

THE CITY OF WALTHAM
MASSACHUSETTS

PURCHASING DEPARTMENT

Cornelia Warren Park Improvements, 2019

ADDENDUM NO. 4

May 29th, 2019

CHANGES, CORRECTIONS AND CLARIFICATIONS

The attention of bidders submitting proposals for the above subject project is called to the following addendum to the specifications. The items set forth herein, whether of omission, addition, substitution or clarification are all to be included in and form a part of the proposal submitted.

THE NUMBER OF THIS ADDENDUM (NO 4) MUST BE ACKNOWLEDGED ON YOUR FORM FOR GENERAL BID PAGE.

ITEM 1: ANSWERS TO POSED QUESTIONS

- Q16.** There is no way to do a proper earthwork model since there is no elevations on the contour lines for us to create an existing conditions model. Can this be provided.
- A16.** See attached topo plan with contour labels.

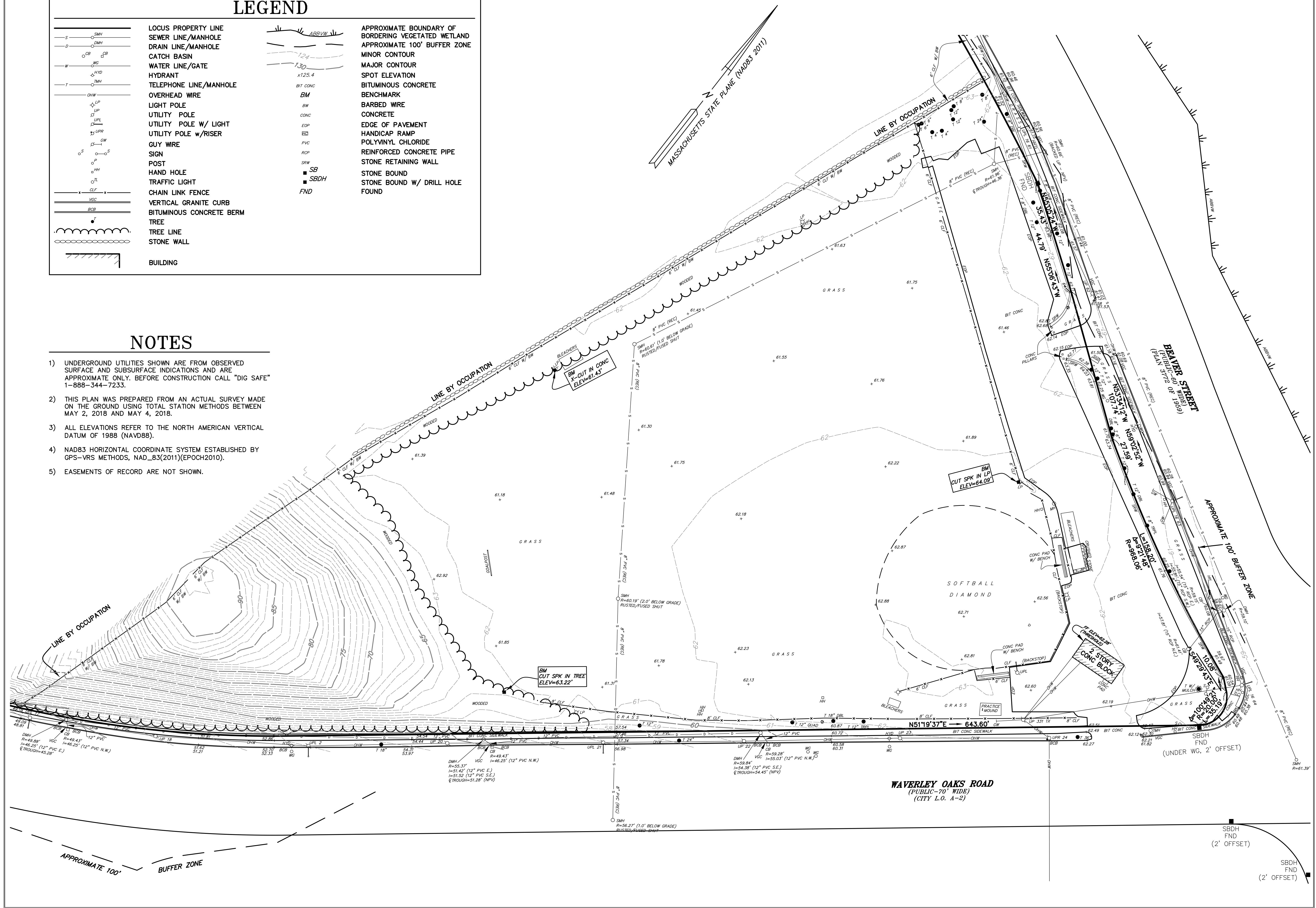
End of Addendum 4

LEGEND

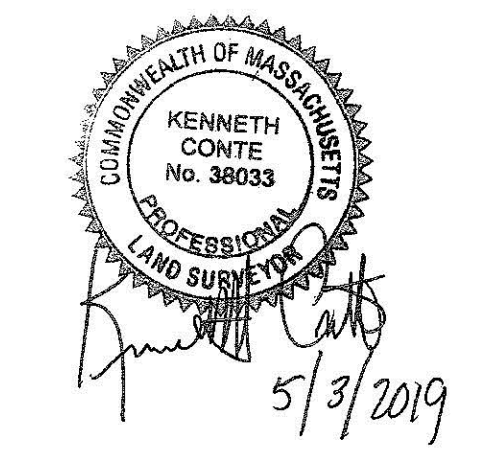
	LOCUS PROPERTY LINE		APPROXIMATE BOUNDARY OF BORDERING VEGETATED WETLAND
	SEWER LINE/MANHOLE		APPROXIMATE 100' BUFFER ZONE
	DRAIN LINE/MANHOLE		MINOR CONTOUR
	CATCH BASIN		MAJOR CONTOUR
	WATER LINE/GATE		SPOT ELEVATION
	HYDRANT		BITUMINOUS CONCRETE
	TELEPHONE LINE/MANHOLE		BENCHMARK
	OVERHEAD WIRE		BARBED WIRE
	LIGHT POLE		CONCRETE
	UTILITY POLE		EDGE OF PAVEMENT
	UTILITY POLE W/ LIGHT		HANDICAP RAMP
	UTILITY POLE W/ RISER		POLYVINYL CHLORIDE
	GUY WIRE		REINFORCED CONCRETE PIPE
	SIGN		STONE RETAINING WALL
	POST		STONE BOUND
	HAND HOLE		STONE BOUND W/ DRILL HOLE
	TRAFFIC LIGHT		FOUND
	CHAIN LINK FENCE		
	VERTICAL GRANITE CURB		
	BITUMINOUS CONCRETE BERM		
	TREE		
	TREE LINE		
	STONE WALL		
	BUILDING		

NOTES

- 1) UNDERGROUND UTILITIES SHOWN ARE FROM OBSERVED SURFACE AND SUBSURFACE INDICATIONS AND ARE APPROXIMATE ONLY. BEFORE CONSTRUCTION CALL "DIG SAFE" 1-888-344-7233.
- 2) THIS PLAN WAS PREPARED FROM AN ACTUAL SURVEY MADE ON THE GROUND USING TOTAL STATION METHODS BETWEEN MAY 2, 2018 AND MAY 4, 2018.
- 3) ALL ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- 4) NAD83 HORIZONTAL COORDINATE SYSTEM ESTABLISHED BY GPS-VRS METHODS, NAD_83(2011)(EPOCH2010).
- 5) EASEMENTS OF RECORD ARE NOT SHOWN.



5			
4			
3			
2			
1	05/03/2019	ISSUED FOR BIDDING	
0	05/15/2018	INITIAL ISSUE	
	ISSUE DATE	DESCRIPTION	
TGS/JAN	JAN	JAN	KCC
FLD	CALC	DWN	CHK'D



TOPOGRAPHIC PLAN

CORNELIA WARREN FIELD
WALTHAM, MA
 (MIDDLESEX COUNTY)

PREPARED BY:
BEALS + THOMAS
 Civil Engineers + Landscape Architects +
 Land Surveyors + Planners +
 Environmental Specialists

BEALS AND THOMAS, INC.
 Reservoir Corporate Center
 144 Turnpike Road
 Southborough, Massachusetts 01772-2104
 T 508.366.0560 | www.bealsandthomas.com

DATE: MAY 15, 2018
 SCALE: 1" = 30'
 METERS
 FEET

B+T JOB NO. 2992.00
 B+T PLAN NO. 299200P002B-001
 SHEET No. 1 OF 1

TP-1

CORNELIA WARREN PARK

IN

WALTHAM, MASSACHUSETTS

(Middlesex County)

OWNER

City of Waltham
610 Main Street
Waltham, Massachusetts 02452

CIVIL ENGINEER/SURVEYOR AND LANDSCAPE ARCHITECT

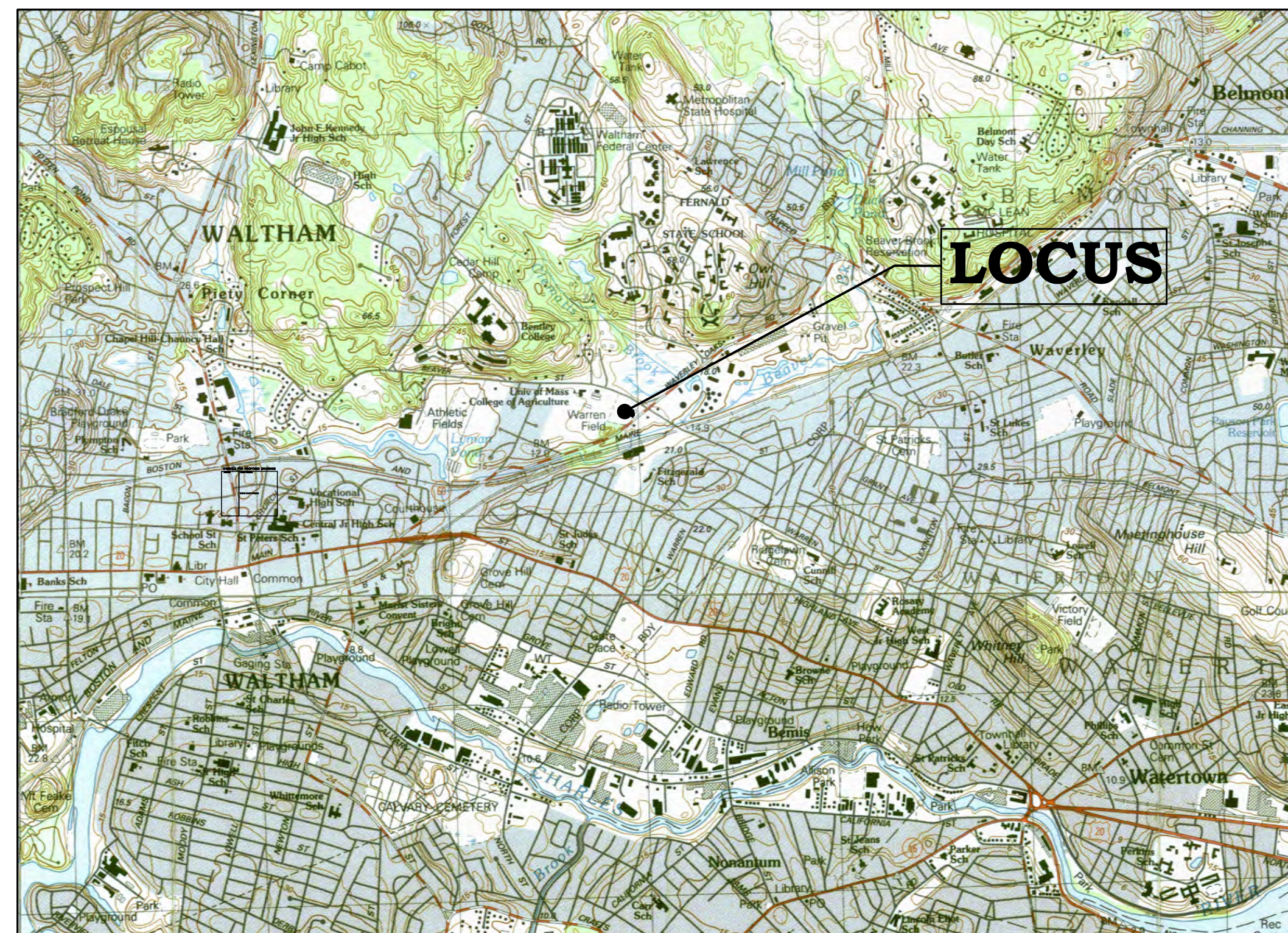
Beals and Thomas, Inc.
Reservoir Corporate Center
144 Turnpike Road
Southborough, Massachusetts 01772

ELECTRICAL ENGINEER

American Electrical Testing Co., LLC
25 Forbes Boulevard, Suite #1
Foxboro, Massachusetts 02035

IRRIGATION CONSULTANT

Aqueous Consultants, LLC
2 Dundee Park Drive Suite 301B
Andover, Massachusetts 01810



Locus Map
Scale: 1" = 2000'



Issued for Bidding - May 3, 2019
Addendum 2 - May 24, 2019
Addendum 3 - May 28, 2019

SHEET INDEX

	Cover Sheet
TP-1	Topographic Plan
C1.1	Notes, References and Legend Sheet
C2.1	Site Preparation Plan
C3.1	Layout and Materials Plan
C3.2	Layout and Materials Enlargement Plan
C3.3	Playground and Fitness Detail Plan
C4.1	Grading, Drainage and Utilities Plan
C5.1	Site Details #1
C5.2	Site Details #2
C5.3	Site Details #3
C5.4	Site Details #4
E-1	Electrical Layout
E-2	One-Line and Schedules
E-3	Electrical Details
IR-1.0	Irrigation Layout Plan
IR-2.0	Irrigation Details
IR-3.0	Irrigation Water Supply

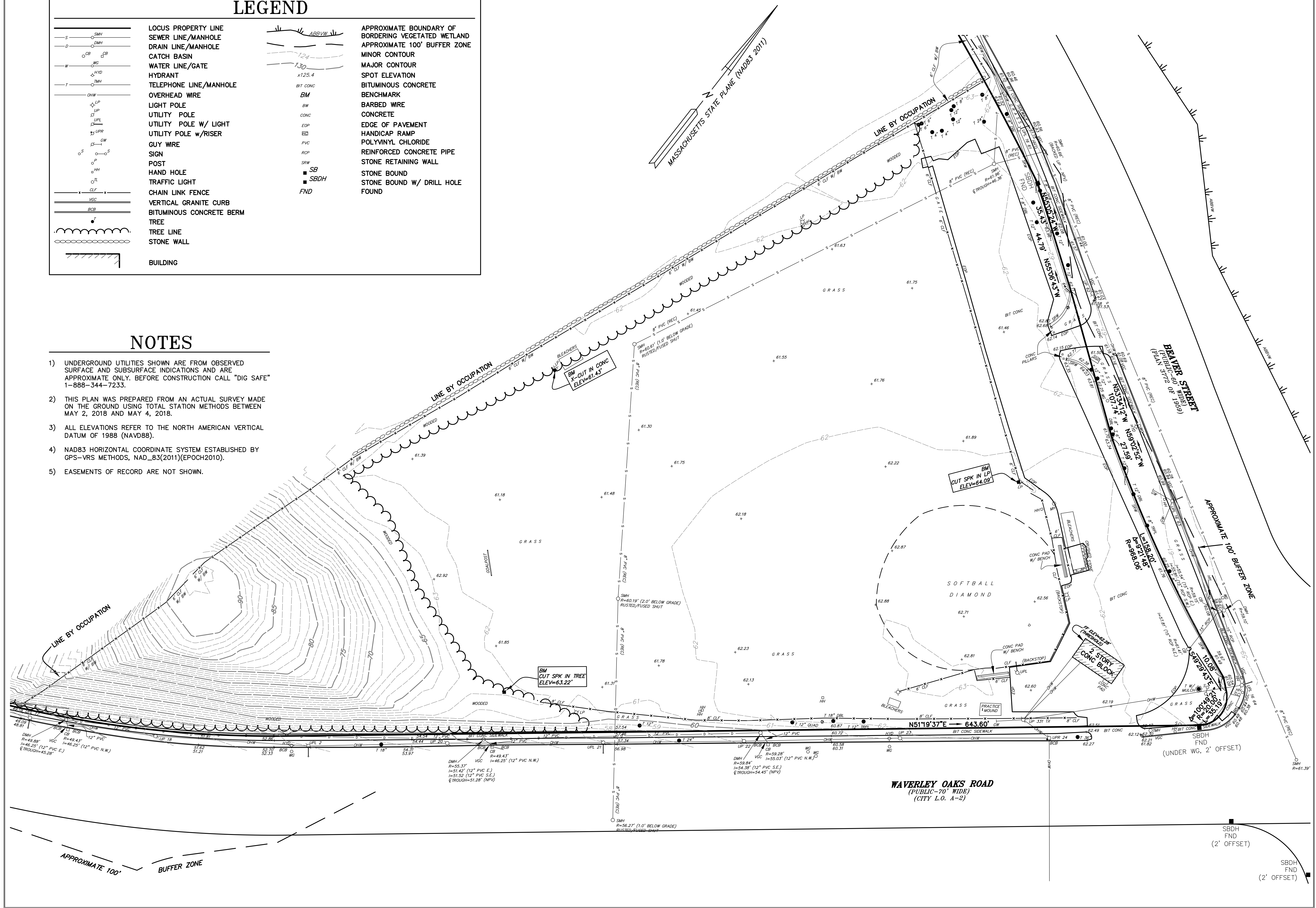
Job No.: 2992.00
Plan No.: 299200P010C-001
Sheet 1 of 18

LEGEND

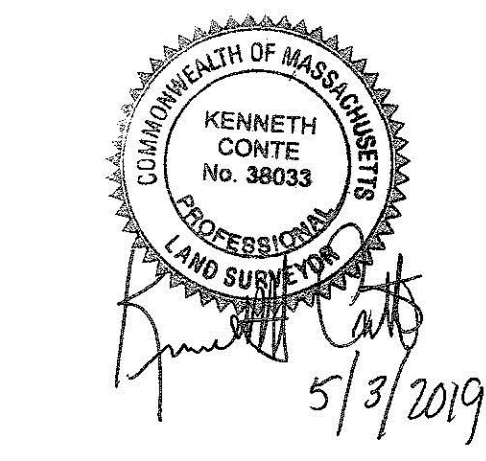
	LOCUS PROPERTY LINE		APPROXIMATE BOUNDARY OF BORDERING VEGETATED WETLAND
	SEWER LINE/MANHOLE		APPROXIMATE 100' BUFFER ZONE
	DRAIN LINE/MANHOLE		MINOR CONTOUR
	CATCH BASIN		MAJOR CONTOUR
	WATER LINE/GATE		SPOT ELEVATION
	HYDRANT		BITUMINOUS CONCRETE
	TELEPHONE LINE/MANHOLE		BENCHMARK
	OVERHEAD WIRE		BARBED WIRE
	LIGHT POLE		CONCRETE
	UTILITY POLE		EDGE OF PAVEMENT
	UTILITY POLE W/ LIGHT		HANDICAP RAMP
	UTILITY POLE W/ RISER		POLYVINYL CHLORIDE
	GUY WIRE		REINFORCED CONCRETE PIPE
	SIGN		STONE RETAINING WALL
	POST		STONE BOUND
	HAND HOLE		STONE BOUND W/ DRILL HOLE
	TRAFFIC LIGHT		FOUND
	CHAIN LINK FENCE		
	VERTICAL GRANITE CURB		
	BITUMINOUS CONCRETE BERM		
	TREE		
	TREE LINE		
	STONE WALL		
	BUILDING		

NOTES

- 1) UNDERGROUND UTILITIES SHOWN ARE FROM OBSERVED SURFACE AND SUBSURFACE INDICATIONS AND ARE APPROXIMATE ONLY. BEFORE CONSTRUCTION CALL "DIG SAFE" 1-888-344-7233.
- 2) THIS PLAN WAS PREPARED FROM AN ACTUAL SURVEY MADE ON THE GROUND USING TOTAL STATION METHODS BETWEEN MAY 2, 2018 AND MAY 4, 2018.
- 3) ALL ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- 4) NAD83 HORIZONTAL COORDINATE SYSTEM ESTABLISHED BY GPS-VRS METHODS, NAD_83(2011)(EPOCH2010).
- 5) EASEMENTS OF RECORD ARE NOT SHOWN.



5			
4			
3			
2			
1	05/03/2019	ISSUED FOR BIDDING	
0	05/15/2018	INITIAL ISSUE	
	ISSUE DATE	DESCRIPTION	
TGS/JAN	JAN	JAN	KCC
FLD	CALC	DWN	CHK'D



TOPOGRAPHIC PLAN

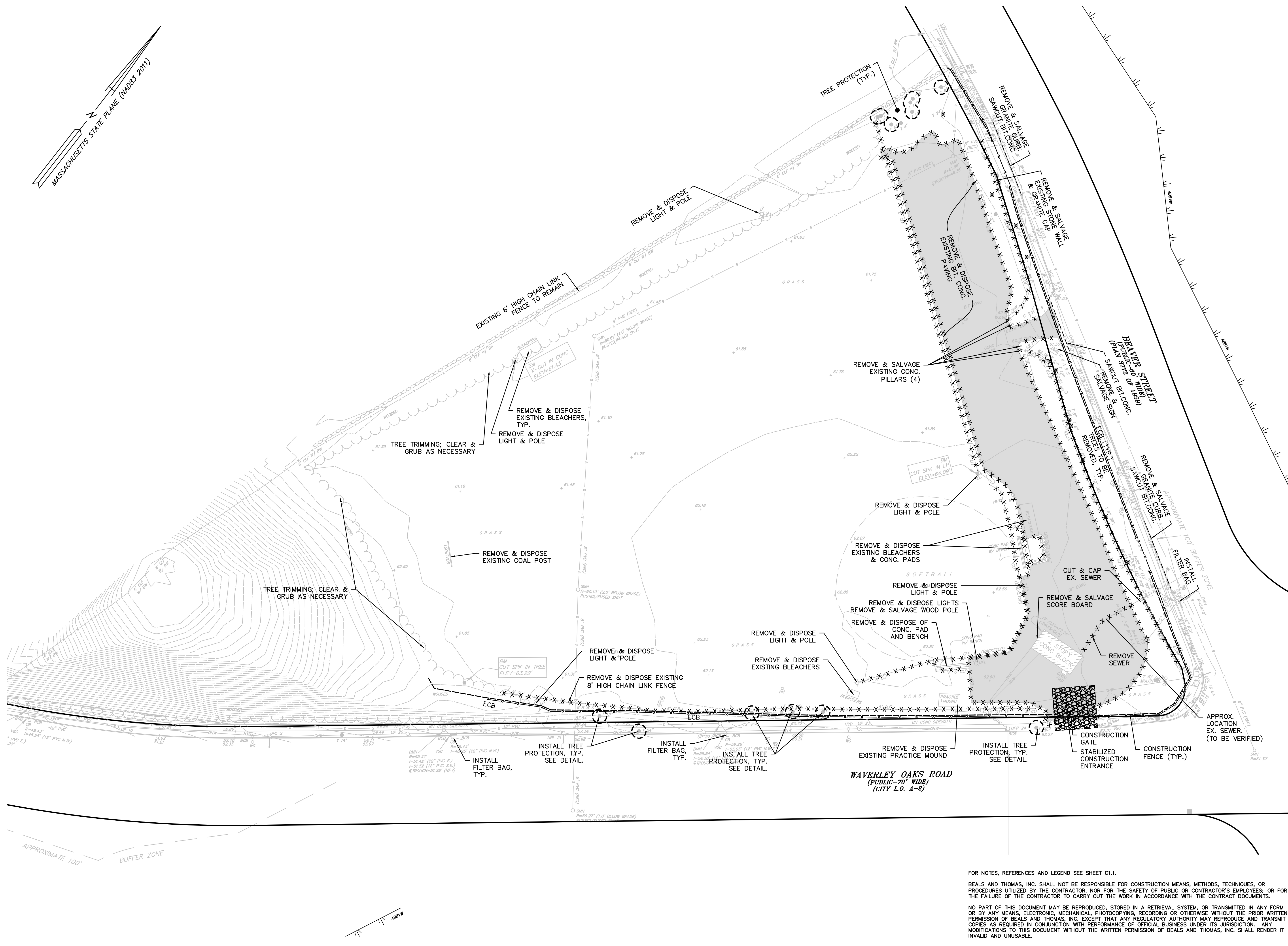
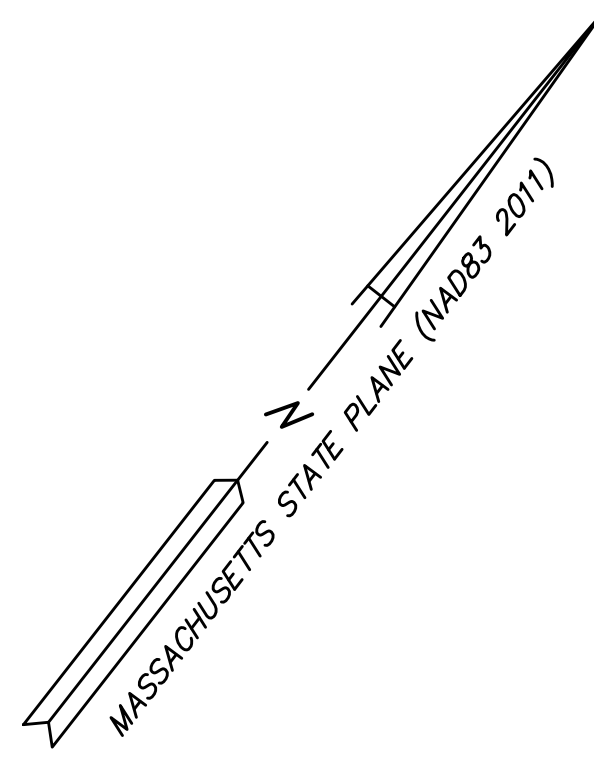
CORNELIA WARREN FIELD
WALTHAM, MA
 (MIDDLESEX COUNTY)

PREPARED BY:
BEALS + THOMAS
 Civil Engineers + Landscape Architects +
 Land Surveyors + Planners +
 Environmental Specialists

BEALS AND THOMAS, INC.
 Reservoir Corporate Center
 144 Turnpike Road
 Southborough, Massachusetts 01772-2104
 T 508.366.0560 | www.bealsandthomas.com
 DATE: MAY 15, 2018
 SCALE: 1" = 30'

B+T JOB NO. 2992.00
 B+T PLAN NO. 299200P02B-001
 SHEET No. 1 OF 1

TP-1



PREPARED FOR:

CITY OF WALTHAM
610 MAIN STREET
WALTHAM, MASSACHUSETTS

RECORD OWNER:

CITY OF WALTHAM
4600/39
054-004-0005



COPYRIGHT (C) BY BEALS AND THOMAS, INC.
ALL RIGHTS RESERVED

PREPARED BY:



BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, Massachusetts 01772-2104
T 508.366.0560 | www.bealsandthomas.com

5		
4		
3		
2		
1	05/28/2019	ADDENDUM 3
0	05/03/2019	ISSUED FOR BIDDING
	ISSUE DATE	DESCRIPTION
DES	DWN	CHK'D APP'D

PROJECT:
CORNELIA WARREN PARK
WALTHAM, MASSACHUSETTS

SCALE: 1" = 30' DATE: MAY 3, 2019
METERS
0 5 10 25 30
FEET

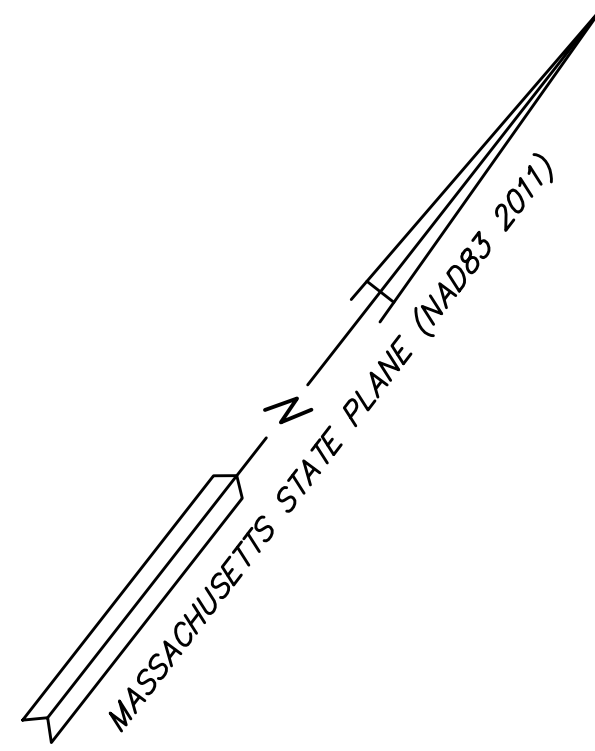
SITE PREPARATION PLAN

B+T JOB NO:2992.00

B+T PLAN NO.
299200P009B-001

C2.1

FOR NOTES, REFERENCES AND LEGEND SEE SHEET C1.1.
BEALS AND THOMAS, INC. SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPIING, RECORDING OR OTHERWISE WITHOUT THE PRIOR WRITTEN PERMISSION OF BEALS AND THOMAS, INC. EXCEPT THAT ANY REGULATORY AUTHORITY MAY REPRODUCE AND TRANSMIT COPIES AS REQUIRED IN CONJUNCTION WITH PERFORMANCE OF OFFICIAL BUSINESS UNDER ITS JURISDICTION. ANY MODIFICATIONS TO THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF BEALS AND THOMAS, INC. SHALL RENDER IT INVALID AND UNUSABLE.



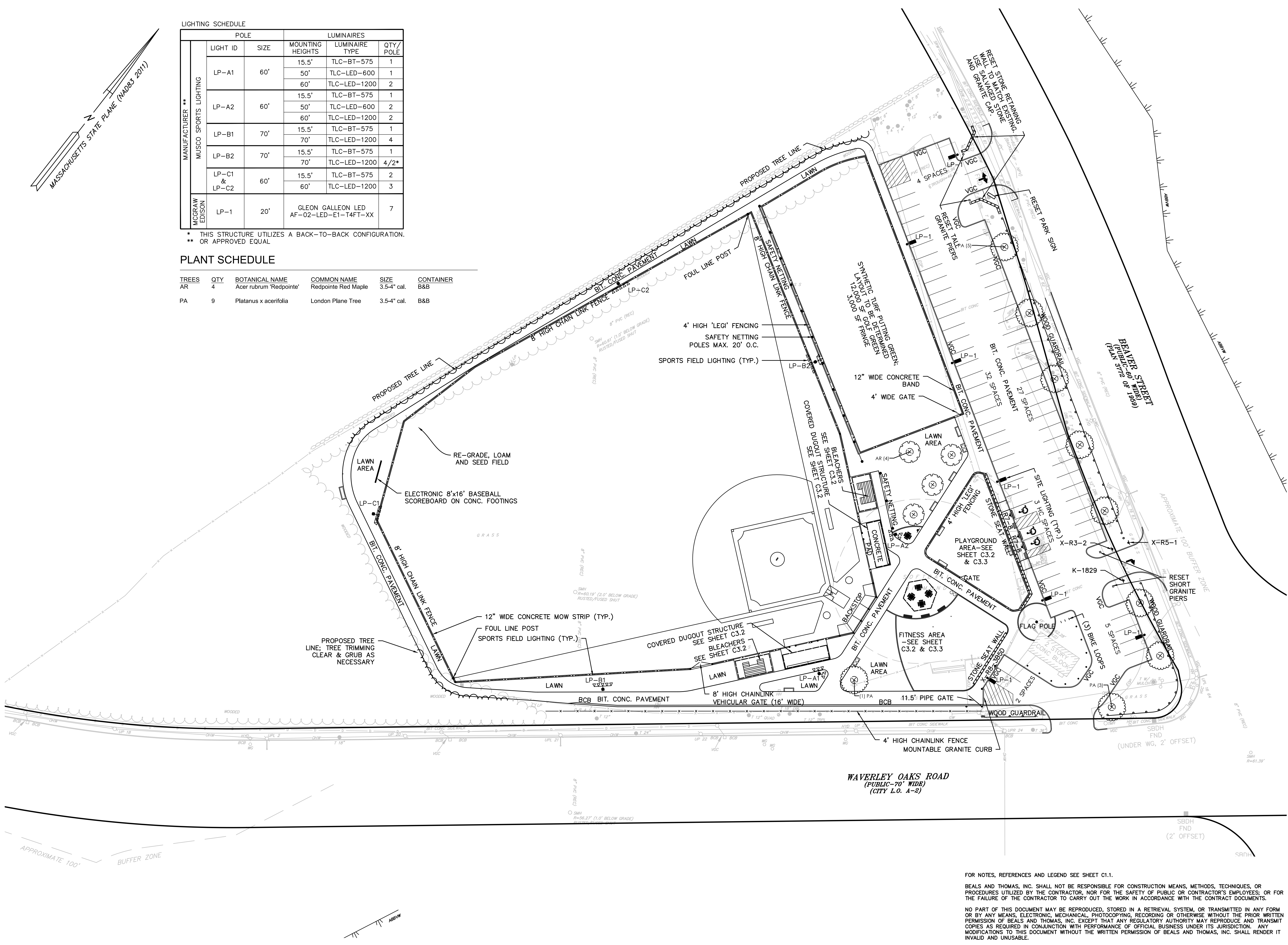
LIGHTING SCHEDULE

MANUFACTURER	POLE		LUMINAIRE		
	LIGHT ID	SIZE	MOUNTING HEIGHTS	LUMINAIRE TYPE	QTY/POLE
MUSCO SPORTS LIGHTING	LP-A1	60'	15.5'	TLC-BT-575	1
			50'	TLC-LED-600	1
			60'	TLC-LED-1200	2
	LP-A2	60'	15.5'	TLC-BT-575	1
			50'	TLC-LED-600	2
			60'	TLC-LED-1200	2
LP-B1	70'	15.5'	TLC-BT-575	1	
		70'	TLC-LED-1200	4	
LP-B2	70'	15.5'	TLC-BT-575	1	
		70'	TLC-LED-1200	4/2*	
LP-C1 & LP-C2	60'	15.5'	TLC-BT-575	2	
		60'	TLC-LED-1200	3	
MCSBRAW EDISON	LP-1	20'	GLEON GALLEON LED AF-02-LED-E1-T4FT-XX		7

* THIS STRUCTURE UTILIZES A BACK-TO-BACK CONFIGURATION.
 ** OR APPROVED EQUAL

PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
AR	4	Acer rubrum 'Redpointe'	Redpointe Red Maple	3.5-4" cal.	B&B
PA	9	Platanus x acerifolia	London Plane Tree	3.5-4" cal.	B&B



PREPARED FOR:
CITY OF WALTHAM
 610 MAIN STREET
 WALTHAM, MASSACHUSETTS

RECORD OWNER:
CITY OF WALTHAM
 4600/39
 054-004-0005

COPYRIGHT (C) BY BEALS AND THOMAS, INC. ALL RIGHTS RESERVED

PREPARED BY:
BEALS + THOMAS
 Civil Engineers + Landscape Architects +
 Land Surveyors + Planners +
 Environmental Specialists

BEALS AND THOMAS, INC.
 Reservoir Corporate Center
 144 Turnpike Road
 Southborough, Massachusetts 01772-2104
 T 508.366.0560 | www.bealsandthomas.com

5			
4			
3			
2			
1	05/28/2019 ADDENDUM 3		
0	05/03/2019 ISSUED FOR BIDDING		
ISSUE DATE	DESCRIPTION		
DES	DWN	CHK'D	APP'D

PROJECT:
CORNELIA WARREN PARK
 WALTHAM,
 MASSACHUSETTS

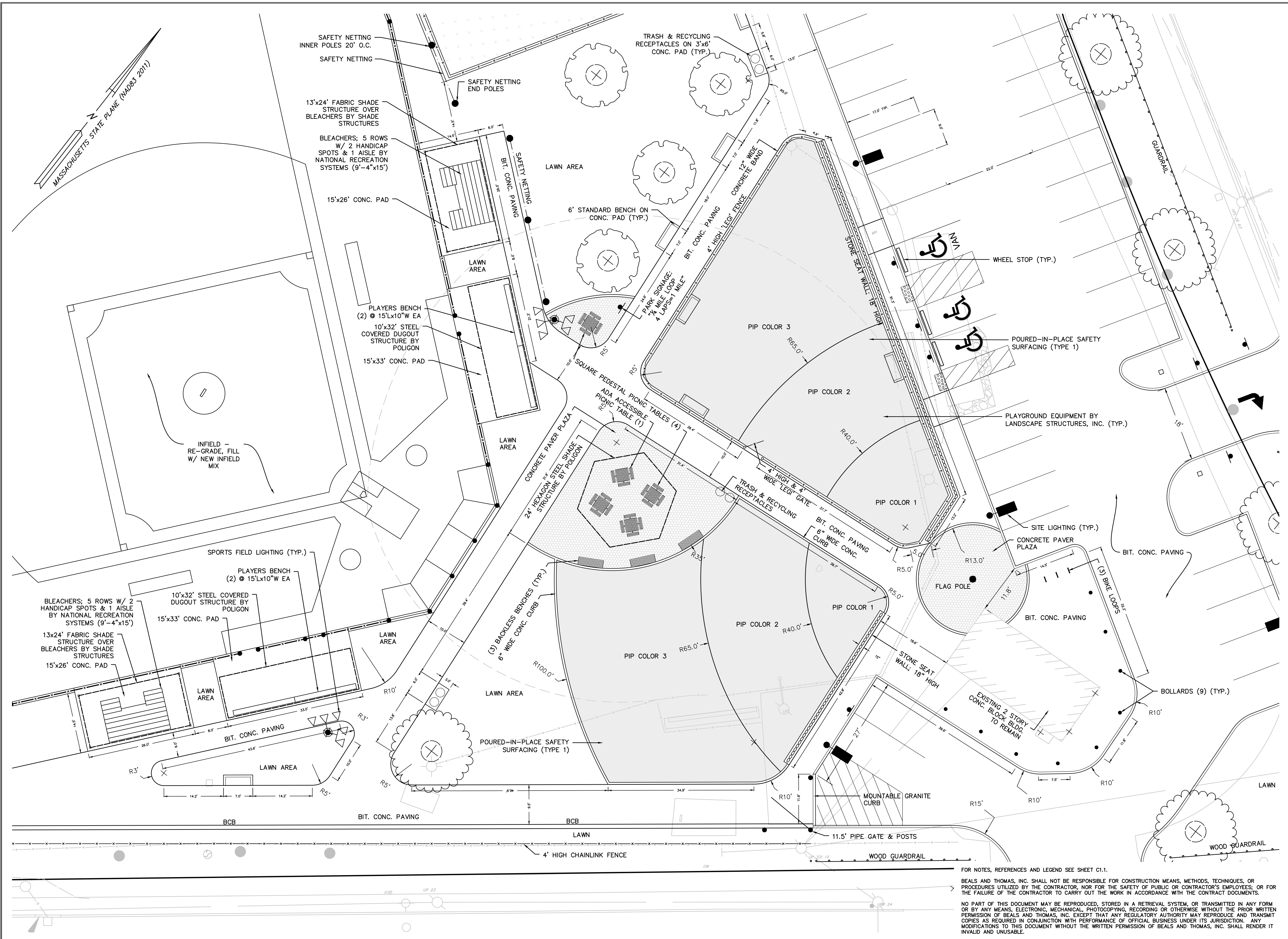
SCALE: 1" = 30' DATE: MAY 3, 2019

LAYOUT AND MATERIALS PLAN

B+T JOB NO.2992.00
 B+T PLAN NO.
 299200P09B-002

C3.1

FOR NOTES, REFERENCES AND LEGEND SEE SHEET C1.1.
 BEALS AND THOMAS, INC. SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE WITHOUT THE PRIOR WRITTEN PERMISSION OF BEALS AND THOMAS, INC. EXCEPT THAT ANY REGULATORY AUTHORITY MAY REPRODUCE AND TRANSMIT COPIES AS REQUIRED IN CONJUNCTION WITH PERFORMANCE OF OFFICIAL BUSINESS UNDER ITS JURISDICTION. ANY MODIFICATIONS TO THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF BEALS AND THOMAS, INC. SHALL RENDER IT INVALID AND UNUSABLE.



