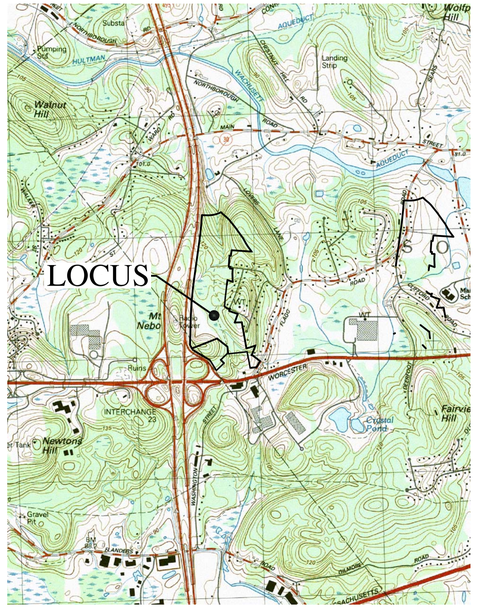


LOCUS MAP

SCALE: 1" = 2000'

COMPREHENSIVE PERMIT PLANS

Pursuant to Notice of Decision on a Use Variance, Town of Southborough Board of Appeals

FOR

PARK CENTRAL

IN

Southborough, Massachusetts
(Worcester County)

DATE: NOVEMBER 4, 2015

REVISED: JANUARY 6, 2016 - ANRAD
JANUARY 26, 2016 - ANRAD
APRIL 6, 2016 - NOI
AUGUST 15, 2016

SHEET LIST:

C0.00-C0.09	EXISTING CONDITIONS PLANS
C1.00-C1.04	PHASING PLANS
C2.00-C2.07	LAYOUT AND MATERIAL PLANS
C3.00-C3.07	GRADING AND DRAINAGE PLANS
C4.00-C4.07	UTILITY PLANS
C5.00-C5.11	PLANTING AND LIGHTING PLANS
C6.00-C6.10	DETAILS

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

_____
_____
_____
_____
_____

DATE: _____

PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
508.366.6506 (FAX)
WATERMANDESIGN.COM WDA@WDASSOC.COM

OWNER:

PARK CENTRAL LLC
259 Turnpike Road Suite 100
Southborough, Massachusetts 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES, LLC
259 Turnpike Road Suite 100
Southborough, Massachusetts 01772

FILE NO.: 0978600
DWG. NO.: 0978601E

NOTES:

1. EXISTING CONDITIONS INFORMATION IS TAKEN FROM ELECTRONIC FILES SUPPLIED BY CONNORSTONE ENGINEERING, INC., NORTHBOROUGH, MA. ELEVATIONS REFER TO NAVD 1988.
2. WETLAND RESOURCE AREAS WERE DELINEATED BY GODDARD CONSULTING, LLC AND SURVEY LOCATED BY WATERMAN DESIGN ASSOCIATES.
3. LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND ARE APPROXIMATE AND ASSUMED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITIES PRESENT AT THE SITE THAT ARE NOT DEPICTED HEREON. BEFORE COMMENCING SITE WORK, CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-344-7233 TO ACCURATELY LOCATE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY DEPARTMENTS / COMPANIES OF ANY UTILITIES DAMAGED DURING CONSTRUCTION. ANY COSTS RELATED TO THE REPAIR OF UTILITIES DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITY SHALL BE THE CONTRACTOR'S RESPONSIBILITY. NO EXCAVATION SHALL BE PERFORMED UNTIL ALL UTILITY COMPANIES HAVE BEEN NOTIFIED.
4. NO APPROXIMATE LIMITS OF ZONE A (AREAS OF 100-YEAR FLOOD) AND ZONE C (AREAS OF MINIMAL FLOODING) EXIST WITHIN THE SUBJECT PARCELS AS COMPILED FROM NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP NUMBERS 25027C 0662F & 25027C 0666F, EFFECTIVE JULY 16, 2014.
5. TEST PIT LOCATIONS APPROXIMATE BASED ON GPS COORDINATES PROVIDED BY OTHERS.

OWNER OF RECORD:

PARK CENTRAL LLC
C/O CAPITAL GROUP PROPERTIES
259 TURNPIKE ROAD, SUITE 100
SOUTHBOROUGH, MA 01772

ASSESSORS MAP REFERENCES:

MAP 24 PARCEL 3
MAP 25 PARCEL 5
MAP 33 PARCEL 4
MAP 41 PARCEL 4A

DEED REFERENCE:

DEED BOOK 51568 PAGE 81

FIRM CLASSIFICATION:

FLOOD INSURANCE RATE MAP NUMBERS
25027C 0662F & 25027C 0666F
EFFECTIVE JULY 16, 2014

ZONING CLASSIFICATIONS:

RA – RESIDENCE A DISTRICT

MINIMUM LOT AREA:	43,560 S.F.
MINIMUM LOT FRONTAGE:	150 FEET
MINIMUM FRONT YARD:	35 FEET
MINIMUM OTHER STREET:	35 FEET
MINIMUM SIDE YARD:	25 FEET**
MINIMUM REAR YARD:	50 FEET**
MAXIMUM BUILDING HEIGHT:	35 FEET
MAXIMUM BUILDING STORIES:	2.5
MAXIMUM FLOOR AREA RATIO:	.18

ID – INDUSTRIAL DISTRICT

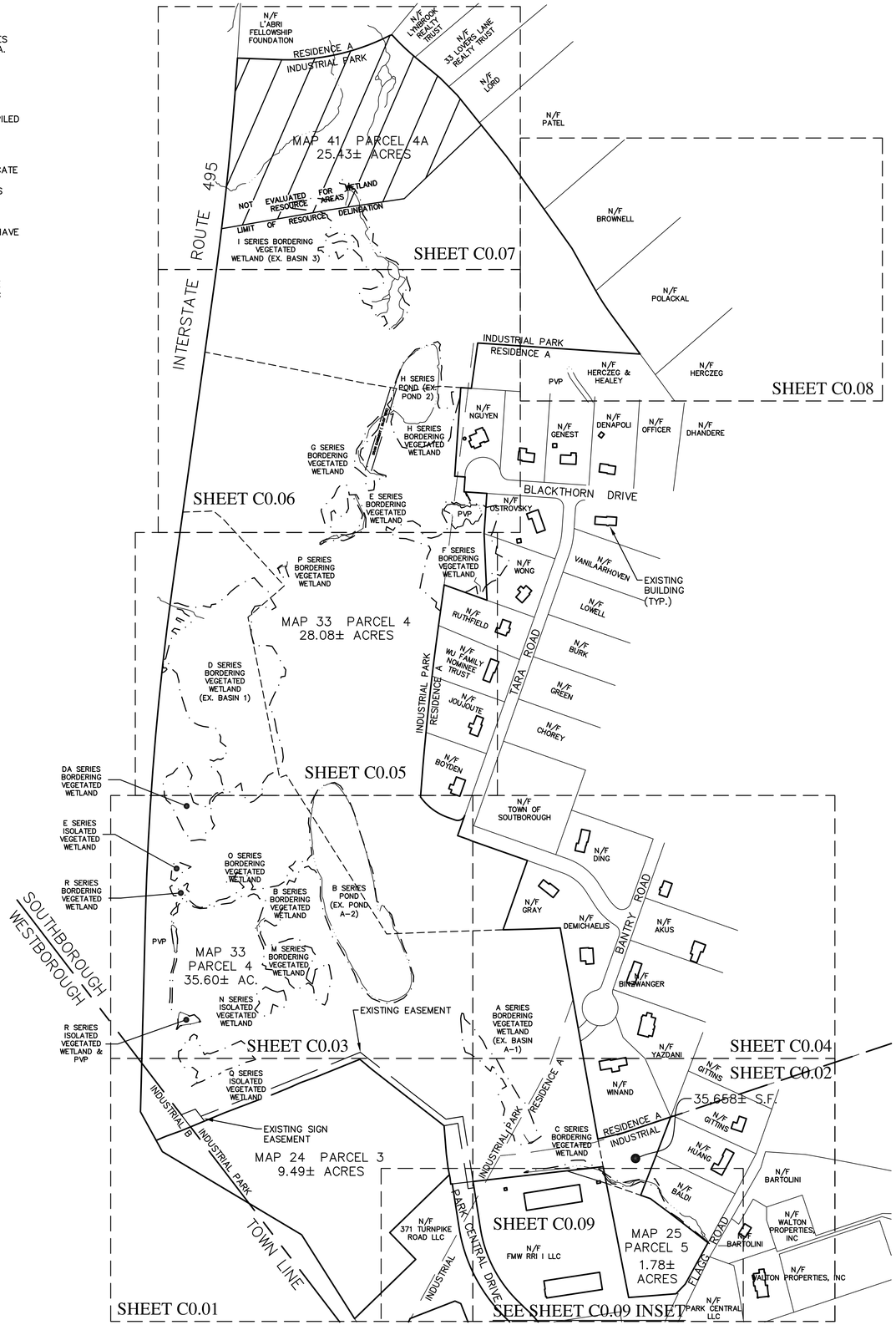
MINIMUM LOT AREA:	43,560 S.F.
MINIMUM LOT FRONTAGE:	200 FEET
MINIMUM FRONT YARD:	*50 FEET
MINIMUM OTHER STREET:	50 FEET
MINIMUM SIDE YARD:	50 FEET**
MINIMUM REAR YARD:	50 FEET**
MAXIMUM BUILDING HEIGHT:	45 FEET
MAXIMUM BUILDING STORIES:	3
MAXIMUM FLOOR AREA RATIO:	.60

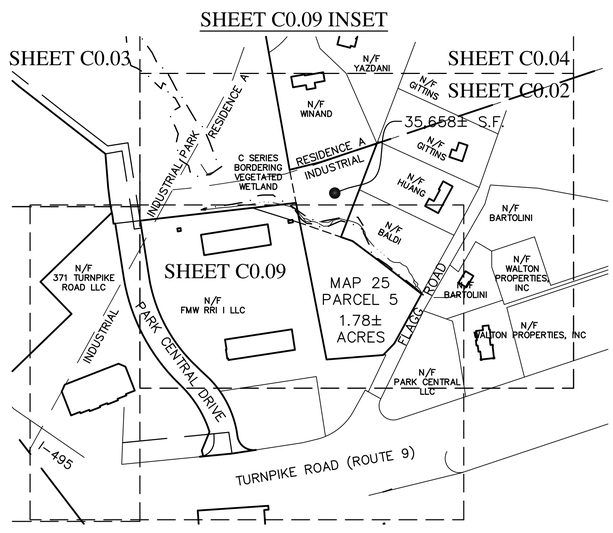
IP – INDUSTRIAL PARK DISTRICT

MINIMUM LOT AREA:	43,560 S.F.
MINIMUM LOT FRONTAGE:	200 FEET
MINIMUM FRONT YARD:	*50 FEET
MINIMUM OTHER STREET:	50 FEET
MINIMUM SIDE YARD:	50 FEET**
MINIMUM REAR YARD:	50 FEET**
MAXIMUM BUILDING HEIGHT:	45 FEET
MAXIMUM BUILDING STORIES:	3
MAXIMUM FLOOR AREA RATIO:	.60

*INCREASE BY (50%) IF ABUTTING WORCESTER TURNPIKE, ROUTE 9

**REFER TO ZBA DECISION, CONDITIONS 4.i & 12, ALLOWING BUILDING SETBACKS TO 40' AND PATIO SETBACKS TO 35'. DECISION RECORDED AT THE WDRD IN DEED BOOK 54060, PAGE 303.





LEGEND

DESCRIPTION	EXISTING
APPROX. BOUNDARY OF BORDERING VEGETATED WETLANDS	ABBVW
BOUNDARY OF BORDERING VEGETATED WETLANDS	BVW
BRUSH LINE	
BUILDING	
CATCH BASIN	□
CHAIN LINK FENCE	—X—X—
CONCRETE BOUND W/DRILL HOLE	⊡ CB/DH
CONTOUR LINE	410
CORRUGATED METAL PIPE	CMP
CURBING	
DECIDUOUS TREE	
DRAIN MANHOLE/DRAIN LINE	—D—Ⓓ—D—
DRILL HOLE	⊙ DH
EDGE OF PAVEMENT	
FLARED END	FES
FOUND	(FND.)
HYDRANT/WATER LINE	—W—W—
INVERT	INV.
IRON PIPE	○ IP
LAND COURT BOUND	⊡ LCB
LAND COURT DISC	○ LCD
LIGHT POLE	☼
NOT TO SCALE	N.T.S.
NOW OR FORMERLY	N/F
PLUS OR MINUS	±
REINFORCED CONCRETE PIPE	RCP
RETAINING WALL	
SIGN	S
SPOT ELEVATION	X 419.3
SQUARE FEET	S.F.
STONE BOUND W/LEAD PLUG	⊡ SB/LP
STONE WALL	
TREELINE	
UTILITY POLE	
WATER	
WETLAND FLAG	X WF D38
WETLANDS	
WETLANDS 100' BUFFER ZONE	100' BVW BZ

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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REV.	DATE	DESCRIPTION	APP'D
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D	04/06/16	NOTICE OF INTENT	
C	01/26/16	WETLAND PEER REVIEW	
B	01/06/16	WETLAND PEER REVIEW	
A		INITIAL ISSUE	

COMMONWEALTH OF MASSACHUSETTS
STEPHEN P. CONVERSE No 33585
PROFESSIONAL LAND SURVEYOR
8/15/16

PREPARED BY:
CIVIL ENGINEERS SURVEYORS LANDSCAPE ARCHITECTS PLANNERS
WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
508.366.6506 (fax)
watermandesign.com wda@wdassoc.com

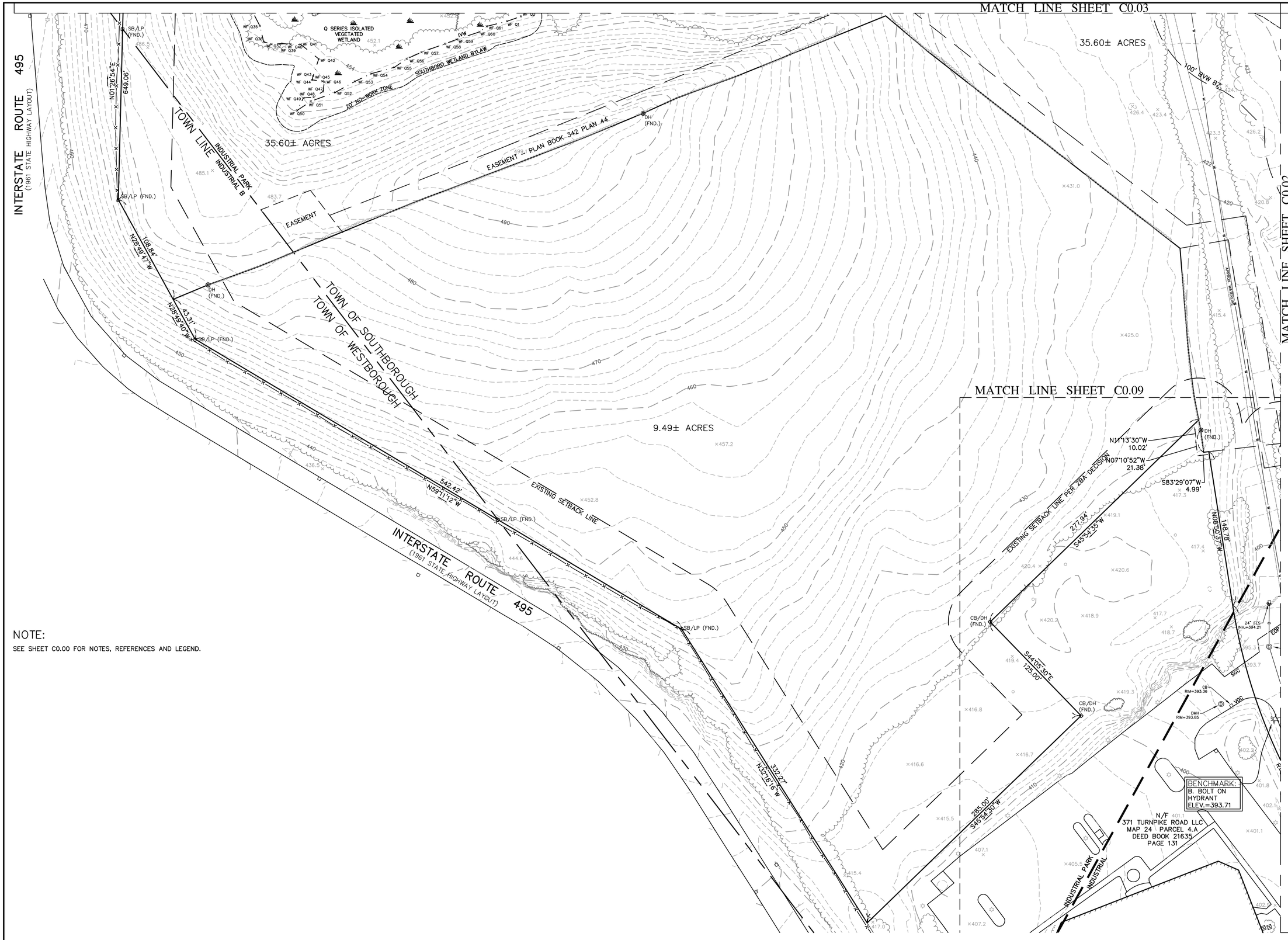
OWNER:
PARK CENTRAL LLC
c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:
CAPITAL GROUP PROPERTIES LLC
259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:
EXISTING CONDITIONS INDEX PLAN
PARK CENTRAL
Southborough, MA
(Middlesex County)

0 200 400 600

DATE: 10/27/15	SCALE: 1" = 200'
JOB NO.: 0978.00	RSCH. BY: SPC FIELD BY: SPC/JRZ CALC. BY: SPC DWN. BY: JRZ CHK'D. BY: SPC
FILE NO.: 0978001	
DRAWING NO.: 0978002E	SHEET: C0.00



NOTE:

SEE SHEET C0.00 FOR NOTES, REFERENCES AND LEGEND.

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

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MATCH LINE SHEET C0.02

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COMMONWEALTH OF MASSACHUSETTS
STEPHEN P. CONVERSE No 33585
PROFESSIONAL LAND SURVEYOR
8/15/16

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watermandesign.com wda@wdassoc.com

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259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:
CAPITAL GROUP PROPERTIES LLC
259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:
EXISTING CONDITIONS PLAN

PARK CENTRAL

Southborough, MA
(Middlesex County)

0 40 80 120

DATE: 10/27/15	SCALE: 1" = 40'
JOB NO.: 0978.00	RSCH. BY: SPC FIELD BY: SPC/JRZ CALC. BY: SPC DWN. BY: JRZ CHK'D. BY: SPC
FILE NO.: 0978001	
DRAWING NO.: 0978003E	SHEET: C0.01

MATCH LINE SHEET C0.04

MATCH LINE SHEET C0.01

MATCH LINE SHEET C0.09

NOTE:
SEE SHEET C0.00 FOR NOTES, REFERENCES AND LEGEND.

35.60± ACRES

N/F
DAVID & KELLY WINAND
MAP 33 PARCEL 44
CERTIFICATE OF TITLE #15671
LAND COURT PLAN #2891-10
LOT 169

N/F
YAN HUANG
MAP 25 PARCEL 7
CERTIFICATE OF TITLE #16621
LAND COURT PLAN #2891E
LOT 11

N/F
PHILIP BALDI
MAP 25 PARCEL 6
CERTIFICATE OF TITLE #11494
LAND COURT PLAN #2891E
LOT 12

N/F
FMW RRI I LLC
MAP 24 PARCEL 4.B
DEED BOOK 48036 PAGE 382

1.78± ACRES

35,658± S.F.

EXISTING SETBACK LINE PER ZBA DECISION

EXISTING SETBACK LINE

R ZBA DECISION

S10°03'09"E 245.13'

S10°05'29"E 209.34'

N76°12'37"E 93.81'

RESIDENCE A
INDUSTRIAL
N71°29'44"E 165.31'

LCB (FND.)

S20°30'04"W 138.58'

S21°08'53"W 142.03'

S83°29'07"W 438.10'

N11°16'17"W 119.65'

S70°53'26"E 34.00'

S55°18'54"E 90.80'

S52°10'39"E 152.29'

S08°50'21"E 156.94'

N10°58'05"W 269.73'

S43°27'05"W 44.64'

S85°28'50"W 158.86'

S28°47'34"W 158.22'

L=318.89'
R=435.00'

R=385.00'
L=299.80'

R=437.71'
L=299.13'

100' BVW BZ

20' NO-WORK ZONE-
SOUTHBORO WETLAND BYLAW

A SERIES BORDERING VEGETATED WETLAND (EX. BASIN A-1)

C SERIES BORDERING VEGETATED WETLAND

EASEMENT
PLAN BOOK 336 PLAN 43

INDUSTRIAL PARK
INDUSTRIAL
RESIDENCE A

FLAGG ROAD
(PUBLIC ~ VARIABLE WIDTH)

BENCHMARK:
B. BOLT ON
HYDRANT
ELEV.=363.06

GATE

DMH RIM=393.75 INV. OUT=389.38

DMH RIM=390.24

CB RIM=382.97
DMH RIM=382.38

CB RIM=382.87

DMH RIM=380.53

DMH RIM=379.72

CB RIM=378.57

12" FES INV.=403.63

12" FES INV.=401.22

24" CMP INV.=356.40

24" CMP INV.=354.71

UP #43

UP #44

UP #44 1/2

DH (FND.)

EOP

EOW

GW

WB

SCC

WV

BVW

BANK

WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
508.366.6506 (fax)
watermandesign.com wda@wdassoc.com

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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D	04/06/16	NOTICE OF INTENT	
C	01/26/16	WETLAND PEER REVIEW	
B	01/06/16	WETLAND PEER REVIEW	
A	X	INITIAL ISSUE	

COMMONWEALTH OF MASSACHUSETTS
STEPHEN F. CONVERSE
No 33585
PROFESSIONAL LAND SURVEYOR
8/15/16

PREPARED BY:

OWNER:
PARK CENTRAL LLC
c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:
CAPITAL GROUP PROPERTIES LLC
259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:
EXISTING CONDITIONS PLAN

PARK CENTRAL

Southborough, MA
(Middlesex County)

0 40 80 120

DATE: 10/27/15	SCALE: 1" = 40'
JOB NO.: 0978.00	RSCH. BY: SPC FIELD BY: SPC/JRZ CALC. BY: SPC DWN. BY: JRZ CHK'D. BY: SPC
FILE NO.: 0978001	
DRAWING NO.: 0978004E	SHEET: C0.02

MATCH LINE SHEET C0.05

INTERSTATE ROUTE 495
(1961 STATE HIGHWAY LAYOUT)

R=9863.00'
L=1106.59'

100' BVW BZ

CB/LP (FND.)

EXISTING SETBACK LINE

DENSE TREES

TOWN OF SOUTHBOROUGH
TOWN OF WESTBOROUGH

N01°25'54"E
649.06'

DA SERIES BORDERING VEGETATED WETLAND

BVW

100' BUFFER TO IVW – SOUTHBORO WETLAND BYLAW

20' NO-WORK ZONE-SOUTHBORO WETLAND BYLAW

E SERIES ISOLATED VEGETATED WETLAND

R SERIES BORDERING VEGETATED WETLAND

PVP

R SERIES ISOLATED VEGETATED WETLAND & PVP

IVW

Q SERIES ISOLATED VEGETATED WETLAND

O SERIES BORDERING VEGETATED WETLAND

B SERIES BORDERING VEGETATED WETLAND

35.60± ACRES

M SERIES BORDERING VEGETATED WETLAND

N SERIES ISOLATED VEGETATED WETLAND

WETLAND

POND

B SERIES POND (EX. POND A-2)

BANK OF POND

APPROX. WATERLINE

APPROX. 12" AC WATER

28.08± ACRES

Rad 89.05'
L=15.51'

L=39.27'
R=25.00'

26.73'
S70°37'25"E

S19°22'03"W
27.74'

TARA ROAD
PUBLIC ~ 40' WIDE

8"x12" RED.

CB/DH (FND.)

40.00'
S70°37'25"E

L=10.09'
R=51.86'

BENCHMARK:
B. BOLT ON HYDRANT
ELEV.=433.03

15" FES
INV.=424.97

DRAIN INLET
RIM=428.06
INV. IN=424.8±
INV. OUT=424.2±

12" RCP

24" FES
INV.=417.49

A SERIES BORDERING VEGETATED WETLAND

NOTE:
SEE SHEET C0.00 FOR NOTES, REFERENCES AND LEGEND.

MATCH LINE SHEET C0.01

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SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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STEPHEN P. CONVERSE
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8/15/16

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FILE NO.: 0978001	
DRAWING NO.: 0978005E	SHEET: C0.03

NOTE:

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BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

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STEPHEN P. CONVERSE
No 33585
PROFESSIONAL LAND SURVEYOR
8/15/16

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FILE NO.: 0978001	
DRAWING NO.: 0978006E	SHEET: C0.04

MATCH LINE SHEET C0.06

NOTE:

SEE SHEET C0.00 FOR NOTES, REFERENCES AND LEGEND.

MATCH LINE SHEET C0.03

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

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COMMONWEALTH OF MASSACHUSETTS
STEPHEN F. CONVERSE No 33585
PROFESSIONAL LAND SURVEYOR
8/15/16

PREPARED BY:
CIVIL ENGINEERS · LAND SURVEYORS · ENVIRONMENTAL SCIENTISTS · LANDSCAPE ARCHITECTS · PLANNERS
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FILE NO.: 0978001	
DRAWING NO.: 0978007E	SHEET: C0.05

MATCH LINE SHEET C0.07

MATCH LINE SHEET 1.05

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
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DATE: _____

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C	01/26/16	WETLAND PEER REVIEW	
B	01/06/16	WETLAND PEER REVIEW	
A	X	INITIAL ISSUE	

COMMONWEALTH OF MASSACHUSETTS
STEPHEN P. CONVERSE
No 33588
PROFESSIONAL LAND SURVEYOR
8/15/16

MATCH LINE SHEET C0.08

PREPARED BY:

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watermandesign.com wda@wdassoc.com

OWNER:

PARK CENTRAL LLC

c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

EXISTING CONDITIONS PLAN

PARK CENTRAL

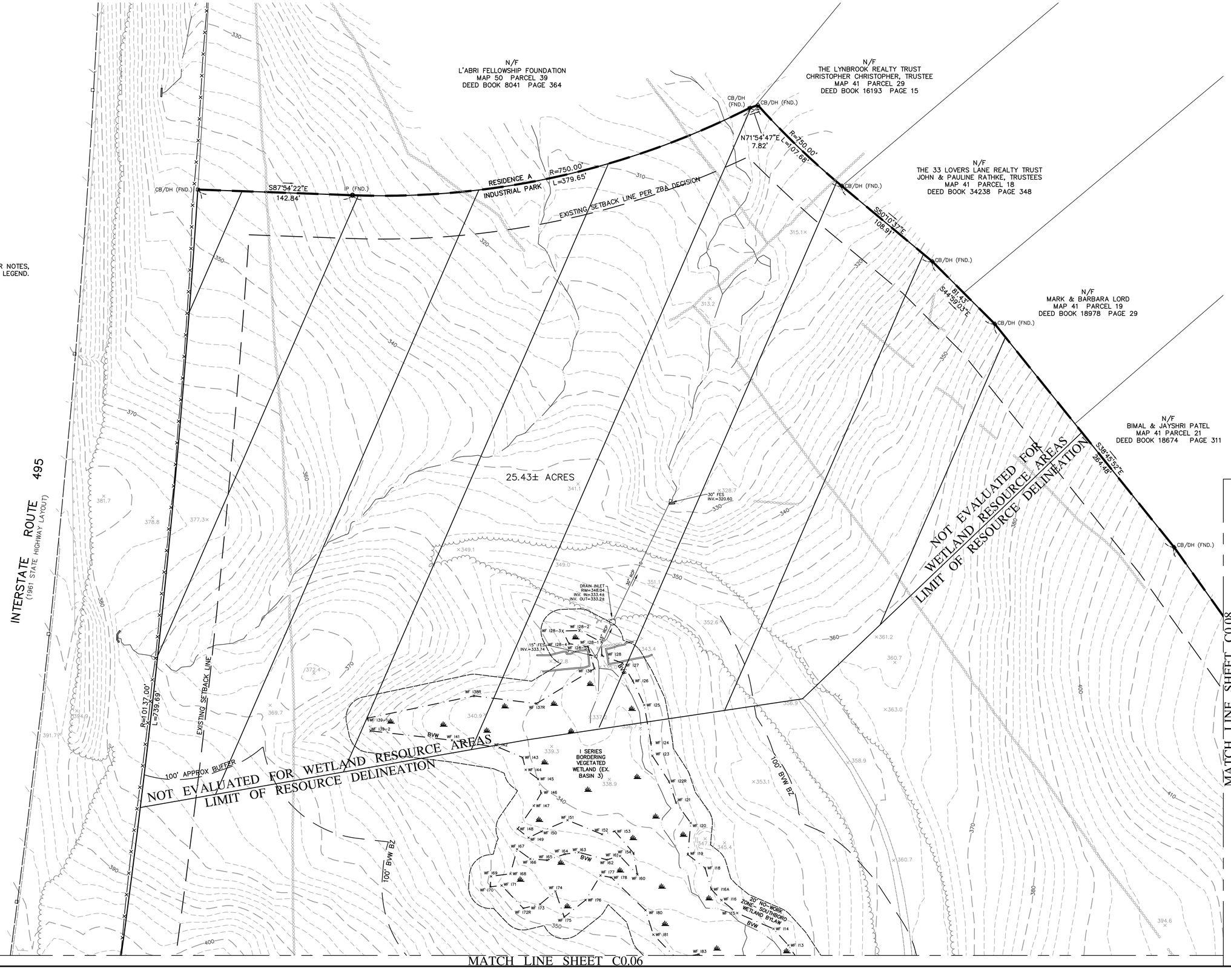
Southborough, MA
(Middlesex County)

0 40 80 120

DATE: 10/27/15	SCALE: 1" = 40'
JOB NO.: 0978.00	RSCH. BY: SPC FIELD BY: SPC/JRZ CALC. BY: SPC DWN. BY: JRZ CHK'D. BY: SPC
FILE NO.: 0978001	
DRAWING NO.: 0978008E	SHEET: C0.06

NOTE:

SEE SHEET C0.00 FOR NOTES, REFERENCES AND LEGEND.



CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

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COMMONWEALTH OF MASSACHUSETTS
STEPHEN P. CONVERSE No 33585 PROFESSIONAL LAND SURVEYOR
8/15/16

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PARK CENTRAL

Southborough, MA
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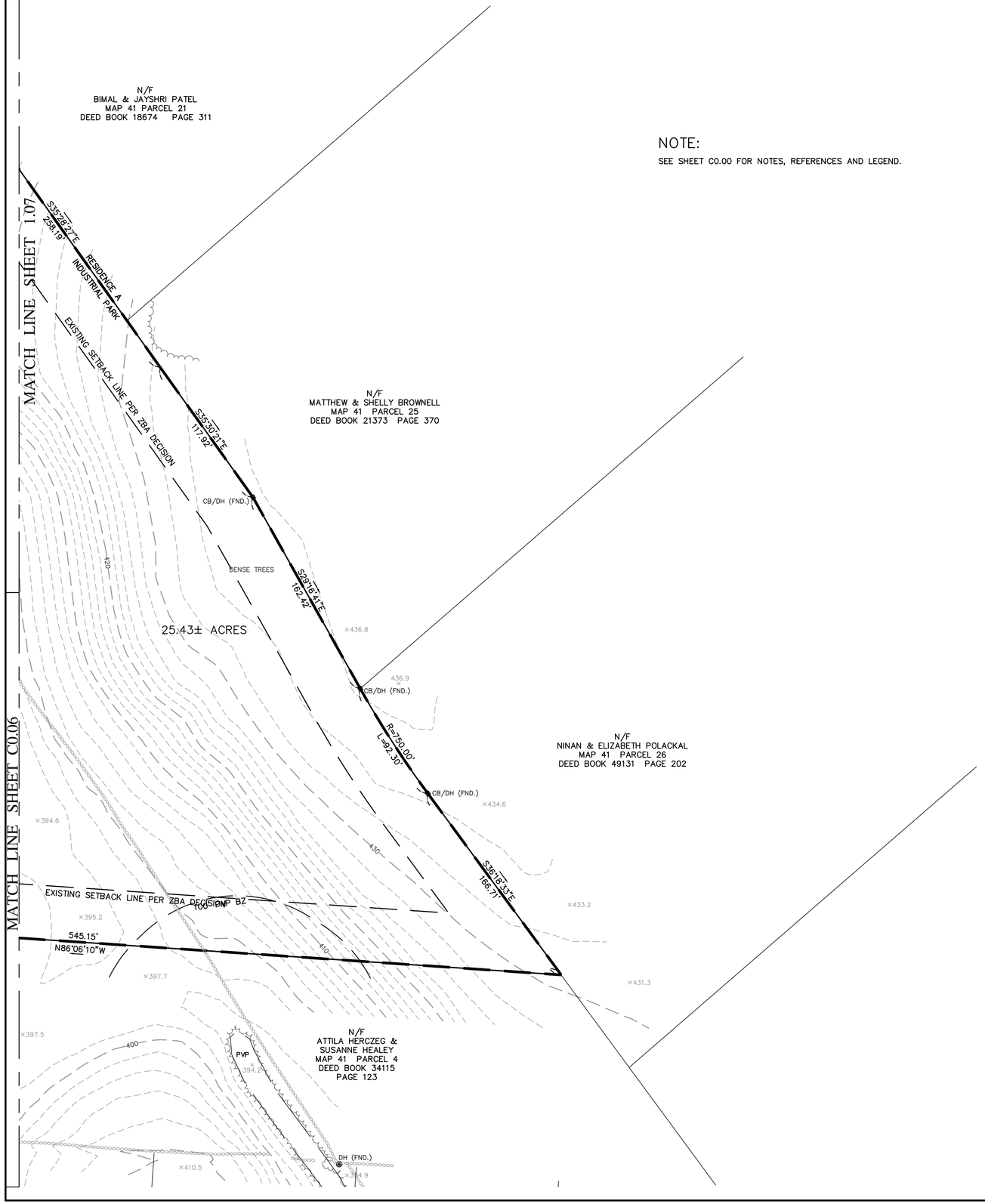
0 40 80 120

DATE: 10/27/15	SCALE: 1" = 40'
JOB NO.: 0978.00	RSCH. BY: SPC FIELD BY: SPC/JRZ
FILE NO.: 0978001	CALC. BY: SPC DWN. BY: JRZ CHK'D. BY: SPC
DRAWING NO.: 0978009E	SHEET: C0.07



NOTE:

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BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

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SOUTHBOROUGH ZONING
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COMMONWEALTH OF MASSACHUSETTS
STEPHEN P. CONVERSE
No 33585
PROFESSIONAL ENGINEER
8/15/16

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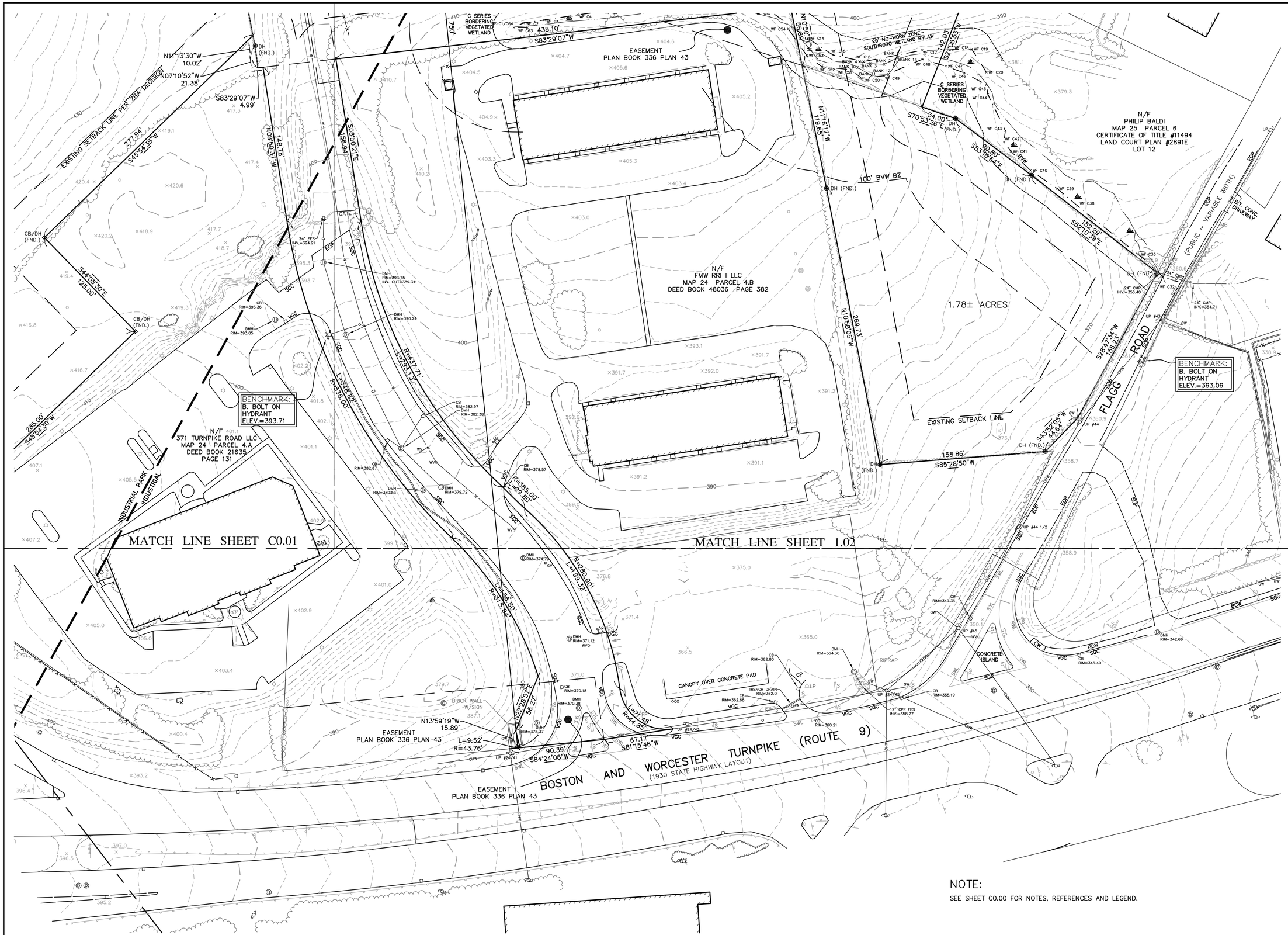
JOB NO.:	0978.00	RSCH. BY:	SPC
		FIELD BY:	SPC/JRZ
		CALC. BY:	SPC
FILE NO.:	0978001	DWN. BY:	JRZ
		CHK'D. BY:	SPC
DRAWING NO.:	0978010E	SHEET:	C0.08



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SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

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A	X	NOT ISSUED	

COMMONWEALTH OF MASSACHUSETTS
STEPHEN F. CONVERSE
No 33585
PROFESSIONAL LAND SURVEYOR
8/15/16

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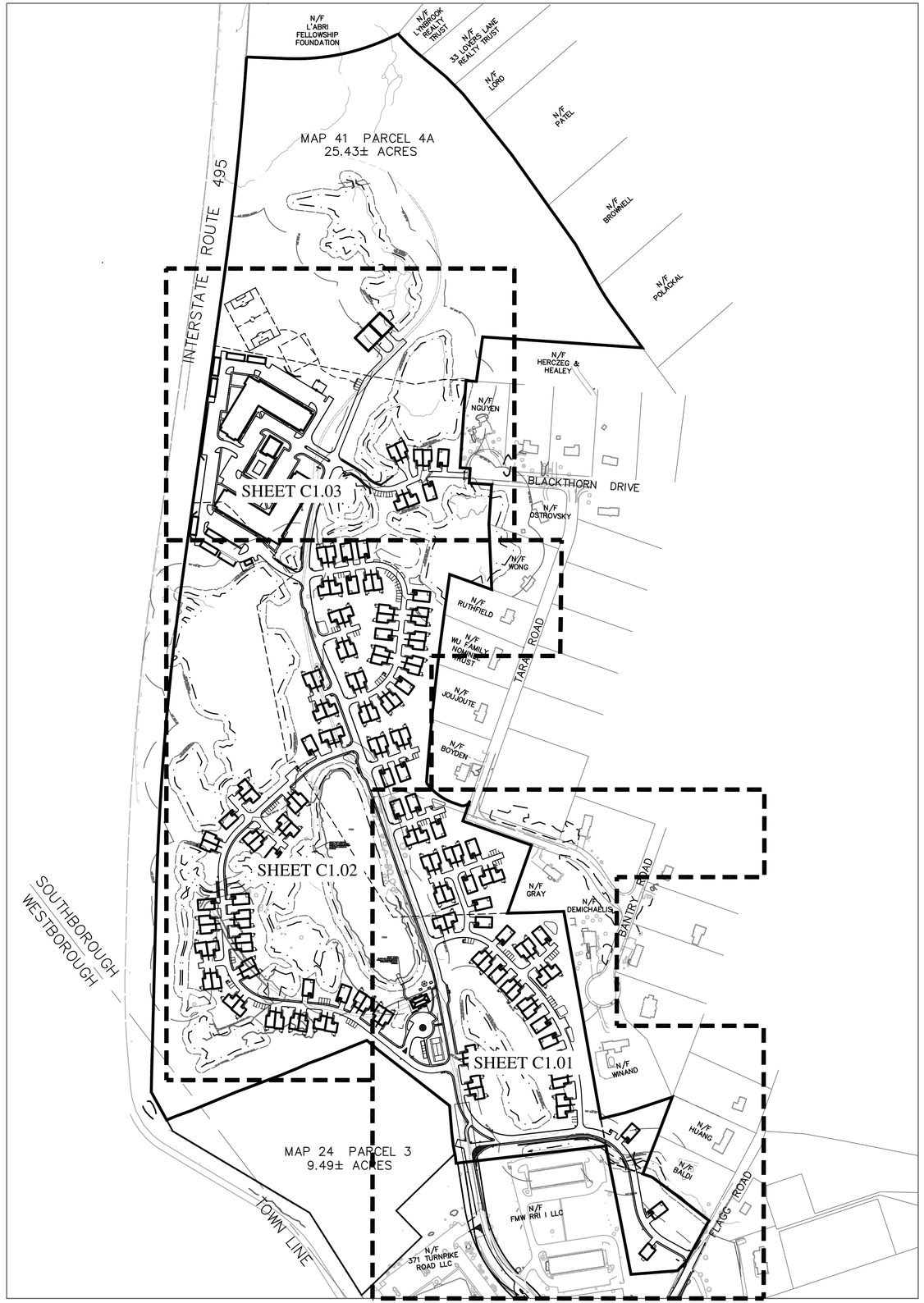
DRAWING NO.: 0978011E	SHEET: C0.09



BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

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C	01/26/16	NOT ISSUED	
B	01/06/16	NOT ISSUED	
A	11/04/15	PROGRESS SET	

MASSACHUSETTS LAWRENCE C. GREEN NO. 1981 REGISTERED LANDSCAPE ARCHITECT
5/15/16

COMMONWEALTH OF MASSACHUSETTS MICHAEL J. SOSKI No. 49866 REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

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Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

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TITLE:

PHASING INDEX

PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 200 400 600

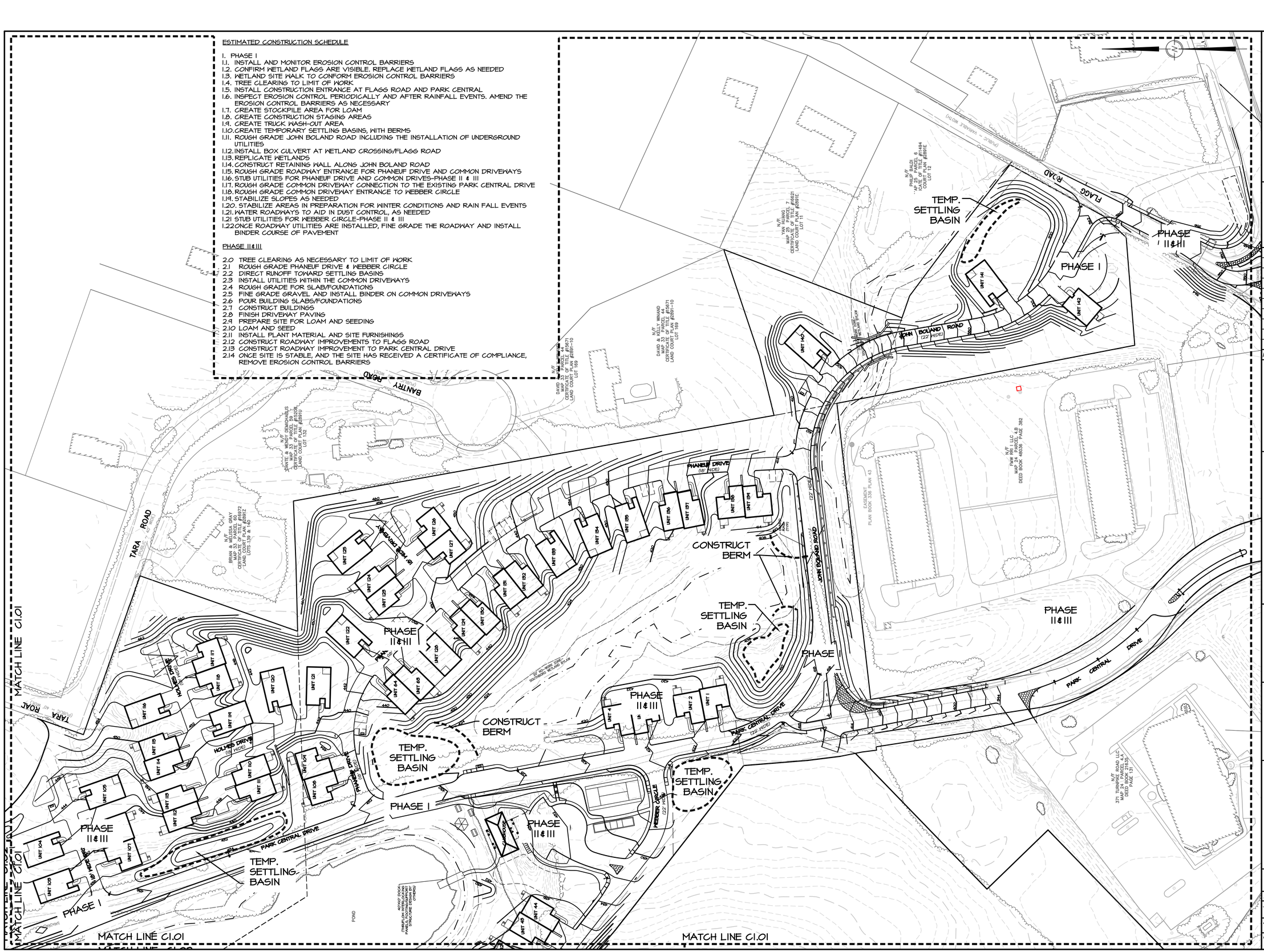
DATE: 4/06/16	SCALE: 1" = 200'
JOB NO.: 0978.00	DWN. BY: _____
FILE NO.: 0978400	CHK'D. BY: _____
DRAWING NO.: 0978414E	SHEET: C1.00

ESTIMATED CONSTRUCTION SCHEDULE

1. PHASE I
1.1. INSTALL AND MONITOR EROSION CONTROL BARRIERS
1.2. CONFIRM WETLAND FLAGS ARE VISIBLE. REPLACE WETLAND FLAGS AS NEEDED
1.3. WETLAND SITE WALK TO CONFORM EROSION CONTROL BARRIERS
1.4. TREE CLEARING TO LIMIT OF WORK
1.5. INSTALL CONSTRUCTION ENTRANCE AT FLAGG ROAD AND PARK CENTRAL
1.6. INSPECT EROSION CONTROL PERIODICALLY AND AFTER RAINFALL EVENTS. AMEND THE EROSION CONTROL BARRIERS AS NECESSARY
1.7. CREATE STOCKPILE AREA FOR LOAM
1.8. CREATE CONSTRUCTION STAGING AREAS
1.9. CREATE TRUCK WASH-OUT AREA
1.10. CREATE TEMPORARY SETTLING BASINS, WITH BERMS
1.11. ROUGH GRADE JOHN BOLAND ROAD INCLUDING THE INSTALLATION OF UNDERGROUND UTILITIES
1.12. INSTALL BOX CULVERT AT WETLAND CROSSING/FLAGG ROAD
1.13. REPLICATE WETLANDS
1.14. CONSTRUCT RETAINING WALL ALONG JOHN BOLAND ROAD
1.15. ROUGH GRADE ROADWAY ENTRANCE FOR PHANEUF DRIVE AND COMMON DRIVEWAYS
1.16. STUB UTILITIES FOR PHANEUF DRIVE AND COMMON DRIVES-PHASE II & III
1.17. ROUGH GRADE COMMON DRIVEWAY CONNECTION TO THE EXISTING PARK CENTRAL DRIVE
1.18. ROUGH GRADE COMMON DRIVEWAY ENTRANCE TO WEBBER CIRCLE
1.19. STABILIZE SLOPES AS NEEDED
1.20. STABILIZE AREAS IN PREPARATION FOR WINTER CONDITIONS AND RAIN FALL EVENTS
1.21. WATER ROADWAYS TO AID IN DUST CONTROL, AS NEEDED
1.21 STUB UTILITIES FOR WEBBER CIRCLE-PHASE II & III
1.22 ONCE ROADWAY UTILITIES ARE INSTALLED, FINE GRADE THE ROADWAY AND INSTALL BINDER COURSE OF PAVEMENT

PHASE II&III

2.0 TREE CLEARING AS NECESSARY TO LIMIT OF WORK
2.1 ROUGH GRADE PHANEUF DRIVE & WEBBER CIRCLE
2.2 DIRECT RUNOFF TOWARD SETTLING BASINS
2.3 INSTALL UTILITIES WITHIN THE COMMON DRIVEWAYS
2.4 ROUGH GRADE FOR SLAB/FOUNDATIONS
2.5 FINE GRADE GRAVEL AND INSTALL BINDER ON COMMON DRIVEWAYS
2.6 POUR BUILDING SLABS/FOUNDATIONS
2.7 CONSTRUCT BUILDINGS
2.8 FINISH DRIVEWAY PAVING
2.9 PREPARE SITE FOR LOAM AND SEEDING
2.10 LOAM AND SEED
2.11 INSTALL PLANT MATERIAL AND SITE FURNISHINGS
2.12 CONSTRUCT ROADWAY IMPROVEMENTS TO FLAGG ROAD
2.13 CONSTRUCT ROADWAY IMPROVEMENT TO PARK CENTRAL DRIVE
2.14 ONCE SITE IS STABLE, AND THE SITE HAS RECEIVED A CERTIFICATE OF COMPLIANCE, REMOVE EROSION CONTROL BARRIERS



CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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A	11/04/15	NOT ISSUED	

