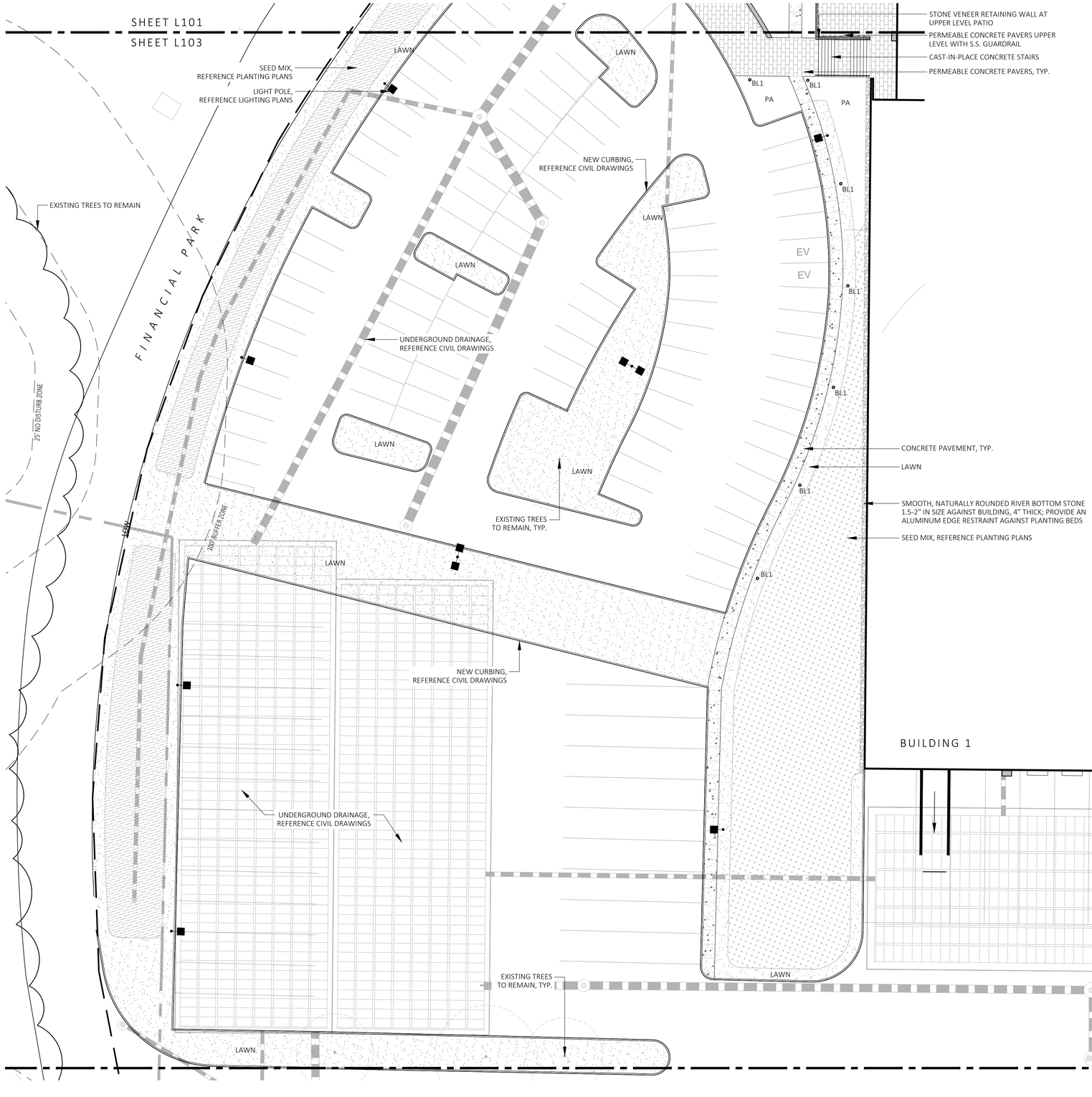
MATERIALS PLAN

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L102

SHEET 03 OF 24

plot date: 8/25/2023



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SCALE: 1" = 20'-0"

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SCALE IN FEET

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	CONCRETE PAVEMENT
	PERMEABLE CONCRETE PAVERS
	STONE SURFACING
	STONE DUST POND PATH
	REINFORCED TURF
BL1	LIGHT BOLLARD
	LIGHT POLE
	EXISTING TREELINE TO REMAIN

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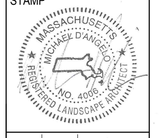

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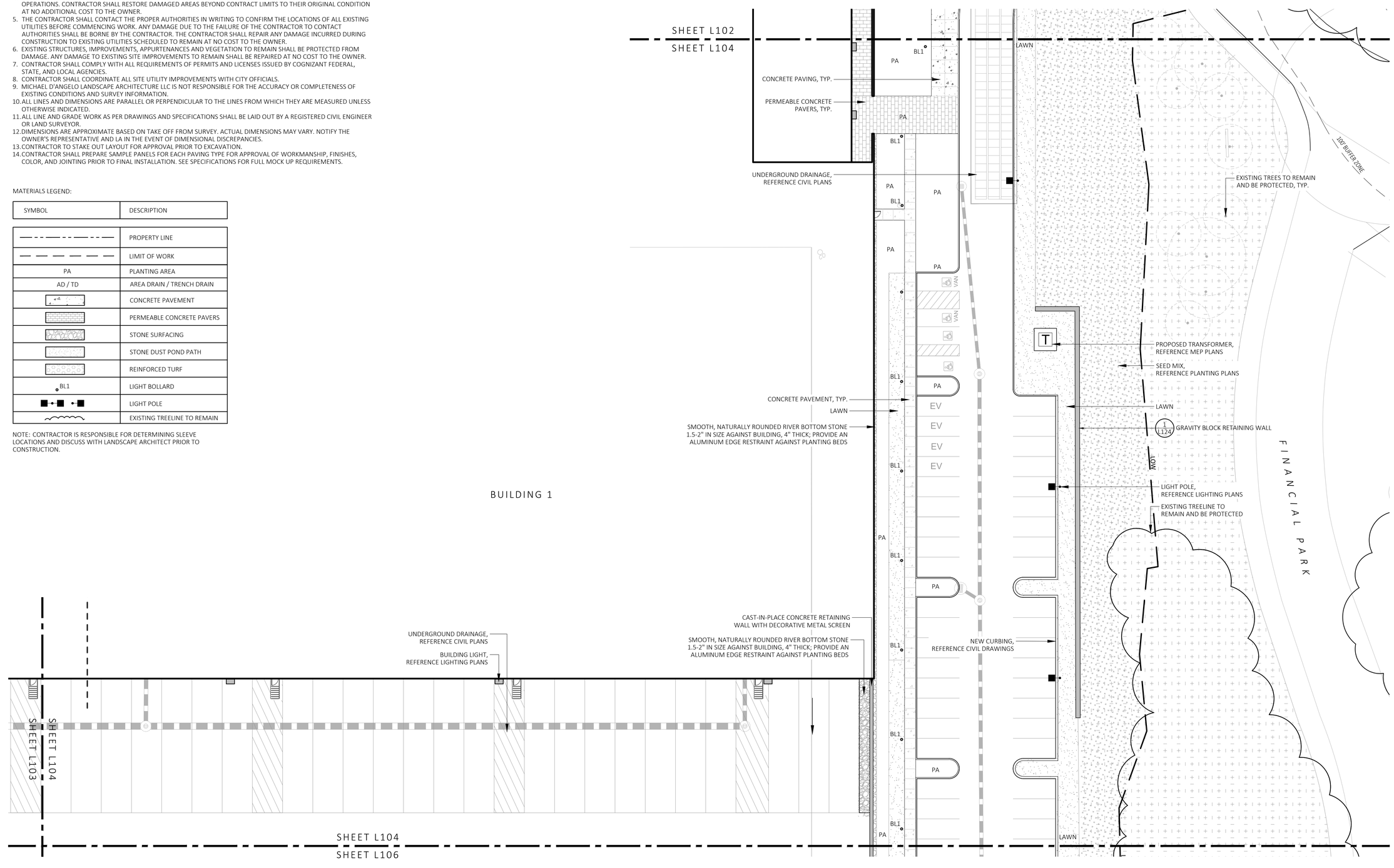

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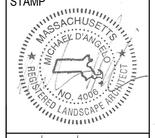

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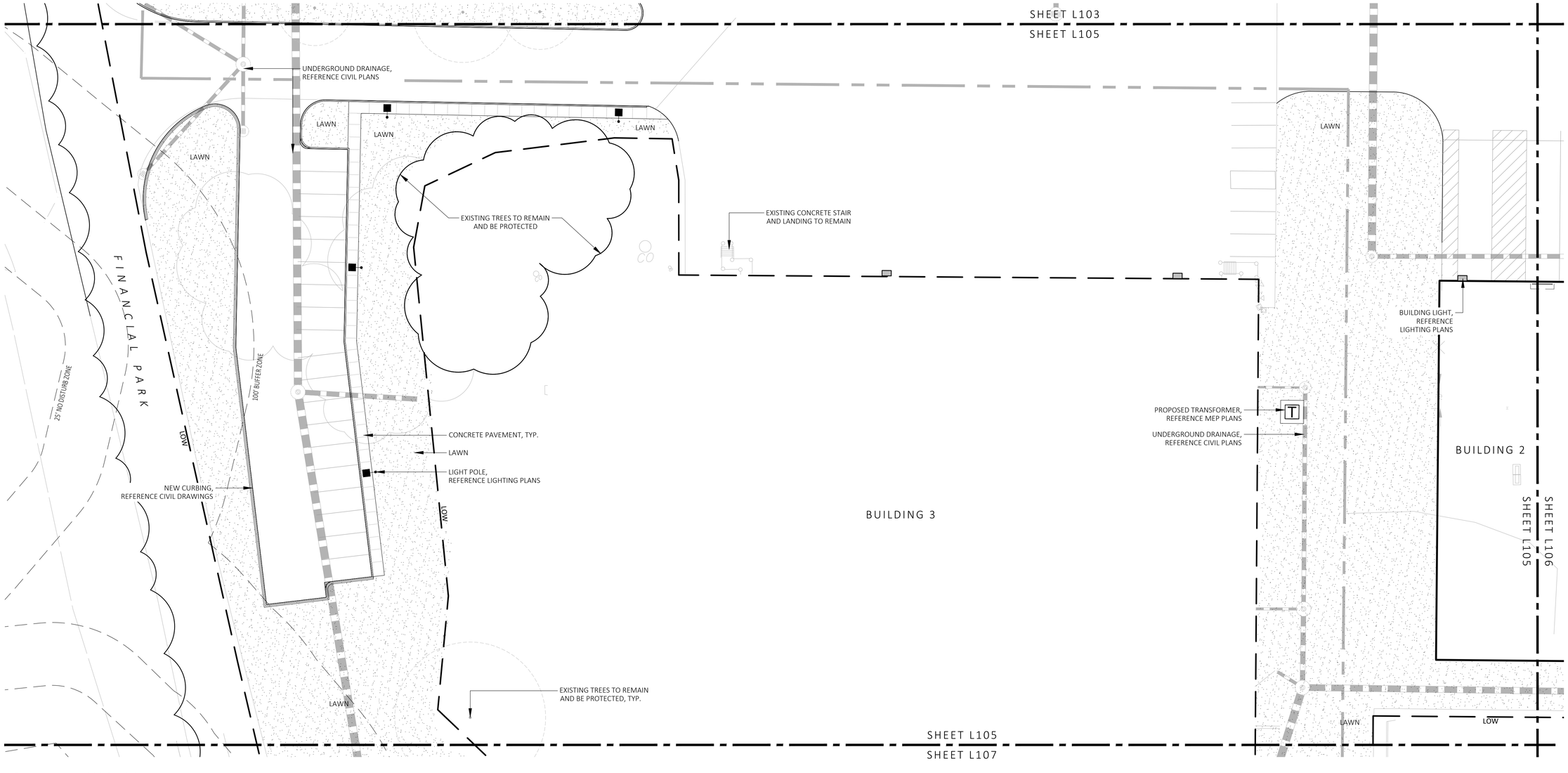

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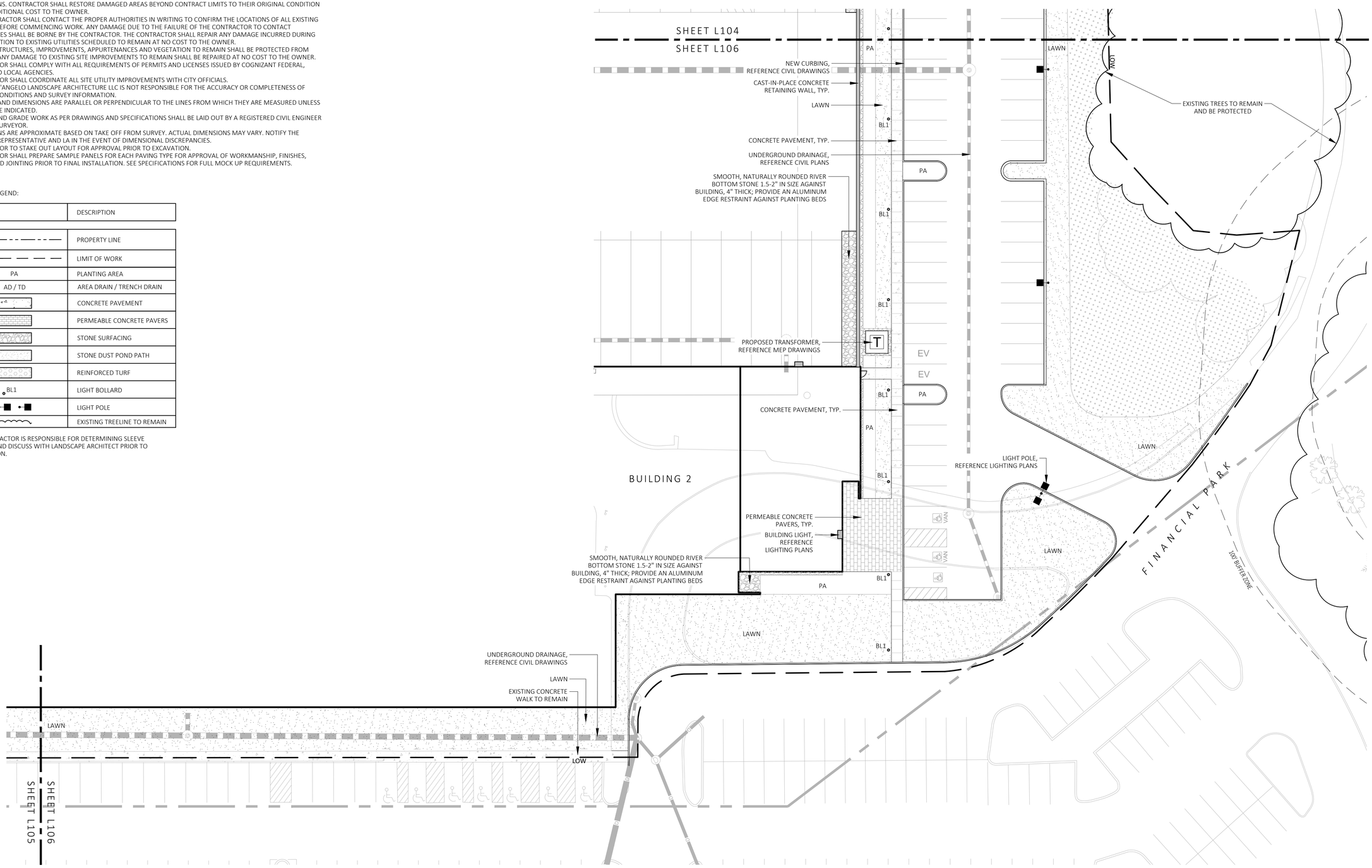

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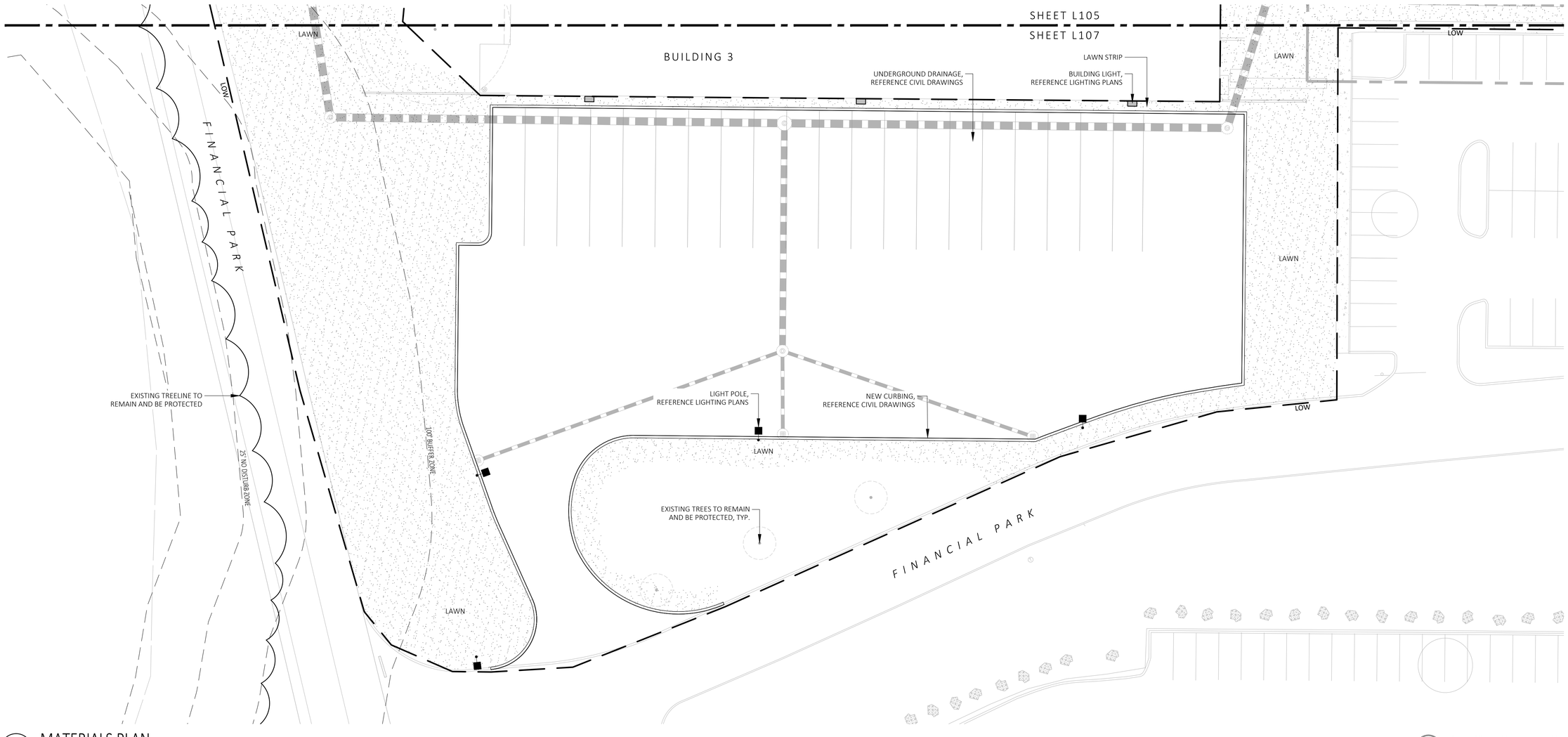

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BIORETENTION PLANT SCHEDULE				
SYMBOL	QTY.	LATIN NAME	COMMON NAME	NOTES
TREES				
NS	2	NYSSA SYLVATICA	BLACK GUM	TREE, SUN, MESIC-HYDRIC
QB	2	QUERCUS BICOLOR	SWAMP WHITE OAK	TREE, SUN/PARTIAL SUN, MESIC TO WET MESIC
QP	3	QUERCUS PALUSTRIS	PIN OAK	TREE, SUN, MESIC-HYDRIC
SHRUBS				
CA		CLETHRA ALNIFOLIA	SWEET PEPPERBUSH	SHRUB, SUN/PARTIAL SUN, MESIC TO WET MESIC
CS		CORNUS SERICEA	RED OSIER DOGWOOD	SHRUB, SUN/SHADE, MESIC-HYDRIC
IG		ILEX GLABRA	INKBERRY	SHRUB, SUN/PARTIAL SUN, MESIC TO WET MESIC
IV		ILEX VERTICILLATA	WINTERBERRY	SHRUB, SUN/PARTIAL SUN, MESIC TO WET MESIC
LB		LINDERA BENZOIN	SPICEBUSH	SHRUB, SUN, MESIC TO WET MESIC
VD		VIBURNUM DENTATUM	ARROWWOOD	SHRUB, SUN, MESIC TO WET MESIC
GRASSES				
AG		ANDROPOGON VIRGINICUS	BROOMSEDGE	GRASS, FULL SUN, WET MEADOW
DC		DESCHAMPSIA CESPITOSA	TUFTED HAIRGRASS	GRASS, SUN, MESIC TO WET MESIC
HH		HEDERA HELIX	ENGLISH IVY	EVERGREEN GROUNDCOVER, SUN, MESIC
LC		LOTUS CORNICULATUS	BIRD'S-FOOT TREFOIL	GRASS, SUN, MESIC-XERIC
PV		PANICUM VIRGATUM	SWITCH GRASS	GRASS, SUN/SHADE, MESIC
RL		RUDBECKIA LACINIATA	GREEN-HEADED CONEFLOWER	GRASS, SUN/SHADE
SS		SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	GRASS, SUN/SHADE