PREPARED FOR:
CITY OF WALTHAM
 610 MAIN STREET
 WALTHAM, MASSACHUSETTS

RECORD OWNER:
CITY OF WALTHAM
 4600/39
 054-004-0005

MASSACHUSETTS LANDSCAPE ARCHITECTS & PLANNERS
 REG. E. MARRIOTT
 NO. 1358
 REGINA MARROTT
 5/20/2019

COPYRIGHT (C) BY BEALS AND THOMAS, INC.
 ALL RIGHTS RESERVED

PREPARED BY:
BEALS + THOMAS
 Civil Engineers + Landscape Architects +
 Land Surveyors + Planners +
 Environmental Specialists

BEALS AND THOMAS, INC.
 Reservoir Corporate Center
 144 Turnpike Road
 Southborough, Massachusetts 01772-2104
 T 508.366.0560 | www.bealsandthomas.com

5			
4			
3			
2			
1	05/28/2019 ADDENDUM 3 - FOR DATE ONLY		
0	05/03/2015 ISSUED FOR BIDDING		
ISSUE DATE	DESCRIPTION		
DES	DWN	CHK'D	APP'D

PROJECT:
CORNELIA WARREN PARK
 WALTHAM,
 MASSACHUSETTS

SCALE: 1" = 10' DATE: MAY 3, 2019

METERS
 0 2.5 5 7.5
 FEET
 0 5 10 20 30

LAYOUT AND MATERIALS ENLARGEMENT PLAN

B+T JOB NO.2992.00

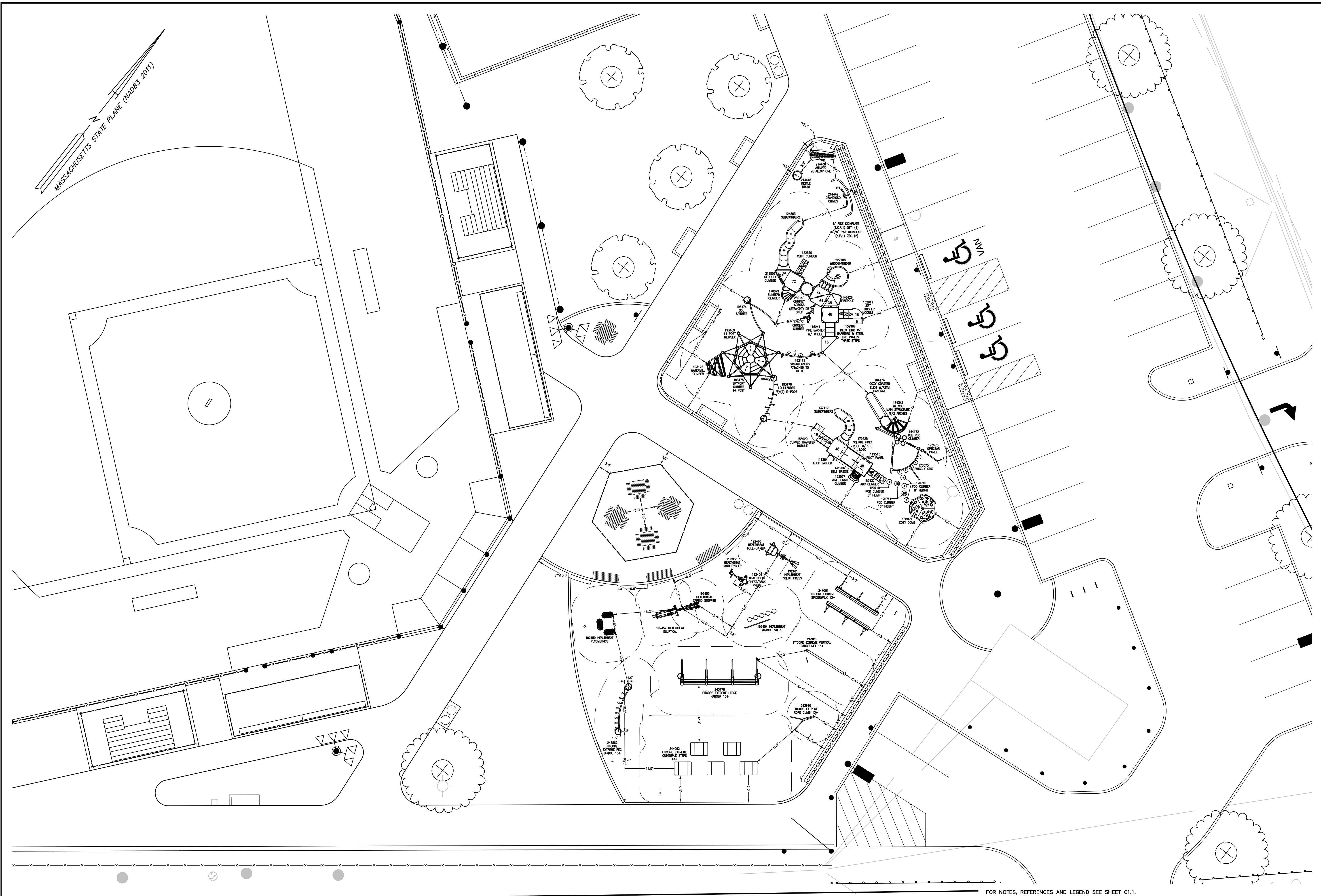
B+T PLAN NO.
 299200P009B-003

C3.2

FOR NOTES, REFERENCES AND LEGEND SEE SHEET C1.1.

BEALS AND THOMAS, INC. SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE WITHOUT THE PRIOR WRITTEN PERMISSION OF BEALS AND THOMAS, INC. EXCEPT THAT ANY REGULATORY AUTHORITY MAY REPRODUCE AND TRANSMIT COPIES AS REQUIRED IN CONJUNCTION WITH PERFORMANCE OF OFFICIAL BUSINESS UNDER ITS JURISDICTION. ANY MODIFICATIONS TO THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF BEALS AND THOMAS, INC. SHALL RENDER IT INVALID AND UNUSABLE.



PREPARED FOR:
CITY OF WALTHAM
 610 MAIN STREET
 WALTHAM, MASSACHUSETTS

RECORD OWNER:
CITY OF WALTHAM
 4600/39
 054-004-0005

COPYRIGHT (C) BY BEALS AND THOMAS, INC.
 ALL RIGHTS RESERVED

PREPARED BY:
BEALS + THOMAS
 Civil Engineers + Landscape Architects +
 Land Surveyors + Planners +
 Environmental Specialists

BEALS AND THOMAS, INC.
 Reservoir Corporate Center
 144 Turnpike Road
 Southborough, Massachusetts 01772-2104
 T 508.366.0560 | www.bealsandthomas.com

5			
4			
3			
2			
1	05/28/2019 ADDENDUM 3 - FOR DATE ONLY		
0	05/03/2015 ISSUED FOR BIDDING		
ISSUE DATE	DESCRIPTION		
DES	DWN	CHK'D	APP'D

PROJECT:
CORNELIA WARREN PARK
 WALTHAM,
 MASSACHUSETTS

SCALE: 1" = 10' DATE: MAY 3, 2019

PLAYGROUND AND FITNESS DETAIL PLAN

B+T JOB NO.2992.00

B+T PLAN NO. 299200P009B-004

C3.3

FOR NOTES, REFERENCES AND LEGEND SEE SHEET C1.1.

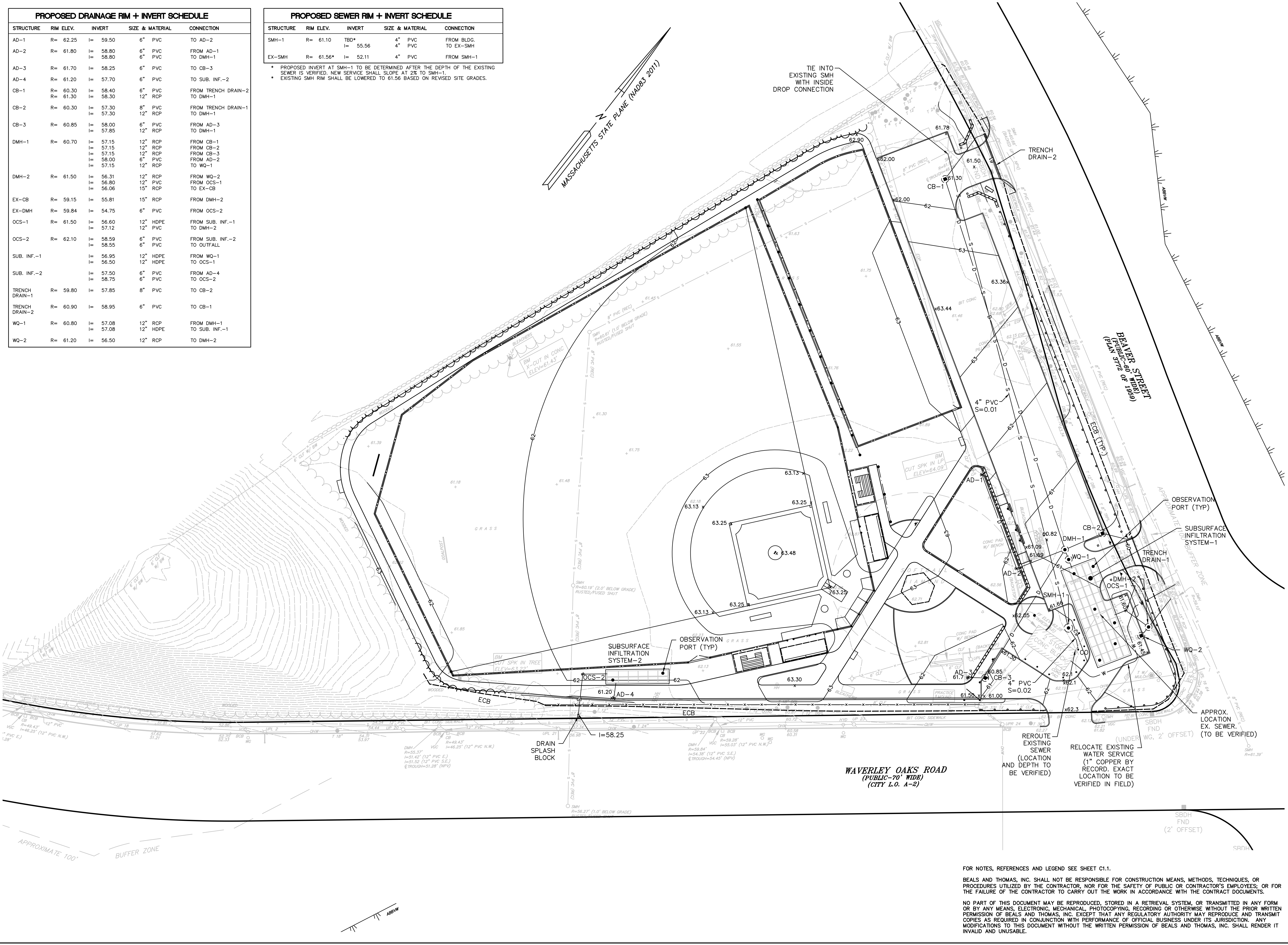
BEALS AND THOMAS, INC. SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE WITHOUT THE PRIOR WRITTEN PERMISSION OF BEALS AND THOMAS, INC. EXCEPT THAT ANY REGULATORY AUTHORITY MAY REPRODUCE AND TRANSMIT COPIES AS REQUIRED IN CONJUNCTION WITH PERFORMANCE OF OFFICIAL BUSINESS UNDER ITS JURISDICTION. ANY MODIFICATIONS TO THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF BEALS AND THOMAS, INC. SHALL RENDER IT INVALID AND UNUSABLE.

PROPOSED DRAINAGE RIM + INVERT SCHEDULE				
STRUCTURE	RIM ELEV.	INVERT	SIZE & MATERIAL	CONNECTION
AD-1	R= 62.25	I= 59.50	6" PVC	TO AD-2
AD-2	R= 61.80	I= 58.80	6" PVC	FROM AD-1
AD-3	R= 61.70	I= 58.25	6" PVC	TO CB-3
AD-4	R= 61.20	I= 57.70	6" PVC	TO SUB. INF.-2
CB-1	R= 60.30	I= 58.40	6" PVC	FROM TRENCH DRAIN-2
CB-2	R= 61.30	I= 58.30	12" RCP	TO DMH-1
CB-3	R= 60.30	I= 57.30	8" PVC	FROM TRENCH DRAIN-1
CB-3	R= 60.30	I= 57.30	12" RCP	TO DMH-1
CB-3	R= 60.85	I= 58.00	6" PVC	FROM AD-3
CB-3	R= 60.85	I= 57.85	12" RCP	TO DMH-1
DMH-1	R= 60.70	I= 57.15	12" RCP	FROM CB-1
DMH-1	R= 60.70	I= 57.15	12" RCP	FROM CB-2
DMH-1	R= 60.70	I= 57.15	12" RCP	FROM CB-3
DMH-1	R= 60.70	I= 58.00	6" PVC	FROM AD-2
DMH-1	R= 60.70	I= 57.15	12" RCP	TO WQ-1
DMH-2	R= 61.50	I= 56.31	12" RCP	FROM WQ-2
DMH-2	R= 61.50	I= 56.80	12" PVC	FROM OCS-1
DMH-2	R= 61.50	I= 56.06	15" RCP	TO EX-CB
EX-CB	R= 59.15	I= 55.81	15" RCP	FROM DMH-2
EX-DMH	R= 59.84	I= 54.75	6" PVC	FROM OCS-2
OCS-1	R= 61.50	I= 56.60	12" HDPE	FROM SUB. INF.-1
OCS-1	R= 61.50	I= 57.12	12" PVC	TO DMH-2
OCS-2	R= 62.10	I= 58.59	6" PVC	FROM SUB. INF.-2
OCS-2	R= 62.10	I= 58.55	6" PVC	TO OUTFALL
SUB. INF.-1	I= 56.95	I= 56.50	12" HDPE	FROM WQ-1
SUB. INF.-1	I= 56.95	I= 56.50	12" HDPE	TO OCS-1
SUB. INF.-2	I= 57.50	I= 58.75	6" PVC	FROM AD-4
SUB. INF.-2	I= 57.50	I= 58.75	6" PVC	TO OCS-2
TRENCH DRAIN-1	R= 59.80	I= 57.85	8" PVC	TO CB-2
TRENCH DRAIN-2	R= 60.90	I= 58.95	6" PVC	TO CB-1
WQ-1	R= 60.80	I= 57.08	12" RCP	FROM DMH-1
WQ-1	R= 60.80	I= 57.08	12" HDPE	TO SUB. INF.-1
WQ-2	R= 61.20	I= 56.50	12" RCP	TO DMH-2

PROPOSED SEWER RIM + INVERT SCHEDULE				
STRUCTURE	RIM ELEV.	INVERT	SIZE & MATERIAL	CONNECTION
SMH-1	R= 61.10	TBD*	4" PVC	FROM BLDG.
SMH-1	R= 61.10	I= 55.56	4" PVC	TO EX-SMH
EX-SMH	R= 61.56*	I= 52.11	4" PVC	FROM SMH-1

* PROPOSED INVERT AT SMH-1 TO BE DETERMINED AFTER THE DEPTH OF THE EXISTING SEWER IS VERIFIED. NEW SERVICE SHALL SLOPE AT 2% TO SMH-1.
* EXISTING SMH RIM SHALL BE LOWERED TO 61.56 BASED ON REVISED SITE GRADES.



PREPARED FOR:
CITY OF WALTHAM
610 MAIN STREET
WALTHAM, MASSACHUSETTS

RECORD OWNER:
CITY OF WALTHAM
4600/39
054-004-0005

Professional Engineer Seal for Jeffrey R. Murphy, No. 51800, Registered Professional Engineer, dated 5/28/2019.

Professional Engineer Seal for Regene Harold, No. 1596, Registered Professional Engineer, dated 5/20/2019.

COPYRIGHT (C) BY BEALS AND THOMAS, INC. ALL RIGHTS RESERVED

PREPARED BY:
BEALS + THOMAS
Civil Engineers + Landscape Architects +
Land Surveyors + Planners +
Environmental Specialists

BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, Massachusetts 01772-2104
T 508.366.0560 | www.bealsandthomas.com

5	
4	
3	
2	
1	05/28/2019 ADDENDUM 3
0	05/03/2019 ISSUED FOR BIDDING
	ISSUE DATE DESCRIPTION
DES	DWN
CHK'D	APP'D

PROJECT:
CORNELIA WARREN PARK
WALTHAM,
MASSACHUSETTS

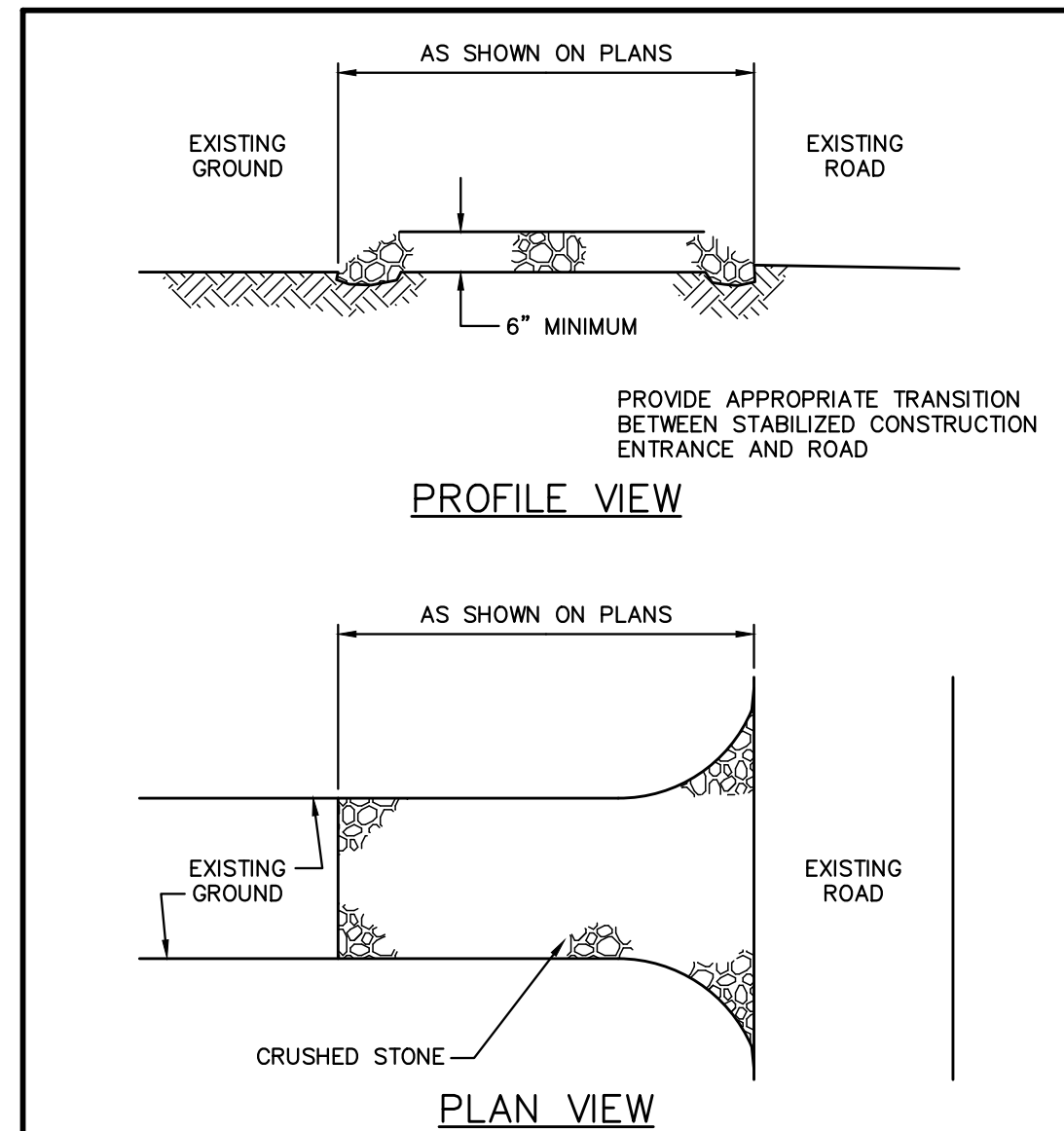
SCALE: 1" = 30' DATE: MAY 3, 2019

METERS 0 5 10 25 30
FEET 0 15 30 60 90

GRADING, DRAINAGE AND UTILITIES PLAN

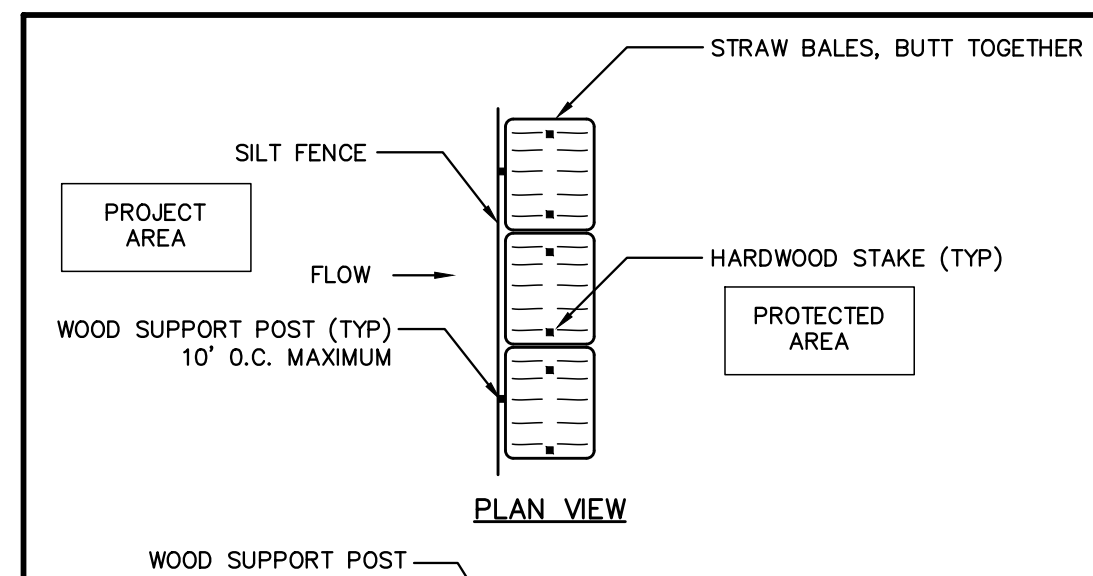
B+T JOB NO. 2992.00
B+T PLAN NO. 299200P009B-005
C4.1

FOR NOTES, REFERENCES AND LEGEND SEE SHEET C1.1.
BEALS AND THOMAS, INC. SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES, OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE WITHOUT THE PRIOR WRITTEN PERMISSION OF BEALS AND THOMAS, INC. EXCEPT THAT ANY REGULATORY AUTHORITY MAY REPRODUCE AND TRANSMIT COPIES AS REQUIRED IN CONJUNCTION WITH PERFORMANCE OF OFFICIAL BUSINESS UNDER ITS JURISDICTION. ANY MODIFICATIONS TO THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF BEALS AND THOMAS, INC. SHALL RENDER IT INVALID AND UNUSABLE.

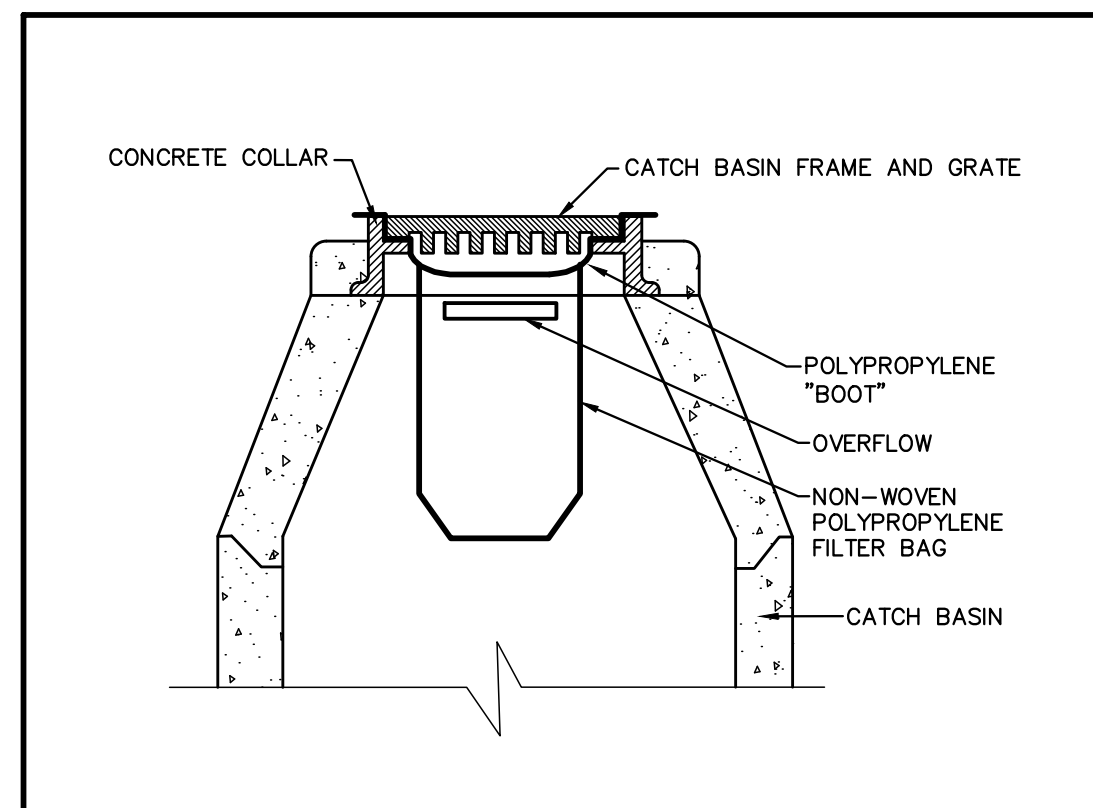


THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO EXISTING ROAD. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO EXISTING ROAD SHALL BE REMOVED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

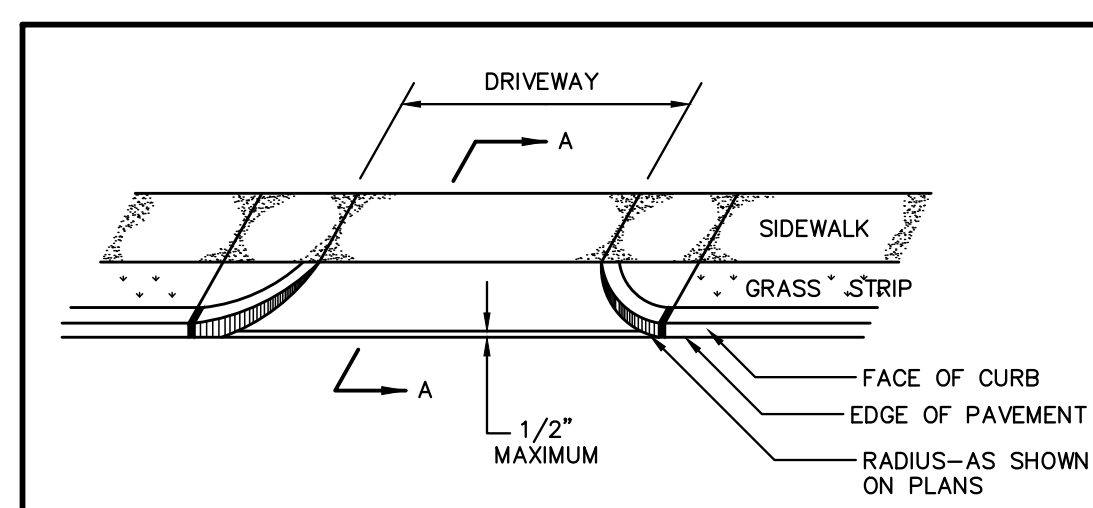
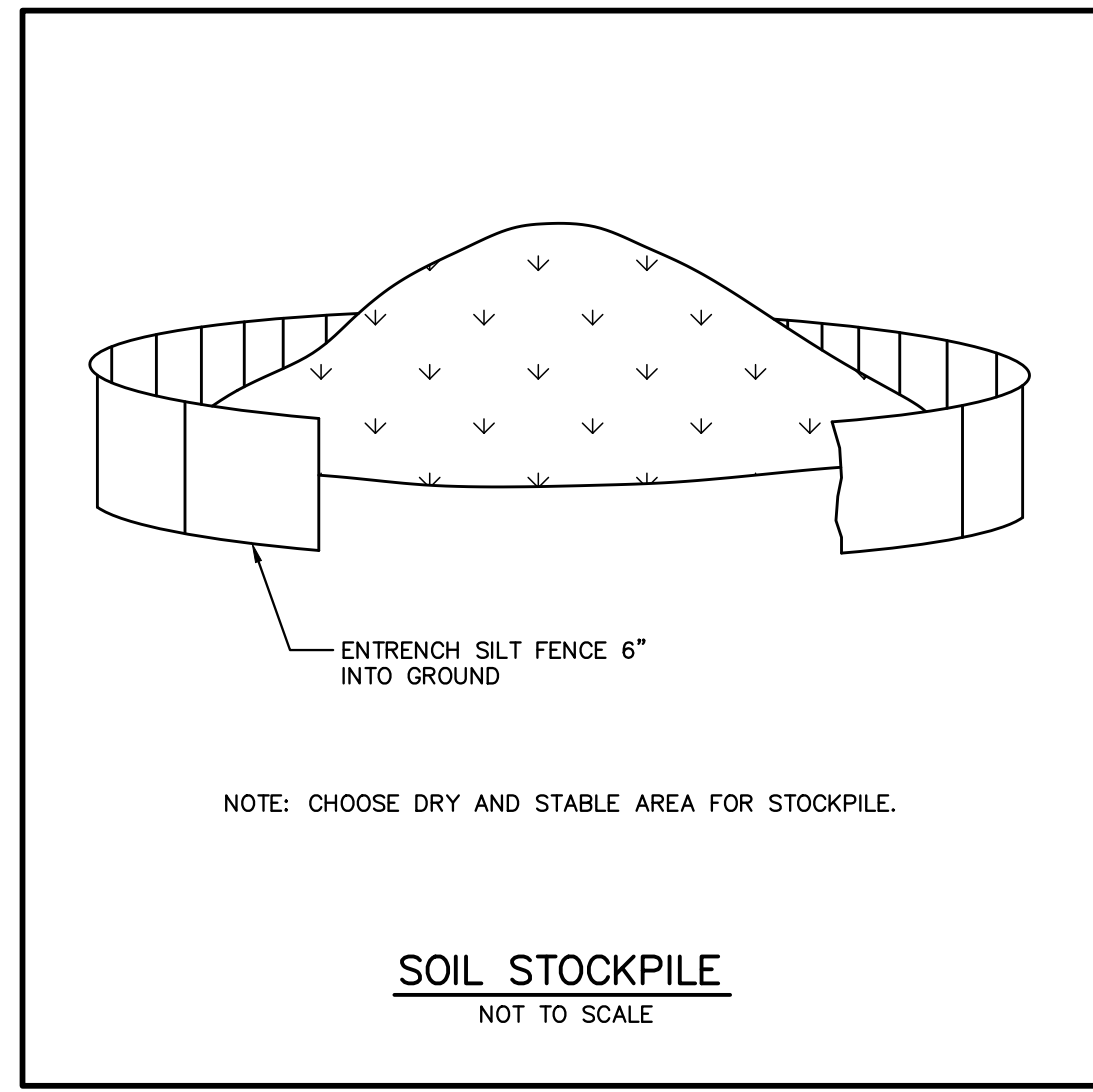