COMMONWEALTH OF MASSACHUSETTS LAWRENCE G. GREENE NO. 3564 REGISTERED LANDSCAPE ARCHITECT
12/15/16

COMMONWEALTH OF MASSACHUSETTS MICHAEL STOKES CIVIL No. 49980 REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

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PARK CENTRAL LLC

c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

PHASING PLAN

PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

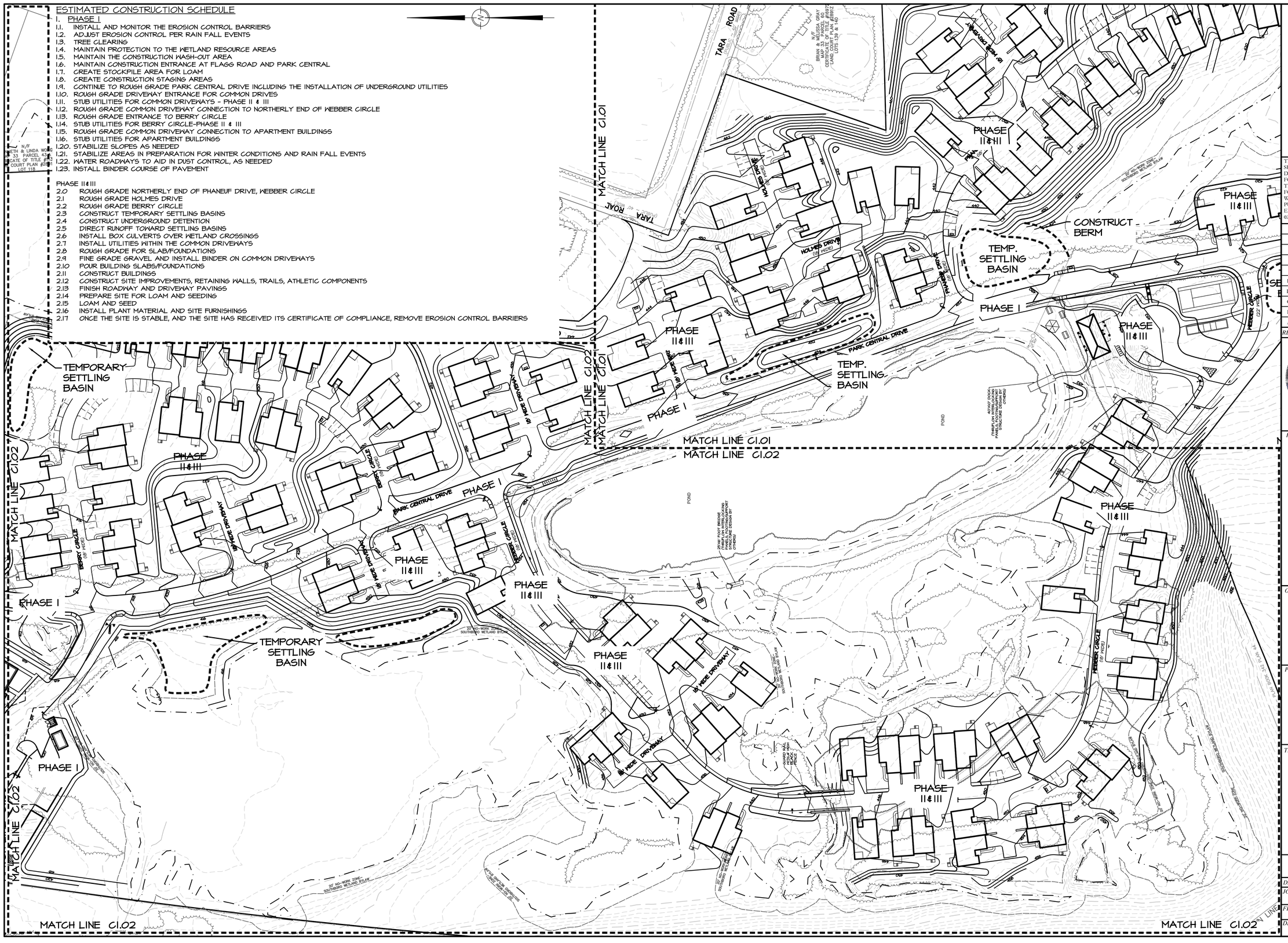
0 60 120 180

DATE: 4/06/16	SCALE: 1" = 60'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978400	CHK'D. BY:
DRAWING NO.: 0978411E	SHEET: C1.01

ESTIMATED CONSTRUCTION SCHEDULE

1. PHASE I
- 1.1. INSTALL AND MONITOR THE EROSION CONTROL BARRIERS
- 1.2. ADJUST EROSION CONTROL PER RAIN FALL EVENTS
- 1.3. TREE CLEARING
- 1.4. MAINTAIN PROTECTION TO THE WETLAND RESOURCE AREAS
- 1.5. MAINTAIN THE CONSTRUCTION WASH-OUT AREA
- 1.6. MAINTAIN CONSTRUCTION ENTRANCE AT FLAGG ROAD AND PARK CENTRAL
- 1.7. CREATE STOCKPILE AREA FOR LOAM
- 1.8. CREATE CONSTRUCTION STAGING AREAS
- 1.9. CONTINUE TO ROUGH GRADE PARK CENTRAL DRIVE INCLUDING THE INSTALLATION OF UNDERGROUND UTILITIES
- 1.10. ROUGH GRADE DRIVEWAY ENTRANCE FOR COMMON DRIVES
- 1.11. STUB UTILITIES FOR COMMON DRIVEWAYS - PHASE II & III
- 1.12. ROUGH GRADE COMMON DRIVEWAY CONNECTION TO NORTHERLY END OF WEBBER CIRCLE
- 1.13. ROUGH GRADE ENTRANCE TO BERRY CIRCLE
- 1.14. STUB UTILITIES FOR BERRY CIRCLE-PHASE II & III
- 1.15. ROUGH GRADE COMMON DRIVEWAY CONNECTION TO APARTMENT BUILDINGS
- 1.16. STUB UTILITIES FOR APARTMENT BUILDINGS
- 1.20. STABILIZE SLOPES AS NEEDED
- 1.21. STABILIZE AREAS IN PREPARATION FOR WINTER CONDITIONS AND RAIN FALL EVENTS
- 1.22. WATER ROADWAYS TO AID IN DUST CONTROL, AS NEEDED
- 1.23. INSTALL BINDER COURSE OF PAVEMENT

PHASE II&III
- 2.0 ROUGH GRADE NORTHERLY END OF PHANEUF DRIVE, WEBBER CIRCLE
- 2.1 ROUGH GRADE HOLMES DRIVE
- 2.2 ROUGH GRADE BERRY CIRCLE
- 2.3 CONSTRUCT TEMPORARY SETTLING BASINS
- 2.4 CONSTRUCT UNDERGROUND DETENTION
- 2.5 DIRECT RUNOFF TOWARD SETTLING BASINS
- 2.6 INSTALL BOX CULVERTS OVER WETLAND CROSSINGS
- 2.7 INSTALL UTILITIES WITHIN THE COMMON DRIVEWAYS
- 2.8 ROUGH GRADE FOR SLAB/FOUNDATIONS
- 2.9 FINE GRADE GRAVEL AND INSTALL BINDER ON COMMON DRIVEWAYS
- 2.10 POUR BUILDING SLABS/FOUNDATIONS
- 2.11 CONSTRUCT BUILDINGS
- 2.12 CONSTRUCT SITE IMPROVEMENTS, RETAINING WALLS, TRAILS, ATHLETIC COMPONENTS
- 2.13 FINISH ROADWAY AND DRIVEWAY PAVINGS
- 2.14 PREPARE SITE FOR LOAM AND SEEDING
- 2.15 LOAM AND SEED
- 2.16 INSTALL PLANT MATERIAL AND SITE FURNISHINGS
- 2.17 ONCE THE SITE IS STABLE, AND THE SITE HAS RECEIVED ITS CERTIFICATE OF COMPLIANCE, REMOVE EROSION CONTROL BARRIERS



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SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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0 60 120 180

DATE: 4/06/16	SCALE: 1" = 60'
JOB NO.: 0978.00	DWN. BY:
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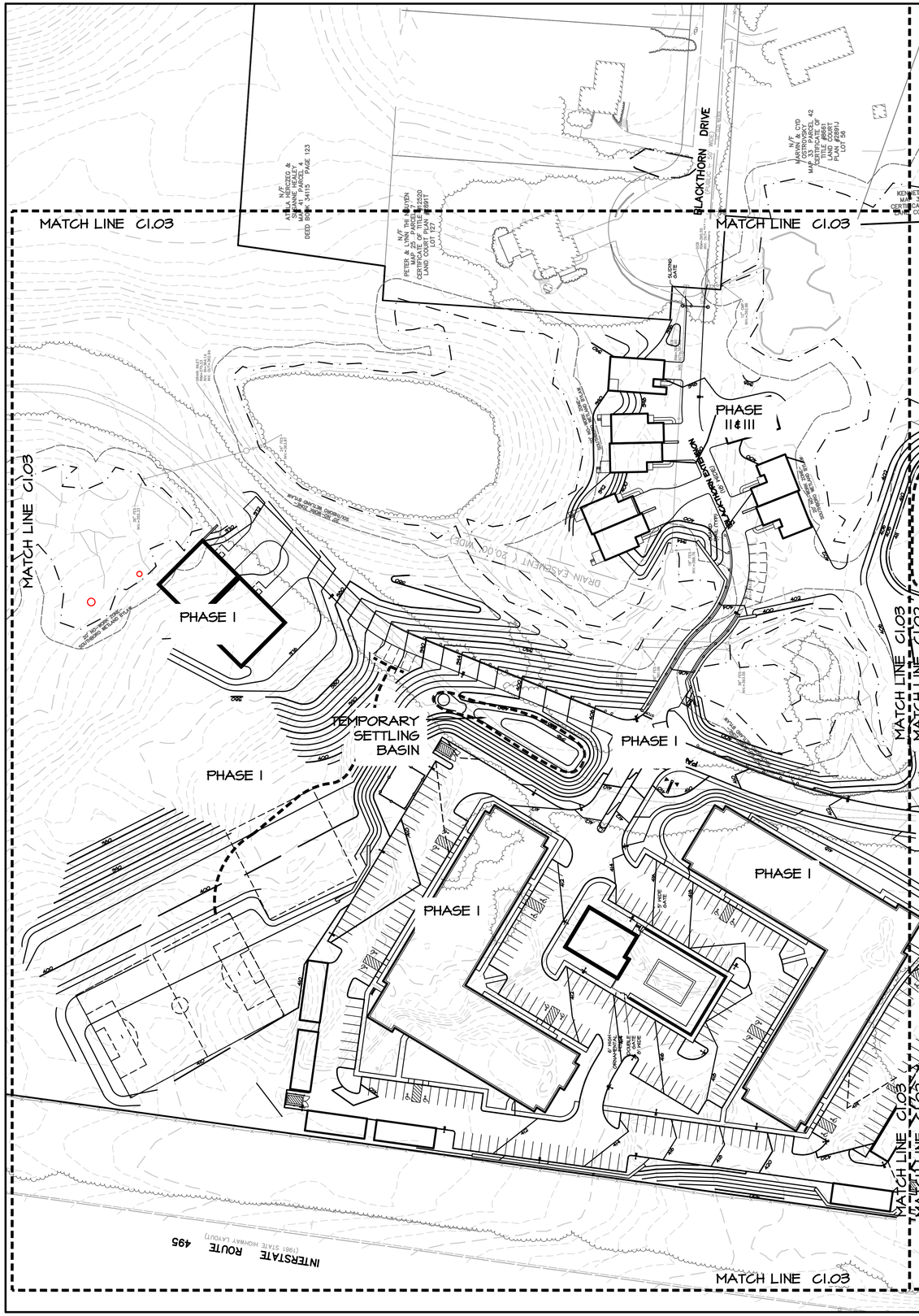
DRAWING NO.: 0978406E	SHEET: C1.02



ESTIMATED CONSTRUCTION SCHEDULE

1. PHASE I
- 1.1. INSTALL AND MONITOR EROSION CONTROL BARRIERS
- 1.2. ADJUST EROSION CONTROL PER RAINFALL EVENTS
- 1.3. TREE CLEARING TO LIMIT OF WORK
- 1.4. PROTECT WETLAND RESOURCE AREAS
- 1.5. MAINTAIN CONSTRUCTION ENTRANCE AT FLAGG ROAD AND PARK CENTRAL
- 1.6. MAINTAIN CONSTRUCTION WASH-OUT AREA
- 1.7. CREATE STOCKPILE AREA FOR LOAM
- 1.8. CREATE CONSTRUCTION STAGING AREAS
- 1.9. GRUB AND STRIP AREAS AS NECESSARY
- 1.10. DIRECT RUNOFF TOWARD TEMPORARY SETTLING BASINS
- 1.11. MANAGE DUST CONTROL
- 1.12. CONSTRUCT DETENTION BASINS BY 40-B SITE AND SEWER TREATMENT BUILDING
- 1.13. CONTINUE TO ROUGH GRADE PARK CENTRAL DRIVE INCLUDING THE INSTALLATION OF UNDERGROUND UTILITIES TO THE SEWER TREATMENT FACILITY
- 1.14. CONSTRUCT THE SEWER TREATMENT FACILITY AND THE LEACH FIELDS
- 1.15. GRADE OUT THE LEACH FIELDS AND CONNECT GRADING TO ROADWAYS
- 1.16. ROUGH GRADE ROADWAY ENTRANCE FOR COMMON DRIVES AND BLACKTHORN EXTENSION
- 1.17. ROUGH GRADE DRIVEWAY ENTRANCE TO APARTMENT SITE
- 1.18. STUB UTILITIES FOR BLACKTHORN EXTENSION
- 1.19. INSTALL UTILITIES FOR THE 40-B SITE
- 1.20. POUR BUILDING SLABS/FOUNDATIONS FOR THE 40-B SITE
- 1.21. CONSTRUCT BUILDINGS FOR THE 40-B SITE
- 1.22. CONSTRUCT SITE IMPROVEMENTS, TRAILS, ATHLETIC COMPONENTS FOR THE 40-B SITE
- 1.23. FINISH DRIVEWAY PAVING- FOR THE 40-B SITE
- 1.24. PREP. FOR LOAM AND SEEDING FOR THE 40-B SITE
- 1.25. CLEAN DRAINAGE STRUCTURES AND DETENTION BASINS FOR THE 40-B SITE
- 1.26. LOAM AND SEED FOR THE 40-B SITE
- 1.27. INSTALL PLANT MATERIAL AND SITE FURNISHINGS
- 1.28. WETLAND REPLICATION ADJACENT TO THE 40-B SITE
- 1.29. PAINT ON PAVEMENT MARKINGS
- 1.30. MAINTAIN AND MONITOR SLOPE STABILIZATION
- 1.31. WATER ROADWAY AS NEEDED TO AID IN DUST CONTROL
- 1.32. ONCE THE SITE IS STABLE, AND THE PROJECT HAS RECEIVED ITS CERTIFICATE OF COMPLIANCE, REMOVE THE EROSION CONTROL BARRIERS

PHASE II&III
- 2.0 INSTALL UTILITIES WITHIN BLACKTHORN EXTENSION
- 2.1 CREATE WETLAND REPLICATION
- 2.2 ROUGH GRADE BLACKTHORN EXTENSION
- 2.3 CONSTRUCT CONNECTION TO BLACKTHORN EXTENSION
- 2.4 DIRECT RUNOFF TOWARD SETTLING BASIN
- 2.5 CONSTRUCT RETAINING WALLS
- 2.6 ROUGH GRADE FOR SLAB/FOUNDATIONS
- 2.7 FINE GRADE GRAVEL AND INSTALL BINDER ON COMMON DRIVEWAYS
- 2.8 POUR BUILDING SLABS/FOUNDATIONS
- 2.9 CONSTRUCT BUILDINGS
- 2.10 CONSTRUCT SITE IMPROVEMENTS, TRAILS, ATHLETIC COMPONENTS
- 2.11 FINISH DRIVEWAY PAVING
- 2.12 PREP. FOR LOAM AND SEEDING
- 2.13 CLEAN DRAINAGE STRUCTURES
- 2.14 LOAM AND SEED
- 2.15 INSTALL PLANT MATERIAL AND SITE FURNISHINGS
- 2.16 ONCE SITE IS STABLE, AND THE PROJECT HAS RECEIVED ITS CERTIFICATE OF COMPLIANCE, REMOVE EROSION CONTROL BARRIERS

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SOUTHBOROUGH ZONING
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C	01/26/16	NOT ISSUED	
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A	11/04/15	NOT ISSUED	

MASSACHUSETTS — LAWRENCE C. GEORGE, JR. — NO. 1693 — REGISTERED LANDSCAPE ARCHITECT — 5/15/16

COMMONWEALTH OF MASSACHUSETTS — MICHAEL J. SCOTT — No. 40960 — REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

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OWNER:

PARK CENTRAL LLC

c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

PHASING PLAN

PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 50 100 150

DATE: 4/06/16	SCALE: 1" = 50'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978400	CHK'D. BY:
DRAWING NO.: 0978413E	SHEET: C1.03

NOTE: DURING AND AFTER THE CONSTRUCTION PERIOD, THE RESPONSIBLE PARTY FOR THE OPERATION AND MAINTENANCE OF THE SITE WILL BE THE PROPERTY OWNER / APPLICANT.

CONSTRUCTION PROCESS
A SIGN FOR ALL JOB NOTICES MUST BE POSTED CONSPICUOUSLY NEAR THE MAIN CONSTRUCTION ENTRANCE TO THE SITE.
BEFORE CONSTRUCTION BEGINS, SILTATION CONTROL BARRIERS CONSISTING OF SILT FENCING ATTACHED TO WOOD POSTS AND BACKED BY STAKED STRAW BALES WILL BE PLACED BETWEEN THE WORK AREAS AND RESOURCE AREAS. ADDITIONAL SILTATION CONTROL BARRIERS WILL BE INSTALLED AROUND THE PROPOSED DRAINAGE AND SEWAGE DISPOSAL SYSTEMS AND AT OTHER CRITICAL LOCATIONS.

THE CONTRACTOR WILL RECORD:
1) DATES WHEN MAJOR GRADING ACTIVITIES OCCUR,
2) DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
3) DATES WHEN STABILIZATION MEASURES ARE INITIATED.

THE TIME OF CONSTRUCTION REQUIRING THE MOST ATTENTION AND CARE OCCURS BETWEEN THE STRIPPING OF NATURAL OVERBURDEN AND THE STABILIZATION OF CONSTRUCTION AREAS. CUT AND FILL AREAS CREATE ADDITIONAL RISK BY INCREASING THE POSSIBILITY OF STORMWATER RUNOFF CAUSING EROSION.
THE CONTRACTOR WILL, AS MUCH AS POSSIBLE, LEAVE NATURAL COVER UNTOUCHED. THE CONTRACTOR WILL LIMIT TO THE SHORTEST TIME POSSIBLE THE TIME THAT SLOPES ARE EXPOSED. THE SLOPE STABILIZATION WILL BE COMPLETED AS EARLY AS CONSTRUCTION ACTIVITIES WILL ALLOW. DURING THE TIMES BETWEEN CLEARING AND LANDSCAPING, SLOPES WILL BE STABILIZED WITH A COMBINATION OF RIP-RAP, STRAW MULCH, TEMPORARY GRASS SEEDING AND OTHER MEASURES AS NECESSARY TO PREVENT ANY SIGNIFICANT EROSION OF SOILS.

WHEN NECESSARY, THE CONTRACTOR SHALL IMPLEMENT STRUCTURAL PRACTICES TO DIVERT FLOWS FROM EXPOSED SOILS, RETAIN/DETAIN FLOWS, OR OTHERWISE LIMIT RUNOFF AND THE DISCHARGE OF POLLUTANTS FROM EXPOSED AREAS OF THE SITE. PLACEMENT OF STRUCTURAL PRACTICES IN FLOOD PLAINS MUST BE AVOIDED TO THE DEGREE PRACTICABLE. STRUCTURAL MEASURES SHOULD BE PLACED ON UPLAND SOILS TO THE DEGREE PRACTICABLE. SUCH MEASURES MUST BE DESIGNED AND INSTALLED IN COMPLIANCE WITH APPLICABLE FEDERAL, STATE OR LOCAL REQUIREMENTS.
ALL SOLID MATERIALS SUCH AS WASHINGS FROM CONCRETE TRUCKS, BUILDING MATERIALS, OR SURPLUS CONCRETE, SHALL NOT BE DIRECTED TO ANY DRAINAGE SYSTEM OR WETLAND RESOURCE AREA.
PRINCETON CONSERVATION COMMISSION SHALL BE NOTIFIED WITHIN ONE BUSINESS DAY.
IN CONJUNCTION WITH THE SITE GRADING PROCESS, A NUMBER OF SEDIMENTATION CONTROL PROCEDURES WILL BE FOLLOWED. THE OBJECT OF THE PROCEDURES IS TO PREVENT THE EROSION OF SOILS AND THE TRANSPORT OF SEDIMENTS TO THE RESOURCE AREAS AND OFF THE SITE.

THE PROPONENT SHALL MEET THE US EPA CONSTRUCTION GENERAL PERMIT REQUIREMENTS AND SHALL COMPLY WITH THE ORDER OF CONDITIONS AND THESE PLANS.

STABILIZATION
TEMPORARY AND PERMANENT STABILIZATION OF DISTURBED SURFACES IS THE MOST RELIABLE METHOD OF PREVENTING THE EROSION AND TRANSPORT OF SITE SOILS. TOWARD THAT END, THE AREAS THAT ARE DISTURBED WILL BE PROVIDED TEMPORARY STABILIZATION WITHIN TWO WEEKS AFTER THE LAST DISTURBANCE WHEN:
1) WORK IS NOT COMPLETE IN THAT AREA;
2) WORK WILL REMAIN INCOMPLETE FOR A PERIOD OF TWO WEEKS OR MORE, AND
3) THE PLANTING SEASON HAS NOT BEEN REACHED IN AREAS WHICH WILL BE RE-VEGETATED.

PERMANENT STABILIZATION WILL TAKE PLACE WHEN:
4) WORK IS COMPLETE IN THAT AREA AND
5) THE PLANTING SEASON HAS BEEN REACHED AND AREAS CAN BE REVEGETATED.

BEST MANAGEMENT PRACTICES EMPLOYED
TO GUARD AGAINST THE TRANSPORT OF SOILS TO RESOURCE AREAS, SEVERAL BEST MANAGEMENT PRACTICES (BMPS), WILL BE EMPLOYED. SILTATION CONTROL BARRIERS, SEDIMENT SUMPS, STRAW CHECK DIKES, SWALES, TEMPORARY SETTLING BASINS, VEGETATIVE FILTER STRIPS, SITE ENTRANCE MAT, RIP-RAP OUTLET PROTECTION, FLOCCULANTS WITH JUTE MESH OR OTHER BIOMEDIA, WILL OR MAY BE USED ON THIS SITE AS APPROPRIATE TO THE NEEDS OF EROSION CONTROL. SOME OF THESE ITEMS, SUCH AS SEDIMENT SUMPS, ARE TEMPORARY. OTHER FEATURES, SUCH AS CATCH BASINS AND AREA DRAINS ARE PERMANENT.

SEDIMENT FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS MUST BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT.

INSPECTION AND MAINTENANCE OF EROSION CONTROLS

1) AT ALL TIMES, SILTATION FABRIC FENCING, STAKES AND STRAW BALES SUFFICIENT TO CONSTRUCT AN EROSION CONTROL BARRIER A MINIMUM 100 FEET LONG WILL BE STOCKPILED ON THE SITE IN ORDER TO REPAIR ESTABLISHED BARRIERS THAT MAY HAVE BEEN DAMAGED OR BREACHED.

2) THE APPLICANT WILL DESIGNATE AS INSPECTOR, A PERSON OR ENTITY OTHER THAN THE SITE CONTRACTOR. THE INSPECTOR MUST BE ACCESSIBLE SEVEN DAYS A WEEK AND BE RESPONSIBLE FOR INSPECTING AND COORDINATING THE MAINTENANCE AND REPAIR OF ALL EROSION CONTROL SYSTEMS ON THE SITE.

3) AN INSPECTION OF ALL EROSION CONTROL MEASURES SHALL BE CONDUCTED BY THE INSPECTOR AT LEAST ONCE EACH WEEK UNTIL THE COMPLETION OF CONSTRUCTION OF THE PROJECT. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL SYSTEMS DAILY AND SHALL NOTIFY THE INSPECTOR OF ANY BREACHES OR FAILURES. IN CASE OF ANY NOTED BREACH OR FAILURE, THE CONTRACTOR SHALL IMMEDIATELY MAKE APPROPRIATE REPAIRS.

4) THE INSPECTOR SHALL INSPECT ALL EROSION CONTROL SYSTEMS ON THE SITE BEFORE, DURING AND AFTER ANY STORM EVENT REACHING ONE OF THE FOLLOWING THRESHOLDS:
A) ANY STORM EVENT IN WHICH RAIN IS PREDICTED TO LAST FOR 12 CONSECUTIVE HOURS OR MORE;
B) ANY STORM EVENT FOR WHICH A FLASH FLOOD WATCH OR WARNING IS ISSUED;
C) ANY SINGLE STORM EVENT PREDICTED TO HAVE A CUMULATIVE RAINFALL GREATER THAN 1/2 INCH; OR
D) ANY STORM EVENT NOT MEETING THE PREVIOUS THREE THRESHOLDS BUT WHICH WOULD MARK THE THIRD CONSECUTIVE DAY OF MEASURABLE RAINFALL.

5) THE INSPECTOR SHALL INSPECT EROSION CONTROL MEASURES AT TIMES OF SIGNIFICANT INCREASE IN SURFACE WATER RUNOFF DUE TO RAPID THAWING WHEN THE RISK OF FAILURE OF THOSE MEASURES IS SIGNIFICANT.

6) IN SUCH INSTANCES AS REMEDIAL ACTION IS NECESSARY, THE INSPECTOR SHALL CAUSE TO BE REPAIRED WITHIN THREE DAYS, ANY AND ALL SIGNIFICANT DEFICIENCIES IN EROSION CONTROL MEASURES.

7) THE SOUTHBOROUGH CONSERVATION COMMISSION SHALL BE NOTIFIED OF ANY SIGNIFICANT FAILURE OF EROSION CONTROL MEASURES AND SHALL BE NOTIFIED OF ANY RELEASE OF POLLUTANTS TO A RESOURCE AREA.

EROSION CONTROL DEVICES

1) CONSTRUCTION ENTRANCE MAT
A SITE ENTRANCE MAT WILL BE INSTALLED AT THE CONSTRUCTION ENTRANCE TO THE SITE. IT WILL CONSIST OF A 30-FOOT LONG, 6-INCH THICK LAYER OF 1-1/2" TO 3" CRUSHED STONE OVERLYING A 6-INCH THICK LAYER OF 3" TO 6" CRUSHED STONE. THE SITE ENTRANCE MAT WILL BE INSTALLED OVER A COMPACTED BASE (SEE DETAILS SHEET C11). THE CRUSHED STONE WILL BE REFRESHED AS NECESSARY.
IF EARTHERN PRODUCTS ARE TRANSPORTED ONTO FLAGG ROAD AND/OR PARK CENTRAL DRIVE DURING ANY OF THE CONSTRUCTION PHASES, THAN THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THESE EARTHERN PRODUCTS.
2) EROSION CONTROL BARRIERS
THE EROSION CONTROL BARRIERS WILL CONSIST OF AN APPROVED SILTATION FABRIC FENCING INSTALLED ON POSTS ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND BACKED BY STAKED STRAW BALES WHERE APPROPRIATE. THE FILTER FABRIC AND STRAW BALES WILL BE PLACED IN A MANNER THAT PREVENTS THE PASSAGE OF SOIL MATERIALS UNDER, AROUND OR OVER THE FENCING. ANY SEDIMENT THAT HAS BEEN CAPTURED AGAINST THE BARRIER WILL BE REMOVED PROMPTLY AND THE AREA THAT HAS AREAS OF EROSION WILL BE STABILIZED PROMPTLY.
3) STRAW BALE OR GRADED STONE DIVERSION DIKES
STRAW BALES WILL BE PLACED IN OTHER LOCATIONS ON THE SITE IN ORDER TO FURTHER PREVENT THE FLOW OF SEDIMENT FROM THE SITE OR REDUCE THE VELOCITY OF RUNOFF CROSSING OPEN LAND OR RUNNING OFF OF STOCKPILE OR FILL AREAS. STRAW BALE DIVERSION DIKES WILL ALSO BE PLACED WITHIN DEVELOPING RILLS TO REDUCE SURFACE RUNOFF VELOCITIES AND TO SHIFT THE PATH OF THE WATER FLOW. THE LOCATIONS WHERE STRAW BALE DIVERSION DIKES ARE INSTALLED WILL BE DETERMINED IN THE FIELD AT THE INSPECTOR'S DISCRETION.
4) SLOPE STABILIZATION
SLOPES OR SURFACES THAT ARE CREATED DUE TO EXCAVATION OR FILLING OF THE SITE WILL BE STABILIZED WITH ONE OR MORE OF THE FOLLOWING:
- STRAW MULCH,
- SOFTWOOD AND HARDWOOD CHIPS, OR
- IN AREAS THAT WILL BE STEEPER THAN 2.5:1 AFTER CONSTRUCTION, THE SLOPE WILL BE STABILIZED BY THE PLACEMENT OF EROSION CONTROL BLANKET OR HEAVY RIP-RAP. THE RIP-RAP SLOPE TO BE PLACED WILL BE FORMED BY PLACING HEAVY STONE ON A ONE FOOT THICK LAYER OF GRAVEL.

PERMANENT STABILIZATION OF SLOPES AND SURFACES WILL EMPLOY ONE OR MORE OF THE FOLLOWING:
- LOAM AND GRASS,
- SOD,
- RIP-RAP, OR
- A COMBINATION OF GRASSES, RIP-RAP AND/OR PLANT MATERIAL

5) RUNOFF DIVERSION SWALES
RUNOFF DIVERSION SWALES WILL BE PROVIDED IN ORDER TO INTERCEPT SHEET AND CONCENTRATED FLOWS ABOVE AREAS OF CUT, ABOVE ABUTTING PROPERTIES AND ABOVE RESOURCE AREAS. THE SWALES WILL DIRECT RUNOFF TO SEDIMENT SUMPS OR TEMPORARY SETTLING BASINS OR TO DETENTION BASINS.
6) SEDIMENT SUMPS
SEDIMENT SUMPS ARE EXCAVATED DEPRESSIONS 10-FOOT IN DIAMETER AND 2-FEET DEEP. THE SUMPS WILL COLLECT RUNOFF FROM THE UNFINISHED DRIVE AND SLOPES AND WILL ALLOW SEDIMENT TO SETTLE OUT BEFORE FLOW CONTINUES TO A DETENTION AREA OR SILTATION CONTROL BARRIER. SEDIMENT SUMPS WILL BE CLEANED WHENEVER THE ACCUMULATED SEDIMENT HAS REACHED ONE-HALF OF THE ORIGINAL DEPTH OF THE SUMP.
7) STONE-LINED SEDIMENT SUMPS
A 10-FOOT DIAMETER, 2-FOOT DEEP, STONE-LINED SEDIMENT SUMP WILL BE INSTALLED AT ALL POINTS WHERE STORM WATER IS DISCHARGED FROM THE PIPED COLLECTION SYSTEM. THESE SUMPS WILL SERVE TO COLLECT SEDIMENT WHICH MAY ERODE FROM THE SITE DURING THE CONSTRUCTION PERIOD. SEDIMENT WILL BE REMOVED FROM A STONE-LINED SEDIMENT SUMP WHEN IT HAS REACHED ONE-HALF OF THE ORIGINAL CAPACITY. STONE-LINED SEDIMENT SUMPS WILL BE CLEANED AND REMAIN IN PLACE AFTER PERMANENT STABILIZATION OF THE SITE HAS BEEN ACHIEVED.
8) TEMPORARY SETTLING BASINS
A TEMPORARY SETTLING BASIN IS A LARGE, EXCAVATED SEDIMENT SUMP THAT HAS A STONE FACE OVERFLOW LEADING TO A SWALE OR TO A DRAINAGE INLET STRUCTURE. THE SIZE VARIES WITH THE AREA DRAINING TO IT. TEMPORARY SETTLING BASINS WILL BE CLEANED WHENEVER THE ACCUMULATED SEDIMENT HAS REACHED ONE HALF OF THEIR ORIGINAL DEPTH.
9) RIP-RIP OUTLET PROTECTION
RIP-RAP OUTLET PROTECTION IS A STONE APRON BEGINNING AT A DRAINAGE SYSTEM DISCHARGE POINT AND EXTENDING DOWN THE SLOPE. THE RIP-RAP WILL SERVE TO REDUCE THE VELOCITY OF THE DISCHARGE, THEREBY PREVENTING EROSION.

WASTE DISPOSAL
ALL WASTE MATERIALS WILL BE COLLECTED AND STORED SECURELY IN METAL DUMPSTERS. THE DUMPSTER WILL MEET LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS WILL BE DEPOSITED IN THE DUMPSTER AND EMPTIED AS NECESSARY. A LICENSED COMPANY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS WILL TRANSPORT THE TRASH. NO TRASH OR CONSTRUCTION DEBRIS WILL BE BURIED ON SITE. THE DISPOSAL OF LIQUID WASTE IS NOT ALLOWED. INDIVIDUALS WORKING ON THE SITE WILL BE INFORMED OF THE APPROPRIATE PROCEDURE FOR THE DISPOSAL OF CONSTRUCTION DEBRIS.
THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE PROJECT SITE IS FREE OF LITTER AND REFUSE.

HAZARDOUS WASTE
ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. INDIVIDUALS WORKING ON THE SITE WILL BE INFORMED OF THE APPROPRIATE PROCEDURES FOR WASTE DISPOSAL. THE CONSTRUCTION SUPERVISOR WILL BE RESPONSIBLE FOR OVERSEEING THAT THE PROPER PROCEDURES ARE FOLLOWED.

SANITARY WASTE
ALL SANITARY WASTE WILL BE COLLECTED IN A TIMELY MANNER BY A LICENSED CONTRACTOR AND DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.

EQUIPMENT & VEHICLE FUELING AND MAINTENANCE PRACTICES
LARGE EQUIPMENT WILL BE FUELED BY AN OVER THE ROAD FUEL TRUCK AND SMALL EQUIPMENT WILL BE FUELED BY FITTED PICKUP TRUCK FUEL TANKS. ALL EQUIPMENT WILL BE FUELED AT A MINIMUM 100 FEET FROM ANY WETLAND AND/OR WATER BODY. FUELING AREAS WILL BE INSPECTED FOR SIGNS OF LEAKS OR SPILLS.

EQUIPMENT & VEHICLE WASHING
NO HEAVY EQUIPMENT AND VEHICLE WASHING WILL BE ALLOWED ON THE SITE. ALL CONSTRUCTION EQUIPMENT WILL BE PARKED IN THE DESIGNATED STAGING AREA AT LEAST 100-FEET FROM ANY WETLAND OR WATER BODY.

SPILL PREVENTION AND CONTROL
ALL CONSTRUCTION PERSONNEL WILL BE INSTRUCTED REGARDING THE FOLLOWING MEASURES.
THE SITE CONSTRUCTION SUPERVISOR WILL BE RESPONSIBLE FOR OVERSEEING THAT ALL SPILL PREVENTION PROCEDURES WILL BE ADHERED TO. NO STORAGE , STOCKPILING, OR STAGING OF EQUIPMENT OR FUEL WILL OCCUR WITHIN 100-FEET OF ANY WETLAND OR WATERBODY.
ALL MATERIALS STORED ONSITE WILL BE MAINTAINED IN AN ORDERLY MANNER AND IN THEIR APPROPRIATE CONTAINERS. MATERIALS WILL BE KEPT IN THERE ORIGINAL CONTAINERS WITH THEIR ORIGINAL LABELS. SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER. THE MANUFACTURERS GUIDELINES FOR THE PROPER USE AND DISPOSAL WILL BE IMPLEMENTED.
THE CONSTRUCTION SUPERVISOR WILL INSPECT THE PREMISES REGULARLY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS.

PETROLEUM PRODUCTS
ALL ONSITE CONSTRUCTION MACHINERY AND VEHICLES WILL BE MONITORED FOR LEAKS AND WILL RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE LIKELIHOOD OF LEAKAGE. NO VEHICLE MAINTENANCE OR HANDLING OF PETROLEUM OF PRODUCTS WILL OCCUR WITHIN 100-FEET OF ANY WETLAND OR WATERBODY. NO PETROLEUM PRODUCTS WILL STORED ONSITE.

FERTILIZERS
FERTILIZERS WILL BE APPLIED AT THE MINIMUM AMOUNT RECOMMENDED BY THE MANUFACTURER. THE STORAGE OF FERTILIZER PRODUCTS WILL NOT BE ALLOWED ONSITE.

SOLVENTS & PAINTS
ALL CONTAINERS WILL BE SEALED AND STORED WHEN NOT USED. EXCESS MATERIAL WILL NOT BE DISCHARGED TO THE STORM AND OR SEWER SYSTEMS AND WILL BE PROPERLY DISPOSED OF ACCORDING TO THE MANUFACTURERS SPECIFICATIONS INCLUDING ALL FEDERAL, STATE, AND LOCAL REGULATIONS. NO STORAGE WILL OCCUR WITHIN 100' OF A WETLAND OR WATERBODY.

CONCRETE TRUCK WASHOUT
CONCRETE TRUCKS WILL DISCHARGE INTO TEMPORARY BASINS, WHERE THE CONCRETE WILL BE ALLOWED TO CURE. ONCE THE CONCRETE IS CURED, THE CONCRETE WILL BE BROKEN UP AND USED AS COMMON FILL OR HAULED OFF SITE.

SPILL CONTROL PRACTICES
ALL OF THE MANUFACTURERS RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE INFORMED OF THE NECESSARY PROCEDURES AND THE LOCATION OF THE CLEANUP SUPPLIES. MATERIALS AND THE EQUIPMENT NECESSARY FOR CLEANUP OF A SPILL WILL BE KEPT ON SITE IN A DESIGNATED AREA. EXAMPLES OF CLEANING EQUIPMENT ARE: SHOVELS, RAKES, WHEEL BARROWS, BROOMS, DUST PANS, MOPS ,RAGS, SAFETY GLOVES AND EYE WEAR, ABSORBENT FOAMS, SAND, SANDUST, AND PLASTIC OR METAL BINS DESIGNATED SPECIFICALLY FOR SPILL CLEANUP. AFTER DISCOVERY, ALL SPILLS WILL BE REMOVED AS SOON AS POSSIBLE.

REPORTING REPORTABLE SPILLS.
REPORTABLE SPILLS, TOXIC OR HAZARDOUS (10 GALLONS OR MORE FOR PETROLEUM), MATERIAL WILL BE REPORTED TO THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WASTE SITE CLEANUP CENTRAL REGIONAL OFFICE, 627 MAIN STREET, WORCESTER, MA 01608-PH-508-792-7653
THE CONSTRUCTION SUPERINTENDENT WILL BE RESPONSIBLE FOR SPILL PREVENTION AND CLEANUP COORDINATOR AND SUPERVISOR. THE CONSTRUCTION SUPERVISOR IS RESPONSIBLE FOR EDUCATING THE CONSTRUCTION PERSONNEL OF THE PROTOCOL IN THE EVENT OF A SPILL.

NON STORAGE DISCHARGES
THE FOLLOWING NON-STORMWATER DISCHARGES ARE EXPECTED AS PART OF THE PROPOSED PROJECT DURING THE CONSTRUCTION PHASE.
WATER FROM UTILITY FLUSHING AND DUST CONTROL, PAVEMENT WASH WATER, WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED, UNCONTAMINATED GROUNDWATER DURING THE DEWATERING EXCAVATIONS.
NON-STORMWATER DISCHARGES WILL BE DIRECTED TO VEGETATED SURFACES AND OR TEMPORARY SETTLING BASINS PRIOR TO DISCHARGE TO WETLANDS AND/OR WATERWAYS.

SEQUENCE OF INSTALLATION AND CONSTRUCTION
PRIOR TO THE START OF EARTH-MOVING ACTIVITIES, THE SEDIMENT CONTROL BARRIERS SHALL BE INSTALLED ALONG THE LIMIT OF WORK AS SHOWN ON THE SITE PLANS.

CONSTRUCTION ACCESS
AT EACH CONSTRUCTION ENTRANCE, A STONE ENTRANCE MAT SHALL BE INSTALLED TO REMOVE SOIL MATERIAL FROM THE EQUIPMENT TIRES. ANY OTHER BARE CONSTRUCTION ROUTES OR EQUIPMENT STAGING AREAS SHALL BE STABILIZED WITH GRAVEL, WOOD CHIPS, OR TEMPORARY VEGETATION.

LAND CLEARING AND GRADING
TO THE EXTENT PRACTICABLE, CLEARING, GRUBBING AND STRIPPING SHALL BE LIMITED. WHENEVER PRACTICAL EXISTING STRIPS OF VEGETATIVE COVER WILL BE PRESERVED BETWEEN CLEARED AREAS AND RESOURCE AREAS TO PROVIDE RUNOFF FILTRATION. ALL SLOPES SHALL BE BROUGHT TO FINISH GRADE AND STABILIZED AS SOON AS POSSIBLE. SLOPES BETWEEN 1:1 AND 2:1 STEEPNESS SHALL BE STABILIZED WITH EROSION CONTROL FABRIC, AND/OR RIP-RAP ARMORING. SLOPES BETWEEN 2:1 AND 3:1 SHALL BE STABILIZED WITH A BONDED FIBER MATRIX, HYDROSEEDING OR SEED AND EROSION CONTROL BLANKETING. SLOPES WHICH ARE 3:1 AND FLATTER SHALL BE STABILIZED WITH HYDROSEEDING AND/OR HAND SEEDING. ADDITIONAL RUN-OFF CONTROL MEASURES SHALL BE INSTALLED AS GRADING PROGRESSES, TO INCLUDE TEMPORARY BASINS, DIKES, AND SWALES.

TEMPORARY SEDIMENT BASINS AND SUMPS
AS NEEDED WITHIN CONSTRUCTION PHASES TEMPORARY SEDIMENT BASINS AND SUMPS WILL BE EXCAVATED PRIOR TO FURTHER SOIL DISTURBANCE ON THE SITE. THE BASINS SHALL INCLUDE STONE AND FILTER FABRIC. THE BASIN SLOPES AND BOTTOM SHALL BE STABILIZED WITH LOAM, SEED, AND/OR AN EROSION CONTROL PRODUCT, AND A STABILIZED EXIT SPILLWAY SHALL BE CONSTRUCTED WITH A FILTER FABRIC AND STONE APRON. TEMPORARY RISER PIPES MAY BE UTILIZED TO ALLOW RETENTION AND TREATMENT WITH CONTROLLED RELEASE OF STORMWATER RUNOFF DURING CONSTRUCTION. THE BASINS MAY BE OVER EXCAVATED AS NEEDED TO PROVIDE STORAGE FOR, AT A MINIMUM, 3,600CF PER DISTURBED ACRE OF RUN-OFF. ADDITIONAL TEMPORARY SEDIMENT BASINS OR SEDIMENT SUMPS, MAY BE CONSTRUCTED AS NECESSARY TO STORE AND INFILTRATE RUN OFF. SEDIMENT SUMPS ARE EXCAVATED DEPRESSIONS OF A MINIMUM 10-FOOT DIAMETER AND A 2-FOOT DEPTH AND STRATEGICALLY INSTALLED TO REDUCE VELOCITIES AND TO PROVIDE SEDIMENT TRAPPING. BASINS AND SUMPS WILL BE INSPECTED WEEKLY, BEFORE AND AFTER SIGNIFICANT STORM EVENTS.

RUN OFF CONTROL AND CONVEYANCE SYSTEMS
AS NEEDED, DIVERSION SWALES AND OR DIKES LEADING INTO THE BASINS SHALL BE CONSTRUCTED AND STABILIZED UTILIZING EARTH, CRUSHED STONE, OR HAYBALES. ADDITIONAL SWALES OR DIKES SHALL BE CONSTRUCTED AS NECESSARY TO DIVERT RUNOFF INTO TEMPORARY SEDIMENT BASINS. STONE CHECK DAMS SHALL BE INSTALLED AT APPROPRIATE INTERVALS.

STOCKPILING
SOIL STOCKPILING SHALL TAKE PLACE IN DESIGNATED AREAS, OUTSIDE OF THE WETLAND BUFFER ZONES. ANY STOCKPILING THAT WILL REMAIN INACTIVE FOR MORE THAN 2 WEEKS SHALL BE HYDROSEEDED OR COVERED WITH PLASTIC COVERS.

SURFACE STABILIZATION
APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHERE WORK IS COMPLETED OR DELAYED GREATER THAN 2 WEEKS.

PARKING LOT & UTILITY CONNECTIONS
TEMPORARY SWALES WITH CHECK DAMS OR DIKES AND SETTLING BASINS WILL BE UTILIZED TO CONTROL RUNOFF UNTIL THE CLOSED DRAINAGE SYSTEM IS FUNCTIONAL. AFTER THE UTILITIES, INCLUDING THE CATCH BASINS HAVE BEEN INSTALLED, THE PARKING LOT WILL BE FINISH GRADED AND STABILIZED WITH A BINDER COAT OF PAVEMENT.

INLET PROTECTION
FOLLOWING THE INSTALLATION OF THE CLOSED DRAINAGE SYSTEM, DRIVEWAY PAVING, CATCH BASIN INLETS WILL BE PROTECTED WITH CATCH BASIN FILTERS.

BUILDING SITE PREPARATION
THE PROPOSED BUILDING CONSTRUCTION AREA WILL BE CLEARED AND GRUBBED AND STABILIZATION SHALL BE PROVIDED BETWEEN CONSTRUCTION INCREMENTS.

LANDSCAPING AND FINAL STABILIZATION
AFTER CONSTRUCTION IS COMPLETE IN A GIVEN AREA ANY EXPOSED SOILS WILL BE STABILIZED BY HYDROSEEDING AND OR LANDSCAPING.

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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REV.	DATE	DESCRIPTION	INIT.
E	08/15/16	TOWN COMMENTS	
D	04/06/16	NOT ISSUED	
C	01/26/16	NOT ISSUED	
B	01/06/16	NOT ISSUED	
A	11/04/15	NOT ISSUED	

COMMONWEALTH OF MASSACHUSETTS — LAWRENCE C. GREENE, JR. — NO. 4884 — REGISTERED LANDSCAPE ARCHITECT
COMMONWEALTH OF MASSACHUSETTS — MICHAEL SCOTT DYER — NO. 39980 — REGISTERED PROFESSIONAL ENGINEER
D/15/16

PREPARED BY:

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Southborough, MA
(Worcester County)

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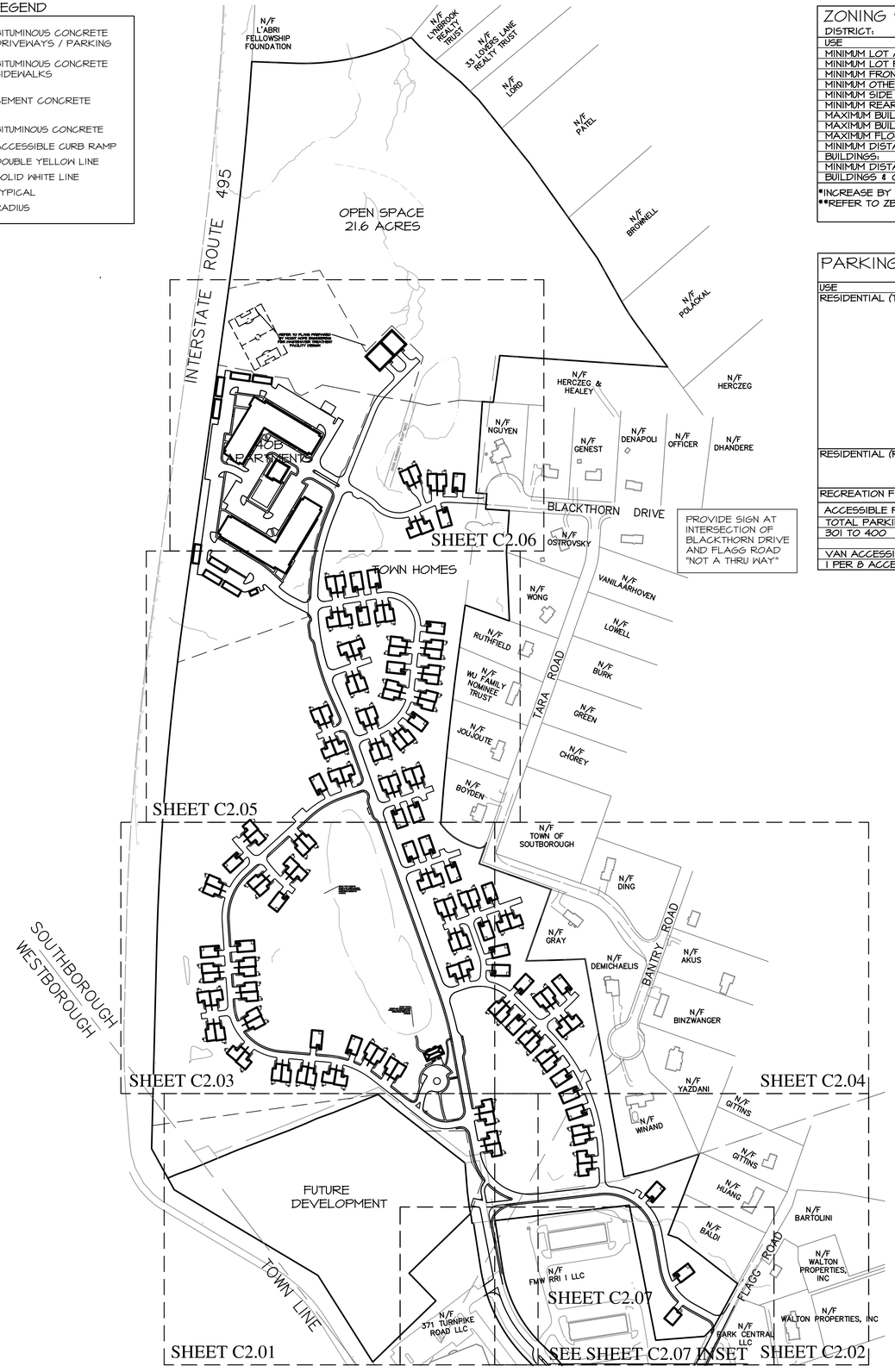
SIGN SUMMARY TABLE

SIGN ID NUMBER	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	SCHEMATIC
OM-3C	12"	24"	
R1-1	30"	30"	STOP
R3-1	24"	24"	
R3-2	24"	24"	
R3-5	30"	36"	ONLY
R4-7	30"	30"	
R5-1	30"	30"	DO NOT ENTER
R5-1a	24"	36"	WRONG WAY
R6-1	36"	12"	ONE WAY
R7-8 WITH R7-8A	12"	18"	RESERVED PARKING / VAN
R8-3	18"	24"	NO PARKING
W2-2	24"	24"	
W5-1	36"	36"	ROAD NARROWS
W5-2	36"	36"	NARROW BRIDGE
W11-2	24"	24"	
W16-9p	24"	12"	AHEAD

NOTE: REFER TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR SIGN COLORS, TEXT HEIGHTS AND SIGN MOUNTING HEIGHT REQUIREMENTS.