ALL PROPOSED PLANTINGS FROM VOLUME 2, CHAPTER 2: STRUCTURAL BMP SPECIFICATIONS FOR THE MASSACHUSETTS STORMWATER HANDBOOK - PLANT SPECIES SUITABLE FOR USE IN BIORETENTION - HERBACEOUS SPECIES

PLANTING:

1. DURING CONSTRUCTION, PROTECT ALL EXISTING SITE FEATURES, STRUCTURES AND UTILITIES.
2. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY SPECIFIED AND NURSERY GROWN IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. SUBSTITUTIONS WILL BE PERMITTED ONLY IF APPROVED BY THE LANDSCAPE ARCHITECT.
3. LANDSCAPE ARCHITECT APPROVAL IS REQUIRED BEFORE PLANT MATERIAL IS PURCHASED. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO SEE ALL MATERIAL IN PERSON AT THE NURSERY. IF TRAVEL OUTSIDE OF MA IS REQUIRED, LANDSCAPE ARCHITECT'S TRAVEL COSTS SHALL BE PAID FOR BY THE CONTRACTOR.
4. ALL EXPOSED BURLAP, WIRE BASKETS AND OTHER MATERIALS ATTACHED TO PLANTS SHALL BE REMOVED PRIOR TO PLANTING. CARE SHALL BE TAKEN NOT TO DISTURB THE ROOT BALL OF PLANTS.
5. THOROUGHLY WATER ALL PLANTS IMMEDIATELY AFTER PLANTING.
6. WHERE DISCREPANCIES IN QUANTITIES OCCUR, DRAWINGS SUPERCEDE PLANT NOTES AND SCHEDULE.
7. TRANSPLANTING SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK.
8. LOAM USED IN PLANT BEDS SHALL BE UNIFORM IN COMPOSITION, FREE FROM SUBSOIL, STONES LARGER THAN 1", NOXIOUS SEEDS AND SUITABLE FOR THE SUPPORT OF VEGETATIVE GROWTH. THE pH VALUE SHALL BE BETWEEN 5.5 AND 6.5.
9. MULCH IN TREE AND SHRUB BEDS SHALL BE NATURAL, NATIVE HEMLOCK MULCH FREE OF GROWTH OR GERMINATION INHIBITING INGREDIENTS. SUBMIT SAMPLES FOR APPROVAL.
10. LOCATIONS FOR PLANTS AND/OR OUTLINE OF AREAS TO BE PLANTED ARE TO BE STAKED OUT AT THE SITE FOR APPROVAL BY THE LANDSCAPE ARCHITECT.
11. SOIL DEPTHS: a.) SHRUBS AND PERENNIAL BEDS: 18" MIN.; b.) GROUNDCOVER: 6" MIN.; c.) TREES: SEE DETAIL; d.) SOD/SEED: 6"MIN.
12. PROVIDE A SUBSURFACE ROOTBALL ANCHOR BY PLATIPUS EARTH ANCHORS, SIZE FOR CALIPER

GENERAL IRRIGATION NOTES:

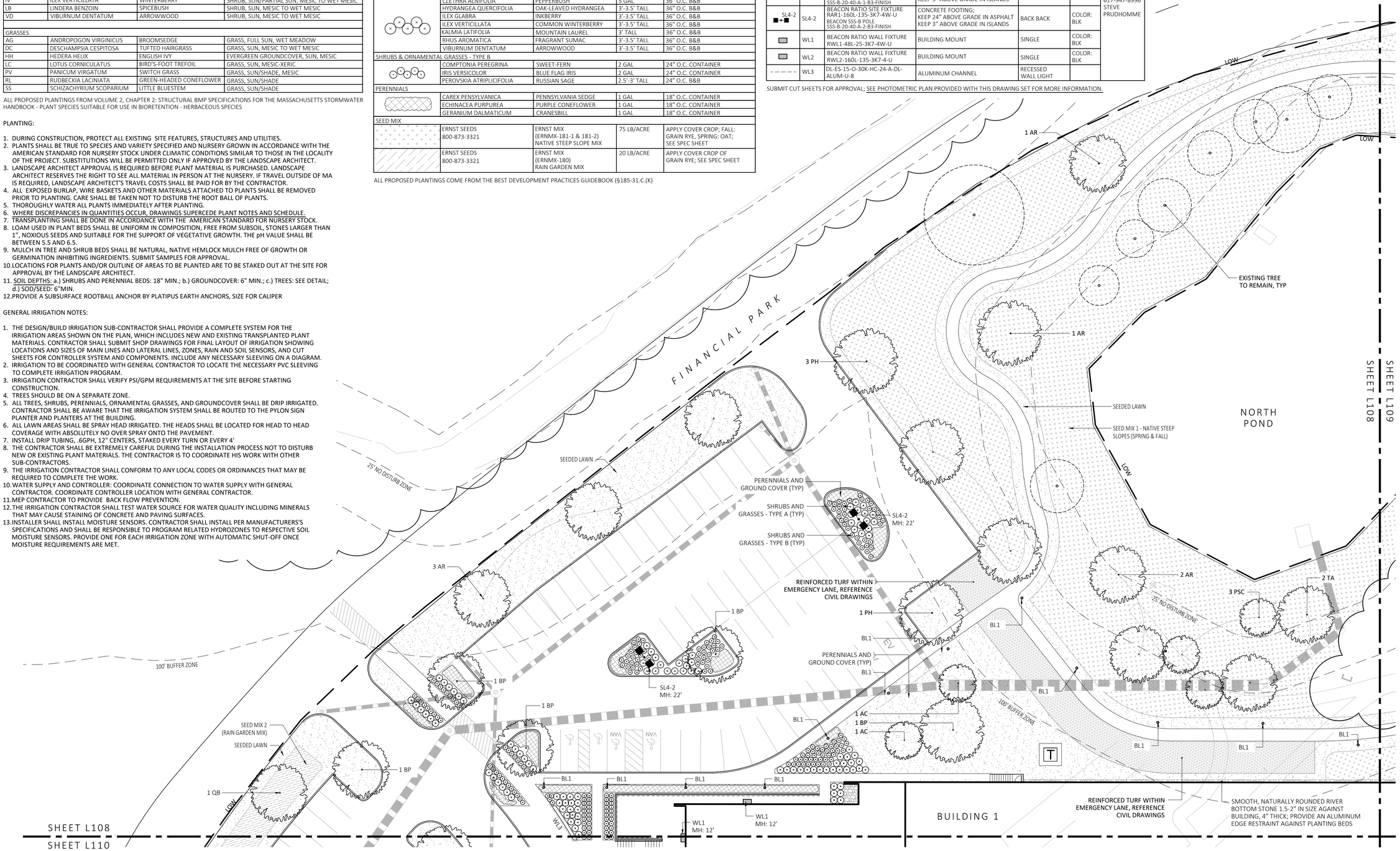
1. THE DESIGN/BUILD IRRIGATION SUB-CONTRACTOR SHALL PROVIDE A COMPLETE SYSTEM FOR THE IRRIGATION AREAS SHOWN ON THE PLAN, WHICH INCLUDES NEW AND EXISTING TRANSPLANTED PLANT MATERIALS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR FINAL LAYOUT OF IRRIGATION SHOWING LOCATIONS AND SIZES OF MAIN LINES AND LATERAL LINES, ZONES, RAIN AND SOIL SENSORS, AND CUT SHEETS FOR CONTROLLER SYSTEM AND COMPONENTS. INCLUDE ANY NECESSARY SLEEVING ON A DIAGRAM.
2. IRRIGATION TO BE COORDINATED WITH GENERAL CONTRACTOR TO LOCATE THE NECESSARY PVC SLEEVING TO COMPLETE IRRIGATION PROGRAM.
3. IRRIGATION CONTRACTOR SHALL VERIFY PSI/GPM REQUIREMENTS AT THE SITE BEFORE STARTING CONSTRUCTION.
4. TREES SHOULD BE ON A SEPARATE ZONE.
5. ALL TREES, SHRUBS, PERENNIALS, ORNAMENTAL GRASSES, AND GROUNDCOVER SHALL BE DRIP IRRIGATED. CONTRACTOR SHALL BE AWARE THAT THE IRRIGATION SYSTEM SHALL BE ROUTED TO THE PYLON SIGN PLANTER AND PLANTERS AT THE BUILDING.
6. ALL LAWN AREAS SHALL BE SPRAY HEAD IRRIGATED. THE HEADS SHALL BE LOCATED FOR HEAD TO HEAD COVERAGE WITH ABSOLUTELY NO OVER SPRAY ONTO THE PAVEMENT.
7. INSTALL DRIP TUBING, .6GPH, 12" CENTERS, STAKED EVERY TURN OR EVERY 4'
8. THE CONTRACTOR SHALL BE EXTREMELY CAREFUL DURING THE INSTALLATION PROCESS NOT TO DISTURB NEW OR EXISTING PLANT MATERIALS. THE CONTRACTOR IS TO COORDINATE HIS WORK WITH OTHER SUB-CONTRACTORS.
9. THE IRRIGATION CONTRACTOR SHALL CONFORM TO ANY LOCAL CODES OR ORDINANCES THAT MAY BE REQUIRED TO COMPLETE THE WORK.
10. WATER SUPPLY AND CONTROLLER: COORDINATE CONNECTION TO WATER SUPPLY WITH GENERAL CONTRACTOR. COORDINATE CONTROLLER LOCATION WITH GENERAL CONTRACTOR.
11. MEP CONTRACTOR TO PROVIDE BACK FLOW PREVENTION.
12. THE IRRIGATION CONTRACTOR SHALL TEST WATER SOURCE FOR WATER QUALITY INCLUDING MINERALS THAT MAY CAUSE STAINING OF CONCRETE AND PAVING SURFACES.
13. INSTALLER SHALL INSTALL MOISTURE SENSORS. CONTRACTOR SHALL INSTALL PER MANUFACTURERS'S SPECIFICATIONS AND SHALL BE RESPONSIBLE TO PROGRAM RELATED HYDROZONES TO RESPECTIVE SOIL MOISTURE SENSORS. PROVIDE ONE FOR EACH IRRIGATION ZONE WITH AUTOMATIC SHUT-OFF ONCE MOISTURE REQUIREMENTS ARE MET.

PLANT SCHEDULE					
SYMBOL	QTY.	LATIN NAME	COMMON NAME	SIZE	NOTES
TREES					
AR	24	ACER RUBRUM	RED MAPLE	3"-3.5" CAL.	B&B, 6' CLEAR BRANCHING
AC	5	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	8-10' HT	B&B, MULTI-STEM
BP	10	BETULA POPULIFOLIA	GRAY BIRCH	3"-3.5" CAL.	B&B, MULTI-STEM
PS	10	PINUS STROBUS	EASTERN WHITE PINE	3"-3.5" CAL.	B&B, 6' CLEAR BRANCHING
PSC	17	PRUNUS SEROTINA	BLACK CHERRY	3"-3.5" CAL.	B&B, 6' CLEAR BRANCHING
PH	16	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	3"-3.5" CAL.	B&B, 6' CLEAR BRANCHING
TA	16	TILIA AMERICANA	BASSWOOD	3"-3.5" CAL.	B&B, 6' CLEAR BRANCHING
SHRUBS & ORNAMENTAL GRASSES - TYPE A					
		CLETHRA ALNIFOLIA	PEPPERBUSH	5 GAL	36" O.C. B&B
		HYDRANGEA QUERCIFOLIA	OAK-LEAVED HYDRANGEA	3'-3.5' TALL	36" O.C. B&B
		ILEX GLABRA	INKBERRY	3'-3.5' TALL	36" O.C. B&B
		ILEX VERTICILLATA	COMMON WINTERBERRY	3'-3.5' TALL	36" O.C. B&B
		KALMIA LATIFOLIA	MOUNTAIN LAUREL	3' TALL	36" O.C. B&B
		RHUS AROMATICA	FRAGRANT SUMAC	3'-3.5' TALL	36" O.C. B&B
		VIBURNUM DENTATUM	ARROWWOOD	3'-3.5' TALL	36" O.C. B&B
SHRUBS & ORNAMENTAL GRASSES - TYPE B					
		COMPTONIA PEREGRINA	SWEET-FERN	2 GAL	24" O.C. CONTAINER
		IRIS VERSICOLOR	BLUE FLAG IRIS	2 GAL	24" O.C. CONTAINER
		PEROVSKIA ATRIPLICIFOLIA	RUSSIAN SAGE	2.5'-3' TALL	24" O.C. B&B
PERENNIALS					
		CAREX PENSYLVANICA	PENNSYLVANIA SEDGE	1 GAL	18" O.C. CONTAINER
		ECHINACEA PURPUREA	PURPLE CONEFLOWER	1 GAL	18" O.C. CONTAINER
		GERANIUM DALMATICUM	CRANESBILL	1 GAL	18" O.C. CONTAINER
SEED MIX					
		ERNST SEEDS 800-873-3321	ERNST MIX (ERNMX-181-1 & 181-2) NATIVE STEEP SLOPE MIX	75 LB/ACRE	APPLY COVER CROP; FALL: GRAIN RYE, SPRING: OAT; SEE SPEC SHEET
		ERNST SEEDS 800-873-3321	ERNST MIX (ERNMX-180) RAIN GARDEN MIX	20 LB/ACRE	APPLY COVER CROP OF GRAIN RYE; SEE SPEC SHEET

ALL PROPOSED PLANTINGS COME FROM THE BEST DEVELOPMENT PRACTICES GUIDEBOOK (§185-31.C.(K)

LIGHT SCHEDULE						
SYMBOL	LABEL	MODEL	MOUNT	ARRANGEMENT	OPTIONS	REP
	BL1	ARCLUCE KLOU180 BOLLARD RWL1-48L-25-3K7-4W-U	CONCRETE FOOTING; KEEP 3" ABOVE GRADE	PEDESTRIAN BOLLARD	COLOR: GRAY	ILLUMINATE 617-947-8996 STEVE PRUDHOMME
SL3	SL3	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-3-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4	SL4	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4-2	SL4-2	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-2-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	BACK BACK	COLOR: BLK	
	WL1	BEACON RATIO WALL FIXTURE RWL1-48L-25-3K7-4W-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL2	BEACON RATIO WALL FIXTURE RWL2-160L-135-3K7-4-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL3	DL-ES-15-O-30K-HC-24-A-DL-ALUM-U-8	ALUMINUM CHANNEL	RECESSED WALL LIGHT		

SUBMIT CUT SHEETS FOR APPROVAL; SEE PHOTOMETRIC PLAN PROVIDED WITH THIS DRAWING SET FOR MORE INFORMATION.



1 PLANTING & LIGTHING PLAN
SCALE: 1" = 20'-0"

0 10 20 40
SCALE IN FEET

FOR PERMIT ONLY
NOT FOR CONSTRUCTION

MDLA
MICHAEL D'ANGELO landscape architecture

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WAREHOUSE / INDUSTRIAL DEV.
100 / 200 FINANCIAL PARK
FRANKLIN, MA

STAMP
MASSACHUSETTS
MICHAEL D'ANGELO
NO. 4095
REGISTERED LANDSCAPE ARCHITECT

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

PLANTING & LIGHTING PLAN

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L108

SHEET 9 OF 24

plot date: 8/25/2023

FOR PERMIT ONLY
NOT FOR CONSTRUCTION

LIGHT SCHEDULE						
SYMBOL	LABEL	MODEL	MOUNT	ARRANGEMENT	OPTIONS	REP
○	BL1	ARCLUCE KLOU180 BOLLARD RWL1-48L-25-3K7-4W-U	CONCRETE FOOTING; KEEP 3" ABOVE GRADE	PEDESTRIAN BOLLARD	COLOR: GRAY	ILLUMINATE 617-947-8996 STEVE PRUDHOMME
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SL4	SL4	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4-2	SL4-2	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-2-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	BACK BACK	COLOR: BLK	
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- - -	WL3	DL-ES-15-O-30K-HC-24-A-DL-ALUM-U-8	ALUMINUM CHANNEL	RECESSED WALL LIGHT		

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PLANT SCHEDULE					
SYMBOL	QTY.	LATIN NAME	COMMON NAME	SIZE	NOTES
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ALL PROPOSED PLANTINGS COME FROM THE BEST DEVELOPMENT PRACTICES GUIDEBOOK (§185-31.C.(K)

PLANTING:

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1 PLANTING & LIGTHING PLAN
SCALE: 1" = 20'-0"

0 10 20 40
SCALE IN FEET

MDLA
MICHAEL D'ANGELO landscape architecture

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LANDSCAPE ARCHITECTURE LLC
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PROJECT
WAREHOUSE / INDUSTRIAL DEV.
100 / 200 FINANCIAL PARK
FRANKLIN, MA