EROSION CONTROL BARRIER (ECB)
NOT TO SCALE

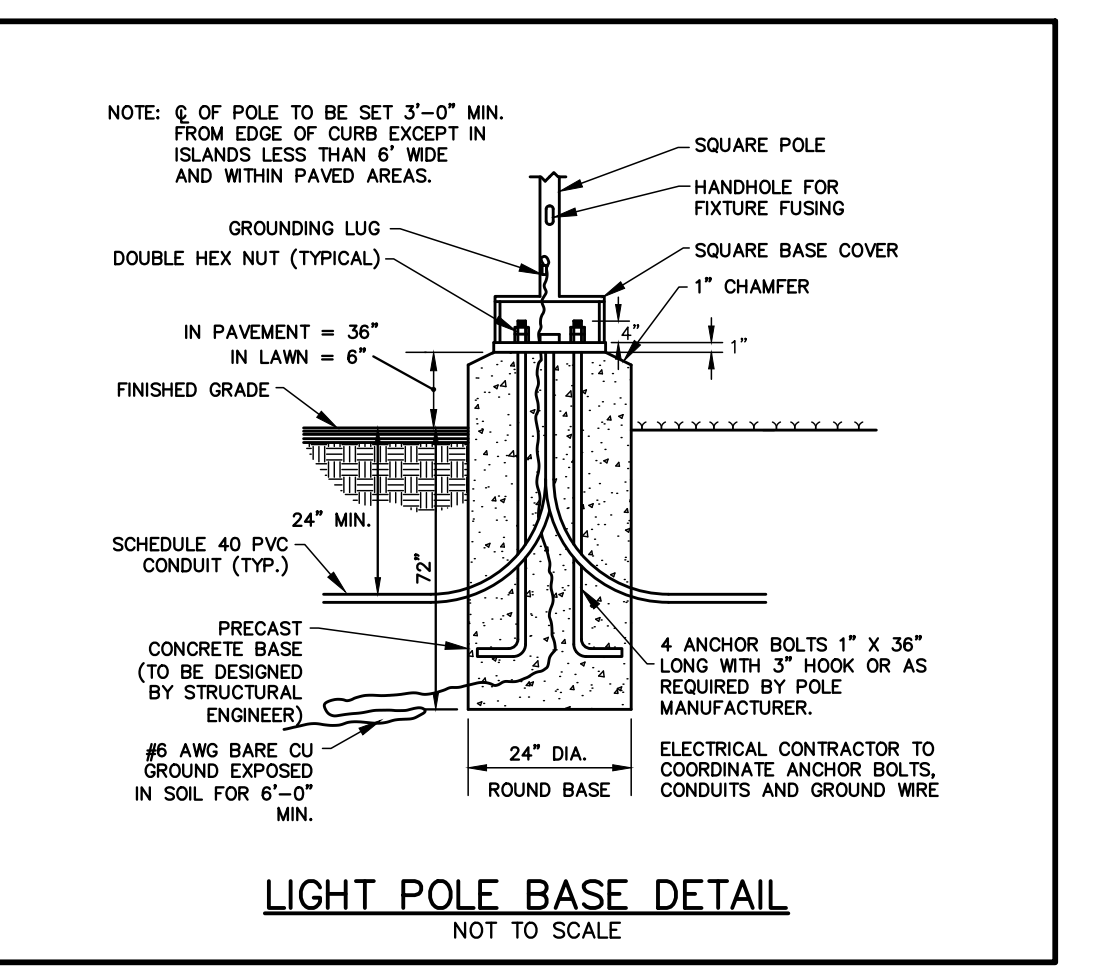
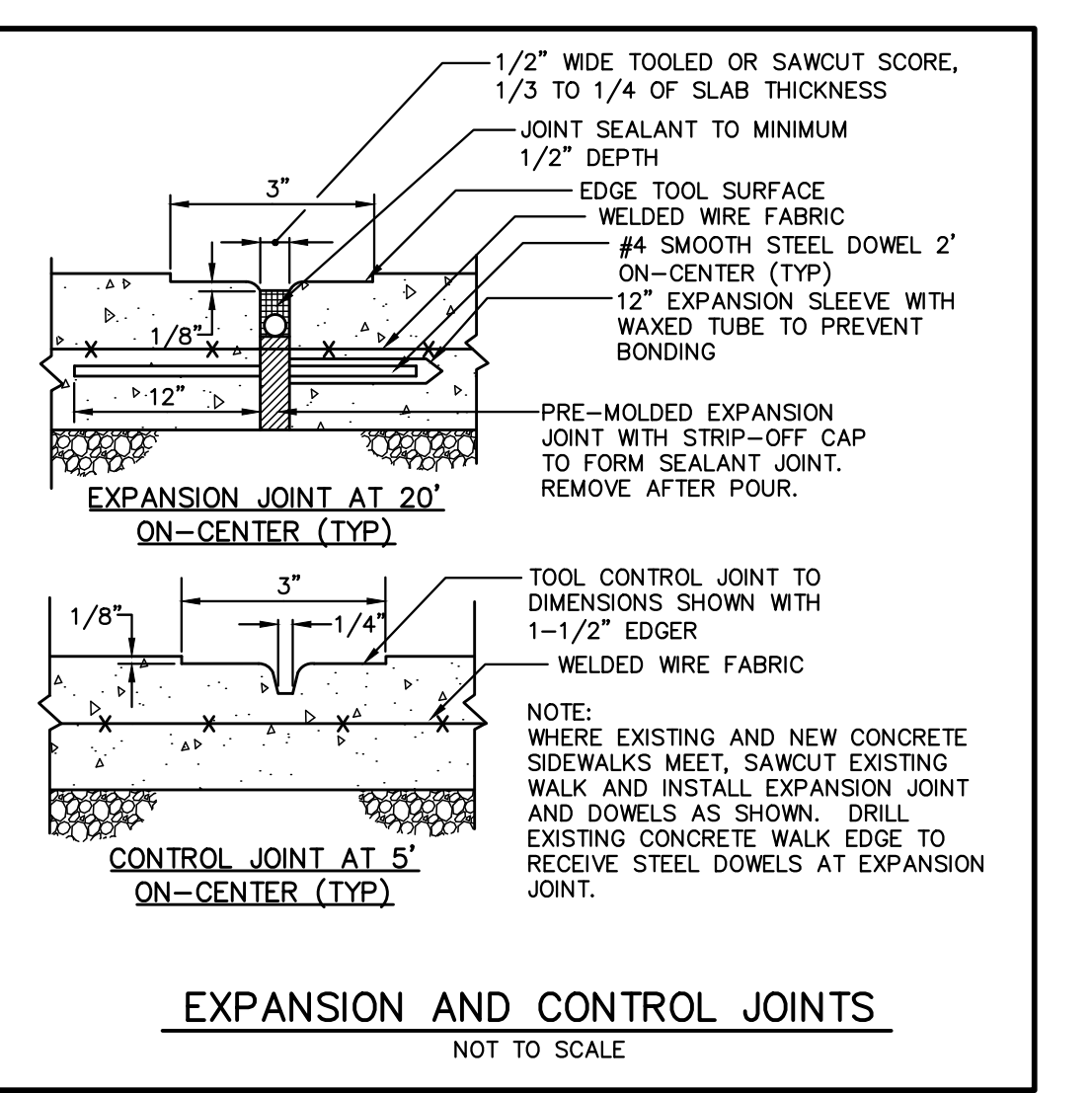
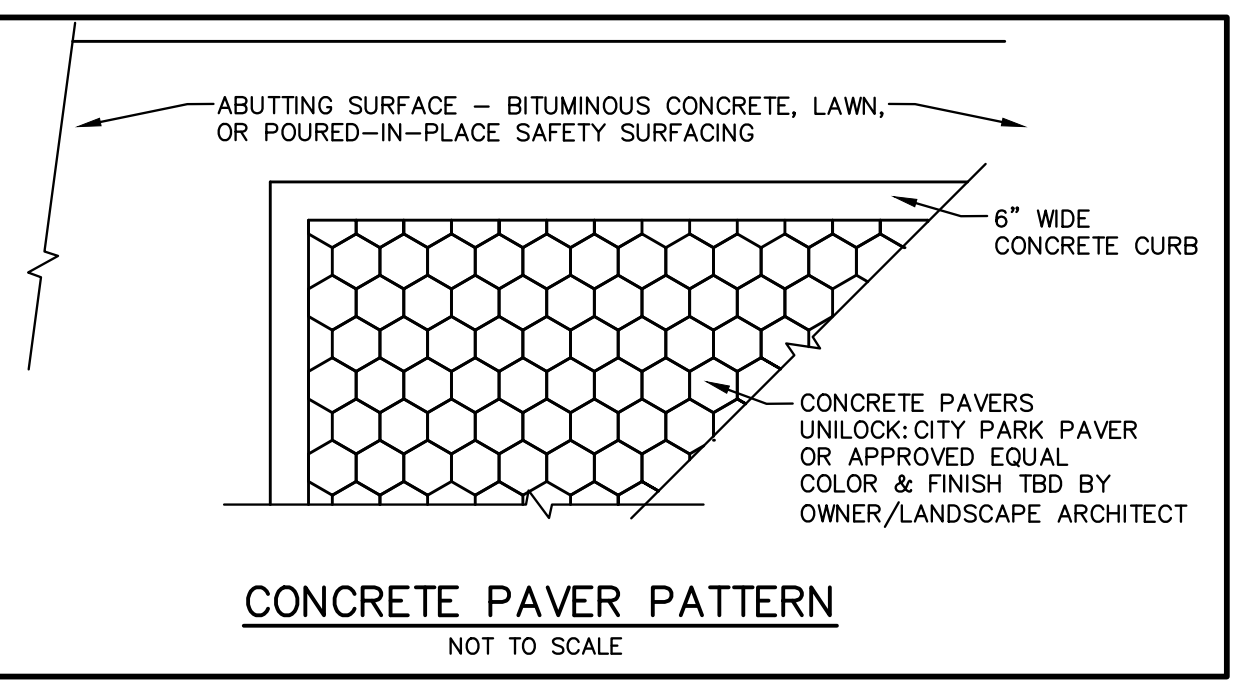
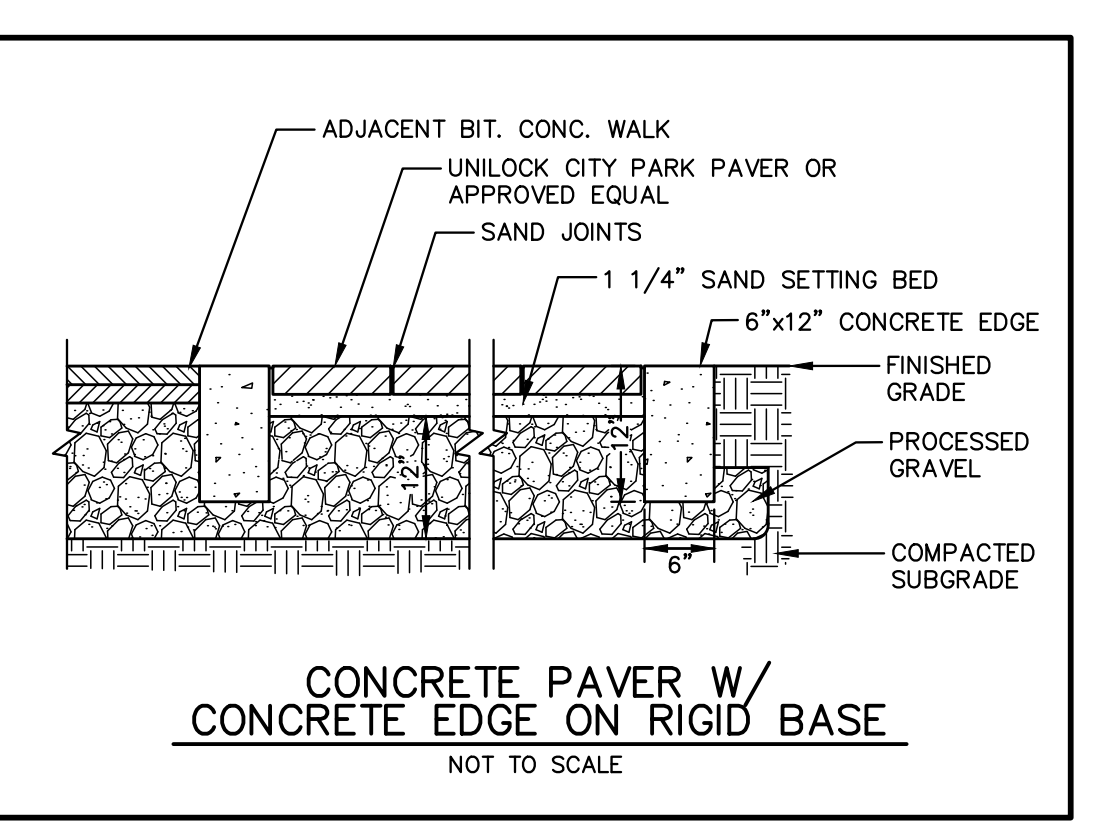
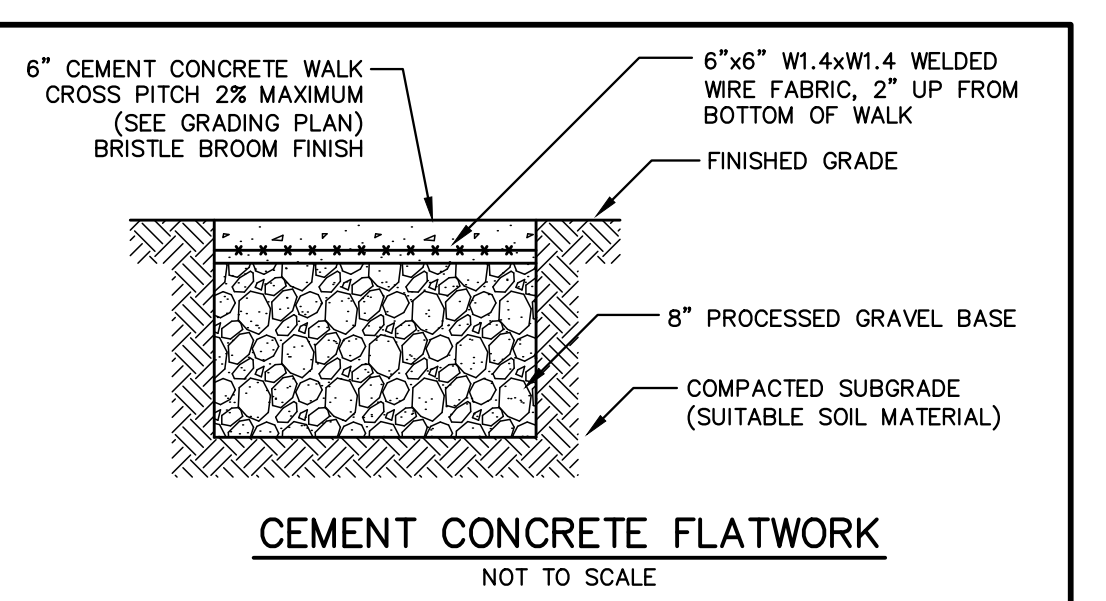
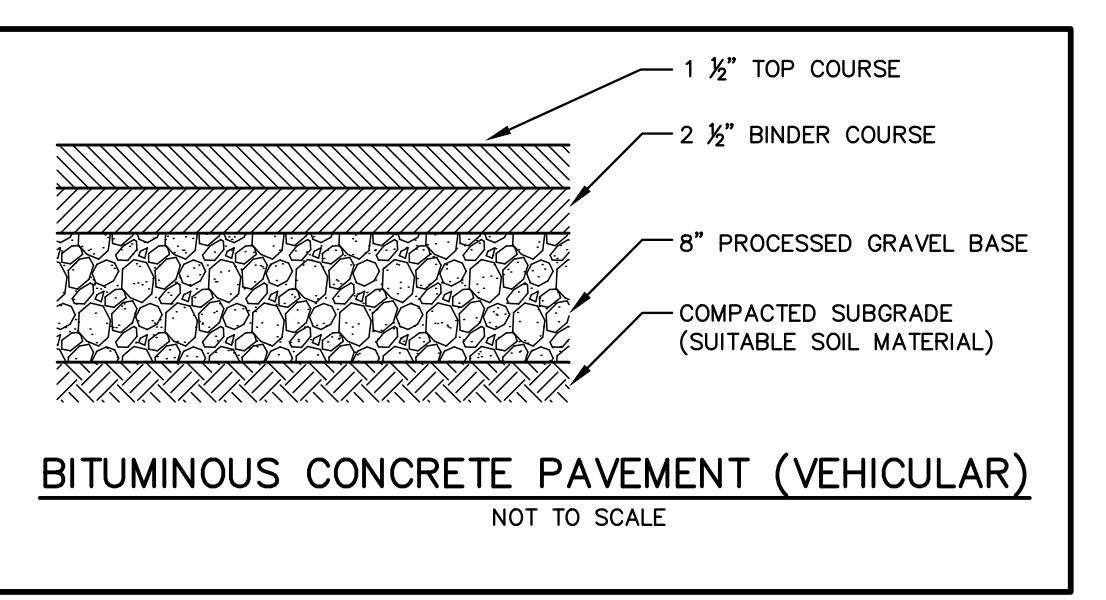
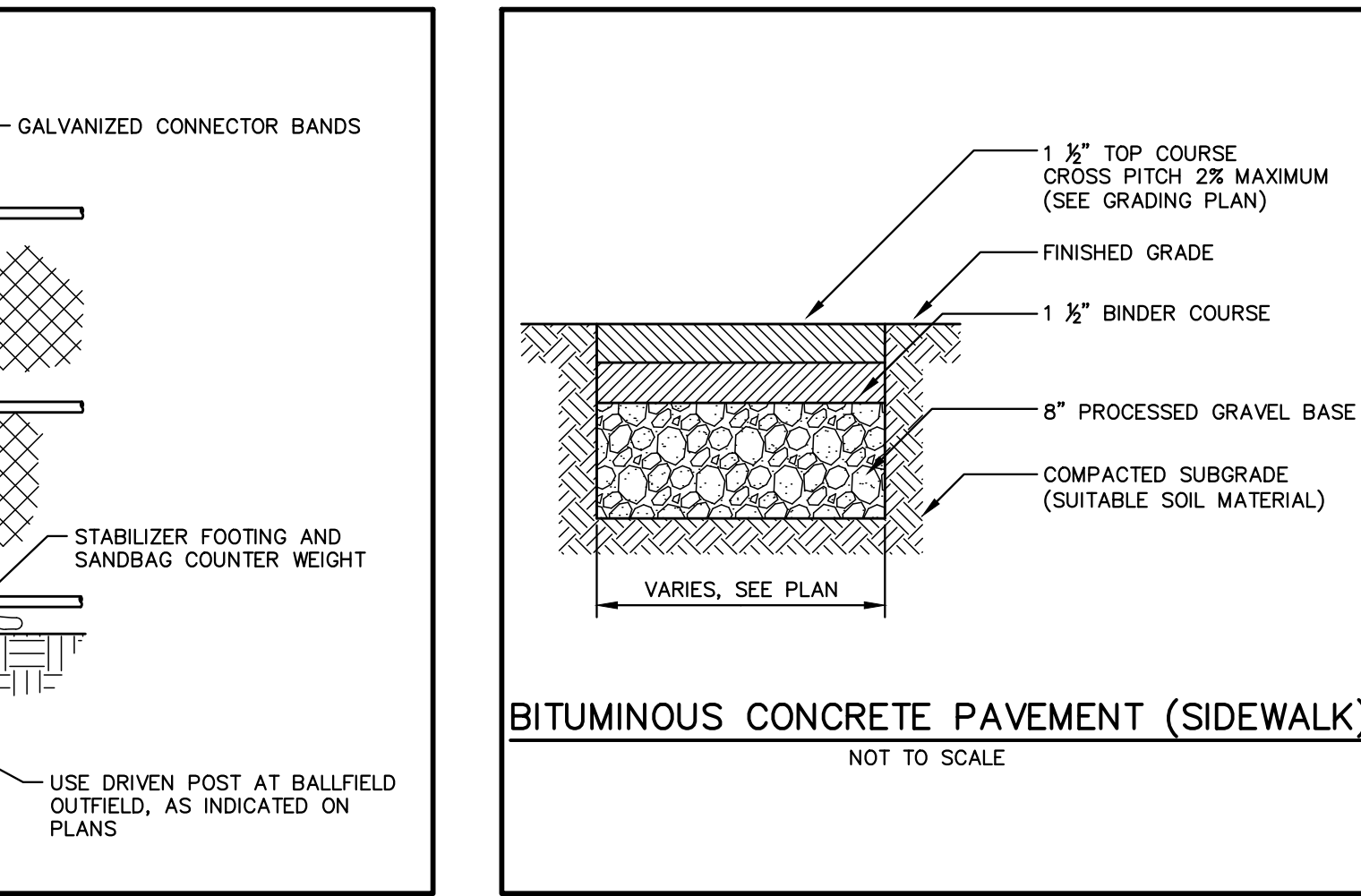
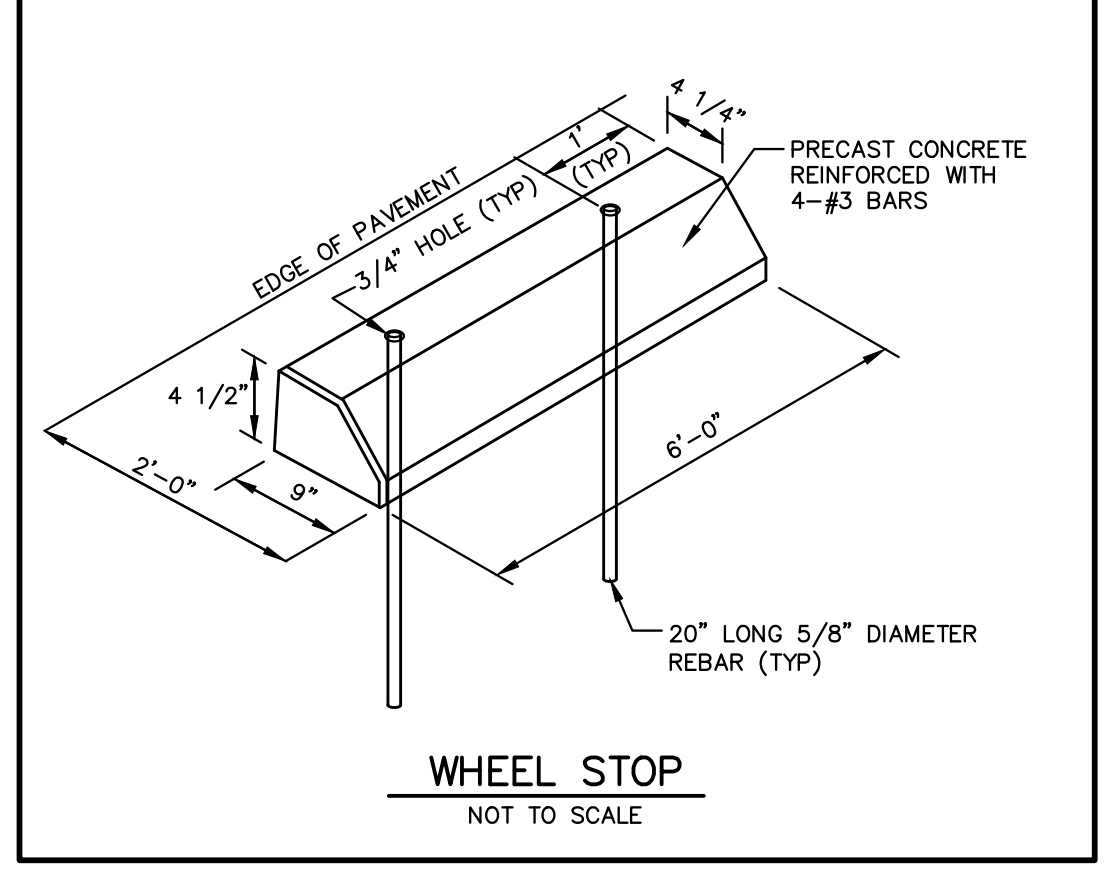
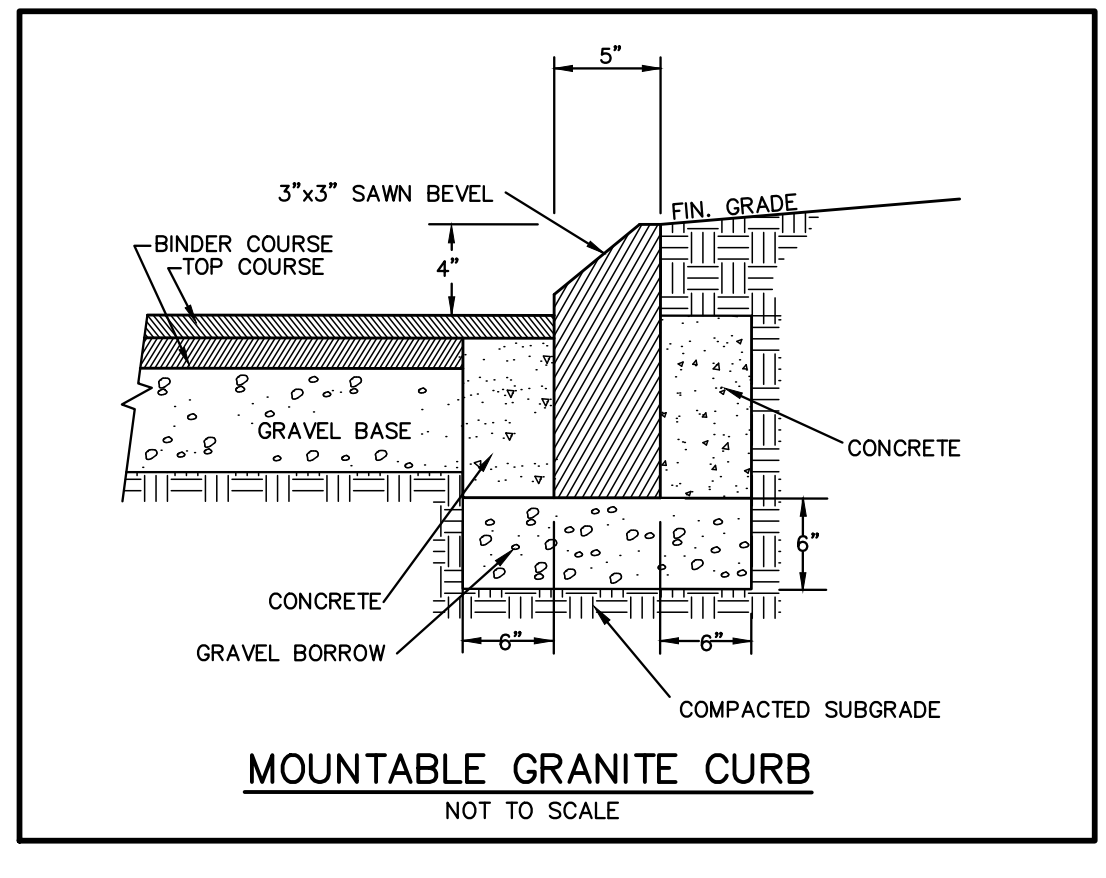
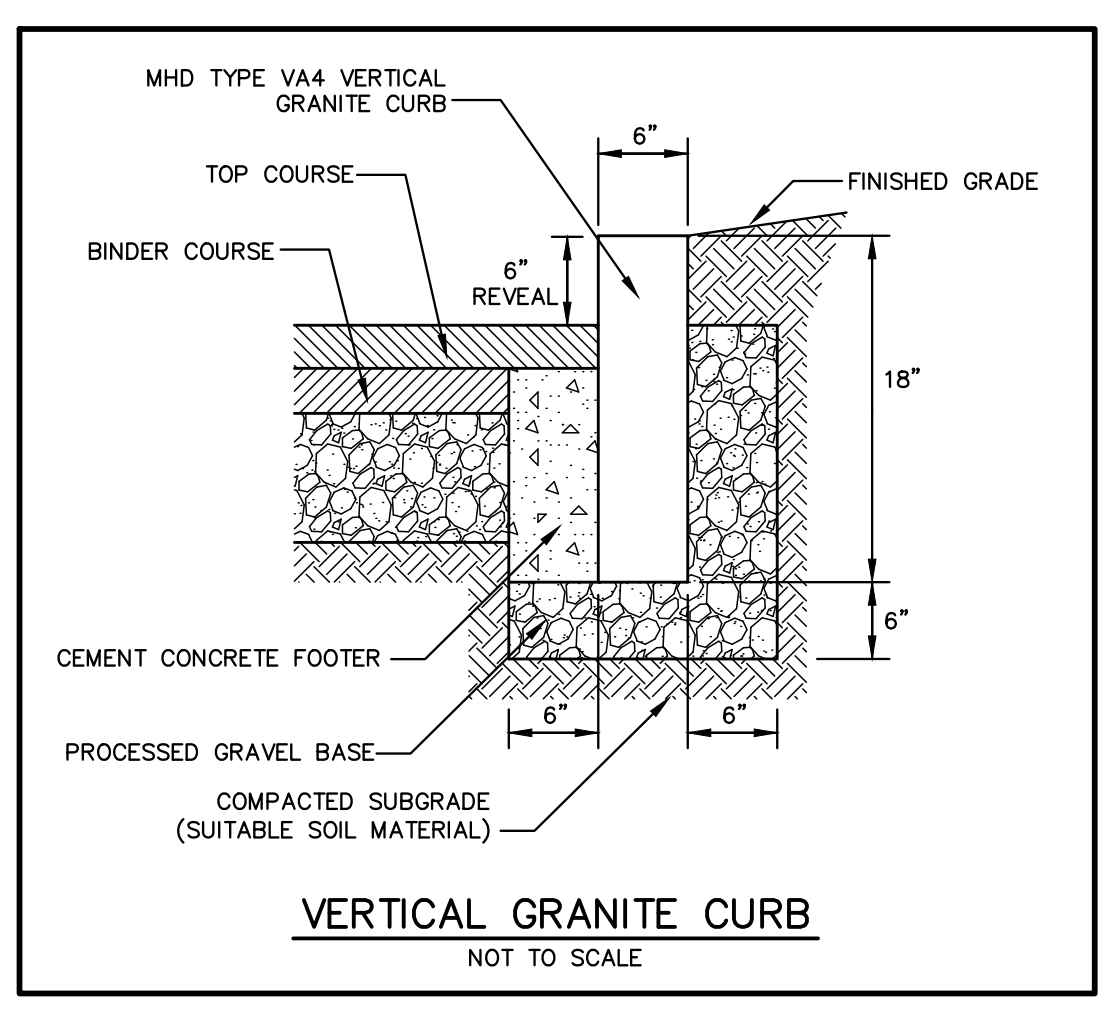
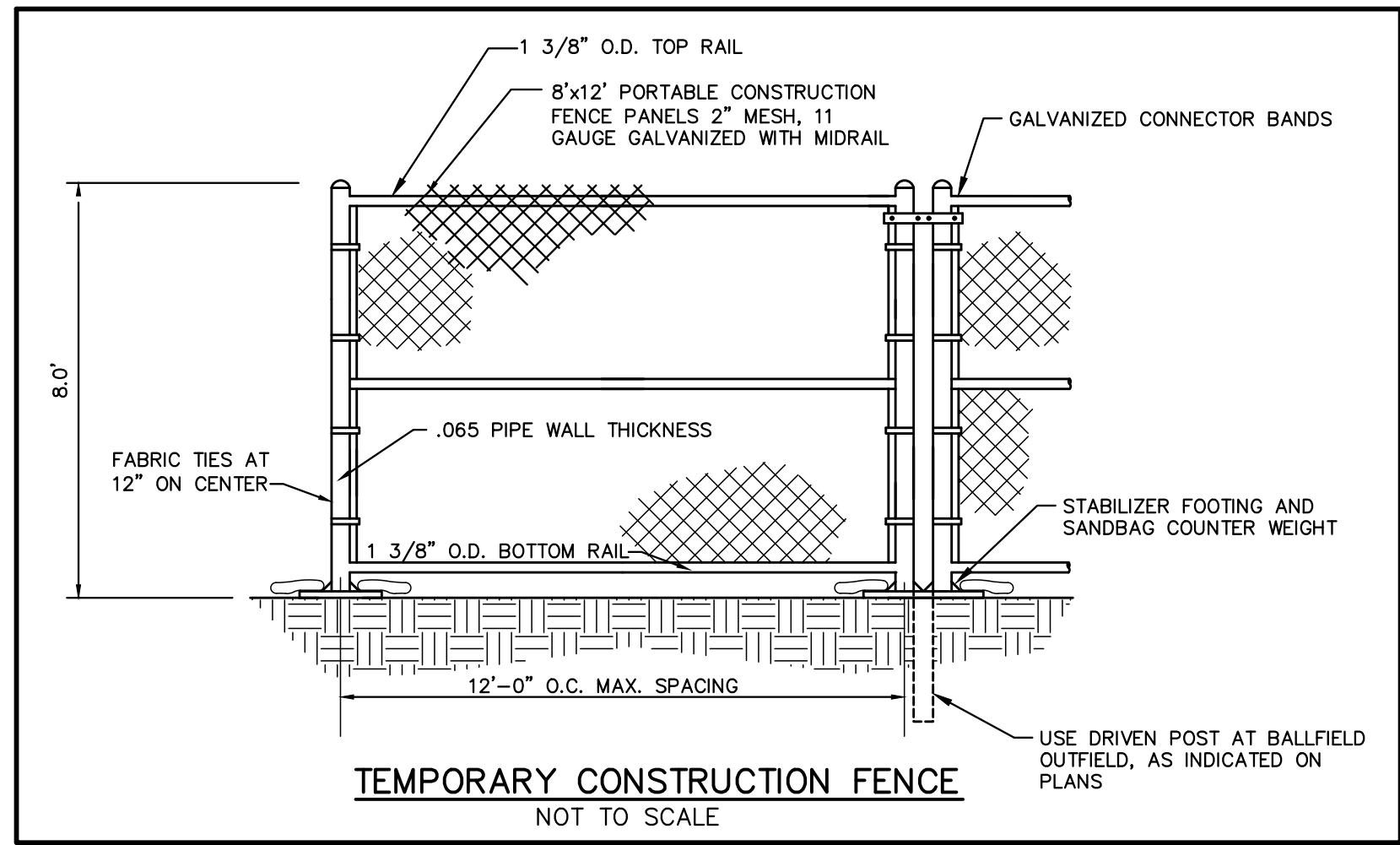
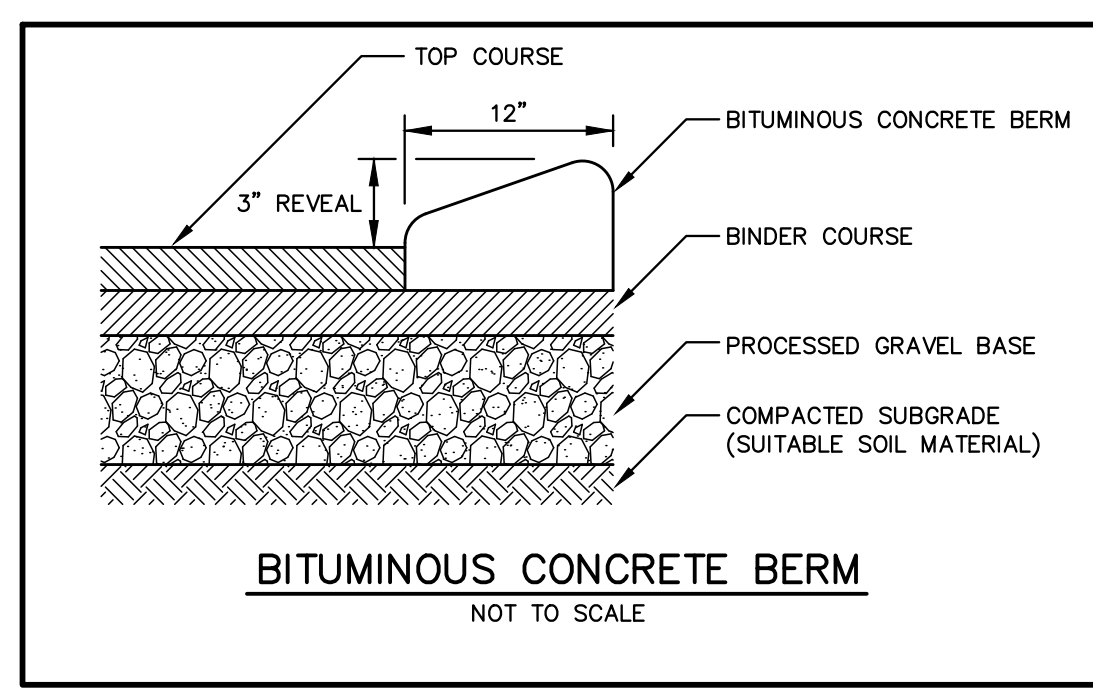
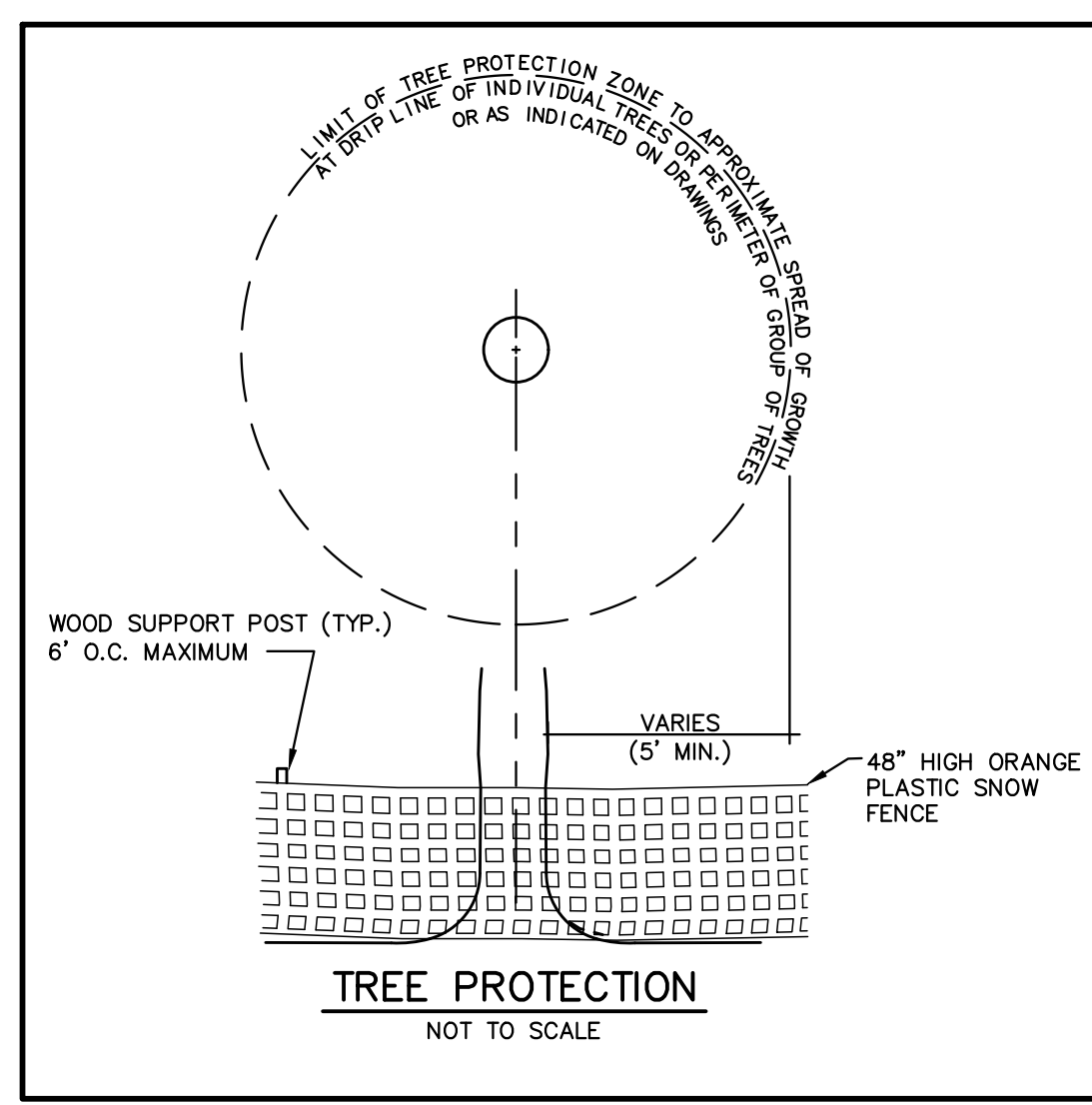