LEGEND

	BITUMINOUS CONCRETE DRIVEWAYS / PARKING
	BITUMINOUS CONCRETE SIDEWALKS
	CEMENT CONCRETE
BIT. CONC.	BITUMINOUS CONCRETE
ACR	ACCESSIBLE CURB RAMP
DYL	DOUBLE YELLOW LINE
SWL	SOLID WHITE LINE
TYP.	TYPICAL
R	RADIUS



ZONING SUMMARY TABLE

DISTRICT:	RA - RESIDENCE A	ID - INDUSTRIAL	IP - INDUSTRIAL PARK	
USE	REQUIRED/ALLOWED	REQUIRED/ALLOWED	REQUIRED/ALLOWED	PROVIDED
MINIMUM LOT AREA:	43,560 S.F.	43,560 S.F.	43,560 S.F.	4,047,127 S.F. (92.9 AC.)
MINIMUM LOT FRONTAGE:	150 FEET	200 FEET	200 FEET	203' (FLAGG ROAD)/ 158' (RTE. 9)
MINIMUM FRONT YARD:	35 FEET	50 FEET*	50 FEET*	102 FEET*
MINIMUM OTHER STREET:	35 FEET	25 FEET*	50 FEET	N/A
MINIMUM SIDE YARD:	25 FEET**	50 FEET**	50 FEET**	41 FEET
MINIMUM REAR YARD:	50 FEET**	50 FEET**	50 FEET**	884 FEET
MAXIMUM BUILDING HEIGHT:	35 FEET	45 FEET	45 FEET	SEE ARCHITECTURAL PLANS
MAXIMUM BUILDING STORIES:	2.5	3	3	SEE ARCHITECTURAL PLANS
MAXIMUM FLOOR AREA RATIO:	.18	.60	.60	.18
MINIMUM DISTANCE BETWEEN BUILDINGS:	N/A**	N/A**	N/A**	21 FEET**
MINIMUM DISTANCE BETWEEN BUILDINGS & COMMON DRIVES:	15 FEET	15 FEET	15 FEET	16 FEET

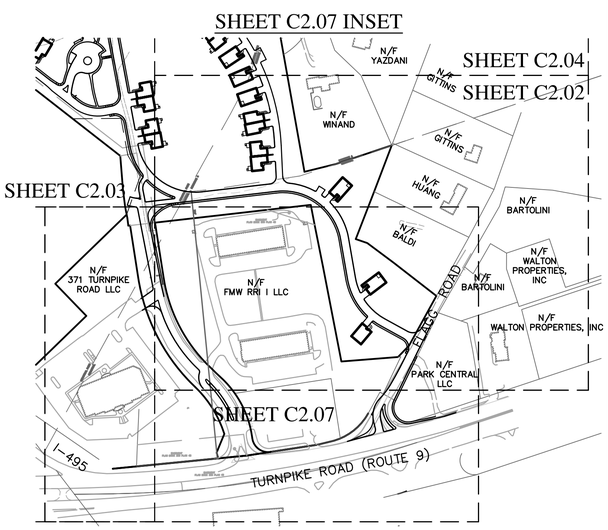
*INCREASE BY (50%) IF ABUTTING WORCESTER TURNPIKE, ROUTE 9
**REFER TO ZBA DECISION, CONDITIONS 4.1, & 12. DECISION RECORDED AT THE WDRD IN DEED BOOK 54060, PAGE 303.

PARKING SUMMARY TABLE

USE	REQUIRED		PROVIDED
RESIDENTIAL (TOWN HOUSE UNITS)	2 SPACES / UNIT (2 BEDROOM UNITS):	2x87=174 SPACES	380 SPACES
	3 SPACES / UNIT (3±MORE BEDROOM UNITS):	3x55=165 SPACES	188 SPACES
	SUBTOTAL:	339 SPACES	568 SPACES (284 GARAGE)
VISITOR PARKING:	(ON SITE)		
	0 SPACES	0 SPACES	106 (93 GREEN)
	(OFF SITE- SHARED PAVED PARKING @ 2 PARK CENTRAL)		
	0 SPACES	0 SPACES	173 SPACES
	SUBTOTAL:	0 SPACES	279 SPACES (93 GREEN)
	TOTAL:	339 SPACES	847 SPACES
PARKING DENSITY: 6 SPACES / UNIT			
RESIDENTIAL (RENTAL/40B UNITS)	2 SPACES / UNIT (1±2 BEDROOM UNITS):	2x87=190 SPACES	380 SPACES
	3 SPACES / UNIT (3±MORE BEDROOM UNITS):	3x18=54 SPACES	44 SPACES
	TOTAL:	378 SPACES	304 SPACES (44 GARAGE)
RECREATION FIELD PARKING:	0 SPACES		4 (93 GREEN)
ACCESSIBLE PARKING (HP) SPACES			
TOTAL PARKING SPACES	REQUIRED		PROVIDED
301 TO 400	8		26
VAN ACCESSIBLE	1 VAN		26 VAN
1 PER 8 ACCESSIBLE SPACES	1 ACCESSIBLE		

LAYOUT & MATERIAL NOTES:

1. SEE SHEET C0.00 FOR REFERENCES AND LEGEND.
2. ALL SETBACK LINES AND DIMENSIONS ARE PARALLEL TO OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED, UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES TO ENGINEER OF RECORD PRIOR TO CONSTRUCTION.
4. DIMENSIONS OF PARKING SPACES AND SIDEWALKS ARE MEASURED FROM FACE OF CURB.
5. EACH ACCESSIBLE PARKING SPACE SHALL BE IDENTIFIED BY A SIGN LOCATED AT THE BACK OF CURB. THE SIGN SHALL CONTAIN THE "INTERNATIONAL SYMBOL OF ACCESSIBILITY" AS DESCRIBED IN THE AMERICANS WITH DISABILITIES ACT, PUBLIC LAW 101-366, AND DETAILED IN THE FHWA/USDOT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AS AMENDED.
6. FACE OF GUARDRAILS ARE TO BE LOCATED A MINIMUM OF 3'-6" FROM FACE OF CURB.
7. ALL CURBING ALONG RADIUS AT STREET INTERSECTIONS OR SITE ENTRANCES IS TO BE GRANITE CURBING THE DISTANCE OF THE ARCS OF THE CURVES PLUS A STRAIGHT SECTION AT EACH END OF EIGHT FEET (8').
8. DEVELOPMENT IS SUBJECT TO CONDITIONS OF USE VARIANCE ISSUED BY THE TOWN OF SOUTHBOROUGH BOARD OF APPEALS MAY 21, 2015.



BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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D	04/06/16	NOTICE OF INTENT	
C	01/26/16	NOT ISSUED	
B	01/06/16	NOT ISSUED	
A	11/04/15	PROGRESS SET	

COMMONWEALTH OF MASSACHUSETTS — STEPHEN P. CONVERSE No 33585 — PROFESSIONAL LAND SURVEYOR — 8/15/16

MASSACHUSETTS — LAWRENCE C. GRUENE, JR. — NO. 4887 — REGISTERED LANDSCAPE ARCHITECT — 8/15/16

PREPARED BY:
WATERMAN DESIGN ASSOCIATES, INC.
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c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:
CAPITAL GROUP PROPERTIES LLC
259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:
LAYOUT AND MATERIALS INDEX PLAN

PARK CENTRAL

Southborough, MA
(Worcester County)

TOWN PERMITTING

0 200 400 600

DATE: 11/04/15	SCALE: 1" = 200'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978200	CHK'D. BY:
DRAWING NO.: 0978200E	SHEET: C2.00

MATCH LINE SHEET C2.03

MATCH LINE SHEET C2.02

FUTURE DEVELOPMENT

Q SERIES ISOLATED VEGETATED WETLAND

IVW

SOUTHBORO WETLAND BYLAW

20' NO-WORK ZONE

100' BUFFER TO IVW – SOUTHBORO WETLAND BYLAW

EASEMENT – PLAN BOOK 342 PLAN 44

TOWN LINE INDUSTRIAL PARK INDUSTRIAL B

EASEMENT

TOWN OF SOUTHBOROUGH
TOWN OF WESTBOROUGH

43.31'
N28°49'40"W

542.42'
N59°11'12"W

EXISTING SETBACK LINE

INTERSTATE ROUTE 495
(196' STATE HIGHWAY LAYOUT)

332.27'
N32°16'16"W

285.00'
S45°54'30"W

"EXISTING SETBACK" LINE PER ZBA DECISION

277.94'
S45°54'35"W

S44°05'30"E
125.00'

N31°13'30"W
10.02'

N07°10'52"W
21.38'

S83°29'07"W
4.99'

148.78'
N08°50'37"W

S08°50'21"E
156.94'

WEBBER CIRCLE
(22' WIDE)

R8-1

18.0'

22.0'

18' (TYP)

11.0' (TYP)

CLUBHOUSE SIGN

BOCCE

TENNIS COURT

PAINTED "STOP" WITH STOP BAR

80' (TYP)

ROAD NAME & R6-1 SIGN

5' WIDE SIDEWALK

UNIT 4

UNIT 3

UNIT 2

UNIT 1

MULTIFAMILY TOWNHOUSE BUILDING (TYP)

12+00

11+00

25.0'

PARK CENTRAL DRIVE
(24' WIDE)

PAINTED "STOP" WITH STOP BAR (TYP)

R1-1
R5-1
R6-1

ROAD NAME SIGN

10.0'

16.4%

9+00

INDUSTRIAL PARK RESIDENCE

"RESIDENTS OF PARK CENTRAL ONLY"

R3-1
R6-1

5' WIDE SIDEWALK

R1-1
R3-5L

2%

4.0%

750'

R6-1
TO FLAGG ROAD/ RTE. 9 & I-495"

COBBLES

R3-1
R6-1
"TO FLAGG ROAD/ RTE. 9 & I-495"
"RESIDENTS OF PARK CENTRAL ONLY"

R5-1a

24.0'

RETAINING WALL (TYP)

RETA ORNA

EXIS DETE BA A

A SE BORD VEGE WETLA BASIN

C SE BORDE VEGET WETL

R4-1

SGC

R3-1
R6-1
"TO FLAGG ROAD/ RTE. 9 & I-495"

COBBLES

R5-1

R1-1
R3-5L

VGC

PARK CENTRAL DRIVE

R=437.71'
L=293.13'

R=335.00'
L=348.82'

INDUSTRIAL PARK INDUSTRIAL

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

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C	01/26/16	NOT ISSUED	
B	01/06/16	NOT ISSUED	
A	11/04/15	PROGRESS SET	

COMMONWEALTH OF MASSACHUSETTS
STEPHEN P. CONVERSE
No 33585
PROFESSIONAL LAND SURVEYOR
8/15/16

MASSACHUSETTS
LAWRENCE C. GREEN
No. 1981
REGISTERED LANDSCAPE ARCHITECT
8/15/16

PREPARED BY:

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c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

LAYOUT AND MATERIALS PLAN

PARK CENTRAL

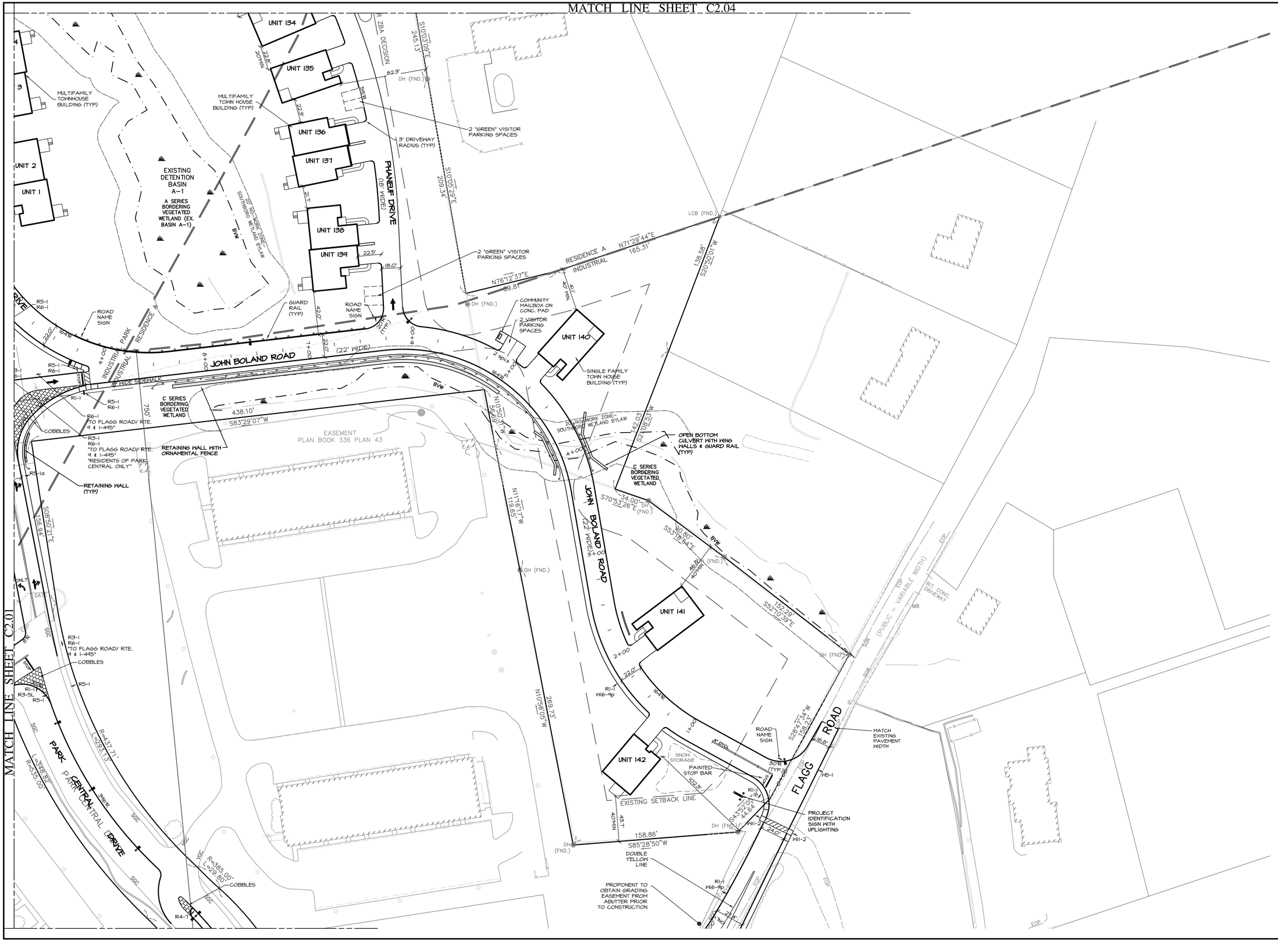
Southborough, MA
(Worcester County)

TOWN PERMITTING

0 40 80 120

DATE: 11/04/15	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978200	CHK'D. BY:
DRAWING NO.: 0978201E	SHEET: C2.01

MATCH LINE SHEET C2.04



MATCH LINE SHEET C2.01

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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B	01/06/16	NOT ISSUED	
A	11/04/15	PROGRESS SET	

COMMONWEALTH OF MASSACHUSETTS — STEPHEN P CONVERSE No 33585 — PROFESSIONAL LAND SURVEYOR — 8/15/16

MASSACHUSETTS — LAWRENCE C. GRUDA — NO. 4981 — REGISTERED LANDSCAPE ARCHITECT — 8/15/16

PREPARED BY:

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Southborough, MA
(Worcester County)

TOWN PERMITTING

0 40 80 120

DATE: 11/04/15	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978200	CHK'D. BY:
DRAWING NO.: 0978202E	SHEET: C2.02

MATCH LINE SHEET C2.05

MATCH LINE SHEET C2.01

MATCH LINE SHEET C2.04

INTERSTATE ROUTE 495
(1961 STATE HIGHWAY LAYOUT)

R=9863.00'
L=1106.59'

EXISTING SETBACK LINE

TOWN OF SOUTHBOROUGH
TOWN OF WESTBOROUGH

N01°26'54"E
649.06'

DA SERIES BORDERING VEGETATED WETLAND

E SERIES ISOLATED VEGETATED WETLAND

R SERIES BORDERING VEGETATED WETLAND

Q SERIES ISOLATED VEGETATED WETLAND

R SERIES ISOLATED VEGETATED WETLAND & PVP

O SERIES BORDERING VEGETATED WETLAND

B SERIES BORDERING VEGETATED WETLAND

M SERIES BORDERING VEGETATED WETLAND

N SERIES ISOLATED VEGETATED WETLAND

A SERIES BORDERING VEGETATED WETLAND

BVW

IVW

PVP

20' NO-WORK ZONE-SOUTHBORO WETLAND BYLAW

GUARD RAIL (TYP)

GUARD RAIL WITH 4' HIGH BLACK FENCE

CB/LP (FND.)

CB/DH (FND.)

18' WIDE DRIVEWAY

WEBBER CIRCLE (18' WIDE)

HOLMES DRIVE (18' WIDE)

PHANEUF DRIVE (18' WIDE)

PARK CENTRAL DRIVE

TARA ROAD (PUBLIC ~ 40' WIDE)

UNIT 45
UNIT 49
UNIT 50
UNIT 25
UNIT 26
UNIT 27
UNIT 28
UNIT 29
UNIT 30
UNIT 31
UNIT 20
UNIT 21
UNIT 19
UNIT 32
UNIT 33
UNIT 34
UNIT 35
UNIT 36
UNIT 18
UNIT 17
UNIT 15
UNIT 16
UNIT 37
UNIT 38
UNIT 14
UNIT 13
UNIT 12
UNIT 11
UNIT 39
UNIT 40
UNIT 41
UNIT 42
UNIT 43
UNIT 44
UNIT 10
UNIT 9
UNIT 8
UNIT 7
UNIT 6
UNIT 5
UNIT 103
UNIT 104
UNIT 105
UNIT 106
UNIT 107
UNIT 108
UNIT 109
UNIT 110
UNIT 111
UNIT 112
UNIT 113
UNIT 114
UNIT 115
UNIT 116
UNIT 119

6 "GREEN" VISITOR PARKING SPACES
2 VISITOR PARKING SPACES
2 "GREEN" VISITOR PARKING SPACES
3 "GREEN" VISITOR PARKING SPACES
4 "GREEN" VISITOR PARKING SPACES
4 "GREEN" VISITOR PARKING SPACES
2 PARKING SPACES

SNOW STORAGE
UNIT # SIGN
POCKET PARK
COMMUNITY MAILBOX ON CONC. PAD
PAINTED "STOP" WITH STOP BAR
PAINTED CROSS WALK
CONCRETE WALKWAY(TYP)
RETAINING WALL
ROAD NAME SIGN
SCHOOL BUS STOP
OUTDOOR SITTING/ GATHERING AREA
CLUBHOUSE
BIKE RACK
53' RADIUS
ACCESSIBLE PARKING SPACES WITH SIGNAGE
TEXTURED ISLAND(TYP)
FLAG POLE
CONCRETE STAIRS WITH RAILINGS
PATIOS (TYP)
3' DRIVEWAY RADIUS (TYP)
STREET LIGHT (TYP)
5' WIDE SIDEWALK (TYP)
4' WIDE SIDEWALK (TYP)
5' WIDE SIDEWALK

25'X6' FOOT BRIDGE (THRUFLOW INTERLOCKING PANELS, FOOTING/SUPPORT STRUCTURE DESIGN BY OTHERS)
40'X10' DOCK (THRUFLOW INTERLOCKING PANELS, FOOTING/SUPPORT STRUCTURE DESIGN BY OTHERS)

POND
BANK OF POND
NATURE TRAIL
B SERIES POND (EX. POND A-2)
EXISTING DETENTION BASIN (POND) A-2

R=89.05'
L=115.51'
L=39.27'
R=25.00'
S19°22'03"W 71.74'
S70°37'25"E 26.73'
S70°37'25"E 40.00'
L=10.09'
R=51.86'

22+00
21+00
20+00
19+00
18+00
17+00
16+00
15+00

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

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C	01/26/16	NOT ISSUED	
B	11/13/15	DOCK, FOOTBRIDGE	
A	11/04/15	PROGRESS SET	

COMMONWEALTH OF MASSACHUSETTS
STEPHEN P. CONVERSE
No 33585
REGISTERED PROFESSIONAL LAND SURVEYOR
8/15/16

MASSACHUSETTS
LAWRENCE C. GRIGNON JR.
NO. 3887
REGISTERED LANDSCAPE ARCHITECT
8/15/16

PREPARED BY:

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PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

LAYOUT AND MATERIALS PLAN

PARK CENTRAL

Southborough, MA
(Worcester County)

TOWN PERMITTING

0 40 80 120

DATE: 11/04/15	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978200	CHK'D. BY:
DRAWING NO.: 0978203E	SHEET: C2.03

MATCH LINE SHEET C2.02

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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B	01/06/16	NOT ISSUED	
A	11/04/15	PROGRESS SET	

COMMONWEALTH OF MASSACHUSETTS — STEPHEN P. CONVERSE No 33585 — PROFESSIONAL LAND SURVEYOR — 8/15/16

MASSACHUSETTS — LAWRENCE C. GRIBBIN — NO. 4881 — REGISTERED LANDSCAPE ARCHITECT — 8/15/16

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PARK CENTRAL

Southborough, MA
(Worcester County)

TOWN PERMITTING

0 40 80 120

DATE: 11/04/15	*SCALE:* 1" = 40'
JOB NO.: 0978.00	*DWN. BY:* _____
FILE NO.: 0978200	*CHK'D. BY:* _____
DRAWING NO.: 0978204E	*SHEET:* C2.04

MATCH LINE SHEET C2.06

MATCH LINE SHEET C2.03

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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B	11/13/15	DRIVEWAY TO APARTMENTS	
A	11/04/15	PROGRESS SET	

COMMONWEALTH OF MASSACHUSETTS — STEPHEN P. CONVERSE No 33585 — PROFESSIONAL LAND SURVEYOR — 8/15/16

MASSACHUSETTS — LAWRENCE C. GRISSOM — REGISTERED LANDSCAPE ARCHITECT — NO. 1997 — 8/15/16

PREPARED BY:

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TOWN PERMITTING

0 40 80 120

DATE: 11/04/15	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978200	CHK'D. BY:
DRAWING NO.: 0978205E	SHEET: C2.05

INTERSTATE ROUTE 495
(1961 STATE HIGHWAY LAYOUT)

REFER TO PLANS PREPARED BY MOUNT HOPE ENGINEERING FOR WASTEWATER TREATMENT FACILITY DESIGN

LIMIT OF 21.6 ACRE OPEN SPACE

RCSB/LP (FND.)

RECREATIONAL FIELD

DUMPSTER WITH FENCE ENCLOSURE (TYP)

WASTEWATER TREATMENT BUILDING

WATER BOOSTER PUMP BUILDING

RETAINING WALL (TYP)

I SERIES BORDERING VEGETATED WETLAND (EX. BASIN 3)

20' NO-WORK ZONE- SOUTHBORO WETLAND BYLAW

BVW

10,000+/- S.F. ACTIVE RECREATIONAL FIELD (LOAM & SEED)

3' WIDE PEDESTRIAN TRAIL

DH (FND.)

GARAGE 6 spaces

GARAGE 6 spaces

GARAGE 6 spaces

ACCESSIBLE GARAGE 4 spaces

8 spaces

24 spaces

20 spaces

RETAINING WALL (TYP)

30'x40' BASKETBALL COURT

SIDEWALK (TYP)

EXISTING SETBACK LINE

13 spaces

88-UNIT APARTMENT BUILDING

DUMPSTER WITH FENCE ENCLOSURE (TYP)

4 "GREEN" RECREATIONAL AREA PARKING SPACES

EXISTING DETENTION BASIN (POND)2

H SERIES POND

INDUSTRIAL PARK RESIDENCE A

CB/DH (FND.)

545.15'
N86°06'10"W

153.20'
S07°59'29"W

N86°10'39"W
35.49'

DH (FND.)

N07°52'36"E

20 spaces

13 spaces

16 spaces

CLUBHOUSE

BUS STOP

TEXTURED ISLAND(TYP)

6' HIGH ORNAMENTAL FENCE

DOUBLE GATE 8' WIDE

STONE WALL TOPPED WITH 42" HIGH ORNAMENTAL FENCE

CONCRETE POOL DECK

POOL

STAIRS 3-6" RISERS

5' WIDE GATE

SITE SIGN WITH UP LIGHTING

9 PARK CENTRAL DRIVE

ROAD NAME SIGN R1-1

COMMUNITY MAILBOX ON CONC. PAD

ACCESSIBLE PARKING SPACES WITH SIGNAGE (TYP)

RETAINING WALL WITH ORNAMENTAL FENCING (TYP)

E SERIES BORDERING VEGETATED WETLAND

DETENTION BASIN (BSN-407)

5' WIDE SIDEWALK (TYP)

RETAINING WALL WITH ORNAMENTAL FENCING (TYP)

DRAIN EASEMENT (20.00' WIDE)

MULTIFAMILY TOWNHOUSE BUILDING (TYP)

H SERIES BORDERING VEGETATED WETLAND

G SERIES BORDERING VEGETATED WETLAND

UNIT 55

UNIT 56

UNIT 57

UNIT 58

UNIT 54

22.0'

21.0'

EXISTING SETBACK LINE PER ZBA DECISION

42.0'
40'MIN

297.15'
S03°53'47"W

SLIDING GATE

S86°06'13"E
34.65'

BLACKTHORN EXTENSION (18' WIDE)

BLACKTHORN DRIVE (PUBLIC ~ 50' WIDE)

S03°53'48"W
49.99'

S86°06'12"E
76.46'

UNIT 60

UNIT 61

UNIT 62

26.4'

6 "GREEN" VISITOR PARKING SPACES

PVP

F SERIES BORDERING VEGETATED WETLAND

134.51'
S03°54'04"W

WETLAND

RETAINING WALL (TYP)

DH (FND.)

ACCESSIBLE PARKING SPACES WITH SIGNAGE (TYP)

24+00

26+00

27+00

28+00

30+00

32+00

MATCH LINE SHEET C2.05

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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E	08/15/16	TOWN COMMENTS	
D	04/06/16	NOTICE OF INTENT	
C	01/26/16	NOT ISSUED	
B	11/13/15	DRIVEWAY TO APARTMENTS	
A	11/04/15	PROGRESS SET	

COMMONWEALTH OF MASSACHUSETTS
STEPHEN P. CONVERSE
No 33585
PROFESSIONAL LAND SURVEYOR
8/15/16

MASSACHUSETTS
LAWRENCE C. GRUENE, JR.
NO. 4987
REGISTERED LANDSCAPE ARCHITECT
8/15/16

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c/o Capital Group Properties
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Southborough, MA 01772

PREPARED FOR:
CAPITAL GROUP PROPERTIES LLC
259 Turnpike Road, Suite 100
Southborough, MA 01772

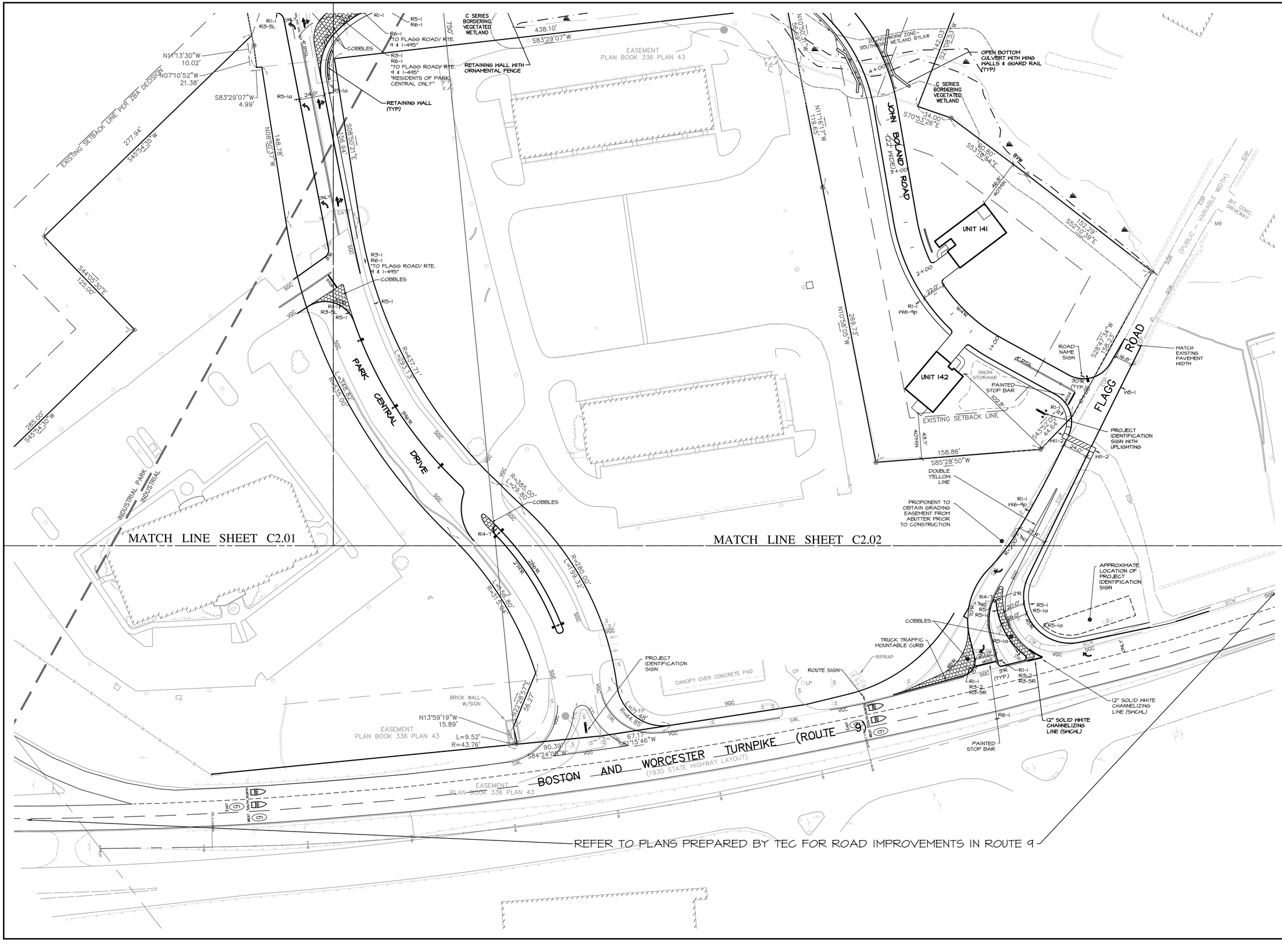
TITLE:
LAYOUT AND MATERIALS PLAN

PARK CENTRAL
Southborough, MA
(Worcester County)

TOWN PERMITTING

0 40 80 120

DATE: 11/04/15	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978200	CHK'D. BY:
DRAWING NO.: 0978206E	SHEET: C2.06



CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

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A	11/04/15	PROGRESS SET	

COMMONWEALTH OF MASSACHUSETTS — STEPHEN P. CONVERSE No 33585 — PROFESSIONAL LAND SURVEYOR — 8/15/16

MASSACHUSETTS — LAWRENCE C. GRASSO — NO. 49871 — REGISTERED LANDSCAPE ARCHITECT — 8/15/16

PREPARED BY:

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Southborough, MA
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TOWN PERMITTING

0 40 80 120

DATE: 11/04/15	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978200	CHK'D. BY:
DRAWING NO.: 0978207E	SHEET: C2.07

SITE PREPARATION AND EROSION AND SEDIMENT CONTROL NOTES:

1. PRIOR TO CONSTRUCTION AN EROSION CONTROL BARRIER (ECB) OR SILT FENCE (SF) SHALL BE PROVIDED AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE ECB AND SF THROUGHOUT ALL PHASES OF CONSTRUCTION AS WELL AS COMPLYING WITH ANY OTHER CONDITIONS ESTABLISHED IN THE ORDER OF CONDITIONS AS ISSUED BY THE SOUTHBOROUGH CONSERVATION COMMISSION (DEP FILE NO. _____-_____).

2. THE CONTRACTOR SHALL TAKE SUFFICIENT PRECAUTIONS DURING CONSTRUCTION TO MINIMIZE THE RUNOFF OF POLLUTING SUBSTANCES SUCH AS SILT, CLAY, FUELS, OILS, BITUMENS, CALCIUM CHLORIDE, OR OTHER POLLUTING MATERIALS INTO THE WETLAND. SPECIAL PRECAUTIONS SHALL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT OPERATIONS WHICH PROMOTE EROSION.

3. CONTRACTOR SHALL NOT PERMIT SEDIMENT LADEN WATERS TO ENTER DRAINAGE FACILITIES. SPECIAL ATTENTION SHALL BE GIVEN TO AREAS FOR PROPOSED STORMWATER INFILTRATION SYSTEMS. CONTRACTOR SHALL UTILIZE TEMPORARY SEDIMENT PITS/BASINS AS NECESSARY.

4. AS CONSTRUCTION PROGRESSES AND SEASONAL CONDITIONS DICTATE, ADDITIONAL SILTATION CONTROL FACILITIES MAY BE REQUIRED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS NEW CONDITIONS THAT MAY BE CREATED AND TO PROVIDE ADDITIONAL FACILITIES OVER THE ABOVE MINIMUM REQUIREMENTS AS MAY BE REQUIRED.

5. AS A MINIMUM, THE FOLLOWING SHALL APPLY:
   - TREES MAY BE CUT WHENEVER DESIRED, BUT BRUSH AND STUMPS SHALL NOT BE REMOVED UNTIL 1 WEEK PRIOR THE START OF CONSTRUCTION FOR EACH PHASE.
   - EROSION AND SEDIMENTATION CONTROL BARRIERS SUCH AS SILTATION FENCE BACKED BY STAKED BALES OF STRAW (OR CERTIFIED WEED AND INVASIVE FREE HAY) AND SILTATION FENCE SHALL BE PROVIDED AS SHOWN OR AS OTHERWISE REQUIRED TO REDUCE THE SEDIMENT CONTENT OF THE WATER. SUFFICIENT BALES OF STRAW SHALL BE PROVIDED SUCH THAT ALL FLOW WILL FILTER THROUGH THE STRAW. OTHER METHODS WHICH REDUCE THE SEDIMENT CONTENT TO AN EQUAL OR GREATER DEGREE MAY BE USED AS APPROVED BY THE ENGINEER.
   - DRAINAGE LEAVING THE SITE SHALL FLOW TO WATER COURSES IN SUCH A MANNER TO PREVENT EROSION.
   - LOAMING AND SEEDING OR MULCHING OF EXPOSED AREAS SHALL TAKE PLACE WITHIN 14 CALENDAR DAYS AFTER THE TEMPORARY OR PERMANENT CESSATION OF EARTH-DISTURBING ACTIVITIES. PROVIDE BINDER COURSE AS SOON AS PRACTICABLE ON AREAS TO BE PAVED.
   - CONTRACTOR IS RESPONSIBLE FOR MONITORING AND MAINTAINING AND/OR REPLACING EROSION CONTROL MEASURES AS APPROPRIATE.

7. SILTATION/SEDIMENTATION PONDS
   - SILTATION/SEDIMENTATION BASINS SHALL BE INSTALLED ON SITE TO DE-SILT ALL STORMWATER OR WATER PUMPED FROM EXCAVATIONS.
   - PROPOSED BASINS MAY BE UTILIZED AS A SILTATION POND PROVIDED THAT TOPSOIL AND SUBSOIL IS NOT STRIPPED FROM THE BOTTOM OF THE BASINS.
   - IF ADDITIONAL SILTATION CONTROL IS REQUIRED, CHECK DAMS OR SILT FENCES MAY BE PLACED IN SWALES RECEIVING STORMWATER FROM AREAS DISTURBED BY CONSTRUCTION, UPON APPROVAL OF THE ENGINEER.
   - SILTATION/SEDIMENTATION BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION OVER FACILITIES TO RECEIVE DISCHARGE FROM SILTATION/SEDIMENTATION PONDS.
   - FOLLOWING STABILIZATION OF UPSTREAM TRIBUTARY AREAS, TOPSOIL AND SUBSOIL SHALL BE REMOVED FROM BASIN AND FREE-DRAINING SOIL FILL MATERIAL PLACED FROM PARENT MATERIAL UP TO SUBGRADE. BASIN BOTTOMS SHALL RECEIVE FINAL LOAM AND SEED.

8. PLACING EROSION CONTROL BLANKETS (SLOPE STABILIZATION) IF REQUIRED:
   - SEED AND FERTILIZER SHALL BE PLACED PRIOR TO THE PLACING OF MATTING.

9. DRAINAGE DIVERSION
   - CONTRACTOR SHALL DIVERT THE SURFACE RUNOFF WATER AROUND THE SITE AS MAY BE REQUIRED.
   - DRAINAGE SHALL BE RESTORED TO CONDITION EXISTING PRIOR TO CONSTRUCTION UNLESS OTHERWISE SHOWN ON THE DRAWINGS.

10. TEMPORARY SOIL STOCKPILES
    - STOCKPILES SHALL BE LOCATED OUTSIDE THE 100' WETLAND BUFFER ZONE.
    - IF STOCKPILES ARE TO REMAIN FOR LONGER THAN 7 DAYS, PILE SHALL BE SURROUNDED BY SILT FENCE.

11. USE OF POLYMERS, FLOCCULENTS OR OTHER TREATMENT CHEMICALS:

    A. USE CONVENTIONAL EROSION AND SEDIMENT CONTROLS PRIOR TO CHEMICAL ADDITION TO ENSURE EFFECTIVE TREATMENT. CHEMICALS MAY ONLY BE APPLIED WHERE TREATED STORMWATER IS DIRECTED TO A SEDIMENT CONTROL (E.G., SEDIMENT BASIN, PERIMETER CONTROL) PRIOR TO DISCHARGE.

    B. CONTRACTOR SHALL SELECT TREATMENT CHEMICALS THAT ARE APPROPRIATELY SUITED TO THE TYPES OF SOILS LIKELY TO BE EXPOSED DURING CONSTRUCTION AND DISCHARGED TO LOCATIONS WHERE CHEMICALS WILL BE APPLIED, AND TO THE EXPECTED TURBIDITY, PH, AND FLOW RATE OF STORMWATER FLOWING INTO THE CHEMICAL TREATMENT SYSTEM OR AREA.

    C. MINIMIZE DISCHARGE RISK FROM STORED CHEMICALS BY STORING ALL TREATMENT CHEMICALS IN LEAK-PROOF CONTAINERS THAT ARE KEPT UNDER STORM-RESISTANT COVER AND SURROUNDED BY SECONDARY CONTAINMENT STRUCTURES (E.G., SPILL BERMS, DECKS, SPILL CONTAINMENT PALLETS), OR PROVIDE EQUIVALENT MEASURES DESIGNED AND MAINTAINED TO MINIMIZE THE POTENTIAL DISCHARGE OF TREATMENT CHEMICALS IN STORMWATER OR BY ANY OTHER MEANS (E.G., STORING CHEMICALS IN COVERED AREA OR HAVING A SPILL KIT AVAILABLE ON SITE).

    D. CONTRACTOR SHALL COMPLY WITH RELEVANT STATE AND LOCAL REQUIREMENTS AFFECTING THE USE OF TREATMENT CHEMICALS.

    E. CONTRACTOR SHALL USE TREATMENT CHEMICALS AND CHEMICAL TREATMENT SYSTEMS IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES, AND WITH DOSING SPECIFICATIONS AND SEDIMENT REMOVAL DESIGN SPECIFICATIONS PROVIDED BY THE PROVIDER/SUPPLIER OF THE APPLICABLE CHEMICALS, OR DOCUMENT SPECIFIC DEPARTURES FROM THESE PRACTICES OR SPECIFICATIONS AND HOW THEY REFLECT GOOD ENGINEERING PRACTICE.

    F. CONTRACTOR SHALL ENSURE THAT ALL PERSONS WHO HANDLE AND USE TREATMENT CHEMICALS AT THE CONSTRUCTION SITE ARE PROVIDED WITH APPROPRIATE, PRODUCT-SPECIFIC TRAINING. AMONG OTHER THINGS, THE TRAINING MUST COVER PROPER DOSING REQUIREMENTS.

    G. USE OF POLYMERS, FLOCCULANTS, OR OTHER TREATMENT CHEMICALS REQUIRES APPROVAL FROM THE SOUTHBOROUGH CONSERVATION COMMISSION PRIOR TO USE ON SITE.

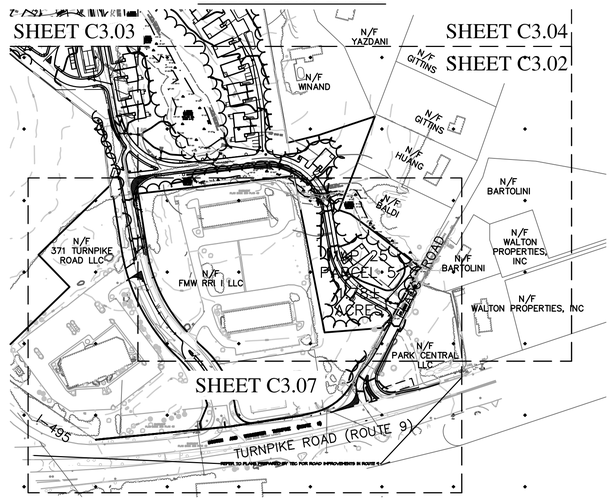
GRADING AND DRAINAGE NOTES:

1. SEE SHEET C3.01 FOR DRAINAGE RIM AND INVERT SCHEDULE.
2. LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND ARE APPROXIMATE AND ASSUMED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITIES PRESENT AT THE SITE. BEFORE COMMENCING SITE WORK, CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-344-7233 (PER 220 CMR 99) AND LOCAL MUNICIPAL UTILITY DEPARTMENTS TO ACCURATELY LOCATE UNDERGROUND UTILITIES. NO EXCAVATION SHALL BE PERFORMED UNTIL ALL UTILITY COMPANIES HAVE BEEN NOTIFIED. THE CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY COMPANIES / DEPARTMENTS OF ANY UTILITIES DAMAGED DURING CONSTRUCTION. ANY COSTS RELATED TO THE REPAIR OF UTILITIES DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITY SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
3. CONTRACTOR SHALL OBTAIN PERMIT(S) FOR TRENCH EXCAVATION (PER 520 CMR 14).
4. ALL ITEMS NOTED FOR REMOVAL AND DISPOSAL, AS WELL AS THOSE ITEMS DISCOVERED DURING EXCAVATION THAT REQUIRE REMOVAL AND REPLACEMENT, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND MUST EITHER BE RECYCLED OR DISPOSED OF OFF SITE ACCORDING TO APPLICABLE REGULATIONS (310 CMR 7, 10 & 19 AND 453 CMR 6). CONTRACTOR IS RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FOR DEMOLITION, HAULING AND DISPOSING OF SAID MATERIALS.
5. ALL DISTURBED AREAS SHALL BE LOAMED (SIX INCHES DEPTH) AND SEEDED (SUITABLE GRASS SEED MIX) UNLESS OTHERWISE SPECIFIED ON THE PLANS.
6. EXISTING PAVEMENT SHALL BE SAW CUT, AND NEW PAVEMENT SHALL BE BLENDED SMOOTHLY TO MEET CUT EDGES.
7. ALL UTILITY COVERS, GRATES, HATCHES, ETC., SHALL BE FLUSH WITH THE PAVEMENT FINISHED GRADE.
8. FINAL GRADES SHALL BE PITCHED EVENLY BETWEEN SPOT ELEVATIONS.
9. ALL SLOPES IN ACCESSIBLE PARKING SPACES SHALL NOT EXCEED 2% IN ANY DIRECTION (PER 521 CMR 23.4.3).
10. ALL SLOPES IN ACCESSIBLE WALKWAYS SHALL NOT EXCEED 5% (PER 521 CMR 22.3) AND SHALL NOT HAVE A CROSS SLOPE OF MORE THAN 2% (PER 521 CMR 22.3.1).
11. RIPRAP APRONS SHALL BE PROVIDED AT ALL FLARED ENDS AND HEADWALLS.
12. RETAINING WALL(S) TO BE DESIGNED BY OTHERS. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ENGINEERED STRUCTURAL DRAWINGS FOR RETAINING WALL(S) WHERE REQUIRED BY CODE, INCLUDING BUT NOT LIMITED TO THE STATE BUILDING CODE (780 CMR, SECTIONS 1105.2 and 1807.2).
13. EACH TOWNHOUSE UNIT SHALL BE FITTED WITH FOUR RECHARGE CHAMBERS FOR ROOF RUNOFF. REFER TO SHEET C6.03 FOR DETAILS.

GRADING AND DRAINAGE KEY:

ECB	EROSION CONTROL BARRIER
DMH	DRAIN MANHOLE
CB	CATCH BASIN
DCB	DOUBLE CATCH BASIN
DI	DROP INLET
HW	HEADWALL
SWTU	STORMWATER TREATMENT UNIT
C/O	CLEAN OUT
TW/BW	TOP/BOTTOM OF WALL
TC/BC	TOP/BOTTOM OF CURB

SHEET C3.07 INSET



BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

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Southborough, MA 01772

TITLE:

GRADING AND DRAINAGE INDEX

PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 200 400 600

DATE: 11/04/15	SCALE: 1" = 200'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978300	CHK'D. BY:
DRAWING NO.: 0978300E	SHEET: C3.00

MATCH LINE SHEET C3.03

MATCH LINE SHEET C3.02

INTERSTATE ROUTE 495
(1961 STATE HIGHWAY LAYOUT)

Q SERIES ISOLATED VEGETATED WETLAND

IVW

ECB

SOUTHBORO WETLAND BYLAW

70' NO-WERV ZONE

100' BUFFER TO IVW – SOUTHBORO WETLAND BYLAW

TOWN LINE

TOWN OF SOUTHBOROUGH
TOWN OF WESTBOROUGH

2:1 SLOPE STABILIZATION

MEMBER CIRCLE

INFILTRATION SYSTEM (INF-1)

100' BVW

UNIT 4

UNIT 3

UNIT 2

UNIT 1

DOUBLE ROW OF ECB'S WITHIN 50' OF A RESOURCE AREA (TYP.)

PARK CENTRAL DRIVE

CB-266

DMH-265

CB-263

DMH-262

DMH-261

DMH-260

DMH-260
RECONSTRUCT EXISTING DMH TO RELOCATE FRAME AND COVER TO ALLOW INSTALLATION OF CURB

BENCHMARK:
B. BOLT ON HYDRANT
ELEV.=393.71

N/F
371 TURNPIKE ROAD LLC
MAP 24 PARCEL 4.A
DEED BOOK 21635
PAGE 131

INTERSTATE ROUTE 495
(1961 STATE HIGHWAY LAYOUT)

NOTES:

1. SEE SHEET C0.00 FOR NOTES, REFERENCES AND LEGEND.
2. SEE SHEET C3.00 FOR GRADING AND DRAINAGE AND EROSION CONTROL NOTES.
3. SEE SHEET C3.07 FOR DRAINAGE RIM AND INVERT SCHEDULE.

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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LAWRENCE C. GRIGNON III — REGISTERED LANDSCAPE ARCHITECT — NO. 1051 — 12/15/15

MICHAEL SCOTT DYER — No. 49360 — REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

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PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 40 80 120

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JOB NO.: 0978.00	DWN. BY: _____
FILE NO.: 0978300	CHK'D. BY: _____
DRAWING NO.: 0978301E	SHEET: C3.01

MATCH LINE SHEET C3.04

MATCH LINE SHEET C3.01

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UNIT 134
UNIT 135
UNIT 136
UNIT 137
UNIT 138
UNIT 139
UNIT 140
UNIT 141
UNIT 142
SHANKLIN DRIVE
JOHN BOLAND ROAD
FLAGG ROAD
2:1 SLOPE STABILIZATION
DOUBLE ROW OF ECB'S WITHIN 50' OF A RESOURCE AREA (TYP.)
EX BASIN A-1
SPECIAL DMH-S1 SEE DETAIL ON C6.02
100' NO-DISTURB ZONE SOUTHBOROUGH WETLAND BYLAW
50' BVW BZ
OPEN BOTTOM CULVERT
PERMANENT BVW ALTERATION AREAS 1-3 (210 SF)
TEMPORARY BVW ALTERATION AREAS A-D (140 SF)- RESTORE TO EXISTING CONDITIONS IN PLACE
TEMPORARY INTERMITTENT BANK ALTERATION (110)- RESTORE TO EXISTING CONDITIONS IN PLACE
EASEMENT PLAN BOOK 336 PLAN 43
(2)-8" PVC L=38' S=0.031 OUTLET INV.=366.0
INFILTRATION SYSTEM (LINE 30.2)
DI-1 (AS OUTLET)
24" CMP INV.=354.71
SNOW STORAGE
EXISTING SETBACK LINE
BENCHMARK: B. BOLT ON HYDRANT ELEV.=363.06

N/F
DAVID & KELLY WINAND
MAP 33 PARCEL 44
CERTIFICATE OF TITLE #15671
LAND COURT PLAN #2891-10
LOT 169

N/F
YAN HUANG
MAP 25 PARCEL 7
CERTIFICATE OF TITLE #16621
LAND COURT PLAN #2891E
LOT 11

N/F
PHILIP BALDI
MAP 25 PARCEL 6
CERTIFICATE OF TITLE #11494
LAND COURT PLAN #2891E
LOT 12

N/F
FMW RRI I LLC
MAP 24 PARCEL 4.B
DEED BOOK 48036 PAGE 382

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SOUTHBOROUGH ZONING
BOARD OF APPEALS

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COMMONWEALTH OF MASSACHUSETTS LAWRENCE C. GREENE NO. 2981 REGISTERED LANDSCAPE ARCHITECT
12/15/15

COMMONWEALTH OF MASSACHUSETTS MICHAEL SEAN CYR No. 49363 REGISTERED PROFESSIONAL ENGINEER

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(Worcester County)

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DRAWING NO.: 0978302E	SHEET: C3.02

MATCH LINE SHEET C3.05

MATCH LINE SHEET C3.01

INTERSTATE ROUTE 495
(I-90 STATE HIGHWAY LAYOUT)

TOWN OF SOUTHBOROUGH
TOWN OF WESTBOROUGH

NOTES:

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2. SEE SHEET C3.00 FOR GRADING AND DRAINAGE AND EROSION CONTROL NOTES.
3. SEE SHEET C3.07 FOR DRAINAGE RIM AND INVERT SCHEDULE.