STAMP
MASSACHUSETTS
MICHAEL D'ANGELO
NO. 4008
REGISTERED LANDSCAPE ARCHITECT

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

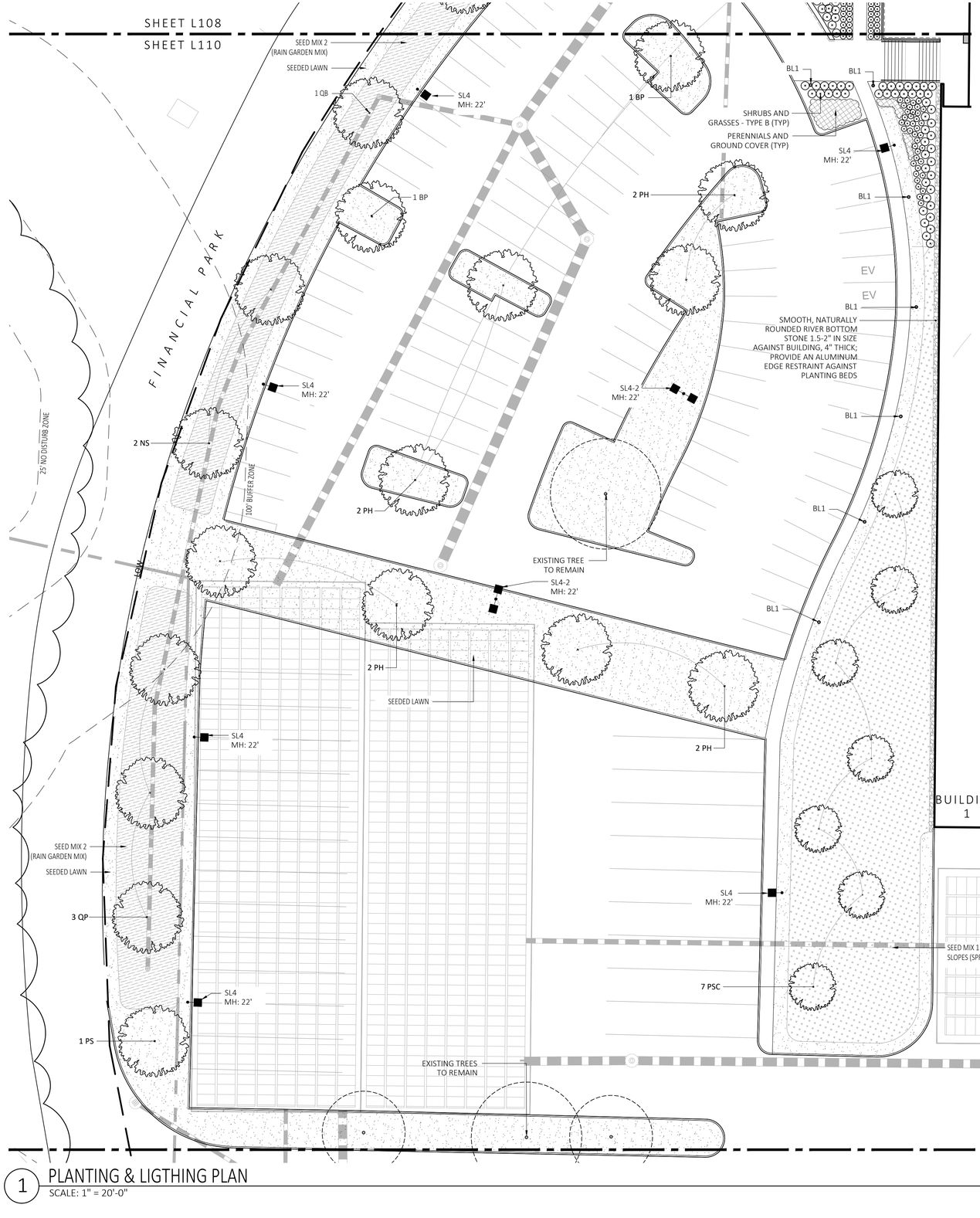
PLANTING & LIGHTING PLAN

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L109

SHEET 10 OF 24

plot date: 8/25/2023



1 PLANTING & LIGTHING PLAN
SCALE: 1" = 20'-0"

SCALE IN FEET: 0 10 20 40

PLANT SCHEDULE

SYMBOL	QTY.	LATIN NAME	COMMON NAME	SIZE	NOTES
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SHRUBS & ORNAMENTAL GRASSES - TYPE A					
		CLETHRA ALNIFOLIA	PEPPERBUSH	5 GAL	36" O.C. B&B
		HYDRANGEA QUERCIFOLIA	OAK-LEAVED HYDRANGEA	3'-3.5' TALL	36" O.C. B&B
		ILEX GLABRA	INKBERRY	3'-3.5' TALL	36" O.C. B&B
		ILEX VERTICILLATA	COMMON WINTERBERRY	3'-3.5' TALL	36" O.C. B&B
		KALMIA LATIFOLIA	MOUNTAIN LAUREL	3' TALL	36" O.C. B&B
		RHUS AROMATICA	FRAGRANT SUMAC	3'-3.5' TALL	36" O.C. B&B
		VIBURNUM DENTATUM	ARROWWOOD	3'-3.5' TALL	36" O.C. B&B
SHRUBS & ORNAMENTAL GRASSES - TYPE B					
		COMPTONIA PEREGRINA	SWEET-FERN	2 GAL	24" O.C. CONTAINER
		IRIS VERSICOLOR	BLUE FLAG IRIS	2 GAL	24" O.C. CONTAINER
		PEROVSKIA ATRIPLICIFOLIA	RUSSIAN SAGE	2.5'-3' TALL	24" O.C. B&B
PERENNIALS					
		CAREX PENSYLVANICA	PENNSYLVANIA SEDGE	1 GAL	18" O.C. CONTAINER
		ECHINACEA PURPUREA	PURPLE CONEFLOWER	1 GAL	18" O.C. CONTAINER
		GERANIUM DALMATICUM	CRANESBILL	1 GAL	18" O.C. CONTAINER
SEED MIX					
		ERNST SEEDS 800-873-3321	ERNST MIX (ERNMX-181-1 & 181-2) NATIVE STEEP SLOPE MIX	75 LB/ACRE	APPLY COVER CROP; FALL: GRAIN RYE, SPRING: OAT; SEE SPEC SHEET
		ERNST SEEDS 800-873-3321	ERNST MIX (ERNMX-180) RAIN GARDEN MIX	20 LB/ACRE	APPLY COVER CROP OF GRAIN RYE; SEE SPEC SHEET

ALL PROPOSED PLANTINGS COME FROM THE BEST DEVELOPMENT PRACTICES GUIDEBOOK (§185-31.C.(K)

BIORETENTION PLANT SCHEDULE

SYMBOL	QTY.	LATIN NAME	COMMON NAME	NOTES
TREES				
NS	2	NYSSA SYLVATICA	BLACK GUM	TREE, SUN, MESIC-HYDRIC
QB	2	QUERCUS BICOLOR	SWAMP WHITE OAK	TREE, SUN/PARTIAL SUN, MESIC TO WET MESIC
QP	3	QUERCUS PALUSTRIS	PIN OAK	TREE, SUN, MESIC-HYDRIC
SHRUBS				
CA		CLETHRA ALNIFOLIA	SWEET PEPPERBUSH	SHRUB, SUN/PARTIAL SUN, MESIC TO WET MESIC
CS		CORNUS SERICEA	RED OSIER DOGWOOD	SHRUB, SUN/SHADE, MESIC-HYDRIC
IG		ILEX GLABRA	INKBERRY	SHRUB, SUN/PARTIAL SUN, MESIC TO WET MESIC
IV		ILEX VERTICILLATA	WINTERBERRY	SHRUB, SUN/PARTIAL SUN, MESIC TO WET MESIC
LB		LINDERA BENZOIN	SPICEBUSH	SHRUB, SUN, MESIC TO WET MESIC
VD		VIBURNUM DENTATUM	ARROWWOOD	SHRUB, SUN, MESIC TO WET MESIC
GRASSES				
AG		ANDROPOGON VIRGINICUS	BROOMSEDGE	GRASS, FULL SUN, WET MEADOW
DC		DESCHAMPSIA CESPITOSA	TUFTED HAIRGRASS	GRASS, SUN, MESIC TO WET MESIC
HH		HEDERA HELIX	ENGLISH IVY	EVERGREEN GROUNDCOVER, SUN, MESIC
LC		LOTUS CORNICULATUS	BIRD'S-FOOT TREFOIL	GRASS, SUN, MESIC-XERIC
PV		PANICUM VIRGATUM	SWITCH GRASS	GRASS, SUN/SHADE, MESIC
RL		RUDBECKIA LACINIATA	GREEN-HEADED CONEFLOWER	GRASS, SUN/SHADE
SS		SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	GRASS, SUN/SHADE

ALL PROPOSED PLANTINGS FROM VOLUME 2, CHAPTER 2: STRUCTURAL BMP SPECIFICATIONS FOR THE MASSACHUSETTS STORMWATER HANDBOOK - PLANT SPECIES SUITABLE FOR USE IN BIORETENTION - HERBACEOUS SPECIES

LIGHT SCHEDULE

SYMBOL	LABEL	MODEL	MOUNT	ARRANGEMENT	OPTIONS	REP
	BL1	ARCLUCE KLOU180 BOLLARD RWL1-48L-25-3K7-4W-U	CONCRETE FOOTING; KEEP 3" ABOVE GRADE	PEDESTRIAN BOLLARD	COLOR: GRAY	ILLUMINATE 617-947-8996 STEVE PRUDHOMME
SL3	SL3	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-3-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4	SL4	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4-2	SL4-2	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-2-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	BACK BACK	COLOR: BLK	
	WL1	BEACON RATIO WALL FIXTURE RWL1-48L-25-3K7-4W-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL2	BEACON RATIO WALL FIXTURE RWL2-160L-135-3K7-4-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL3	DL-ES-15-O-30K-HC-24-A-DL- ALUM-U-8	ALUMINUM CHANNEL	RECESSED WALL LIGHT		

SUBMIT CUT SHEETS FOR APPROVAL; SEE PHOTOMETRIC PLAN PROVIDED WITH THIS DRAWING SET FOR MORE INFORMATION.

FOR PERMIT ONLY
NOT FOR CONSTRUCTION

PLANTING:

1. DURING CONSTRUCTION, PROTECT ALL EXISTING SITE FEATURES, STRUCTURES AND UTILITIES.
2. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY SPECIFIED AND NURSERY GROWN IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. SUBSTITUTIONS WILL BE PERMITTED ONLY IF APPROVED BY THE LANDSCAPE ARCHITECT.
3. LANDSCAPE ARCHITECT APPROVAL IS REQUIRED BEFORE PLANT MATERIAL IS PURCHASED. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO SEE ALL MATERIAL IN PERSON AT THE NURSERY. IF TRAVEL OUTSIDE OF MA IS REQUIRED, LANDSCAPE ARCHITECT'S TRAVEL COSTS SHALL BE PAID FOR BY THE CONTRACTOR.
4. ALL EXPOSED BURLAP, WIRE BASKETS AND OTHER MATERIALS ATTACHED TO PLANTS SHALL BE REMOVED PRIOR TO PLANTING. CARE SHALL BE TAKEN NOT TO DISTURB THE ROOT BALL OF PLANTS.
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6. WHERE DISCREPANCIES IN QUANTITIES OCCUR, DRAWINGS SUPERCEDE PLANT NOTES AND SCHEDULE.
7. TRANSPLANTING SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK.
8. LOAM USED IN PLANT BEDS SHALL BE UNIFORM IN COMPOSITION, FREE FROM SUBSOIL, STONES LARGER THAN 1", NOXIOUS SEEDS AND SUITABLE FOR THE SUPPORT OF VEGETATIVE GROWTH. THE pH VALUE SHALL BE BETWEEN 5.5 AND 6.5.
9. MULCH IN TREE AND SHRUB BEDS SHALL BE NATURAL, NATIVE HEMLOCK MULCH FREE OF GROWTH OR GERMINATION INHIBITING INGREDIENTS. SUBMIT SAMPLES FOR APPROVAL.
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11. SOIL DEPTHS: a.) SHRUBS AND PERENNIAL BEDS: 18" MIN.; b.) GROUNDCOVER: 6" MIN.; c.) TREES: SEE DETAIL; d.) SOD/SEED: 6"MIN.
12. PROVIDE A SUBSURFACE ROOTBALL ANCHOR BY PLATIPUS EARTH ANCHORS, SIZE FOR CALIPER

GENERAL IRRIGATION NOTES:

1. THE DESIGN/BUILD IRRIGATION SUB-CONTRACTOR SHALL PROVIDE A COMPLETE SYSTEM FOR THE IRRIGATION AREAS SHOWN ON THE PLAN, WHICH INCLUDES NEW AND EXISTING TRANSPLANTED PLANT MATERIALS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR FINAL LAYOUT OF IRRIGATION SHOWING LOCATIONS AND SIZES OF MAIN LINES AND LATERAL LINES, ZONES, RAIN AND SOIL SENSORS, AND CUT SHEETS FOR CONTROLLER SYSTEM AND COMPONENTS. INCLUDE ANY NECESSARY SLEEVING ON A DIAGRAM.
2. IRRIGATION TO BE COORDINATED WITH GENERAL CONTRACTOR TO LOCATE THE NECESSARY PVC SLEEVING TO COMPLETE IRRIGATION PROGRAM.
3. IRRIGATION CONTRACTOR SHALL VERIFY PSI/GPM REQUIREMENTS AT THE SITE BEFORE STARTING CONSTRUCTION.
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6. ALL LAWN AREAS SHALL BE SPRAY HEAD IRRIGATED. THE HEADS SHALL BE LOCATED FOR HEAD TO HEAD COVERAGE WITH ABSOLUTELY NO OVER SPRAY ONTO THE PAVEMENT.
7. INSTALL DRIP TUBING, .6GPH, 12" CENTERS, STAKED EVERY TURN OR EVERY 4'
8. THE CONTRACTOR SHALL BE EXTREMELY CAREFUL DURING THE INSTALLATION PROCESS NOT TO DISTURB NEW OR EXISTING PLANT MATERIALS. THE CONTRACTOR IS TO COORDINATE HIS WORK WITH OTHER SUB-CONTRACTORS.
9. THE IRRIGATION CONTRACTOR SHALL CONFORM TO ANY LOCAL CODES OR ORDINANCES THAT MAY BE REQUIRED TO COMPLETE THE WORK.
10. WATER SUPPLY AND CONTROLLER: COORDINATE CONNECTION TO WATER SUPPLY WITH GENERAL CONTRACTOR. COORDINATE CONTROLLER LOCATION WITH GENERAL CONTRACTOR.
11. MEP CONTRACTOR TO PROVIDE BACK FLOW PREVENTION.
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100 / 200 FINANCIAL PARK
FRANKLIN, MA

STAMP
MASSACHUSETTS
MICHAEL D'ANGELO
NO. 4006
REGISTERED LANDSCAPE ARCHITECT

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

PLANTING & LIGHTING PLAN

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L110

SHEET 11 OF 24

plot date: 8/25/2023

FOR PERMIT ONLY
NOT FOR CONSTRUCTION

PLANT SCHEDULE					
SYMBOL	QTY.	LATIN NAME	COMMON NAME	SIZE	NOTES
TREES					
AR	24	ACER RUBRUM	RED MAPLE	3"-3.5" CAL.	B&B, 6' CLEAR BRANCHING
AC	5	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	8-10' HT	B&B, MULTI-STEM
BP	10	BETULA POPULIFOLIA	GRAY BIRCH	3"-3.5" CAL.	B&B, MULTI-STEM
PS	10	PINUS STROBUS	EASTERN WHITE PINE	3"-3.5" CAL.	B&B, 6' CLEAR BRANCHING
PSC	17	PRUNUS SEROTINA	BLACK CHERRY	3"-3.5" CAL.	B&B, 6' CLEAR BRANCHING
PH	16	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	3"-3.5" CAL.	B&B, 6' CLEAR BRANCHING
TA	16	TILIA AMERICANA	BASSWOOD	3"-3.5" CAL.	B&B, 6' CLEAR BRANCHING
SHRUBS & ORNAMENTAL GRASSES - TYPE A					
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		HYDRANGEA QUERCIFOLIA	OAK-LEAVED HYDRANGEA	3'-3.5' TALL	36" O.C. B&B
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SHRUBS & ORNAMENTAL GRASSES - TYPE B					
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		IRIS VERSICOLOR	BLUE FLAG IRIS	2 GAL	24" O.C. CONTAINER
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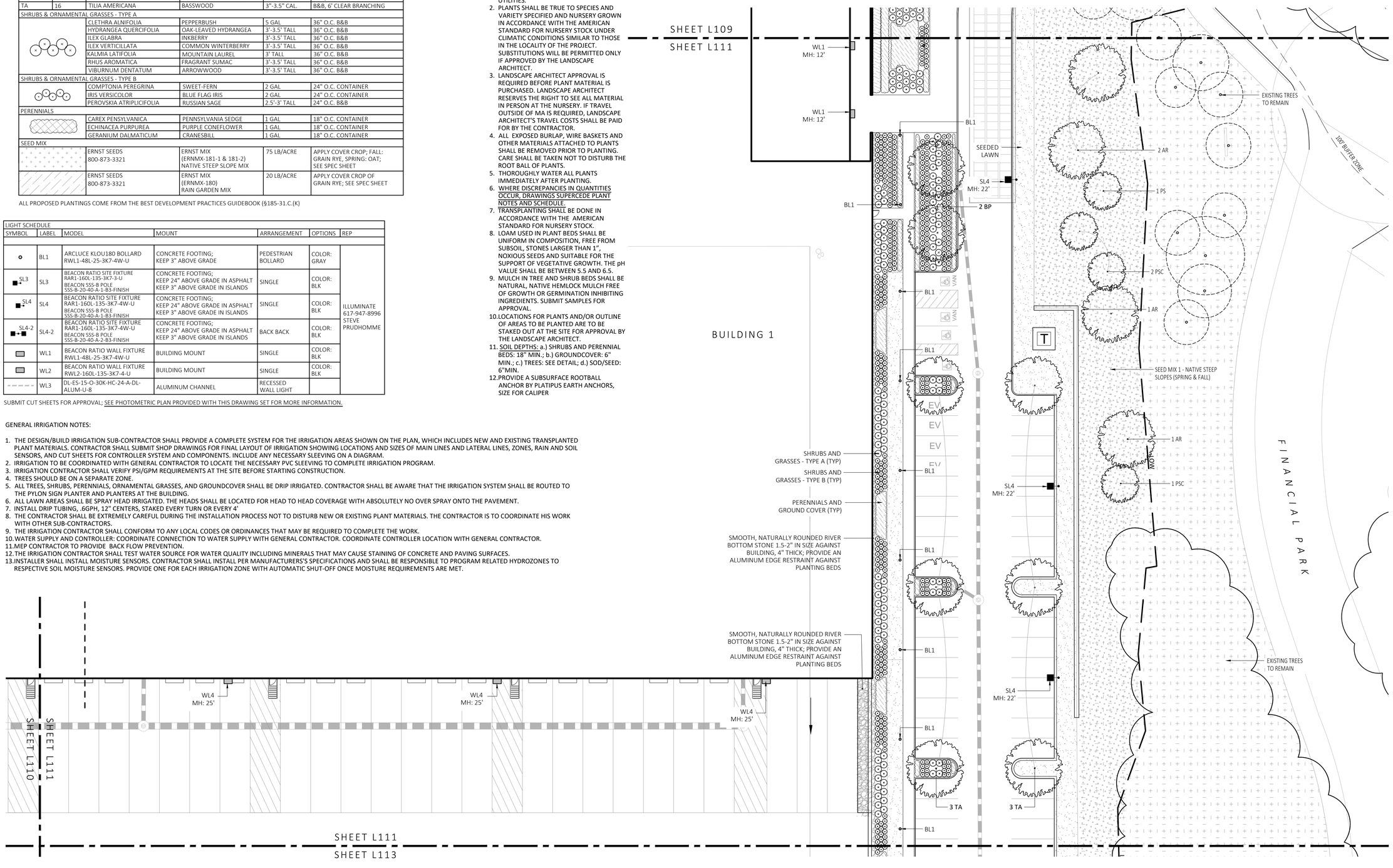
12. PROVIDE A SUBSURFACE ROOTBALL ANCHOR BY PLATIPUS EARTH ANCHORS, SIZE FOR CALIPER



1 PLANTING & LIGTHING PLAN
SCALE: 1" = 20'-0"

0 10 20 40
SCALE IN FEET

MDLA
MICHAEL D'ANGELO landscape architecture

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100 / 200 FINANCIAL PARK
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STAMP
MASSACHUSETTS
MICHAEL D'ANGELO
NO. 4006
REGISTERED LANDSCAPE ARCHITECT

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PLANTING & LIGHTING PLAN

DRAWN: NC
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SCALE: AS NOTED
DATE: 5/11/2023

L111

SHEET 12 OF 24

plot date: 8/25/2023

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2. IRRIGATION TO BE COORDINATED WITH GENERAL CONTRACTOR TO LOCATE THE NECESSARY PVC SLEEVING TO COMPLETE IRRIGATION PROGRAM.
3. IRRIGATION CONTRACTOR SHALL VERIFY PSI/GPM REQUIREMENTS AT THE SITE BEFORE STARTING CONSTRUCTION.
4. TREES SHOULD BE ON A SEPARATE ZONE.
5. ALL TREES, SHRUBS, PERENNIALS, ORNAMENTAL GRASSES, AND GROUNDCOVER SHALL BE DRIP IRRIGATED. CONTRACTOR SHALL BE AWARE THAT THE IRRIGATION SYSTEM SHALL BE ROUTED TO THE PYLON SIGN PLANTER AND PLANTERS AT THE BUILDING.
6. ALL LAWN AREAS SHALL BE SPRAY HEAD IRRIGATED. THE HEADS SHALL BE LOCATED FOR HEAD TO HEAD COVERAGE WITH ABSOLUTELY NO OVER SPRAY ONTO THE PAVEMENT.
7. INSTALL DRIP TUBING, .6GPH, 12" CENTERS, STAKED EVERY TURN OR EVERY 4'
8. THE CONTRACTOR SHALL BE EXTREMELY CAREFUL DURING THE INSTALLATION PROCESS NOT TO DISTURB NEW OR EXISTING PLANT MATERIALS. THE CONTRACTOR IS TO COORDINATE HIS WORK WITH OTHER SUB-CONTRACTORS.
9. THE IRRIGATION CONTRACTOR SHALL CONFORM TO ANY LOCAL CODES OR ORDINANCES THAT MAY BE REQUIRED TO COMPLETE THE WORK.
10. WATER SUPPLY AND CONTROLLER: COORDINATE CONNECTION TO WATER SUPPLY WITH GENERAL CONTRACTOR. COORDINATE CONTROLLER LOCATION WITH GENERAL CONTRACTOR.
11. MEP CONTRACTOR TO PROVIDE BACK FLOW PREVENTION.
12. THE IRRIGATION CONTRACTOR SHALL TEST WATER SOURCE FOR WATER QUALITY INCLUDING MINERALS THAT MAY CAUSE STAINING OF CONCRETE AND PAVING SURFACES.
13. INSTALLER SHALL INSTALL MOISTURE SENSORS. CONTRACTOR SHALL INSTALL PER MANUFACTURERS'S SPECIFICATIONS AND SHALL BE RESPONSIBLE TO PROGRAM RELATED HYDROZONES TO RESPECTIVE SOIL MOISTURE SENSORS. PROVIDE ONE FOR EACH IRRIGATION ZONE WITH AUTOMATIC SHUT-OFF ONCE MOISTURE REQUIREMENTS ARE MET.