FILTER BAG
NOT TO SCALE

NOTES:
1. TO BE INSTALLED IN CATCH BASINS IN TRAFFIC AREAS UNTIL COMPLETION OF CONSTRUCTION.
2. BOOT ADAPTER MAY BE TRIMMED TO SIZE.



DRIVEWAY CURB CUT
NOT TO SCALE



FOR NOTES, REFERENCES AND LEGEND SEE SHEET C1.1.

BEALS AND THOMAS, INC. SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE WITHOUT THE PRIOR WRITTEN PERMISSION OF BEALS AND THOMAS, INC. EXCEPT THAT ANY REGULATORY AUTHORITY MAY REPRODUCE AND TRANSMIT COPIES AS REQUIRED IN CONJUNCTION WITH PERFORMANCE OF OFFICIAL BUSINESS UNDER ITS JURISDICTION. ANY MODIFICATIONS TO THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF BEALS AND THOMAS, INC. SHALL RENDER IT INVALID AND UNUSABLE.

PREPARED FOR:
CITY OF WALTHAM
610 MAIN STREET
WALTHAM, MASSACHUSETTS

RECORD OWNER:
CITY OF WALTHAM
4600/39
054-004-0005

COMMONWEALTH OF MASSACHUSETTS
JEFFREY R. MURPHY
CIVIL
No. 51800
REGISTERED PROFESSIONAL ENGINEER
Jeffrey R. Murphy
5/28/2019

MASSACHUSETTS
BEALS & THOMAS, INC.
LANDSCAPE ARCHITECTS
No. 1599
REGISTERED PROFESSIONAL LANDSCAPE ARCHITECTS
Regina Harold
5/28/2019

COPYRIGHT (C) BY BEALS AND THOMAS, INC.
ALL RIGHTS RESERVED

PREPARED BY:
BEALS + THOMAS
Civil Engineers + Landscape Architects +
Land Surveyors + Planners +
Environmental Specialists

BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, Massachusetts 01772-2104
T 508.366.0560 | www.bealsandthomas.com

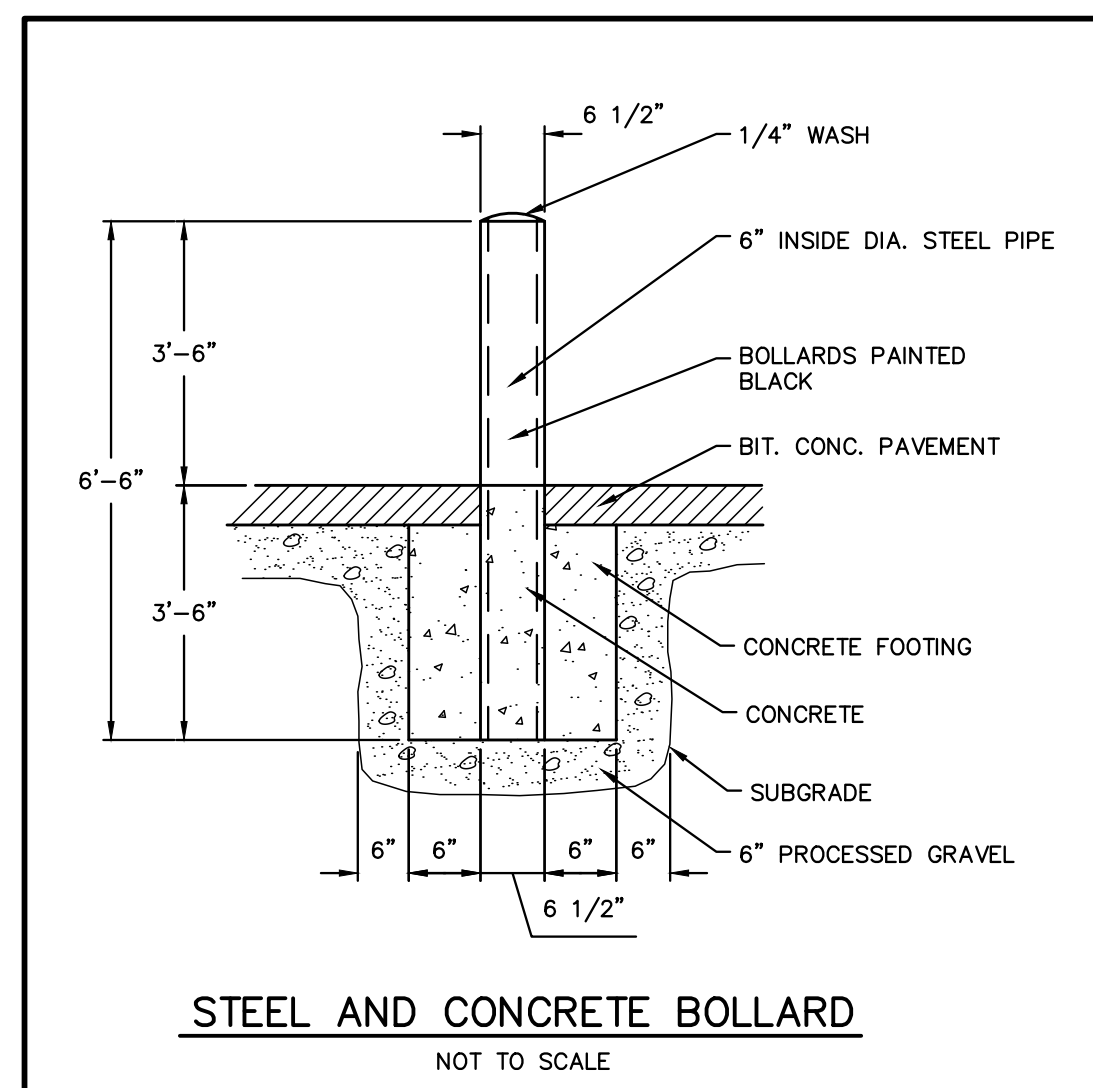
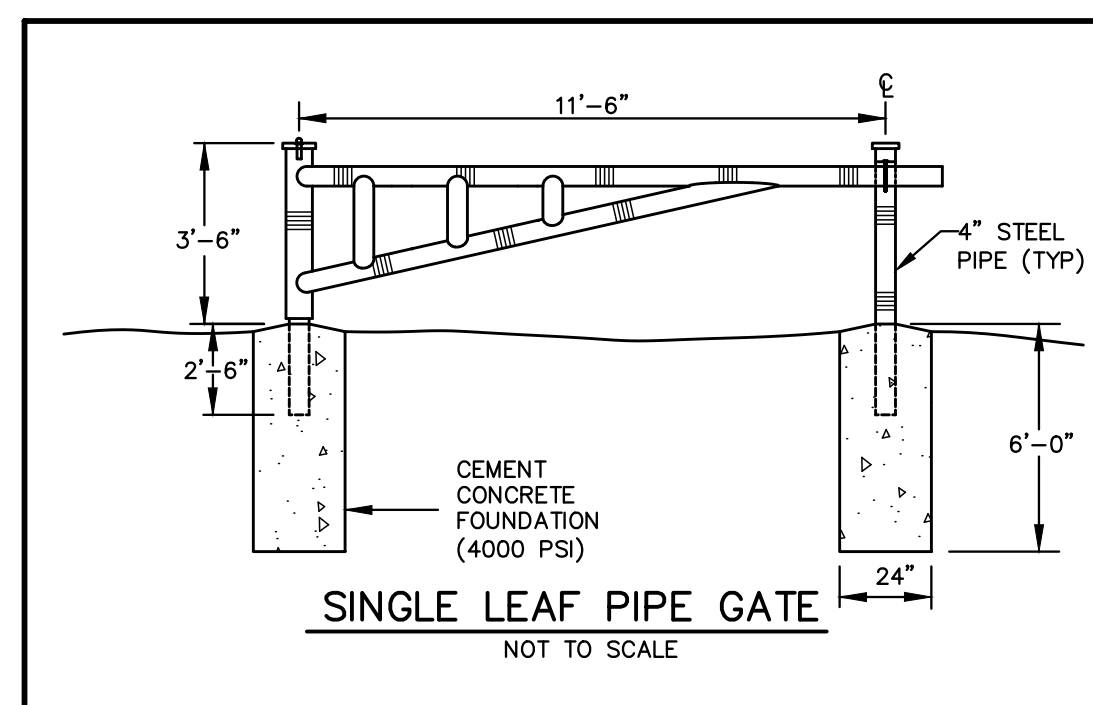
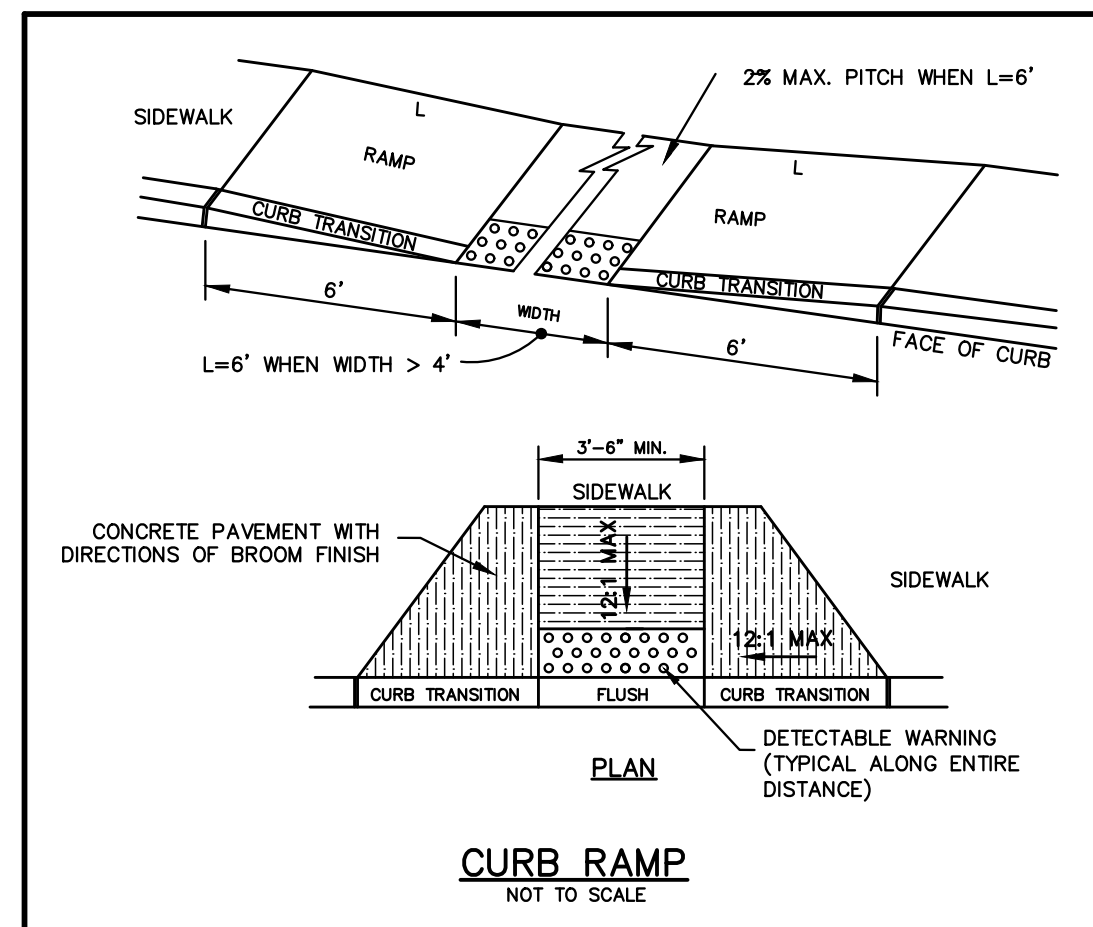
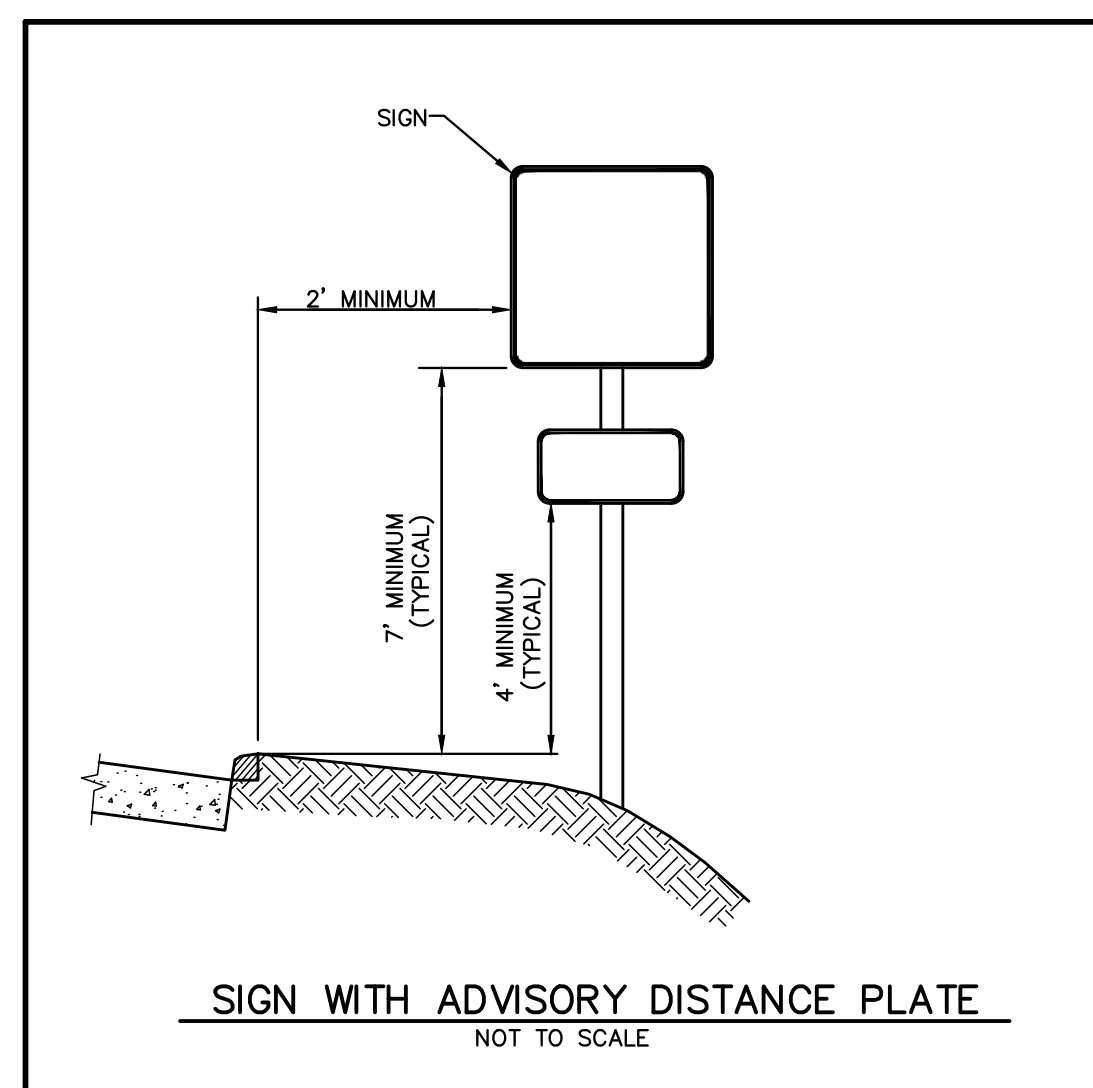
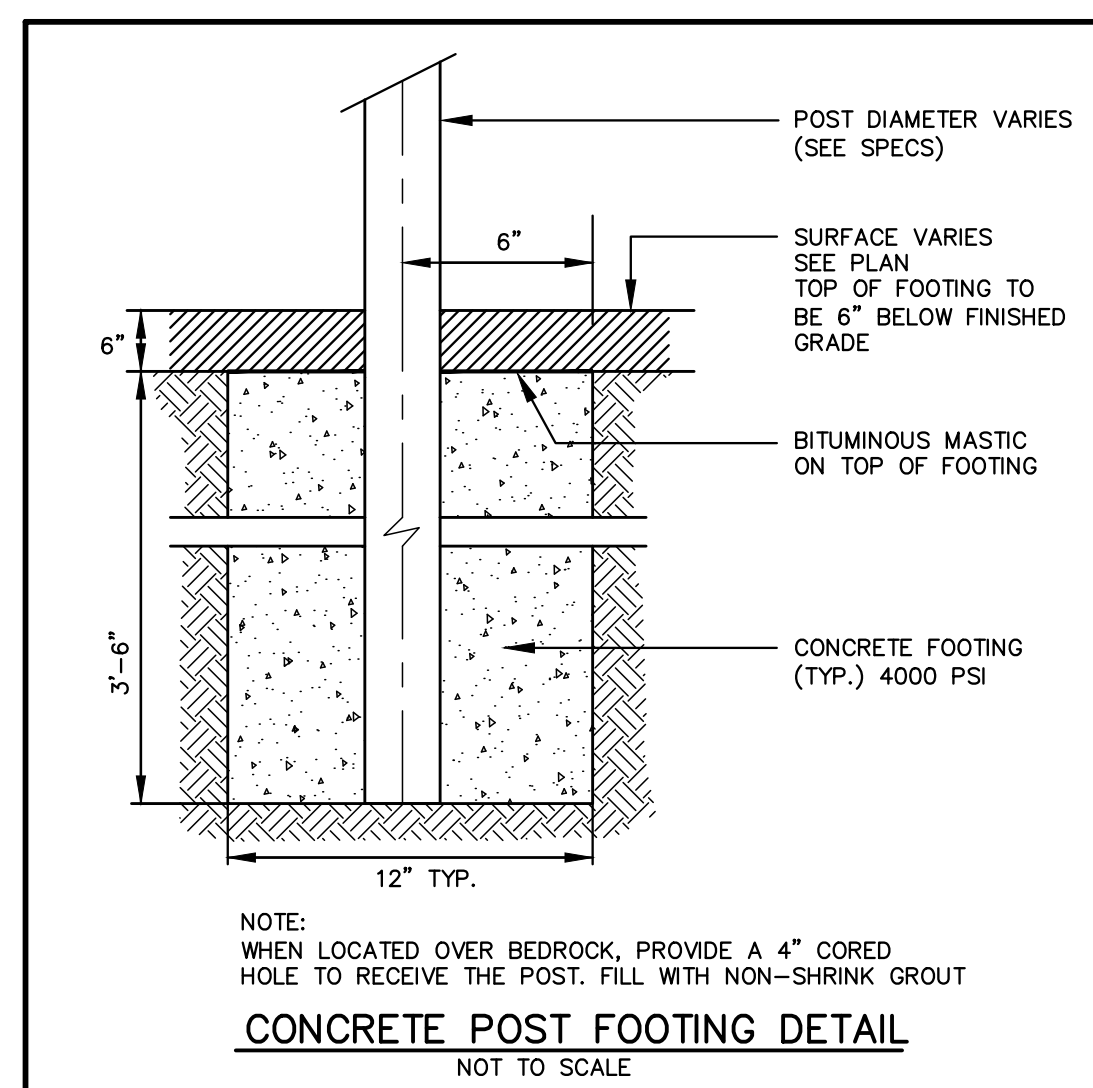
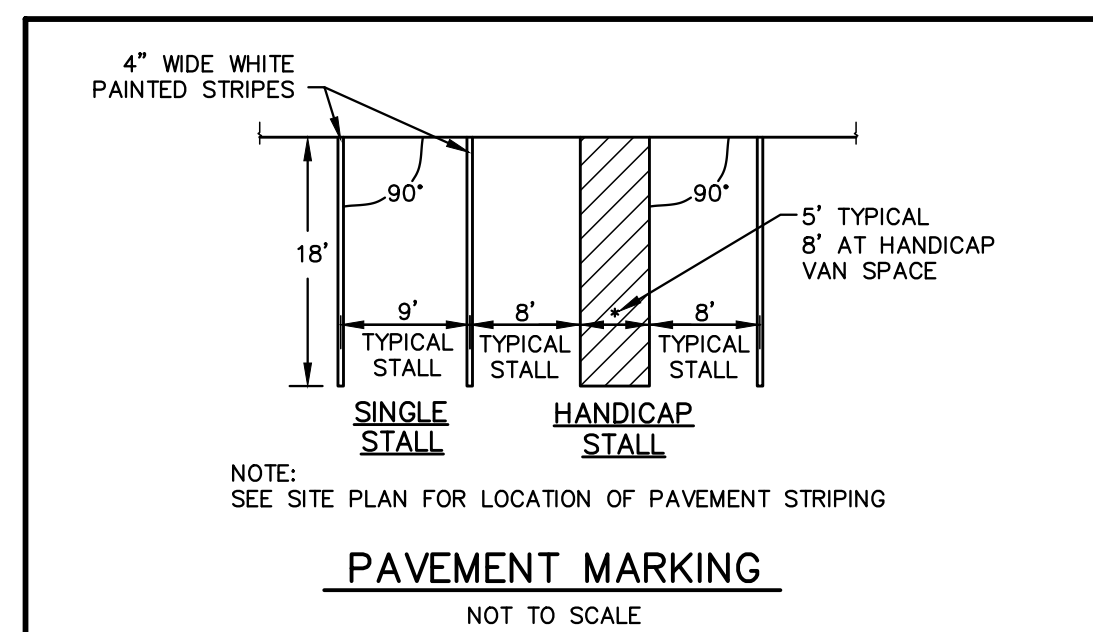
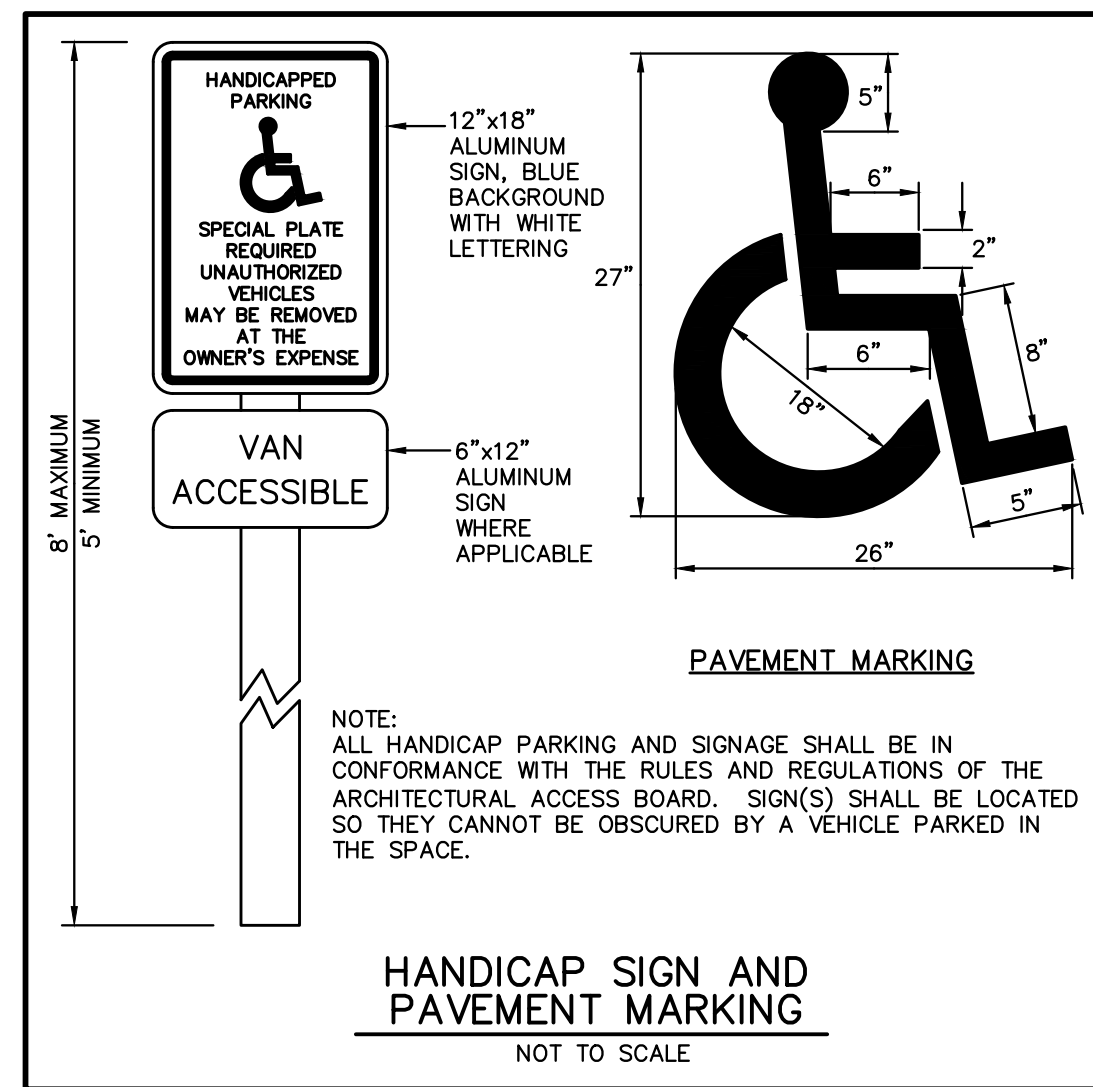
5			
4			
3			
2			
1	05/28/2019	ADDENDUM 3	
0	05/03/2019	ISSUED FOR BIDDING	
	ISSUE DATE	DESCRIPTION	
DES	DWN	CHK'D	APP'D