BENCHMARK:
B. BOLT ON HYDRANT
ELEV.=433.03

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

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REV.	DATE	DESCRIPTION	INIT
E	08/15/16	TOWN COMMENTS	
D	04/06/16	NOTICE OF INTENT	
C	01/26/16	NOT ISSUED	
B	01/06/16	NOT ISSUED	
A	11/04/15	PROGRESS SET	

MASSACHUSETTS — LAWRENCE C. GRANGE — NO. 1661 — REGISTERED LANDSCAPE ARCHITECT — 12/15/15

COMMONWEALTH OF MASSACHUSETTS — MICHAEL J. SOSA — No. 39883 — REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
508.366.6506 (fax)
watermandesign.com wda@wdassoc.com

OWNER:

PARK CENTRAL LLC

c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

GRADING AND DRAINAGE PLAN

PARK CENTRAL

Southborough, MA
(Worcester County)

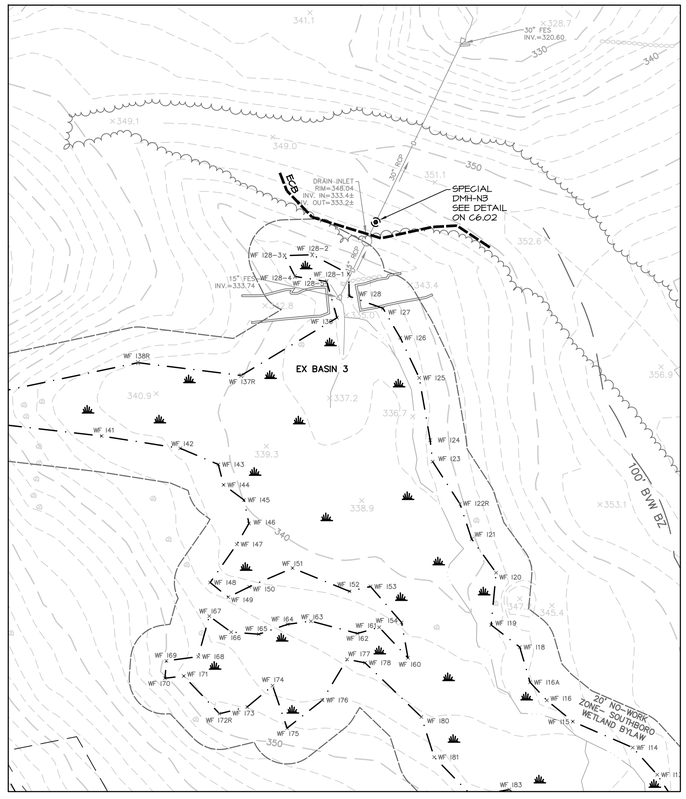
PERMITTING

0 40 80 120

DATE: 11/04/15	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978300	CHK'D. BY:
DRAWING NO.: 0978303E	SHEET: C3.03

NOTES:

1. SEE SHEET C0.00 FOR NOTES, REFERENCES AND LEGEND.
2. SEE SHEET C3.00 FOR GRADING AND DRAINAGE AND EROSION CONTROL NOTES.
3. SEE SHEET C3.07 FOR DRAINAGE RIM AND INVERT SCHEDULE.



INSET

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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TITLE:

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PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 40 80 120

DATE: 11/04/15	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978300	CHK'D. BY:
DRAWING NO.: 0978304E	SHEET: C3.04

MATCH LINE SHEET C3.06

NOTES:

1. SEE SHEET C0.00 FOR NOTES, REFERENCES AND LEGEND.
2. SEE SHEET C3.00 FOR GRADING AND DRAINAGE AND EROSION CONTROL NOTES.
3. SEE SHEET C3.07 FOR DRAINAGE RIM AND INVERT SCHEDULE.

MATCH LINE SHEET C3.03

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
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A	11/04/15	PROGRESS SET	

MASSACHUSETTS LAWRENCE C. GRIMES NO. 3081 REGISTERED LANDSCAPE ARCHITECT 11/15/16

COMMONWEALTH OF MASSACHUSETTS MICHAEL J. ROSSI NO. 34067 REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

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PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

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Southborough, MA 01772

TITLE:

GRADING AND DRAINAGE PLAN

PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 40 80 120

DATE: 11/04/15	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978300	CHK'D. BY:
DRAWING NO.: 0978305E	SHEET: C3.05

SEE INSET ON C3.04

INTERSTATE ROUTE 495
(1961 STATE HIGHWAY LAYOUT)

REFER TO PLANS PREPARED BY MOUNT HOPE ENGINEERING FOR WASTEWATER TREATMENT FACILITY DESIGN

WATER BOOSTER PUMP BUILDING
SLAB = 379.50

WASTEWATER TREATMENT BUILDING
SLAB = 375.50

TW@369.7
BW@363.0

TW@367.0
BW@366.0

SPECIAL DMH-N2 SEE DETAIL ON C6.02

100' BVW BZ

20' NO-WORK ZONE SOUTHBORO WETLAND BYLAW

36" FES INV.=355.33

24" FES INV.=363.87

DRAIN INLET RIM=370.23 INV. IN=364.1± INV. OUT=362.9±

2:1 SLOPE STABILIZATION

TW@409.5
BW@406.0

TW@409.5
BW@404.0

88-UNIT APARTMENT BUILDING
SLAB = 412.0

CLUBHOUSE
SLAB = 415.0

POOL

92-UNIT APARTMENT BUILDING
SLAB = 420.0

INFILTRATION SYSTEM (INF-400)

INFILTRATION SYSTEM (INF-410)

INFILTRATION BASIN (BSN-400)

PARK CENTRAL DRIVE

BLACKTHORN EXTENSION

BLACKTHORN DRIVE
(PUBLIC ~ 50' WIDE)

TW@408.0
BW@401.0

TW@406.5
BW@398

TW@345.5
BW@343.8

TW@404.0
BW@394.7

HW=394.8

TW@406.8
BW@396.8

TW@405.2
BW@397.9

TW@419.5
BW@417.8

TW@419.5
BW@418.6

TW@415.5
BW@413.0

TW@418.3
BW@414.3

TW@423.0
BW@416.0

TW@429.0
BW@422.0

UNIT 55
UNIT 56
UNIT 57
UNIT 58
UNIT 59
UNIT 60
UNIT 61
UNIT 62

TEMPORARY BVW ALTERATION (30 SF)- RESTORE TO EXISTING CONDITIONS IN PLACE

TEMPORARY BVW ALTERATION (65 SF)- RESTORE TO EXISTING CONDITIONS IN PLACE

DOUBLE ROW OF ECB'S WITHIN 50' OF A RESOURCE AREA (TYP.)

(2)-6" PVC
L=81'

12" RCP

12" CMP
INV.=392.66

BENCHMARK:
B. BOLT ON HYDRANT
ELEV.=400.74

N/F
ATTILA HERCZEG &
SUSANNE HEALEY
MAP 41 PARCEL 4
DEED BOOK 34115 PAGE 123

N/F
PETER & LYNN THI NGUYEN
MAP 25 PARCEL 7
CERTIFICATE OF TITLE #12520
LAND COURT PLAN #2891T
LOT 127

N/F
MARVIN & CYD OSTROVSKY
MAP 33 PARCEL 42
CERTIFICATE OF TITLE #8661
LAND COURT PLAN #2891J
LOT 56

NOTES:

EX POND 2

1. SEE SHEET C0.00 FOR NOTES, REFERENCES AND LEGEND.
2. SEE SHEET C3.00 FOR GRADING AND DRAINAGE AND EROSION CONTROL NOTES.
3. SEE SHEET C3.07 FOR DRAINAGE RIM AND INVERT SCHEDULE.

MATCH LINE SHEET C3.05

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
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A	11/04/15	PROGRESS SET	

MASSACHUSETTS LAWRENCE C. GREENE NO. 49871 REGISTERED LANDSCAPE ARCHITECT
12/15/16

COMMONWEALTH OF MASSACHUSETTS MICHAEL J. WATERMAN No. 39063 REGISTERED PROFESSIONAL ENGINEER
12/15/16

PREPARED BY:

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31 East Main Street
Westborough, MA 01581
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TITLE:

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PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 40 80 120

DATE: 11/04/15	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978300	CHK'D. BY:
DRAWING NO.: 0978306E	SHEET: C3.06

UPSTREAM STRUCTURE	UPSTREAM RIM (ft)	UPSTREAM INVERT (ft)	PIPE	DOWNSTREAM STRUCTURE	DOWNSTREAM RIM (ft)	DOWNSTREAM INVERT (ft)	DIAMETER (in)	LENGTH (ft)	SLOPE (ft/ft)	MATERIAL
DMH-1B	363.00	357.80	D-0	DI-1	359.50	357.50	12	122	0.002	PERF. CPE (TYPE SP)
DMH-1A	362.60	358.00	D-1	DMH-1B	363.00	357.80	12	8	0.025	CPE (TYPE S)
CB-2	362.15	358.15	D-2	DMH-1A	362.60	358.00	12	14	0.011	CPE (TYPE S)
CB-3	362.20	358.20	D-3	DMH-1A	362.60	358.00	12	22	0.009	CPE (TYPE S)
DMH-4	372.50	366.55	D-4	INF-302	372.00	366.50	18	9	0.006	CPE (TYPE S)
DMH-5	371.20	367.20	D-5	DMH-4	372.50	366.55	18	43	0.015	CPE (TYPE S)
CB-6	371.35	367.35	D-6	DMH-5	371.20	367.20	12	10	0.015	CPE (TYPE S)
CB-7	371.85	367.85	D-7	DMH-5	371.20	367.60	12	13	0.019	CPE (TYPE S)
DMH-8	378.35	370.00	D-8	DMH-5	371.20	367.20	12	71	0.039	CPE (TYPE S)
DMH-9	391.35	380.80	D-9	DMH-8	378.35	374.00	12	130	0.052	CPE (TYPE S)
CB-10	392.25	387.75	D-10	DMH-9	391.35	387.00	12	16	0.047	CPE (TYPE S)
CB-11	392.25	387.75	D-11	DMH-9	391.35	387.00	12	16	0.047	CPE (TYPE S)
DMH-16	413.25	409.15	D-16	FE-15	409.00	408.50	12	92	0.007	CPE (TYPE S)
DMH-17	413.25	409.25	D-17	DMH-16	413.25	409.15	12	13	0.008	CPE (TYPE S)
CB-18	413.45	409.45	D-18	DMH-16	413.25	409.15	12	10	0.030	CPE (TYPE S)
DMH-19	419.65	414.65	D-19	DMH-17	413.25	409.25	12	114	0.047	CPE (TYPE S)
DMH-20	429.19	424.19	D-20	DMH-19	419.65	415.65	12	142	0.060	CPE (TYPE S)
CB-21	433.35	428.35	D-21	DMH-20	429.19	425.19	12	68	0.046	CPE (TYPE S)
DMH-30	417.00	410.25	D-30	FE-29	412.00	410.00	12	22	0.011	CPE (TYPE S)
DMH-31	416.10	411.60	D-31	DMH-30	417.00	410.25	12	146	0.009	CPE (TYPE S)
CB-32	415.75	411.75	D-32	DMH-31	416.10	411.60	12	14	0.011	CPE (TYPE S)
CB-33	415.75	411.75	D-33	DMH-31	416.10	411.60	12	14	0.011	CPE (TYPE S)
DMH-41	419.60	414.50	D-41	DMH-41A	418.70	414.20	12	17	0.018	CPE (TYPE S)
DMH-41A	418.70	413.50	D-41A	FE-40	413.00	413.00	12	24	0.021	CPE (TYPE S)
CB-42	419.50	415.50	D-42	DMH-41	419.60	414.50	12	10	0.100	CPE (TYPE S)
CB-43	419.50	415.50	D-43	DMH-41	419.60	415.18	12	16	0.020	CPE (TYPE S)
DMH-44	420.35	416.35	D-44	DMH-41	419.60	415.35	12	53	0.019	CPE (TYPE S)
DMH-45	423.55	419.55	D-45	DMH-44	420.35	416.35	12	91	0.035	CPE (TYPE S)
DMH-46	425.00	421.00	D-46	DMH-45	423.55	419.55	12	48	0.030	CPE (TYPE S)
CB-47	425.50	421.50	D-47	DMH-46	425.00	421.00	12	16	0.031	CPE (TYPE S)
DMH-49	426.90	422.60	D-49	DMH-45	423.55	419.55	12	154	0.020	CPE (TYPE S)
CB-50	426.85	422.85	D-50	DMH-49	426.90	422.60	12	12	0.021	CPE (TYPE S)
CB-51	426.85	422.85	D-51	DMH-49	426.90	422.60	12	14	0.018	CPE (TYPE S)
DMH-56	435.00	429.50	D-56	FE-55	430.00	429.00	15	59	0.008	CPE (TYPE S)
DMH-57	434.95	430.45	D-57	DMH-56	435.00	429.50	15	111	0.009	CPE (TYPE S)
CB-58	434.25	430.55	D-58	DMH-57	434.95	430.45	12	16	0.006	CPE (TYPE S)
DMH-59	439.75	435.50	D-59	DMH-57	434.95	430.45	12	106	0.048	CPE (TYPE S)
CB-60	439.70	435.70	D-60	DMH-59	439.75	435.50	12	14	0.014	CPE (TYPE S)
DMH-61	444.20	440.00	D-61	DMH-59	439.75	435.50	12	102	0.044	CPE (TYPE S)
CB-62	444.20	440.20	D-62	DMH-61	444.20	440.00	12	16	0.012	CPE (TYPE S)
DMH-63	444.90	440.90	D-63	DMH-61	444.20	440.00	12	51	0.018	CPE (TYPE S)
CB-64	446.60	442.60	D-64	DMH-63	444.90	440.90	12	118	0.014	CPE (TYPE S)
DMH-67	447.90	444.40	D-67	FE-66	446.00	444.00	18	95	0.004	CPE (TYPE S)
DMH-68	451.10	447.60	D-68	DMH-67	447.90	444.40	18	110	0.029	CPE (TYPE S)
FE-69	451.00	449.50	D-69	DMH-68	451.10	447.60	18	71	0.027	CPE (TYPE S)
DMH-71	446.50	440.50	D-71	DMH-71A	446.25	440.25	12	10	0.025	CPE (TYPE S)
DMH-71A	446.25	440.25	D-71A	FE-70	438.00	437.90	12	84	0.028	CPE (TYPE S)
CB-72	447.00	443.00	D-72	DMH-71	446.50	440.50	12	65	0.038	CPE (TYPE S)
CB-73	445.00	441.00	D-73	DMH-71	446.50	440.50	12	41	0.012	CPE (TYPE S)
CB-76	432.15	428.65	D-76	FE-75	429.00	428.10	12	59	0.009	CPE (TYPE S)
DMH-81	426.50	419.00	D-81	FE-80	424.00	418.00	12	55	0.018	CPE (TYPE S)
DMH-82	432.60	423.60	D-82	DMH-81	426.50	422.25	12	83	0.016	CPE (TYPE S)
CB-83	432.40	425.10	D-83	DMH-82	432.60	424.82	12	11	0.025	CPE (TYPE S)
DMH-85	429.80	425.80	D-85	DMH-82	432.60	423.60	12	190	0.012	CPE (TYPE S)
CB-87	429.60	425.90	D-87	DMH-85	429.80	425.80	12	9	0.011	CPE (TYPE S)
CB-88	431.50	427.50	D-88	DMH-85	429.80	425.80	12	48	0.035	CPE (TYPE S)
DMH-91	438.45	429.00	D-91	DMH-111	432.20	427.70	15	110	0.012	CPE (TYPE S)
CB-92	433.80	429.80	D-92	DMH-91	438.45	429.00	12	45	0.018	CPE (TYPE S)
DMH-93	443.90	439.40	D-93	DMH-91	438.45	434.30	12	114	0.045	CPE (TYPE S)
CB-94	443.90	439.90	D-94	DMH-93	443.90	439.40	12	38	0.013	CPE (TYPE S)
CB-95	449.90	443.40	D-95	DMH-93	443.90	439.40	12	97	0.041	CPE (TYPE S)
DMH-96	443.50	435.06	D-96	DMH-91	438.45	433.40	12	74	0.022	CPE (TYPE S)
CB-97	444.10	440.10	D-97	DMH-96	443.50	439.50	12	18	0.033	CPE (TYPE S)
DMH-98	445.00	435.80	D-98	DMH-96	443.50	435.06	12	86	0.009	CPE (TYPE S)
CB-99	443.80	439.80	D-99	DMH-98	445.00	438.87	12	55	0.017	CPE (TYPE S)
CB-100	439.80	436.30	D-100	DMH-98	445.00	435.80	12	96	0.005	CPE (TYPE S)
DMH-106	448.65	436.65	D-106	FE-105	426.00	426.00	12	145	0.073	CPE (TYPE C)
CB-107	449.90	445.90	D-107	DMH-106	448.65	444.65	12	53	0.024	CPE (TYPE S)
DMH-110	430.10	426.30	D-110	FE-109	426.00	426.00	15	69	0.004	CPE (TYPE S)
DMH-111	432.20	427.70	D-111	DMH-110	430.10	426.30	15	95	0.015	CPE (TYPE S)
CB-112	432.12	428.12	D-112	DMH-111	432.20	427.70	12	13	0.032	CPE (TYPE S)
DMH-113	432.20	428.10	D-113	DMH-111	432.20	427.70	12	46	0.009	CPE (TYPE S)

UPSTREAM STRUCTURE	UPSTREAM RIM (ft)	UPSTREAM INVERT (ft)	PIPE	DOWNSTREAM STRUCTURE	DOWNSTREAM RIM (ft)	DOWNSTREAM INVERT (ft)	DIAMETER (in)	LENGTH (ft)	SLOPE (ft/ft)	MATERIAL
CB-114	432.22	428.22	D-114	DMH-113	432.20	428.10	12	19	0.006	CPE (TYPE S)
CB-115	432.22	428.22	D-115	DMH-113	432.20	428.10	12	18	0.007	CPE (TYPE S)
CB-121	444.70	436.70	D-121	FE-120	436.00	435.00	12	36	0.047	CPE (TYPE S)
DMH-122	434.80	431.10	D-122	FE-126	434.00	431.00	12	32	0.003	CPE (TYPE S)
DMH-123	435.00	431.20	D-123	DMH-122	434.80	431.10	12	19	0.005	CPE (TYPE S)
CB-124	434.95	431.28	D-124	DMH-123	435.00	431.20	12	16	0.005	CPE (TYPE S)
CB-125	434.95	431.45	D-125	DMH-123	435.00	431.20	12	18	0.014	CPE (TYPE S)
FE-128	433.00	432.00	D-127	DMH-122	434.80	431.10	12	23	0.039	CPE (TYPE S)
DMH-131	437.00	430.90	D-131	FE-130	432.00	430.25	18	107	0.006	CPE (TYPE S)
CB-132	437.40	433.40	D-132	DMH-131	437.00	433.26	12	10	0.014	CPE (TYPE S)
DMH-133	435.50	431.85	D-133	DMH-131	437.00	430.90	18	227	0.004	CPE (TYPE S)
CB-134	435.50	432.00	D-134	DMH-133	435.50	431.85	12	8	0.019	CPE (TYPE S)
DMH-135	436.05	432.25	D-135	DMH-133	435.50	431.85	12	65	0.006	CPE (TYPE S)
CB-136	435.80	432.30	D-136	DMH-135	436.05	432.25	12	13	0.004	CPE (TYPE S)
CB-137	435.80	432.30	D-137	DMH-135	436.05	432.25	12	13	0.004	CPE (TYPE S)
DMH-141	422.40	418.15	D-141	DMH-141A	423.05	418.08	18	14	0.005	CPE (TYPE S)
DMH-141A	423.05	418.08	D-141A	FE-140	419.00	418.00	18	24	0.003	CPE (TYPE S)
CB-142	421.75	418.25	D-142	DMH-141	422.40	418.15	12	15	0.007	CPE (TYPE S)
CB-143	421.75	418.25	D-143	DMH-141	422.40	418.15	12	16	0.006	CPE (TYPE S)
DMH-144	425.18	418.50	D-144	FE-41	419.00	416.00	12	55	0.045	CPE (TYPE S)
CB-145	423.80	419.80	D-145	DMH-144	425.18	418.50	12	41	0.032	CPE (TYPE S)
DMH-146	429.70	419.20	D-146	DMH-144	425.18	418.50	12	111	0.006	CPE (TYPE S)
DMH-147	432.55	424.55	D-147	DMH-146	429.70	423.55	12	73	0.014	CPE (TYPE S)
CB-148	432.75	428.75	D-148	DMH-147	432.55	428.45	12	15	0.020	CPE (TYPE S)
CB-149	432.55	428.55	D-149	DMH-147	432.55	428.31	12	12	0.020	CPE (TYPE S)
DMH-150	426.00	419.50	D-150	DMH-146	429.70	419.20	12	108	0.003	CPE (TYPE S)
DMH-151	424.10	419.70	D-151	DMH-150	426.00	419.50	12	86	0.002	CPE (TYPE S)
CB-152	423.75	419.75	D-152	DMH-151	424.10	419.70	12	8	0.006	CPE (TYPE S)
CB-153	424.00	420.17	D-153	DMH-151	424.10	419.70	12	47	0.010	CPE (TYPE S)
DMH-161	410.45	405.70	D-161	INF-411A	410.00	405.50	18	21	0.010	CPE (TYPE S)
DMH-162	411.00	406.00	D-162	DMH-161	410.45	405.70	18	31	0.010	CPE (TYPE S)
CB-163	410.10	406.30	D-163	DMH-162	411.00	406.00	12	31	0.010	CPE (TYPE S)
CB-164	410.10	406.30	D-164	DMH-162	411.00	406.00	12	39	0.008	CPE (TYPE S)
CB-165	412.55	408.55	D-165	DMH-162	411.00	406.00	12	116	0.022	CPE (TYPE S)
DMH-166	414.00	409.80	D-166	CB-165	412.55	408.55	12	80	0.016	CPE (TYPE S)
CB-167	414.00	410.40	D-167	DMH-166	414.00	409.80	12	77	0.008	CPE (TYPE S)
CB-168	417.60	412.10	D-168	DMH-166	414.00	409.80	12	57	0.040	CPE (TYPE S)
DMH-170	411.70	406.20	D-170	INF-411B	410.00	405.50	12	35	0.020	CPE (TYPE S)
DMH-171	412.45	408.35	D-171	DMH-170	411.70	407.70	12	44	0.015	CPE (TYPE S)
CB-172	412.50	408.50	D-172	DMH-171	412.45	408.35	12	19	0.008	CPE (TYPE S)
DMH-173	415.60	411.60	D-173	DMH-171	412.45	408.35	12	183	0.018	CPE (TYPE S)
DMH-174	416.60	412.60	D-174	DMH-173	415.60	411.60	12	27	0.037	CPE (TYPE S)
CB-175	416.75	412.85	D-175	DMH-174	416.60	412.60	12	14	0.018	CPE (TYPE S)
CB-176	417.35	413.35	D-176	DMH-174	416.60	412.60	12	29	0.026	CPE (TYPE S)
CB-177	416.45	412.45	D-177	DMH-173	415.60	411.60	12	59	0.014	CPE (TYPE S)
CB-101	429.40	425.50	D-180	INF-307A	430.20	425.50	18	27	0.000	CPE (TYPE S)
CB-182	395.50	392.00	D-182	FE-180	392.00	390.00	12	88	0.023	CPE (TYPE S)
CB-186	401.70	395.70	D-186	HW-184	395.00	393.80	12	37	0.051	CPE (TYPE S)
DMH-191	400.25	388.25	D-191	FE-190	388.00	386.00	15	67	0.034	CPE (TYPE C)
DMH-192	409.00	403.00	D-192	DMH-191	400.25	396.00	12	172	0.041	CPE (TYPE S)
CB-193	408.90	404.90	D-193	DMH-192	409.00	404.60	12	15	0.020	CPE (TYPE S)
CB-194	408.90	404.90	D-194	DMH-192	409.00	404.50	12	22	0.018	CPE (TYPE S)
CB-253	419.50	415.50	D-195	DMH-251	418.20	414.20	12	49	0.027	CPE (TYPE S)
RD-113	412.00	408.00	D-196	DMH-225	411.40	407.00	12	50	0.020	CPE (TYPE S)
DMH-232	413.80	408.10	D-198	DMH-209	410.83	406.71	12	137	0.010	CPE (TYPE S)
DMH-201	409.10	404.75	D-201	FE-200	404.00	403.00	18	82	0.021	CPE (TYPE S)
CB-202	409.20	405.20	D-202	DMH-201	409.10	405.02	12	9	0.020	CPE (TYPE S)
DMH-203	413.23	406.75	D-203	DMH-201	409.10	404.75	18	74	0.027	CPE (TYPE S)
INF-408C	415.50	407.70	D-204	DMH-203	413.23	406.75	18	38	0.025	CPE (TYPE S)
DMH-206	414.15	405.90	D-206	INF-408A	414.30	405.90	24	12	0.000	CPE (TYPE S)
CB-207	413.60	409.60	D-207	DMH-206	414.15	409.22	12	19	0.020	CPE (TYPE S)
DMH-208	413.13	406.15	D-208	DMH-206	414.15	405.90	18	33	0.008	CPE (TYPE S)
DMH-209	410.83	406.71	D-209	DMH-208	413.13	406.15	18	110	0.005	CPE (TYPE S)
CB-210	410.35	406.85	D-210	DMH-209	410.83	406.71	12	24	0.006	CPE (TYPE S)
CB-211	410.50	407.00	D-211	DMH-209	410.83	406.71	12	57	0.005	CPE (TYPE S)
RD-114	412.00	408.00	D-212	DMH-209	410.83	406.71	12	61	0.021	CPE (TYPE S)
CB-217	408.55	401.55	D-217	FE-215	400.00	400.00	12	29	0.053	CPE (TYPE S)
DMH-221	410.90	400.65	D-221	FE-220	400.00	400.00	12	25	0.026	CPE (TYPE S)
CB-222	410.80	406.80	D-222	DMH-221	410.90	406.64	12	9	0.018	CPE (TYPE S)
DMH-223	409.43	403.43	D-223	DMH-221	410.90	400.65	12	145	0.019	CPE (TYPE S)
CB-224	408.95	404.95	D-224	DMH-223	409.43	404.45	12	25	0.020	CPE (TYPE S)
DMH-225	411.40	405.25	D-225	DMH-223	409.43	403.43	12	132	0.014	CPE (TYPE S)

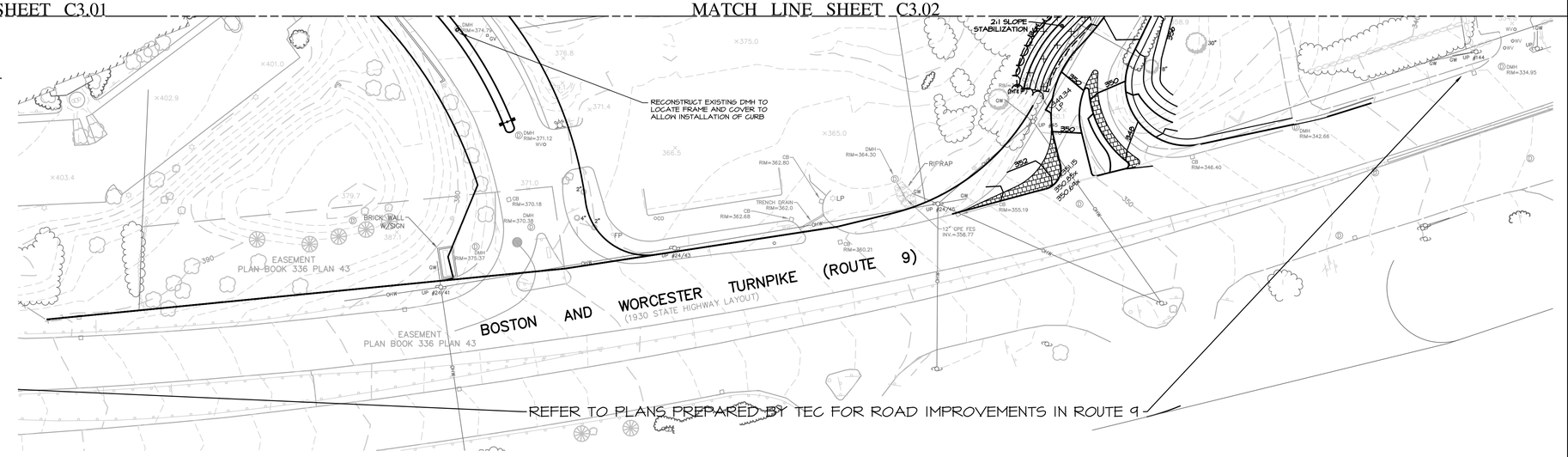
UPSTREAM STRUCTURE	UPSTREAM RIM (ft)	UPSTREAM INVERT (ft)	PIPE	DOWNSTREAM STRUCTURE	DOWNSTREAM RIM (ft)	DOWNSTREAM INVERT (ft)	DIAMETER (in)	LENGTH (ft)	SLOPE (ft/ft)	MATERIAL
DMH-226	410.65	406.00	D-226	DMH-225	411.40	405.25	12	97	0.008	CPE (TYPE S)
CB-227	409.75	406.25	D-227	DMH-226	410.65	406.00	12	39	0.006	CPE (TYPE S)
CB-231	397.90	387.90	D-231	FE-230	385.00	384.00	12	82	0.048	CPE (TYPE S)
CB-233	414.40	410.40	D-233	DMH-232	413.80	409.80	12	32	0.019	CPE (TYPE S)
DMH-234	412.60	408.55	D-234	DMH-232	413.80	408.10	12	64	0.007	CPE (TYPE S)
CB-235	413.65	409.65	D-235	DMH-234	412.60	408.90	12	37	0.020	CPE (TYPE S)
CB-236	412.35	408.75	D-236	DMH-234	412.60	408.55	12	11	0.018	CPE (TYPE S)
DMH-241	419.05	410.00	D-241	INF-408B	418.80	406.00	12	38	0.105	CPE (TYPE S)
INF-410C	418.90	415.16	D-242	DMH-241	419.05	410.00	12	19	0.272	CPE (TYPE S)
DMH-244	417.00	413.50	D-244	INF-410A	418.00	413.50	12	17	0.000	CPE (TYPE S)
CB-245	417.25	413.75	D-245	DMH-244	417.00	413.50	12	9	0.028	CPE (TYPE S)
CB-246	417.15	413.65	D-246	DMH-244	417.00	413.50	12	9	0.017	CPE (TYPE S)
RD-248	420.00	416.00	D-248	INF-410B	419.00	415.80	12	8	0.025	CPE (TYPE S)
DMH-251	418.20	414.20	D-251	FE-250	412.00	412.00	12	139	0.016	CPE (TYPE S)
CB-252	418.05	414.35	D-252	DMH-251	418.20	414.20	12	11	0.014	CPE (TYPE S)
RD-256	420.00	414.00	D-256	FE-255	412.00	412.00	12	33	0.061	CPE (TYPE S)
DMH-261	395.85	389.50	D-260	DMH-260	393.75	389.30	12	10	0.020	CPE (TYPE S)
DMH-262	396.50	392.25	D-262	DMH-261	395.85	391.85	12	23	0.017	CPE (TYPE S)
CB-263	397.20	392.70	D-263	DMH-262	396.50	392.50	12	11	0.018	CPE (TYPE S)
CB-264	397.20	392.90	D-264	DMH-262	396.50	392.50	12	21	0.019	CPE (TYPE S)
DMH-265	416.50	406.50	D-265	DMH-261	395.85	389.50	12	245	0.069	CPE (TYPE S)
CB-266	423.00	419.00	D-266	DMH-265	416.50	406.50	12	158	0.079	CPE (TYPE S)

MATCH LINE SHEET C3.01

MATCH LINE SHEET C3.02

NOTES:

1. SEE SHEET C0.00 FOR NOTES, REFERENCES AND LEGEND.
2. SEE SHEET C3.00 FOR GRADING AND DRAINAGE AND EROSION CONTROL NOTES.
3. THE FOLLOWING STRUCTURES ARE CDS-2015: DMH-1B, DMH-31, DMH-41A, DMH-144, DMH-56, DMH-71A, CB-76, DMH-81, CB-107, DMH-110, CB-121, DMH-123, CB-121, DMH-131, DMH-141A, CB-182, CB-186, DMH-192, DMH-251, DMH-4, CB-101, DMH-170, DMH-161, DMH-206, DMH-244
4. THE FOLLOWING STRUCTURES ARE VSH536: CB-217, DMH-1B



CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

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PREPARED BY:
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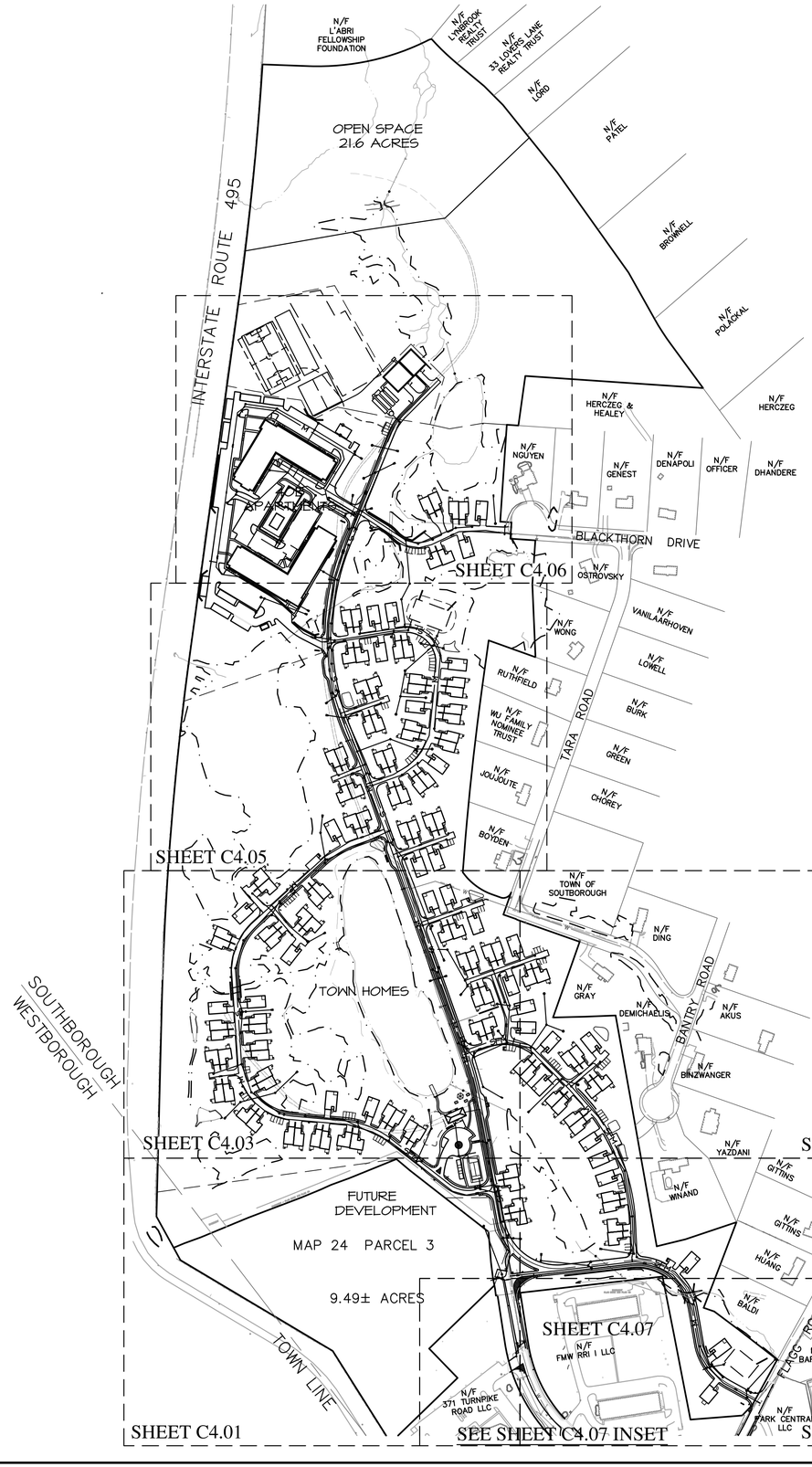
Southborough, MA 01772

PREPARED FOR:
CAPITAL GROUP PROPERTIES LLC
259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:
GRADING AND DRAINAGE PLAN
PARK CENTRAL
Southborough, MA
(Worcester County)
PERMITTING

0 40 80 120

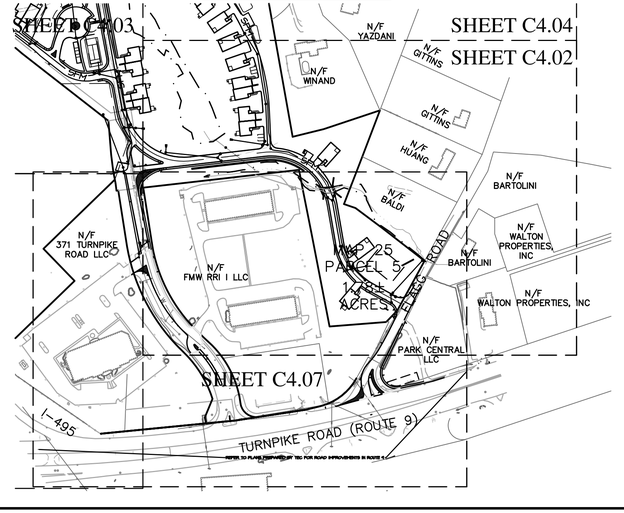
DATE: 11/04/15	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978300	CHK'D. BY:
DRAWING NO.: 0978317E	SHEET: C3.07



UTILITY NOTES:

1. LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND ARE APPROXIMATE AND ASSUMED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITIES THAT ARE NOT DEPICTED HEREON. BEFORE COMMENCING SITE WORK, CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-344-7233 (PER 220 CMR 99) AND LOCAL MUNICIPAL UTILITY DEPARTMENTS TO ACCURATELY LOCATE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY COMPANIES / DEPARTMENTS OF ANY UTILITIES DAMAGED DURING CONSTRUCTION. ANY COSTS RELATED TO THE REPAIR OF UTILITIES DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITY SHALL BE THE CONTRACTOR'S RESPONSIBILITY. NO EXCAVATION SHALL BE PERFORMED UNTIL ALL UTILITY COMPANIES HAVE BEEN NOTIFIED.
2. CONTRACTOR SHALL OBTAIN PERMIT(S) FOR TRENCH EXCAVATION (PER 520 CMR 14).
3. CONTRACTOR SHALL CONFIRM DEPTH(S) OF PERTINENT UTILITIES BY TEST PIT AND NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES.
4. ALL ITEMS NOTED FOR REMOVAL AND DISPOSAL, AS WELL AS THOSE ITEMS DISCOVERED DURING EXCAVATION THAT REQUIRE REMOVAL AND REPLACEMENT, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND MUST EITHER BE RECYCLED OR DISPOSED OF OFF SITE ACCORDING TO APPLICABLE REGULATIONS (310 CMR 7, 18 & 19 AND 453 CMR 6). CONTRACTOR IS RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FOR DEMOLITION, HAULING AND DISPOSING OF SAID MATERIALS.
5. PIPE LENGTHS/SLOPES ARE MEASURED CENTER-OF-STRUCTURE TO CENTER-OF-STRUCTURE.
6. ALL DRAIN PIPE SHALL BE SMOOTH-WALLED CORRUGATED PE (ADS-N12 OR EQUAL), UNLESS OTHERWISE NOTED.
7. ALL GRAVITY SEWER PIPE SHALL BE SDR 35 PVC (ASTM D3034) WITH WATERTIGHT INTEGRAL BELL GASKETED JOINT (ASTM D3212) AND ELASTOMERIC GASKET (ASTM F477), UNLESS OTHERWISE NOTED.
8. ALL FORCE MAIN SEWER PIPE SHALL BE SDR11 HDPE (200 PSI RATED) OR SDR21 PVC (200 PSI RATED, ASTM D2241) WITH WATERTIGHT JOINTS (ASTM D2672 OR D3212 AS ALLOWED), UNLESS OTHERWISE NOTED.
9. TOWN HOME UNITS SHALL BE FITTED WITH A SIMPLEX SEWER PUMP STATION WITH 70 GALLONS (MIN.) STORAGE AND CAPABLE OF DELIVERING 9 GPM AT 124 FEET OF TOTAL DYNAMIC HEAD. GRINDER PUMP SHALL BE SEMI-POSITIVE DISPLACEMENT TYPE CAPABLE OF OPERATING AS PART OF LOW PRESSURE SEWER SYSTEM. SEWER PUMP STATIONS SHALL BE E/ONE DH07I-93 OR EQUIVALENT. EACH TOWN HOME FITTED WITH AN E/ONE STATION SHALL ALSO BE FITTED WITH A 1-1/4" SS SERVICE LATERAL AND GENTRAN SWITCH. SEE PLANS FOR TOWNHOMES REQUIRING SEWER PUMP STATION.
10. ALL WATER MAIN PIPE AND FITTINGS SHALL BE CLDI CLASS 52 (AWWA C151, C110 & C104) WITH RUBBER GASKETED JOINTS (AWWA 111), UNLESS OTHERWISE NOTED. ALL WATER SERVICES TO BE PRESSURE RATED PE OR COPPER AS REQUIRED/APPROVED BY DPW. PROVIDE 5' MIN. COVER. ALL VALVES SHALL OPEN PER TOWN OF SOUTHBOROUGH REQUIREMENTS. WATER SYSTEM SHALL CONFORM TO REQUIREMENTS OF PARE ENGINEERING HYDRAULIC EVALUATION FOR PROPOSED PARK CENTRAL (PARE PROJECT NO. 08176.15) DATED FEBRUARY 24, 2016. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND BECOMING FAMILIAR WITH SAID REPORT.
11. AT LEAST ONE HYDRANT MUST BE LOCATED WITHIN 50' OF THE FIRE DEPARTMENT CONNECTION FOR PROPOSED BUILDINGS WITH SPRINKLER SYSTEMS. HYDRANT LOCATIONS SHALL BE COORDINATED WITH MEP AND FIRE PROTECTION ENGINEERING PLANS AND FINAL LOCATIONS SHALL BE ADJUSTED AS NECESSARY.
12. WHERE 10' HORIZONTAL SEPARATION BETWEEN SEWER AND WATER MAINS CANNOT BE MAINTAINED, CROWN OF SEWER MAIN SHALL BE 18" BELOW BOTTOM OF WATER MAIN, IN ACCORDANCE WITH SECTION 9.7.2 OF MASSDEP "GUIDELINES AND POLICIES FOR PUBLIC WATER SYSTEMS" (AS DEFINED IN 310 CMR 22.02).
13. PROPOSED GAS, ELECTRIC, TELEPHONE AND CABLE DEPICTED IS SCHEMATIC ONLY. CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANY FOR FINAL PLANS AND SPECIFICATIONS.
14. CONTRACTOR SHALL COORDINATE CONNECTION TO MUNICIPAL FIRE ALARM.

SHEET C4.07 INSET



BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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B	01/06/16	NOT ISSUED	
A	11/04/15	PROGRESS SET	

COMMONWEALTH OF MASSACHUSETTS — MICHAEL J. CHOATE — No. 50837 — REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:
CIVIL ENGINEERS SURVEYORS LANDSCAPE ARCHITECTS PLANNERS
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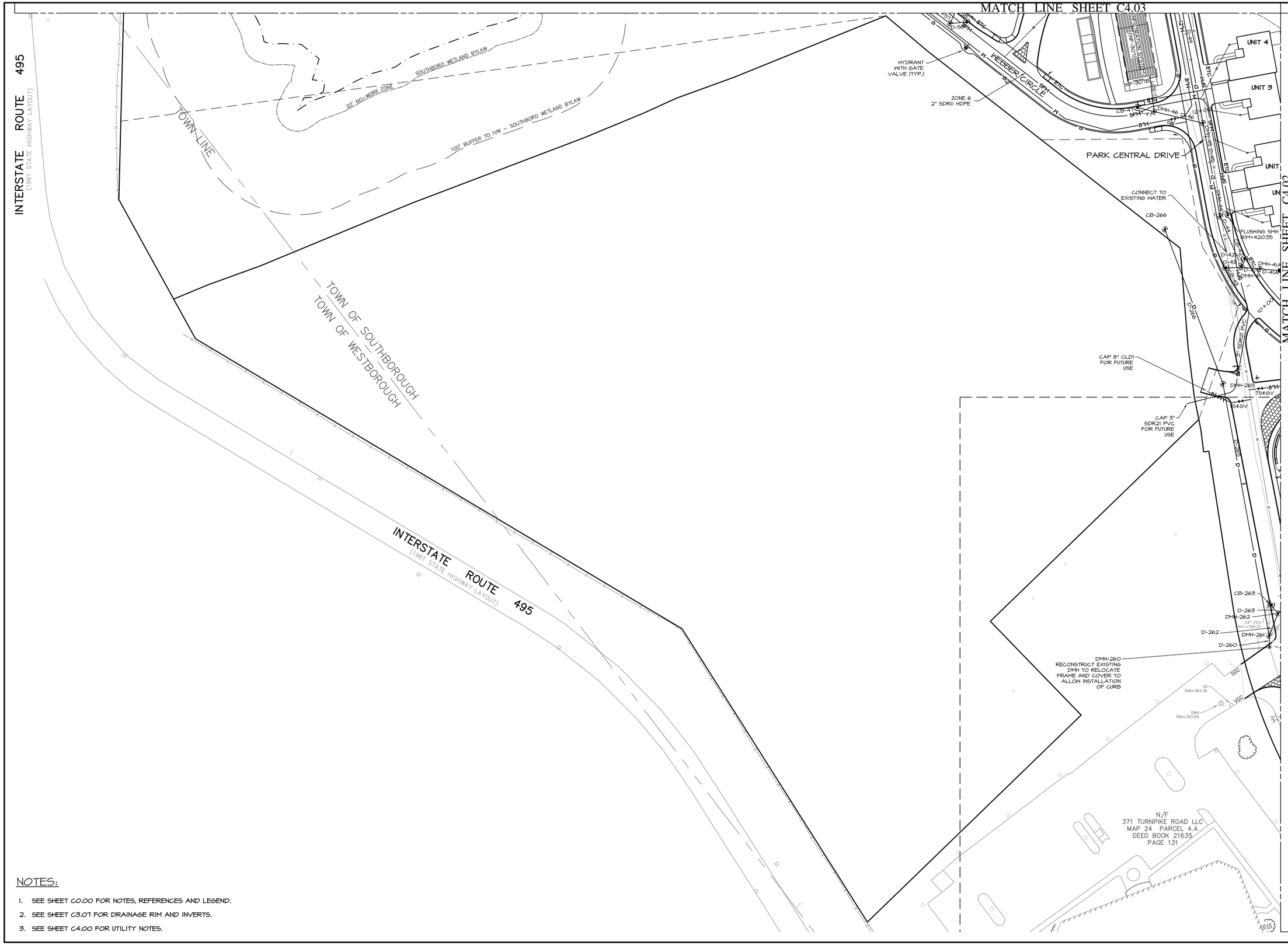
OWNER:
PARK CENTRAL LLC
c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:
CAPITAL GROUP PROPERTIES LLC
259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:
UTILITY PLAN INDEX
PARK CENTRAL
Southborough, MA
(Worcester County)
PERMITTING

0 200 400 600

DATE: 11/04/15	SCALE: 1" = 200'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978300	CHK'D. BY:
DRAWING NO.: 0978310E	SHEET: C4.00



NOTES:

1. SEE SHEET C0.00 FOR NOTES, REFERENCES AND LEGEND.
2. SEE SHEET C3.07 FOR DRAINAGE RIM AND INVERTS.
3. SEE SHEET C4.00 FOR UTILITY NOTES.

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

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COMMONWEALTH OF MASSACHUSETTS
MICHAEL SCOTT CYR
No. 42883
REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

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OWNER:

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c/o Capital Group Properties
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PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

UTILITY PLAN

PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 40 80 120

DATE: 11/04/15	*SCALE:* 1" = 40'
JOB NO.: 0978.00	*DWN. BY:* _____
FILE NO.: 0978300	*CHK'D. BY:* _____
DRAWING NO.: 0978311E	*SHEET:* C4.01

MATCH LINE SHEET C4.04

MATCH LINE SHEET C4.01

UNIT 134
UNIT 135
UNIT 136
UNIT 137
UNIT 138
UNIT 139
UNIT 140
UNIT 141
UNIT 142

ZONE 2
2" SDR11 HDPE

HYDRANT WITH GATE VALVE (TYP.)