PLANT SCHEDULE

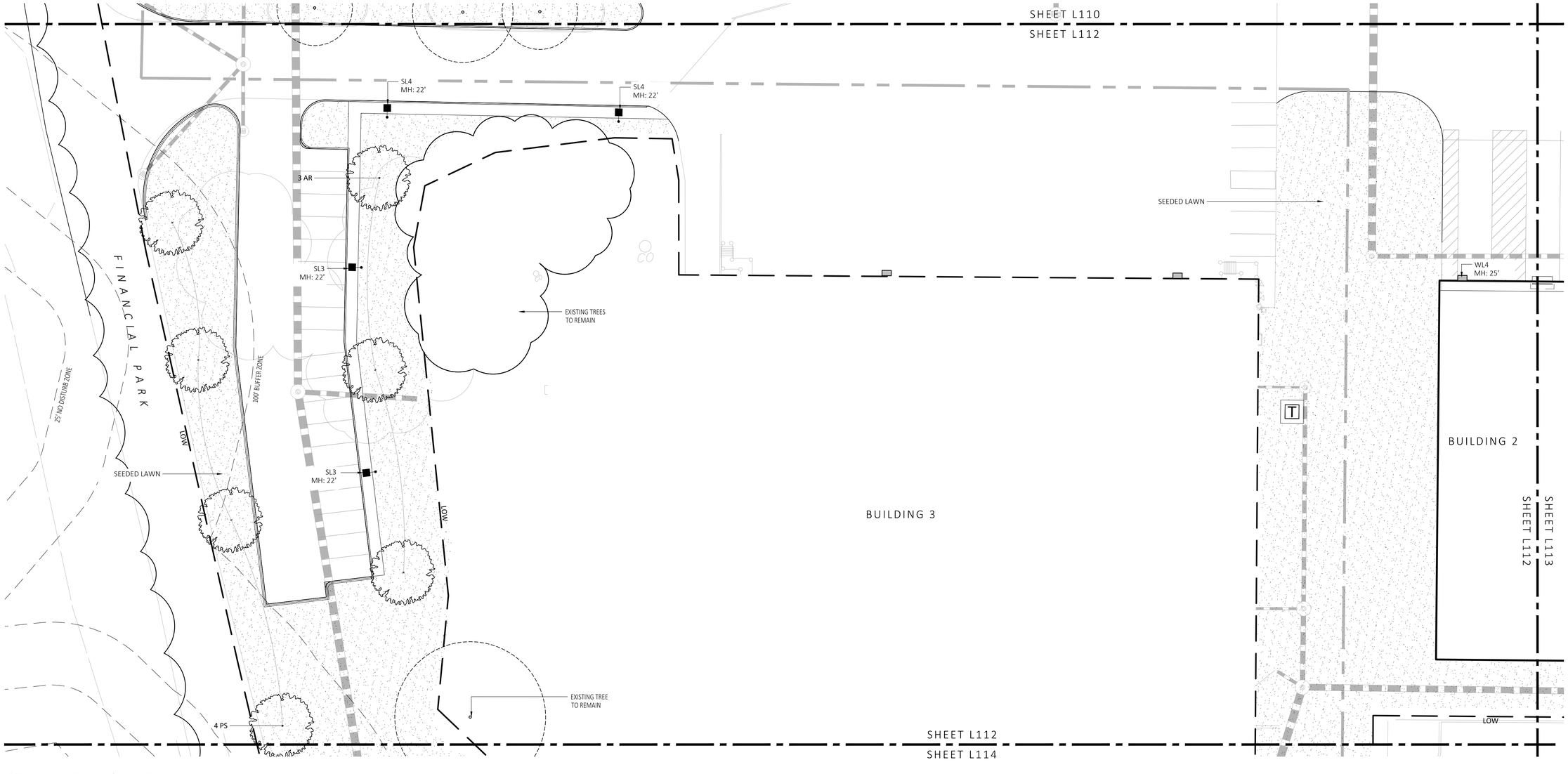
SYMBOL	QTY.	LATIN NAME	COMMON NAME	SIZE	NOTES
TREES					
AR	24	ACER RUBRUM	RED MAPLE	3"-3.5" CAL.	B&B, 6' CLEAR BRANCHING
AC	5	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	8-10' HT	B&B, MULTI-STEM
BP	10	BETULA POPULIFOLIA	GRAY BIRCH	3"-3.5" CAL.	B&B, MULTI-STEM
PS	10	PINUS STROBUS	EASTERN WHITE PINE	3"-3.5" CAL.	B&B, 6' CLEAR BRANCHING
PSC	17	PRUNUS SEROTINA	BLACK CHERRY	3"-3.5" CAL.	B&B, 6' CLEAR BRANCHING
PH	16	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	3"-3.5" CAL.	B&B, 6' CLEAR BRANCHING
TA	16	TILIA AMERICANA	BASSWOOD	3"-3.5" CAL.	B&B, 6' CLEAR BRANCHING
SHRUBS & ORNAMENTAL GRASSES - TYPE A					
		CLETHRA ALNIFOLIA	PEPPERBUSH	5 GAL	36" O.C. B&B
		HYDRANGEA QUERCIFOLIA	OAK-LEAVED HYDRANGEA	3'-3.5' TALL	36" O.C. B&B
		ILEX GLABRA	INKBERRY	3'-3.5' TALL	36" O.C. B&B
		ILEX VERTICILLATA	COMMON WINTERBERRY	3'-3.5' TALL	36" O.C. B&B
		KALMIA LATIFOLIA	MOUNTAIN LAUREL	3' TALL	36" O.C. B&B
		RHUS AROMATICA	FRAGRANT SUMAC	3'-3.5' TALL	36" O.C. B&B
		VIBURNUM DENTATUM	ARROWWOOD	3'-3.5' TALL	36" O.C. B&B
SHRUBS & ORNAMENTAL GRASSES - TYPE B					
		COMPTONIA PEREGRINA	SWEET-FERN	2 GAL	24" O.C. CONTAINER
		IRIS VERSICOLOR	BLUE FLAG IRIS	2 GAL	24" O.C. CONTAINER
		PEROVSKIA ATRIPLICIFOLIA	RUSSIAN SAGE	2.5'-3' TALL	24" O.C. B&B
PERENNIALS					
		CAREX PENSYLVANICA	PENNSYLVANIA SEDGE	1 GAL	18" O.C. CONTAINER
		ECHINACEA PURPUREA	PURPLE CONEFLOWER	1 GAL	18" O.C. CONTAINER
		GERANIUM DALMATICUM	CRANESBILL	1 GAL	18" O.C. CONTAINER
SEED MIX					
	ERNST SEEDS 800-873-3321	ERNST MIX (ERNMX-181-1 & 181-2) NATIVE STEEP SLOPE MIX		75 LB/ACRE	APPLY COVER CROP; FALL: GRAIN RYE, SPRING: OAT; SEE SPEC SHEET
	ERNST SEEDS 800-873-3321	ERNST MIX (ERNMX-180) RAIN GARDEN MIX		20 LB/ACRE	APPLY COVER CROP OF GRAIN RYE; SEE SPEC SHEET

ALL PROPOSED PLANTINGS COME FROM THE BEST DEVELOPMENT PRACTICES GUIDEBOOK (§185-31.C.(K)

LIGHT SCHEDULE

SYMBOL	LABEL	MODEL	MOUNT	ARRANGEMENT	OPTIONS	REP
	BL1	ARCLUCE KLOU180 BOLLARD RWL1-48L-25-3K7-4W-U	CONCRETE FOOTING; KEEP 3" ABOVE GRADE	PEDESTRIAN BOLLARD	COLOR: GRAY	ILLUMINATE 617-947-8996 STEVE PRUDHOMME
SL3	SL3	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-3-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4	SL4	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4-2	SL4-2	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-2-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	BACK BACK	COLOR: BLK	
	WL1	BEACON RATIO WALL FIXTURE RWL1-48L-25-3K7-4W-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL2	BEACON RATIO WALL FIXTURE RWL2-160L-135-3K7-4-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL3	DL-ES-15-O-30K-HC-24-A-DL-ALUM-U-8	ALUMINUM CHANNEL	RECESSED WALL LIGHT		

SUBMIT CUT SHEETS FOR APPROVAL; SEE PHOTOMETRIC PLAN PROVIDED WITH THIS DRAWING SET FOR MORE INFORMATION.



1 PLANTING & LIGTHING PLAN
SCALE: 1" = 20'-0"

0 10 20 40
SCALE IN FEET

MDLA
MICHAEL D'ANGELO landscape architecture

MICHAEL D'ANGELO LANDSCAPE ARCHITECTURE LLC
840 SUMMER STREET
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BOSTON, MA 02127
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CLIENT
BERKELEY PARTNERS
1 WASHINGTON MALL, SUITE 701
BOSTON, MA

PROJECT
WAREHOUSE / INDUSTRIAL DEV.
100 / 200 FINANCIAL PARK
FRANKLIN, MA

STAMP
MASSACHUSETTS MICHAEL D'ANGELO NO. 4096 REGISTERED LANDSCAPE ARCHITECT

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

PLANTING & LIGHTING PLAN

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L112

SHEET 13 OF 24

plot date: 8/25/2023

FOR PERMIT ONLY
NOT FOR CONSTRUCTION

PLANT SCHEDULE					
SYMBOL	QTY.	LATIN NAME	COMMON NAME	SIZE	NOTES
TREES					
AR	24	ACER RUBRUM	RED MAPLE	3"-3.5" CAL.	B&B, 6' CLEAR BRANCHING
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		ILEX VERTICILLATA	COMMON WINTERBERRY	3'-3.5' TALL	36" O.C. B&B
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		RHUS AROMATICA	FRAGRANT SUMAC	3'-3.5' TALL	36" O.C. B&B
		VIBURNUM DENTATUM	ARROWWOOD	3'-3.5' TALL	36" O.C. B&B
SHRUBS & ORNAMENTAL GRASSES - TYPE B					
		COMPTONIA PEREGRINA	SWEET-FERN	2 GAL	24" O.C. CONTAINER
		IRIS VERSICOLOR	BLUE FLAG IRIS	2 GAL	24" O.C. CONTAINER
		PEROVSKIA ATRIPLICIFOLIA	RUSSIAN SAGE	2.5'-3' TALL	24" O.C. B&B
PERENNIALS					
		CAREX PENSYLVANICA	PENNSYLVANIA SEDGE	1 GAL	18" O.C. CONTAINER
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SEED MIX					
		ERNST SEEDS 800-873-3321	ERNST MIX (ERNMX-181-1 & 181-2) NATIVE STEEP SLOPE MIX	75 LB/ACRE	APPLY COVER CROP; FALL: GRAIN RYE, SPRING: OAT; SEE SPEC SHEET
		ERNST SEEDS 800-873-3321	ERNST MIX (ERNMX-180) RAIN GARDEN MIX	20 LB/ACRE	APPLY COVER CROP OF GRAIN RYE; SEE SPEC SHEET

ALL PROPOSED PLANTINGS COME FROM THE BEST DEVELOPMENT PRACTICES GUIDEBOOK (§185-31.C.(K)

LIGHT SCHEDULE						
SYMBOL	LABEL	MODEL	MOUNT	ARRANGEMENT	OPTIONS	REP
	BL1	ARCLUCE KLOU180 BOLLARD RWL1-48L-25-3K7-4W-U	CONCRETE FOOTING; KEEP 3" ABOVE GRADE	PEDESTRIAN BOLLARD	COLOR: GRAY	ILLUMINATE 617-947-8996 STEVE PRUDHOMME
SL3	SL3	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-3-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4	SL4	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4-2	SL4-2	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-2-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	BACK BACK	COLOR: BLK	
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	WL2	BEACON RATIO WALL FIXTURE RWL2-160L-135-3K7-4-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL3	DL-ES-15-O-30K-HC-24-A-DL-ALUM-U-8	ALUMINUM CHANNEL	RECESSED WALL LIGHT		

SUBMIT CUT SHEETS FOR APPROVAL; SEE PHOTOMETRIC PLAN PROVIDED WITH THIS DRAWING SET FOR MORE INFORMATION.

PLANTING:

1. DURING CONSTRUCTION, PROTECT ALL EXISTING SITE FEATURES, STRUCTURES AND UTILITIES.
2. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY SPECIFIED AND NURSERY GROWN IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. SUBSTITUTIONS WILL BE PERMITTED ONLY IF APPROVED BY THE LANDSCAPE ARCHITECT.
3. LANDSCAPE ARCHITECT APPROVAL IS REQUIRED BEFORE PLANT MATERIAL IS PURCHASED. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO SEE ALL MATERIAL IN PERSON AT THE NURSERY. IF TRAVEL OUTSIDE OF MA IS REQUIRED, LANDSCAPE ARCHITECT'S TRAVEL COSTS SHALL BE PAID FOR BY THE CONTRACTOR.
4. ALL EXPOSED BURLAP, WIRE BASKETS AND OTHER MATERIALS ATTACHED TO PLANTS SHALL BE REMOVED PRIOR TO PLANTING. CARE SHALL BE TAKEN NOT TO DISTURB THE ROOT BALL OF PLANTS.
5. THOROUGHLY WATER ALL PLANTS IMMEDIATELY AFTER PLANTING.
6. WHERE DISCREPANCIES IN QUANTITIES OCCUR, DRAWINGS SUPERCEDE PLANT NOTES AND SCHEDULE.
7. TRANSPLANTING SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK.
8. LOAM USED IN PLANT BEDS SHALL BE UNIFORM IN COMPOSITION, FREE FROM SUBSOIL, STONES LARGER THAN 1", NOXIOUS SEEDS AND SUITABLE FOR THE SUPPORT OF VEGETATIVE GROWTH. THE pH VALUE SHALL BE BETWEEN 5.5 AND 6.5.
9. MULCH IN TREE AND SHRUB BEDS SHALL BE NATURAL, NATIVE HEMLOCK MULCH FREE OF GROWTH OR GERMINATION INHIBITING INGREDIENTS. SUBMIT SAMPLES FOR APPROVAL.
10. LOCATIONS FOR PLANTS AND/OR OUTLINE OF AREAS TO BE PLANTED ARE TO BE STAKED OUT AT THE SITE FOR APPROVAL BY THE LANDSCAPE ARCHITECT.
11. SOIL DEPTHS: a.) SHRUBS AND PERENNIAL BEDS: 18" MIN.; b.) GROUNDCOVER: 6" MIN.; c.) TREES: SEE DETAIL; d.) SOD/SEED: 6"MIN.
12. PROVIDE A SUBSURFACE ROOTBALL ANCHOR BY PLATIPUS EARTH ANCHORS, SIZE FOR CALIPER

GENERAL IRRIGATION NOTES:

1. THE DESIGN/BUILD IRRIGATION SUB-CONTRACTOR SHALL PROVIDE A COMPLETE SYSTEM FOR THE IRRIGATION AREAS SHOWN ON THE PLAN, WHICH INCLUDES NEW AND EXISTING TRANSPLANTED PLANT MATERIALS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR FINAL LAYOUT OF IRRIGATION SHOWING LOCATIONS AND SIZES OF MAIN LINES AND LATERAL LINES, ZONES, RAIN AND SOIL SENSORS, AND CUT SHEETS FOR CONTROLLER SYSTEM AND COMPONENTS. INCLUDE ANY NECESSARY SLEEVING ON A DIAGRAM.
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7. INSTALL DRIP TUBING, .6GPH, 12" CENTERS, STAKED EVERY TURN OR EVERY 4'
8. THE CONTRACTOR SHALL BE EXTREMELY CAREFUL DURING THE INSTALLATION PROCESS NOT TO DISTURB NEW OR EXISTING PLANT MATERIALS. THE CONTRACTOR IS TO COORDINATE HIS WORK WITH OTHER SUB-CONTRACTORS.
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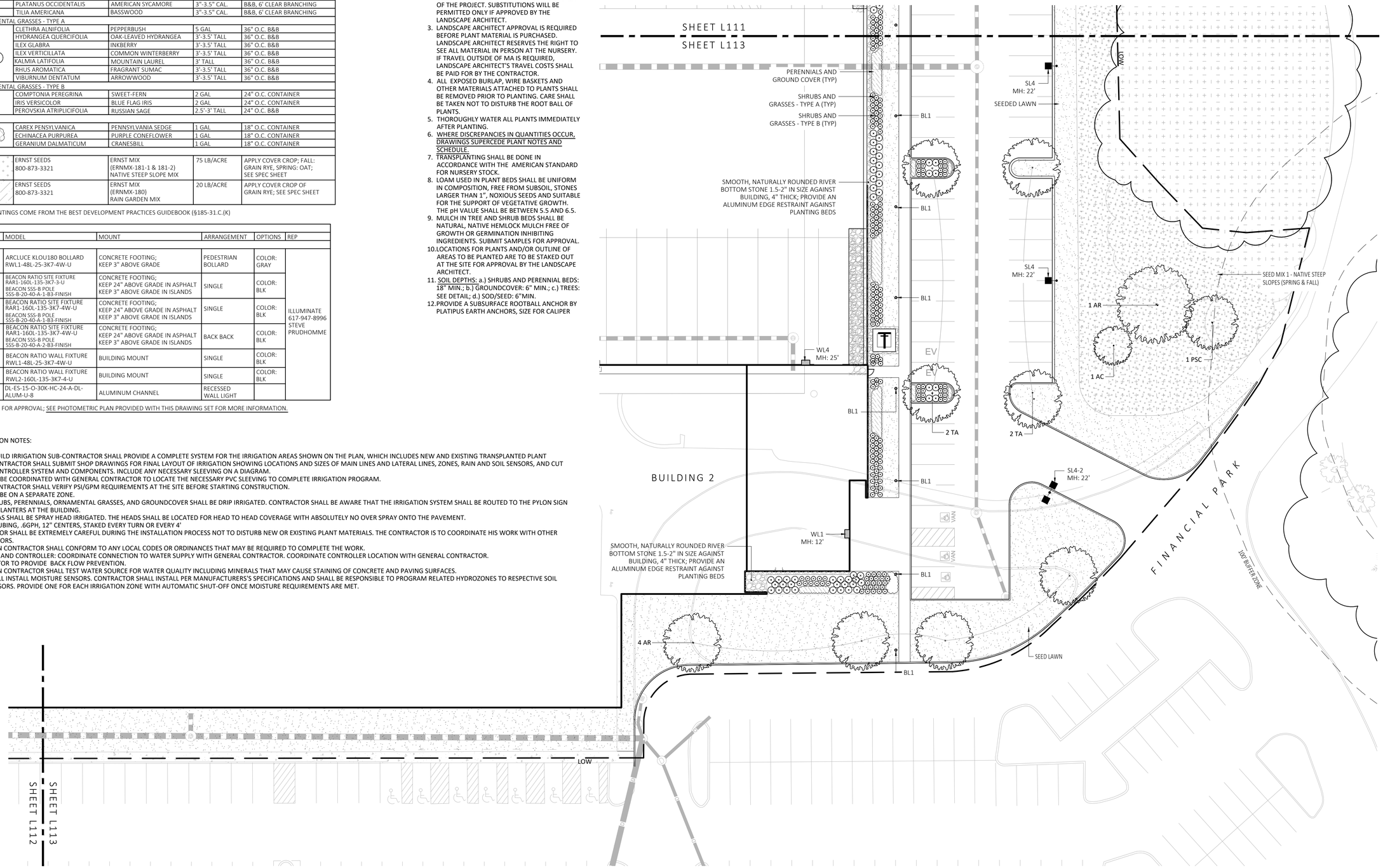

1 PLANTING & LIGTHING PLAN
SCALE: 1" = 20'-0"

0 10 20 40
SCALE IN FEET

MDLA
MICHAEL D'ANGELO landscape architecture

MICHAEL D'ANGELO
LANDSCAPE ARCHITECTURE LLC
840 SUMMER STREET
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BOSTON, MA 02127
t. 203.592.4788
www.m-d-l-a.com

CLIENT
BERKELEY PARTNERS
1 WASHINGTON MALL, SUITE 701
BOSTON, MA

PROJECT
WAREHOUSE / INDUSTRIAL DEV.
100 / 200 FINANCIAL PARK
FRANKLIN, MA

STAMP
MASSACHUSETTS
MICHAEL D'ANGELO
NO. 4008
REGISTERED LANDSCAPE ARCHITECT

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

PLANTING & LIGHTING PLAN

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L113

SHEET 14 OF 24

plot date: 8/25/2023

PLANTING:

1. DURING CONSTRUCTION, PROTECT ALL EXISTING SITE FEATURES, STRUCTURES AND UTILITIES.
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SHRUBS & ORNAMENTAL GRASSES - TYPE A					
		CLETHRA ALNIFOLIA	PEPPERBUSH	5 GAL	36" O.C. B&B
		HYDRANGEA QUERCIFOLIA	OAK-LEAVED HYDRANGEA	3'-3.5' TALL	36" O.C. B&B
		ILEX GLABRA	INKBERRY	3'-3.5' TALL	36" O.C. B&B
		ILEX VERTICILLATA	COMMON WINTERBERRY	3'-3.5' TALL	36" O.C. B&B
		KALMIA LATIFOLIA	MOUNTAIN LAUREL	3' TALL	36" O.C. B&B
		RHUS AROMATICA	FRAGRANT SUMAC	3'-3.5' TALL	36" O.C. B&B
		VIBURNUM DENTATUM	ARROWWOOD	3'-3.5' TALL	36" O.C. B&B
SHRUBS & ORNAMENTAL GRASSES - TYPE B					
		COMPTONIA PEREGRINA	SWEET-FERN	2 GAL	24" O.C. CONTAINER
		IRIS VERSICOLOR	BLUE FLAG IRIS	2 GAL	24" O.C. CONTAINER
		PEROVSKIA ATRIPLICIFOLIA	RUSSIAN SAGE	2.5'-3' TALL	24" O.C. B&B
PERENNIALS					
		CAREX PENSYLVANICA	PENNSYLVANIA SEDGE	1 GAL	18" O.C. CONTAINER
		ECHINACEA PURPUREA	PURPLE CONEFLOWER	1 GAL	18" O.C. CONTAINER
		GERANIUM DALMATICUM	CRANESBILL	1 GAL	18" O.C. CONTAINER
SEED MIX					
		ERNST SEEDS 800-873-3321	ERNST MIX (ERNMX-181-1 & 181-2) NATIVE STEEP SLOPE MIX	75 LB/ACRE	APPLY COVER CROP; FALL: GRAIN RYE, SPRING: OAT; SEE SPEC SHEET
		ERNST SEEDS 800-873-3321	ERNST MIX (ERNMX-180) RAIN GARDEN MIX	20 LB/ACRE	APPLY COVER CROP OF GRAIN RYE; SEE SPEC SHEET

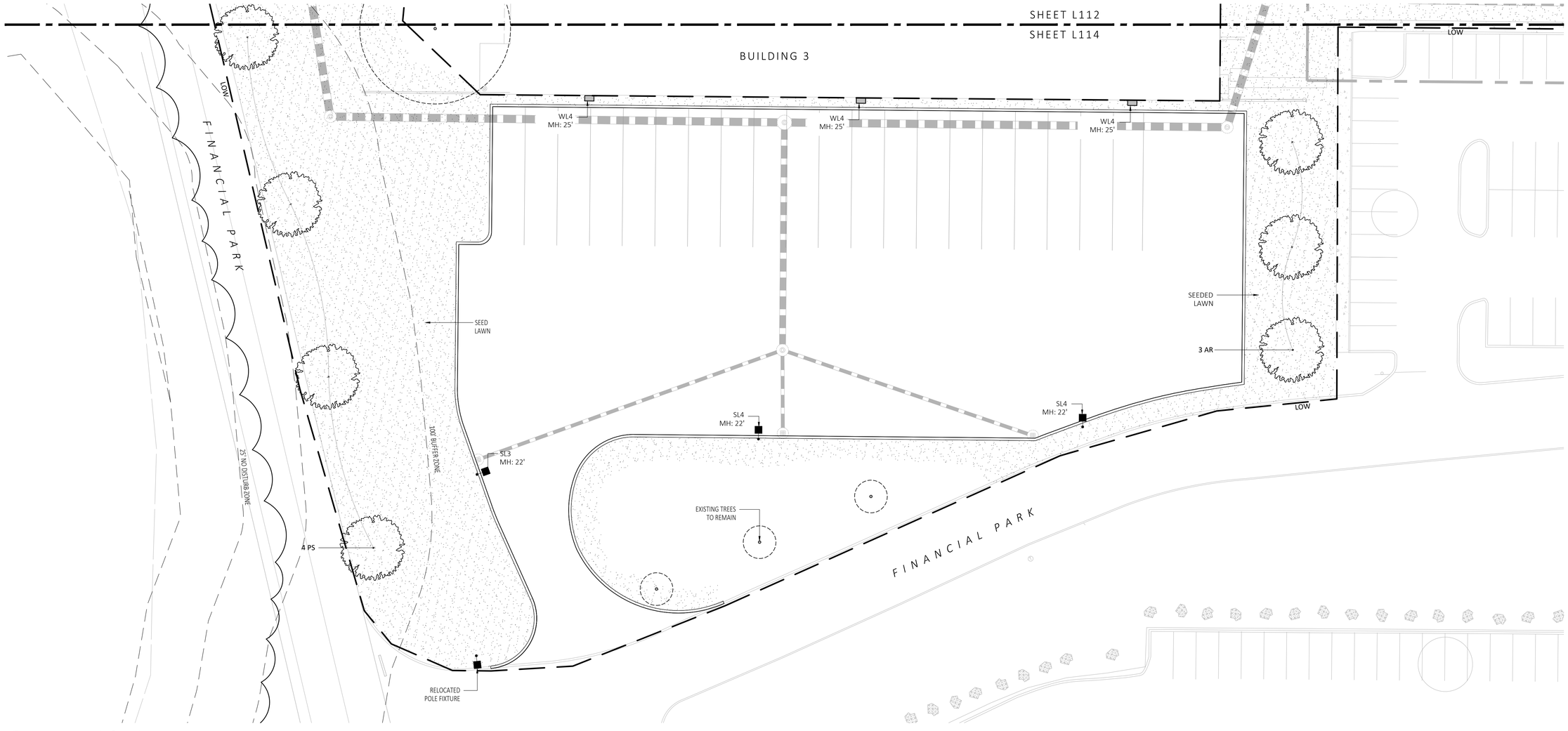
ALL PROPOSED PLANTINGS COME FROM THE BEST DEVELOPMENT PRACTICES GUIDEBOOK (§185-31.C.(K)

FOR PERMIT ONLY
NOT FOR CONSTRUCTION

LIGHT SCHEDULE

SYMBOL	LABEL	MODEL	MOUNT	ARRANGEMENT	OPTIONS	REP
○	BL1	ARCLUCE KLOU180 BOLLARD RWL1-48L-25-3K7-4W-U	CONCRETE FOOTING; KEEP 3" ABOVE GRADE	PEDESTRIAN BOLLARD	COLOR: GRAY	ILLUMINATE 617-947-8996 STEVE PRUDHOMME
■ SL3	SL3	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-3-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
■ SL4	SL4	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
■ SL4-2 ■	SL4-2	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-2-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	BACK BACK	COLOR: BLK	
▭	WL1	BEACON RATIO WALL FIXTURE RWL1-48L-25-3K7-4W-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
▭	WL2	BEACON RATIO WALL FIXTURE RWL2-160L-135-3K7-4-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
– – – –	WL3	DL-ES-15-O-30K-HC-24-A-DL-ALUM-U-8	ALUMINUM CHANNEL	RECESSED WALL LIGHT		

SUBMIT CUT SHEETS FOR APPROVAL; SEE PHOTOMETRIC PLAN PROVIDED WITH THIS DRAWING SET FOR MORE INFORMATION.



1 PLANTING & LIGTHING PLAN
SCALE: 1" = 20'-0"

0 10 20 40
SCALE IN FEET

MDLA
MICHAEL D'ANGELO landscape architecture

MICHAEL D'ANGELO
LANDSCAPE ARCHITECTURE LLC
840 SUMMER STREET
SUITE 201A
BOSTON, MA 02127
t. 203.592.4788
www.m-d-l-a.com

CLIENT
BERKELEY PARTNERS
1 WASHINGTON MALL, SUITE 701
BOSTON, MA

PROJECT
WAREHOUSE / INDUSTRIAL DEV.
100 / 200 FINANCIAL PARK
FRANKLIN, MA

STAMP
MASSACHUSETTS MICHAEL D'ANGELO NO. 4096 REGISTERED LANDSCAPE ARCHITECT

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

PLANTING & LIGHTING PLAN

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L114

SHEET 15 OF 24

plot date: 8/25/2023

FOR PERMIT ONLY
NOT FOR CONSTRUCTION

Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Spring

Date: August 28, 2018

Native Steep Slope Mix w/Grain Oats - ERNMX-181-1

	Botanical Name	Common Name	Price/lb
40.00 %	*Avena sativa, Variety Not Stated*	Oats, Variety Not Stated	0.22
20.40 %	*Sorghastrum nutans, NY4 Ecotype*	Indiangrass, NY4 Ecotype	12.90
8.10 %	*Andropogon gerardii, 'Niagara'*	Big Bluestem, 'Niagara'	13.06
7.50 %	*Elymus virginicus, PA Ecotype*	Virginia Wildrye, PA Ecotype	7.72
5.20 %	*Elymus canadensis*	Canada Wildrye	12.87
4.50 %	*Schizachyrium scoparium, Fort Indiantown Gap-PA Ecotype*	Little Bluestem, Fort Indiantown Gap-PA Ecotype	12.02
3.70 %	*Tridens flavus, Fort Indiantown Gap-PA Ecotype*	Purpletop, Fort Indiantown Gap-PA Ecotype	18.78
3.00 %	*Agrostis perennans, Albany Pine Bush-NY Ecotype*	Autumn Bentgrass, Albany Pine Bush-NY Ecotype	14.00
2.30 %	*Panicum virgatum, 'Shawnee'*	Switchgrass, 'Shawnee'	7.51
1.10 %	*Chamaecrista fasciculata, PA Ecotype*	Partridge Pea, PA Ecotype	10.00
1.00 %	*Echinacea purpurea*	Purple Coneflower	36.00
0.80 %	*Gaillardia aristata*	Perennial Gaillardia (Blanketflower)	32.00
0.80 %	*Rudbeckia hirta*	Blackeyed Susan	20.00
0.70 %	*Heliopsis helianthoides, PA Ecotype*	Oxeye Sunflower, PA Ecotype	42.00
0.40 %	*Aster novae-angliae, PA Ecotype*	New England Aster, PA Ecotype	360.00
0.20 %	*Asclepias syriaca, PA Ecotype*	Common Milkweed, PA Ecotype	196.00
0.20 %	*Liatris spicata*	Marsh (Dense) Blazing Star (Spiked Gayfeather)	210.00
0.10 %	*Penstemon digitalis*	Tall White Beardtongue	160.00
100.00 %		**Mix Price/lb Bulk:**	**$10.45**

Seeding Rate: 75 lb per acre

Erosion Control & Revegetation

Use this formula with grain oats as a cover crop in the spring and summer (until September 1st). Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

Price quotes guaranteed for 30 days.
All prices are FOB Meadville, PA.
Please check our web site at www.ernstseed.com
for current pricing when placing orders.

Ernst Conservation Seeds
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Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Fall

Date: August 28, 2018

Native Steep Slope Mix w/Grain Rye - ERNMX-181-2

	Botanical Name	Common Name	Price/lb
40.00 %	*Secale cereale, Variety Not Stated*	Grain Rye, Variety Not Stated	0.21
20.40 %	*Sorghastrum nutans, PA Ecotype*	Indiangrass, PA Ecotype	10.60
8.10 %	*Andropogon gerardii, 'Niagara'*	Big Bluestem, 'Niagara'	13.06
7.50 %	*Elymus virginicus, PA Ecotype*	Virginia Wildrye, PA Ecotype	7.72
5.20 %	*Elymus canadensis*	Canada Wildrye	12.87
4.50 %	*Schizachyrium scoparium, 'Camper'*	Little Bluestem, 'Camper'	12.59
3.70 %	*Tridens flavus*	Purpletop	18.56
3.00 %	*Agrostis perennans, Albany Pine Bush-NY Ecotype*	Autumn Bentgrass, Albany Pine Bush-NY Ecotype	14.00
2.30 %	*Panicum virgatum, 'Shawnee'*	Switchgrass, 'Shawnee'	7.51
1.10 %	*Chamaecrista fasciculata, PA Ecotype*	Partridge Pea, PA Ecotype	10.00
1.00 %	*Echinacea purpurea*	Purple Coneflower	36.00
0.80 %	*Gaillardia aristata*	Perennial Gaillardia (Blanketflower)	32.00
0.80 %	*Rudbeckia hirta*	Blackeyed Susan	20.00
0.70 %	*Heliopsis helianthoides, PA Ecotype*	Oxeye Sunflower, PA Ecotype	42.00
0.40 %	*Aster bieriflorus*	Calico Aster	320.00
0.30 %	*Liatris spicata*	Marsh (Dense) Blazing Star (Spiked Gayfeather)	210.00
0.20 %	*Asclepias syriaca, PA Ecotype*	Common Milkweed, PA Ecotype	196.00
100.00 %		**Mix Price/lb Bulk:**	**$9.88**

Seeding Rate: 75 lb per acre

Erosion Control & Revegetation

Use this formula with grain rye as a cover crop (from August 1st-February 15th). Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

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All prices are FOB Meadville, PA.
Please check our web site at www.ernstseed.com
for current pricing when placing orders.

Ernst Conservation Seeds
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Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: August 28, 2018

Rain Garden Mix - ERNMX-180

	Botanical Name	Common Name	Price/lb
31.50 %	*Schizachyrium scoparium, Albany Pine Bush-NY Ecotype*	Little Bluestem, Albany Pine Bush-NY Ecotype	12.02
20.00 %	*Elymus virginicus, PA Ecotype*	Virginia Wildrye, PA Ecotype	7.72
10.00 %	*Carex vulpinoidea, PA Ecotype*	Fox Sedge, PA Ecotype	24.00
10.00 %	*Panicum rigidulum, Coastal Plain NC Ecotype*	Redtop Panicgrass, Coastal Plain NC Ecotype	48.00
5.00 %	*Echinacea purpurea*	Purple Coneflower	36.00
3.00 %	*Coreopsis lanceolata*	Lanceleaf Coreopsis	24.00
3.00 %	*Rudbeckia hirta*	Blackeyed Susan	20.00
2.00 %	*Carex scoparia, PA Ecotype*	Blunt Broom Sedge, PA Ecotype	72.00
2.00 %	*Chamaecrista fasciculata, PA Ecotype*	Partridge Pea, PA Ecotype	10.00
2.00 %	*Eupatorium coelestinum, VA Ecotype*	Mistflower, VA Ecotype	128.00
2.00 %	*Heliopsis helianthoides, PA Ecotype*	Oxeye Sunflower, PA Ecotype	42.00
2.00 %	*Penstemon digitalis, PA Ecotype*	Tall White Beardtongue, PA Ecotype	160.00
1.00 %	*Asclepias incarnata, PA Ecotype*	Swamp Milkweed, PA Ecotype	160.00
1.00 %	*Juncus effusus*	Soft Rush	45.00
1.00 %	*Juncus tenuis, PA Ecotype*	Path Rush, PA Ecotype	66.00
1.00 %	*Liatris spicata*	Marsh (Dense) Blazing Star (Spiked Gayfeather)	210.00
0.80 %	*Aster novae-angliae, PA Ecotype*	New England Aster, PA Ecotype	360.00
0.70 %	*Aster laevis, NY Ecotype*	Smooth Blue Aster, NY Ecotype	320.00
0.50 %	*Rudbeckia fulgida var. fulgida, Northern VA Ecotype*	Orange Coneflower, Northern VA Ecotype	300.00
0.50 %	*Senna hebecarpa, VA & WV Ecotype*	Wild Senna, VA & WV Ecotype	24.00
0.40 %	*Monarda fistulosa, Fort Indiantown Gap-PA Ecotype*	Wild Bergamot, Fort Indiantown Gap-PA Ecotype	160.00
0.30 %	*Pycnanthemum tenuifolium*	Narrowleaf Mountainmint	140.00
0.30 %	*Solidago juncea, PA Ecotype*	Early Goldenrod, PA Ecotype	280.00
100.00 %		**Mix Price/lb Bulk:**	**$37.29**

Seeding Rate: 20 lb per acre with a cover crop of grain rye at 30 lb per acre

Uplands & Meadows

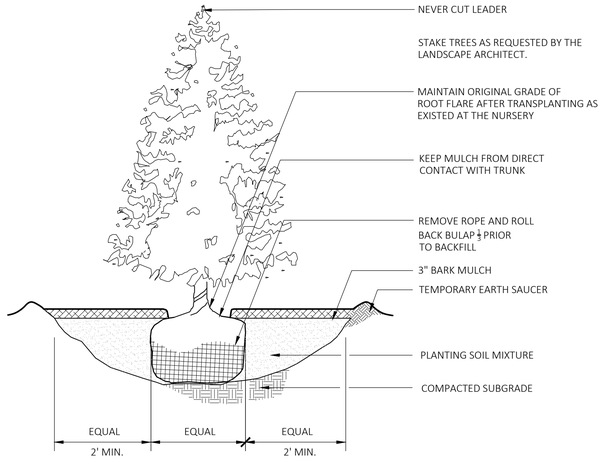
The native perennial forbs and grasses provide food and cover for rain garden biodiversity. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

Price quotes guaranteed for 30 days.
All prices are FOB Meadville, PA.
Please check our web site at www.ernstseed.com
for current pricing when placing orders.

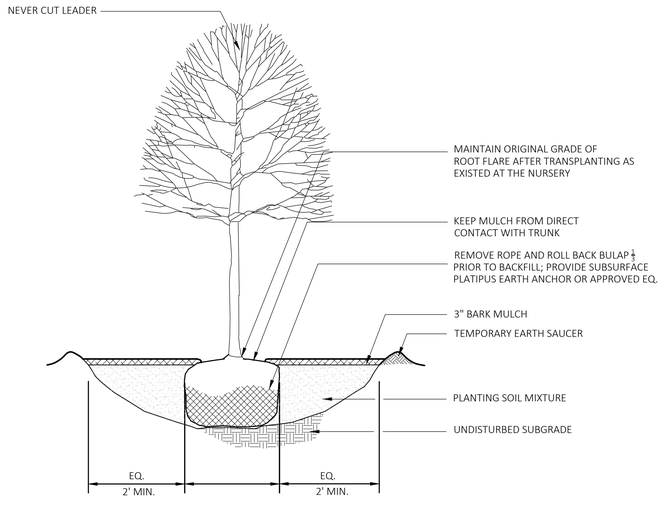
1 SEED MIX 1 - NATIVE STEEP SLOPES (SPRING)
SCALE: N.T.S.

2 SEED MIX 1 - NATIVE STEEP SLOPES (FALL)
SCALE: N.T.S.

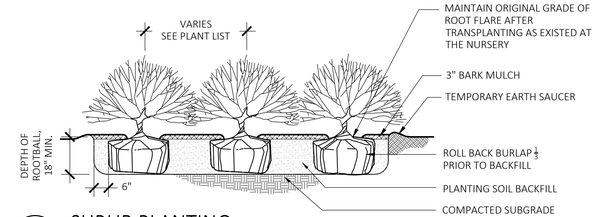
3 SEED MIX 2 - RAIN GARDEN MIX
SCALE: N.T.S.



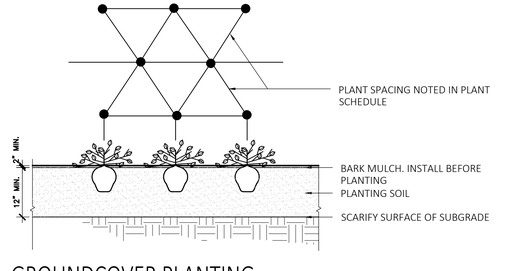
4 EVERGREEN TREE PLANTING
SCALE: N.T.S.



5 DECIDUOUS TREE PLANTING
SCALE: N.T.S.



6 SHRUB PLANTING
SCALE: N.T.S.



7 GROUNDCOVER PLANTING
SCALE: N.T.S.

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MICHAEL D'ANGELO
LANDSCAPE ARCHITECTURE LLC
840 SUMMER STREET
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BERKELEY PARTNERS
1 WASHINGTON MALL, SUITE 701
BOSTON, MA

PROJECT
WAREHOUSE / INDUSTRIAL DEV.
100 / 200 FINANCIAL PARK
FRANKLIN, MA

STAMP

MASSACHUSETTS
MICHAEL D'ANGELO
NO. 4006
REGISTERED LANDSCAPE ARCHITECT

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

PLANTING SCHEDULE & DETAILS

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L115

SHEET 16 OF 24

plot date: 8/25/2023

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NOT FOR CONSTRUCTION

Bollard lights

Generated on: 03-22-2023 7:54 pm

Arcluce

Project	
TYPE	
Catalog#	
NOTES	

KLOU180

large

Arcluce Code S-KL0203US-12S
Code Ref. 0871001D-830-12US

Installation instructions

IES photometry

TECHNICAL INFORMATION

Light source:	LED, 3000K, CRI>80
Light efficiency:	73lm/W
Power luminaire:	20W, 1450lm
LED life time:	> 60000h - L80 - B20 (Ta 25°C)
High colour consistency:	< 3 SDCM
Wiring:	120-277V 60Hz DIMM
Optics:	radial
Color:	Black - 12
Weight:	24.03 lb
Size:	A: Ø 7" 1/4 B: 36" 3/8

IP66 IK09 CERTIFIED 2.15 ft²

Construction

- Die-cast aluminium body (EN 47100).
- Extruded aluminium pole.
- Double layer polyester powder paint resistant to corrosion and salt spray fog.
- Silicone rubber gaskets.
- AISI 316 stainless steel external screws.