PROJECT:
CORNELIA WARREN PARK
WALTHAM, MASSACHUSETTS

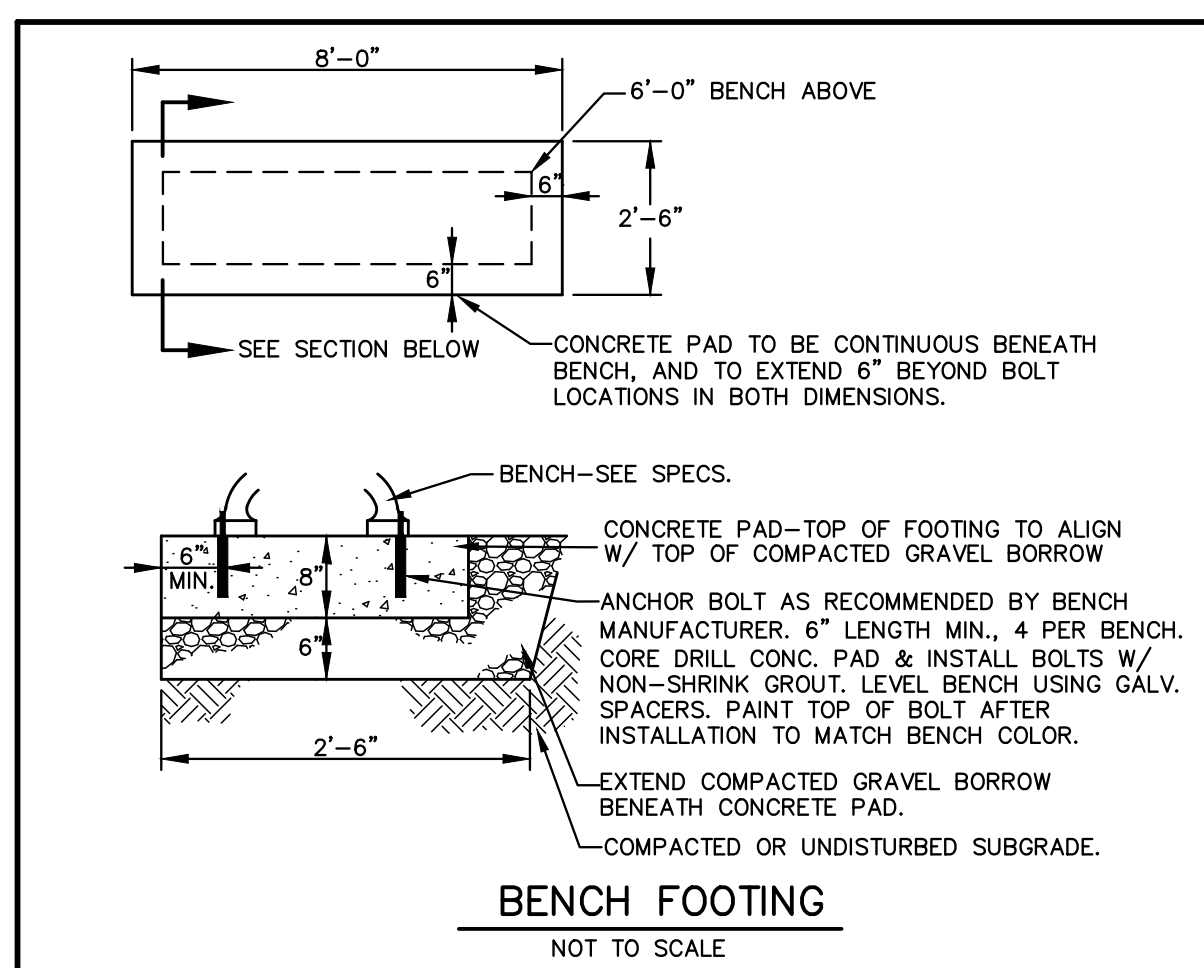
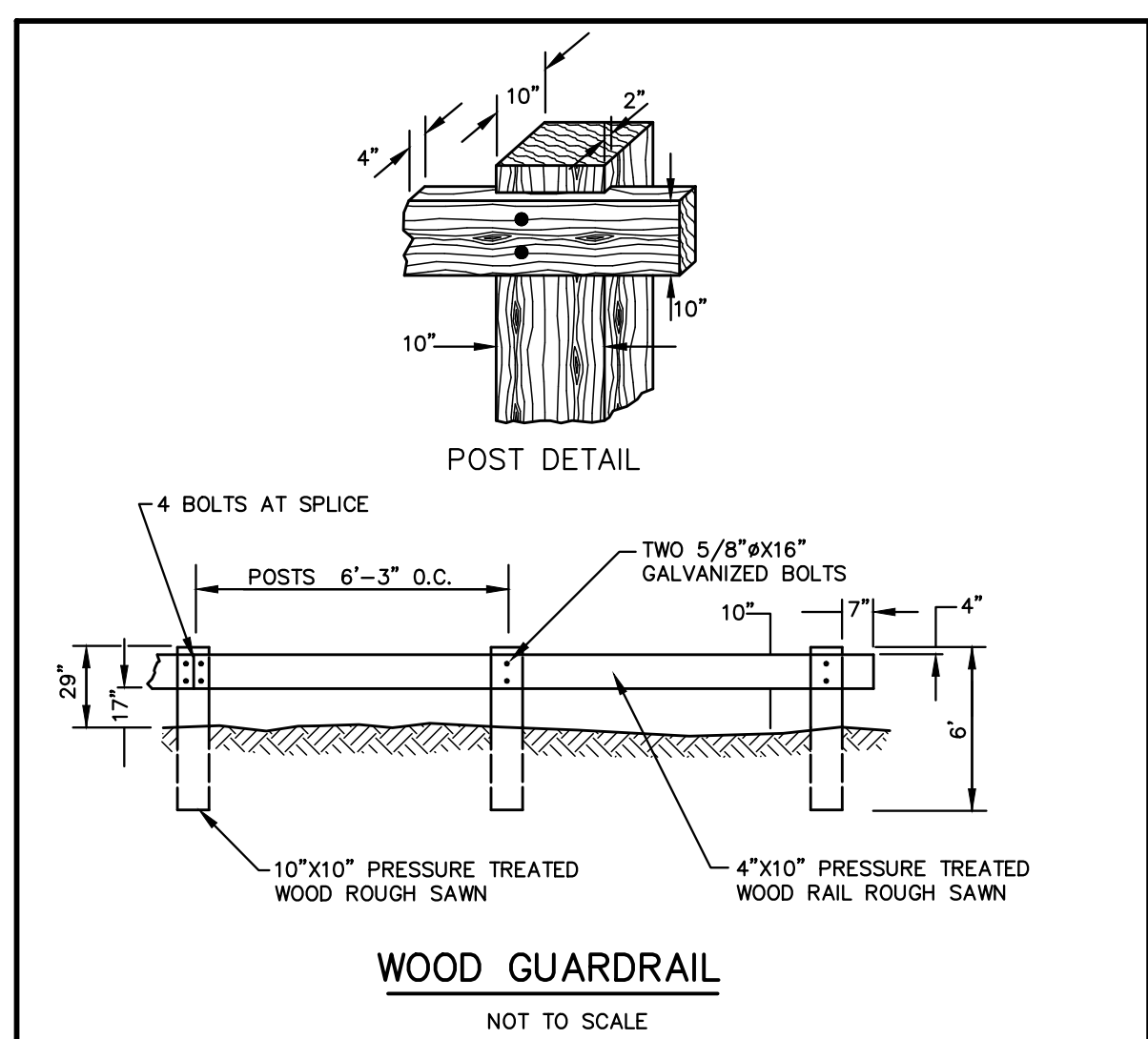
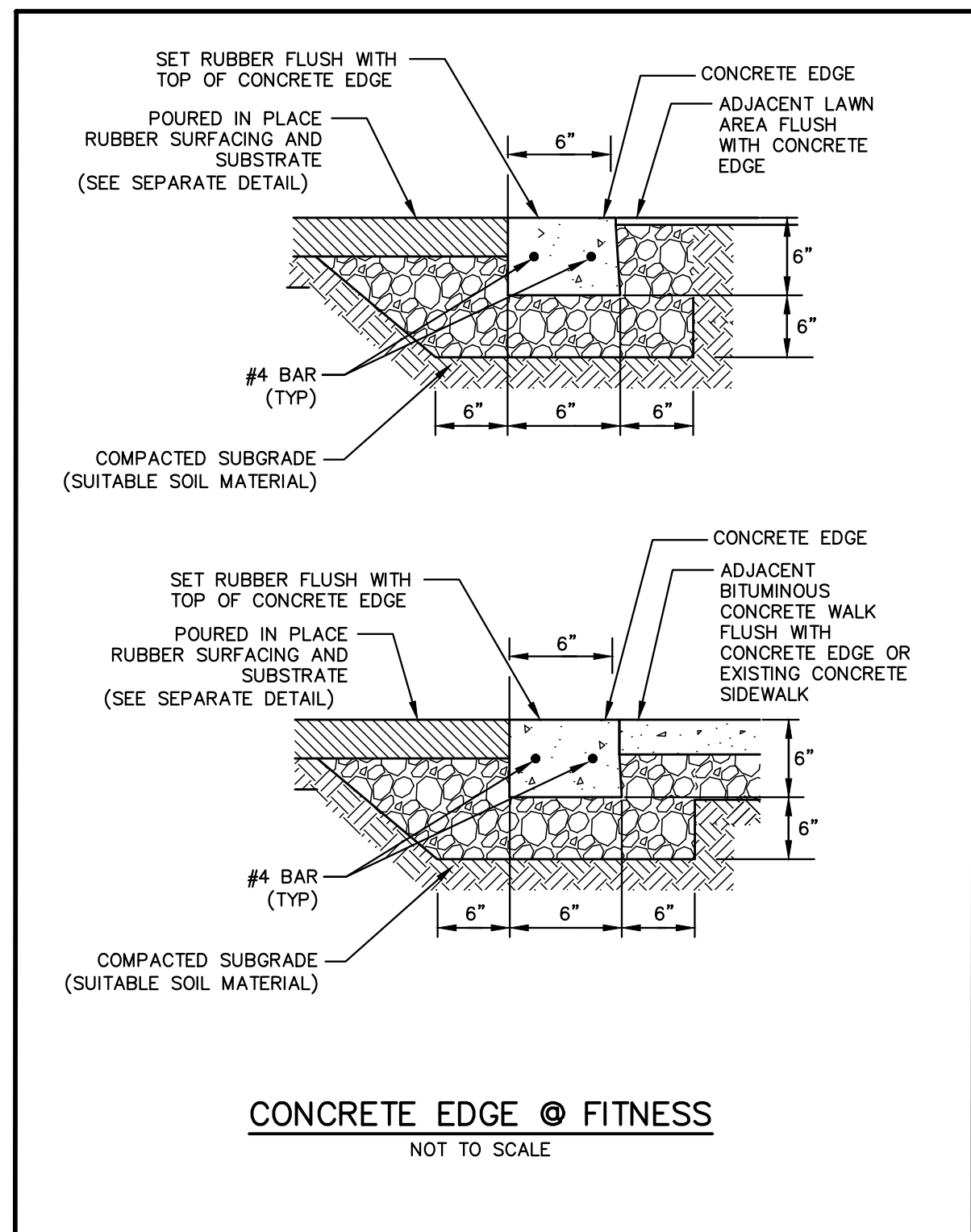
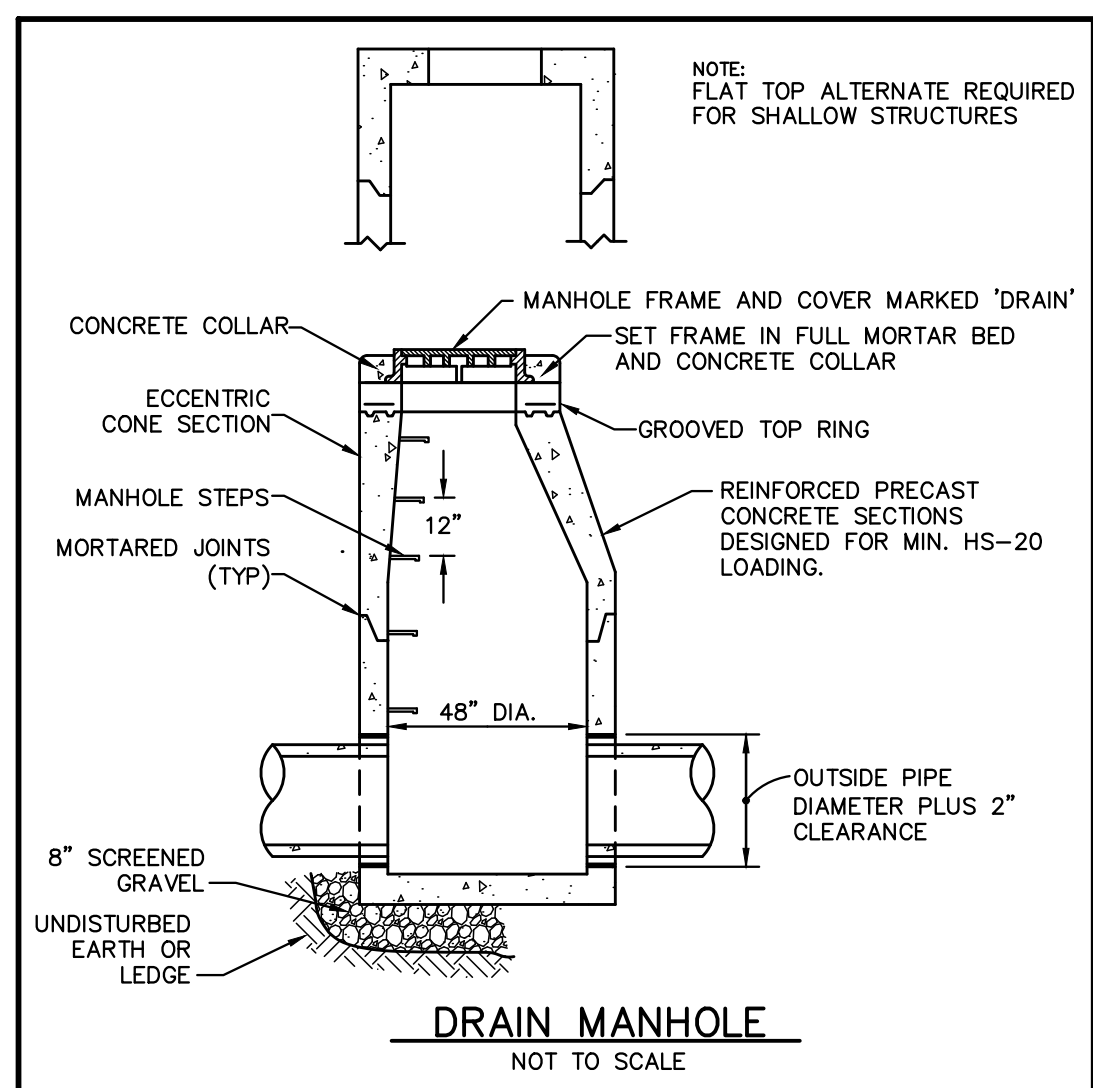
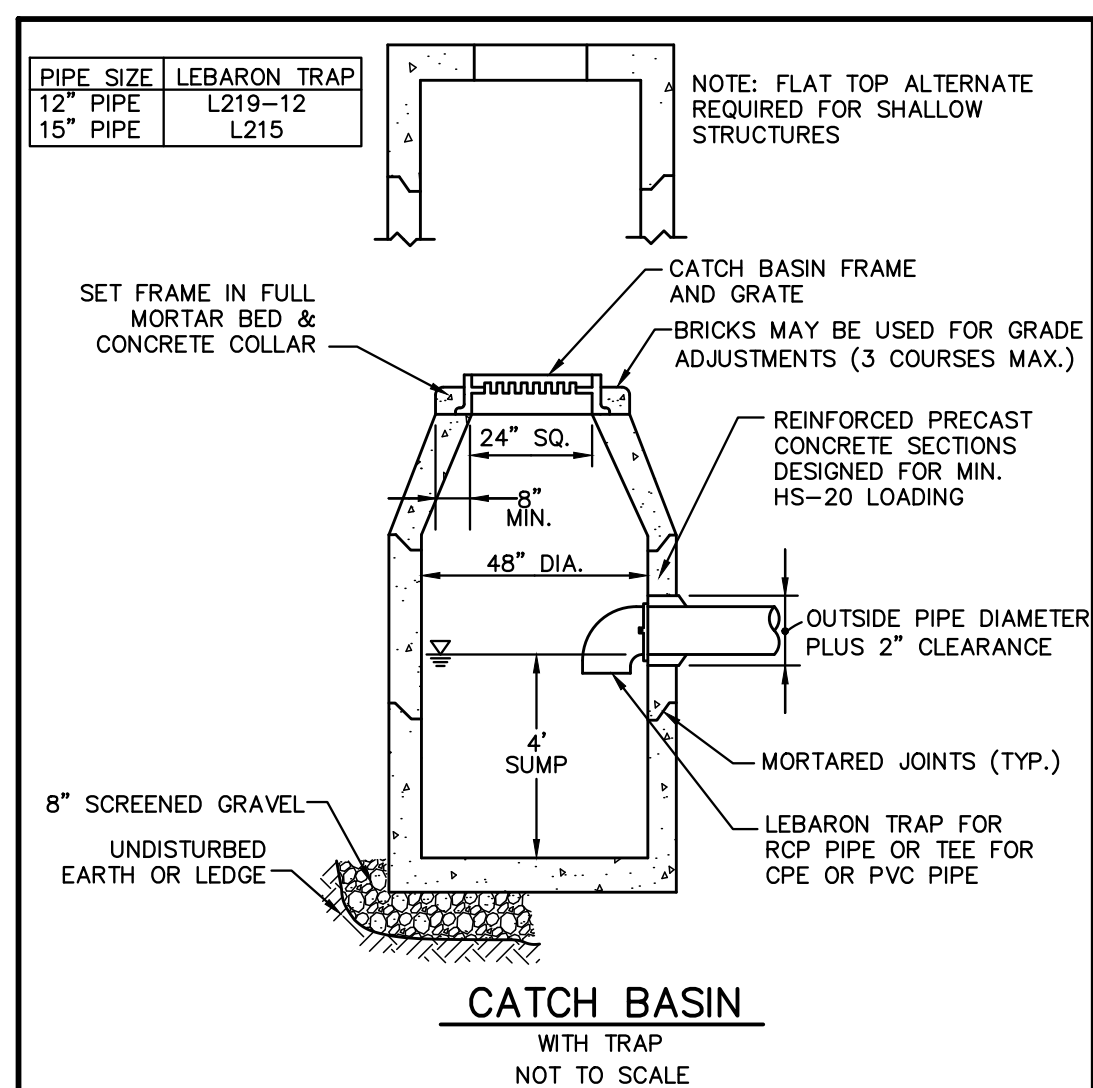
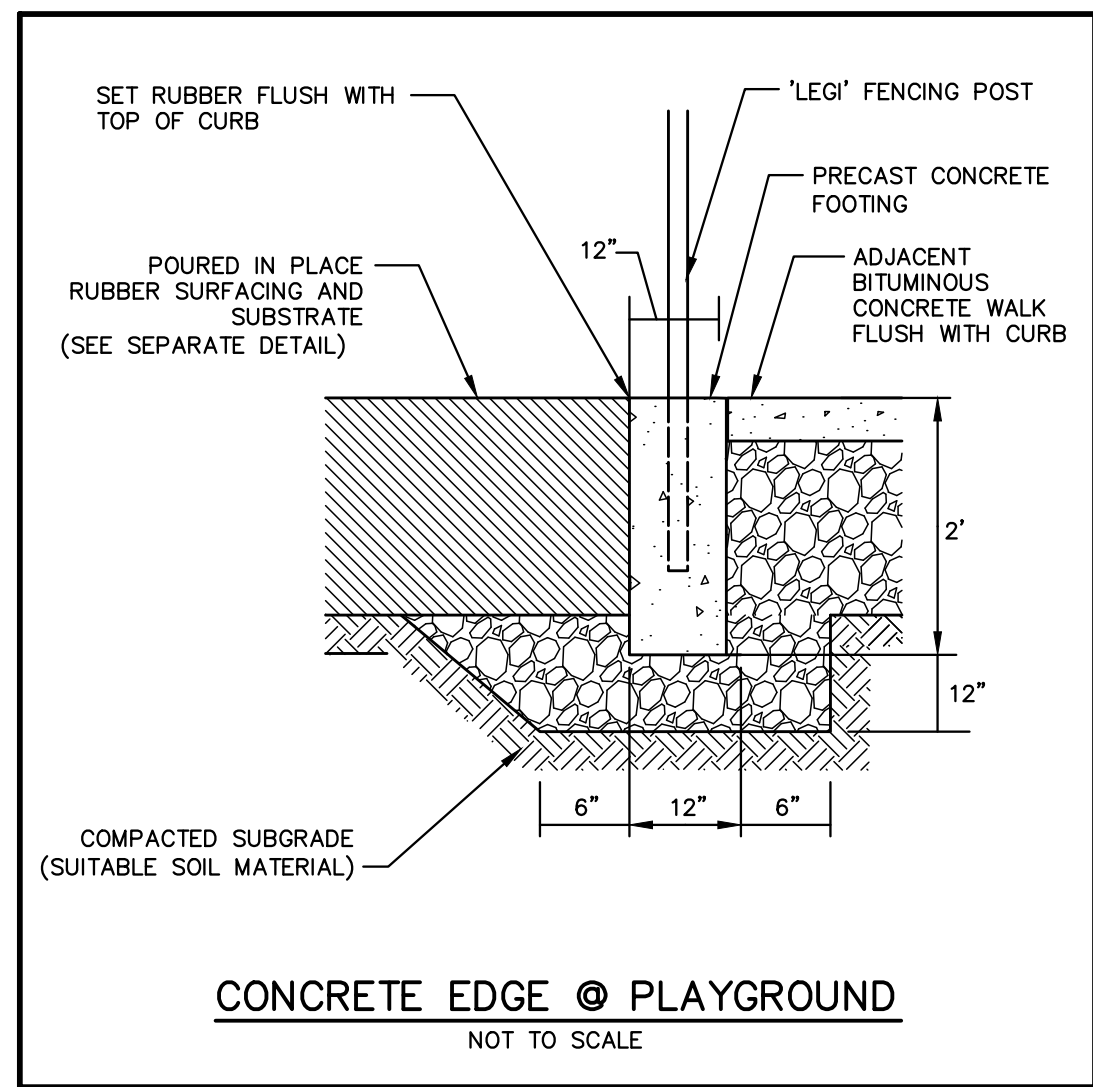
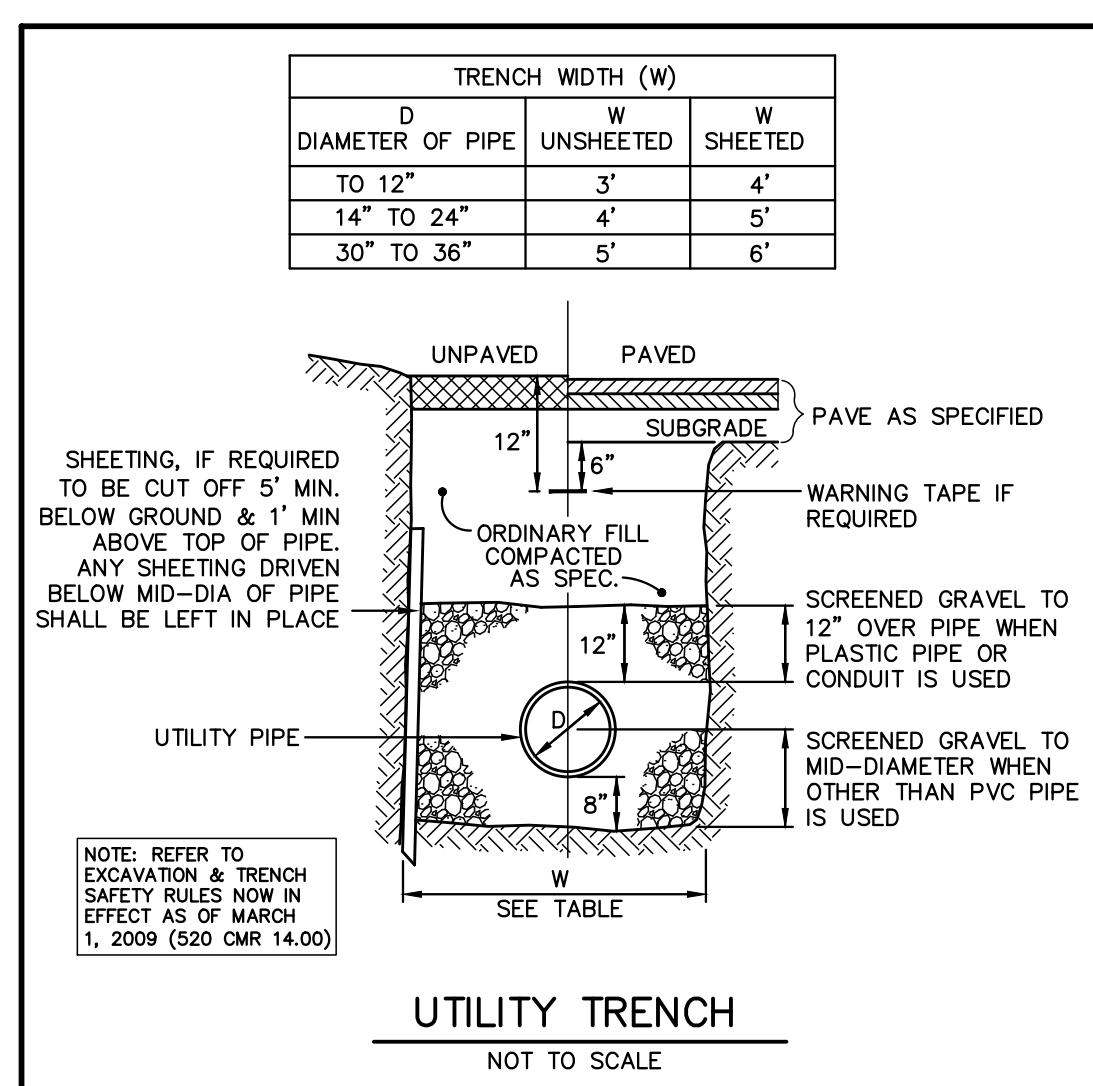
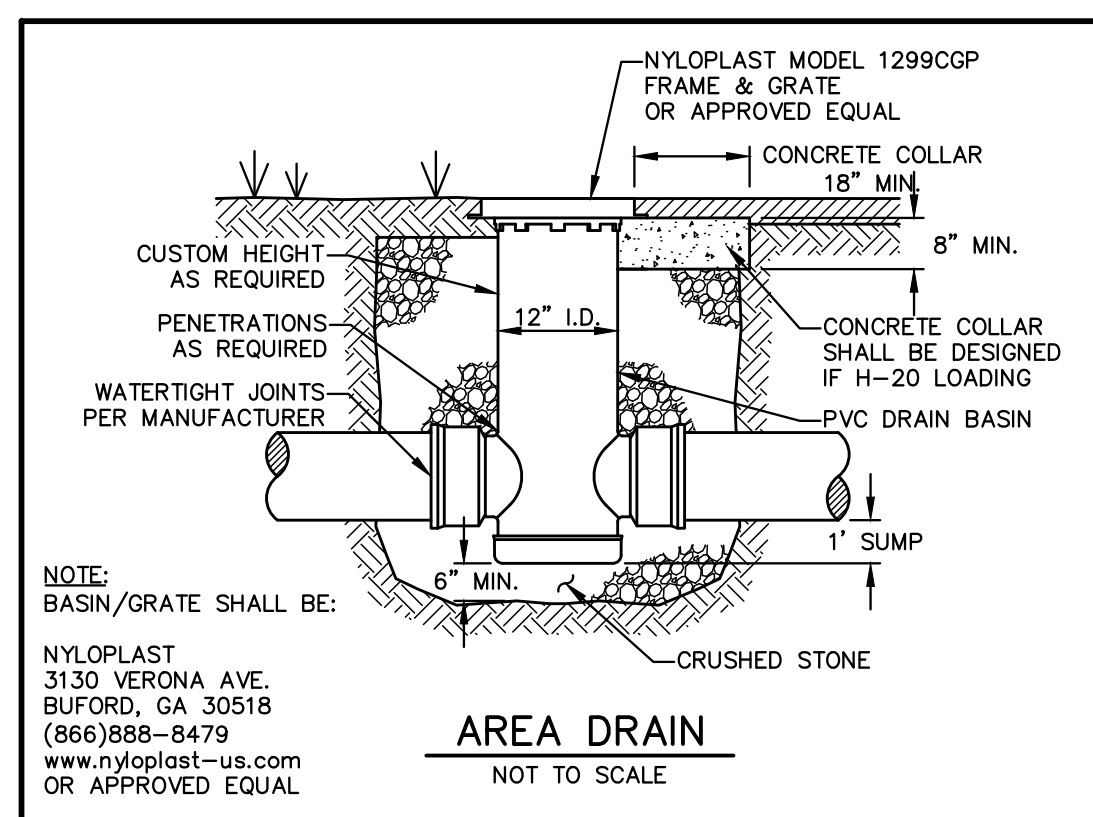
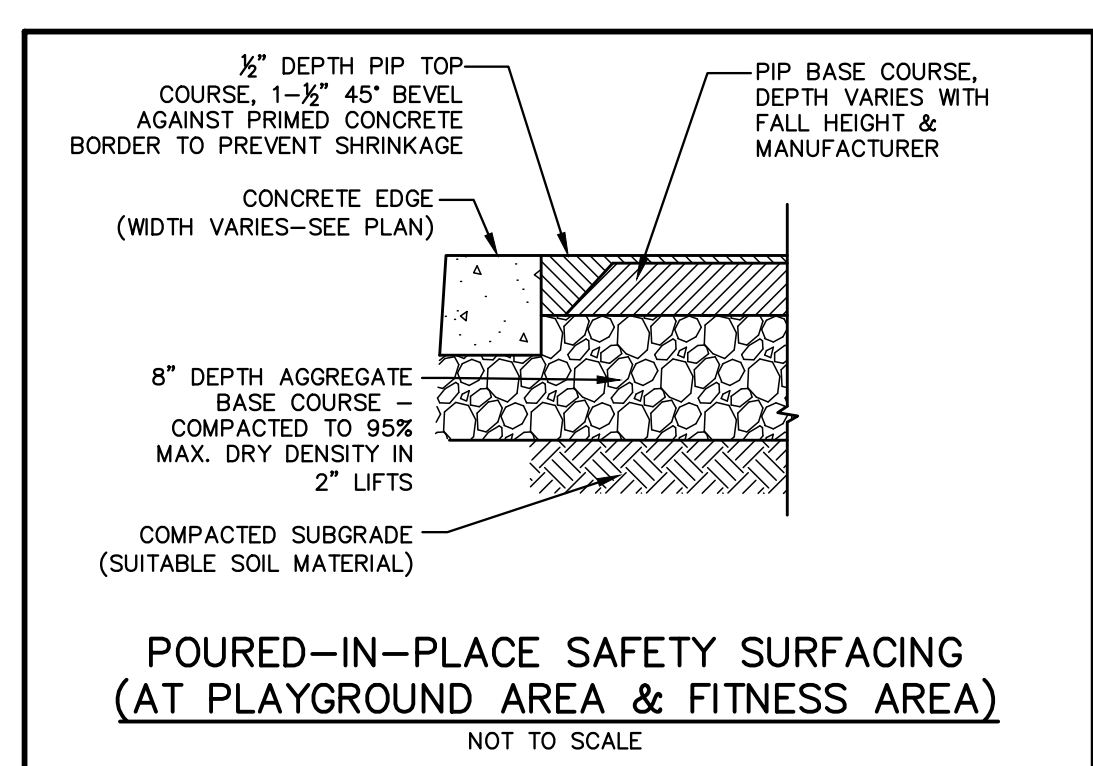
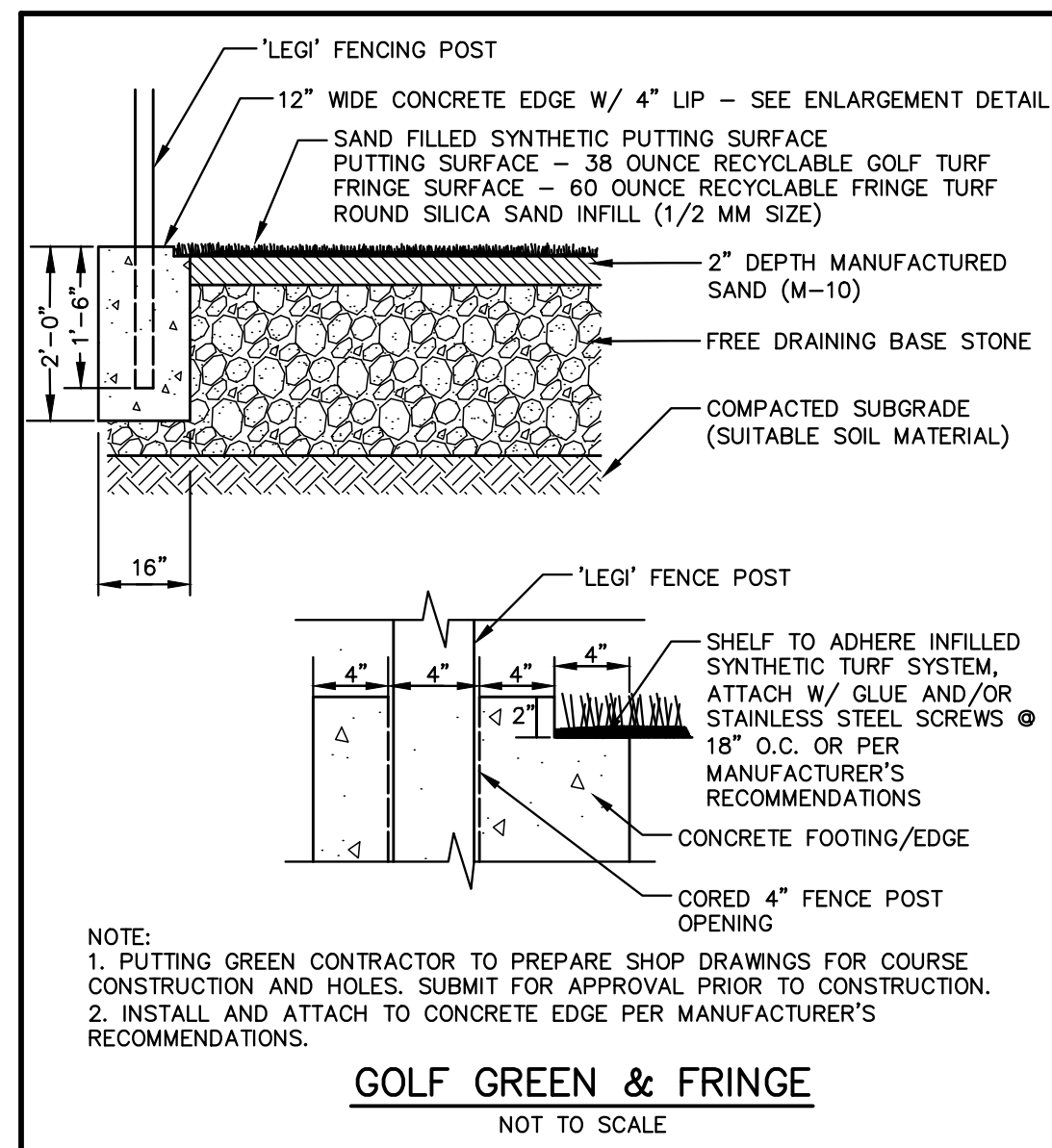
SCALE: AS NOTED DATE: MAY 3, 2019

SITE DETAILS

B+T JOB NO.2992.00
B+T PLAN NO. 299200P010C-003
C5.1



TRAFFIC SIGN SUMMARY			
M.U.T.C.D. NUMBER	SPECIFICATIONS		DESCRIPTION
	WIDTH	HEIGHT	
K-1829	18"	24"	RIGHT TURN ONLY
R3-2	24"	24"	[No Turn on Red Sign]
X-R5-1	30"	30"	NO THROUGH TRUCKS ENTER
R7-8A	12"	6"	VAN ACCESSIBLE



FOR NOTES, REFERENCES AND LEGEND SEE SHEET C1.1.

BEALS AND THOMAS, INC. SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPIING, RECORDING OR OTHERWISE WITHOUT THE PRIOR WRITTEN PERMISSION OF BEALS AND THOMAS, INC. EXCEPT THAT ANY REGULATORY AUTHORITY MAY REPRODUCE AND TRANSMIT COPIES AS REQUIRED IN CONJUNCTION WITH PERFORMANCE OF OFFICIAL BUSINESS UNDER ITS JURISDICTION. ANY MODIFICATIONS TO THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF BEALS AND THOMAS, INC. SHALL RENDER IT INVALID AND UNUSABLE.