N/F
DAVID & KELLY WINAND
MAP 33 PARCEL 44
CERTIFICATE OF TITLE #15671
LAND COURT PLAN #2891-10
LOT 169

N/F
YAN HUANG
MAP 25 PARCEL 7
CERTIFICATE OF TITLE #16621
LAND COURT PLAN #2891E
LOT 11

N/F
PHILIP BALDI
MAP 25 PARCEL 6
CERTIFICATE OF TITLE #11494
LAND COURT PLAN #2891E
LOT 12

N/F
FMW RRI I LLC
MAP 24 PARCEL 4.B
DEED BOOK 48036 PAGE 382

EASEMENT
PLAN BOOK 336 PLAN 43

EX BASIN A-1

100' NO-DISTURB WORK ZONE~ SOUTHBORO WETLAND BYLAW

100' BVW BZ

SPECIAL DMH-SI SEE DETAIL ON C6.02

12" FES INV.=403.63

FE-40
FE-29
FE-15
FE-24

DMH-16
DMH-SI
DMH-31
DMH-1A
DMH-1B

CB-33
CB-32
CB-2
CB-264

FLUSHING SMH RIM=412.70

12" FES INV.=401.22

OPEN BOTTOM CULVERT

LOW PRESSURE SEWER

ZONE 1
1.5" SDR11 HDPE

(2)-8" PVC
L=38'
S=0.03'
OUTLET INV.=366.0

INFILTRATION SYSTEM (INF-302)

FLUSHING SMH RIM=366.80

24" CMP INV.=360.40

24" CMP INV.=354.71

DI-1 (AS OUTLET)

FLAGG ROAD
(PUBLIC ~ VARIABLE WIDTH)

BIT. CONC. DRIVEWAY

T5&GV CONNECT TO EX. WATER MAIN (FIELD VERIFY LOCATION)

DMH RIM=393.75 INV. OUT=389.3±

DMH RIM=390.24

CB RIM=382.97

DMH RIM=382.38

CB RIM=382.87

DMH RIM=380.53

DMH RIM=379.3

CB RIM=378.57

NOTES:

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REV.	DATE	DESCRIPTION	INIT
E	08/15/16	TOWN COMMENTS	
D	04/06/16	NOTICE OF INTENT	
C	01/26/16	NOT ISSUED	
B	01/06/16	NOT ISSUED	
A	11/04/15	PROGRESS SET	

COMMONWEALTH OF MASSACHUSETTS MICHAEL SCOTT CIVIL No. 49886 REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
508.366.6506 (fax)
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OWNER:

PARK CENTRAL LLC

c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

UTILITY PLAN

PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 40 80 120

DATE: 11/04/15	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978300	CHK'D. BY:
DRAWING NO.: 0978312E	SHEET: C4.02

MATCH LINE SHEET C4.05

INTERSTATE ROUTE 495
(1961 STATE HIGHWAY LAYOUT)

TOWN OF SOUTHBOROUGH
TOWN OF WESTBOROUGH

DENSE TREES

POND

POND

EX POND A-2

PARK CENTRAL DRIVE

WEBBER CIRCLE

TARA ROAD

PHANEUF DRIVE

POCKET PARK

CLUBHOUSE

UNIT 1 UNIT 2 UNIT 3 UNIT 4 UNIT 5 UNIT 6 UNIT 7 UNIT 8 UNIT 9 UNIT 10 UNIT 11 UNIT 12 UNIT 13 UNIT 14 UNIT 15 UNIT 16 UNIT 17 UNIT 18 UNIT 19 UNIT 20 UNIT 21 UNIT 24 UNIT 25 UNIT 26 UNIT 27 UNIT 28 UNIT 29 UNIT 30 UNIT 31 UNIT 32 UNIT 33 UNIT 34 UNIT 35 UNIT 36 UNIT 37 UNIT 38 UNIT 39 UNIT 40 UNIT 41 UNIT 42 UNIT 43 UNIT 44 UNIT 45 UNIT 49 UNIT 50 UNIT 101 UNIT 102 UNIT 103 UNIT 104 UNIT 105 UNIT 106 UNIT 107 UNIT 108 UNIT 109 UNIT 110 UNIT 111 UNIT 112 UNIT 113 UNIT 114 UNIT 115 UNIT 116 UNIT 117 UNIT 118 UNIT 119

SMH-46 RIM=435.40 INV.=428.40
SMH-39 RIM=431.00 INV.=424.00
SMH-40 RIM=437.50 INV.=428.70
SMH-41 RIM=441.95 INV.=436.05
SMH-42 RIM=449.85 INV.=440.50
SMH-42A RIM=454.10 INV.=446.10
SMH-43 RIM=444.75 INV.=441.40
SMH-44 RIM=447.80 INV.=442.70
SMH-47 RIM=433.55 INV.=425.55
SMH-48 RIM=442.50 INV.=435.50
SMH-14 RIM=436.65 INV.=426.85
SMH-15 RIM=435.70 INV.=428.00
SMH-16 RIM=438.50 INV.=428.80
SMH-17 RIM=445.00 INV.=435.70
SMH-18 RIM=459.70 INV.=448.70/SMH-19 INV.=437.10/SMH-20
SMH-22 RIM=444.70 INV.=438.70
SFM TERMINATION SMH RIM=435.64 INV.=428.25(2-3")
SFM TERMINATION SMH RIM=447.60 INV.=443.00
FLUSHING SMH RIM=431.90

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DMH-67 DMH-68 DMH-71A DMH-111 DMH-122 DMH-123 DMH-22 DMH-54 DMH-41 DMH-42 DMH-43 DMH-110

FE-66 FE-69 FE-70 FE-76 FE-77 FE-78 FE-79 FE-80 FE-81 FE-82 FE-83 FE-84 FE-85 FE-86 FE-87 FE-88 FE-89 FE-90 FE-91 FE-92 FE-93 FE-94 FE-95 FE-96 FE-97 FE-98 FE-99 FE-100 FE-101 FE-102 FE-103 FE-104 FE-105 FE-106 FE-107 FE-108 FE-109 FE-110 FE-111 FE-112 FE-113 FE-114 FE-115 FE-116 FE-117 FE-118 FE-119 FE-120 FE-121 FE-122 FE-123 FE-124 FE-125 FE-126 FE-127 FE-128 FE-129 FE-130 FE-131 FE-132 FE-133 FE-134 FE-135 FE-136 FE-137 FE-138 FE-139 FE-140 FE-141 FE-142 FE-143 FE-144 FE-145 FE-146 FE-147 FE-148 FE-149 FE-150 FE-151 FE-152 FE-153 FE-154 FE-155 FE-156 FE-157 FE-158 FE-159 FE-160 FE-161 FE-162 FE-163 FE-164 FE-165 FE-166 FE-167 FE-168 FE-169 FE-170 FE-171 FE-172 FE-173 FE-174 FE-175 FE-176 FE-177 FE-178 FE-179 FE-180 FE-181 FE-182 FE-183 FE-184 FE-185 FE-186 FE-187 FE-188 FE-189 FE-190 FE-191 FE-192 FE-193 FE-194 FE-195 FE-196 FE-197 FE-198 FE-199 FE-200 FE-201 FE-202 FE-203 FE-204 FE-205 FE-206 FE-207 FE-208 FE-209 FE-210 FE-211 FE-212 FE-213 FE-214 FE-215 FE-216 FE-217 FE-218 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FE-791 FE-792 FE-793 FE-794 FE-795 FE-796 FE-797 FE-798 FE-799 FE-800 FE-801 FE-802 FE-803 FE-804 FE-805 FE-806 FE-807 FE-808 FE-809 FE-810 FE-811 FE-812 FE-813 FE-814 FE-815 FE-816 FE-817 FE-818 FE-819 FE-820 FE-821 FE-822 FE-823 FE-824 FE-825 FE-826 FE-827 FE-828 FE-829 FE-830 FE-831 FE-832 FE-833 FE-834 FE-835 FE-836 FE-837 FE-838 FE-839 FE-840 FE-841 FE-842 FE-843 FE-844 FE-845 FE-846 FE-847 FE-848 FE-849 FE-850 FE-851 FE-852 FE-853 FE-854 FE-855 FE-856 FE-857 FE-858 FE-859 FE-860 FE-861 FE-862 FE-863 FE-864 FE-865 FE-866 FE-867 FE-868 FE-869 FE-870 FE-871 FE-872 FE-873 FE-874 FE-875 FE-876 FE-877 FE-878 FE-879 FE-880 FE-881 FE-882 FE-883 FE-884 FE-885 FE-886 FE-887 FE-888 FE-889 FE-890 FE-891 FE-892 FE-893 FE-894 FE-895 FE-896 FE-897 FE-898 FE-899 FE-900 FE-901 FE-902 FE-903 FE-904 FE-905 FE-906 FE-907 FE-908 FE-909 FE-910 FE-911 FE-912 FE-913 FE-914 FE-915 FE-916 FE-917 FE-918 FE-919 FE-920 FE-921 FE-922 FE-923 FE-924 FE-925 FE-926 FE-927 FE-928 FE-929 FE-930 FE-931 FE-932 FE-933 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D-66 D-67 D-68 D-69 D-71 D-72 D-111 D-122 D-123 D-124 D-125 D-126 D-127 D-128 D-129 D-130 D-131 D-132 D-133 D-134 D-135 D-136 D-137 D-138 D-139 D-140 D-141 D-142 D-143 D-144 D-145 D-146 D-147 D-148 D-149 D-150 D-151 D-152 D-153 D-154 D-155 D-156 D-157 D-158 D-159 D-160 D-161 D-162 D-163 D-164 D-165 D-166 D-167 D-168 D-169 D-170 D-171 D-172 D-173 D-174 D-175 D-176 D-177 D-178 D-179 D-180 D-181 D-182 D-183 D-184 D-185 D-186 D-187 D-188 D-189 D-190 D-191 D-192 D-193 D-194 D-195 D-196 D-197 D-198 D-199 D-200 D-201 D-202 D-203 D-204 D-205 D-206 D-207 D-208 D-209 D-210 D-211 D-212 D-213 D-214 D-215 D-216 D-217 D-218 D-219 D-220 D-221 D-222 D-223 D-224 D-225 D-226 D-227 D-228 D-229 D-230 D-231 D-232 D-233 D-234 D-235 D-236 D-237 D-238 D-239 D-240 D-241 D-242 D-243 D-244 D-245 D-246 D-247 D-248 D-249 D-250 D-251 D-252 D-253 D-254 D-255 D-256 D-257 D-258 D-259 D-260 D-261 D-262 D-263 D-264 D-265 D-266 D-267 D-268 D-269 D-270 D-271 D-272 D-273 D-274 D-275 D-276 D-277 D-278 D-279 D-280 D-281 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D-614 D-615 D-616 D-617 D-618 D-619 D-620 D-621 D-622 D-623 D-624 D-625 D-626 D-627 D-628 D-629 D-630 D-631 D-632 D-633 D-634 D-635 D-636 D-637 D-638 D-639 D-640 D-641 D-642 D-643 D-644 D-645 D-646 D-647 D-648 D-649 D-650 D-651 D-652 D-653 D-654 D-655 D-656 D-657 D-658 D-659 D-660 D-661 D-662 D-663 D-664 D-665 D-666 D-667 D-668 D-669 D-670 D-671 D-672 D-673 D-674 D-675 D-676 D-677 D-678 D-679 D-680 D-681 D-682 D-683 D-684 D-685 D-686 D-687 D-688 D-689 D-690 D-691 D-692 D-693 D-694 D-695 D-696 D-697 D-698 D-699 D-700 D-701 D-702 D-703 D-704 D-705 D-706 D-707 D-708 D-709 D-710 D-711 D-712 D-713 D-714 D-715 D-716 D-717 D-718 D-719 D-720 D-721 D-722 D-723 D-724 D-725 D-726 D-727 D-728 D-729 D-730 D-731 D-732 D-733 D-734 D-735 D-736 D-737 D-738 D-739 D-740 D-741 D-742 D-743 D-744 D-745 D-746 D-747 D-748 D-749 D-750 D-751 D-752 D-753 D-754 D-755 D-756 D-757 D-758 D-759 D-760 D-761 D-762 D-763 D-764 D-765 D-766 D-767 D-768 D-769 D-770 D-771 D-772 D-773 D-774 D-775 D-776 D-777 D-778 D-779 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8" PVC S (TYP.)
8" PVC G (TYP.)
8" PVC W (TYP.)
6"W
8"W
12"W
ZONE 4 3" SDR11 HDPE
ZONE 5 3" SDR11 HDPE
ZONE 6 2" SDR11 HDPE
HYD & GV
HYDRANT WITH GATE VALVE (TYP.)
GV
DRAIN ABOVE SEWER
8x6x6 TEE
CAP
100' BUFFER TO WETLAND
20' NO-WORK ZONE-SOUTHBORO WETLAND BYLAW
25'X6' FOOT BRIDGE (THRUFLOW INTERLOCKING PANELS, FOOTING/SUPPORT STRUCTURE DESIGN BY OTHERS)
40'X10' DOCK (THRUFLOW INTERLOCKING PANELS, FOOTING/SUPPORT STRUCTURE DESIGN BY OTHERS)
SPECIAL DMH-52 SEE DETAIL ON C6.02
15" FES INV.=424.97
DRAIN INLET RIM=428.06 INV. IN=424.86± INV. OUT=424.23
24" FES INV.=417.45
REMOVE EXISTING WATER
REPLACE AND RELOCATE EXISTING HYDRANT
CONNECT TO EXISTING WATER
PROTECT AND RETAIN EXISTING HYDRANT
REMOVE EXISTING WATER
OPEN BOTTOM CULVERT

NOTES:

1. SEE SHEET C0.00 FOR NOTES, REFERENCES AND LEGEND.
2. SEE SHEET C3.07 FOR DRAINAGE RIM AND INVERTS.
3. SEE SHEET C4.00 FOR UTILITY NOTES.

MATCH LINE SHEET C4.01

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

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Southborough, MA
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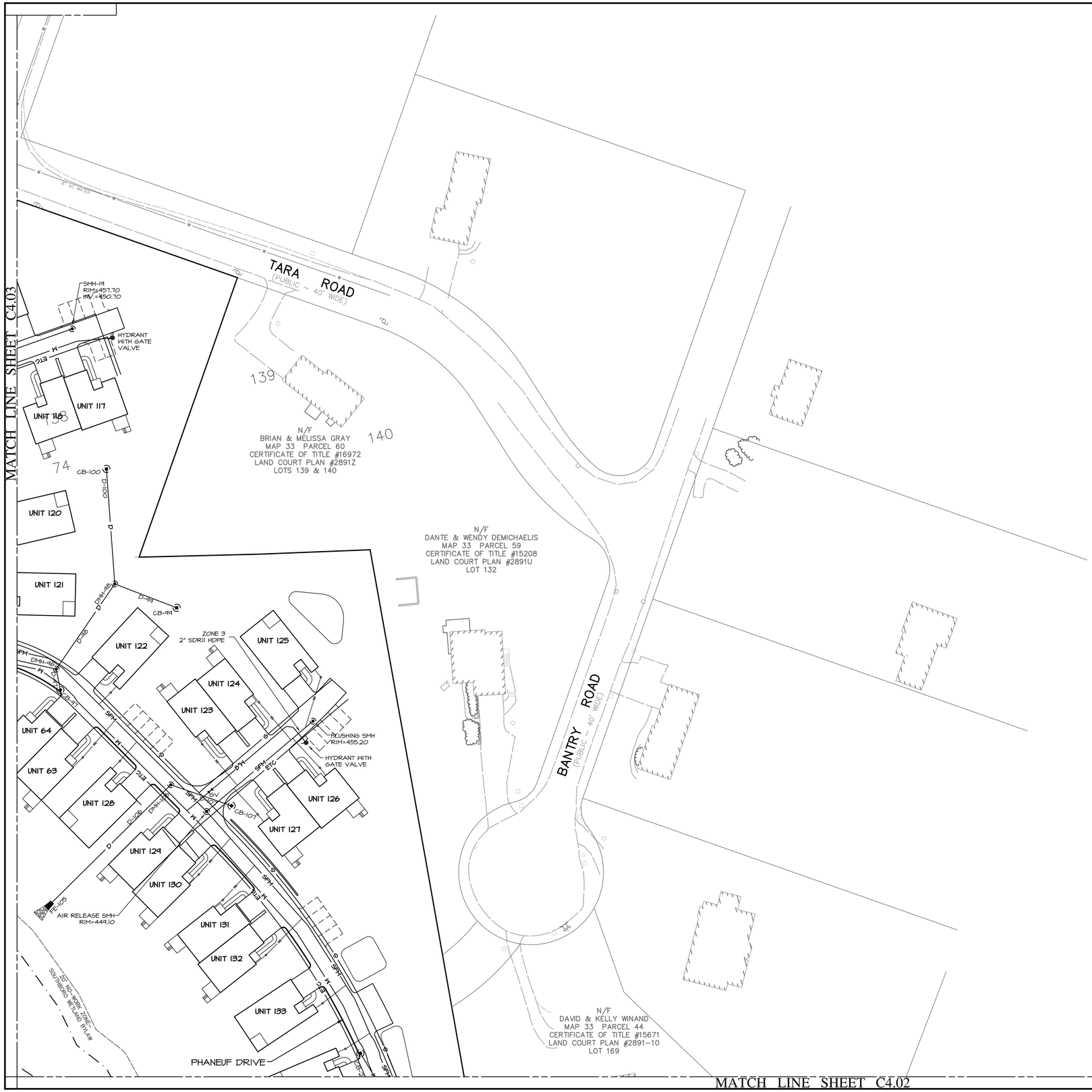

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1. SEE SHEET C0.00 FOR NOTES, REFERENCES AND LEGEND.
2. SEE SHEET C3.01 FOR DRAINAGE RIM AND INVERTS.
3. SEE SHEET C4.00 FOR UTILITY NOTES.

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

_____

DATE: _____

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E	08/15/16	TOWN COMMENTS	
D	04/06/16	NOTICE OF INTENT	
C	01/26/16	NOT ISSUED	
B	01/06/16	NOT ISSUED	
A	11/04/15	PROGRESS SET	

COMMONWEALTH OF MASSACHUSETTS
MICHAEL SCOTT CHU
NO. 40161
REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
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watermandesign.com wda@wdassoc.com

OWNER:

PARK CENTRAL LLC

c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

UTILITY PLAN

PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 40 80 120

DATE: 11/04/15	*SCALE:* 1" = 40'
JOB NO.: 0978.00	*DWN. BY:* _____
FILE NO.: 0978300	*CHK'D. BY:* _____
DRAWING NO.: 0978314E	*SHEET:* C4.04

MATCH LINE SHEET C4.06

NOTES:

1. SEE SHEET C0.00 FOR NOTES, REFERENCES AND LEGEND.
2. SEE SHEET C3.07 FOR DRAINAGE RIM AND INVERTS.
3. SEE SHEET C4.00 FOR UTILITY NOTES.

MATCH LINE SHEET C4.03

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED SOUTHBOROUGH ZONING BOARD OF APPEALS

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COMMONWEALTH OF MASSACHUSETTS MICHAEL J. GRAY 39021 REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

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Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

UTILITY PLAN

PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 40 80 120

DATE: 11/04/15	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978300	CHK'D. BY:
DRAWING NO.: 0978315E	SHEET: C4.05

INTERSTATE ROUTE 495
(1961 STATE HIGHWAY LAYOUT)

REFER TO PLANS PREPARED BY MOUNT HOPE ENGINEERING FOR WASTEWATER TREATMENT FACILITY DESIGN

LEACHING AREA (BY OTHERS)

RESERVE LEACHING AREA

WATER BOOSTER PUMP BUILDING

WASTEWATER TREATMENT BUILDING

EX POND 2

88-UNIT APARTMENT BUILDING

CLUBHOUSE

PARK CENTRAL DRIVE

BLACKTHORN EXTENSION

BLACKTHORN DRIVE (PUBLIC ~ 50' WIDE)

REFER TO PLANS BY MT HOPE ENGINEERING, INC. FOR WASTEWATER TREATMENT PLANT AND DISPOSAL SYSTEM

20' NO-WORK ZONE- SOUTHBORO WETLAND BYLAW

100' BVW BZ

SPECIAL DMH-N2 SEE DETAIL ON C6.02

DMH-226, DMH-225, DMH-223, DMH-204, DMH-206, DMH-208, DMH-203, DMH-201, DMH-234, DMH-232, DMH-244, DMH-241, DMH-221

CB-221, CB-224, CB-222, CB-231, CB-210, CB-211, CB-207, CB-235, CB-236, CB-233, CB-245, CB-246, CB-217, CB-218, CB-182, CB-186

SMH-1 RIM=384.05 INV.=368.00

SMH-2 (DROP) RIM=407.70 INV.=391.70/SMH-3 INV.=387.05/SMH-21

SMH-21 RIM=403.90 INV.=394.40 - HH-184 INV.=388.40

SMH-3 RIM=404.95 INV.=399.90

SMH-4 RIM=412.10 INV.=402.15

SMH-22 RIM=403.00 INV.=390.40

SMH-23 RIM=344.85 INV.=341.75

SMH-24 RIM=348.45 INV.=342.45

SMH-25 (DROP) RIM=418.20 INV.=412.20/IN INV.=405.50/OUT

OCS-407 INFILTRATION BASIN (BSN-407)

INFILTRATION SYSTEM (INF-408)

INFILTRATION SYSTEM (INF-410)

INF-205A, INF-205B

UNIT 55, UNIT 56, UNIT 57, UNIT 58, UNIT 59, UNIT 60, UNIT 61, UNIT 62

FE-180, FE-190, FE-200, FE-210, FE-215, FE-220, FE-230

36" FES INV.=355.33

24" FES INV.=363.87

36" FES INV.=391.04

36" FES INV.=391.08

DRAIN INLET RIM=370.23 INV. IN=364.1± INV. OUT=362.9±

DCB RIM=395.90 INV. OUT=391.68

DCB RIM=395.55 INV. OUT=393.1±

12" OMP INV.=392.66

CONNECT TO EXISTING WATER

FIRE SERVICE DOMESTIC SERVICE

ELEC, TELE, DATA

SEWER

HYDRANT WITH GATE VALVE (TYP.)

(2)-6" PVC L=31'

D-221, D-226, D-146, D-225, D-223, D-224, D-222, D-221, D-148, D-211, D-212, D-213, D-204, D-234, D-235, D-233, D-205, D-206, D-207, D-208, D-209, D-202, D-203, D-201, D-241, D-242, D-243, D-248, D-249, D-182, D-186

RD-113, RD-249

GV 12"x12"x12" TEE

GV 12"x6"x12" TEE

MATCH LINE SHEET C4.05

NOTES:

1. SEE SHEET C0.00 FOR NOTES, REFERENCES AND LEGEND.
2. SEE SHEET C3.01 FOR DRAINAGE RIM AND INVERTS.
3. SEE SHEET C4.00 FOR UTILITY NOTES.

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED SOUTHBOROUGH ZONING BOARD OF APPEALS

DATE: _____

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A	11/04/15	PROGRESS SET	

COMMONWEALTH OF MASSACHUSETTS — MICHAEL ROY CHARETTE — No. 39883 — REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

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PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

UTILITY PLAN

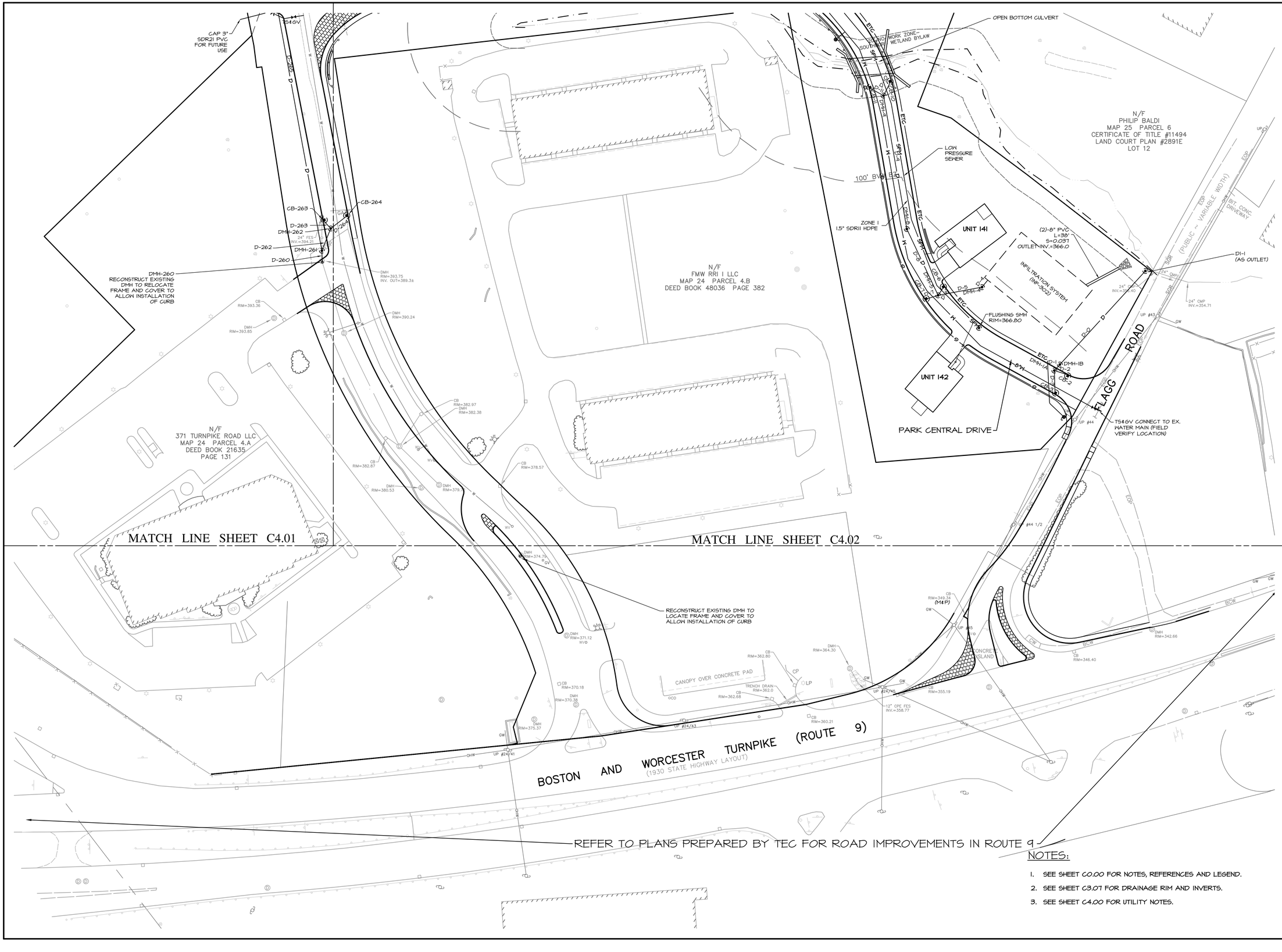
PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 40 80 120

DATE: 11/04/15	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978300	CHK'D. BY:
DRAWING NO.: 0978316E	SHEET: C4.06



BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
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COMMONWEALTH OF MASSACHUSETTS MICHAEL SCOTT DUNN No. 40983 REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

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PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

UTILITY PLAN

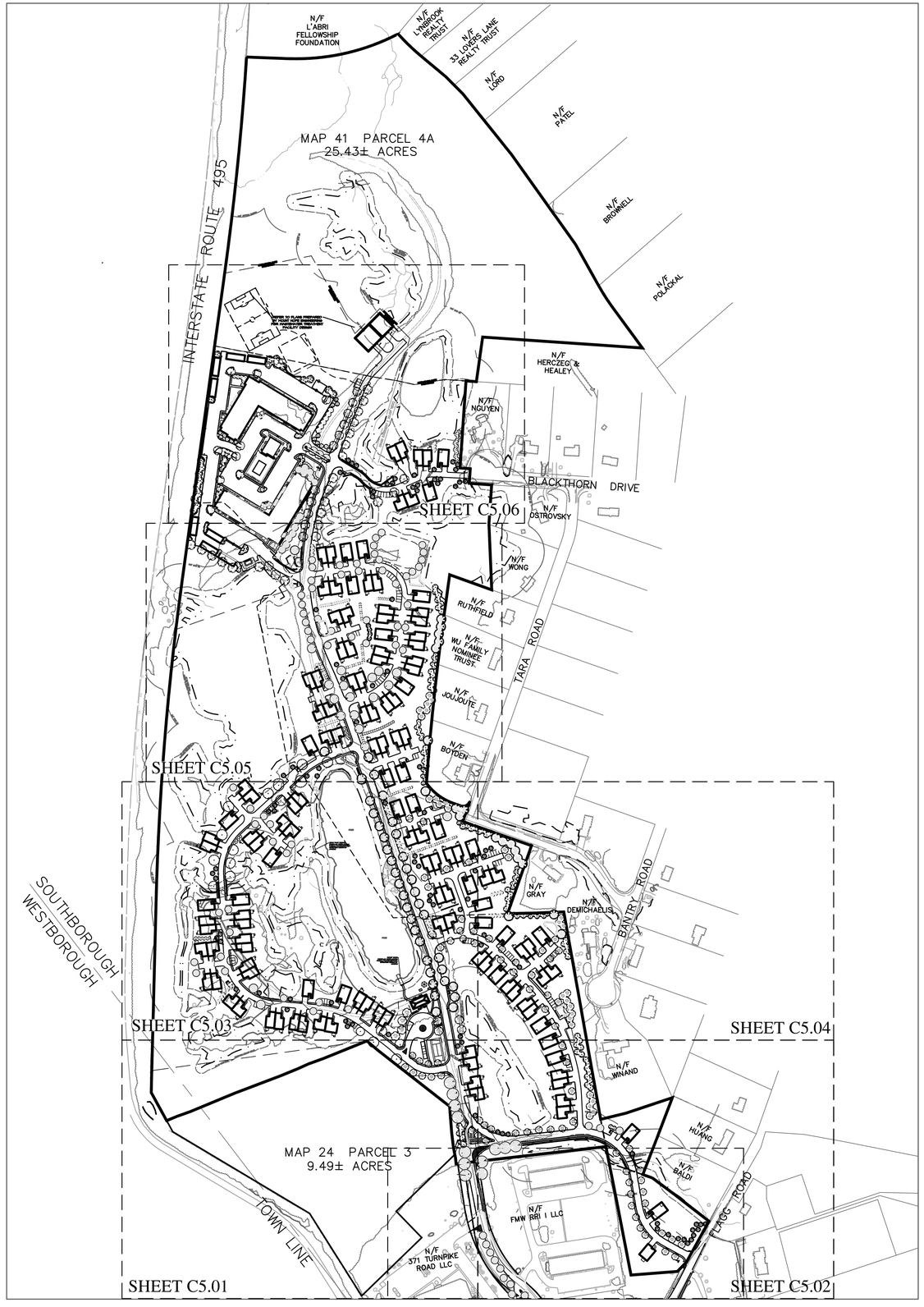
PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 40 80 120

DATE: 11/04/15	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978300	CHK'D. BY:
DRAWING NO.: 0978318E	SHEET: C4.07



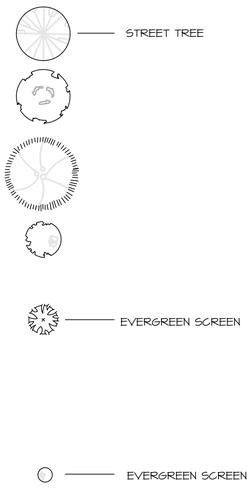
LIGHTING NOTES AND SPECIFICATIONS

THE LIGHTING ILLUMINATION LEVELS AS PROPOSED COMPLY WITH THE AVERAGE ILLUMINATION LEVELS RECOMMENDED BY ILLUMINATION ENGINEERING SOCIETY OF NORTH AMERICA (IESNA).

1. PROPOSED POLE-MOUNTED LIGHT FIXTURES SHALL BE MOUNTED AT A HEIGHT NOT TO EXCEED 15 FEET WHEN MEASURED FROM THE GROUND SURFACE TO THE BOTTOM OF THE FIXTURE.
2. SEE SHEET 7 OF 11 FOR DETAILS ON SITE LIGHTING FIXTURES.
3. FIXTURES SHALL BE POLE MOUNTED
4. POLE, ARM AND FIXTURE COMPONENTS SHALL BE BLACK FINISH.
5. ALL POLES TO BE MOUNTED ON CONCRETE LIGHT POLE BASES. THE CONCRETE BASE SHALL EXTEND 6" ABOVE GRADE WHERE LOCATED OFF PAVEMENT; BASES SHALL EXTEND 30" ABOVE GRADE IN PAVED AREAS.
6. POLE BASES LOCATED AT THE PERIMETER OF PARKING AREAS SHALL BE LOCATED A MINIMUM OF 1.5 FEET FROM THE FACE OF THE CURB.

LANDSCAPE NOTES

1. THE PLANT SCHEDULE PROVIDED CONTAINS A PALLET OF PLANT MATERIALS CHOSEN FOR THE PROJECT. PLANT MATERIALS SHALL BE PROVIDED IN ACCORDANCE WITH THE PLANTING SCHEDULE BASED ON AVAILABILITY AT THE TIME OF INSTALLATION. SUBSTITUTION OF PLANT MATERIAL SHALL ONLY BE AS APPROVED BY THE LANDSCAPE ARCHITECT. SUBSTITUTIONS SHALL BE EQUAL IN OVERALL HEIGHT, LEAF, FORM, BRANCHING HABIT, FRUIT, FLOWER, COLOR, AND CULTURE.
2. ALL PLANT MATERIALS SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED BY ANSI Z60.1, "THE AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
3. PLANT MATERIAL SHALL BE LABELED WITH THE BOTANICAL NAME, COMMON NAME, AND NURSERY OF ITS ORIGINATION. PLANT MATERIAL SHALL BE LABELED WITH A SECURELY ATTACHED WATERPROOF TAB BEARING LEGIBLE DESIGNATION.
4. THE LANDSCAPE CONTRACTOR SHALL PROVIDE HEALTHY, VIGOROUS STOCK, GROWN AT A RECOGNIZED NURSERY IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE AND FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN-SCALD, INJURIES, ABRASIONS, DISFIGUREMENT, ETC.
5. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL AT THE SITE. MATERIAL SHALL BE IMMEDIATELY REMOVED FROM THE PROPERTY BY THE LANDSCAPE CONTRACTOR AND REPLACED WITH IN-KIND MATERIAL APPROVED BY LANDSCAPE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
6. ALL NEW TREES PROPOSED ADJACENT TO SIDEWALKS SHALL ACHIEVE A 6'-8" MIN. BRANCHING STANDARD AT TIME OF PLANTING.
7. PLANT MATERIALS SHALL BEAR THE SAME RELATIONSHIP TO GRADE AS THEY DID IN THE NURSERY, CONTAINER OR THE EXISTING SITE GRADES IN THE CASE OF TRANSPLANTED MATERIALS.
8. INCLUDE IN BID A TWELVE MONTH WARRANTY TO REPLACE DEAD OR DYING PLANTS FOR ONE YEAR FOLLOWING DATE OF FINAL ACCEPTANCE BY THE OWNER. ANY REPLACEMENTS SHALL BE AT NO ADDITIONAL COST TO OWNER.
9. PROVIDE FIVE (5) FOOT DIAMETER MULCH CIRCLE AROUND ALL INDIVIDUAL TREE PLANTINGS AND CONTINUOUS MULCH BED AROUND SHRUB PLANTINGS UNLESS OTHERWISE NOTED ON THE PLAN. MULCH WITH CLEAN, SHREDDED PINE BARK MULCH TO A MINIMUM OF 3" DEPTH IN PLACE UNLESS OTHERWISE NOTED. PRIOR TO SPREADING MULCH, APPLY A WEED PREVENTER SUCH AS "TREFLAN" OR APPROVED EQUAL. FOLLOW MANUFACTURER'S INSTRUCTIONS.
10. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PRESERVE AND PROTECT EXISTING VEGETATION WHERE IT IS NOT IN CONFLICT WITH PROPOSED SITE CONSTRUCTION.
11. THE CONTRACTOR SHALL COMPLETE AN ON-SITE EVALUATION OF SITE CONDITIONS PRIOR TO COMMENCEMENT OF PLANTING INSTALLATION, INCLUDING SOIL COMPACTION, COMPOSITION AND DRAINAGE CHARACTERISTICS. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MITIGATE ANY SITE CONDITIONS UNSUITABLE FOR PLANT GROWTH PRIOR TO PLANTING TO ENSURE VIGOROUS PLANT GROWTH AND GENERAL HEALTH.



BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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MASSACHUSETTS LAWRENCE C. GRANDE NO. 3381 REGISTERED LANDSCAPE ARCHITECT
12/15/15

PREPARED BY:

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Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

LANDSCAPE AND LIGHTING INDEX

PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 200 400 600

DATE: 4/06/16	SCALE: 1" = 200'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978400	CHK'D. BY:
DRAWING NO.: 0978400E	SHEET: C5.00

MATCH LINE SHEET C5.03

MATCH LINE SHEET C5.02

INTERSTATE ROUTE 495
(1961 STATE HIGHWAY LAYOUT)

TOWN LINE

TOWN OF SOUTHBOROUGH
TOWN OF WESTBOROUGH

SOUTHBORO WETLAND BYLAW

20' NO-WORK ZONE

LOT 166
L.C. PLAN #2891-8

PLAY AREA

OUTDOOR RECREATIONAL AREA

4 PP

2 PR

5 PP

WEBBER CIRCLE
(22' WIDE)

100' BVW

UNIT 4

UNIT 3

UNIT

PARK CENTRAL DRIVE
(22' WIDE)

1 PB

4 ZS

24 PH

8 MZ

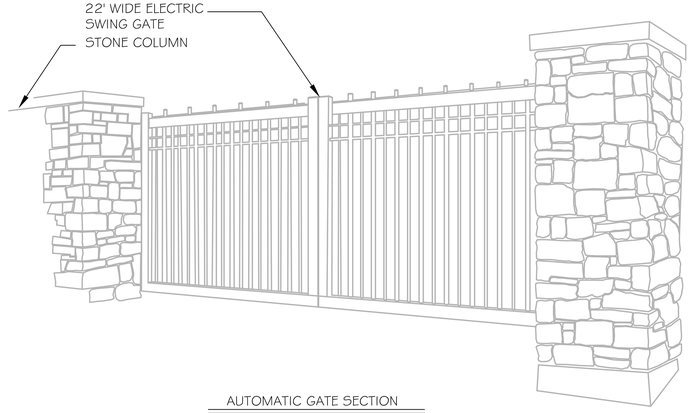
6 PG

3 ZS

Qty.	Key	Common Name	Botanical Name	Size	Remarks
TREES					
3	PB	"Hoopsii" Blue Spruce	*Picea pungens "Hoopsii"*	10' Ht.	B&B
6	PG	White Spruce	*Picea glauca*	10' Ht.	B&B
9	PP	Persian Parrotia	*Parrotia persica*	3½"Cal.	B&B
2	PR	"Redspire" Pear	*Pyrus calleryana "Redspire"*	3" Cal.	B&B
4	ZS	"Green Vase" Zelkova'	*Zelkova serrata "Green Vase"*	3" Cal.	B&B
PERENNIALS					
8	MZ	"Zebra" grass	*Miscanthus sinensis "Zebrinus"*	#3 Pot	Container Grown
24	PH	"Heavy Metal" Switch Grass	*Panicum virgatum "Heavy Metal"*	#3 Pot	Container Grown

N/F
371 TURNPIKE ROAD LLC
MAP 24 PARCEL 4.A
DEED BOOK 21635
PAGE 131

22' WIDE ELECTRIC SWING GATE
STONE COLUMN



AUTOMATIC GATE SECTION
NOT TO SCALE

LANDSCAPING NOTES

1. NOTIFY DIG-SAFE AT 1-888-DIG-SAFE AND LOCAL AUTHORITIES PRIOR TO ANY TYPE OF SITE PREPARATION OR CONSTRUCTION.
2. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL AND MULCH IN SUFFICIENT QUANTITIES TO COMPLETE PLANTING AS SHOWN ON THE DRAWINGS.
3. DRAWING QUANTITIES TAKE PRECEDENCE OVER PLANT LIST QUANTITIES.
4. ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES SET FORTH BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
5. ALL TREES AND SHRUBS SHALL BE PLANTED WITH THE "BEST FACE" SHOWING. ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN, UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT.
6. ALL CONTAINER GROWN STOCK SHALL BE HEALTHY, VIGOROUS, WELL ROOTED AND ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE GROWING. THEY SHALL HAVE TOPS OF GOOD QUALITY, NO APPARENT INJURY AND BE IN A HEALTHY GROWING CONDITION. A CONTAINER GROWN PLANT SHALL HAVE A WELL ESTABLISHED ROOT SYSTEM REACHING THE SIDES OF THE CONTAINER TO MAINTAIN A FIRM BALL.
7. THE QUALITY OF ALL TREES & SHRUBS IS TO BE NORMAL FOR THE SPECIES. ALL PLANTS ARE TO HAVE DEVELOPED ROOT SYSTEMS, TO BE FREE OF INSECTS AND DISEASES AS WELL AS MECHANICAL INJURIES, AND IN ALL RESPECTS BE SUITABLE FOR PLANTINGS.
8. ALL CONIFERS SHALL HAVE DORMANT BUDS AND SECONDARY NEEDLES.
9. WHERE SPECIFIED, CALIPER SIZE IS TO BE THE OVERRIDING FACTOR IN TREE SELECTION. CALIPER SIZE SHALL BE MEASURED 12" ABOVE THE ROOTBALL.
10. PLANT SUBSTITUTIONS ARE NOT ALLOWED UNLESS APPROVED BY THE PROJECT LANDSCAPE ARCHITECT.
11. ALL DISTURBED AREAS NOT SHOWN OTHERWISE SHALL BE LOAMED AND SEEDED AND BLENDED INTO EXISTING GRADE AND CONDITIONS.
12. PRIOR TO INSTALLING ANY PLANT MATERIAL, THE CONTRACTOR SHALL SUBMIT A LOAM SOIL SAMPLE FOR A ROUTINE, ORGANIC, SALTS, AND NITRATE SOIL TEST. UPON THE RESULTS OF THIS TEST, THE SITE CONTRACTOR SHALL AMEND THE LOAM AS RECOMMENDED. SEND THE SOIL SAMPLE TO THE UNIVERSITY OF MASSACHUSETTS SOIL AND PLANT TISSUE TESTING LABORATORY, WEST EXPERIMENT STATION, 682 NORTH PLEASANT ST., UNIVERSITY OF MASSACHUSETTS, AMHERST, MA 01003.
13. LAWN SEED MIX SHALL BE THE PREVIOUS YEARS CROP: 35% JEFFERSON KENTUCKY BLUEGRASS, 35% CARMEN CHEWING FESCUE AND 30% STALLION PERENNIAL RYEGRASS, OR APPROVED EQUAL. PLANT AT A RATE OF 1 LB. PER 150 SQUARE FEET.
14. SLOPE SEED MIX SHALL BE THE PREVIOUS YEARS CROP. PLANT AT A RATE OF 1 LB. PER 150. SQUARE FEET. SEED MIX SHALL BE STALLION PERENNIAL RYE 10%, CREEPING RED FESCUE 50%, ANNUAL RYE GRASS 15%, JEFFERSON KENTUCKY BLUE GRASS 10%, RED TOP CLOVER 5%, AND LADINO CLOVER 5%, OR APPROVED EQUAL. PLANT AT A RATE OF 1 LB. PER 1505F.
15. LAWN SEED AREAS SHALL BE NOT BE DEEMED ACCEPTABLE UNTIL IN EXCESS OF 90% OF EACH AREA, INDEPENDENTLY, IS GERMINATED, GROWING AND DISPLAYING HEALTHY, UNIFORM GROWTH AND HAS BEEN CUT TWICE. THE SITE CONTRACTOR IS RESPONSIBLE FOR APPLYING AT A MINIMUM 1" OF WATER A WEEK, UNTIL THE SEEDED AREAS HAVE BEEN ACCEPTED. THE WATERING SHALL OCCUR IN SMALL DOSES. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY WEEDS (CRAB GRASS) WITHIN THE SEEDED AREAS UNTIL THE SEEDED AREAS HAVE BEEN ACCEPTED.
16. THE DETENTION BASIN SEED MIX SHALL BE THE NEW ENGLAND EROSION CONTROL RESTORATION SEED MIX BY NEW ENGLAND WETLAND PLANTS INC. 820 WEST STREET, AMHERST, MA 01002, PH-413-549-4000. PLANT AT A RATE OF 1 LB. PER 1,250SF.
17. THE HYDRO SEED SLURRY SHALL BE A WOOD BASED BONDED FIBER MATRIX. THE APPLICATION RATE SHALL BE 2,500-3,000LB. PER ACRE SPRAYED IN A LEAST TWO DIRECTIONS. DO NOT APPLY HYDRO SEED SLURRY IF RAIN IS EXPECTED WITHIN 12 HOURS, AND WHEN TEMPERATURES ARE BELOW 50 DEGREES.
18. PRIOR TO PLANTING, THE LANDSCAPER SHALL REVIEW AND COORDINATE WITH THE SITE UTILITY PLAN AND GRADING PLAN.
19. THE ROOTS OF NEWLY PLANTED TREES AND SHRUBS MUST BE KEPT STEADILY MOIST, AS THE DEVELOPING ROOTS ESTABLISH IN THE NEW SOIL. AT PLANTING, WATER THOROUGHLY TO SOAK THE ROOTS AND TO SETTLE THE NEW SOIL AROUND THE ROOT BALL THE AMOUNT OF SUPPLEMENTAL WATER NEEDED EACH WEEK DURING THE FIRST GROWING SEASON AFTER PLANTING DEPENDS ON RECENT RAINFALL, TEMPERATURE, AND WIND. IF LESS THAN ONE-INCH OF RAIN HAS FALLEN OVER THE PAST FIVE TO SEVEN DAYS, THE NEW PLANTINGS MUST BE WATERED. LAWNS, TREES, AND SHRUBS WATERING SHALL OCCUR AT A MINIMUM OF TWO (2) TIMES A DAY FOR THE FIRST TWO (2) MONTHS; ONCE IN THE EARLY MORNING AND THEN THE OTHER IN THE LATE AFTERNOON. IN GENERAL TEN GALLONS OF WATER APPLIED TWICE A WEEK WILL WET A 20"-24" ROOT BALL AND PROVIDE THE EQUIVALENT OF ONE INCH OF RAIN FALL. NEW LAWNS SHALL BE WATERED SO THAT IS RECEIVES AT A MINIMUM ONE INCH (1") OF WATER EVERY WEEK.
20. WITHIN THE LANDSCAPE BEDS ADJACENT TO THE BUILDING FOUNDATIONS, NO (HEMLOCK, PINE, SPRUCE, OR CEDAR) MULCH OR OTHER COMBUSTIBLE LANDSCAPE MATERIALS SHALL BE INSTALLED WITHIN 18" OF THE FOUNDATION.
21. ALL LANDSCAPE BEDS SHALL RECEIVE THREE-INCHES OF BARK MULCH.
22. LANDSCAPE AREAS SHALL BE DEEP TILLED TO A DEPTH OF TWELVE INCHES TO FACILITATE DEEP WATER PENETRATION.
23. AS PART OF THE SITE REDEVELOPMENT, IF INVASIVE SPECIES ARE ENCOUNTERED, SUCH AS BITTERSWEET AND MULTI-FLORA ROSE ARE TO BE REMOVED, INCLUDING THE ROOT SYSTEM.
24. COORDINATE WITH EACH PLAN SET FOR A PLANTING TABLE
25. IF PLAN SUBSTITUTIONS IS REQUIRES, NO PLANT SHALL BE ON THE MASSACHUSETTS INVASIVE SPECIES LIST.

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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D	04/06/16	NOT ISSUED	
C	01/26/16	NOT ISSUED	
B	01/06/16	NOT ISSUED	
A	11/04/15	PROGRESS SET	

MASSACHUSETTS
LAWRENCE C. GREENE JR.
REGISTERED LANDSCAPE ARCHITECT
NO. 1987
8/15/16

PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
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OWNER:

PARK CENTRAL LLC

c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

LANDSCAPE AND LIGHTING PLAN

PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 40 80 120

DATE: 4/06/16	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978400	CHK'D. BY:
DRAWING NO.: 0978401E	SHEET: C5.01

MATCH LINE SHEET C5.04

MATCH LINE SHEET C5.01

Qty.	Key	Common Name	Botanical Name	Size	Remarks
TREES					
3	MD	"Donald Wyman" Crabapple	*Malus sp. "Donald Wyman"*	3" Cal.	B&B
19	PB	"Hoopsii" Blue Spruce	*Picea pungens "Hoopsii"*	10' Ht.	B&B
6	PG	White Spruce	*Picea glauca*	10' Ht.	B&B
5	PS	White pine	*Pinus stobus*	3½"Cal.	B&B
33	SJ	Japanese Stewartia	*Stewartia pseudocamellia "Koreana"*	3" Cal.	B&B
9	ZS	"Green Vase" Zelkova	*Zelkova serrata "Green Vase"*	3" Cal.	B&B
PERENNIALS					
12	PA	Fountain grass	*Pennisetum alopecuroides*	#3 Pot	Container Grown

UNIT 134
UNIT 135
UNIT 136
UNIT 137
UNIT 138
UNIT 139
UNIT 140
UNIT 141
UNIT 142
3 SJ
8 PG
6 SJ
5 PS
2 PB
1 MD
2 MD
1 SJ
1 PB
3 PB
3 ZS
2 PA
2 ZS
12 TC
4 SJ
8 SJ
2 SJ
11 PB
3 SJ
PHANEUF DRIVE (18' WIDE)
JOHN BOLAND ROAD (22' WIDE)
FLAGG ROAD
50' (PUBLIC ~ VARIABLE WIDTH)
100' BVW
100' NO-DISTURB ZONE~ SOUTHBORO WETLAND BYLAW
DOG WASTE STATION(TYP)
EASEMENT PLAN BOOK 336 PLAN 43
ORNAMENTAL SIGN WITH UPLIGHTING AND PLANTINGS
PARK CENTRAL DRIVE
N/F DAVID & KELLY WINAND MAP 33 PARCEL 44 CERTIFICATE OF TITLE #15671 LAND COURT PLAN #2891-10 LOT 169
N/F YAN HUANG MAP 25 PARCEL 7 CERTIFICATE OF TITLE #16621 LAND COURT PLAN #2891E LOT 11
N/F PHILIP BALDI MAP 25 PARCEL 6 CERTIFICATE OF TITLE #11494 LAND COURT PLAN #2891E LOT 12
N/F FMW RRI I LLC MAP 24 PARCEL 4.B DEED BOOK 48036 PAGE 382

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED SOUTHBOROUGH ZONING BOARD OF APPEALS

DATE: _____

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COMMONWEALTH OF MASSACHUSETTS LAWRENCE C. GREENE JR. NO. 2981 REGISTERED LANDSCAPE ARCHITECT
12/16/16

PREPARED BY:

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PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 40 80 120

DATE: 4/06/16	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY: _____
FILE NO.: 0978400	CHK'D. BY: _____
DRAWING NO.: 0978402E	SHEET: C5.02

MATCH LINE SHEET C5.05

Qty.	Key	Common Name	Botanical Name	Size	Remarks
TREES					
27	MD	'Donald Wyman' Crabapple	*Malus sp. 'Donald Wyman'*	3" Cal.	B&B
4	PA	Norway Spruce	*Picea abies*	10' Ht.	B&B
32	PB	'Hoopsii" Blue Spruce	*Picea pungens 'Hoopsii'*	10' Ht.	B&B
11	PP	Persian Parrotia	*Parrotia persica*	3½" Cal.	B&B
12	PR	'Redspire' Pear	*Pyrus calleryana 'Redspire'*	3" Cal.	B&B
5	PS	White pine	*Pinus stobus*	3½" Cal.	B&B
6	SJ	Japanese Stewartia	*Stewartia pseudocamellia 'Koreana'*	3" Cal.	B&B
33	ZS	'Green Vase' Zelkova'	*Zelkova serrata 'Green Vase'*	3" Cal.	B&B
SHRUBS					
39	LP	California Privet	*Ligustrum ovalifolium*	6' Ht.	B&B
7	MP	Northern Bayberry	*Myrica pensylvanica*	48"Ht.	B&B
32	VC	'Summer Snowflake' Viburnum	*Viburnum plicatum 'Summer Snowflake'*	48"Ht.	B&B
10	VD	'Blue Muffin' Viburnum	*Viburnum dentatum 'Blue Muffin'*	#7 Pot	Container Grown

INTERSTATE ROUTE 495
(1961 STATE HIGHWAY LAYOUT)

100' BVW BZ

TOWN OF SOUTHBOROUGH
TOWN OF WESTBOROUGH

UNIT 49 UNIT 50 UNIT 25 UNIT 26 UNIT 45 UNIT 27 UNIT 28 UNIT 21 UNIT 20 UNIT 31 UNIT 30 UNIT 29 UNIT 32 UNIT 19 UNIT 33 UNIT 34 UNIT 18 UNIT 17 UNIT 35 UNIT 36 UNIT 15 UNIT 16 UNIT 37 UNIT 38 UNIT 14 UNIT 13 UNIT 12 UNIT 11 UNIT 39 UNIT 40 UNIT 41 UNIT 42 UNIT 43 UNIT 44 UNIT 10 UNIT 9 UNIT 8 UNIT 7 UNIT 6 UNIT 5 UNIT 103 UNIT 104 UNIT 105 UNIT 106 UNIT 107 UNIT 112 UNIT 113 UNIT 114 UNIT 115 UNIT 116 UNIT 110 UNIT 111 UNIT 119 UNIT 108 UNIT 109

18' WIDE DRIVEWAY
WEBBER CIRCLE (18' WIDE)
HOLMES DRIVE (18' WIDE)
PARK CENTRAL DRIVE
PHANEUF DRIVE (18' WIDE)
TARA ROAD (PUBLIC ~ 40' WIDE)

20' NO-WORK ZONE-SOUTHBORO WETLAND BYLAW

DOG WASTE STATION(TYP)

FOOT BRIDGE OVER WETLAND

OUTDOOR SEATING (TYP)

VARIABLE WIDTH NATURAL PATH(TYP)

POND

PIER (TYP)

CLUBHOUSE

MATCH LINE SHEET C5.01

MATCH LINE SHEET C5.04

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

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MASSACHUSETTS
LAWRENCE C. GREENE
NO. 4981
REGISTERED LANDSCAPE ARCHITECT

PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
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508.366.6552
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c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

LANDSCAPE AND LIGHTING PLAN

PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

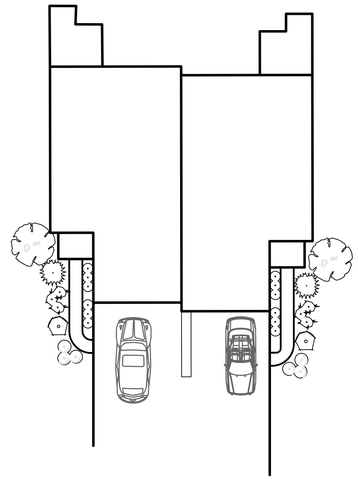
0 40 80 120

DATE: 4/06/16	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978400	CHK'D. BY:
DRAWING NO.: 0978403E	SHEET: C5.03

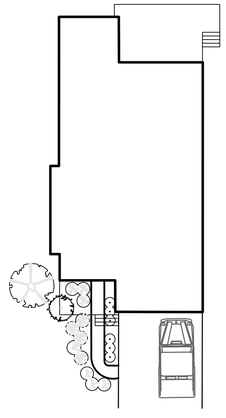
Qty.	Key	Common Name	Botanical Name	Size	Remarks
TREES					
8	PA	Norway Spruce	*Picea abies*	10' Ht.	B&B
24	PB	'Hoopsii' Blue Spruce	*Picea pungens 'Hoopsii'*	10' Ht.	B&B
19	PG	White Spruce	*Picea glauca*	10' Ht.	B&B
6	PP	Persian Parrotia	*Parrotia persica*	3½" Cal.	B&B
11	PS	White pine	*Pinus stobus*	3½" Cal.	B&B
11	SJ	Japanese Stewartia	*Stewartia pseudocamellia 'Koreana'*	3" Cal.	B&B
SHRUBS					
8	VC	'Summer Snowflake' Viburnum	*Viburnum plicatum 'Summer Snowflake'*	48" Ht.	B&B
18	VD	'Blue Muffin' Viburnum	*Viburnum dentatum 'Blue Muffin'*	#7 Pot	Container Grown
PERENNIALS					
54	MS	'Adagio' Maiden Grass	*Miscanthus sinensis 'Adagio'*	#3 Pot	Container Grown

MATCH LINE SHEET C5.02

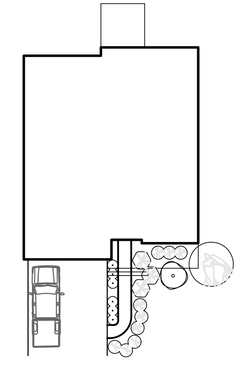
TYPICAL PLANTING TWO-FAMILY TOWN HOUSE



TYPICAL PLANTING SINGLE-FAMILY TOWN HOUSE



TYPICAL PLANTING SINGLE-FAMILY TOWN HOUSE



PLANT SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
SHRUBS			
CS	CORNUS STOLONIFERA 'ARCTIC FIRE'	ARCTIC FIRE RED TWIG DOGWOOD	30" HT.
IG	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	30" HT.
JC	JUNIPERUS CHINENSIS 'SEA GREEN'	SEA GREEN CHINESE JUNIPER	30" HT.
RA	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	24" SP.
MP	MYRICA PENSYLVANIA	NORTHERN BAYBERRY	18"-24" HT
AM	AZALEA 'MAJESTY'	MAJESTY AZALEA	18" SP.
SJ	SPIRAEA JAPONICA 'GOLD FLAME'	GOLD FLAME SPIRAEA	18" SP.
RC	RHODODENDRON 'CUNNINGHAM'S WHITE'	CUNNINGHAM'S WHITE RHOD.	24" HT.
PERENINIALS/GROUNDCOVERS			
MS	MISCANTHUS SINENSIS 'MORNING LIGHT'	MORNING LIGHT MAIDEN GRASS	#3
PH	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	#3
JH	JUNIPERUS HORIZONTALIS 'WILTON'	BLUE RUG JUNIPER	18" SP.
PS	PHLOX SUBULATA EMERALD PINK	EMERAND PINK CREEPING PHLOX	2 QT. POT
PT	PACYSANDRA TERMINALIS 'GREEN CARPET'	GREEN CARPET SPURGE	FLAT
VM	VINCA MINOR	PERIWINKLE	#1 POT

✳ THE QUANTITIES PROVIDED ARE TOTALS FOR EACH OF THE FIVE PLANT MATERIAL CATEGORIES. BIDS ARE TO BE PROVIDED BASED ON THE AVERAGE COST OF THE SPECIES LISTED IN EACH CATEGORY TIMES THE TOTAL QUANTITY.