Electrical & Optics

- Universal input voltage: 120-277V 50/60Hz.
- 0-10V dimming available.
- Wiring on removable galvanized steel tray.
- High-efficacy LEDs with standard 3000K, 4000K (2700K or other CCTs available on request).
- Reflector made of anodized aluminium with non-iridescent finishing.
- UV rays stabilized, 850°C glow wire test resistant, V2 self-extinguishing clear polycarbonate screen.

Listings

- UL certified to U.S. and Canadian standards, suitable for wet locations (cULus mark).
- Suitable for mounting within 1.2 m (4 ft) of ground.
- Rated IP65 per EN60598.
- Luminaire rated for -40°C minimum ambient temperature on selected model variants.
- High quality LED sources characterized according to IES TM-30, with high color consistency <3SDCM and long useful life >60000 hours at L80.

Installation

- Surface installation.
- Die-cast aluminium base (EN 47100) for anchoring with rawlplugs.
- Supplied with steel base plate and j-shaped anchor bolts.
- Available on request zinc-plated steel pillar for reinforced anchoring.
- Supplied with power cord (18AWG conductors).

See accessories in the next page

1 BL1
SCALE: N.T.S.

BEACON

RATIO Series

AREA/SITE LIGHTER

DATE: LOCATION:
TYPE: PROJECT:
CATALOG #:

10-DAY QUICK SHIP PROGRAM

FEATURES

- Low profile LED area/site luminaire with a variety of IES distributions for lighting applications such as retail, commercial and campus parking lots
- Featuring Micro Strike Optics which maximizes target zone illumination with minimal losses at the house-side, reducing light trespass issues
- Visual comfort standard
- Compact and lightweight design with low EPA
- 3G rated for high vibration applications including bridges and overpasses
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™ and 7-Pin with networked controls
- Best in class surge protection available

CONTROL TECHNOLOGY

LIGHTING CONTROLS

SPECIFICATIONS

CONSTRUCTION
- Rectilinear form mimics the traditional shoebox form factor keeping a similar but updated style and appearance, ideal for retrofit applications
- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish

OPTICS
- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- 80, 160, 320 or 480 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI) CCT
- Zero uplight at 0 degrees of tilt
- Field rotatable optics

INSTALLATION
- Standard square arm mount, compatible with B3 drill pattern
- Optional universal mounting block for ease of installation during retrofit applications. Available as an option or accessory for square and round poles.
- Knuckle arm fitter option available for 2-3/8" OD tenon. Max tilt of 60 degrees with 4 degree adjustable increments. (Restrictions apply for 7-pin options)

ELECTRICAL
- Universal 120-277 VAC or 347-480 VAC input voltage, 50/60 Hz
- Ambient operating temperature -40°C to 40°C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Field replaceable surge protection device (SPD) options available for locations with IEEE C62.41.2 Category C High and Surge Location Category C3. Automatically takes fixture off-line for protection when device is compromised

CONTROLS
- Photo control, occupancy sensor and wireless available for complete on/off and dimming control
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for field lock photocontrols or wireless control modules (control accessories sold separately)
- 0- 10 V Dimming Drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than the 6" standard
- NX Distributed Intelligence™ available with in fixture wireless control module, features dimming and occupancy sensor

CERTIFICATIONS
- DLC® DesignLights Consortium Qualified), with some Premium Qualified configurations. Not all product variations on this page are DLC Qualified. Refer to www.designlights.org for the most up-to-date list.
- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures.
- 3G rated for ANSI C136.31 high vibration applications
- Fixture is IP66 rated
- Meets IDA recommendations using 3K CCT configuration at 0 degrees of tilt
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/23/2020

WARRANTY
- 5 year limited warranty

KEY DATA

Lumen Range	3,000–48,000
Wattage Range	25–340
Efficacy Range (LPW)	118–155
Fixture Projected Life (Hours)	L70>60K
Weights lbs. (kg)	13.5–24 (6.1-10.9)

Current

currentlighting.com/beacon

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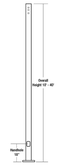
2 SL3, SL4, SL4-2 FIXTURE
SCALE: N.T.S.

BEACON

SSS-B Series Poles

SQUARE STRAIGHT STEEL

DATE: LOCATION:
TYPE: PROJECT:
CATALOG #:

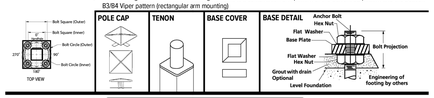


APPLICATIONS
- Lighting installations for side and top mounting of luminaires with effective projected area (EPA) not exceeding maximum allowable loading of the specified pole in its installed geographic location

CONSTRUCTION
- SHAFT: One-piece straight steel with square cross section, flat sides and minimum 0.23" radius on all corners; Minimum yield of 46,000 psi (ASTM-A500, Grade B); Longitudinal weld seam to appear flush with shaft side wall; Steel base plate with axial bolt circle slots welded flush to pole shaft having minimum yield of 36,000 psi (ASTM A36)
- BASE COVER: Two-piece square aluminum base cover included standard
- POLE CAP: Pole shaft supplied with removable cover when applicable; Tenon and post-top configurations also available
- HAND HOLE: Rectangular 3x5 steel hand hole frame (2.38" x 4.38" opening); Mounting provisions for grounding lug located behind gasketed cover
- ANCHOR BOLTS: Four galvanized anchor bolts provided per pole with minimum yield of 55,000 psi (ASTM F1554). Galvanized hardware with two washers and two nuts per bolt for leveling
  Anchor bolt part numbers: 3/4 x 30 x 3 — TAB-30-M38
  1 x 36 x 4 — TAB-36-M38

FINISH
- Durable thermoset polyester powder coat paint finish with nominal 3.0 mil thickness
- Powder paint prime applied over "white metal" steel substrate cleaned via mechanical shot blast method
- Decorative finish coat available in multiple standard colors; Custom colors available; RAL number preferable

WAREHOUSE 'STOCKED' POLES:
- SSSH20-40A-4-HV-DB-RDC, SSSH25-40A-4-HV-DB-RDC and SSSH30-50B-4-HV-DB-RDC
- The HV designation in the above catalog numbers is a combination drill pattern of the Current S2 pattern and the Beacon B3/B4 Viper pattern (rectangular arm mounting)



ORDERING INFORMATION

ORDERING EXAMPLE:

SSS –B – 25 – 40 – A/B/C – 2L – B3 – BLT – UL

Reference page 2 for available configurations

SERIES	HEIGHT	SHAFT	THICKNESS
SSS-B Square Straight Steel Pole Beacon	Reference page 2 Ordering matrix	Reference page 2 Ordering matrix	Reference page 2 Ordering matrix

MOUNTING ORIENTATION

1 Removeable tenon used in conjunction with side arm mounting. First specify desired arm configuration followed by the "TR" notation. Example: **SSS-B-25-40-A-1-BT-TR-BBT**
2 Specify option location using logic found on page 2 **(Option Orientation)**
3 VMT recommended on poles 20' and taller with EPAs of less than 1.

ACCESSORIES - Order Separately

Catalog Number	Description
VMT	1st mode vibration damper
VM2SXX	2nd mode vibration damper

MOUNTING	FINISH	OPTIONS
1 Single arm mount	BLT Black Matte Textured	GFI 20 Amp GFCI Receptacle and Cover
2 Two tenons at 180°	BLS Black Gloss Smooth	EHH* Extra Handhole
2L Two tenons at 90°	DBT Dark Bronze Matte Textured	CO5* 5" Coupling
3T Three fixtures at 90°	DBS Dark Bronze Gloss Smooth	CO7* 75" Coupling
4 Four fixtures at 90°	GTT Graphite Matte Textured	C20* 2" Coupling
TA Tenon (2.38" OD x 4' Tall)	LGS Light Grey Gloss Smooth	MPB* Mid-pole Luminaire Bracket
TB Tenon (2.88" OD x 4' Tall)	PSS Platinum Silver Smooth	VM2 2nd mode vibration damper
TC Tenon (3.5" OD x 6' Tall)	WHT White Matte Textured	LAB Less Anchor Bolts
TR* Removable Tenon (2.375 x 4.25)	WHS White Gloss Smooth	UL UL Certified
OT Open Top (no clutch pole cap)	VGT Verde Green Textured	
	Color Option	
	CC Custom Color	

DRILL PATTERN

B1 Cruze, 1.98" arm
B3 2 bolt (2-½" spacing), Viper "A" arm
S2 2 bolt (3-½" spacing), Viper "AD" arm

Current

currentlighting.com/beacon

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3 SL3, SL4, SL4-2 POST
SCALE: N.T.S.

BEACON

RATIO Wall

RWL1/RWL2 LED WALLPACK

DATE: LOCATION:
TYPE: PROJECT:
CATALOG #:

FEATURES

- Low profile LED wall luminaire with a variety of IES distributions for lighting applications such as retail, commercial and industrial building mount
- Featuring Micro Strike Optics which maximizes target zone illumination with minimal losses at the house-side, reducing light trespass issues
- Visual comfort standard
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™, Wiscape and 7-Pin with networked controls
- Battery Backup options available for emergency code compliance
- Quick-mount adapter allows easy installation/maintenance
- 347V and 480V versions for industrial applications and Canada

CONTROL TECHNOLOGY

LIGHTING CONTROLS wiSCAPE

SPECIFICATIONS

CONSTRUCTION
- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Powder paint finish provides durability in outdoor environments. Tested to meet 1000 hour salt spray rating

OPTICS
- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- 48 or 160 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI/80 CRI) CCT
- Zero uplight distributions
- LED optics provide IES type II, III and IV distributions. Type II only available in RWL2 configurations

INSTALLATION
- Quick-mount adapter provides easy installation to wall or to recessed junction boxes (4" square junction box)
- Designed for direct j-box mount.
- Integral back box contains 1/2" conduit hubs
- Integral back box standard with Dual Driver, Dual Power Feed, NX, Wiscape and battery versions (battery versions for RWL1 only)

ELECTRICAL
- 120V-277V universal voltage 50/60Hz 0-10V dimming drivers
- 347V and 480V dimmable driver option for all wattages above 35W
- Ambient operating temperature -40°C to 40°C
- Driver RoHS and IP66

ELECTRICAL (CONTINUED)
- 10kV Surge Protector optional
- Drivers have greater than .90 power factor and less than 20% Total Harmonic Distortion
- Dual Driver option provides 2 drivers within luminaire but only one set of leads exiting the luminaire, where Dual Power Feed provides two drivers which can be wired independently as two sets of leads are extended from the luminaire. Both options can not be included in one same fixture.
- Dimming drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than 6" standard.

CONTROLS
- Photo control, occupancy sensor and wireless available for complete on/off and dimming control
- Button photocontrol is suitable for 120-277V operation
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for field lock photocontrols or wireless control modules (control accessories sold separately)
- NX Distributed Intelligence™ available with in fixture wireless control module, features dimming and occupancy sensor
- wiSCAPE® available with in fixture wireless control module, features dimming and occupancy sensor
- Integral Battery Backup provides emergency lighting for the required 90 minute path of egress
- Battery Backup suitable for operating temperatures -25°C to 40°C. RWL1 battery is 12.5W RWL2 battery is 16W

CONTROLS (CONTINUED)
- Dual Driver and Dual Power Feed options creates product configuration with 2 internal drivers for code compliance
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application.

CERTIFICATIONS
- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations
- IP65 rated housing
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/23/2020. See Buy American Solutions
- Not all product variations listed in this document are DLC® (DesignLights Consortium Qualified). Refer to designlights.org for most up-to-date list.

WARRANTY
- 5 year limited warranty

KEY DATA

Lumen Range	1,300–18,800
Wattage Range	10–155
Efficacy Range (LPW)	119–148
Weights lbs. (kg)	6.5/16.5 (2.9/7.5)

Current

currentlighting.com/beacon

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4 WL1, WL4
SCALE: N.T.S.

DURA LAMP
a brand of TARGETTI

DURATAPE™ ES

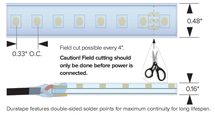
IP66 OUTDOOR

QUICK SHIP 5 Days IP66 RoHS Class 2

KEY FEATURES

- Energy efficient high/mid/low output narrow spaced essential white LED flexible linear light strip for continuous consistant color in linear applications.
- Ideal for IP66 exterior cove, under-counter/cabinet, lighting accents.
- Complete with encased silicone jacket for outdoor rated IP66, sold per foot.
- Features 2-circuit substrate for optimum heat dissipation, minimizing voltage drop while increasing run lengths per power feed, standardizing electrical flow over entire length of the strip for maximum product reliability.
- Features double sided solder points for maximum conductivity and durability.
- Pre-assembled to specific lengths with various connector options for project requirements and efficient power configuration.
- Max continuous length: up to 36' per run (1.5W/ft)
  up to 22' per run (3.0W/ft)
  up to 19' per run (3.9W/ft)
  up to 16' per run (4.4W/ft)
- Multiple dimming options available.

DIMENSIONAL DRAWINGS



Duratape features double-sided solder points for maximum continuity for long lifespan.

DESIGN INSTALLATION EXAMPLES

Cove | Under Counter Task | Under Counter Directional Task

DETAILS

Spacing	0.33" OC LED Spacing
LEDs	36 LEDs per foot
Wattage	1.5W/ft / 3.0W/ft / 3.9W/ft / 4.4W/ft
Color Temp	2700K / 3000K / 3500K / 4000K
Color Consistency	Bin centered on the Planck curve with a +/ - 2 step MacAdam tolerance.
CRI	>Ra96
End Preps	Factory prepped wiring options *(See Page 2)*
Mounting	Includes installation-ready 3M tape adhesive for simplified installation directly to mounting channel or application surface
Installation	Optional mounting channels and clips, protective lens covers, thermal channels for optimal maintainance. Field trimmable every 4".
Power Supply	Listed Class 2 output, 24V DC power supply required.
Certifications	cULus Class 2 Wet Listed E471161 Tested in accordance with LM-79-08
Compliance	Energy efficient for California installations. *CEC T24 JA8-2019-E certified, 3.9W with DEL60PWM or DELX60T24ICPWM drivers. ROHS compliant MR Safe, driver to be mounted outside of MR room. To be use with plastic or aluminum profiles only. To be installed with adhesive or MR safe hardware only, no factory provided mounting hardware to be used.
Warranty	5 year warranty

STRIP DATA

Model 3000K	Efficacy* Lm/Wt	Lm/Ft	Wt/Ft
1.5W/ft	61.00*	91.5	1.5
3.0W/ft	86.00*	259	3.0
3.9W/ft	90.00*	351	3.9
4.4W/ft	94.00*	412	4.4

* Meets Title 24 High efficacy rating.

LED DATA

Model	Wattage	Viewing Angle	Lifespan at 90% drive
1.5W/ft	0.04W	120°	60,000hrs
3.0W/ft	0.08W		60,000hrs
3.9W/ft	0.10W		50,000hrs
4.4W/ft	0.12W		40,000hrs

* LEDs operating at 90% of LED manufacturers maximum current rating.

TM30 *(3.0W/ft model)*

CCT	CRI Ra	R9	Rf	Rg
2207K	98.5	85	94.2	103.4
2733K	97.7	95	95.1	101.7
3132K	97.3	94	89.7	97.3
3507K	96.2	95	89.1	97.8
4058K	96.6	93	89.3	97.8

PRODUCT CODE	INTENSITY	WATTAGE	IP RATING	COLOR TEMP	CRI	VOLTAGE	+	END PREP	+	MOUNTING	+	POWER SUPPLY
DL — Duratape™	ES — Essential White	15 — 1.5W/ft 30 — 3.0W/ft 39* — 3.9W/ft 44 — 4.4W/ft	O — Outdoor IP66	27 — 2700K 30 — 3000K 35 — 3500K 40 — 4000K	HC — +95 CRI	24 — 24VDC						

QUICK SHIP 5 Days: DLES30027HC24-GS = 5YLWORLS-GS
DLES30030HC24-GS = 5YLWOBLS-GS
DLES39030HC24-GS = 5YLWOBL1-GS
DLES44030HC24-GS = 5YLWOBL1-GS

* Lead time for quick ship fixtures is 1-3 weeks from processed PO date. Consult factory for quantities of over 1,000ft to confirm lead time.

5 WL3
SCALE: N.T.S.

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BOSTON, MA

PROJECT
WAREHOUSE / INDUSTRIAL DEV.
100 / 200 FINANCIAL PARK
FRANKLIN, MA

STAMP

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

LIGHTING SCHEDULE & CUT SHEETS

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L116

SHEET 17 OF 24

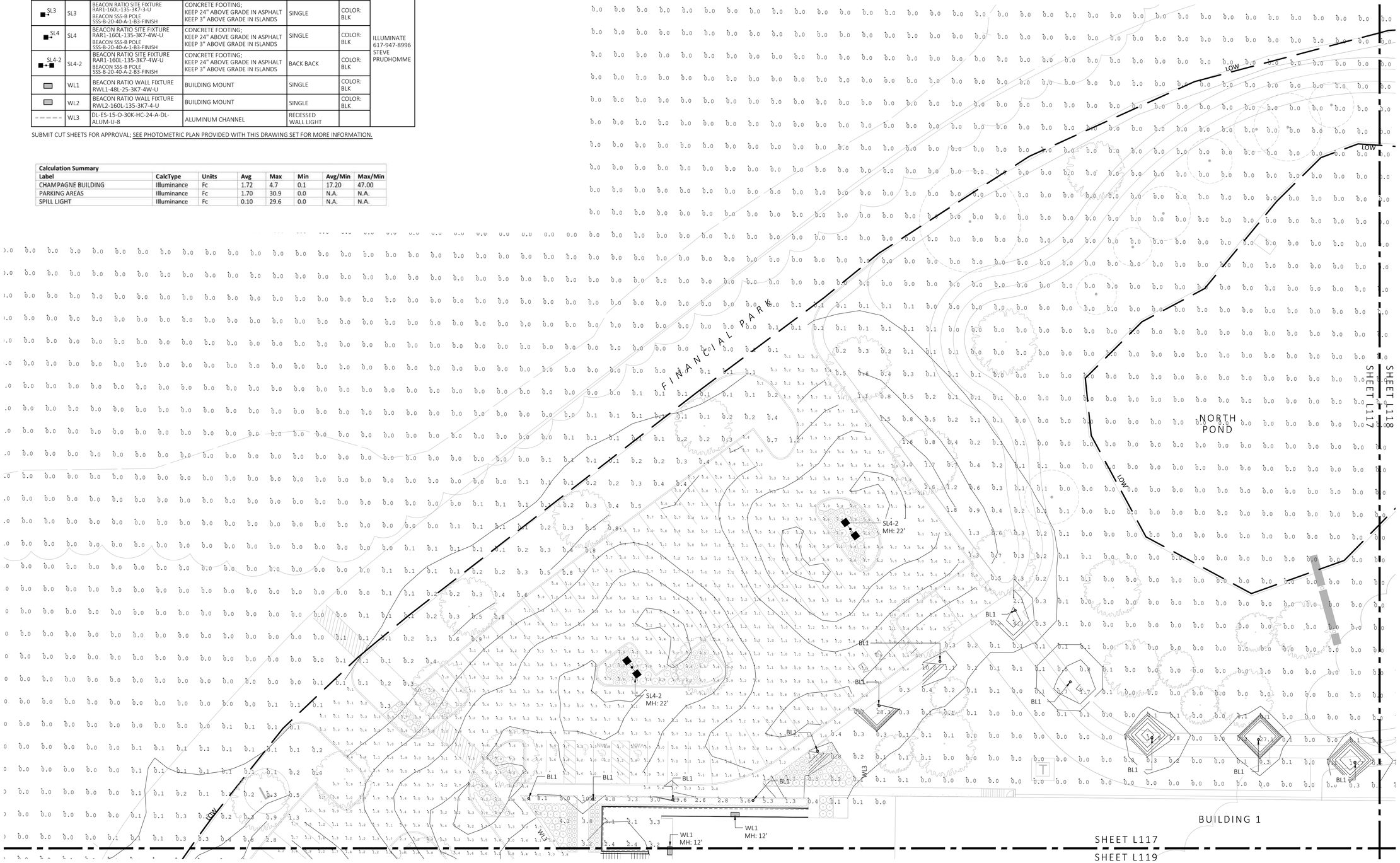
plot date: 8/25/2023

FOR PERMIT ONLY
NOT FOR CONSTRUCTION

LIGHT SCHEDULE						
SYMBOL	LABEL	MODEL	MOUNT	ARRANGEMENT	OPTIONS	REP
○	BL1	ARCLUCE KLOU180 BOLLARD RWL1-48L-25-3K7-4W-U	CONCRETE FOOTING; KEEP 3" ABOVE GRADE	PEDESTRIAN BOLLARD	COLOR: GRAY	ILLUMINATE 617-947-8996 STEVE PRUDHOMME
SL3	SL3	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-3-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4	SL4	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4-2	SL4-2	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-2-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	BACK BACK	COLOR: BLK	
WL1	WL1	BEACON RATIO WALL FIXTURE RWL1-48L-25-3K7-4W-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
WL2	WL2	BEACON RATIO WALL FIXTURE RWL2-160L-135-3K7-4-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
WL3	WL3	DL-ES-15-O-30K-HC-24-A-DL-ALUM-U-8	ALUMINUM CHANNEL	RECESSED WALL LIGHT		

SUBMIT CUT SHEETS FOR APPROVAL; SEE PHOTOMETRIC PLAN PROVIDED WITH THIS DRAWING SET FOR MORE INFORMATION.