PREPARED FOR:
CITY OF WALTHAM
610 MAIN STREET
WALTHAM, MASSACHUSETTS

RECORD OWNER:
CITY OF WALTHAM
4600/39
054-004-0005

COMMONWEALTH OF MASSACHUSETTS
JEFFREY R. MURPHY
CIVIL
No. 51800
REGISTERED PROFESSIONAL ENGINEER

Jeff R. Murphy
5/28/2019

COMMONWEALTH OF MASSACHUSETTS
REGINA E. WARD
CIVIL
No. 1596
REGISTERED LANDSCAPE ARCHITECT

Regina Ward
5/28/2019

COPYRIGHT (C) BY BEALS AND THOMAS, INC.
ALL RIGHTS RESERVED

PREPARED BY:
BEALS + THOMAS
Civil Engineers + Landscape Architects +
Land Surveyors + Planners +
Environmental Specialists

BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, Massachusetts 01772-2104
T 508.366.0560 | www.bealsandthomas.com

ISSUE DATE	DESCRIPTION
05/28/2019	ADDENDUM 3
05/24/2019	ADDENDUM 2
05/03/2019	ISSUED FOR BIDDING

DES	DWN	CHK'D	APP'D

PROJECT:
CORNELIA WARREN PARK
WALTHAM,
MASSACHUSETTS

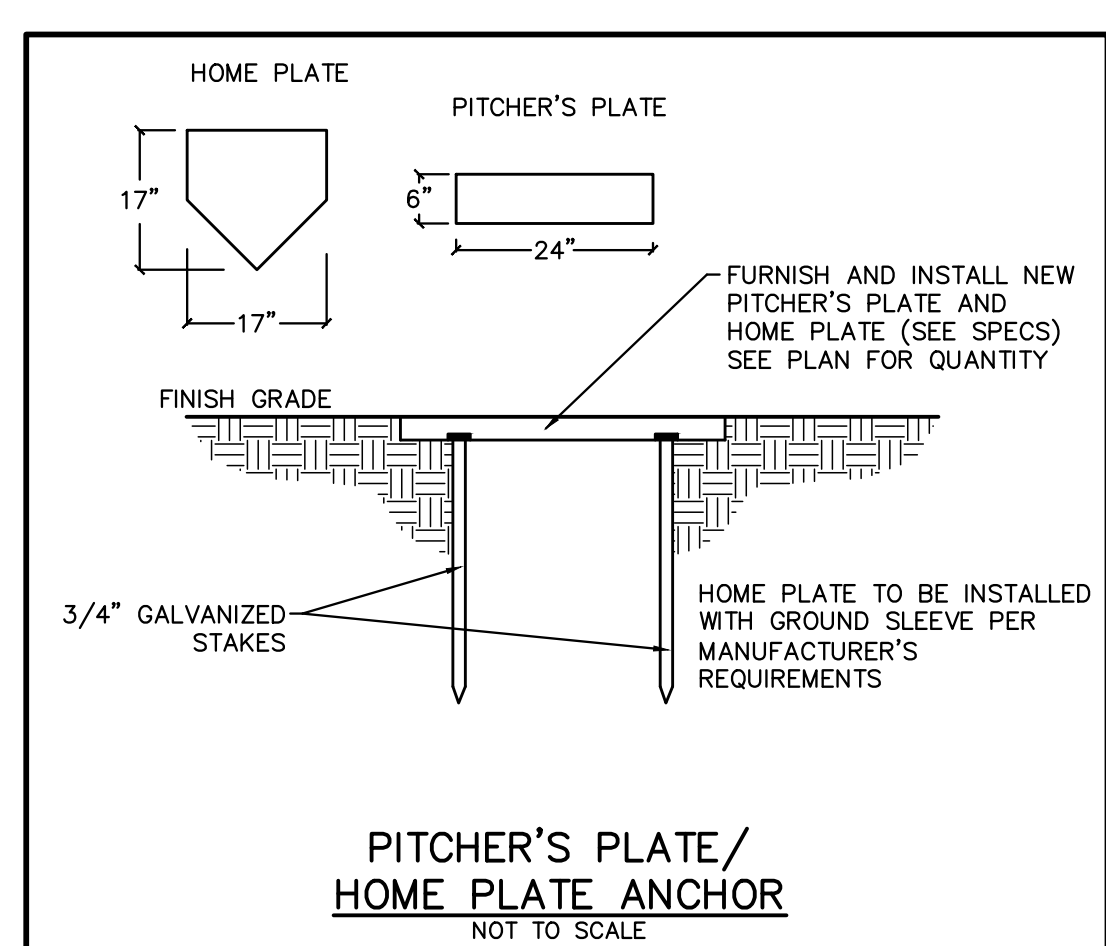
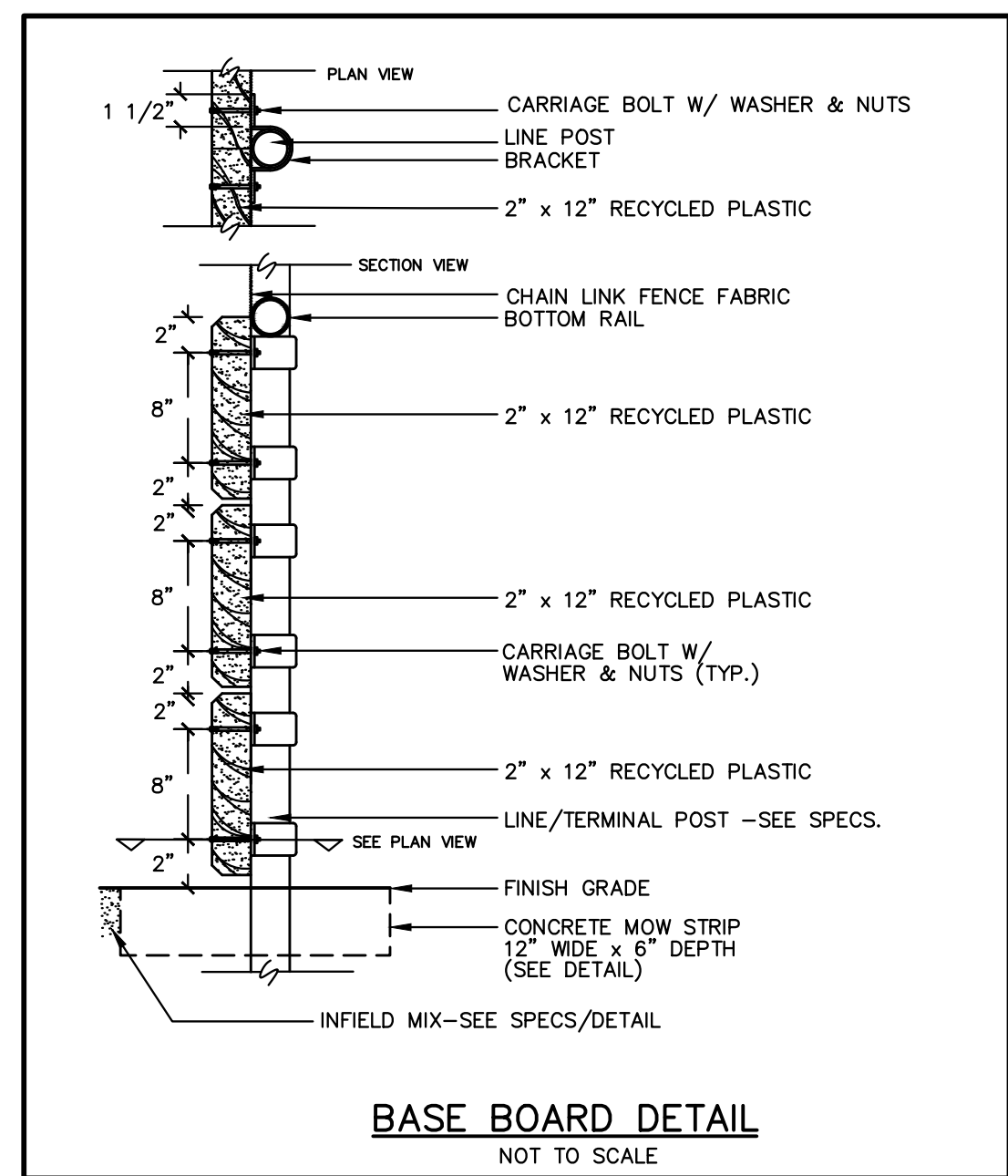
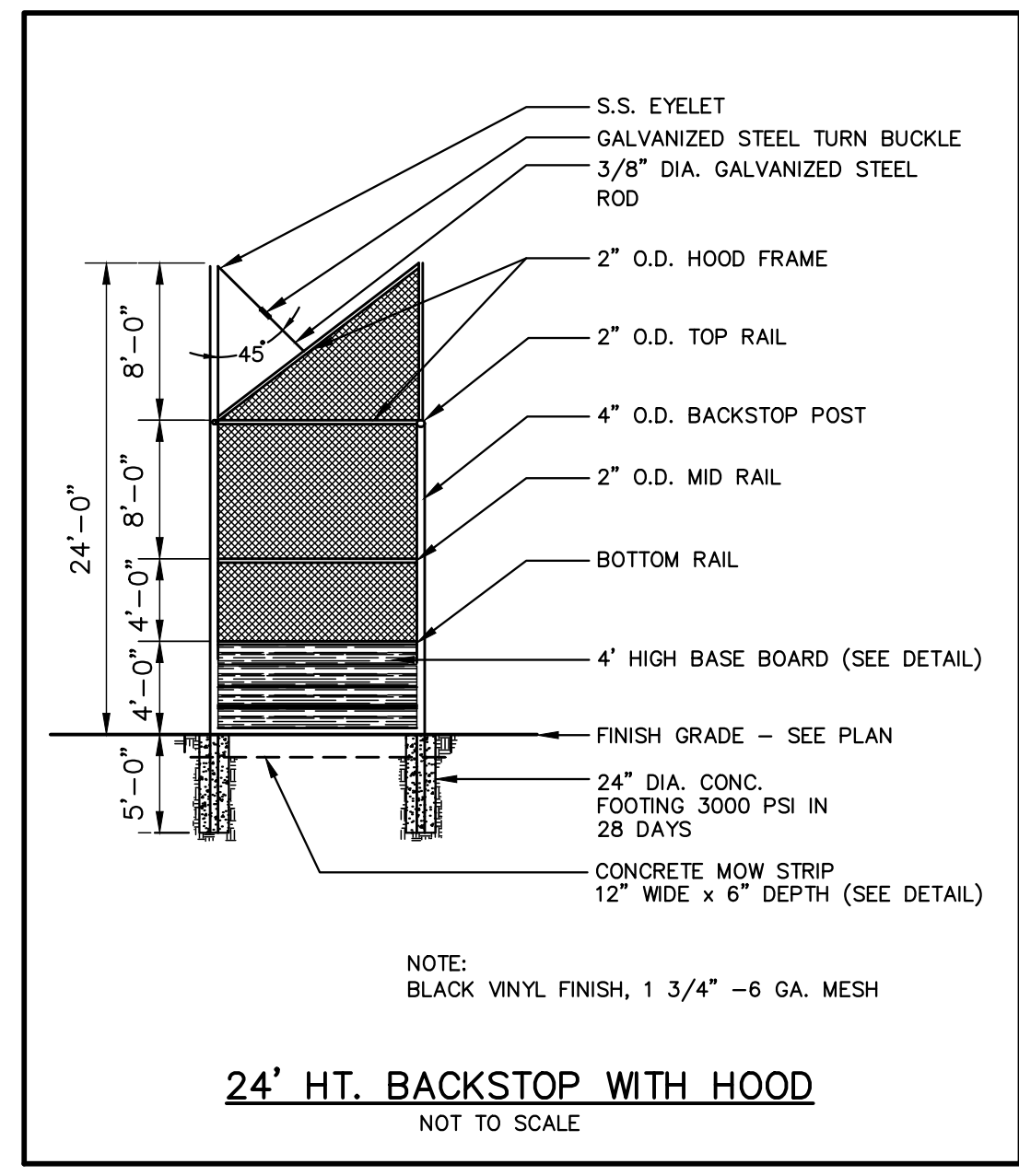
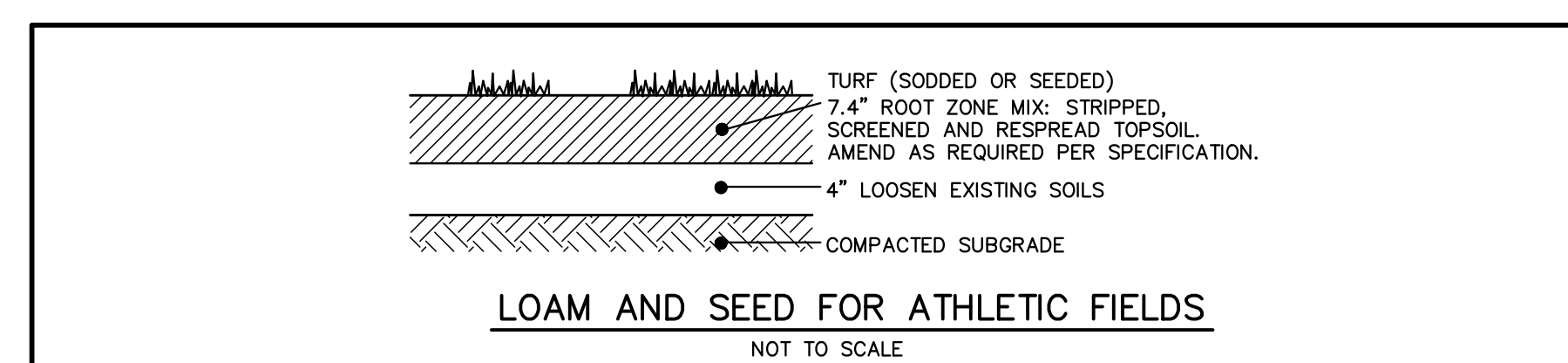
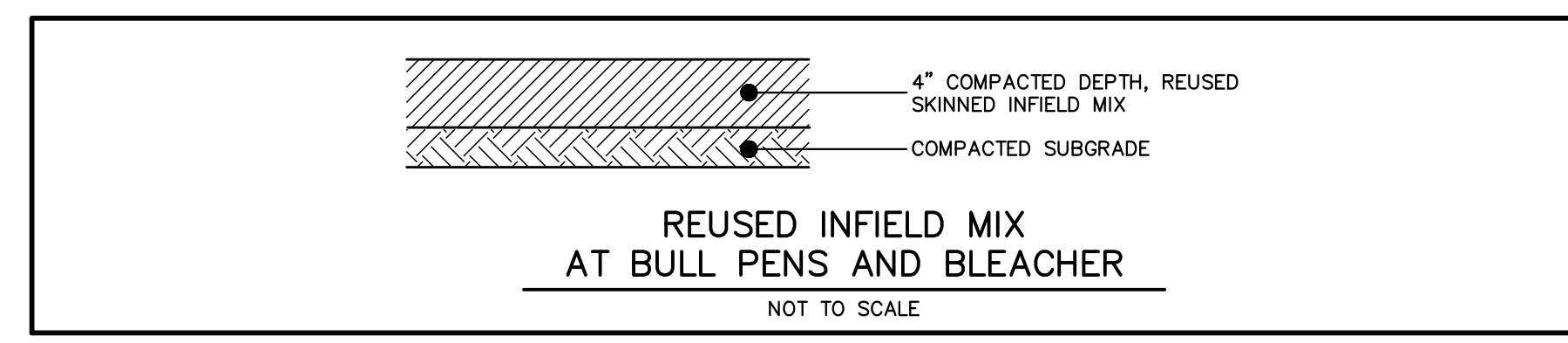
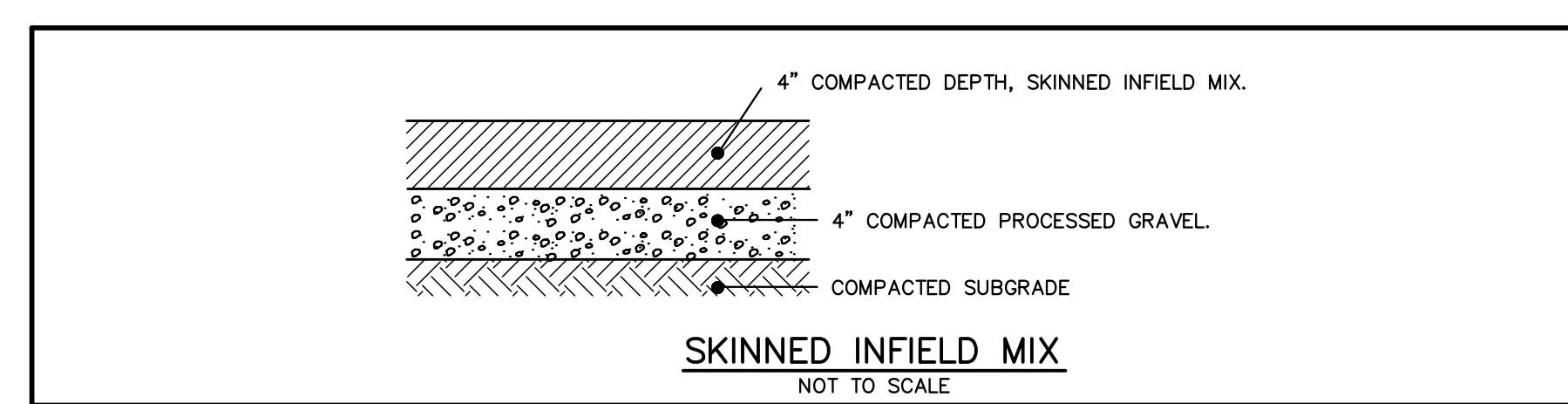
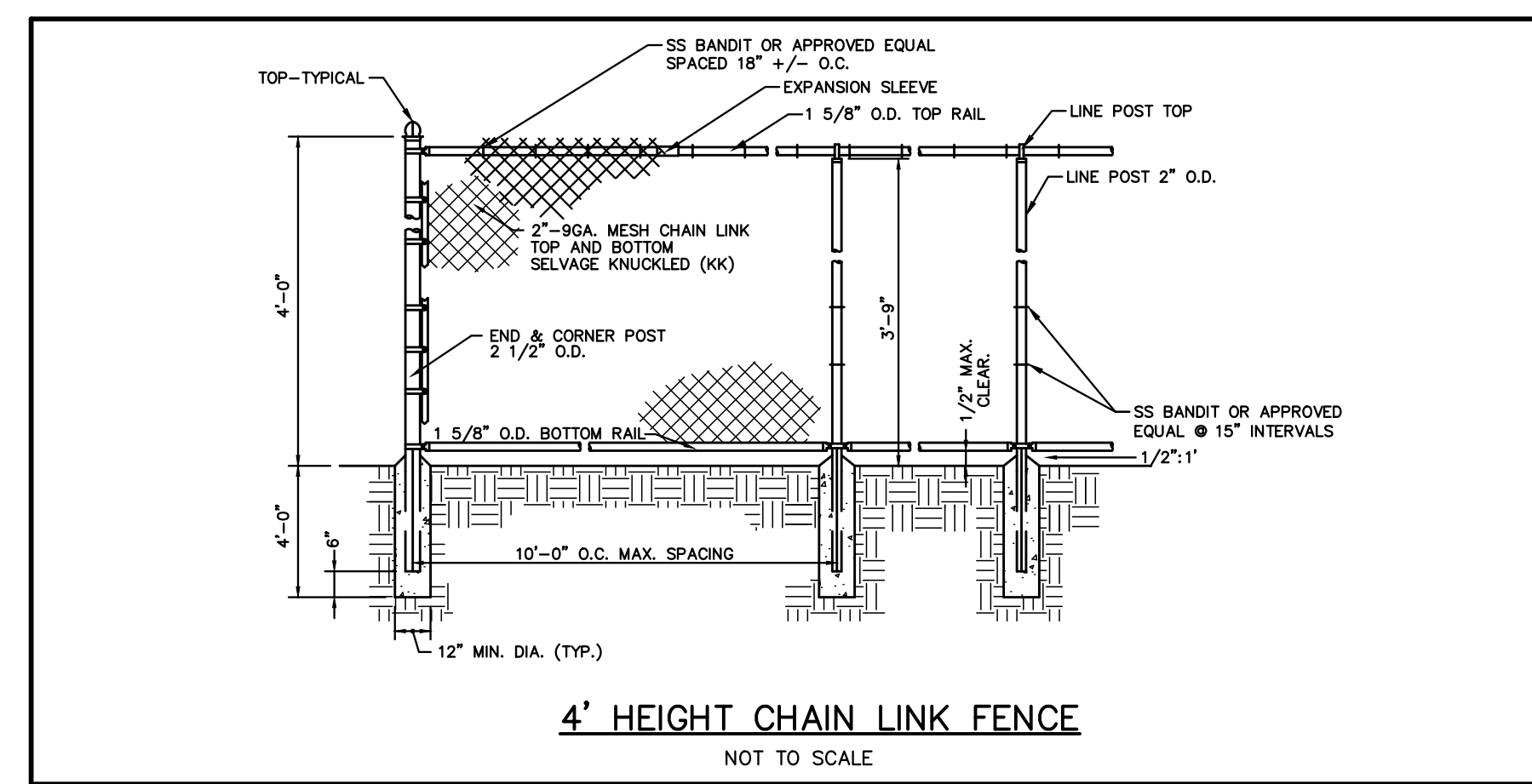
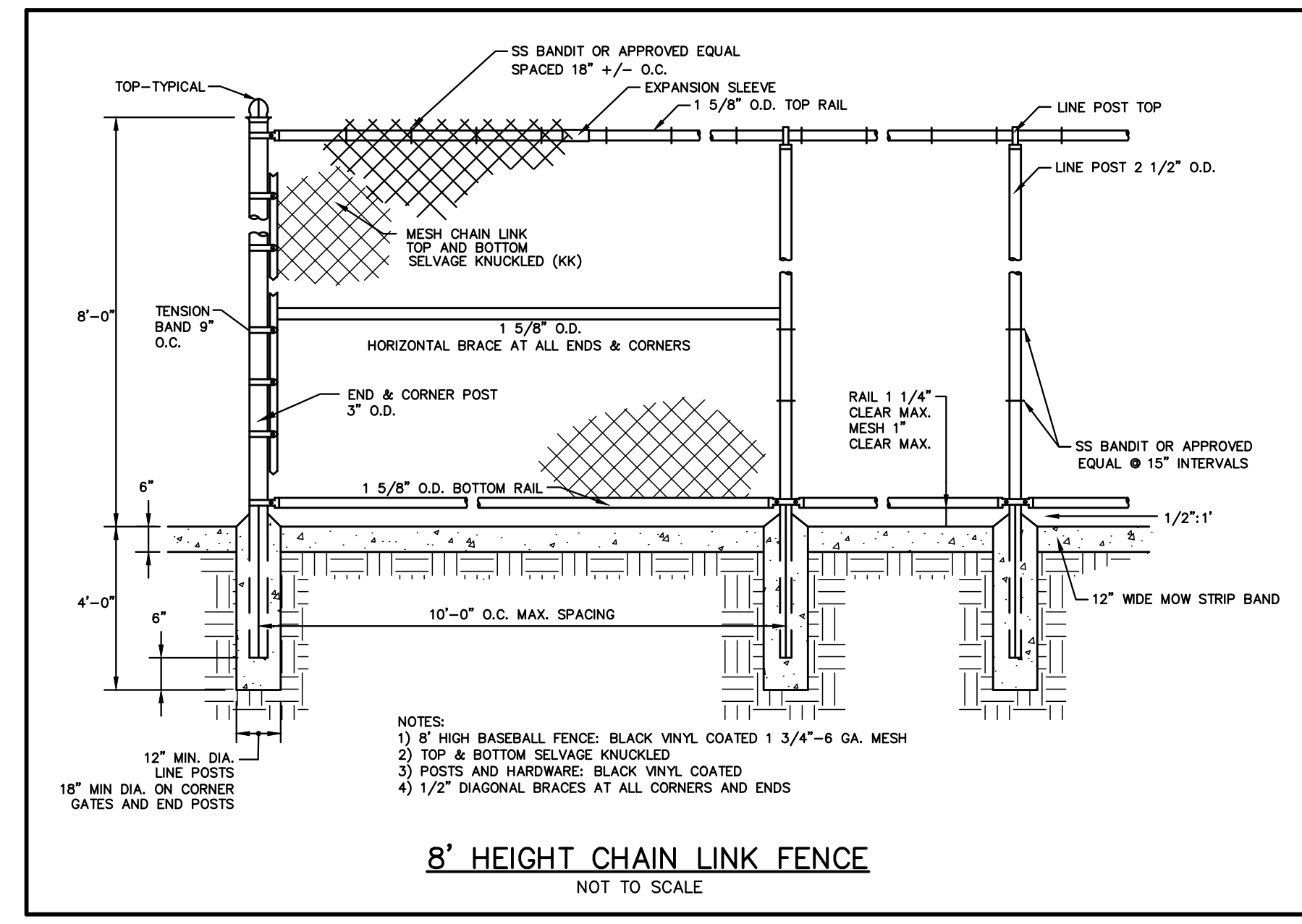
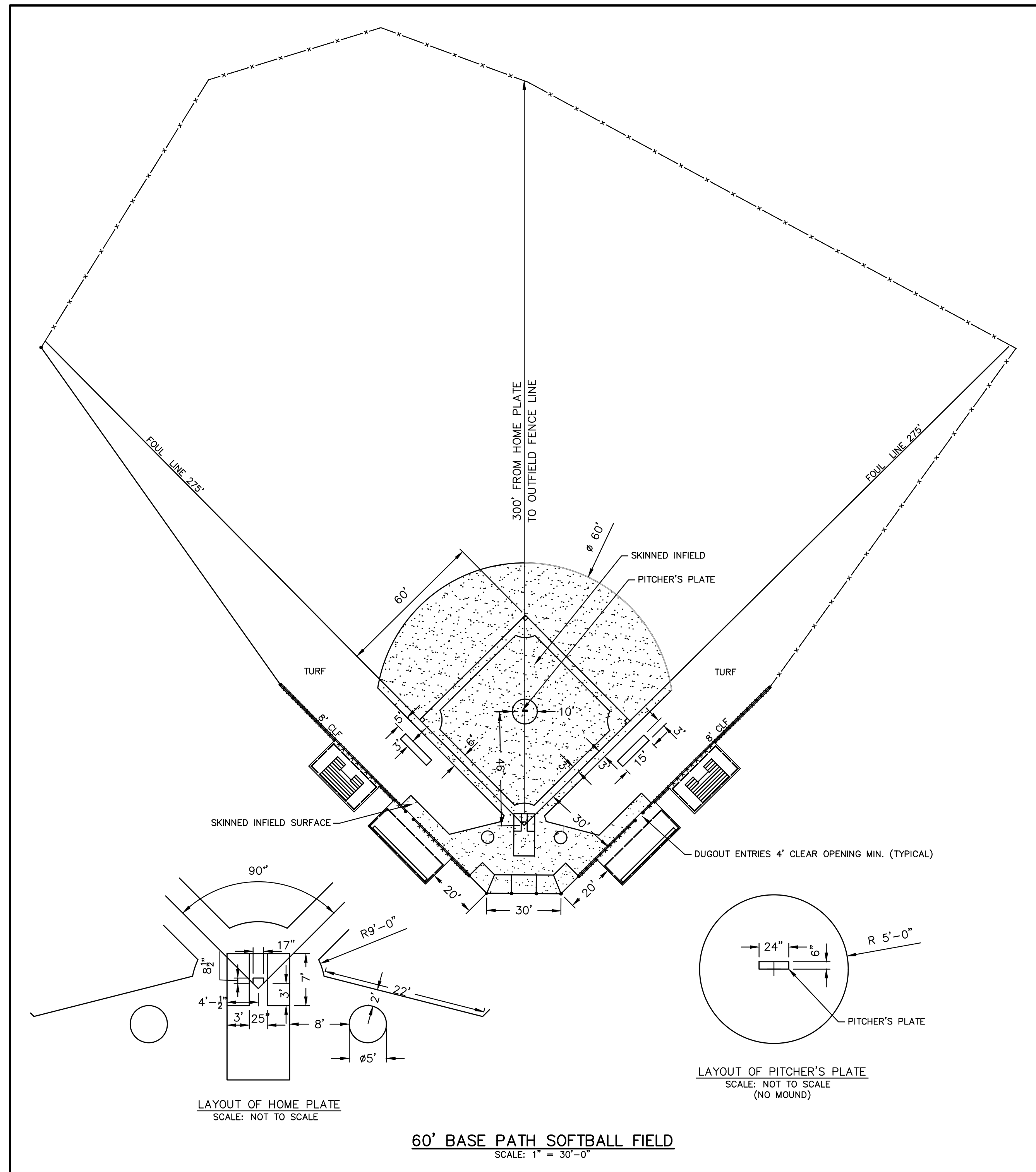
SCALE: AS NOTED DATE: MAY 3, 2019

SITE DETAILS

B+T JOB NO.2992.00

B+T PLAN NO.
29920P010C-004

C5.2



FOR NOTES, REFERENCES AND LEGEND SEE SHEET C1.1.

BEALS AND THOMAS, INC. SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES, OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE WITHOUT THE PRIOR WRITTEN PERMISSION OF BEALS AND THOMAS, INC. EXCEPT THAT ANY REGULATORY AUTHORITY MAY REPRODUCE AND TRANSMIT COPIES AS REQUIRED IN CONJUNCTION WITH PERFORMANCE OF OFFICIAL BUSINESS UNDER ITS JURISDICTION. ANY MODIFICATIONS TO THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF BEALS AND THOMAS, INC. SHALL RENDER IT INVALID AND UNUSABLE.

PREPARED FOR:
CITY OF WALTHAM
610 MAIN STREET
WALTHAM, MASSACHUSETTS

RECORD OWNER:
CITY OF WALTHAM
4600/39
054-004-0005

COPYRIGHT (C) BY BEALS AND THOMAS, INC. ALL RIGHTS RESERVED

PREPARED BY:
BEALS + THOMAS
Civil Engineers + Landscape Architects +
Land Surveyors + Planners +
Environmental Specialists

BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, Massachusetts 01772-2104
T 508.366.0560 | www.bealsandthomas.com

5			
4			
3			
2			
1	05/28/2019 ADDENDUM 3 - FOR DATE ONLY		
0	05/03/2019 ISSUED FOR BIDDING		
ISSUE DATE	DESCRIPTION		
DES	DWN	CHK'D	APP'D