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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MASSACHUSETTS — LAWRENCE C. GINGERAS JR. — NO. 3981 — REGISTERED LANDSCAPE ARCHITECT — 12/15/16

PREPARED BY:

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31 East Main Street
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watermandesign.com wda@wdassoc.com

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c/o Capital Group Properties
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Southborough, MA 01772

PREPARED FOR:

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TITLE:

LANDSCAPE AND LIGHTING PLAN

PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 40 80 120

DATE: 4/06/16	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978400	CHK'D. BY:
DRAWING NO.: 0978404E	SHEET: C5.04

MATCH LINE SHEET C5.06

Qty.	Key	Common Name	Botanical Name	Size	Remarks
TREES					
17	CB	European Hornbeam	*Carpinus betula 'Fastigiata'*	3" Cal.	B&B
22	CV	"Winter King" Hawthorn	*Crataegus viridis 'Winter King'*	3" Cal.	B&B
1	HW	"Wells Special" Hinoki Cypress	*Chamaecyparis obtusa 'Wells Special'*	3½" Cal.	B&B
8	MD	"Donald Wyman" Crabapple	*Malus sp. 'Donald Wyman'*	3" Cal.	B&B
6	PA	Norway Spruce	*Picea abies*	10' Ht.	B&B
28	PB	"Hoopsii" Blue Spruce	*Picea pungens 'Hoopsii'*	10' Ht.	B&B
17	PG	White Spruce	*Picea glauca*	10' Ht.	B&B
10	PP	Persian Parrotia	*Parrotia persica*	3½" Cal.	B&B
4	PR	"Redspire" Pear	*Pyrus calleryana 'Redspire'*	3" Cal.	B&B
5	PS	White pine	*Pinus stobus*	3½" Cal.	B&B
3	SJ	Japanese Stewartia	*Stewartia pseudocamellia 'Koreana'*	3" Cal.	B&B
18	TO	"Emerald" Arborvitae	*Thuja occidentalis 'Emerald'*	8' Ht.	B&B
4	ZS	"Green Vase" Zelkova	*Zelkova serrata 'Green Vase'*	3" Cal.	B&B
SHRUBS					
31	LP	California Privet	*Ligustrum ovalifolium*	6" Ht.	B&B
6	MP	Northern Bayberry	*Myrica pensylvanica*	48"Ht.	B&B
23	VC	"Summer Snowflake" Viburnum	*Viburnum plicatum 'Summer Snowflake'*	48"Ht.	B&B
22	VD	"Blue Muffin" Viburnum	*Viburnum dentatum 'Blue Muffin'*	#7 Pot	Container Grown
PERENNIALS					
17	MZ	"Zebra" grass	*Miscanthus sinensis 'Zebrinus'*	#3 Pot	Container Grown
37	PA	Fountain grass	*Pennisetum alopecuroides*	#3 Pot	Container Grown
26	PH	"Heavy Metal" Switch Grass	*Panicum virgatum 'Heavy Metal'*	#3 Pot	Container Grown

MATCH LINE SHEET C5.03

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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MASSACHUSETTS
LAWRENCE C. GINGERICH JR.
REGISTERED LANDSCAPE ARCHITECT
NO. 1581
12/15/16

PREPARED BY:

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Qty.	Key	Common Name	Botanical Name	Size	Remarks
TREES					
23	PB	"Hoopsii" Blue Spruce	*Picea pungens 'Hoopsii'*	10' Ht.	B&B
3	PP	Persian Parrotia	*Parrotia persica*	3½" Cal.	B&B
12	SJ	Japanese Stewartia	*Stewartia pseudocamellia 'Koreana'*	3" Cal.	B&B
10	TO	"Emerald" Arborvitae	*Thuja occidentalis 'Emerald'*	8' Ht.	B&B
SHRUBS					
6	VC	"Summer Snowflake" Viburnum	*Viburnum plicatum 'Summer Snowflake'*	#7 Pot	Container Grown
5	VD	"Blue Muffin" Viburnum	*Viburnum dentatum 'Blue Muffin'*	#7 Pot	Container Grown
5	WE	"Red Prince" Weigela	*Weigela florida 'Red Prince'*	36" Ht.	B&B

INTERSTATE ROUTE 495
(1961 STATE HIGHWAY LAYOUT)

GRASS FIELD WITH PAINTED LINES

BENCHES(TYP)

PATH WAY TO PLAY AREAS

EVERGREEN SCREEN(TYP)

GRASS FIELD

88-UNIT APARTMENT BUILDING

CLUBHOUSE

RETAINING WALL(TYP)

EVERGREEN SCREEN(TYP)

LIMIT OF 21.6 ACRE OPEN SPACE

20' NO-WORK ZONE- SOUTHBORO WETLAND BYLAW

WATER BOOSTER PUMP BUILDING

WASTEWATER TREATMENT BUILDING

N/F
ATTILA HERCZEG &
SUSANNE HEALEY
MAP 41 PARCEL 4
DEED BOOK 34115 PAGE 123

6 SJ

DETENTION BASIN SEED MIX

DOG WASTE STATION(TYP)

1 PP

4 PB

ORNAMENTAL SIGN WITH UPLIGHTING AND PLANTINGS

PARK CENTRAL DRIVE

LIGHT FIXTURE WITH SIDE SHIELD(TYP)

RETAINING WALL(TYP)

N/F
PETER & LYNN THI NGUYEN
MAP 25 PARCEL 7
CERTIFICATE OF TITLE #12520
LAND COURT PLAN #2891T
LOT 127

UNIT 55 UNIT 56 UNIT 57 UNIT 58 UNIT 59 UNIT 60 UNIT 61 UNIT 62

6 VC

5 VD

10 TO

3 PB

ORNAMENTAL GATE. PROVIDE ELEC. & DATA LINES TO GATE

BLACKTHORN EXTENSION (18' WIDE)

BLACKTHORN DRIVE
(PUBLIC ~ 50' WIDE)

5 WE

N/F
MARVIN & CYD
OSTROVSKY
MAP 33 PARCEL 42
CERTIFICATE OF
TITLE #8661
LAND COURT
PLAN #2891J
LOT 56

MATCH LINE SHEET C5.05

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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A	11/04/15	PROGRESS SET	

MASSACHUSETTS
LAWRENCE C. GARDINO, JR.
NO. 3881
REGISTERED LANDSCAPE ARCHITECT
12/15/16

PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
508.366.6506 (fax)
watermandesign.com wda@wdassoc.com

OWNER:

PARK CENTRAL LLC

c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

LANDSCAPE AND LIGHTING PLAN

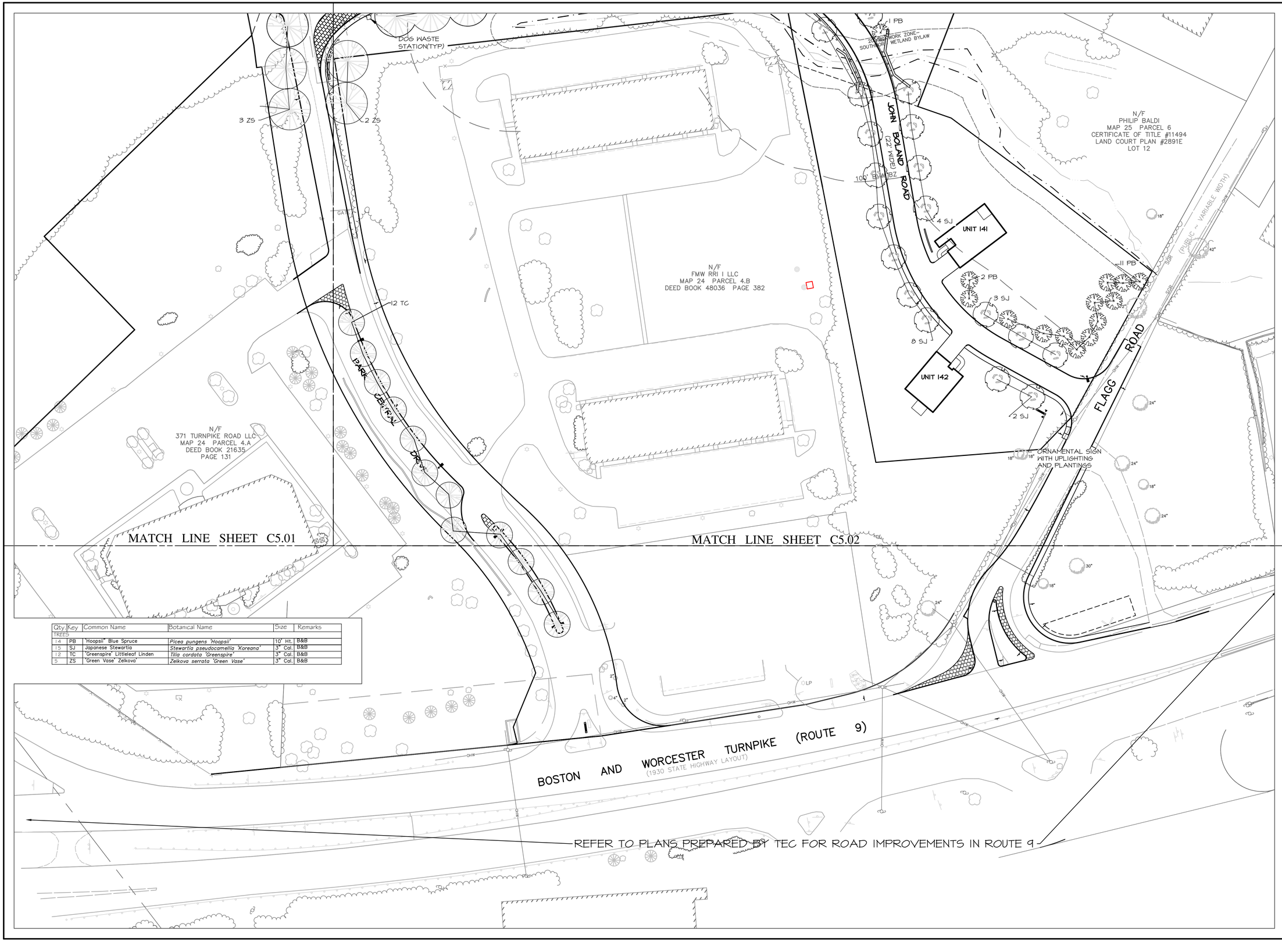
PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 40 80 120

DATE: 4/16/16	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978400	CHK'D. BY:
DRAWING NO.: 0978406E	SHEET: C5.06



Qty.	Key	Common Name	Botanical Name	Size	Remarks
TREES					
14	PB	"Hoopsii" Blue Spruce	*Picea pungens 'Hoopsii'*	10' Ht.	B&B
15	SJ	Japanese Stewartia	*Stewartia pseudocamellia 'Koreana'*	3" Cal.	B&B
12	TC	'Greenspire' Littleleaf Linden	*Tilia cordata 'Greenspire'*	3" Cal.	B&B
5	ZS	'Green Vase' Zelkova	*Zelkova serrata 'Green Vase'*	3" Cal.	B&B

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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REV.	DATE	DESCRIPTION	INIT.
E	08/15/16	TOWN COMMENTS	
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C	01/26/16	NOT ISSUED	
B	01/06/16	NOT ISSUED	
A	11/04/15	PROGRESS SET	

MASSACHUSETTS LAWRENCE C. GRIMES JR. NO. 1681 REGISTERED LANDSCAPE ARCHITECT
12/15/16

PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
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TITLE:

LANDSCAPE AND LIGHTING PLAN

PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 40 80 120

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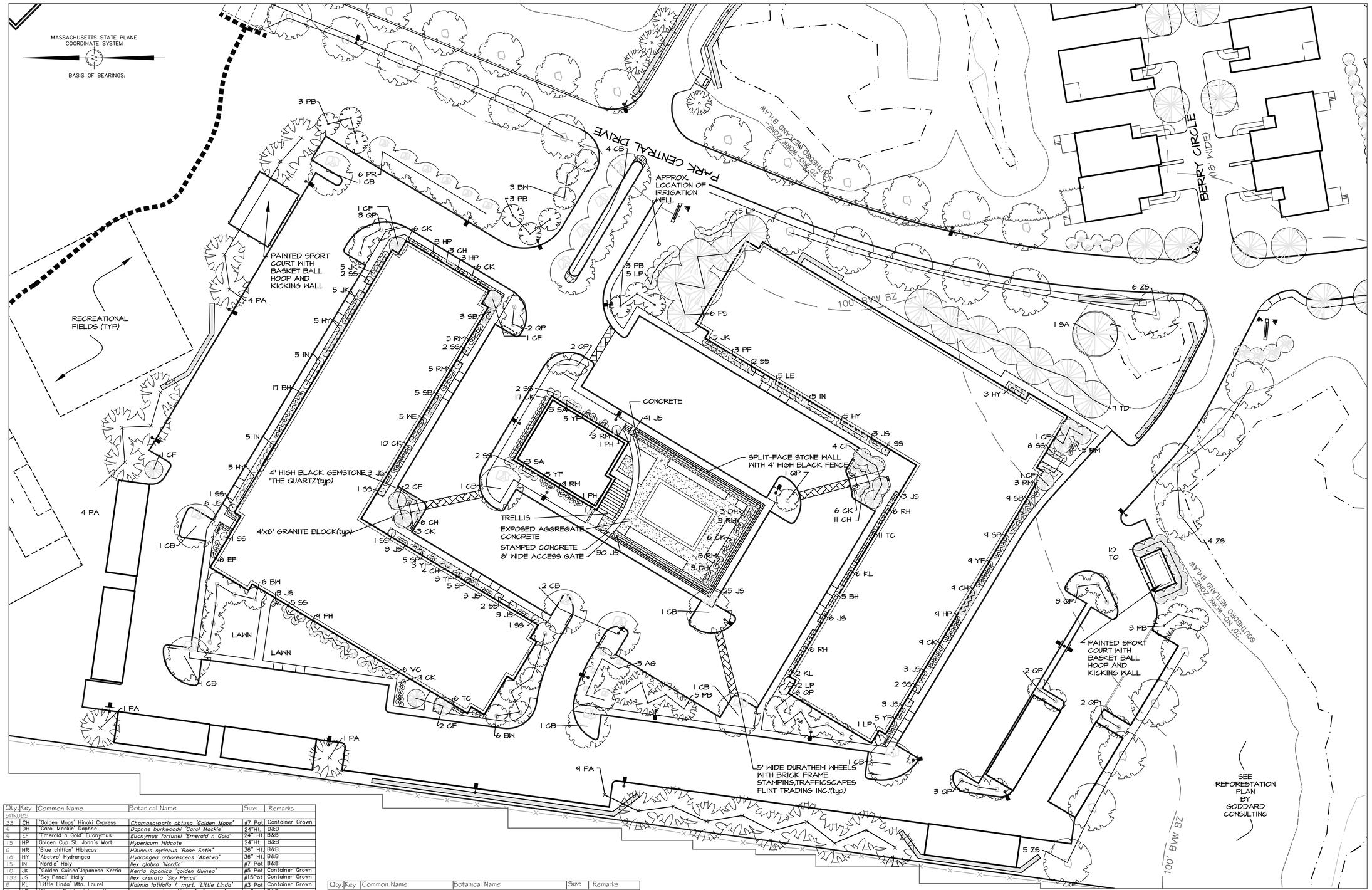
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978400	CHK'D. BY:
DRAWING NO.: 0978407E	SHEET: C5.07



Qty.	Key	Common Name	Botanical Name	Size	Remarks
SHRUBS					
33	CH	'Golden Mops' Hinoki Cypress	*Chamaecyparis obtusa 'Golden Mops'*	#7 Pot	Container Grown
6	DH	'Carol Mackie' Daphne	*Daphne burkwoodii 'Carol Mackie'*	24"Ht.	B&B
6	EF	'Emerald n Gold' Euonymus	*Euonymus fortunei 'Emerald n Gold'*	24" Ht.	B&B
15	HP	Golden Cup St. John's Wort	*Hypericum Hidcote*	24" Ht.	B&B
6	HR	'Blue chiffon' Hibiscus	*Hibiscus syriacus 'Rose Satin'*	36" Ht.	B&B
18	HY	'Abetwo' Hydrangea	*Hydrangea arborescens 'Abetwo'*	36" Ht.	B&B
15	IN	'Nordic' Holy	*Ilex glabra 'Nordic'*	#7 Pot	B&B
10	JK	'Golden Guinea'Japanese Kerria	*Kerria japonica 'golden Guinea'*	#5 Pot	Container Grown
133	JS	'Sky Pencil' Holly	*Ilex crenata 'Sky Pencil'*	#15Pot	Container Grown
6	KL	'Little Linda' Mtn. Laurel	*Kalmia latifolia f. myrt. 'Little Linda'*	#3 Pot	Container Grown
5	LE	'Girard's Rainbow' Leucothoe	*Leucothoe font. 'Girard's Rainbow'*	36"Ht.	B&B
13	LP	California Privet	*Ligustrum ovalifolium*	6' Ht.	B&B
33	MP	Northern Bayberry	*Myrica pensylvanica*	48" Ht.	B&B
3	PF	'Dorothy Wycoff' Mtn. Andromeda	*Pieris japonica 'Dorothy Wycoff'*	36" Ht.	B&B
11	PH	'Mindia' Purple Ninebark	*Physocarpus opulifolius 'Coppertina'*	36" Ht.	Container Grown
18	RH	'Percy Wiseman' Rhododendron	*Rhododendron sp. 'Percy Wiseman'*	36"Ht.	B&B
30	RM	'Blushing Knock out' Rose	*Rosa sp. 'Blushing Knock Out'*	36" Ht.	B&B
3	SA	'Flamingo' Japanese Willow	*Salix integra 'Flamingo'*	#3 Pot	Container Grown
17	SB	'Bloomerang' Lilac	*Syringa x penda 'Bloomerang'*	36"Ht.	B&B
25	SP	'Shirobi' Spirea	*Spirea japonica 'Shirobi'*	#7 Pot	Container Grown
27	SS	'Steeds' Holly	*Ilex crenata 'Steeds'*	48" Ht.	B&B
17	TC	Spreading English Yew	*Taxus baccata 'Repandens'*	24" Ht.	B&B
6	VC	'Summer Snowflake' Viburnum	*Viburnum plicatum 'Summer Snowflake'*	48" Ht.	B&B
5	WE	'Dark Horse' Weigela	*Weigela florida 'Dark Horse'*	#7 Pot	Container Grown
30	YF	'Bright Edge' Yucca	*Yucca filamentosa 'Bright Edge'*	#7 Pot	Container Grown

Qty.	Key	Common Name	Botanical Name	Size	Remarks
TREES					
5	AG	Paperbark Maple	*Acer griseum*	3" Cal.	B&B
15	BW	'Whitespire' Birch	*Betula platyphylla 'Whitespire'*	12' Ht.	B&B
12	CB	European HornBeam	*Carpinus betula 'Fastigiata*	3" Cal.	B&B
15	CF	'Cherokee Brave' Dogwood	*Cornus florida 'Cherokee Brave'*	3" Cal.	B&B
1	HT	'Tardiva' Hydrangea	*Hydrangea paniculata 'Tardiva' treeform*	2" Cal.	B&B
23	PA	Norway Spruce	*Picea abies*	12 'Ht.	B&B
15	PB	'Hoopsi' Blue Spruce	*Picea pungens 'Hoopsi'*	15' Ht.	B&B
6	PR	'RedSpire' Flowering Pear	*Pryus calleryana 'Redspire'*	3" Cal.	B&B
6	PS	Sargent Cherry	*Prunus sargentii*	3" Cal.	B&B
24	QP	'Green Pillar' Oak	*Quercus palustris 'Green Pillar'*	3" Cal.	B&B
7	SA	Golden Weeping Willow	*Salix alba 'Tristis'*	5" Cal.	B&B
7	TD	Bald Cypress	*Taxodium distichum*	12 'Ht.	B&B
10	TO	'Green Giant' Arborvitae	*Thuja occidentalis 'Green Giant'*	12 'Ht.	B&B
21	ZS	'Green Vase' Zelkova	*Zelkova serrata 'Green Vase'*	3" Cal.	B&B

Qty.	Key	Common Name	Botanical Name	Size	Remarks
PERENNIALS					
22	BH	'Beni Kaze' Hakone Grass	*Hakonechloa macra 'Beni Kaze'*	#3 Pot	Container Grown
72	CK	'Karl Foerster'Feather Reed Grass	*Calamagrostis x acutifolia'Karl Foerster'*	#3 Pot	Container Grown
5	SH	'Hameln' Fountain Grass	*Pennisetum alopecuroides 'Hameln'*	#3 Pot	Container Grown

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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A	11/04/15	PROGRESS SET	

MASSACHUSETTS LAWRENCE C. GIBSON NO. 4881 REGISTERED LANDSCAPE ARCHITECT
12/15/16

PREPARED BY:

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c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

LANDSCAPE AND LIGHTING PLAN

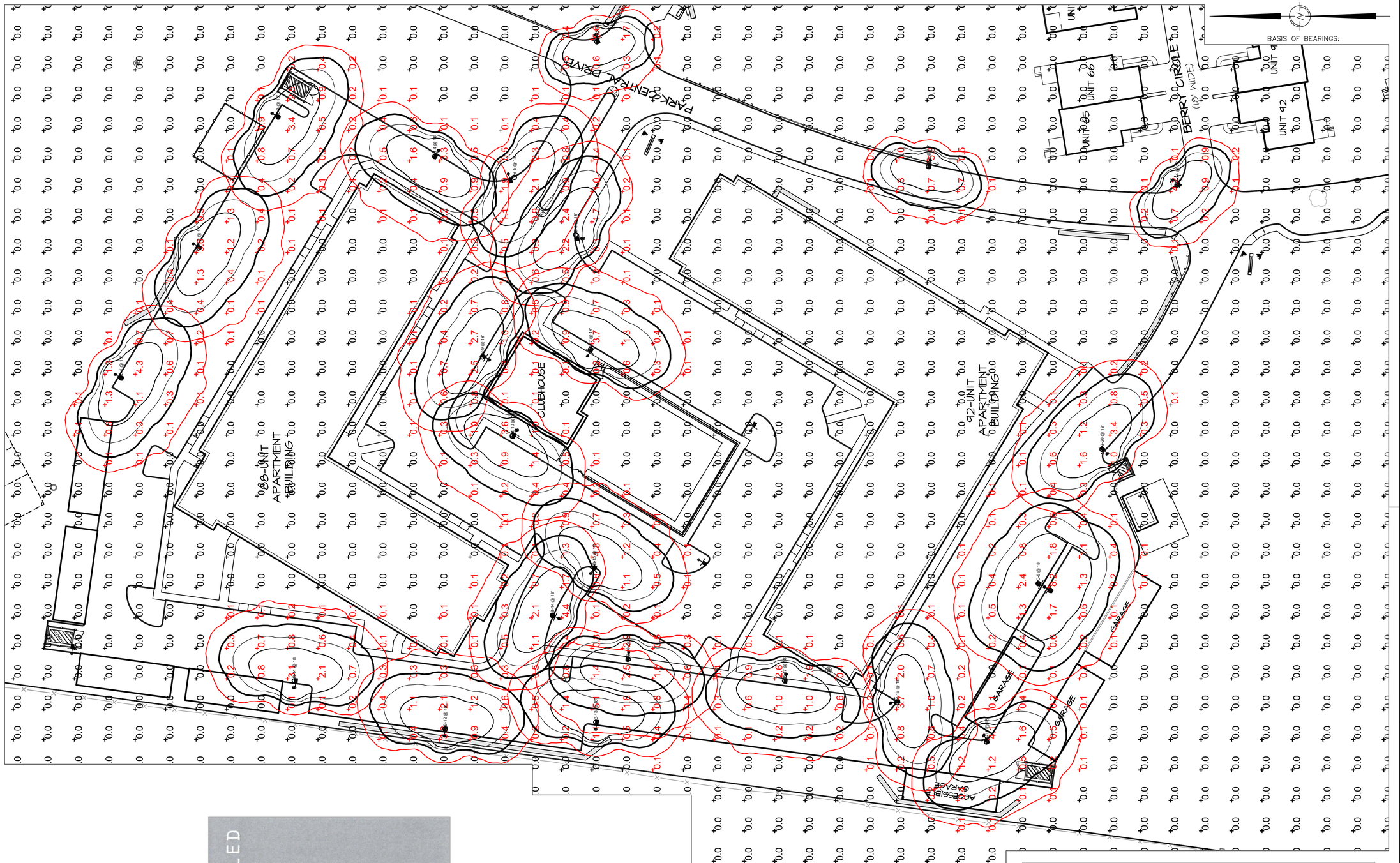
PARK CENTRAL

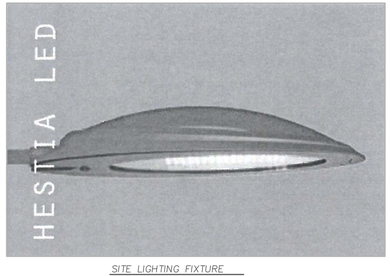
Southborough, MA
(Worcester County)

PERMITTING

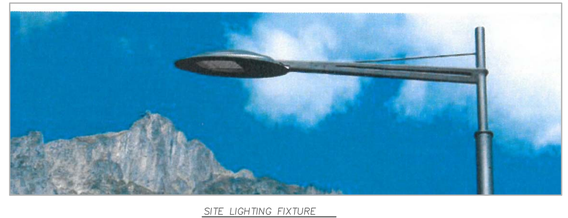
0 30 60 90

DATE: 4/06/16	SCALE: 1" = 30'
JOB NO.: 0978.00	DWN. BY: _____
FILE NO.: 0978400	CHK'D. BY: _____
DRAWING NO.: 0978408E	SHEET: C5.08





SITE LIGHTING FIXTURE
NOT TO SCALE



SITE LIGHTING FIXTURE
NOT TO SCALE

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

LIGHTING PLAN

PARK CENTRAL

Southborough, MA
(Worcester County)

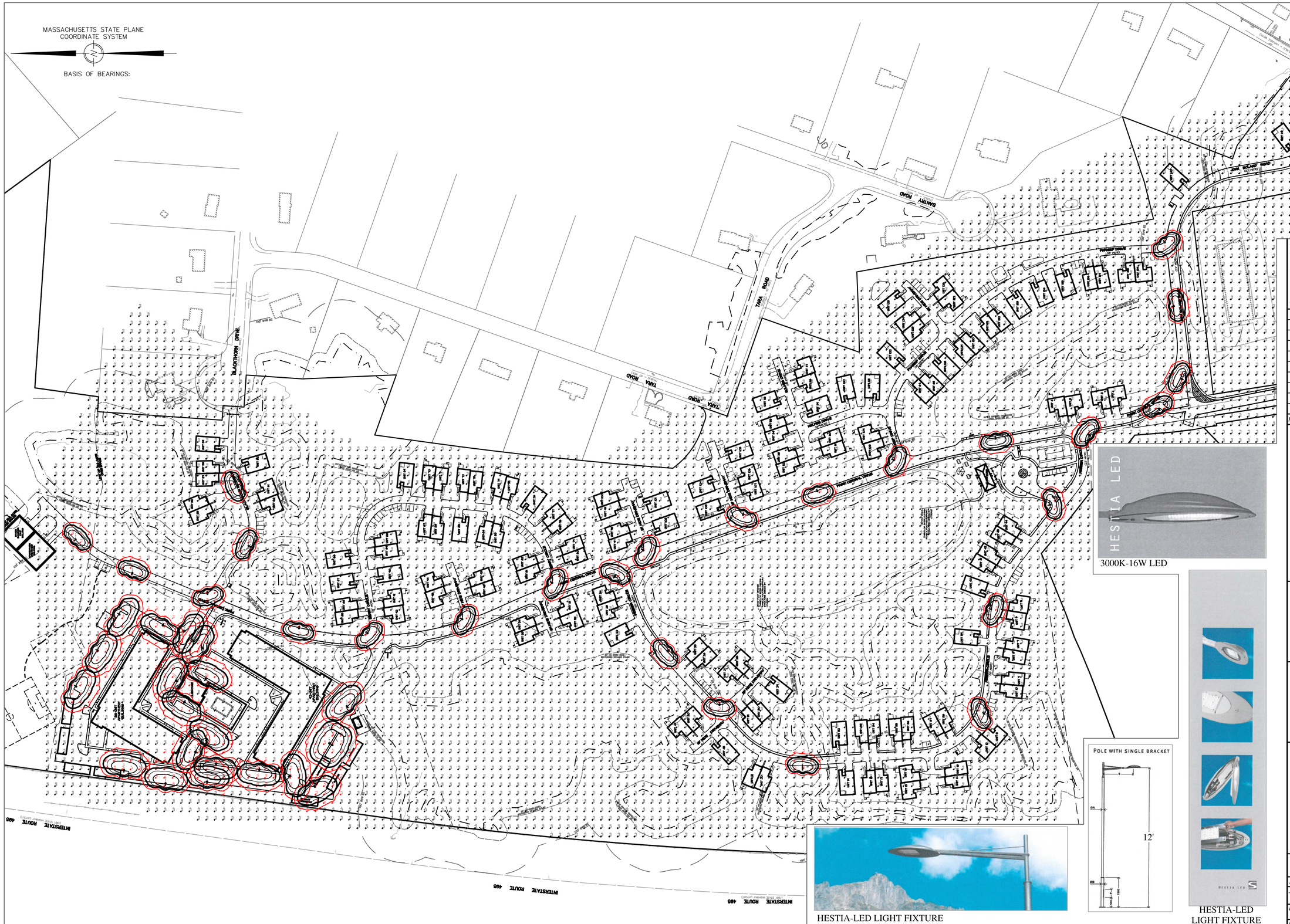
PERMITTING

0 40 80 120

DATE: 4/06/16	SCALE: 1" = 40'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978400	CHK'D. BY:
DRAWING NO.: 0978409E	SHEET: C5.09

MASSACHUSETTS STATE PLANE
COORDINATE SYSTEM

BASIS OF BEARINGS:



3000K-16W LED

HESTIA-LED LIGHT FIXTURE

HESTIA-LED
LIGHT FIXTURE

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP
PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

LIGHTING PLAN

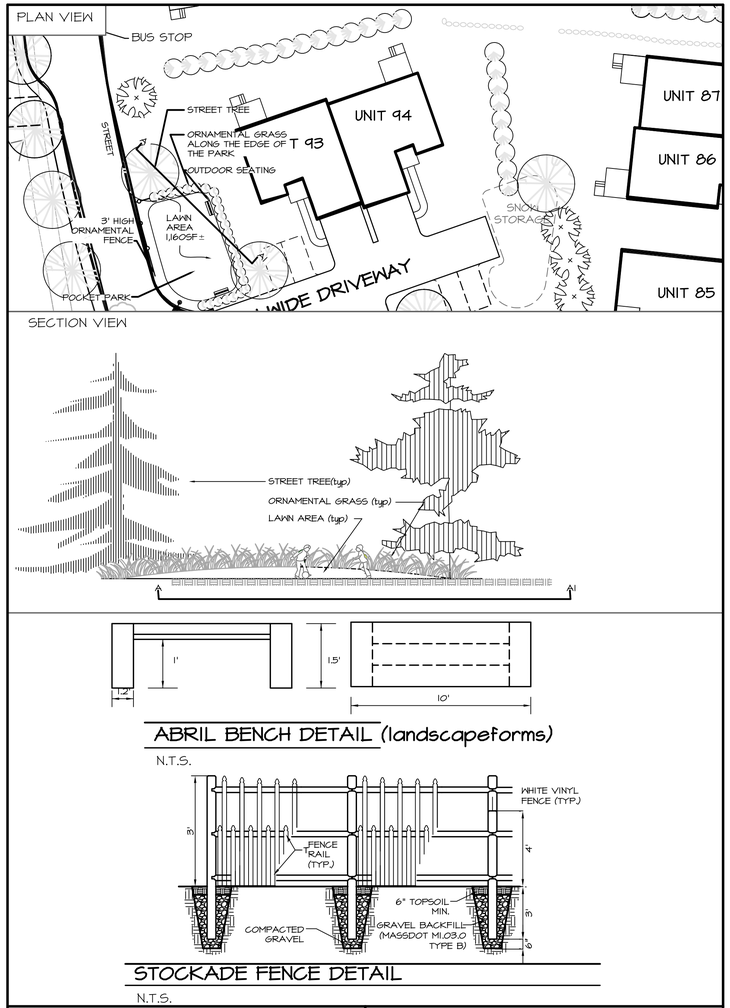
PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

0 100 200 300

DATE: 4/06/16	SCALE: 1" = 100'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978400	CHK'D. BY:
DRAWING NO.: 0978410E	SHEET: C5.10



ABRIL BENCH DETAIL (landscapeforms)

N.T.S.

STOCKADE FENCE DETAIL

N.T.S.

PREPARED BY:
WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
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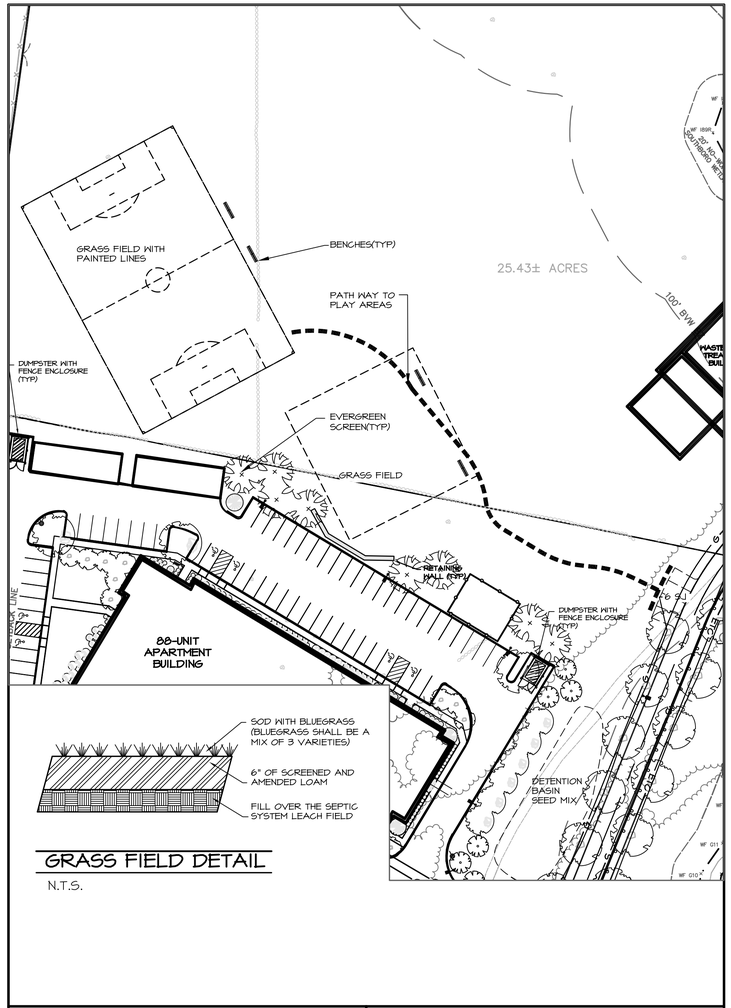
watermandesign.com wda@wdassoc.com

TITLE: POCKET PARK EXHIBIT
CLIENT: PARK CENTRAL LLC, c/o Capital Group Properties, 259 Turnpike Road, Suite 100, Southborough, MA 01772

DATE:	07/05/16	FILE NO.:	0978
JOB NO.:	0978	DWG NO.:	0978400 XX
SCALE:	1" = 30'	DRAWN BY:	kg
REV DATE:	08/18/16		



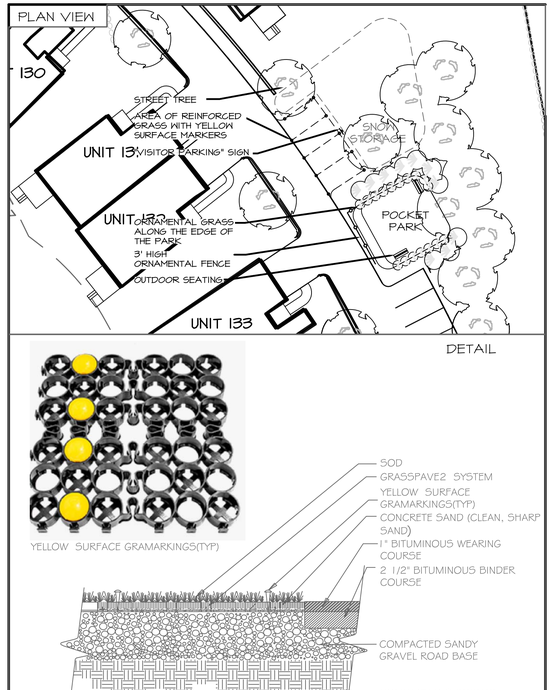
GRASS FIELD DETAIL

N.T.S.

PREPARED BY:
WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
(fax) 508.366.6506
watermandesign.com wda@wdassoc.com

TITLE: RECREATION FIELD EXHIBIT
CLIENT: PARK CENTRAL LLC, c/o Capital Group Properties, 259 Turnpike Road, Suite 100, Southborough, MA 01772

DATE:	08/11/16	FILE NO.:	0978
JOB NO.:	0978	DWG NO.:	0978400 XX
SCALE:	1" = 50'	DRAWN BY:	kg
REV DATE:	XX/XX/XX		



DETAIL

YELLOW SURFACE GRAMARKINGS(TYP)

PREPARED BY
WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
(fax) 508.366.6506
watermandesign.com wda@wdassoc.com

TITLE: VISITOR "GREEN PARKING" EXHIBIT
CLIENT: PARK CENTRAL LLC, c/o Capital Group Properties, 259 Turnpike Road, Suite 100, Southborough, MA 01772

DATE:	07/05/16	FILE NO.:	0978
JOB NO.:	0978	DWG NO.:	0978400 XX
SCALE:	1" = 30'	DRAWN BY:	kg
REV. DATE:	08/11/16		

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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B	01/06/16	NOT ISSUED	
A	11/04/15	PROGRESS SET	

COMMONWEALTH OF MASSACHUSETTS
LAWRENCE C. GRIENKE, JR.
NO. 1581
REGISTERED LANDSCAPE ARCHITECT
12/15/16

PREPARED BY:

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Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC
259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

LANDSCAPE EXHIBITS

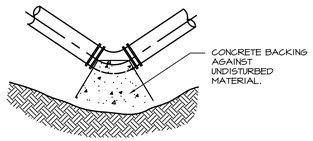
PARK CENTRAL
Southborough, MA
(Worcester County)

PERMITTING

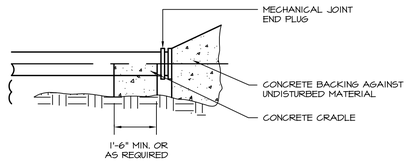
0 40 80 120

DATE:	4/06/16	SCALE:	See Plan
JOB NO.:	0978.00	DWN. BY:	
FILE NO.:	0978400	CHK'D. BY:	
DRAWING NO.:	0978407E	SHEET:	C5.11

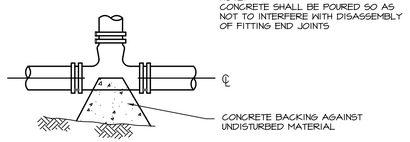
MINIMUM VERTICAL-PLANE BEARING AREAS FOR WATER MAIN FITTINGS (SF)			
SIZE OF MAIN (IN.)	22 1/2° BEND	45° BEND	TEES & PLUGS
8" OR LESS	8	8	10
10" & 12"	13	22	16



HORIZONTAL BEND



TYPICAL PLUG OR END CAP (ELEVATION VIEW)

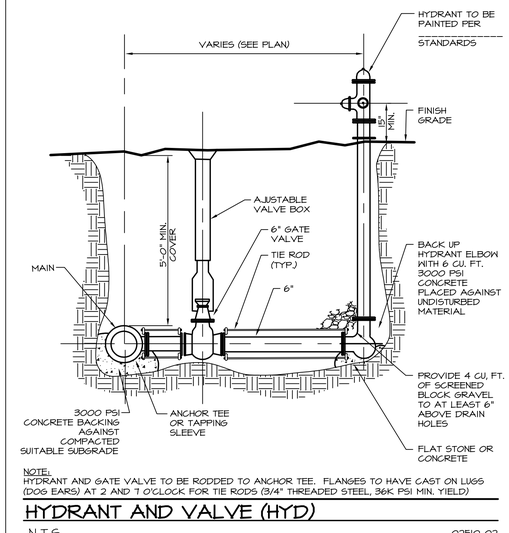


TYPICAL TEE

THRUST BLOCKS

N.T.S. 02510-06

WDA, INC.



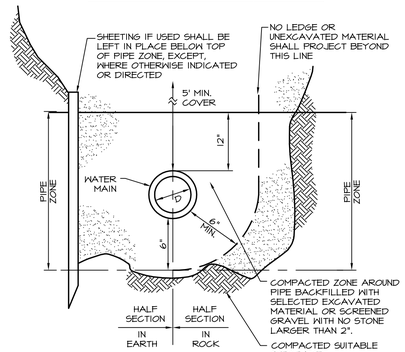
NOTE:
HYDRANT AND GATE VALVE TO BE RODDED TO ANCHOR TEE. FLANGES TO HAVE CAST ON LUGS (DOG EARS) AT 2 AND 7 O'CLOCK FOR TIE RODS (3/4" THREADED STEEL, 36K PSI MIN. YIELD)

HYDRANT AND VALVE (HYD)

N.T.S. 02510-02

WDA, INC.

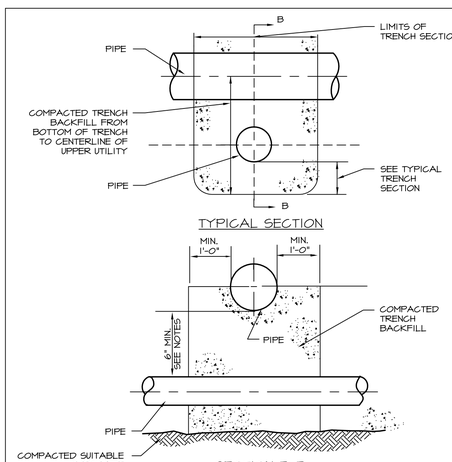
DIAMETER OF PIPE D.	TRENCH WIDTH	
	UNSHEETED	SHEETED
12" AND SMALLER	3'-0"	4'-2"
15"	3'-2"	4'-4"
18"	3'-6"	4'-8"
21"	3'-10"	5'-0"
24"	4'-2"	5'-4"
27"	4'-6"	5'-8"



WATER MAIN TRENCH SECTION

N.T.S. 02510-03

WDA, INC.

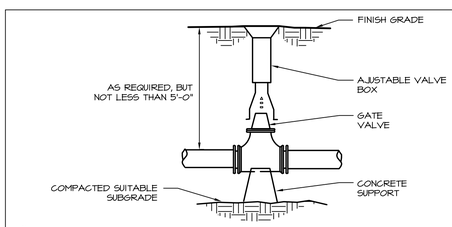


NOTES:
1. IF WATER MAIN AND SEWER CROSS, THE BOTTOM OF WATER SHALL BE AT LEAST EIGHTEEN (18) INCHES ABOVE THE TOP OF SEWER OR SEWER SHALL BE CONSTRUCTED OF ANNA C-900 PVC OR DUCTILE IRON PIPE.
2. IF SEWER MUST PASS OVER WATER MAIN, SEWER SHALL BE CONCRETE ENCASED A DISTANCE OF TEN (10) FEET EITHER SIDE OF WATER MAIN. ENCASEMENT SHALL BE PIPE DIA. PLUS A MINIMUM OF SIX (6) INCHES.

UTILITIES CROSSING

N.T.S. 02500-03

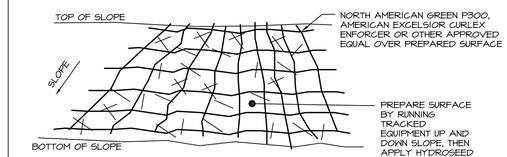
WDA, INC.



WATER GATE VALVE (WG)

N.T.S. 02510-01

WDA, INC.

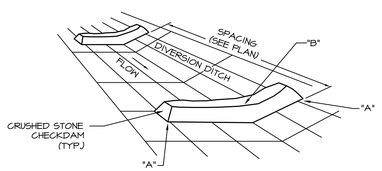


NOTE:
TO BE INSTALLED ON ALL SLOPES STEEPER THAN 3:1 TO MAX. 2:1, STAPLE AND OVERLAP PER MANUFACTURER'S RECOMMENDATIONS

SLOPE STABILIZATION

N.T.S. 02370-04

WDA, INC.

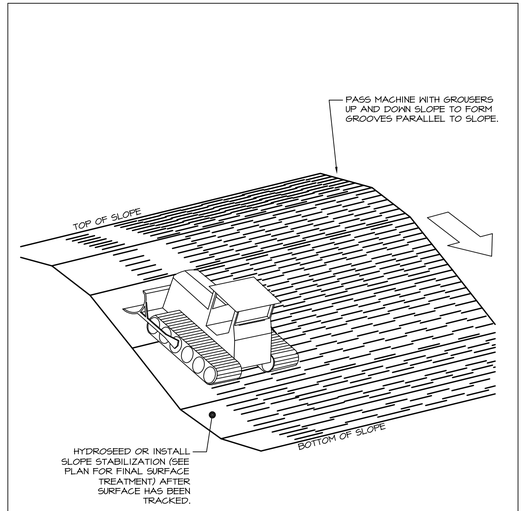


NOTE:
CHECKDAM SHALL CONSIST OF 3/4" CRUSHED STONE (MASSDOT M2.01.4); BASE WIDTH TO BE 24"± AND HEIGHT & TOP WIDTH TO BE 12"±. LENGTH SHALL BE SUFFICIENT TO ESTABLISH ELEVATION "A" AT LEAST 6" ABOVE OVERFLOW ELEVATION "B"

CRUSHED STONE CHECKDAM

N.T.S. 02370-14

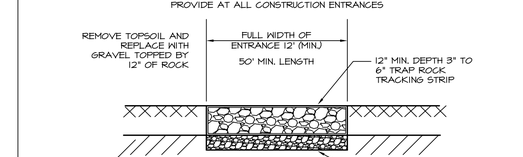
WDA, INC.



SLOPE TRACKING

N.T.S. 02370-15

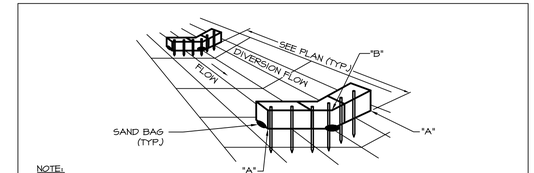
WDA, INC.



CONSTRUCTION ENTRANCE

N.T.S. 02700-13

WDA, INC.

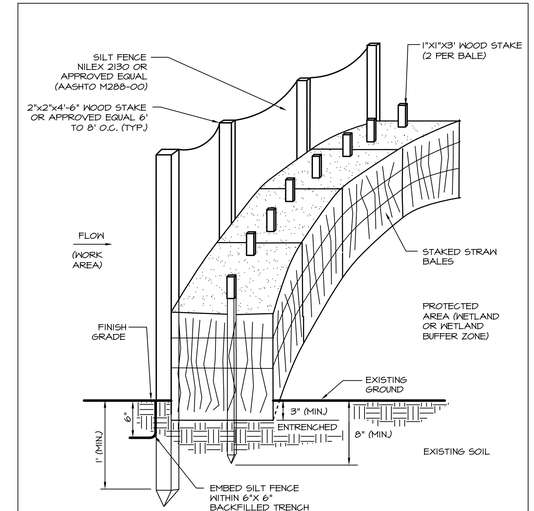


NOTE:
EROSION CHECK TO BE OF BALES OF STRAW SECURED TO THE GROUND WITH 2-3' LONG GRADE STAKES FOR EACH BALE AND/OR SAND BAG AS REQUIRED. PLACE SUFFICIENT BALES TO ESTABLISH ELEVATIONS AT "A" AT LEAST 6" ABOVE OVERFLOW AT "B".