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CHAMPAGNE BUILDING	Illuminance	Fc	1.72	4.7	0.1	17.20	47.00
PARKING AREAS	Illuminance	Fc	1.70	30.9	0.0	N.A.	N.A.
SPILL LIGHT	Illuminance	Fc	0.10	29.6	0.0	N.A.	N.A.



1 PHOTOMETRIC PLAN
SCALE: 1" = 20'-0"

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MICHAEL D'ANGELO landscape architecture

MICHAEL D'ANGELO
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100 / 200 FINANCIAL PARK
FRANKLIN, MA

STAMP
MASSACHUSETTS
MICHAEL D'ANGELO
NO. 4098
REGISTERED LANDSCAPE ARCHITECT

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

PHOTOMETRIC PLAN

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L117

SHEET 18 OF 24

plot date: 8/25/2023

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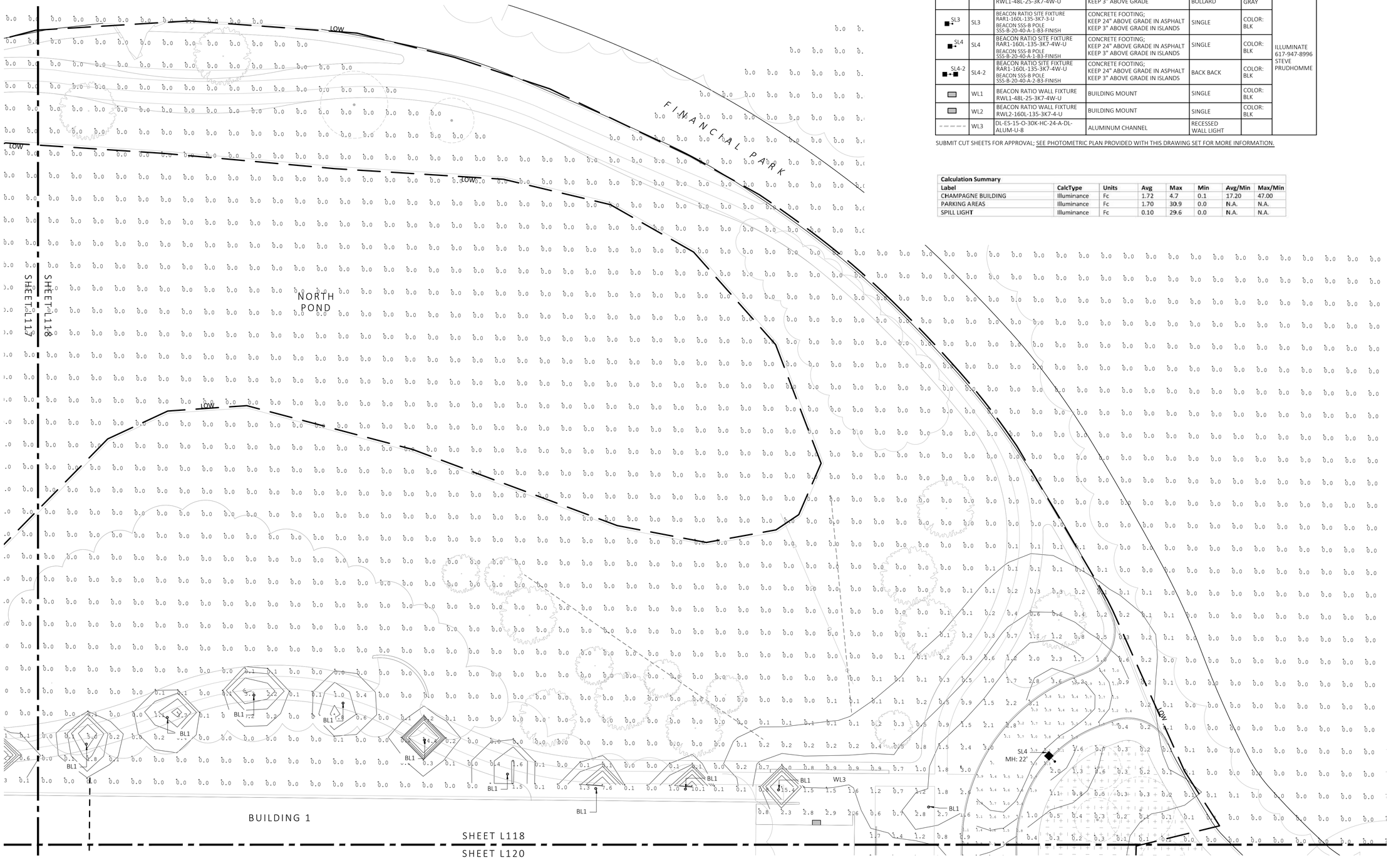
NOT FOR CONSTRUCTION

LIGHT SCHEDULE						
SYMBOL	LABEL	MODEL	MOUNT	ARRANGEMENT	OPTIONS	REP
	BL1	ARCLUCE KLOU180 BOLLARD RWL1-48L-25-3K7-4W-U	CONCRETE FOOTING; KEEP 3" ABOVE GRADE	PEDESTRIAN BOLLARD	COLOR: GRAY	ILLUMINATE 617-947-8996 STEVE PRUDHOMME
SL3	SL3	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-3-U BEACON SSS-8 POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4	SL4	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-8 POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4-2	SL4-2	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-8 POLE SSS-B-20-40-A-2-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	BACK BACK	COLOR: BLK	
	WL1	BEACON RATIO WALL FIXTURE RWL1-48L-25-3K7-4W-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL2	BEACON RATIO WALL FIXTURE RWL2-160L-135-3K7-4-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL3	DL-ES-15-O-30K-HC-24-A-DL-ALUM-U-8	ALUMINUM CHANNEL	RECESSED WALL LIGHT		

SUBMIT CUT SHEETS FOR APPROVAL; SEE PHOTOMETRIC PLAN PROVIDED WITH THIS DRAWING SET FOR MORE INFORMATION.

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CHAMPAGNE BUILDING	Illuminance	Fc	1.72	4.7	0.1	17.20	47.00
PARKING AREAS	Illuminance	Fc	1.70	30.9	0.0	N.A.	N.A.
SPILL LIGHT	Illuminance	Fc	0.10	29.6	0.0	N.A.	N.A.



1 PHOTOMETRIC PLAN
SCALE: 1" = 20'-0"

MDLA
MICHAEL D'ANGELO landscape architecture

MICHAEL D'ANGELO LANDSCAPE ARCHITECTURE LLC
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PROJECT
WAREHOUSE / INDUSTRIAL DEV.
100 / 200 FINANCIAL PARK
FRANKLIN, MA

STAMP
MASSACHUSETTS MICHAEL D'ANGELO REGISTERED LANDSCAPE ARCHITECT NO. 4006

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

PHOTOMETRIC PLAN

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L118

SHEET 19 OF 24

plot date: 8/25/2023

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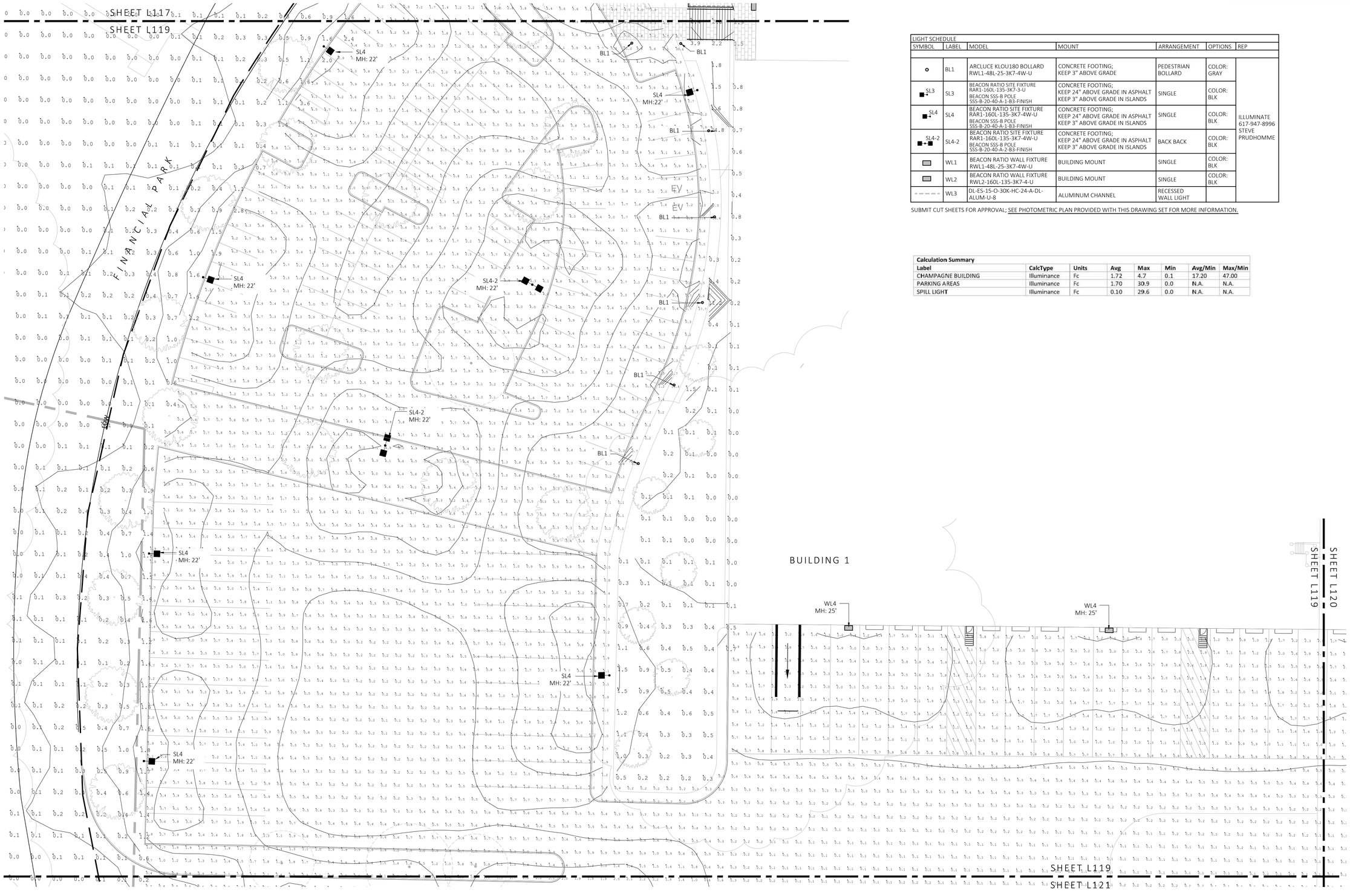

1 PHOTOMETRIC PLAN
SCALE: 1" = 20'-0"

0 10 20 40
SCALE IN FEET

LIGHT SCHEDULE

SYMBOL	LABEL	MODEL	MOUNT	ARRANGEMENT	OPTIONS	REP
	BL1	ARCLUCE KLOU180 BOLLARD RWL1-48L-25-3K7-4W-U	CONCRETE FOOTING; KEEP 3" ABOVE GRADE	PEDESTRIAN BOLLARD	COLOR: GRAY	ILLUMINATE 617-947-8996 STEVE PRUDHOMME
SL3	SL3	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-3-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4	SL4	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4-2	SL4-2	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-2-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	BACK BACK	COLOR: BLK	
	WL1	BEACON RATIO WALL FIXTURE RWL1-48L-25-3K7-4W-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL2	BEACON RATIO WALL FIXTURE RWL2-160L-135-3K7-4-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL3	DL-ES-15-O-30K-HC-24-A-DL-ALUM-U-8	ALUMINUM CHANNEL	RECESSED WALL LIGHT		

SUBMIT CUT SHEETS FOR APPROVAL; SEE PHOTOMETRIC PLAN PROVIDED WITH THIS DRAWING SET FOR MORE INFORMATION.

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CHAMPAGNE BUILDING	Illuminance	Fc	1.72	4.7	0.1	17.20	47.00
PARKING AREAS	Illuminance	Fc	1.70	30.9	0.0	N.A.	N.A.
SPILL LIGHT	Illuminance	Fc	0.10	29.6	0.0	N.A.	N.A.

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NO. 4006
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2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

PHOTOMETRIC PLAN

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L119

SHEET 20 OF 24

plot date: 8/25/2023

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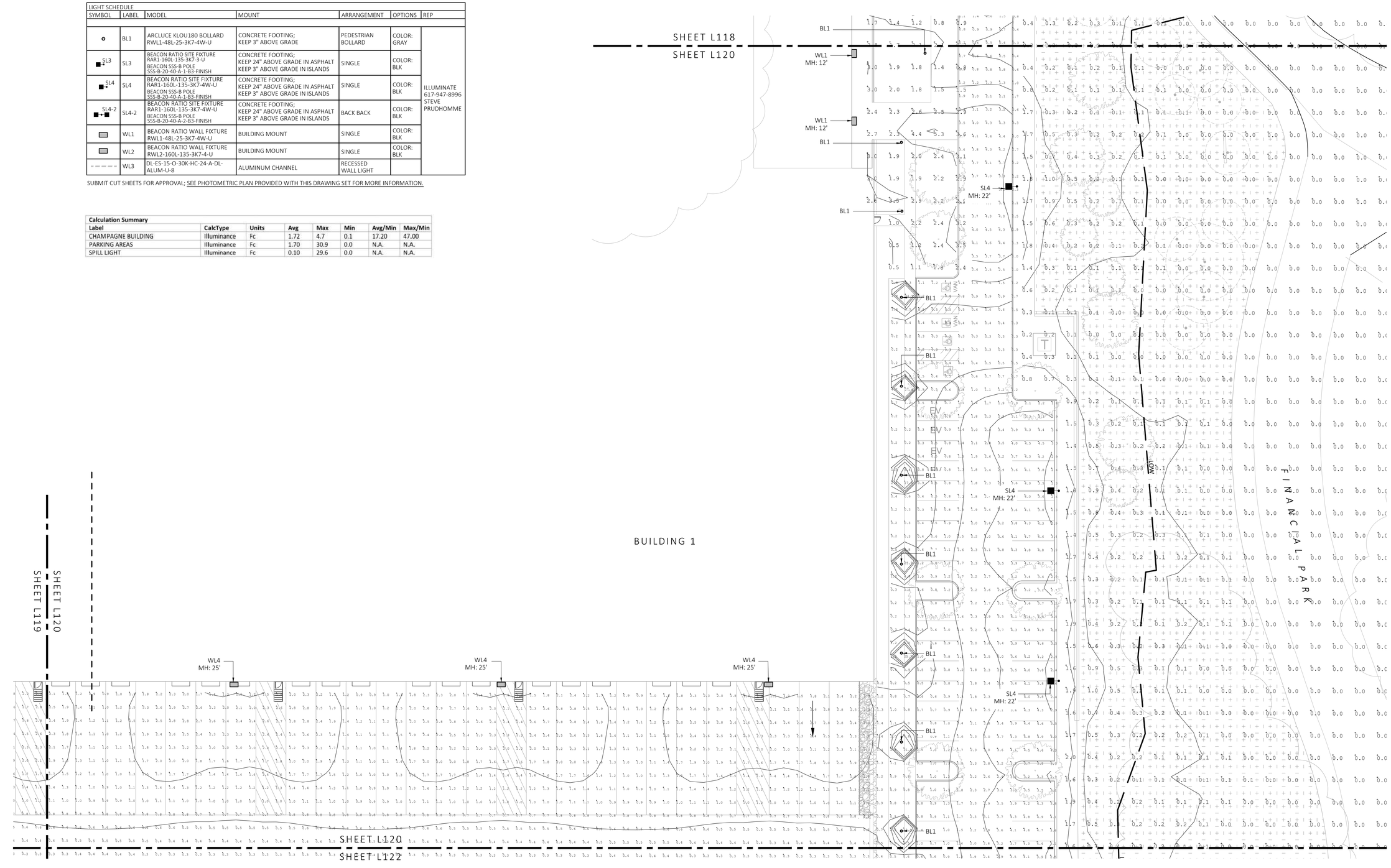
NOT FOR CONSTRUCTION

LIGHT SCHEDULE						
SYMBOL	LABEL	MODEL	MOUNT	ARRANGEMENT	OPTIONS	REP
	BL1	ARCLUCE KLOU180 BOLLARD RWL1-48L-25-3K7-4W-U	CONCRETE FOOTING; KEEP 3" ABOVE GRADE	PEDESTRIAN BOLLARD	COLOR: GRAY	
SL3	SL3	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-3-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4	SL4	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	ILLUMINATE 617-947-8996 STEVE PRUDHOMME
SL4-2	SL4-2	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-2-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	BACK BACK	COLOR: BLK	
	WL1	BEACON RATIO WALL FIXTURE RWL1-48L-25-3K7-4W-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL2	BEACON RATIO WALL FIXTURE RWL2-160L-135-3K7-4-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL3	DL-ES-15-O-30K-HC-24-A-DL-ALUM-U-8	ALUMINUM CHANNEL	RECESSED WALL LIGHT		

SUBMIT CUT SHEETS FOR APPROVAL; SEE PHOTOMETRIC PLAN PROVIDED WITH THIS DRAWING SET FOR MORE INFORMATION.

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CHAMPAGNE BUILDING	Illuminance	Fc	1.72	4.7	0.1	17.20	47.00
PARKING AREAS	Illuminance	Fc	1.70	30.9	0.0	N.A.	N.A.
SPILL LIGHT	Illuminance	Fc	0.10	29.6	0.0	N.A.	N.A.