PROJECT:
CORNELIA WARREN PARK
WALTHAM, MASSACHUSETTS

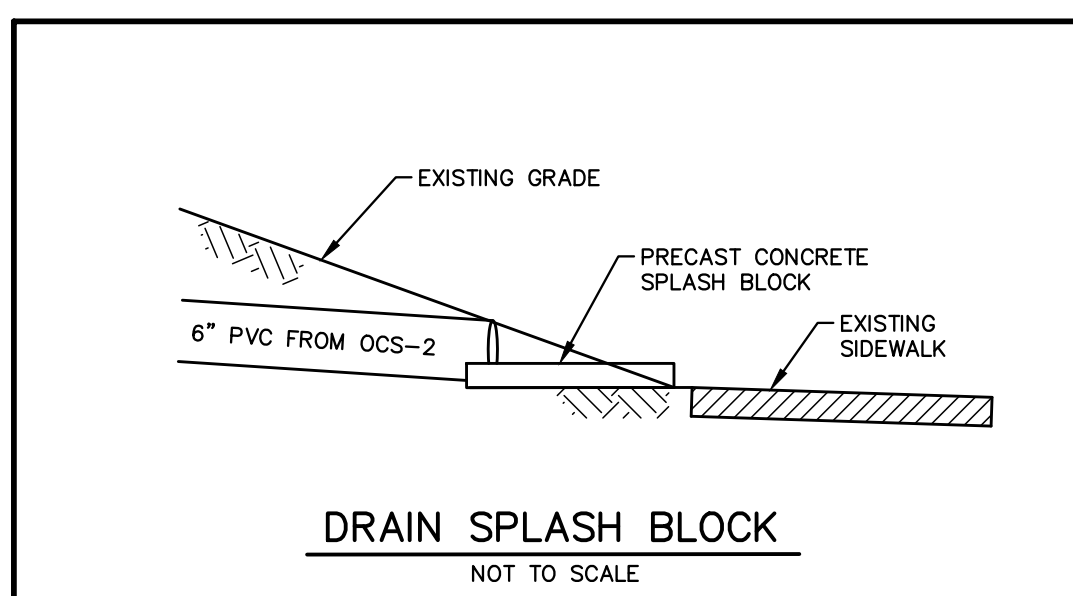
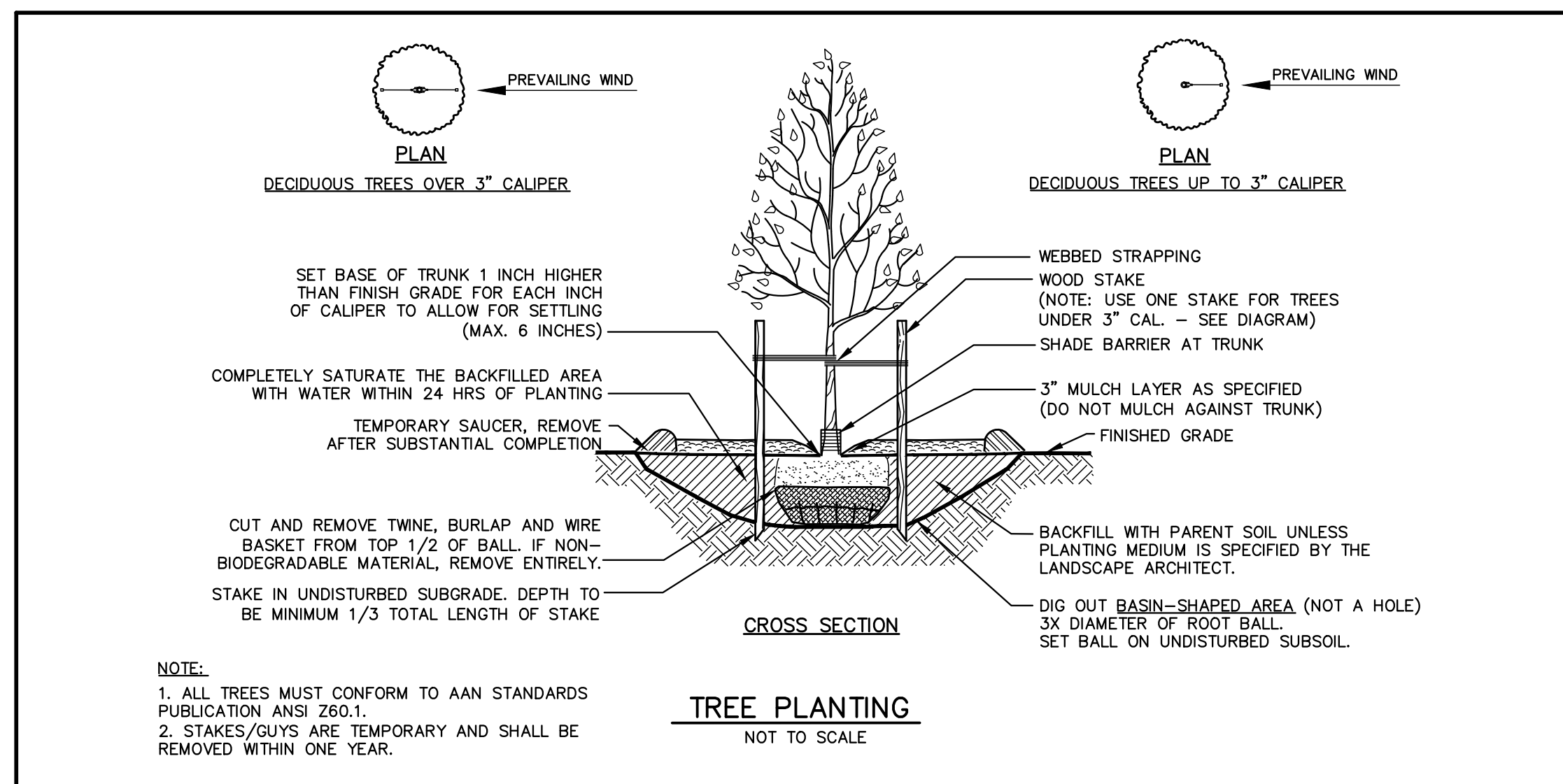
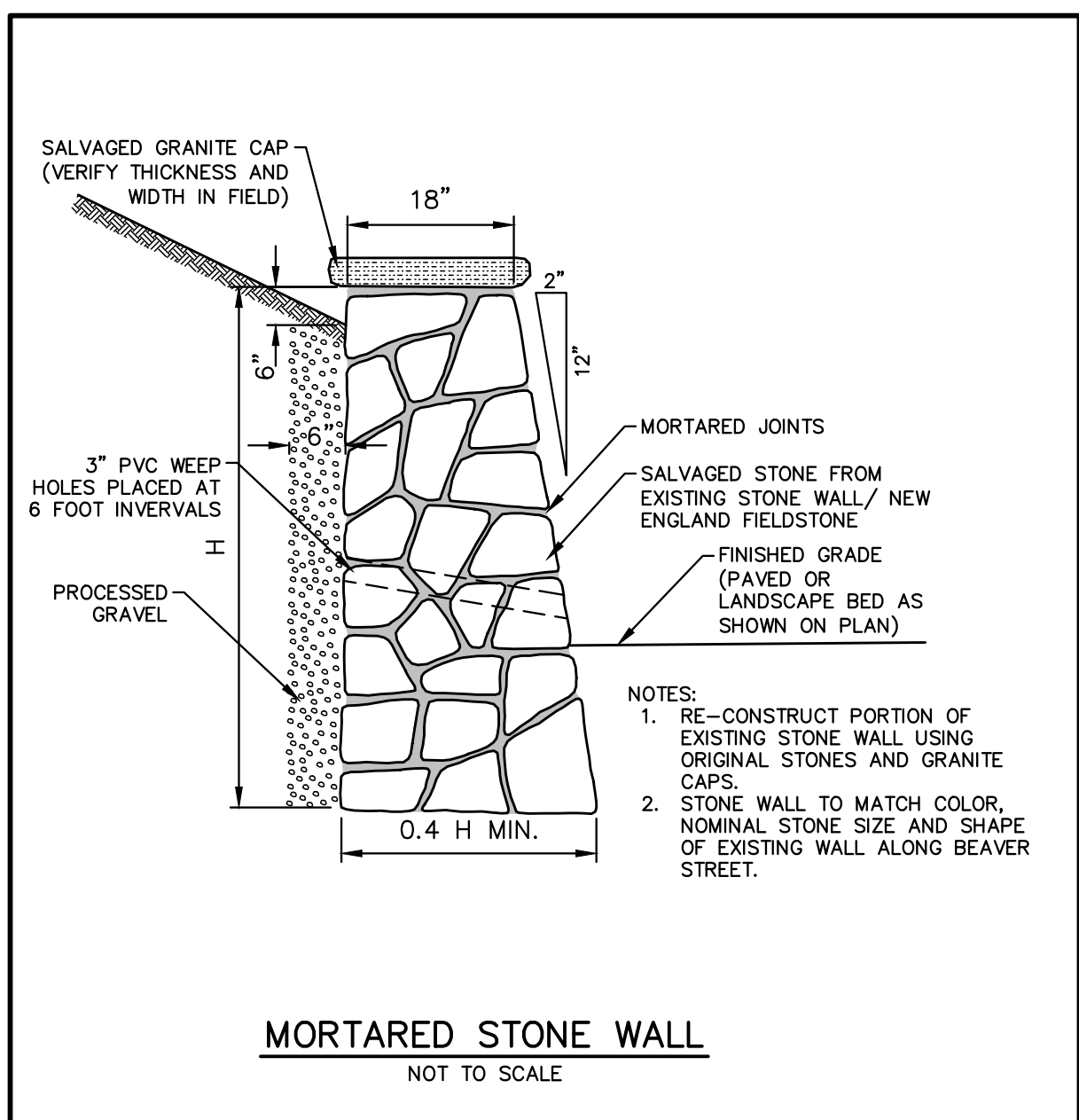
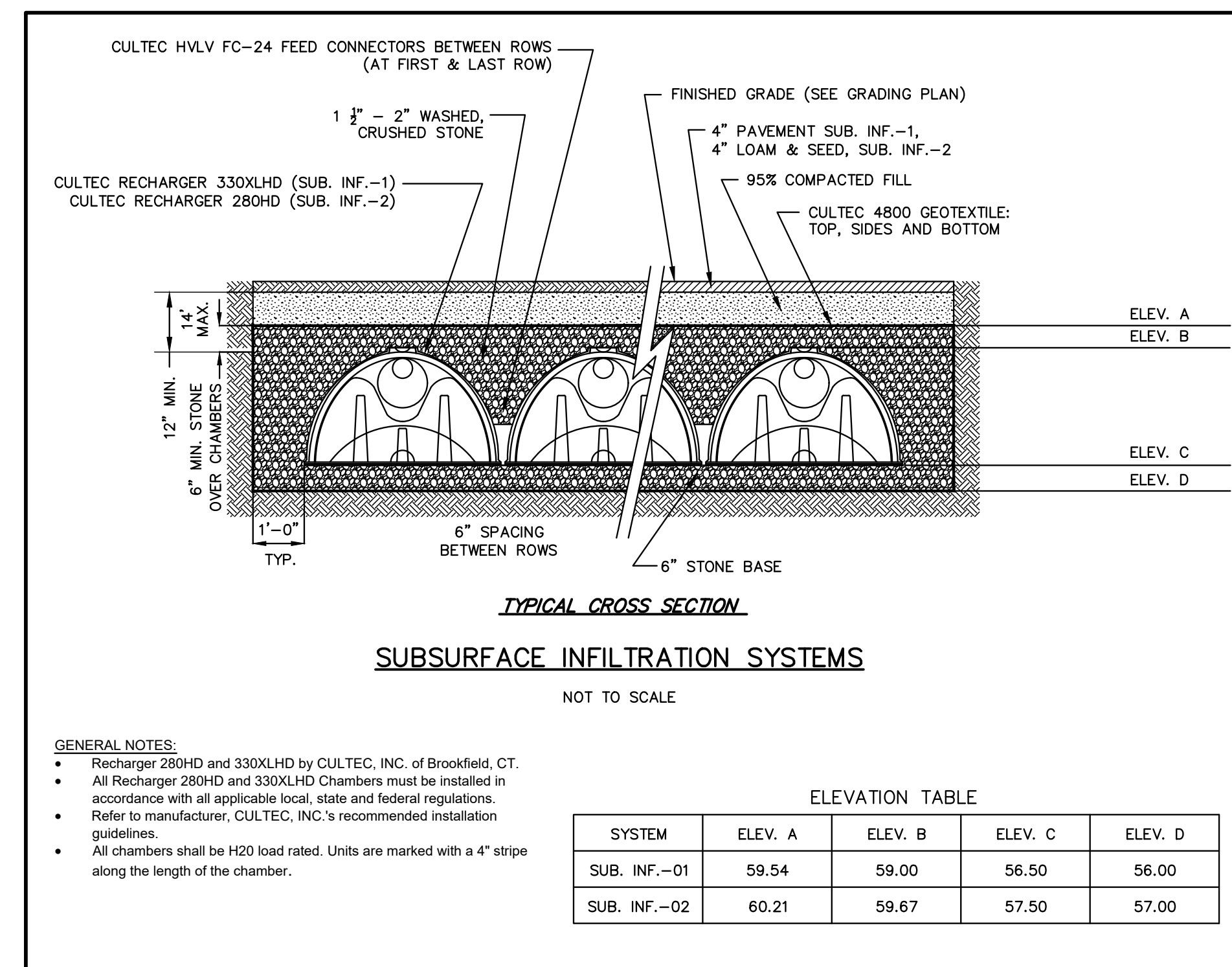
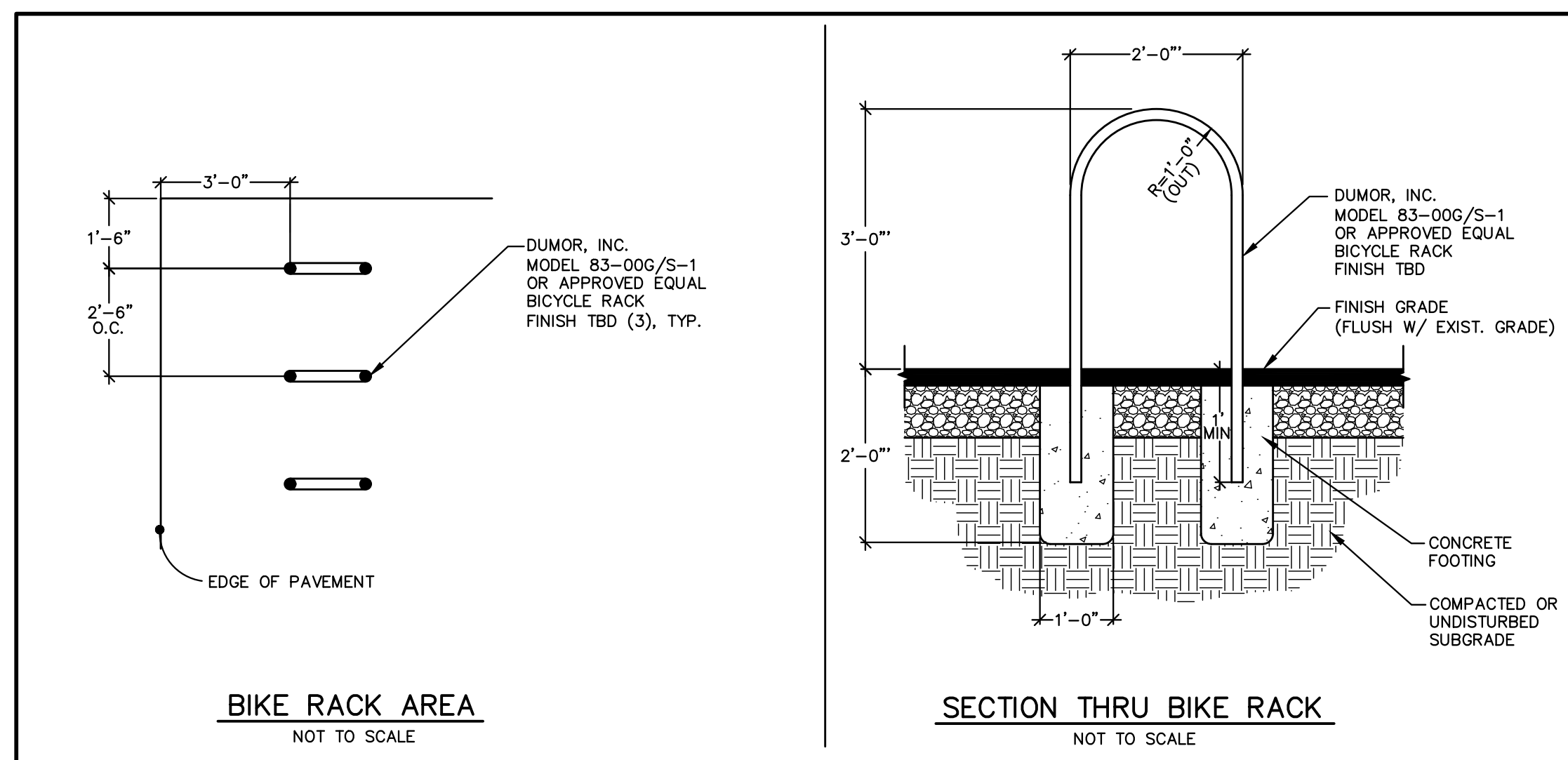
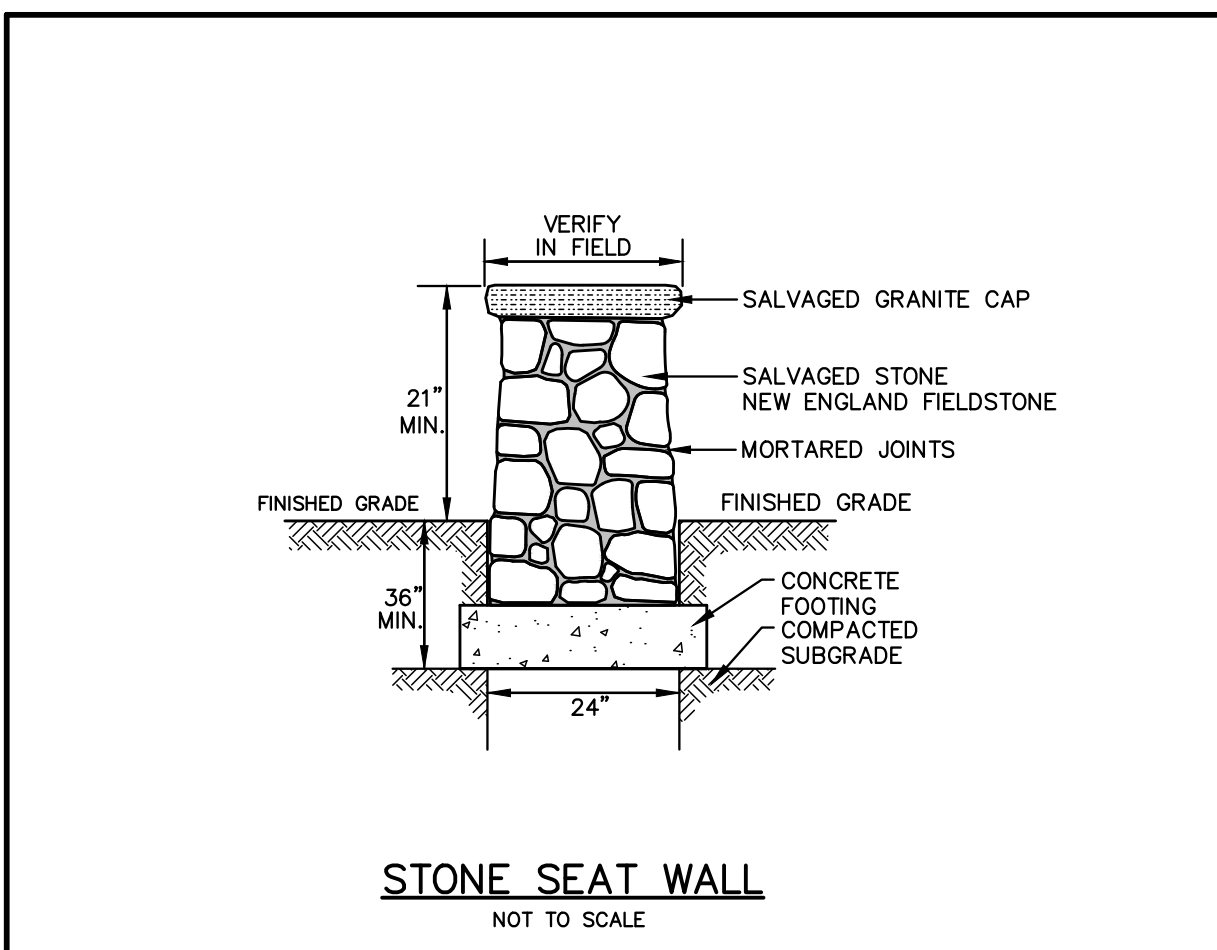
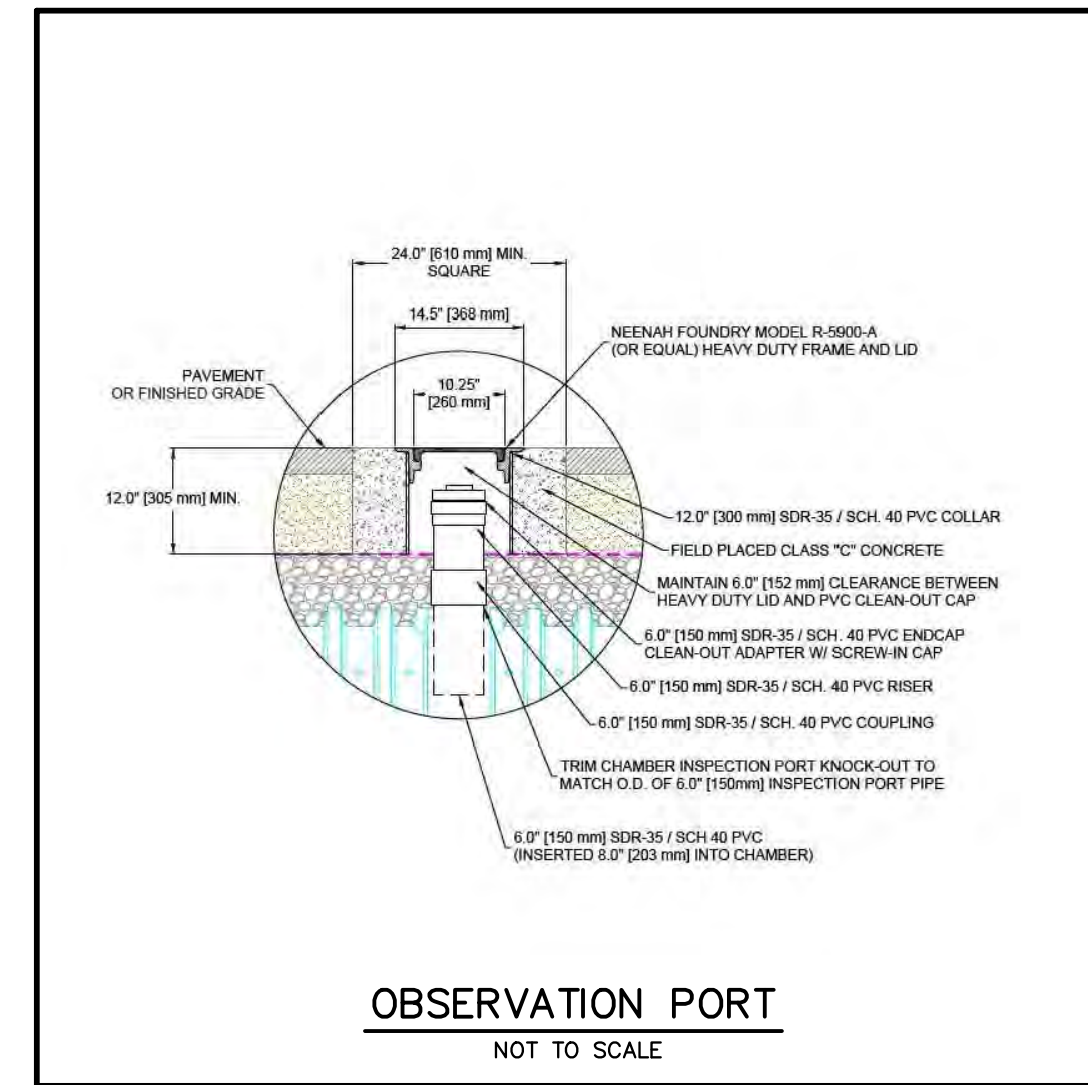
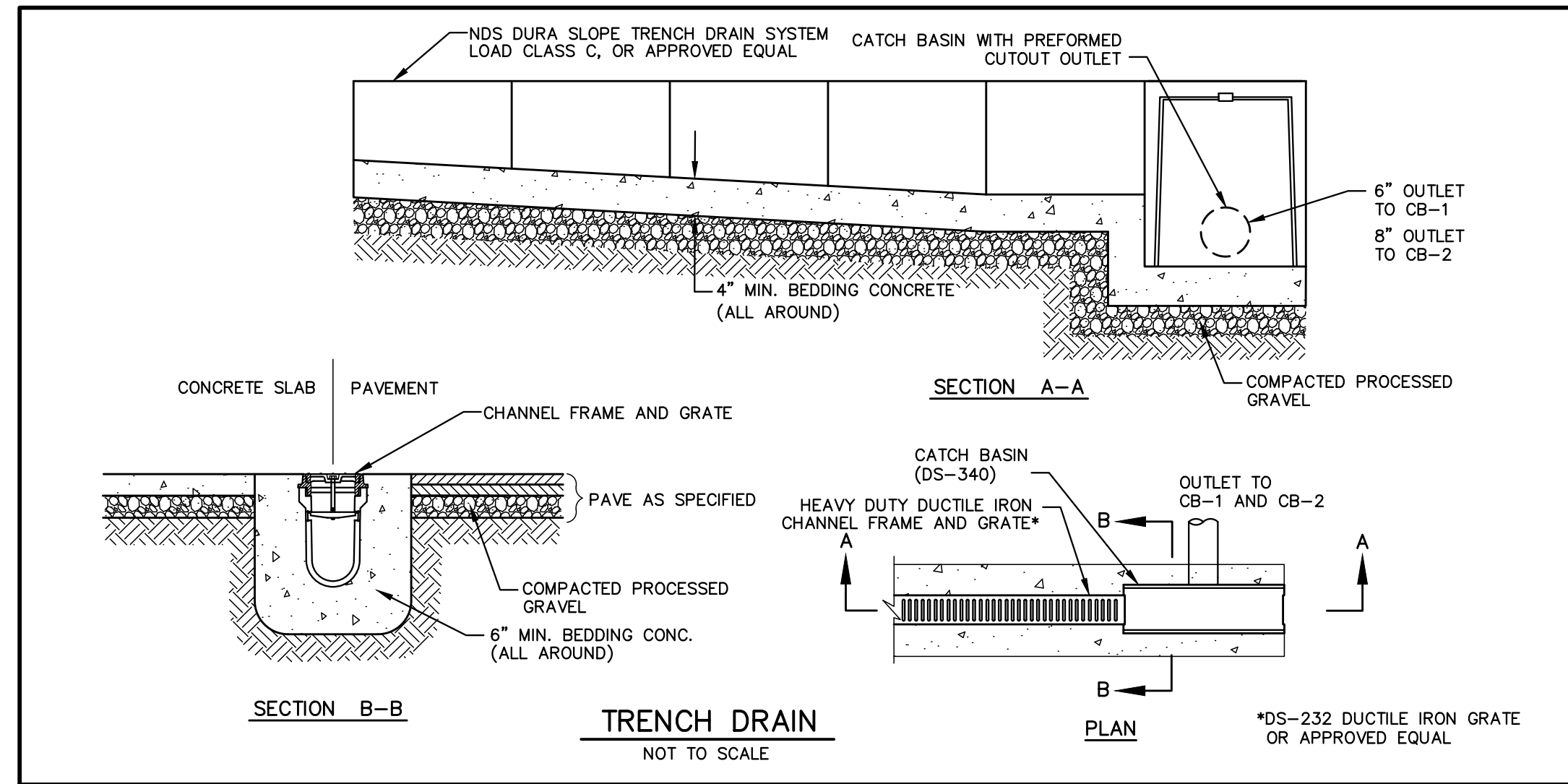
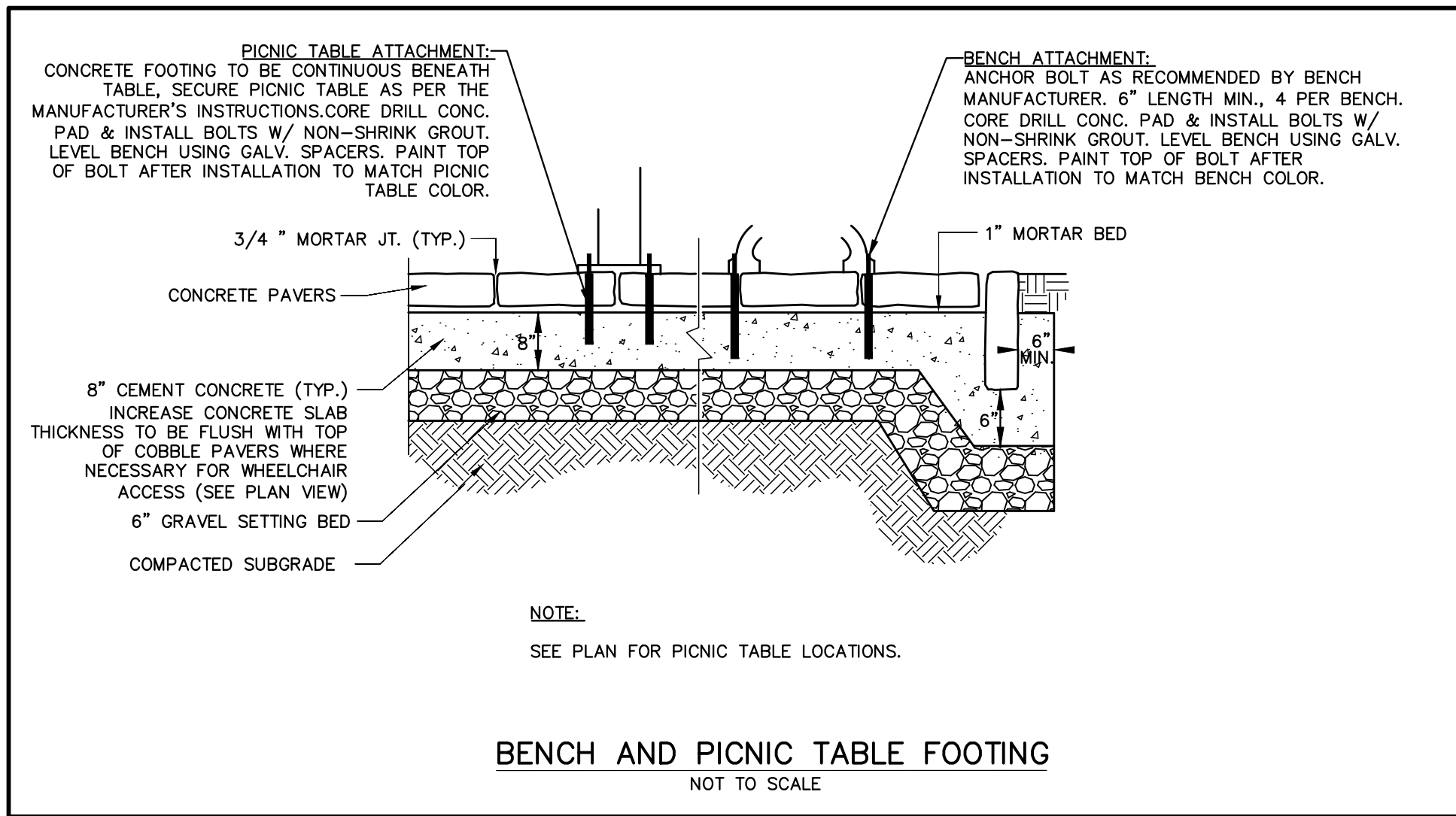
SCALE: AS NOTED DATE: MAY 3, 2019

SITE DETAILS

B+T JOB NO.2992.00

B+T PLAN NO. 299200P10C-005

C5.3



VORTSENTRY HS DESIGN NOTES

THE STANDARD SOLID COVER CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW.

Model	Manhole Diameter (Ø)	Typical Total Diameter Min. to Outside Bottom A	Typical Distance Rim to Invert B	Typical Depth Below Invert (FLOOR) C	Approximate Minimum Distance Rim to Invert	Maximum Pipe Diameter (Ø)						
H28	3	3.60	18.18	3.10	4.88	1.54	5.58	11.02	3.50	8.91	18	450
H36	4	4.50	22.50	4.24	6.00	1.83	6.75	20.57	4.00	11.22	24	600
H50	5	5.50	27.50	4.81	6.50	1.98	7.36	24.28	4.82	14.17	30	750
H57	6	6.50	32.50	5.39	6.75	2.08	8.13	27.98	5.58	17.10	36	900
H64	7	7.50	37.50	5.97	7.70	2.24	9.00	31.68	6.38	19.12	42	1050
H68	8	8.50	42.50	6.55	8.50	2.39	10.14	35.38	6.81	21.11	48	1200

SITE SPECIFIC DATA REQUIREMENTS

CONTRACTOR TO PROVIDE	CONTRACTOR TO PROVIDE	CONTRACTOR TO PROVIDE	CONTRACTOR TO PROVIDE
WATER QUALITY FLOW RATE (GFS)	PEAK FLOW RATE (GFS)	RETURNS PERIOD OF PEAK FLOW (HRS)	PIPE DATA: LE MATERIAL DIAMETER
INLET PIPE	OUTLET PIPE	INLET PIPE	OUTLET PIPE
INLET ELEVATION	OUTLET ELEVATION	INLET ELEVATION	OUTLET ELEVATION
INLET PIPE DIAMETER (Ø)	OUTLET PIPE DIAMETER (Ø)	INLET PIPE DIAMETER (Ø)	OUTLET PIPE DIAMETER (Ø)

FRAME AND COVER (OF SQUARE) N.T.S.

FRAME AND GRATE (OF SQUARE) N.T.S.

GENERAL NOTES:

- CONTRACTOR TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- DIMENSIONS MARKED WITH * ARE REVISIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT PLEASE CONTACT YOUR CULTEC ENGINEER'S SOLUTIONS REPRESENTATIVE: www.cultech.com
- VORTSENTRY HS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THE DRAWINGS.
- STRUCTURE SHALL BE SET AT THE ELEVATION AND DRAINAGE SHALL BE AS NOTED ON DRAWINGS. ASSUMING GROUNDWATER ELEVATION AT OR BELOW THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.

INSTALLATION NOTES:

- ANY SUBGRADE SETTLEMENT, DEPTH, AND/OR ANTI-FLOATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE PROVIDED BY ENGINEER OF RECORD.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND WEIGHTS OF ALL PARTS AND SET THE VORTSENTRY HS MANHOLE STRUCTURE (IF USING CULTEC'S PROVIDED).
- CONTRACTOR TO RECALL, VERIFY WEIGHTS BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
- CONTRACTOR TO PROVIDE, INSTALL AND GROUT PIPE. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO AVOID ANY EXCESSIVE WATER FLOW INTO THE INVERT MANHOLE. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

VORTSENTRY HS STANDARD DETAIL

WQ-1&2
NOT TO SCALE

PREPARED FOR:

CITY OF WALTHAM
610 MAIN STREET
WALTHAM, MASSACHUSETTS

RECORD OWNER:

CITY OF WALTHAM
4600/39
054-004-0005

COMMONWEALTH OF MASSACHUSETTS
JEFFREY R. MURPHY
CIVIL
No. 51800
REGISTERED PROFESSIONAL ENGINEER

Jeff R. Murphy
5/20/2019

COMMONWEALTH OF MASSACHUSETTS
REGINA E. MARRIOTT
REGISTERED LANDSCAPE ARCHITECT
No. 1586
REGISTERED PROFESSIONAL

Regina Marriott
5/20/2019

COPYRIGHT (C) BY BEALS AND THOMAS, INC.
ALL RIGHTS RESERVED

PREPARED BY:

BEALS + THOMAS
Civil Engineers + Landscape Architects +
Land Surveyors + Planners +
Environmental Specialists

BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, Massachusetts 01772-2104
T 508.366.0560 | www.bealsandthomas.com

DES	DWN	CHK'D	APP'D
5			
4			
3			
2			
1	05/28/2019	ADDENDUM 3	
0	05/03/2019	ISSUED FOR BIDDING	
ISSUE DATE	DESCRIPTION		

PROJECT:

CORNELIA WARREN PARK
WALTHAM,
MASSACHUSETTS

SCALE: AS NOTED DATE: MAY 3, 2019

SITE DETAILS

B+T JOB NO.2992.00

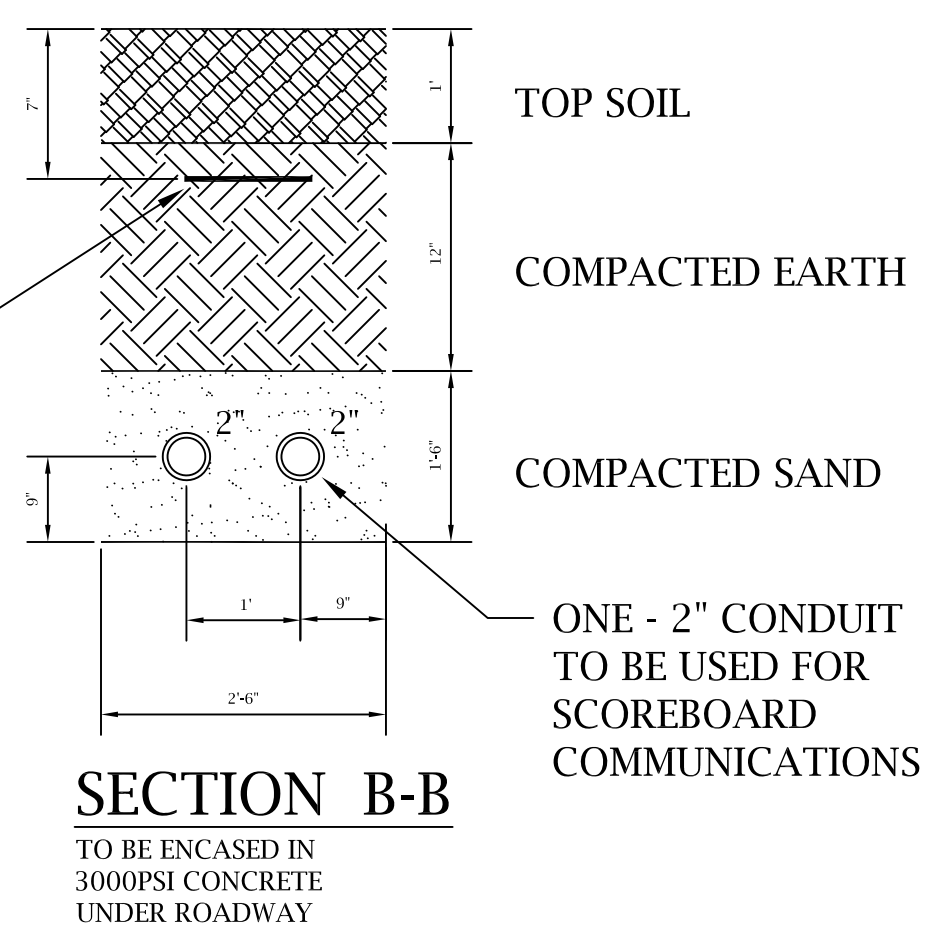
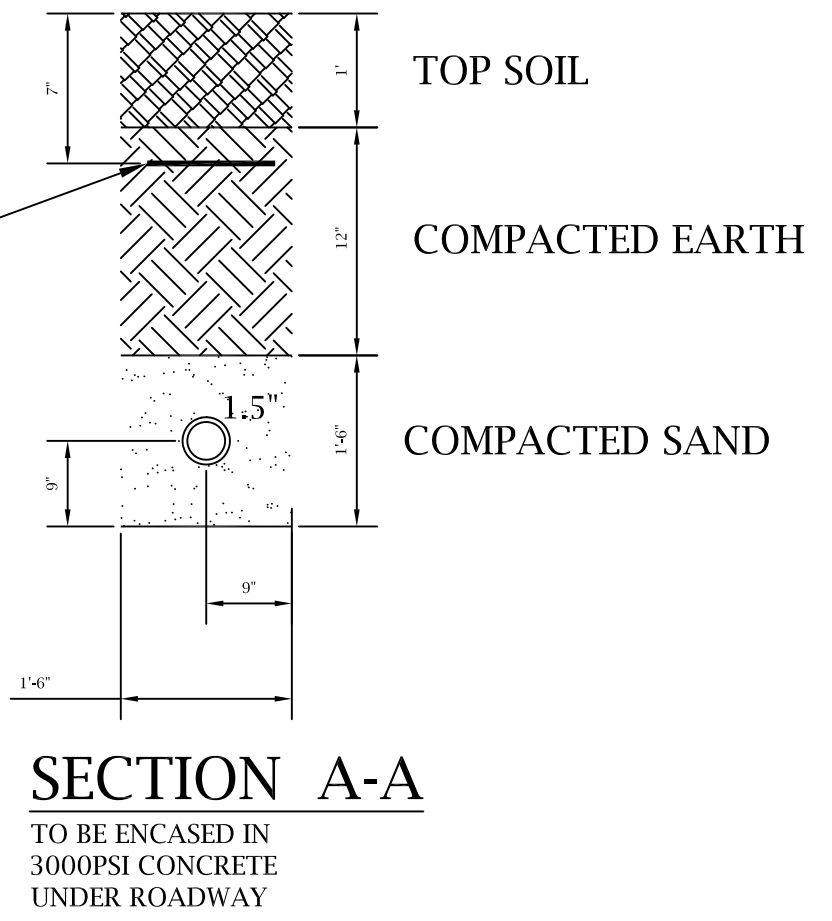
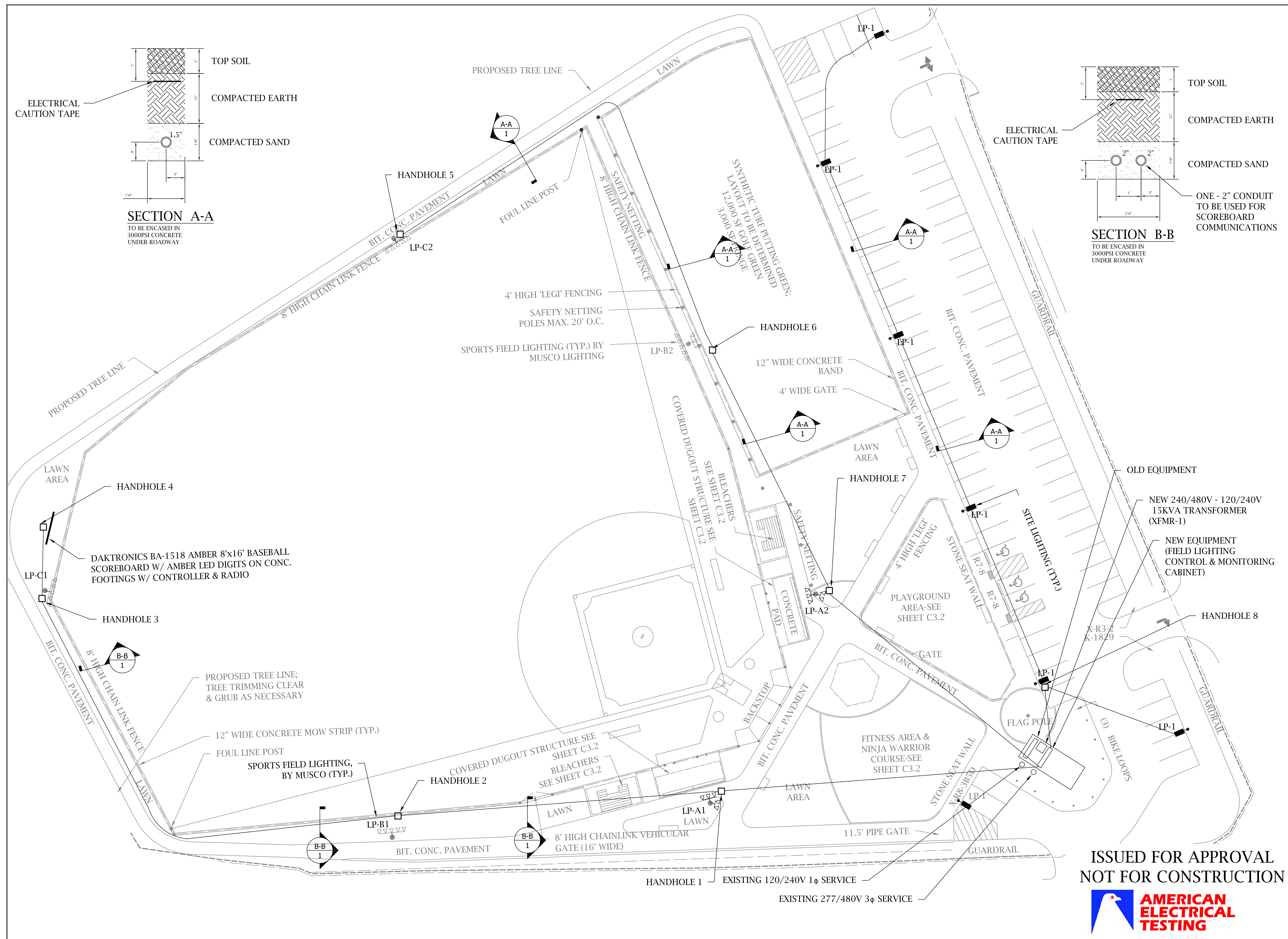
B+T PLAN NO. 29920P010C-006

C5.4

FOR NOTES, REFERENCES AND LEGEND SEE SHEET C1.1.