STRAW BALE CHECKDAM

N.T.S. 02370-11

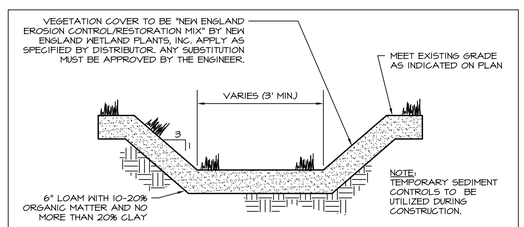
WDA, INC.



EROSION CONTROL BARRIER (ECB)

N.T.S. 02370-02

WDA, INC.



WATER QUALITY SWALE (WQS)

N.T.S. 02600-05

WDA, INC.

MUTCD REFERS TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, 1988 EDITION (AS AMENDED AND/OR STANDARD HIGHWAY SIGNS, 1979 (AS AMENDED), BOTH ISSUED BY THE USDOT/FHWA.

AASHTO REFERS TO AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING, PART I - SPECIFICATIONS, TWENTIETH EDITION (AS AMENDED).

MHDSS REFERS TO MASS. HIGHWAY DEPT. STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988 (AS AMENDED).

DPW REFERS TO LOCAL DEPARTMENT OF PUBLIC WORKS.

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CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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REV.	DATE	DESCRIPTION	INIT.
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C	01/26/16	NOT ISSUED	
B	01/06/16	NOT ISSUED	
A	11/04/15	NOT ISSUED	

COMMONWEALTH OF MASSACHUSETTS — MICHAEL J. HOEY — CIVIL — REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

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watermandesign.com wda@wdassoc.com

OWNER:

PARK CENTRAL LLC
c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC
259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

SITE DETAILS

PARK CENTRAL
Southborough, MA
Worcester County)

TOWN PERMITTING

0 1 2 3

DATE: 4/06/16	SCALE: AS NOTED
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978500	CHK'D. BY:
DRAWING NO.: 0978501E	SHEET: C6.00

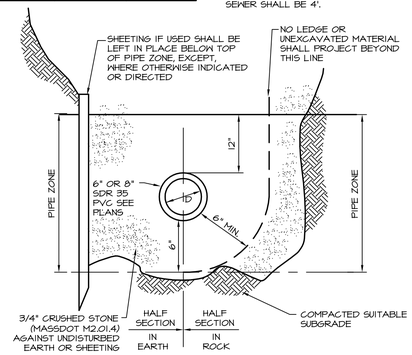
DIAMETER OF PIPE D.	TRENCH WIDTH	
	UNSHEETED	SHEETED
12" AND SMALLER	3'-0"	4'-2"
15"	3'-2"	4'-4"
18"	3'-6"	4'-8"
21"	3'-10"	5'-0"
24"	4'-2"	5'-4"
27"	4'-6"	5'-8"

NOTES:

PROVIDE AT LEAST ONE TRENCH DAM BETWEEN EACH SMH OR EVERY 300 FEET, WHICH EVER IS LESS (SEE TRENCH DAM DETAIL).

EXCAVATABLE CONTROLLED DENSITY FILL (MASSDOT M4.08.0, TYPE IE OR 2E) SHALL BE USED IN PUBLIC RIGHTS-OF-WAY AND WHEN CROSSING OR ADJACENT TO CRITICAL EXISTING STRUCTURES.

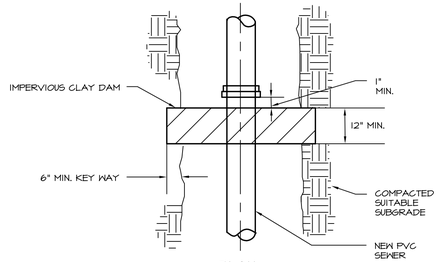
MINIMUM DEPTH OF COVER FOR "DRY" SEWER SHALL BE 4'.



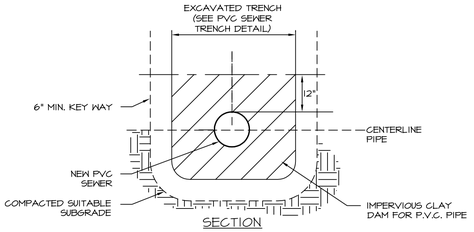
PVC SEWER TRENCH SECTION

N.T.S. 02500-01

WDA, INC.



PLAN

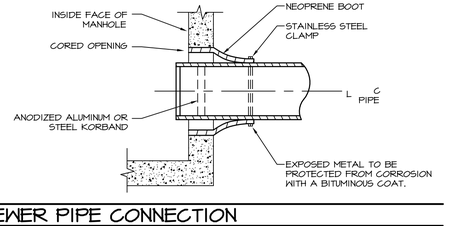


SECTION

PIPE TRENCH DAM (FOR PVC PIPE)

N.T.S. 02500-05

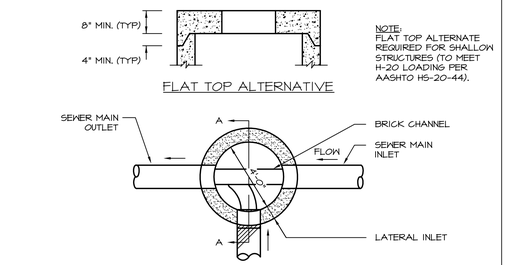
WDA, INC.



SEWER PIPE CONNECTION

N.T.S. 02530-08

WDA, INC.



NOTE:
FLAT TOP ALTERNATE REQUIRED FOR SHALLOW STRUCTURES (TO MEET H-20 LOADING PER AASHTO HS-20-44).

NOTES:

PIPE CONNECTIONS TO BE PROVIDED WITH NEOPRENE BOOT AND STAINLESS STEEL CLAMP.

COVER AND STRUCTURE SHALL SUPPORT H-20 LOADING PER AASHTO HS-20-44.

4' DIA. - DEPTH TO 18'.

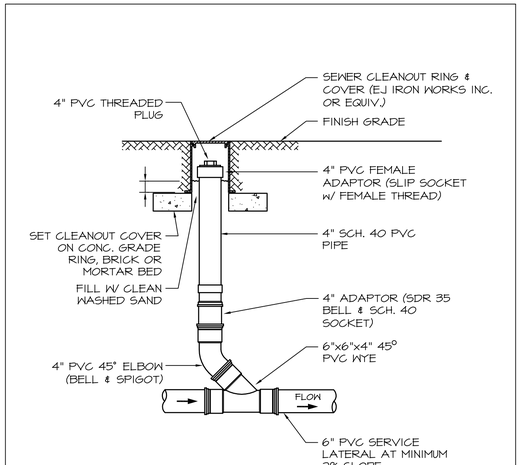
5' DIA. - DEPTHS > 18'.

SECTION A-A

SEWER MANHOLE (SMH)

N.T.S. 02530-02

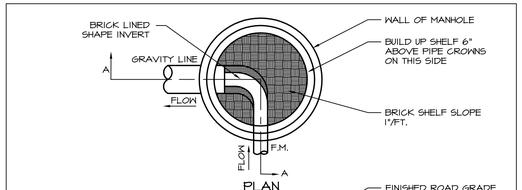
WDA, INC.



SEWER CLEANOUT - IN LINE (CO)

N.T.S. 02530-13

WDA, INC.

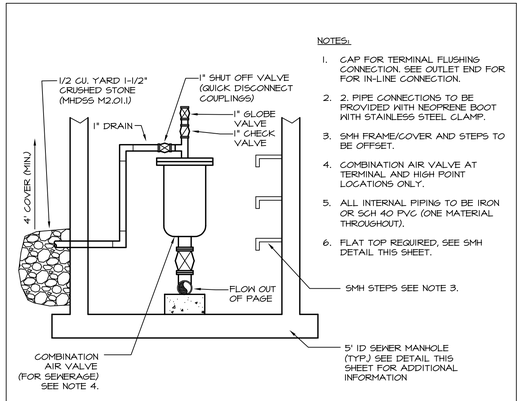


SECTION A-A

FORCE MAIN TERMINATION MANHOLE

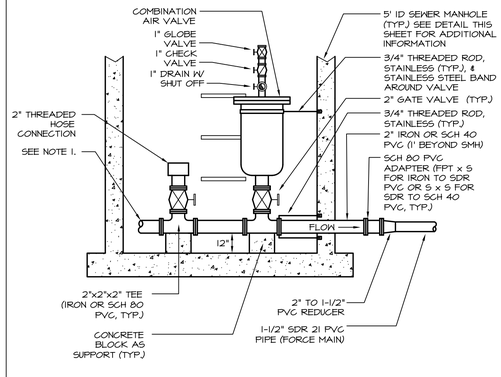
N.T.S. 02530-03

WDA, INC.



NOTES:

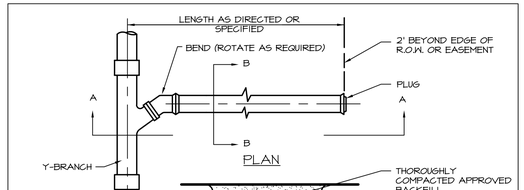
1. CAP FOR TERMINAL FLUSHING CONNECTION. SEE OUTLET END FOR FOR IN-LINE CONNECTION.
2. 2. PIPE CONNECTIONS TO BE PROVIDED WITH NEOPRENE BOOT WITH STAINLESS STEEL CLAMP.
3. SMH FRAME/COVER AND STEPS TO BE OFFSET.
4. COMBINATION AIR VALVE AT TERMINAL AND HIGH POINT LOCATIONS ONLY.
5. ALL INTERNAL PIPING TO BE IRON OR SCH 40 PVC (ONE MATERIAL THROUGHOUT).
6. FLAT TOP REQUIRED, SEE SMH DETAIL THIS SHEET.



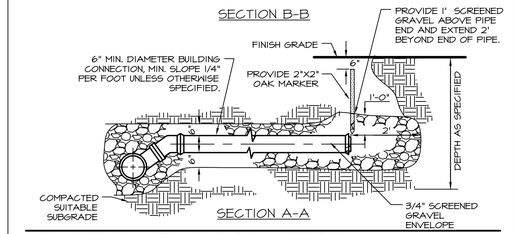
SEWER FORCE MAIN FLUSHING MANHOLE

N.T.S. 02530-17

WDA, INC.



SECTION B-B



SECTION A-A

SEWER BUILDING CONNECTION

N.T.S. 02530-10

WDA, INC.

SANITARY SEWER MANHOLE TESTING

A. Vacuum testing of sanitary sewer manholes shall be conducted and results shall be submitted to the Owner and Local DPW. The vacuum test shall only be used prior to backfilling of manholes. All lift holes shall be plugged prior to testing. The test head shall be placed at the inside of the top of the cone section and the seal inflated in accordance with the manufacturers recommendations. A vacuum of 10 inches of mercury shall be drawn and the pump shut off. The manhole shall pass if the time for the vacuum to drop 9 inches is greater than 60 seconds for 48-inch diameter, 75 seconds for 60-inch diameter and 90 seconds for 72-inch diameter. If the manhole fails, the Contractor is to make necessary repairs with a non-shrink grout while the vacuum is being drawn and retest until satisfactory results are obtained. Repair/replacement and retesting shall be at no cost to the Owner.

B. Leakage Testing

1. Leakage tests shall be made on sanitary manholes if required by the Local DPW. The test shall be by infiltration and/or exfiltration as described below.

2. After the manhole has been assembled in place, all lifting holes and those exterior joints within 6 feet of the ground surface shall be filled and pointed with an approved non-shrink mortar. The tests shall be made prior to placing the shelf and invert and before filling and pointing of the horizontal joints below the 6-foot depth line. The Contractor shall furnish and put in place all temporary plugs and all equipment required to measure leakage rates. The Contractor shall furnish all water for testing purposes. All pipes and other openings into the manhole shall be suitably plugged and the plugs braced to prevent blow out.

3. Infiltration Test

   a. If the groundwater table is above the highest joint in the manhole, an infiltration test may be made. If observation indicates no visible leakage, that is no water visibly moving down the interior surface of the manhole, the manhole shall be considered watertight, the manhole will be accepted and testing considered complete.

4. Exfiltration Test

   a. An exfiltration test shall be made if the groundwater level is not up to the highest joint, or the manhole has failed the infiltration test specified above.
   b. If the groundwater table has risen above the bottom of the manhole, it shall be lowered for the duration of the test. The manhole shall then be filled with water to the top of the cone section. If observation indicates no visible leakage, that is, no water visibly moving down the exterior urface of the manhole, the manhole may be considered to be satisfactorily watertight. If the test, as described above is unsatisfactory, repairs shall be made and the structure retested. A period of time may be permitted to allow for absorption, if the Contractor so requests. At the end of this period, the manhole shall be refilled to the top of the cone, if necessary, and the water level measured and recorded for a time of at least 8 hours. At the end of the test period the manhole shall be refilled to the top of the cone, measuring the volume of water added. This amount shall be extrapolated to a 24-hour rate and the leakage determined on the basis of the depth of drop. The leakage for each manhole shall not exceed 1 gallon per vertical foot for a 24-hour period. If the test fails this requirement, but the leakage does not exceed 3 gallons per vertical foot per day, repairs by approved methods may be made to bring the leakage within the allowable rate of 1 gallon per foot per day. Leakage due to a defective section or joint or leakage exceeding the 3 gallon per vertical foot per day rate, shall be cause for the rejection of the manhole. It shall be the Contractor's responsibility to disemble, reconstruct or replace all manholes that do not pass the leakage test, at no cost to the Owner. The manhole shall then be retested and, if satisfactory, interior joints shall be filled and pointed, at no cost to the Owner.
   c. No adjustment in the leakage allowance will be made for unknown causes such as leaking plugs, absorption, etc., (i.e., it will be assumed that all loss of water during the test is a result of leaks through the joints or through the concrete). Furthermore, the Contractor shall take any steps necessary to assure the Engineer that the water table is below the bottom of the manhole throughout the duration of the test.

FORCE MAIN (PRESSURE) SANITARY SEWER LINE TESTING

A. Testing of force main (pressure) sewer lines shall be conducted by a Contractor approved by the Local DPW. Testing shall be witnessed by the Local DPW, as required.

B. Prior to testing, all sewer lines shall be jetted to remove any rocks or debris that may have inadvertently entered the pipe during installation.

C. Pressure and leakage tests will be made by the Contractor to determine that the PVC force main is structurally sound and does not constitute a potential for excessive leakage. The force main pipeline shall be subject to a hydrostatic pressure test with the water pressure equal to 1.5 times the anticipated working pressure of the force main (67 psig).

D. When the force main has been filled with water to line pressure, but prior to being subject to test pressures, air shall be bled from the pipeline.

E. Water pressure shall be raised to test pressure carefully, so as not to shock (impart impact energy to) the force main. Water shall be drawn from a tank of a size and shape, which will allow accurate measurement and recording of the water volume drawn from the tank over time. The contractor shall record the rate at which water is pumped into the line to maintain test pressure.

F. The force main shall be considered adequate if leakage does not exceed the following:

Pipe Diameter (inches)	Maximum Leakage Rate per 1,000 ft of pipeline (gal./hr.)
< 4	0.27
4	0.27
6	0.41

Should leakage exceed the rates specified above, the Contractor shall immediately locate the section(s) of the pipeline where the leak(s) are present and repair or replace the section(s) at no cost to the Owner. The repaired/replaced section(s) shall be retested in accordance with this Section at no cost to the Owner.

G. If television inspection, or other tests or inspections are required to locate leaks, or to satisfy municipal requirements, the Contractor shall provide same at no cost to the Owner.

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DATE: _____

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COMMONWEALTH OF MASSACHUSETTS — MICHAEL J. ONEIL — No. 49876 — REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

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c/o Capital Group Properties
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Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC
259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

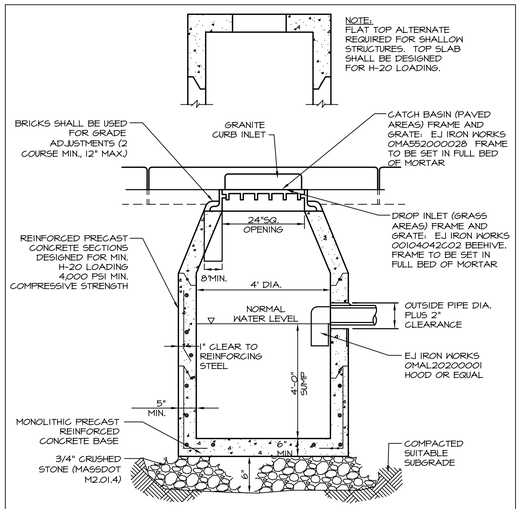
SITE DETAILS

PARK CENTRAL
Southborough, MA
Worcester County)

TOWN PERMITTING

0 1 2 3

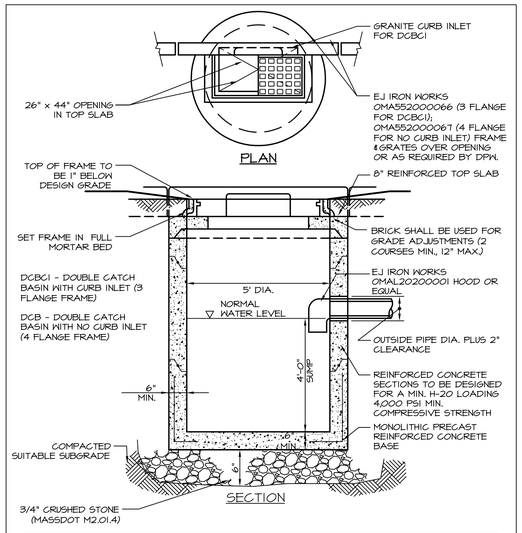
DATE: 4/06/16	SCALE: AS NOTED
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978500	CHK'D. BY:
DRAWING NO.: 0978502E	SHEET: C6.01



4' DIAMETER DROP INLET (DI)
4' DIAMETER CATCH BASIN (CB)

N.T.S. 02600-01

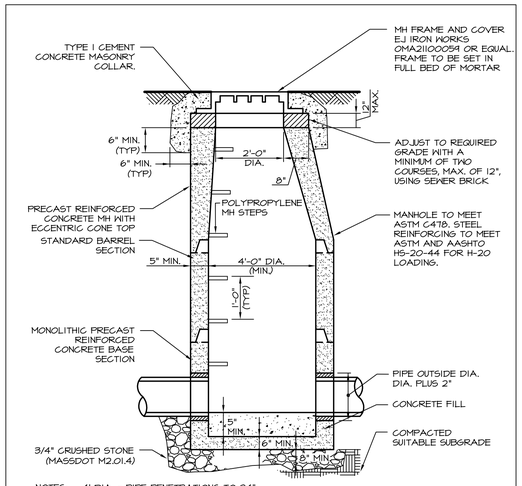
WDA, INC.



DOUBLE GRATE CATCH BASIN (DCB)

N.T.S. 02600-03

WDA, INC.



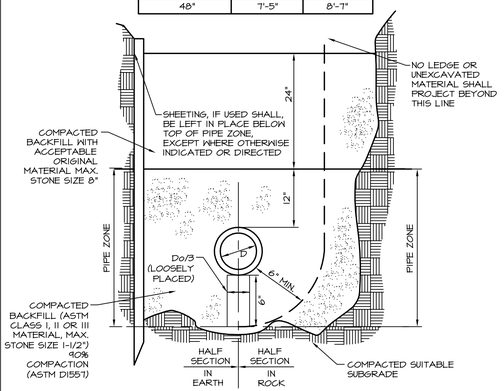
NOTES: 4' DIA. - PIPE PENETRATIONS TO 24"
5' DIA. - PIPE PENETRATIONS TO 30"
6' DIA. - PIPE PENETRATIONS TO 42"
8' DIA. - PIPE PENETRATIONS TO 60"

DRAIN MANHOLE (DMH)

N.T.S. 02600-04

WDA, INC.

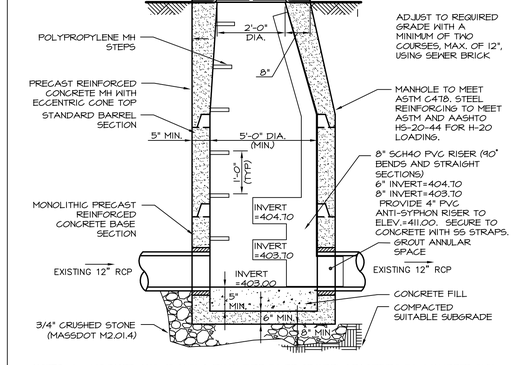
DIAMETER OF PIPE D.	TRENCH WIDTH	
	UNSHEETED	SHEETED
15" AND SMALLER	3'-0"	4'-2"
18"	3'-3"	4'-5"
24"	4'-0"	5'-2"
30"	5'-6"	6'-8"
36"	6'-6"	7'-8"
48"	7'-5"	8'-7"



CPE TRENCH SECTION

N.T.S. 02500-06

WDA, INC.

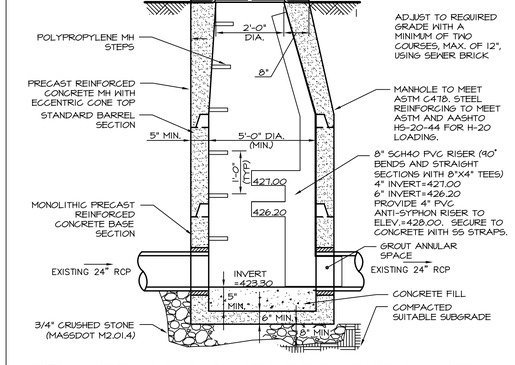


NOTES: 1. 10" RISER AND 4" ANTI-SYPHON TUBE TO BE SECURELY FASTENED TO CONCRETE DMH STRUCTURE.
2. ANNULAR SPACE AROUND 10" RISER TO BE GROUTED.
3. PROPOSED STRUCTURE INVERT BASED ON EXISTING DRAIN LINE INVERTS AND LENGTH.

SPECIAL DRAIN MANHOLE - S1

N.T.S. 02600-XX

WDA, INC.

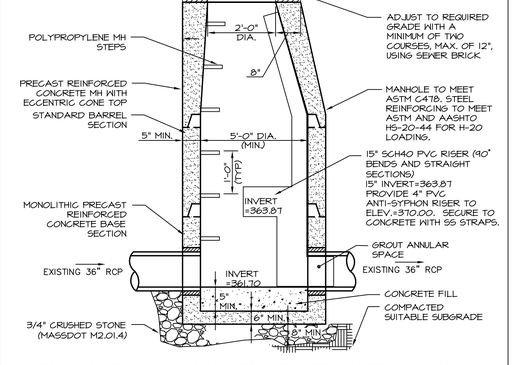


NOTES: 1. 10" RISER AND 4" ANTI-SYPHON TUBE TO BE SECURELY FASTENED TO CONCRETE DMH STRUCTURE.
2. ANNULAR SPACE AROUND 10" RISER TO BE GROUTED.
3. PROPOSED STRUCTURE INVERT BASED ON EXISTING DRAIN LINE INVERTS AND LENGTH.

SPECIAL DRAIN MANHOLE - S2

N.T.S. 02600-XX

WDA, INC.

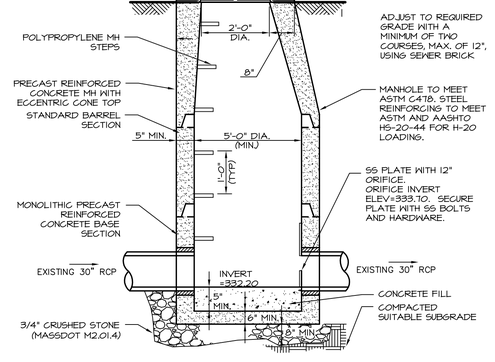


NOTES: 1. 10" RISER AND 4" ANTI-SYPHON TUBE TO BE SECURELY FASTENED TO CONCRETE DMH STRUCTURE.
2. ANNULAR SPACE AROUND 10" RISER TO BE GROUTED.
3. PROPOSED STRUCTURE INVERT BASED ON EXISTING DRAIN LINE INVERTS AND LENGTH.

SPECIAL DRAIN MANHOLE - N2

N.T.S. 02600-XX

WDA, INC.



NOTES: 1. STAINLESS STEEL PLATE TO BE SECURELY FASTENED TO CONCRETE DMH STRUCTURE WITH SS HARDWARE.
2. PROPOSED STRUCTURE INVERT BASED ON EXISTING DRAIN LINE INVERTS AND LENGTH.

SPECIAL DRAIN MANHOLE - N3

N.T.S. 02600-XX

WDA, INC.

MUTCD REFERS TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, 1988 EDITION (AS AMENDED AND/OR STANDARD HIGHWAY SIGNS, 1979 (AS AMENDED), BOTH ISSUED BY THE USDOT/FHWA.

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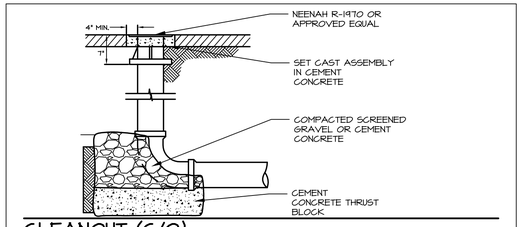

CLEANOUT (C/O)

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CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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c/o Capital Group Properties
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TITLE:

SITE DETAILS

PARK CENTRAL

Southborough, MA
Worcester County)

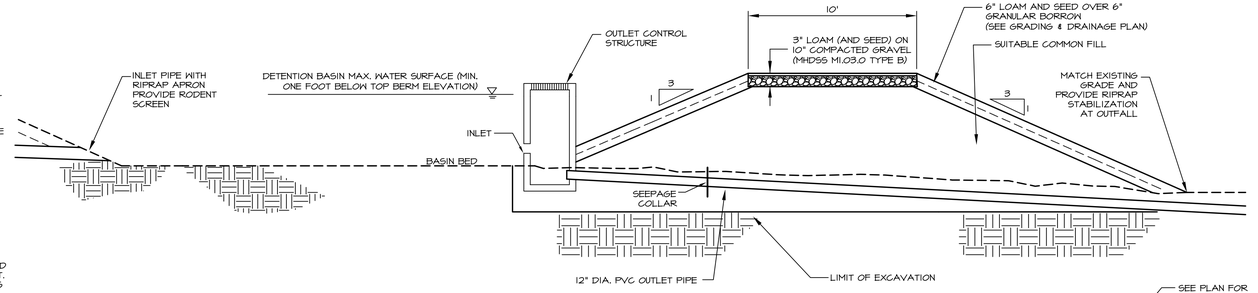
TOWN PERMITTING

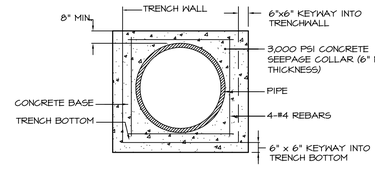
0 1 2 3

DATE: 4/06/16	SCALE: AS NOTED
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978500	CHK'D. BY:
DRAWING NO.: 0978503E	SHEET: C6.02

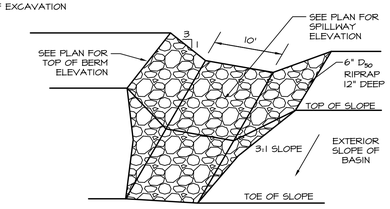
CONSTRUCTION NOTES:

1. CONTRACTOR SHALL USE LIGHT EARTH-MOVING EQUIPMENT TO EXCAVATE AND GRADE THE INFILTRATION BASIN TO PREVENT COMPACTION OF THE SOIL.
2. REMOVE EXISTING TOPSOIL, SUBSOIL, AND/OR EXISTING FILL BELOW BOTTOM OF BASIN.
3. FOLLOWING THE ESTABLISHMENT OF BASIN SUBGRADE, TILL/SCARIFY BOTTOM OF BASIN TO 12" DEPTH TO RESTORE INFILTRATION RATES.
4. IMMEDIATELY FOLLOWING BASIN CONSTRUCTION, STABILIZE BASIN BOTTOM AND SIDE SLOPES WITH WATER-TOLERANT GRASSES. (USE LOW MAINTENANCE, RAPIDLY GERMINATING GRASSES SUCH AS FESCUES. DO NOT SOD THE BASIN BOTTOM.
5. FOLLOWING CONSTRUCTION OF BASIN, KEEP ALL CONSTRUCTION EQUIPMENT OUT OF BASIN AREA.
6. AFTER THE BASIN FLOOR IS SHAPED, PLACE SOIL ADDITIVES ON THE BASIN FLOOR TO AMEND THE SOIL. THE SOIL ADDITIVES SHALL INCLUDE COMPOST, PROPERLY AGED TO KILL ANY SEED STOCK CONTAINED WITHIN THE COMPOST. DO NOT PUT BIOSOLIDS IN THE COMPOST. MIX NATIVE SOILS THAT WERE EXCAVATED FROM THE A OR B HORIZONS TO CREATE THE BASIN WITH THE COMPOST, AND THEN SCARIFY THE NATIVE MATERIALS AND COMPOST INTO THE PARENT MATERIAL USING A CHISEL PLOW OR ROTARY DEVICE TO A DEPTH OF 12 INCHES. IMMEDIATELY AFTER CONSTRUCTING THE BASIN, STABILIZE ITS BOTTOM AND SIDE SLOPES WITH A DENSE TURF OF WATER-TOLERANT GRASS. USE LOW-MAINTENANCE, RAPIDLY GERMINATING GRASSES, SUCH AS FESCUES. THE SELECTED GRASSES MUST BE CAPABLE OF SURVIVING IN BOTH WET AND DRY CONDITIONS. DO NOT USE SOD, WHICH CAN PREVENT ROOTS FROM DIRECTLY CONTACTING THE UNDERLYING SOIL. DURING THE FIRST TWO MONTHS, INSPECT THE NEWLY ESTABLISHED VEGETATION SEVERAL TIMES TO DETERMINE IF ANY REMEDIAL ACTIONS (E.G., RESEEDING, IRRIGATING) ARE NECESSARY.





SEEPAGE COLLAR



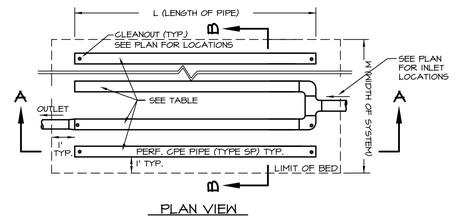
EMERGENCY SPILLWAY

INFILTRATION BASIN SECTION A-A

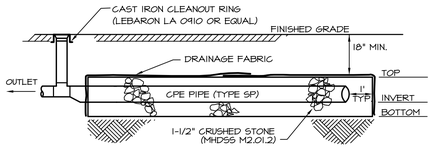
N.T.S.

02600-28

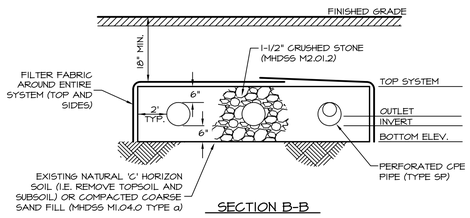
WDA, INC.



PLAN VIEW



SECTION A-A



SECTION B-B

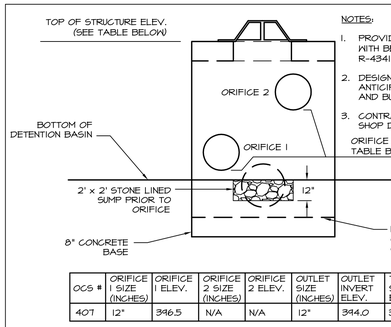
INF #	WIDTH OF STONE	LENGTH OF STONE	# OF ROWS	PIPE DIA.	LENGTH OF PIPE	CL TO CL DIM.	BOTTOM ELEV.	INLET INVERT	OUTLET DIA.	OUTLET INVERT
307	28.5'	80'	11	18"	76'	30"	425.0	425.5	6"	426.5
408	60'	131'	15	24"	127'	48"	405.4	405.9	2-10"	407.07
410	40'	115'	10	24"	111'	48"	413.0	413.50	4"	415.16

STORMWATER INFILTRATION SYSTEMS (INF)

N.T.S.

02600-23

WDA, INC.



NOTES:

1. PROVIDE FLAT CONCRETE TOP WITH BEEHIVE GRATE (NEENAH R-4341-A, OR EQUAL).
2. DESIGN SHALL SUPPORT ANTICIPATED HYDROSTATIC AND BUOYANT FORCES.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS.

ORIFICE INV. ELEV. (SEE TABLE BELOW)

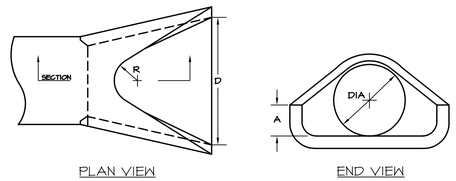
OCS #	ORIFICE 1 SIZE (INCHES)	ORIFICE 1 ELEV.	ORIFICE 2 SIZE (INCHES)	ORIFICE 2 ELEV.	OUTLET SIZE (INCHES)	OUTLET INVERT ELEV.	TOP OF STRUCTURE ELEV.
407	12"	346.5	N/A	N/A	12"	344.0	348.0

OUTLET CONTROL STRUCTURE (OCS)

N.T.S.

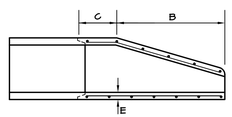
02600-14

WDA, INC.



PLAN VIEW END VIEW

DIA.	A	B	C	D	E	R
12"	4"	2'-0"	4'-0 7/8"	2'-0"	2"	9"
15"	6"	2'-3"	3'-10"	2'-6"	2-1/4"	11"
18"	9"	2'-3"	3'-10"	3'-0"	2-1/2"	12"
24"	9 1/2"	3'-7 1/2"	2'-6"	4'-0"	3"	14"
30"	12"	4'-6"	1'-7 3/4"	5'-0"	3-1/2"	15"
36"	15"	5'-3"	2'-10 3/4"	6'-0"	4"	20"



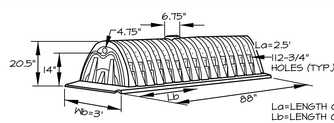
SECTION VIEW

CONCRETE FLARED END (FE)

N.T.S.

02600-30

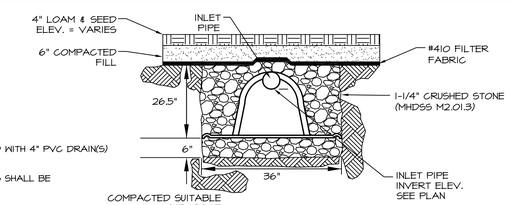
WDA, INC.



La=LENGTH OF SIDEWALL ARCH
Lb=LENGTH OF BASE=1 FT.
Wb=OPEN BASE=3 FT.

NOTES:

1. EACH TOWNHOUSE UNIT SHALL BE FITTED WITH FOUR CHAMBERS. CHAMBERS SHALL BE CONNECTED WITH 4" PVC DRAIN(S) TO THE GUTTER DOWNSPOUTS OR STONE DRIP STRIP(S) LOCATED BELOW THE EAVE(S).
2. EACH CHAMBER AND STONE SURROUND SHALL PROVIDE 240± GALLONS OF STORAGE. CHAMBERS SHALL BE "RECHARGER 180" BY CULTEC, OR EQUAL AS APPROVED BY THE ENGINEER.
3. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.

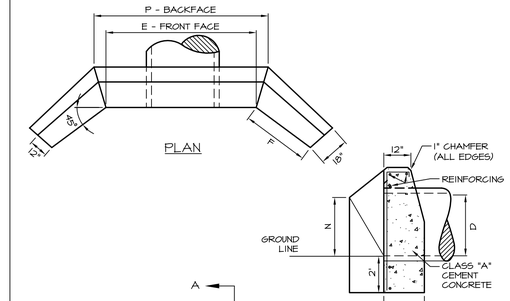


TOWNHOUSE ROOF RECHARGE SYSTEM

N.T.S.

02600-XX-CULTEC

WDA, INC.



PIPE DIAM.	2 : 1 SLOPE					
D	E	P	J	N	L	F
≤ 30"	4'	5'-3"	3'-6"	2'	1'-6"	4'-3"
36"	4'-6"	5'-11"	4'	2'-3"	1'-8"	5'
48"	5'-6"	7'-2"	5'	2'-9"	2'	6'-6"
60"	6'-6"	8'-5"	6'	3'-3"	2'-4"	8'
72"	7'-6"	9'-9"	7'	3'-9"	2'-8"	9'-6"
84"	8'-6"	11'	8'	4'-3"	3'	11'

NOTES:

1. FOR DESCRIPTIONS, MATERIALS, AND CONSTRUCTION METHODS, SEE LATEST MHDSS.
2. ALL CONCRETE DIMENSIONS SHOWN ARE MINIMUM.
3. ALL REINFORCING TO BE #3 BARS AT 12" EACH WAY (TYP.) WITH 1-1/2" CLEARANCE (MIN.).

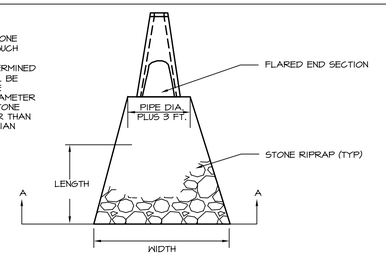
HEADWALL WITH WINGWALLS (WW)

N.T.S.

02600-41

WDA, INC.

STONE RIPRAP: WELL-GRADED STONE DOWN TO 1" DIA. SUCH THAT 50% OF THE MIXTURE (AS DETERMINED BY WEIGHT) SHALL BE LARGER THAN THE MEDIAN STONE DIAMETER SPECIFIED. NO STONE SHALL BE LARGER THAN 1.5 TIMES THE MEDIAN STONE DIA.



RIPRAP APRON

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COMMONWEALTH OF MASSACHUSETTS — MICHAEL J. CLANCY — No. 49961 — REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

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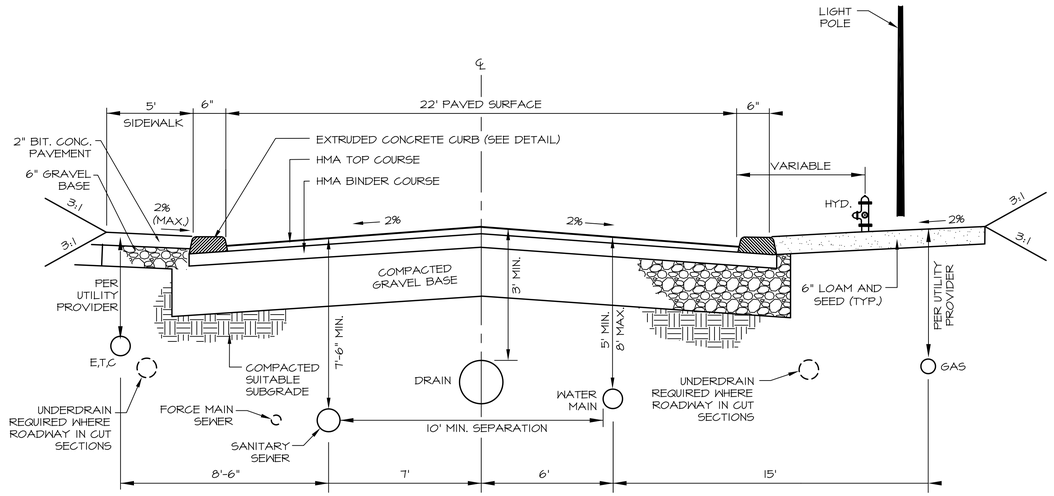
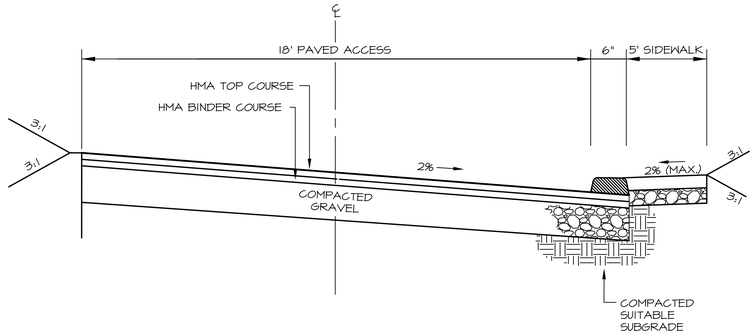


STREET TREES ARE REQUIRED AT 40-FOOT INTERVALS ALONG THE ROADWAY ON BOTH SIDES

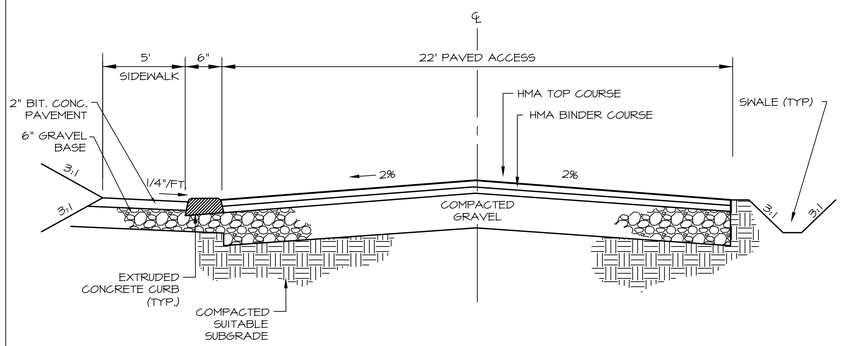
22' DRIVEWAY SECTION-SEE GRADING PLAN

NOT TO SCALE



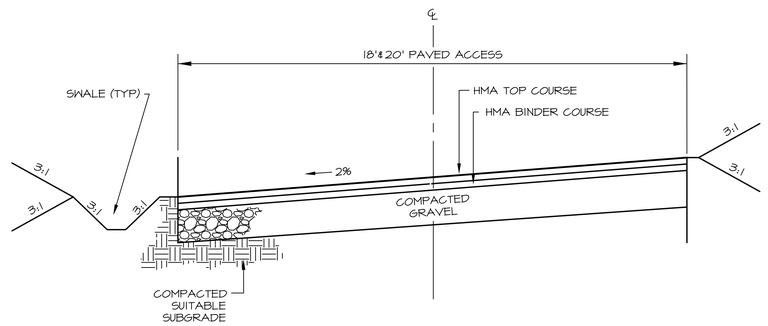
18' DRIVEWAY SECTION (ONE SIDEWALK) - SEE GRADING PLAN

NOT TO SCALE



22' DRIVEWAY SECTION-SEE GRADING PLAN

NOT TO SCALE



18' DRIVEWAY SECTION (NO SIDEWALK) - SEE GRADING PLAN

NOT TO SCALE

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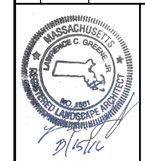

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FILE NO.: 0978500	*CHK'D. BY:*
DRAWING NO.: 0978505E	*SHEET:* C6.04

MASSACHUSETTS RIVER AND STREAM CROSSING STANDARDS

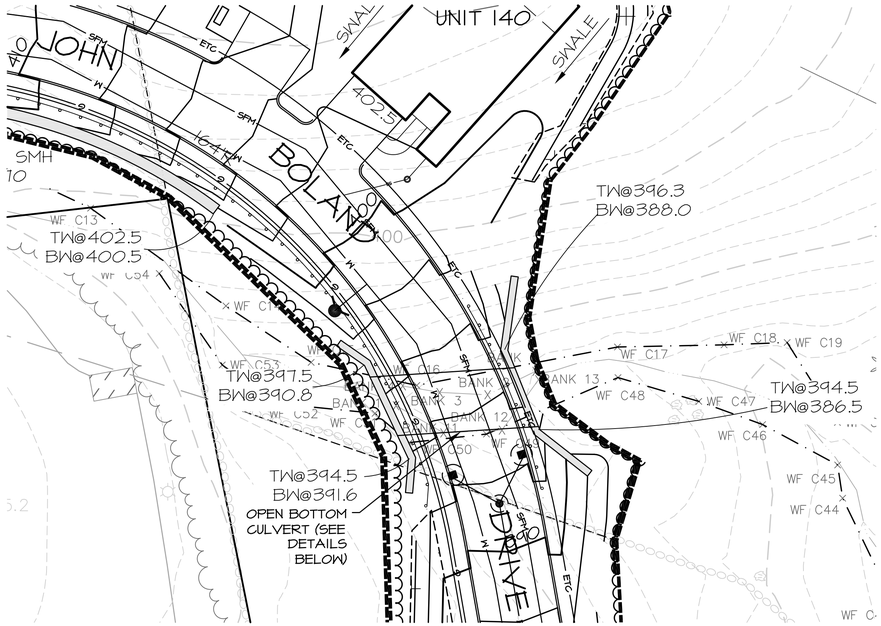
1. PROVIDE OPEN-BOTTOM ARCH.
2. REQUIRES EMBEDMENT IF CULVERT IS PROVIDED. NOT APPLICABLE.
3. THE ARCH SHALL SPAN THE CHANNEL WIDTH (MINIMUM OF 1.2 TIMES THE BANKFULL WIDTH). BANKFULL WIDTH = 6.7', MIN. SPAN = 8.04'
4. PROVIDE NATURAL BOTTOM SUBSTRATE WITHIN STRUCTURE. THE PROPOSED CHANNEL SHALL MIMIC THE MOBILITY, SLOPE, STABILITY, AND CONFINEMENT OF THE EXISTING UPSTREAM/ DOWNSTREAM CHANNEL. UTILIZED EXISTING CHANNEL MATERIAL WHERE AVAILABLE FOR CHANNEL RESTORATION.
5. MAINTAIN CHARACTERISTICS OF EXISTING NATURAL CHANNEL. THE PROPOSED CHANNEL SHALL MIMIC THE EXISTING UPSTREAM/DOWNSTREAM CHANNEL TO MATCH EXISTING WATER DEPTHS AND VELOCITIES.
6. OPENNESS RATIO RECOMMENDED TO BE GREATER THAN OR EQUAL TO 0.82 FEET/0.25 METERS.

GENERAL STREAM CROSSING CONSTRUCTION NOTES:
(NOT INTENDED TO BE AN ALL INCLUSIVE CONSTRUCTION SEQUENCE)

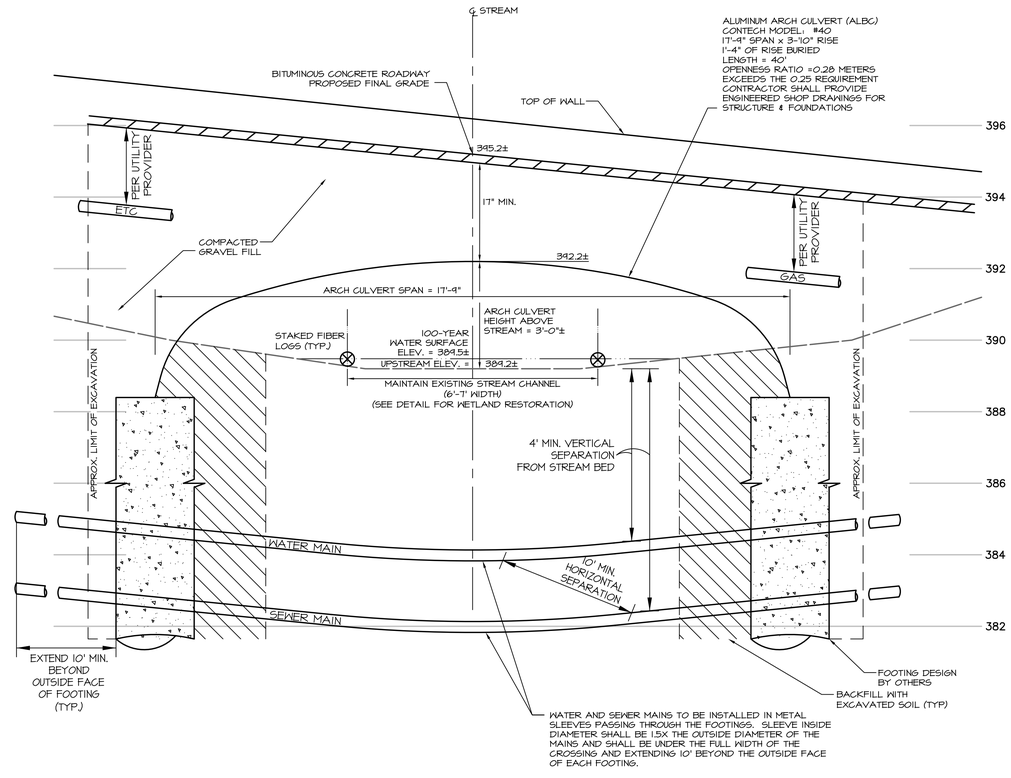
1. PROVIDE EROSION CONTROL BARRIER WHERE SHOWN UPSTREAM AND DOWNSTREAM OF THE CROSSING LOCATION.
2. PERFORM CONSTRUCTION OF CROSSING DURING LOW FLOW OR NO FLOW.
3. IF FLOW IS ENCOUNTERED, PROVIDE TEMPORARY SAND BAG DAM / PUMP SYSTEM UPSTREAM TO DIVERT STREAM AROUND CONSTRUCTION AREA. PROVIDE DEWATERING BASIN IF PUMPING IS REQUIRED.
4. FOLLOWING REMOVAL OF EARTHEN MATERIAL AT THE EXISTING CROSSING, PROVIDE 12" SCREENED GRAVEL/CRUSHED STONE FOR FOOTING BEDDING AND INSTALL FOOTINGS AND ARCH CULVERT. BACKFILL IN 6" COMPACTED LIFTS TO SUBGRADE WHILE CONSTRUCTING RETAINING WALLS.
6. FOLLOWING INSTALLATION OF UNDERGROUND UTILITIES WITHIN THE STREAM CHANNEL, RESTORE ANY DISTURBANCE TO EXISTING STREAM CHANNEL, BANK OR WETLAND.
7. FOLLOWING INSTALLATION OF PROPOSED UTILITIES OVER ARCH CULVERT, COMPLETE ROADWAY FINAL GRADING, CURBING, AND PAVING.

STREAM CHANNEL AND BANK RESTORATION:

- IMPACTS TO STREAM BANK, AT THE PROPOSED WETLAND CROSSING, WILL BE MITIGATED THROUGH THE USE OF AN OPEN-BOTTOM ARCH CULVERT "SPAN" AND RESTORATION OF THE STREAM CHANNEL WITHIN THE ARCH CULVERT.
- WORK WITHIN THE STREAM WILL ONLY BE CONDUCTED DURING A LOW-FLOW OR NO-FLOW PERIOD BETWEEN JULY 1 AND SEPTEMBER 30 ONLY.
- PROVISIONS MUST BE IN PLACE TO RE-DIRECT OR PUMP ANY STREAM FLOW AROUND OR THROUGH THE WORK AREA WITHOUT EXPOSURE TO SEDIMENT OR OTHER CONTAMINANTS.
- THE STREAM CHANNEL WILL BE GRADED IN A SINUOUS CONFIGURATION TO MATCH THE PROFILES OF THE EXISTING STREAM ON EITHER SIDE OF THE CROSSING.
- THE RE-CONSTRUCTED STREAM CHANNEL WILL BE LINED WITH STAPLED GEOTEXTILE FABRIC THAT IS KEYED INTO THE NATIVE TOPSOIL ABOVE THE STREAM BANKS.
- STAKED AND TIED FIBER LOGS (12 INCH DIAMETER) WILL BE PLACED OVER THE FABRIC TO FORM THE STREAM BANKS.
- IF THE NATIVE TOPSOIL HAS BEEN STRIPPED IT WILL BE REPLACED WITH 6 INCHES OF UNSCREENED, ON-SITE TOPSOIL/LOAM. NATIVE OR RESTORED SOILS ABOVE THE BANKS WILL BE MULCHED WITH 1 TO 2 INCHES OF BARK OR CHOPPED LEAVES.
- GRAVEL AND ROUNDED COBBLES (6-INCH MINUS) WILL BE PLACED IN THE STREAM BED TO APPROXIMATE THE EXISTING STREAM BED ABOVE AND BELOW THE CROSSING.