1 PHOTOMETRIC PLAN
SCALE: 1" = 20'-0"

0 10 20 40
SCALE IN FEET

MDLA
MICHAEL D'ANGELO landscape architecture

MICHAEL D'ANGELO
LANDSCAPE ARCHITECTURE LLC

840 SUMMER STREET
SUITE 201A
BOSTON, MA 02127
t. 203.592.4788
www.m-d-l-a.com

CLIENT
BERKELEY PARTNERS
1 WASHINGTON MALL, SUITE 701
BOSTON, MA

PROJECT
WAREHOUSE / INDUSTRIAL DEV.
100 / 200 FINANCIAL PARK
FRANKLIN, MA

STAMP
MASSACHUSETTS
MICHAEL D'ANGELO
NO. 4096
REGISTERED LANDSCAPE ARCHITECT

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

PHOTOMETRIC PLAN

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L120

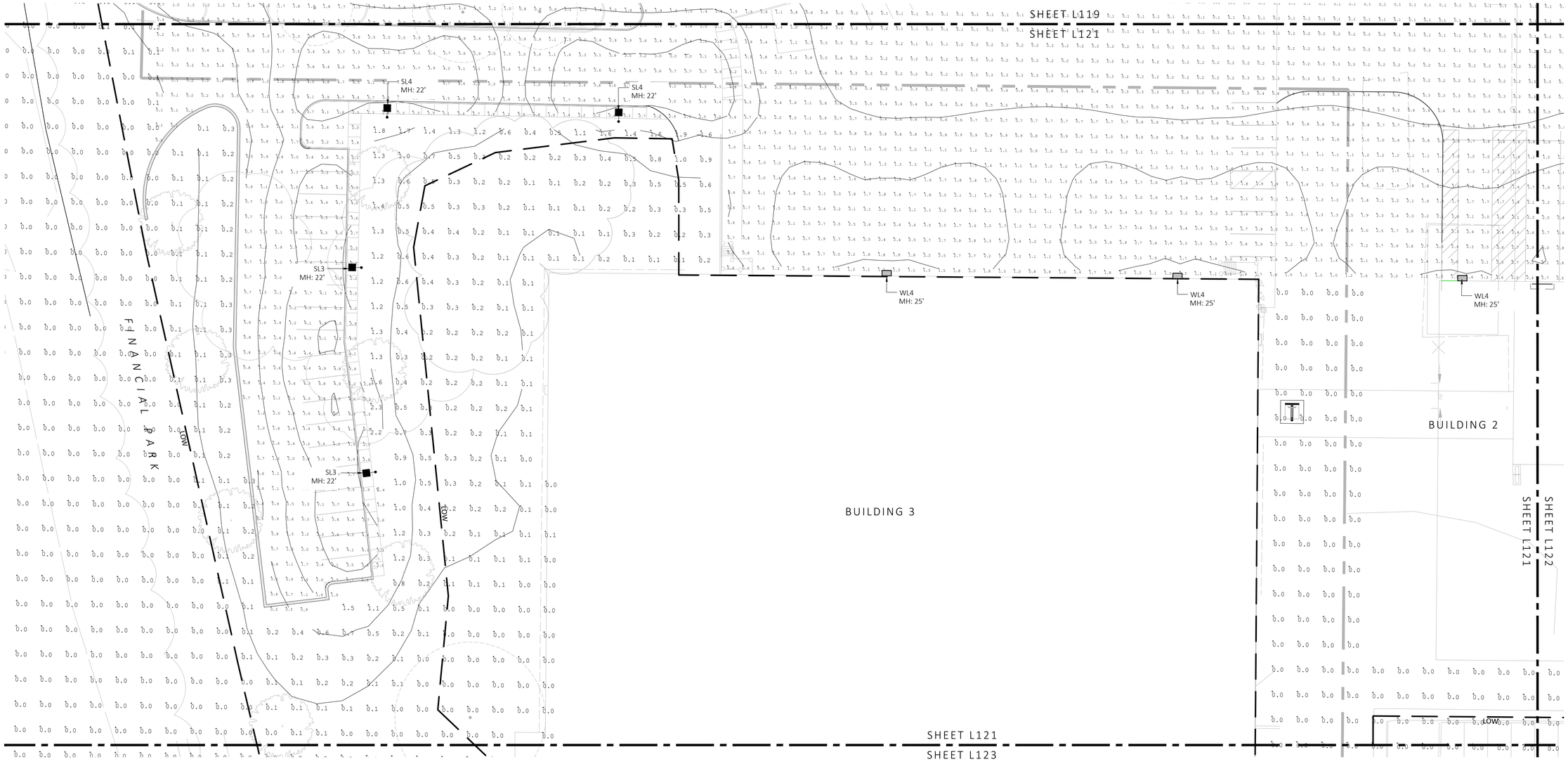
plot date: 8/25/2023

FOR PERMIT ONLY
NOT FOR CONSTRUCTION

LIGHT SCHEDULE						
SYMBOL	LABEL	MODEL	MOUNT	ARRANGEMENT	OPTIONS	REP
	BL1	ARCLUCE KLOU180 BOLLARD RWL1-48L-25-3K7-4W-U	CONCRETE FOOTING; KEEP 3" ABOVE GRADE	PEDESTRIAN BOLLARD	COLOR: GRAY	ILLUMINATE 617-947-8996 STEVE PRUDHOMME
SL3	SL3	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-3-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4	SL4	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4-2	SL4-2	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-2-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	BACK BACK	COLOR: BLK	
	WL1	BEACON RATIO WALL FIXTURE RWL1-48L-25-3K7-4W-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL2	BEACON RATIO WALL FIXTURE RWL2-160L-135-3K7-4-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL3	DL-ES-15-Q-30K-HC-24-A-DL-ALUM-U-8	ALUMINUM CHANNEL	RECESSED WALL LIGHT		

SUBMIT CUT SHEETS FOR APPROVAL; SEE PHOTOMETRIC PLAN PROVIDED WITH THIS DRAWING SET FOR MORE INFORMATION.

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CHAMPAGNE BUILDING	Illuminance	Fc	1.72	4.7	0.1	17.20	47.00
PARKING AREAS	Illuminance	Fc	1.70	30.9	0.0	N.A.	N.A.
SPILL LIGHT	Illuminance	Fc	0.10	29.6	0.0	N.A.	N.A.



1 PHOTOMETRIC PLAN
SCALE: 1" = 20'-0"

0 10 20 40
SCALE IN FEET

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STAMP
MASSACHUSETTS
MICHAEL D'ANGELO
NO. 4095
REGISTERED LANDSCAPE ARCHITECT

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

PHOTOMETRIC PLAN

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L121

SHEET 22 OF 24

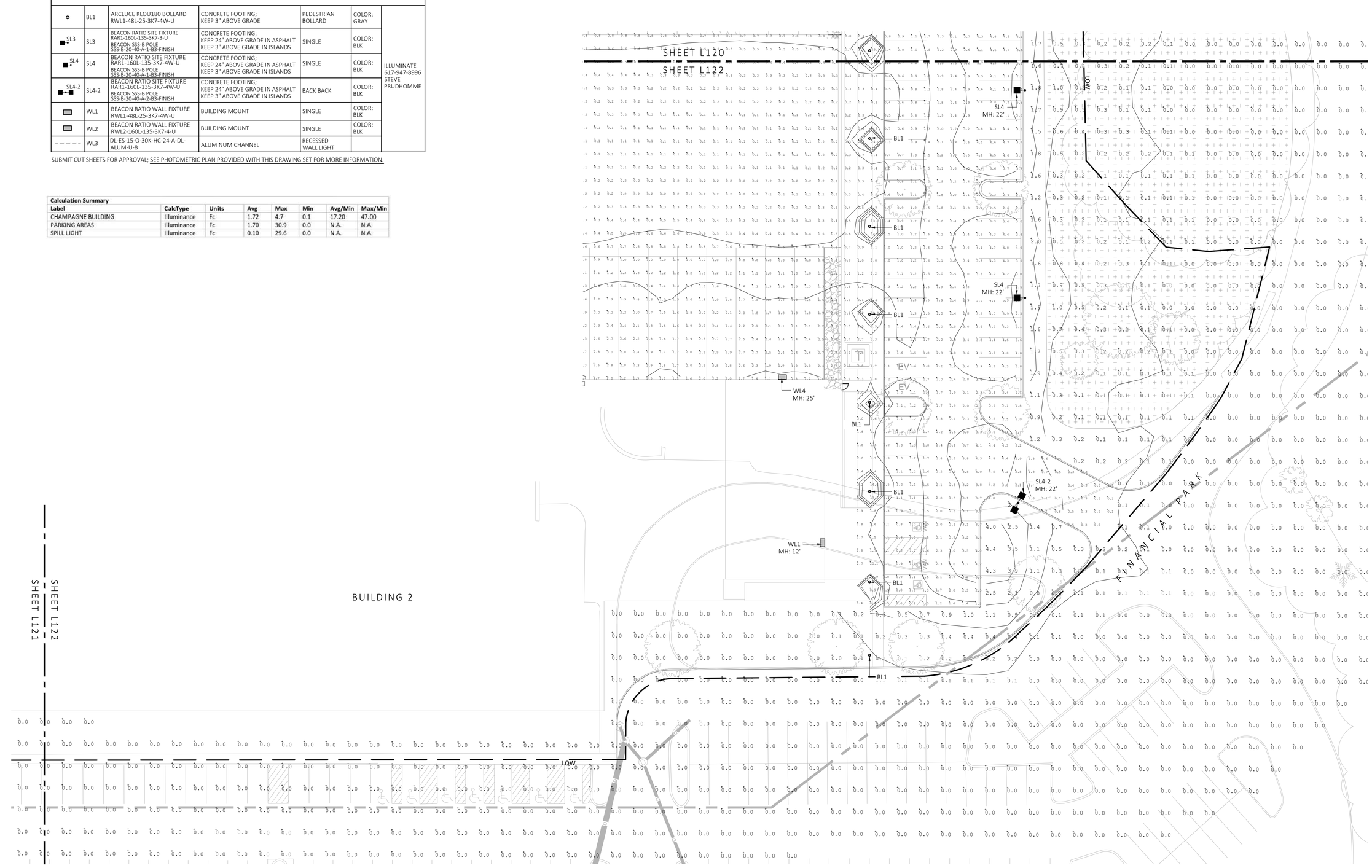
plot date: 8/25/2023

FOR PERMIT ONLY
NOT FOR CONSTRUCTION

LIGHT SCHEDULE						
SYMBOL	LABEL	MODEL	MOUNT	ARRANGEMENT	OPTIONS	REP
○	BL1	ARCLUCE KLOU180 BOLLARD RWL1-48L-25-3K7-4W-U	CONCRETE FOOTING; KEEP 3" ABOVE GRADE	PEDESTRIAN BOLLARD	COLOR: GRAY	ILLUMINATE 617-947-8996 STEVE PRUDHOMME
SL3	SL3	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-3-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4	SL4	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4-2	SL4-2	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-2-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	BACK BACK	COLOR: BLK	
▭	WL1	BEACON RATIO WALL FIXTURE RWL1-48L-25-3K7-4W-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
▭	WL2	BEACON RATIO WALL FIXTURE RWL2-160L-135-3K7-4-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
- - -	WL3	DL-ES-15-O-30K-HC-24-A-DL-ALUM-U-8	ALUMINUM CHANNEL	RECESSED WALL LIGHT		

SUBMIT CUT SHEETS FOR APPROVAL; SEE PHOTOMETRIC PLAN PROVIDED WITH THIS DRAWING SET FOR MORE INFORMATION.

Calculation Summary							
Label	**CalcType**	**Units**	**Avg**	**Max**	**Min**	**Avg/Min**	**Max/Min**
CHAMPAGNE BUILDING	Illuminance	Fc	1.72	4.7	0.1	17.20	47.00
PARKING AREAS	Illuminance	Fc	1.70	30.9	0.0	N.A.	N.A.
SPILL LIGHT	Illuminance	Fc	0.10	29.6	0.0	N.A.	N.A.



1 PHOTOMETRIC PLAN
SCALE: 1" = 20'-0"

0 10 20 40
SCALE IN FEET

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FRANKLIN, MA

STAMP
MASSACHUSETTS
MICHAEL D'ANGELO
NO. 4009
REGISTERED LANDSCAPE ARCHITECT

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

PHOTOMETRIC PLAN

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L122

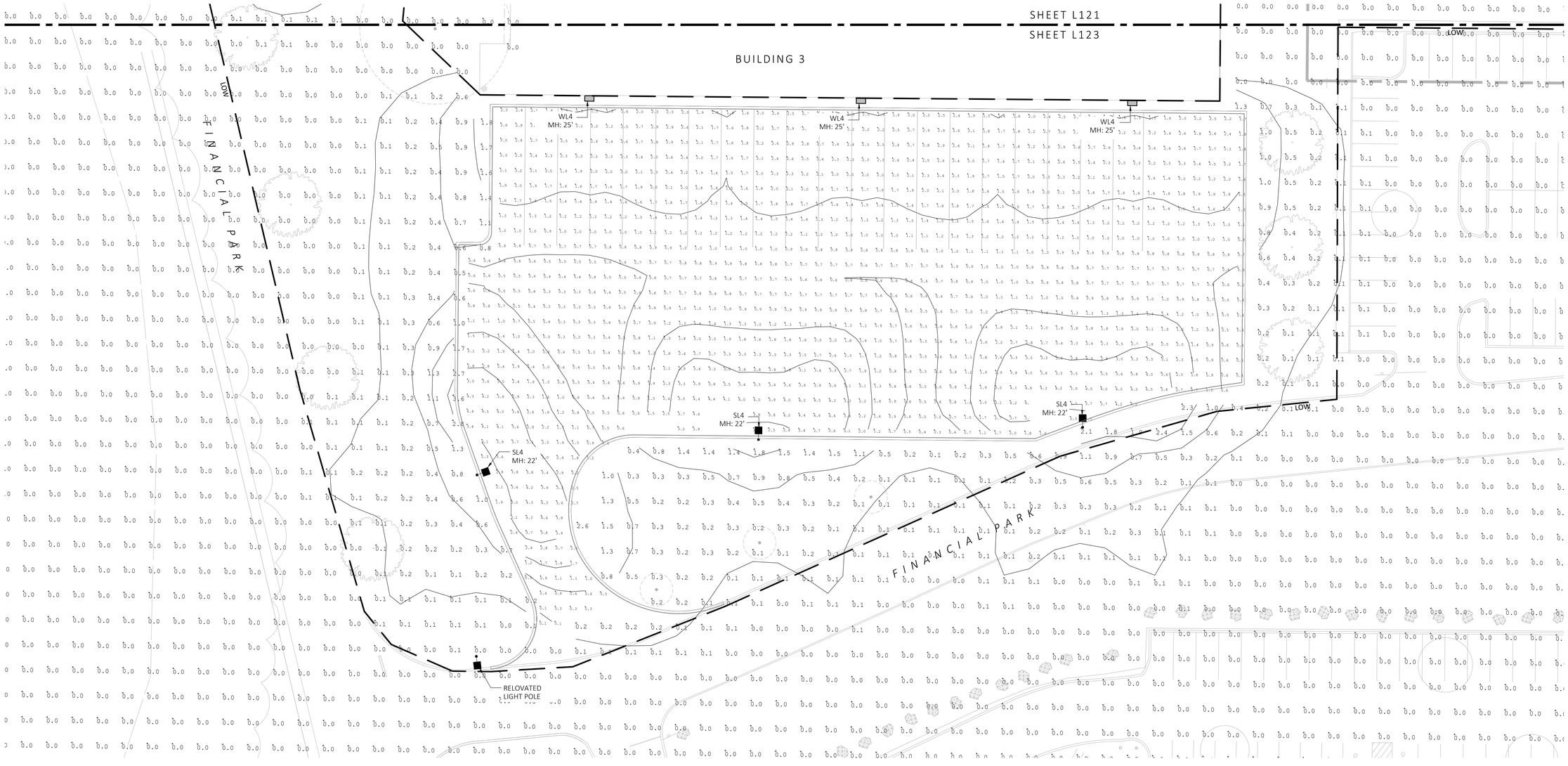
plot date: 8/25/2023

FOR PERMIT ONLY
NOT FOR CONSTRUCTION

LIGHT SCHEDULE						
SYMBOL	LABEL	MODEL	MOUNT	ARRANGEMENT	OPTIONS	REP
	BL1	ARCLUCE KLOU180 BOLLARD RWL1-48L-25-3K7-4W-U	CONCRETE FOOTING; KEEP 3" ABOVE GRADE	PEDESTRIAN BOLLARD	COLOR: GRAY	ILLUMINATE 617-947-8996 STEVE PRUDHOMME
SL3	SL3	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-3-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4	SL4	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-1-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	SINGLE	COLOR: BLK	
SL4-2	SL4-2	BEACON RATIO SITE FIXTURE RAR1-160L-135-3K7-4W-U BEACON SSS-B POLE SSS-B-20-40-A-2-B3-FINISH	CONCRETE FOOTING; KEEP 24" ABOVE GRADE IN ASPHALT KEEP 3" ABOVE GRADE IN ISLANDS	BACK BACK	COLOR: BLK	
	WL1	BEACON RATIO WALL FIXTURE RWL1-48L-25-3K7-4W-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL2	BEACON RATIO WALL FIXTURE RWL2-160L-135-3K7-4-U	BUILDING MOUNT	SINGLE	COLOR: BLK	
	WL3	DL-ES-15-O-30K-HC-24-A-DL-ALUM-U-8	ALUMINUM CHANNEL	RECESSED WALL LIGHT		

SUBMIT CUT SHEETS FOR APPROVAL; SEE PHOTOMETRIC PLAN PROVIDED WITH THIS DRAWING SET FOR MORE INFORMATION.

Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CHAMPAGNE BUILDING	Illuminance	Fc	1.72	4.7	0.1	17.20	47.00
PARKING AREAS	Illuminance	Fc	1.70	30.9	0.0	N.A.	N.A.
SPILL LIGHT	Illuminance	Fc	0.10	29.6	0.0	N.A.	N.A.



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SCALE: 1" = 20'-0"

0 10 20 40
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100 / 200 FINANCIAL PARK
FRANKLIN, MA

STAMP
MASSACHUSETTS
MICHAEL D'ANGELO
NO. 4006
REGISTERED LANDSCAPE ARCHITECT

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

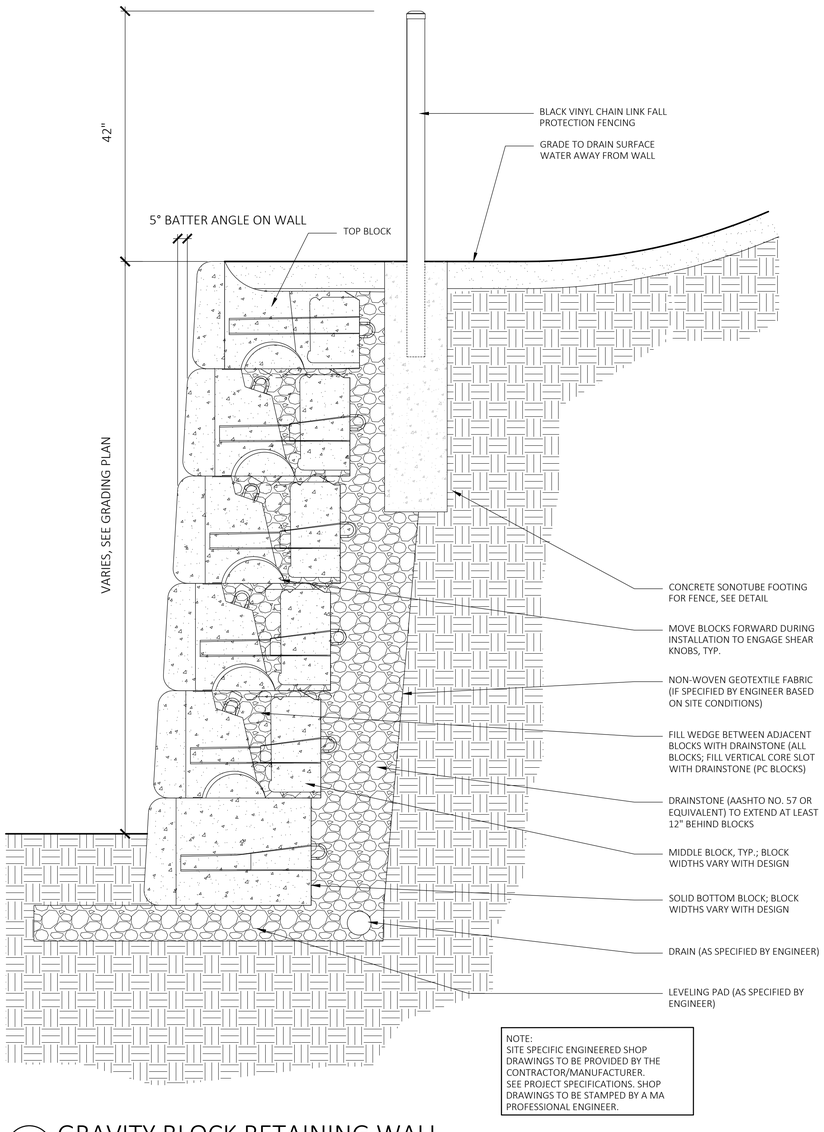
PHOTOMETRIC PLAN

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L123

SHEET 24 OF 24

plot date: 8/25/2023



NOTE:
SITE SPECIFIC ENGINEERED SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR/MANUFACTURER.
SEE PROJECT SPECIFICATIONS. SHOP DRAWINGS TO BE STAMPED BY A MA PROFESSIONAL ENGINEER.

1 GRAVITY BLOCK RETAINING WALL
SCALE: 1" = 1'-0"

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MDLA
MICHAEL D'ANGELO landscape architecture

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LANDSCAPE ARCHITECTURE LLC

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PROJECT
WAREHOUSE / INDUSTRIAL DEV.
100 / 200 FINANCIAL PARK
FRANKLIN, MA

STAMP
MASSACHUSETTS · MICHAEL D'ANGELO · NO. 4098 · REGISTERED LANDSCAPE ARCHITECT

REV. NO.	DATE	DESCRIPTION
	5/11/23	FOR PERMIT
1	7/17/23	RESPONSE TO COMMENTS
2	8/10/23	RESPONSE TO COMMENTS
3	8/25/23	RESPONSE TO COMMENTS

LANDSCAPE DETAILS

DRAWN: NC
CHECKED: AS NOTED
SCALE: AS NOTED
DATE: 5/11/2023

L124

SHEET 19 OF 24

plot date: 8/25/2023