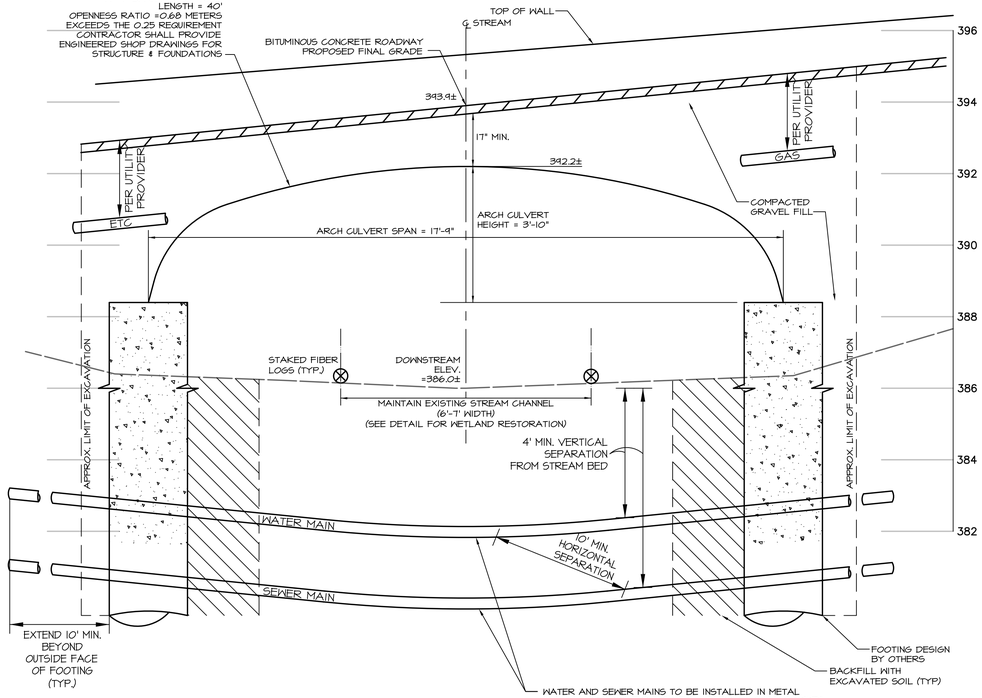


PLAN VIEW
1" = 20'



UPSTREAM (WEST) ELEVATION VIEW
SCALE: 1" = 2'

WETLAND CROSSING NO. 1 (STATION 4+00) JOHN BOLAND DRIVE



DOWNSTREAM (EAST) ELEVATION VIEW
SCALE: 1" = 2'

WETLAND CROSSING NO. 1 (STATION 4+00) JOHN BOLAND DRIVE

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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B	01/06/16	NOT ISSUED	
A	11/04/15	NOT ISSUED	

COMMONWEALTH OF MASSACHUSETTS
MICHAEL SCOTT CHICK
No. 43660
REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
508.366.6506 (fax)
watermandesign.com wda@wdassoc.com

OWNER:

PARK CENTRAL LLC
c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC
259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

WETLAND CROSSING DETAIL

PARK CENTRAL
Southborough, MA
(Worcester County)

PERMITTING

0 20 40 60

DATE: 4/06/16	SCALE: 1" = 20'
JOB NO.: 0978.00	DWN. BY: KTS
FILE NO.: 0978330	CHK'D. BY:
DRAWING NO.: 0978331E	SHEET: C6.05

MASSACHUSETTS RIVER AND STREAM CROSSING STANDARDS

1. PROVIDE OPEN-BOTTOM ARCH.
2. REQUIRES EMBEDMENT IF CULVERT IS PROVIDED. NOT APPLICABLE.
3. THE ARCH SHALL SPAN THE CHANNEL WIDTH (MINIMUM OF 1.2 TIMES THE BANKFULL WIDTH). BANKFULL WIDTH = 6.7', MIN. SPAN = 8.04'
4. PROVIDE NATURAL BOTTOM SUBSTRATE WITHIN STRUCTURE. THE PROPOSED CHANNEL SHALL MIMIC THE MOBILITY, SLOPE, STABILITY, AND CONFINEMENT OF THE EXISTING UPSTREAM/ DOWNSTREAM CHANNEL. UTILIZED EXISTING CHANNEL MATERIAL WHERE AVAILABLE FOR CHANNEL RESTORATION.
5. MAINTAIN CHARACTERISTICS OF EXISTING NATURAL CHANNEL. THE PROPOSED CHANNEL SHALL MIMIC THE EXISTING UPSTREAM/DOWNSTREAM CHANNEL TO MATCH EXISTING WATER DEPTHS AND VELOCITIES.
6. OPENNESS RATIO RECOMMENDED TO BE GREATER THAN OR EQUAL TO 0.82 FEET/0.25 METERS.

GENERAL STREAM CROSSING CONSTRUCTION NOTES:
(NOT INTENDED TO BE AN ALL INCLUSIVE CONSTRUCTION SEQUENCE)

1. PROVIDE EROSION CONTROL BARRIER WHERE SHOWN UPSTREAM AND DOWNSTREAM OF THE CROSSING LOCATION.
2. PERFORM CONSTRUCTION OF CROSSING DURING LOW FLOW OR NO FLOW.
3. IF FLOW IS ENCOUNTERED, PROVIDE TEMPORARY SAND BAG DAM / PUMP SYSTEM UPSTREAM TO DIVERT STREAM AROUND CONSTRUCTION AREA. PROVIDE DEWATERING BASIN IF PUMPING IS REQUIRED.
4. FOLLOWING REMOVAL OF EARTHEN MATERIAL AT THE EXISTING CROSSING, PROVIDE 12" SCREENED GRAVEL/CRUSHED STONE FOR FOOTING BEDDING AND INSTALL FOOTINGS AND ARCH CULVERT. BACKFILL IN 6" COMPACTED LIFTS TO SUBGRADE WHILE CONSTRUCTING RETAINING WALLS.
6. FOLLOWING INSTALLATION OF UNDERGROUND UTILITIES WITHIN THE STREAM CHANNEL, RESTORE ANY DISTURBANCE TO EXISTING STREAM CHANNEL, BANK OR WETLAND.
7. FOLLOWING INSTALLATION OF PROPOSED UTILITIES OVER ARCH CULVERT, COMPLETE ROADWAY FINAL GRADING, CURBING, AND PAVING.

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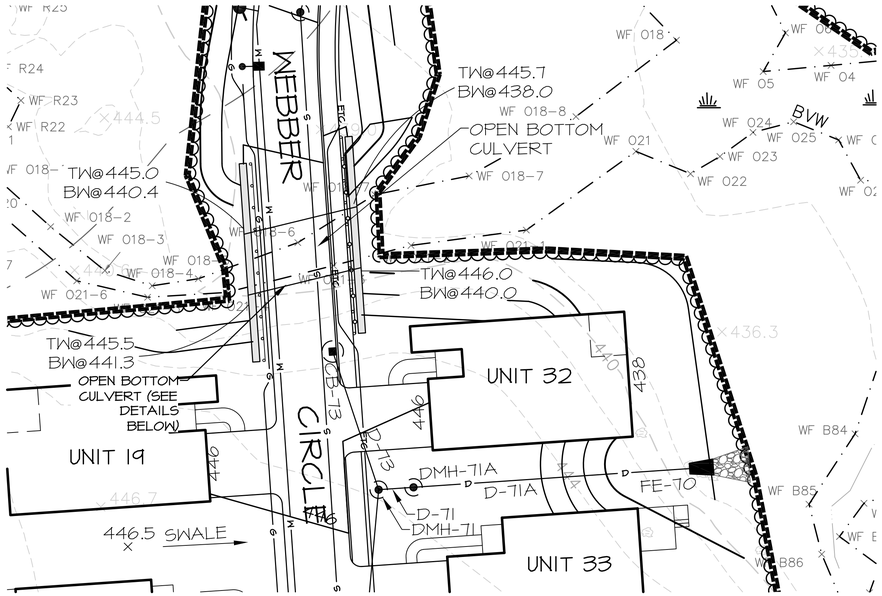
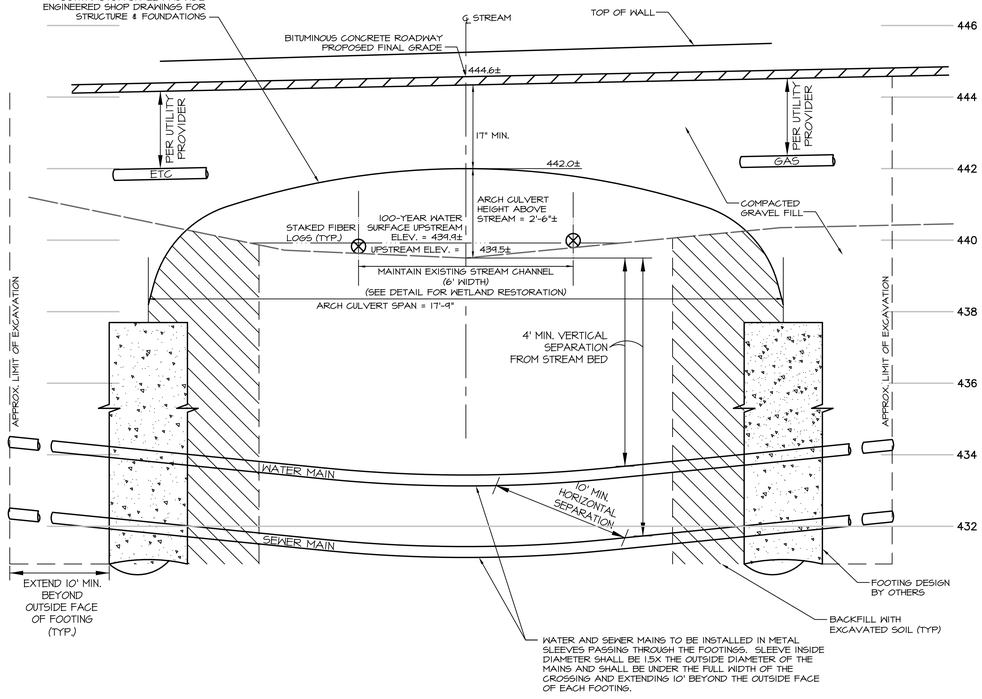


PLAN VIEW
1" = 20'

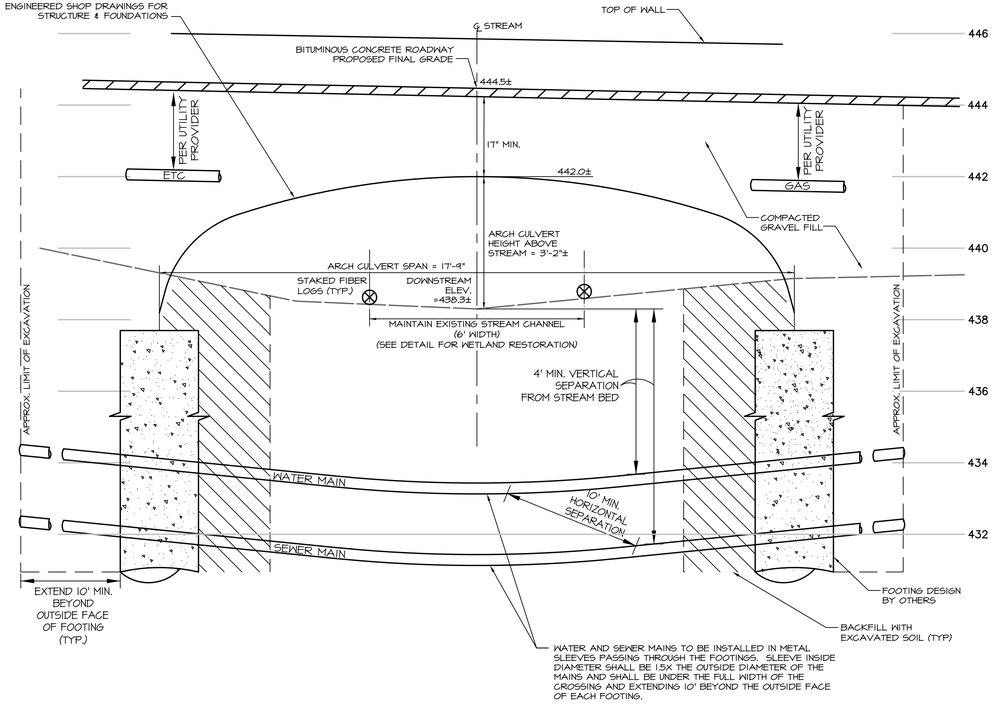
ALUMINUM ARCH CULVERT (ALBC)
CONTECH MODEL: #40
17'-9" SPAN x 3'-10" RISE
LENGTH = 32.5'
OPENNESS RATIO =0.26 METERS
EXCEEDS THE 0.25 REQUIREMENT
CONTRACTOR SHALL PROVIDE ENGINEERED SHOP DRAWINGS FOR STRUCTURE & FOUNDATIONS



UPSTREAM (WEST) ELEVATION VIEW
SCALE: 1" = 2'

WETLAND CROSSING NO. 2 (WEBBER CIRCLE 1,140' FROM THE INTERSECTION OF PARK CENTRAL DRIVE)

ALUMINUM ARCH CULVERT (ALBC)
CONTECH MODEL: #40
17'-9" SPAN x 3'-10" RISE
LENGTH = 32.5'
OPENNESS RATIO =0.45 METERS
EXCEEDS THE 0.25 REQUIREMENT
CONTRACTOR SHALL PROVIDE ENGINEERED SHOP DRAWINGS FOR STRUCTURE & FOUNDATIONS



DOWNSTREAM (EAST) ELEVATION VIEW
SCALE: 1" = 2'

WETLAND CROSSING NO. 2 (WEBBER CIRCLE 1,140' FROM THE INTERSECTION OF PARK CENTRAL DRIVE)

THIS DRAWING IS NOT FOR CONSTRUCTION UNTIL ISSUED FOR CONSTRUCTION BY WATERMAN DESIGN ASSOCIATES, INC.

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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COMMONWEALTH OF MASSACHUSETTS
MICHAEL ROY CHU
No. 44660
REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

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Westborough, MA 01581
508.366.6552
508.366.6506 (fax)
watermandesign.com wda@wdassoc.com

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c/o Capital Group Properties
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PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

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Southborough, MA 01772

TITLE:

WETLAND CROSSING DETAIL

PARK CENTRAL

Southborough, MA
(Worcester County)

PERMITTING

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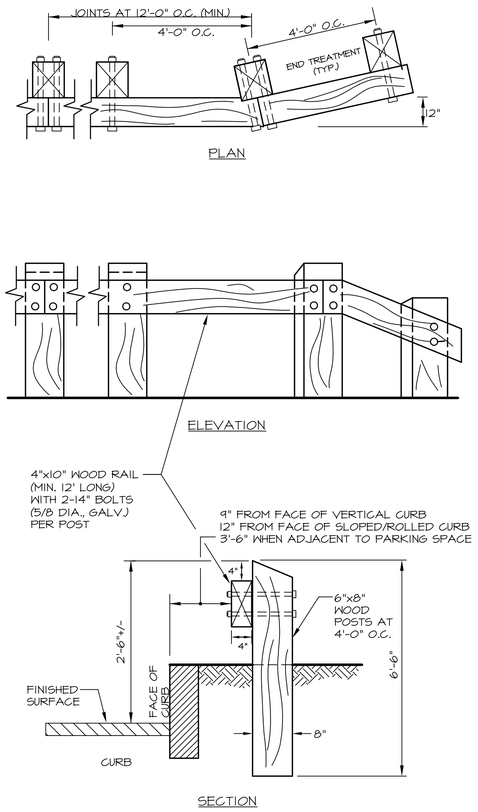
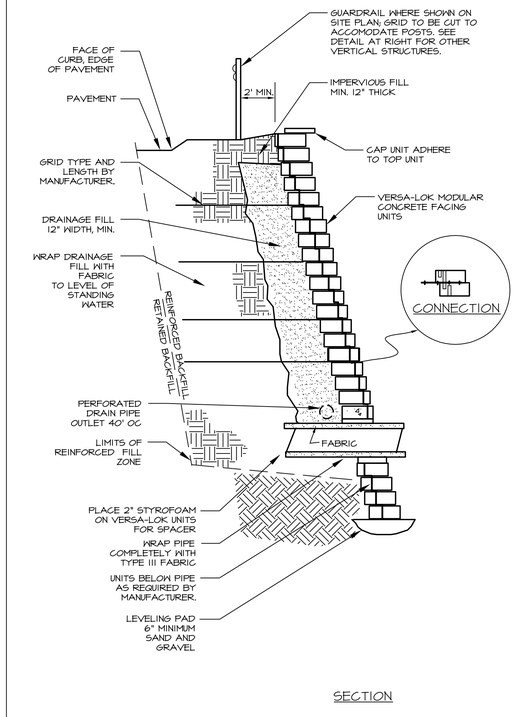
JOB NO.: 0978.00	DWN. BY: KTS
FILE NO.: 0978330	CHK'D. BY:
DRAWING NO.: 0978331E	SHEET: C6.06



WOOD GUIDE RAIL (WGR)

N.T.S. 02800-03

WDA, INC.



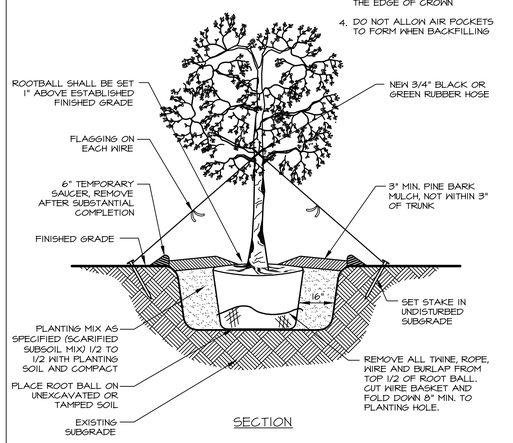
MODULAR CONCRETE UNIT RETAINING WALL

N.T.S. 02800-07

WDA, INC.

NOTES:

1. TREE SHALL BE SET PLUMB.
2. STAKING ONLY UPON APPROVAL OF PROJECT LANDSCAPE ARCHITECT. STAKES ARE TO BE REMOVED NO LATER THAN ONE YEAR FROM TIME OF PLANTING
3. DO NOT HEAVILY PRUNE TREE AT TIME OF PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS AND BROKEN OR DEAD BRANCHES. DO NOT REMOVE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF CROWN
4. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING



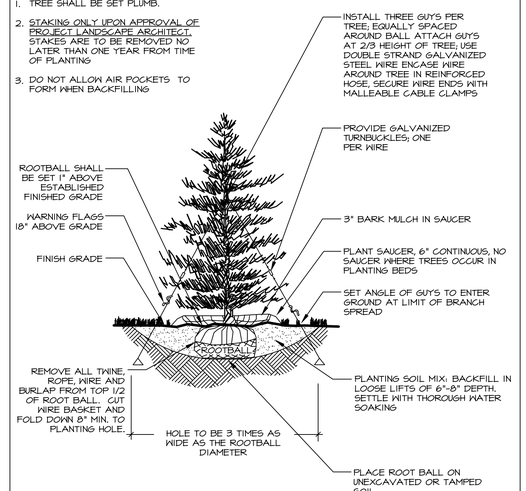
DECIDUOUS TREE PLANTING

N.T.S. 02900-01

WDA, INC.

NOTES:

1. TREE SHALL BE SET PLUMB.
2. STAKING ONLY UPON APPROVAL OF PROJECT LANDSCAPE ARCHITECT. STAKES ARE TO BE REMOVED NO LATER THAN ONE YEAR FROM TIME OF PLANTING
3. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING



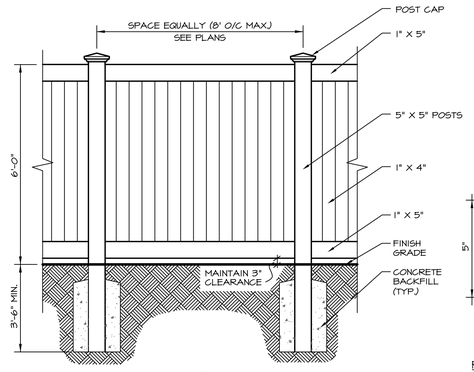
EVERGREEN TREE PLANTING

N.T.S. 02900-03

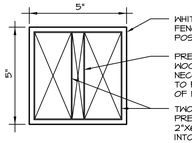
WDA, INC.

NOTES:

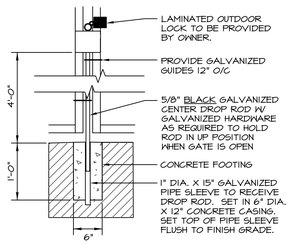
1. FENCE CONSTRUCTED OF WHITE PVC.
2. ALL POSTS MINIMUM 3'-6" BELOW GRADE WITH CONCRETE BACKFILL.
3. ALL FASTENERS STAINLESS STEEL. COLOR: BLACK.
4. INSTALL FENCE TOP LEVEL. ADJUST GRADE TO MAINTAIN 3" CLEARANCE AT BOTTOM OF FENCE.
5. SUBMIT SAMPLES OF ALL COMPONENTS PRIOR TO ORDERING.
6. FOR ACCESS, INCLUDE DOUBLE SWING GATES (10' CLEAR EACH) WITH REINFORCED POSTS AND CORRESPONDING HARDWARE (COLOR: BLACK) IN LOCATIONS SHOWN ON PLAN.



PRECEDENT IMAGE



REINFORCED GATE POST PLAN VIEW

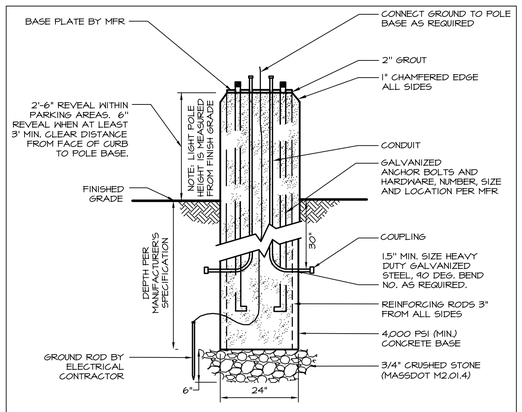


GATE ROD DETAIL

DUMPSTER ENCLOSURE FENCE AND ACCESS GATE

N.T.S.

WDA, INC.



NOTES:

1. IT IS THE CONTRACTORS RESPONSIBILITY TO CHECK AND VERIFY ALL ANCHOR BOLT DIMENSION (SIZE, BOLT CIRCLE, ETC.) WITH THE POLE MANUFACTURER PRIOR TO INSTALLATION OF FOUNDATION.
2. STABILITY TO BE CHECKED BY GEOTECHNICAL ENGINEER FOR SPECIFIC SITE SOIL CONDITIONS.
3. PROVIDE INSULATED GROUNDING BUSHING ON EXPOSED END (IN BASE OF POLE) OF ALL GALVANIZED STEEL BENDS.

LIGHT POLE BASE

N.T.S. 02800-05

WDA, INC.

MUTCD REFERS TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, 1988 EDITION (AS AMENDED AND/OR STANDARD HIGHWAY SIGNS, 1979 (AS AMENDED), BOTH ISSUED BY THE USDOT/FHWA.

AASHTO REFERS TO AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING, PART I - SPECIFICATIONS, TWENTIETH EDITION (AS AMENDED).

MHDSS REFERS TO MASS. HIGHWAY DEPT. STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988 (AS AMENDED).

DPW REFERS TO LOCAL DEPARTMENT OF PUBLIC WORKS.

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION PURPOSES UNTIL ISSUED AS A CONSTRUCTION DRAWING BY WATERMAN DESIGN ASSOCIATES, INC.

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

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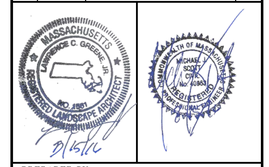

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TITLE:

SITE DETAILS

PARK CENTRAL

Southborough, MA
Worcester County)

TOWN PERMITTING

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JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978500	CHK'D. BY:
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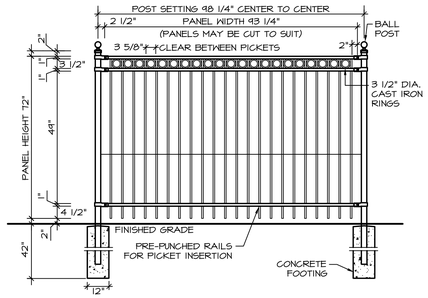


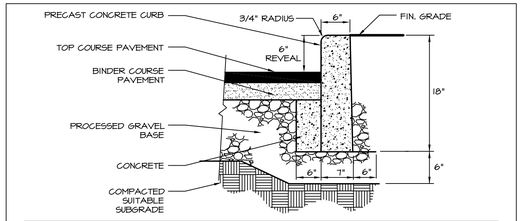
SPECIFICATIONS

POSTS, RAILS & PICKETS	GOLD FORMED STEEL TUBING INTERIOR & EXTERIOR GALVALUME® COATING CHROMATE CONVERSION COATING ELECTROSTATICALLY APPLIED THERMALLY BONDED POLYESTER POWDER COATING MINIMUM FILM THICKNESS 2.5 MILS
POSTS:	2"x2", 16 GAUGE OR 14 GAUGE STANDARD POST SPACING (CENTER TO CENTER): 98 1/4"
POST FLANGES:	3"x6" x 1/4"
RAILS:	1" x 1", 14 GAUGE
PICKETS:	5/8"x5/8", 18 GAUGE
FITTINGS:	14 GAUGE STAMP FORGED FACTORY FINISH AS ABOVE
WELDS:	STAINLESS STEEL
STANDARD PANEL WIDTH:	93 1/4"

ORNAMENTAL FENCE

N.T.S. 02800-19

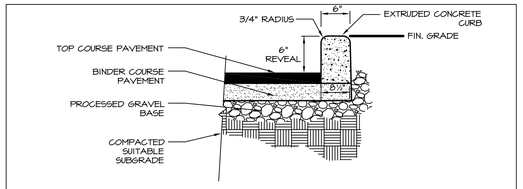
WDA, INC.



PRECAST CONCRETE CURB (CC)

N.T.S. 02700-04

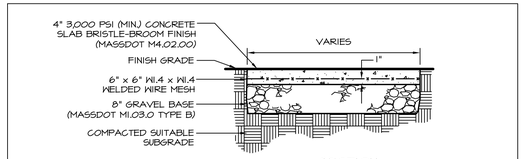
WDA, INC.



EXTRUDED CONCRETE CURB (CC)

N.T.S. 02700-04

WDA, INC.



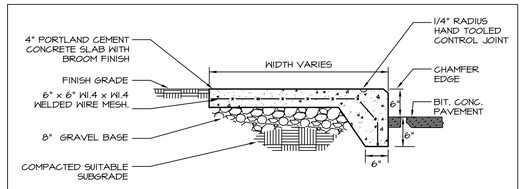
SECTION

NOTE: WHERE CEMENT CONCRETE WALK ABUTS BUILDING DOOR(S), SLAB SHALL BE 6" DEPTH AND DOWELS SHALL BE PROVIDED TO CONNECT SLAB TO BUILDING FOUNDATION WALL (REFER TO ARCHITECTURAL/STRUCTURAL PLANS).

CEMENT CONCRETE WALK

N.T.S. 02700-10

WDA, INC.

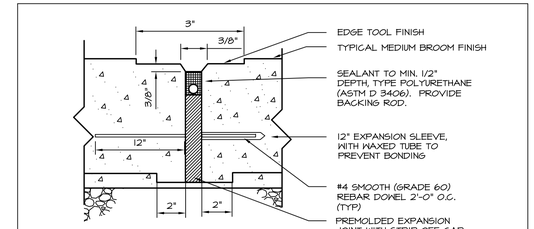


SECTION

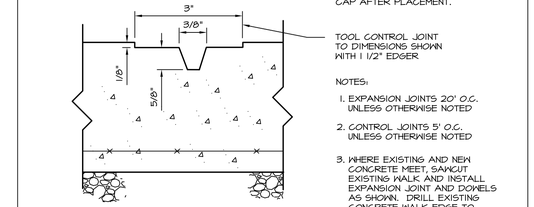
HAUNCHED CEMENT CONCRETE WALK (HCC)

N.T.S. 02700-05

WDA, INC.



EXPANSION JOINT AT 20' O.C.



CONTROL JOINT AT 5' O.C.

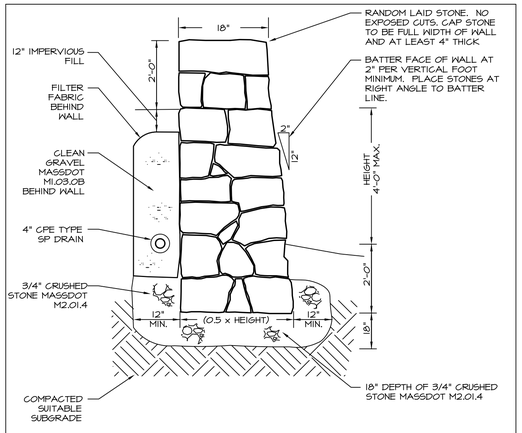
NOTES:

1. EXPANSION JOINTS 20' O.C. UNLESS OTHERWISE NOTED
2. CONTROL JOINTS 5' O.C. UNLESS OTHERWISE NOTED
3. WHERE EXISTING AND NEW CONCRETE MEET, SAWCUT EXISTING WALK AND INSTALL EXPANSION JOINT AND DOWELS AS SHOWN. DRILL EXISTING CONCRETE WALK EDGE TO RECEIVE STEEL DOWELS AT EXPANSION JOINT.

EXPANSION & CONTROL JOINTS FOR SIDEWALK PAVING

N.T.S. 02700-17

WDA, INC.



NOTES:

1. IMPERVIOUS FILL SHALL CONFORM TO MASSDOT M1.08.0 (EXCLUDING PEATS OR OTHER HIGHLY ORGANIC SOILS).
2. 4" CPE TYPE SP DRAIN TO DAY LIGHT THROUGH WALL EVERY 50' AND AT ENDS OF WALL. DRAIN SHALL BE WRAPPED IN FILTER FABRIC SOCK.
3. CRUSHED STONE BASE SHALL BE WELL CONSILIDATED.

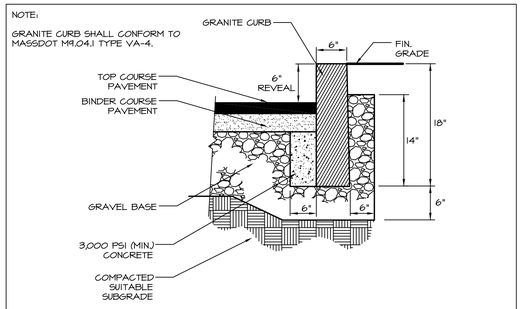
FIELDSTONE RETAINING WALL (SHORT)

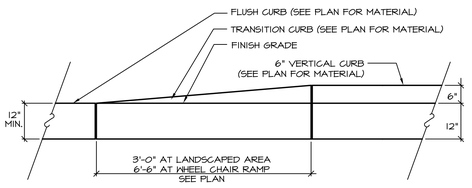
N.T.S. 02800-25

WDA, INC.

NOTE:

GRANITE CURB SHALL CONFORM TO MASSDOT M9.04.1 TYPE VA-4.

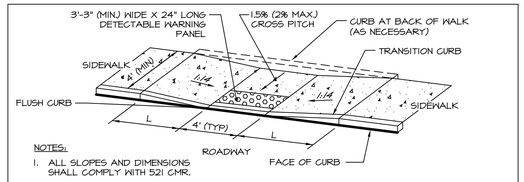




VERTICAL GRANITE CURB (VGC)

N.T.S. 02700-06

WDA, INC.



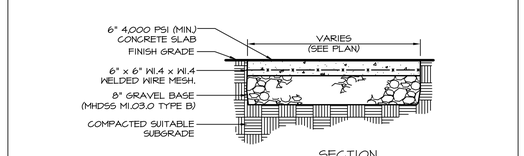
NOTES:

1. ALL SLOPES AND DIMENSIONS SHALL COMPLY WITH 521 CMR.
2. PROVIDE HEAVY BROOM FINISH ON RAMP PERPENDICULAR TO FLOW OF FOOT TRAFFIC.
3. L=7' (MIN) FOR 6" CURB L=9.5' (MIN) FOR 3" BERM

WHEEL CHAIR RAMP, TYPE A (WCR-A)

N.T.S. 02700-24

WDA, INC.

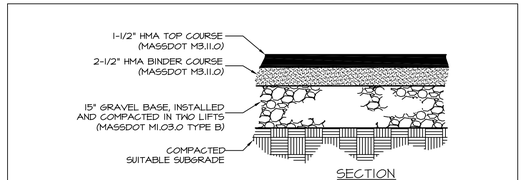


SECTION

DUMPSTER PAD / LOADING AREA

N.T.S.

WDA, INC.

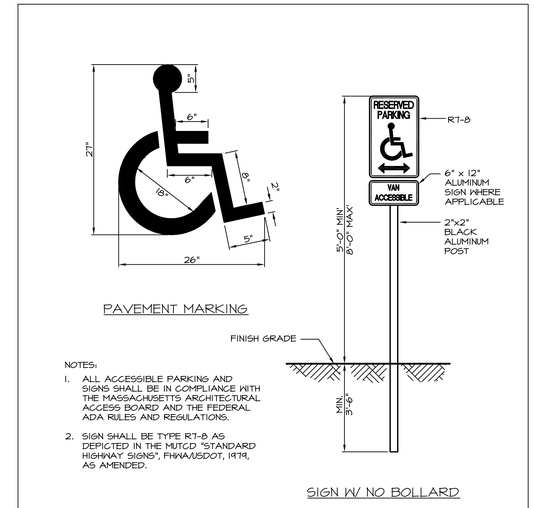


SECTION

BITUMINOUS CONCRETE PAVEMENT

N.T.S. 02700-08

WDA, INC.



PAVEMENT MARKING

NOTES:

1. ALL ACCESSIBLE PARKING AND SIGNS SHALL BE IN COMPLIANCE WITH THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD AND THE FEDERAL ADA RULES AND REGULATIONS.
2. SIGN SHALL BE TYPE R7-8 AS DEPICTED IN THE MUTCD "STANDARD HIGHWAY SIGNS", FHWA/USDOT, 1979, AS AMENDED.

SIGN W/ NO BOLLARD

ACCESSIBLE SIGN AND PAVEMENT MARKING

N.T.S. 02700-20

WDA, INC.

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CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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REV.	DATE	DESCRIPTION	INIT.
E	08/15/16	TOWN COMMENTS	
D	04/06/16	NOTICE OF INTENT	
C	01/26/16	NOT ISSUED	
B	01/06/16	NOT ISSUED	
A	11/04/15	PROGRESS SET	

MASSACHUSETTS LAWRENCE C. GREENE, JR. NO. 4921 REGISTERED LANDSCAPE ARCHITECT 11/15/16

COMMONWEALTH OF MASSACHUSETTS MICHAEL J. ROSSI 37196 REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
508.366.6506 (fax)
watermandesign.com wda@wdassoc.com

OWNER:

PARK CENTRAL LLC

c/o Capital Group Properties
259 Turnpike Road, Suite 100
Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

SITE DETAILS

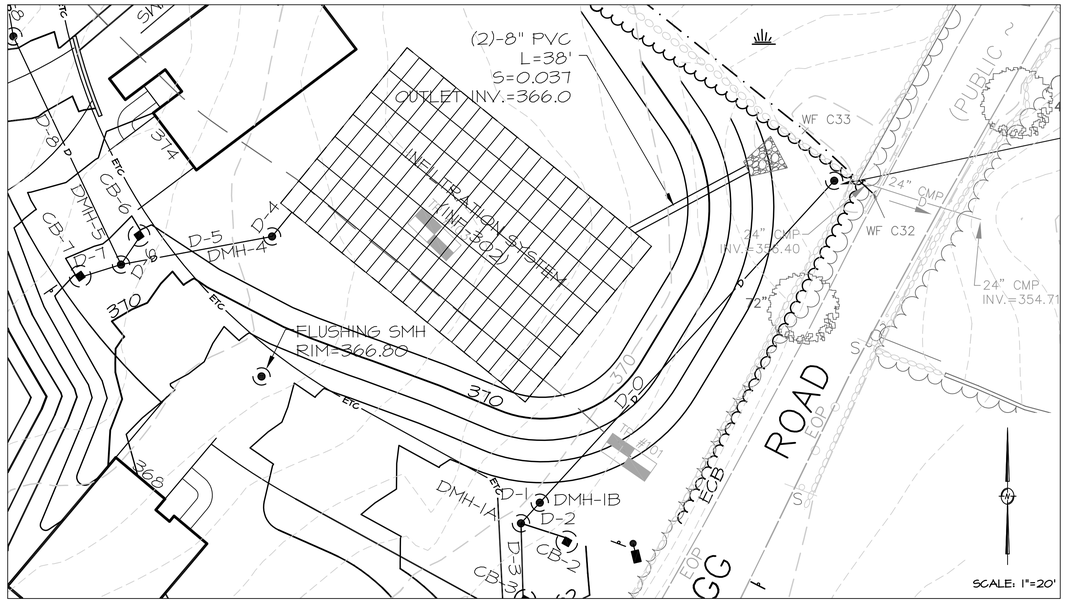
PARK CENTRAL

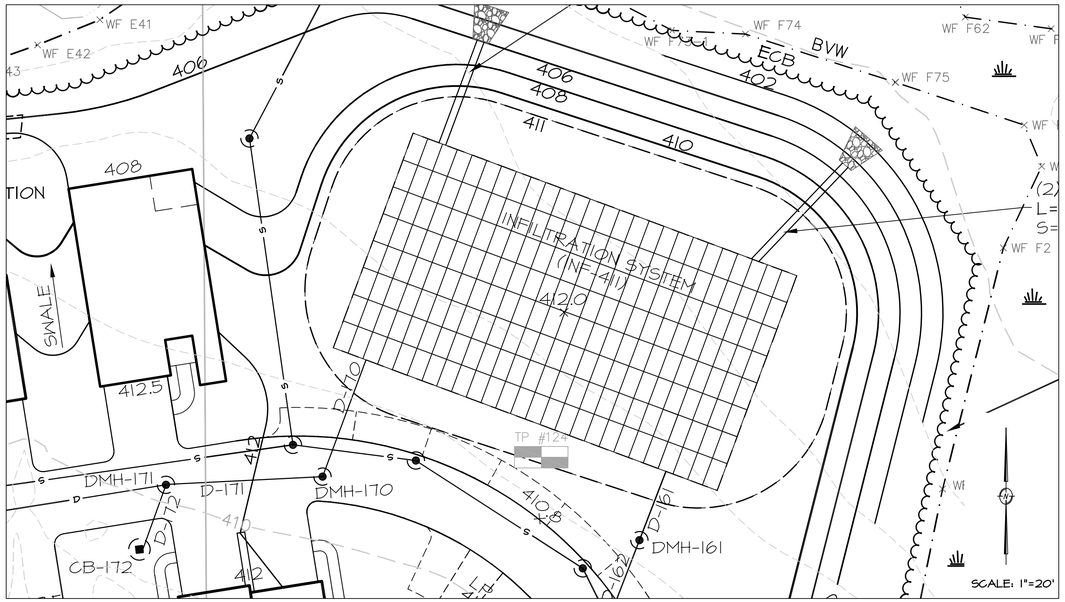
Southborough, MA
Worcester County)

TOWN PERMITTING

0 1 2 3

DATE: 4/06/16	SCALE: AS NOTED
JOB NO.: 0978.00	DWN. BY: _____
FILE NO.: 0978500	CHK'D. BY: _____
DRAWING NO.: 0978507E	SHEET: C6.08





EFFECTIVE LEACHING (SF/L.F)	WEIGHT (LBS.)
6.8	3589

SYSTEM DESIGNATION	BOTTOM ELEV.	2x8" INVERT ELEV.	WIDTH OF STONE	LENGTH OF STONE	# OF UNITS/ROW	# OF ROWS	TOTAL # OF UNITS
INF-302	366.00	367.40	90'	58'	7	20	140

NOTES:
1. CENTER UNIT 64 SF.
2. CONCRETE - 4000 PSI AT 28 DAYS.
3. MUST MEET SPECIFICATIONS CONNECTICUT PRECAST CORP. LOW PROFILE GALLERIES.
4. INSTALLATION IS TO BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

PRE-CAST CONCRETE LOW PROFILE LEACHING GALLIES (4'X 8'X 2')

N.T.S. 02600-10

WDA, INC.

EFFECTIVE LEACHING (SF/L.F)	WEIGHT (LBS.)
8.0	4000

SYSTEM DESIGNATION	BOTTOM ELEV.	INVERT #1 ELEV.	INVERT #1 DIAMETER	INVERT #2 ELEV.	INVERT #2 DIAMETER	WIDTH OF STONE	LENGTH OF STONE	# OF ROWS	# OF UNITS/ROW	TOTAL # OF UNITS
INF-411	405.00	406.40	2x8"	407.50	2x6"	116'	66'	26	8	208

NOTES:
1. CENTER UNIT 64 SF.
2. CONCRETE - 4000 PSI AT 28 DAYS.
3. MUST MEET SPECIFICATIONS CONNECTICUT PRECAST CORP. LOW PROFILE GALLERIES.
4. INSTALLATION IS TO BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

PRE-CAST CONCRETE LOW PROFILE LEACHING GALLIES (4'X 8'X 4')

N.T.S. 02600-10

WDA, INC.

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CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

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COMMONWEALTH OF MASSACHUSETTS
MICHAEL SCOTT CLARK
No. 49806
REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

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Westborough, MA 01581
508.366.6552
508.366.6506 (fax)
watermandesign.com wda@wdassoc.com

OWNER:

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c/o Capital Group Properties
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Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

SITE DETAILS

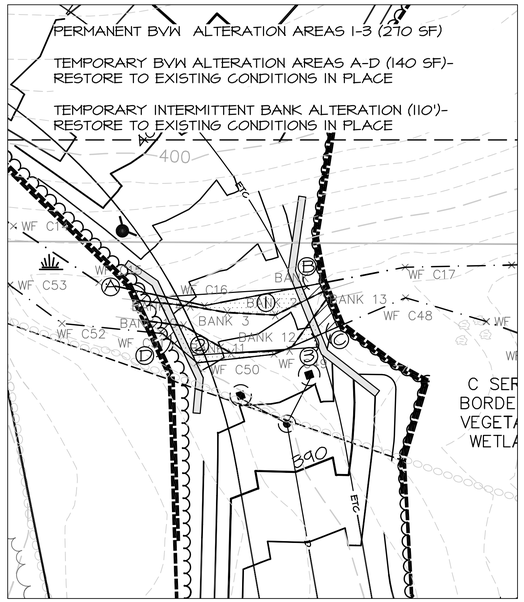
PARK CENTRAL

Southborough, MA
Worcester County)

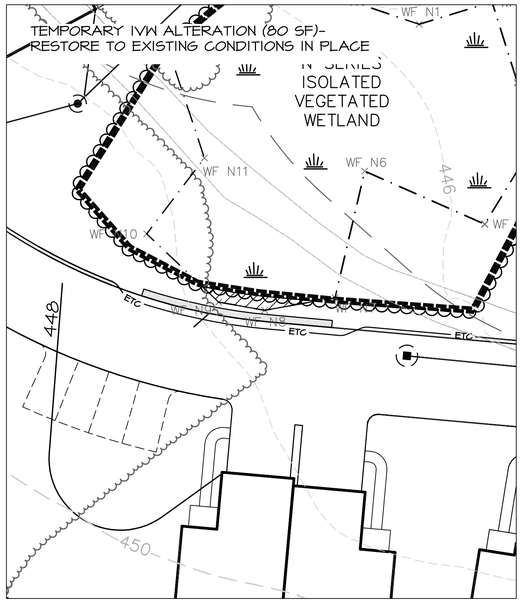
TOWN PERMITTING

0 1 2 3

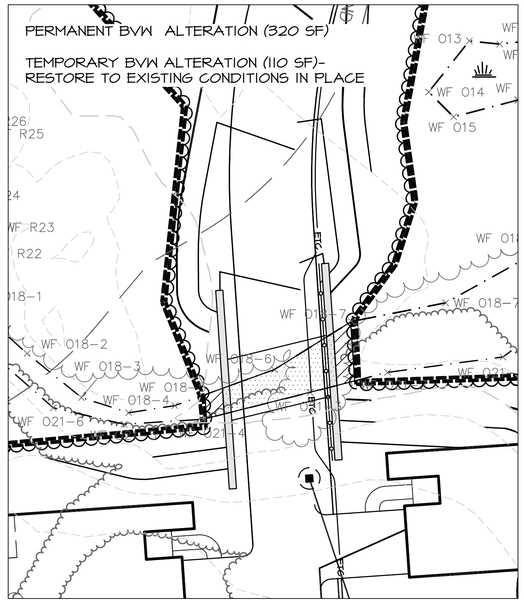
DATE: 4/06/16	SCALE: AS NOTED
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978500	CHK'D. BY:
DRAWING NO.: 0978508E	SHEET: C6.09



JOHN BOLAND ROAD



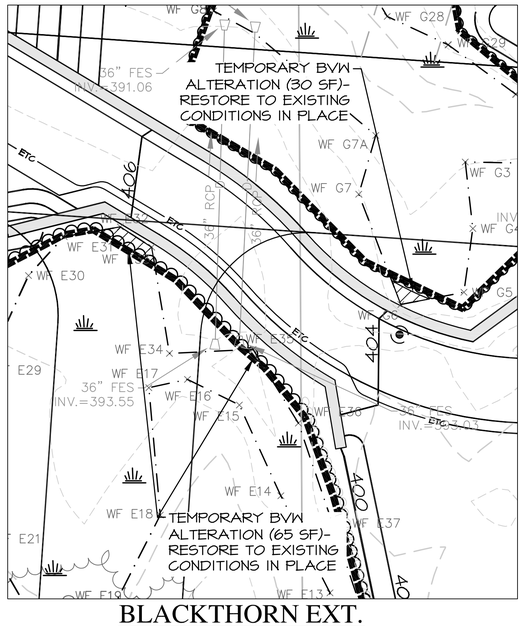
WEBBER CIRCLE



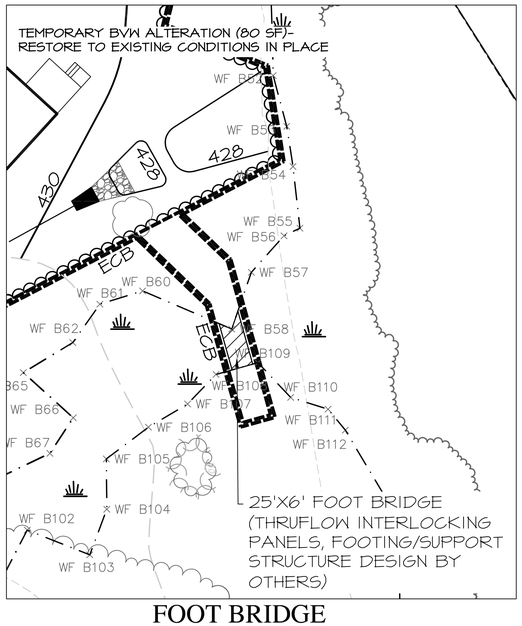
WEBBER CIRCLE

KEY

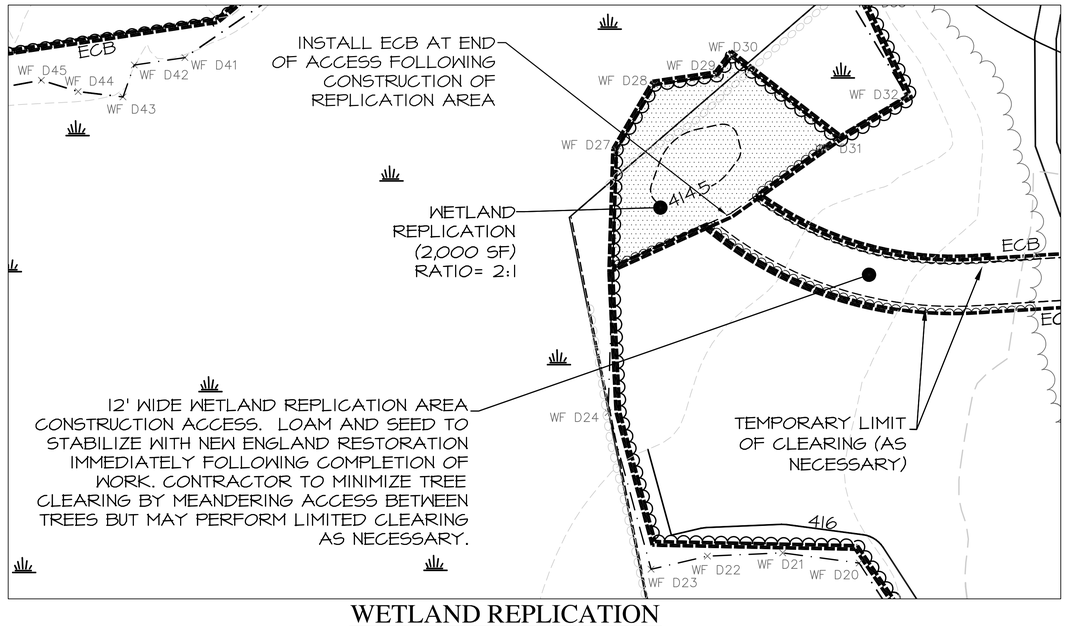
- PERMANENT BVW ALTERATION
- TEMPORARY BVW ALTERATION
- TEMPORARY INTERMITTENT BANK ALTERATION
- WETLAND REPLICATION
- ROW OF ECB'S
- DOUBLE ROW OF ECB'S WITHIN 50' OF A RESOURCE AREA



BLACKTHORN EXT.



FOOT BRIDGE



WETLAND REPLICATION

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION PURPOSES UNTIL ISSUED AS A CONSTRUCTION DRAWING BY WATERMAN DESIGN ASSOCIATES, INC.

BASIS OF BEARINGS: MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

CONDITIONALLY APPROVED
SOUTHBOROUGH ZONING
BOARD OF APPEALS

DATE: _____

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COMMONWEALTH OF MASSACHUSETTS — MICHAEL J. ONORATO — No. 40060 — REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:

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c/o Capital Group Properties
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Southborough, MA 01772

PREPARED FOR:

CAPITAL GROUP PROPERTIES LLC

259 Turnpike Road, Suite 100
Southborough, MA 01772

TITLE:

WETLANDS IMPACT DETAILS

PARK CENTRAL

Southborough, MA
Worcester County)

TOWN PERMITTING

0 20 40 60

DATE: 4/06/16	SCALE: 1"=20'
JOB NO.: 0978.00	DWN. BY:
FILE NO.: 0978500	CHK'D. BY:
DRAWING NO.: 0978509E	SHEET: C6.10