BEALS AND THOMAS, INC. SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE WITHOUT THE PRIOR WRITTEN PERMISSION OF BEALS AND THOMAS, INC. EXCEPT THAT ANY REGULATORY AUTHORITY MAY REPRODUCE AND TRANSMIT COPIES AS REQUIRED IN CONJUNCTION WITH PERFORMANCE OF OFFICIAL BUSINESS UNDER ITS JURISDICTION. ANY MODIFICATIONS TO THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF BEALS AND THOMAS, INC. SHALL RENDER IT INVALID AND UNUSABLE.



PREPARED FOR:
CITY OF WALTHAM
610 MAIN STREET
WALTHAM, MASSACHUSETTS

COPYRIGHT (C) BY BEALS AND THOMAS, INC.
ALL RIGHTS RESERVED

PREPARED BY:
BEALS + THOMAS
Civil Engineers + Landscape Architects +
Land Surveyors + Planners +
Environmental Specialists

BEALS AND THOMAS, INC.
32 Court Street
Plymouth, Massachusetts 02360-3866
T 508.746.3288 | www.bealsandthomas.com

5			
4			
3			
2			
1			
0			
ISSUE DATE	DESCRIPTION		
DES	DWN	CHK'D	APP'D

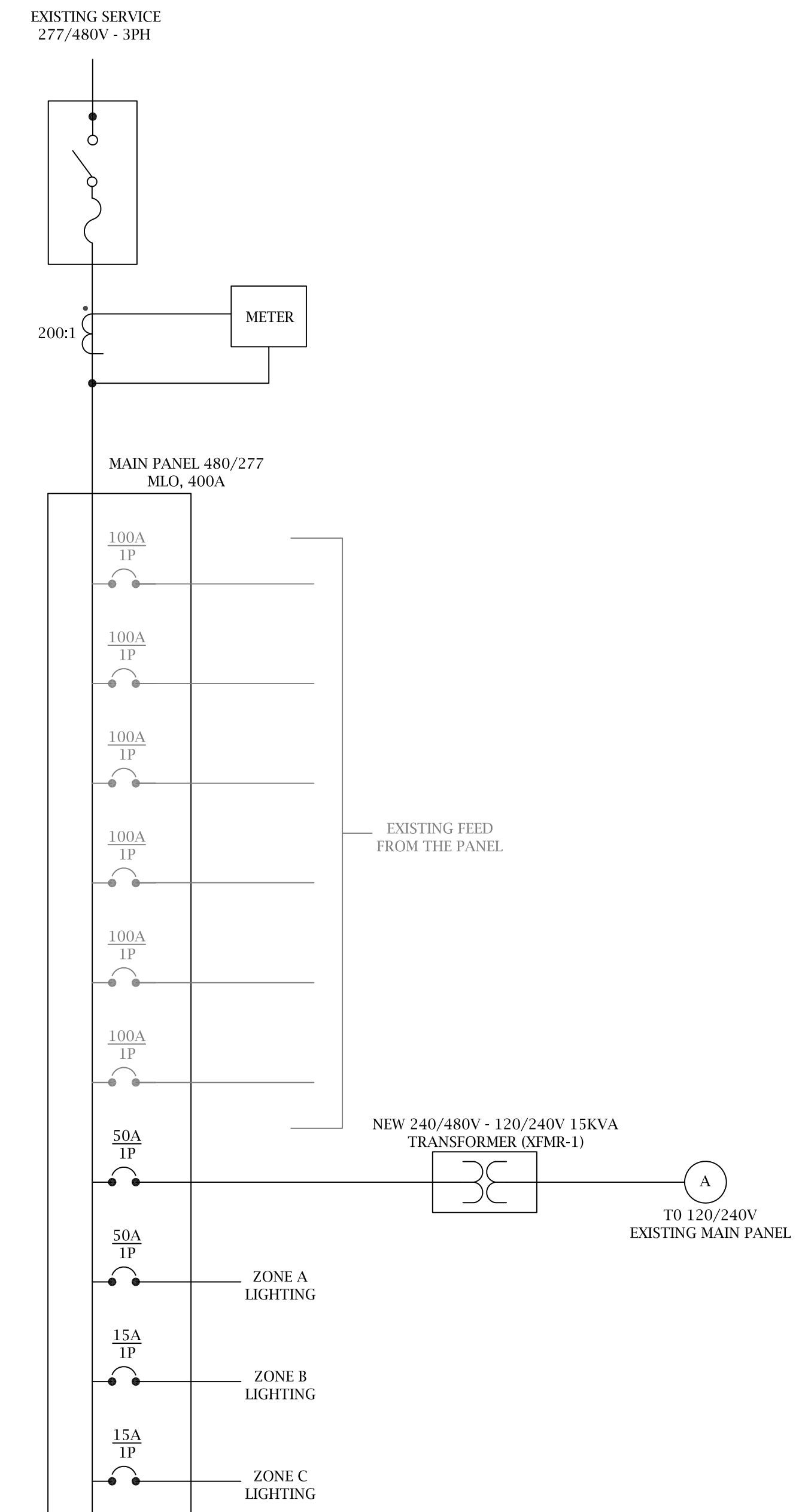
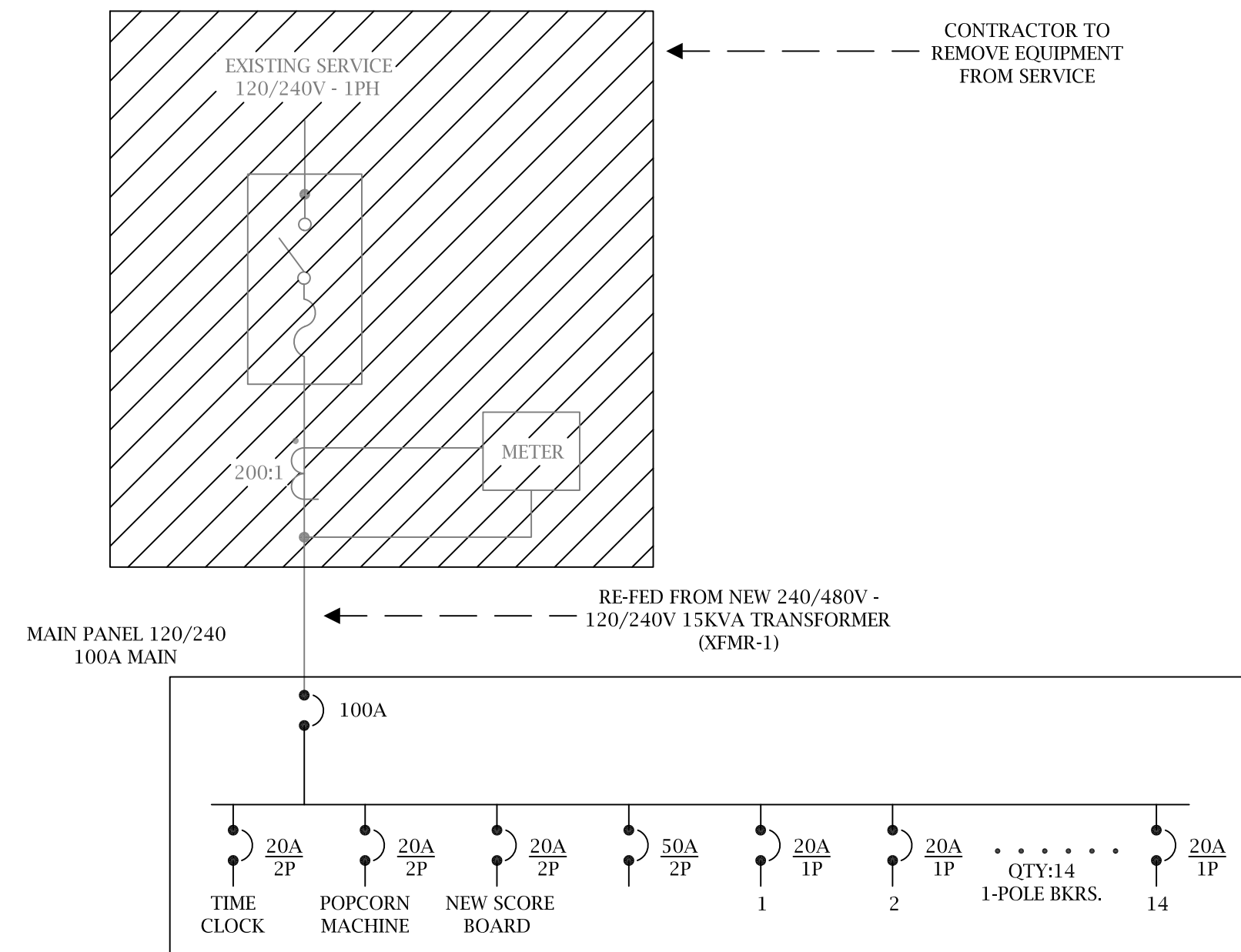
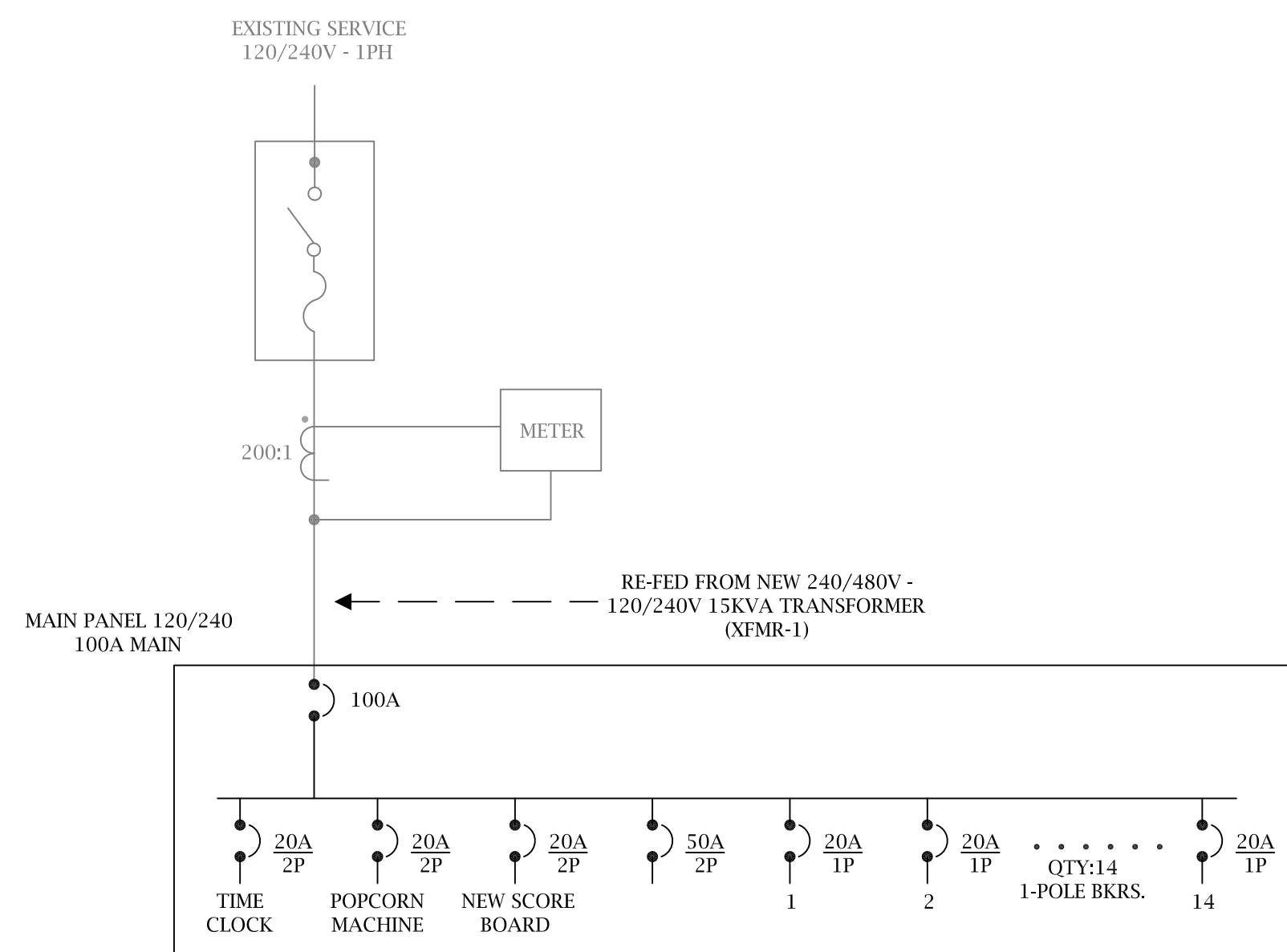
PROJECT:
CORNELIA WARREN PARK
WALTHAM,
MASSACHUSETTS

SCALE: DATE:

ELECTRICAL LAYOUT

B+T JOB NO. 18-0010
B+T PLAN NO. **E-1**

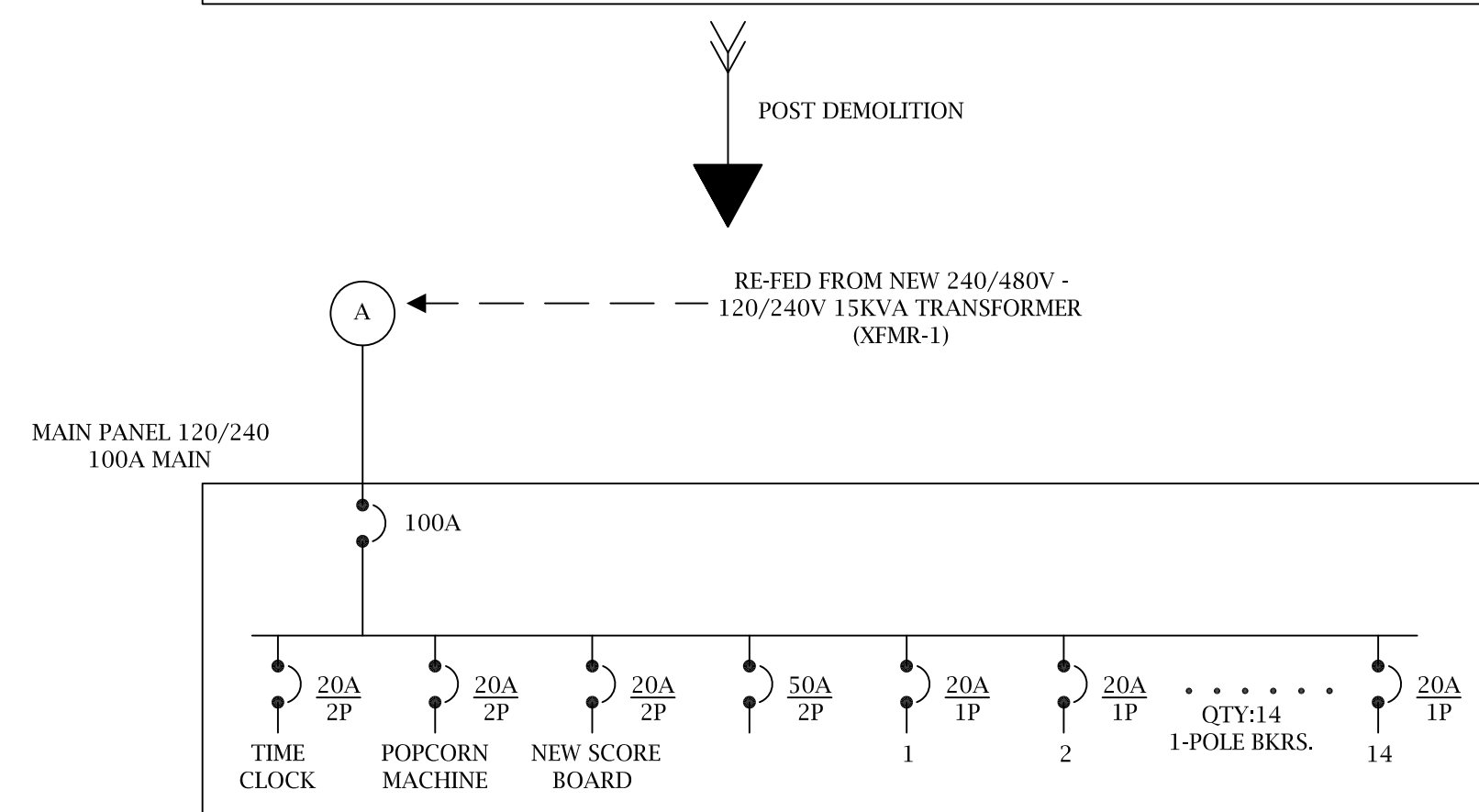
**ISSUED FOR APPROVAL
NOT FOR CONSTRUCTION**



EXISTING PANEL
100AMP MAIN
120/240 1Ø 3W

	L1	L2	
TIME CLOCK 20A, 2P	1	2	50A, 2P
TIME CLOCK 20A, 2P	3	4	50A, 2P
SCOREBOARD 20A, 2P	5	6	(UNKNOWN) 20A, 1P
SCOREBOARD 20A, 2P	7	8	HOT WATER 20A, 1P
(UNKNOWN) 20A, 1P	9	10	(UNKNOWN) 20A, 1P
(UNKNOWN) 20A, 1P	11	12	(UNKNOWN) 20A, 1P
(UNKNOWN) 20A, 1P	13	14	(UNKNOWN) 20A, 1P
(UNKNOWN) 20A, 1P	15	16	(UNKNOWN) 20A, 1P
(UNKNOWN) 20A, 1P	17	18	BATHROOM 20A, 1P
(UNKNOWN) 20A, 1P	19	20	(UNKNOWN) 20A, 1P
MAIN 100A, 2P	21	22	POPCORN 20A, 2P
MAIN 100A, 2P	23	24	POPCORN 20A, 2P

PANEL SCHEDULE



EXISTING PANEL
400AMP M.L.O.
277/480 3Ø 4W

	L1	L2	L3	
UNKNOWN 100A, 1P	1	2		BLANK SPACE
UNKNOWN 100A, 1P	3	4		BLANK SPACE
UNKNOWN 100A, 1P	5	6		BLANK SPACE
UNKNOWN 100A, 1P	7	8		BLANK SPACE
UNKNOWN 100A, 1P	9	10		BLANK SPACE
UNKNOWN 100A, 1P	11	12		BLANK SPACE
NEW 50A, 2P	13	14		BLANK SPACE
NEW 50A, 2P	15	16		BLANK SPACE
NEW 50A, 2P	17	18		BLANK SPACE
NEW 50A, 2P	19	20		BLANK SPACE
NEW 15A, 2P	21	22		BLANK SPACE
NEW 15A, 2P	23	24		BLANK SPACE
NEW 15A, 2P	25	26		BLANK SPACE
NEW 15A, 2P	27	28		BLANK SPACE
BLANK SPACE	29	30		BLANK SPACE
BLANK SPACE	31	32		BLANK SPACE
BLANK SPACE	33	34		BLANK SPACE
BLANK SPACE	35	36		BLANK SPACE
BLANK SPACE	37	38		BLANK SPACE
BLANK SPACE	39	40		BLANK SPACE

PANEL SCHEDULE

ISSUED FOR APPROVAL
NOT FOR CONSTRUCTION



PREPARED FOR:

CITY OF
WALTHAM
610 MAIN STREET
WALTHAM, MASSACHUSETTS

COPYRIGHT (C) BY BEALS AND THOMAS, INC.
ALL RIGHTS RESERVED

PREPARED BY:



BEALS AND THOMAS, INC.
32 Court Street
Plymouth, Massachusetts 02360-3866
T 508.746.3288 | www.bealsandthomas.com

5	
4	
3	
2	
1	
0	

ISSUE DATE	DESCRIPTION
DES	DWN
CHK'D	APP'D

PROJECT:
CORNELIA
WARREN PARK
WALTHAM,
MASSACHUSETTS

SCALE: DATE:

ONE-LINE
&
SCHEDULES

B+T JOB NO. 18-0010

B+T PLAN NO.

E-2

IRRIGATION LEGEND

SYMBOL	MANUFACTURER/MODEL		2-Inch Stop & Waste Valve (Winterization)
	Hunter PROS-06-PRS30-CV (or Equal) 5' strip spray		2-Inch Lead Free RPZ Backflow Preventer
	Hunter PROS-06-PRS30-CV (or Equal) 5' radius		Hunter HCC With Two-Wire
	Hunter PROS-06-PRS30-CV (or Equal) 8' radius		1-Station Hunter-EZDS Decoder
	Hunter PROS-06-PRS30-CV (or Equal) 10' radius		Wi-Fi Service Service (Coordinate with Sire Contractor)
	Hunter PROS-06-PRS30-CV (or Equal) 15' radius		Rain Sensor (mounted to Enclosure)
	Hunter PROS-06-PRS30-CV (or Equal) adjustable arc		Brass Flow Sensor on Unions (for Winterization)
	Hunter MP Strip PROS-06-PRS-40-CV		Irrigation Lateral Line: SDR-15 100 psi PE (Single Clamp) per City of Waltham
	Hunter MP2000 PROS-06-PRS-40-CV		Irrigation Mainline: 2-Inch SDR-15 100 psi PE (Double Clamps) per City of Waltham
	Hunter I-25-06-S5 (or Equal)		2-Inch Domestic Water Type K Copper Service
	Hunter I-25-06-S5 (or Equal)		Pipe Sleeve: PVC Schedule 40
	Hunter I-25-06-S5 (or Equal)		
	Hunter I-25-06-S5 (or Equal)		
	Hunter PGP-04-SR-CV (or Equal)		
	Hunter PGP-04-SR-CV (or Equal)		
	Hunter I-25-06-S5-HI Speed (or Equal for Infield) Manual Operation Only		
	Electric Zone Valve with Filter Scrubber/Sentry		
	1-Inch Quick Coupling Valve		
	Bronze Gate Valve with Cross Handle		
	2-Inch Brass Master Valve		
	Program & Valve Number Valve Flow Valve Size		Program A = Athletic Field (Turn Off after Establishment)
			Program B = Landscape (Manual Operation Only by Owner / Operator)
			Program C = Infield Skins (Manual Operation Only by Owner / Operator)

- IRRIGATION NOTES**
- SEE IRRIGATION DETAILS AND SPECIFICATIONS FOR ADDITIONAL REQUIRED INFORMATION.
 - ALL BIDDING CONTRACTORS SHALL FILL OUT QUALIFICATIONS AND BID FORMS IN SPECIFICATIONS. CONTRACTORS DEEMED NOT QUALIFIED BASED ON EXPERIENCE AND REFERENCES PROVIDED AS PER OWNER'S REPRESENTATIVE AND ENGINEER WILL HAVE THEIR BIDS DISQUALIFIED.
 - COORDINATE FINAL LOCATION OF SPRINKLERS, NOZZLES, AND VALVE BOXES WITH FINAL APPROVED LANDSCAPE.
 - ALL PIPE AND VALVE LOCATIONS ARE DIAGRAMMATIC FOR CLARITY; CONTRACTOR SHALL FIELD VERIFY.
 - SPECIFIED VALVE BOXES IN NATURAL TURF AREAS SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. GENERALLY, ALL VALVE BOXES SHALL BE A MINIMUM OF 10 FEET FROM ACTIVE PLAYING SURFACES AS SHOWN ON THIS PLAN (FIELD DESIGN BY OTHERS, REFER TO CIVIL/LANDSCAPE DRAWINGS).
 - ALL CONTROL WIRE SHALL BE 14/2 AWG TWO-WIRE FOR DECODERS, GROUNDED IN ACCORDANCE WITH THIS PLAN AND IRRIGATION CONTROLLER MANUFACTURER (WHICHEVER IS MORE RESTRICTIVE).
 - IRRIGATION SYSTEM IS DESIGNED FOR DOMESTIC WATER SUPPLY ALREADY WITHIN THE PROPERTY. PROVIDE NEW BACKFLOW PREVENTER AND RECEIVE CITY ISSUED WATER METER TO BE PLACED WITHIN ENCLOSURE AND EXTEND WATER SUPPLY TO LOCATION SHOWN ON PLAN. SYSTEM REQUIRES 52 GALLONS PER MINUTE MAXIMUM AT 70 POUNDS PER SQUARE INCH DOWNSTREAM OF THE ENCLOSURE.
 - INSTALL NEW IRRIGATION CONTROLLER IN OUTDOOR STAINLESS STEEL PEDAESTAL ENCLOSURE GENERALLY WHERE SHOWN ON DRAWING AS DIRECTED BY OWNER'S REPRESENTATIVE. HARD WIRE TO 120 VOLT, DEDICATED 20-AMP CIRCUIT POWER SUPPLY USING LICENSED ELECTRICIAN. ROUTE ALL TWO-WIRE TO CONTROLLER IN CONDUIT THROUGH PEDAESTAL CONCRETE PAD. GROUND IRRIGATION CONTROLLER AND DECODERS AS PER MANUFACTURER, GENERALLY AS SHOWN ON DRAWINGS, DETAILS, AND DESCRIBED IN SPECIFICATIONS.
 - ALL ABOVE GROUND WIRING SHALL BE INSTALLED IN RIGID, METALLIC CONDUIT FOR VANDALISM PROTECTION.
 - COORDINATE LOCATION OF ALL EXISTING AND FUTURE UTILITIES ON SITE. CONTACT PROPER AUTHORITIES AND UTILITY COMPANIES BEFORE THE START OF WORK.
 - FLUSH ALL LATERAL LINES BEFORE INSTALLING SPRINKLERS (NO INTERNALS).
 - CONTRACTOR MUST SUBMIT IRRIGATION PRODUCTS AS PER THE WRITTEN SPECIFICATIONS TO REVIEW ENGINEER FOR APPROVAL PRIOR TO ORDERING MATERIAL AND BEGINNING WORK.
 - MATERIAL SUBSTITUTIONS WHICH VARY FROM THE SPECIFIED PRODUCTS MUST BE SUBMITTED TO REVIEW ENGINEER FOR APPROVAL AS PART OF THE SUBMITTAL PROCESS.
 - ONCE APPROVED SUBMITTALS HAVE BEEN RETURNED TO THE CONTRACTOR, WORK MAY BEGIN. OWNER'S REPRESENTATIVE MUST BE NOTIFIED 7 DAYS IN ADVANCE OF THE START OF WORK TO COORDINATE ON-SITE SUPERVISION AND ADMINISTRATION.
 - FINAL LOCATION AND CONFIGURATION OF IRRIGATION SYSTEM SHALL BE APPROVED BY OWNER'S REPRESENTATIVE AND PER LOCAL AUTHORITIES.

PREPARED FOR:

CITY OF WALTHAM
610 MAIN STREET
WALTHAM, MASSACHUSETTS

IRRIGATION DESIGN BY:

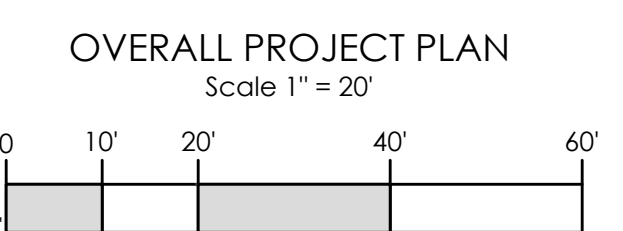
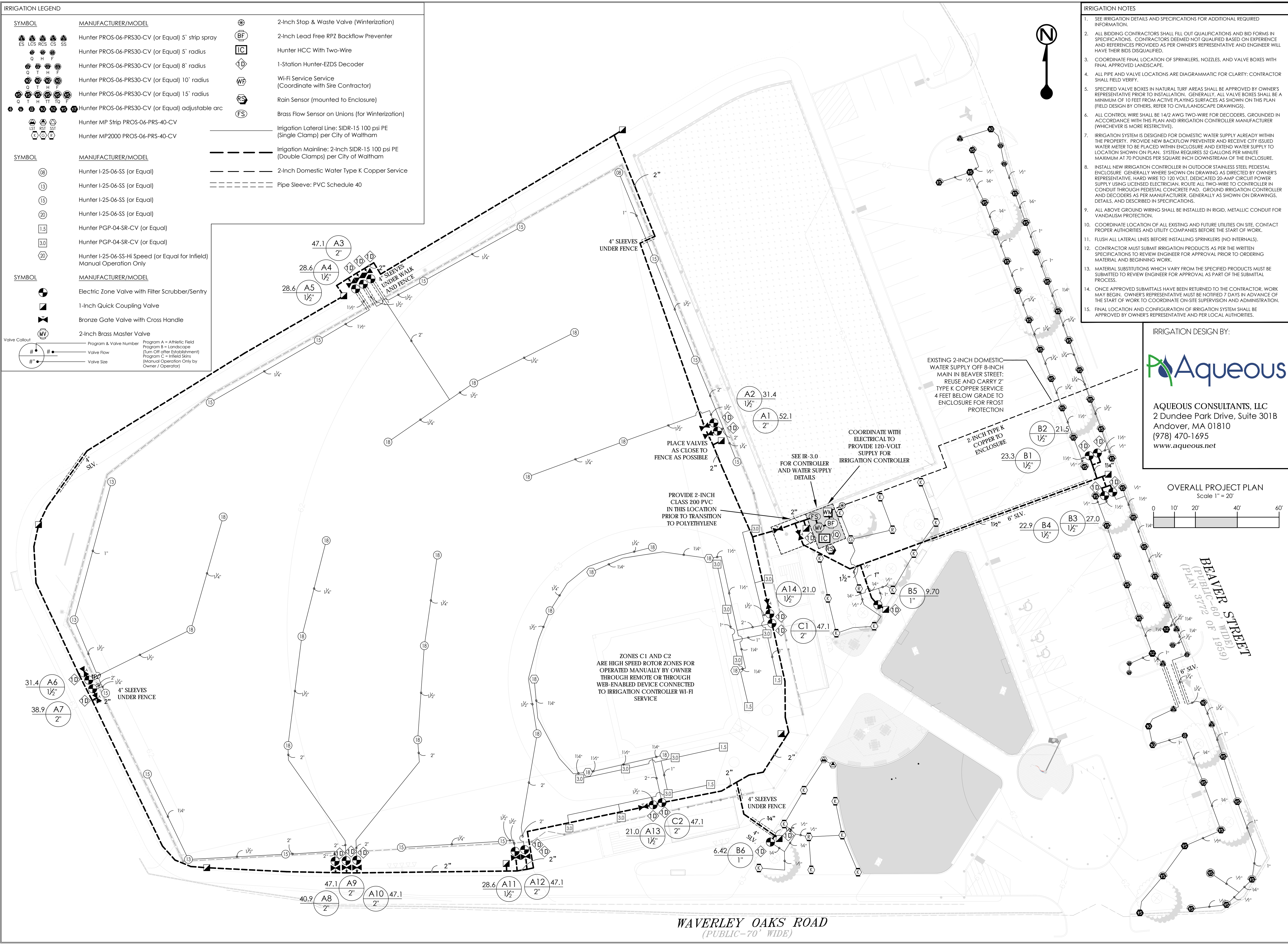
Aqueous

AQUEOUS CONSULTANTS, LLC
2 Dundee Park Drive, Suite 301B
Andover, MA 01810
(978) 470-1695
www.aqueous.net

COPYRIGHT (C) BY BEALS AND THOMAS, INC. ALL RIGHTS RESERVED

PREPARED BY:
BEALS + THOMAS
Civil Engineers + Landscape Architects +
Land Surveyors + Planners +
Environmental Specialists

BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, Massachusetts 01772-2104
T 508.366.0560 | www.bealsandthomas.com



5	
4	
3	
2	
1	
0	05/22/19 CITY SPECIFICATIONS
ISSUE DATE	DESCRIPTION
MI	MI
DES	DWN
	CHK'D
	APP'D

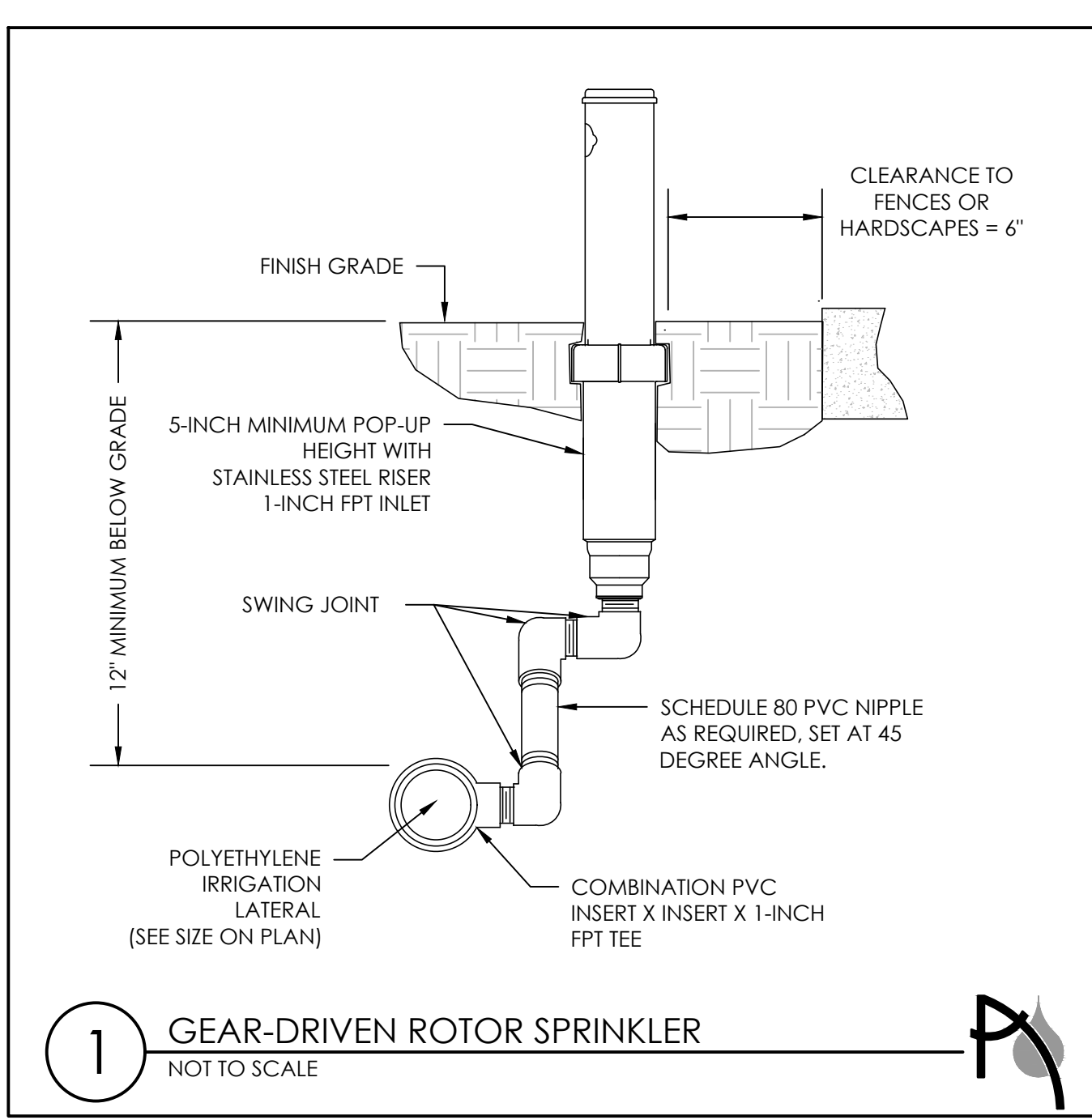
PROJECT:

CORNELIA WARREN PARK
WALTHAM,
MASSACHUSETTS

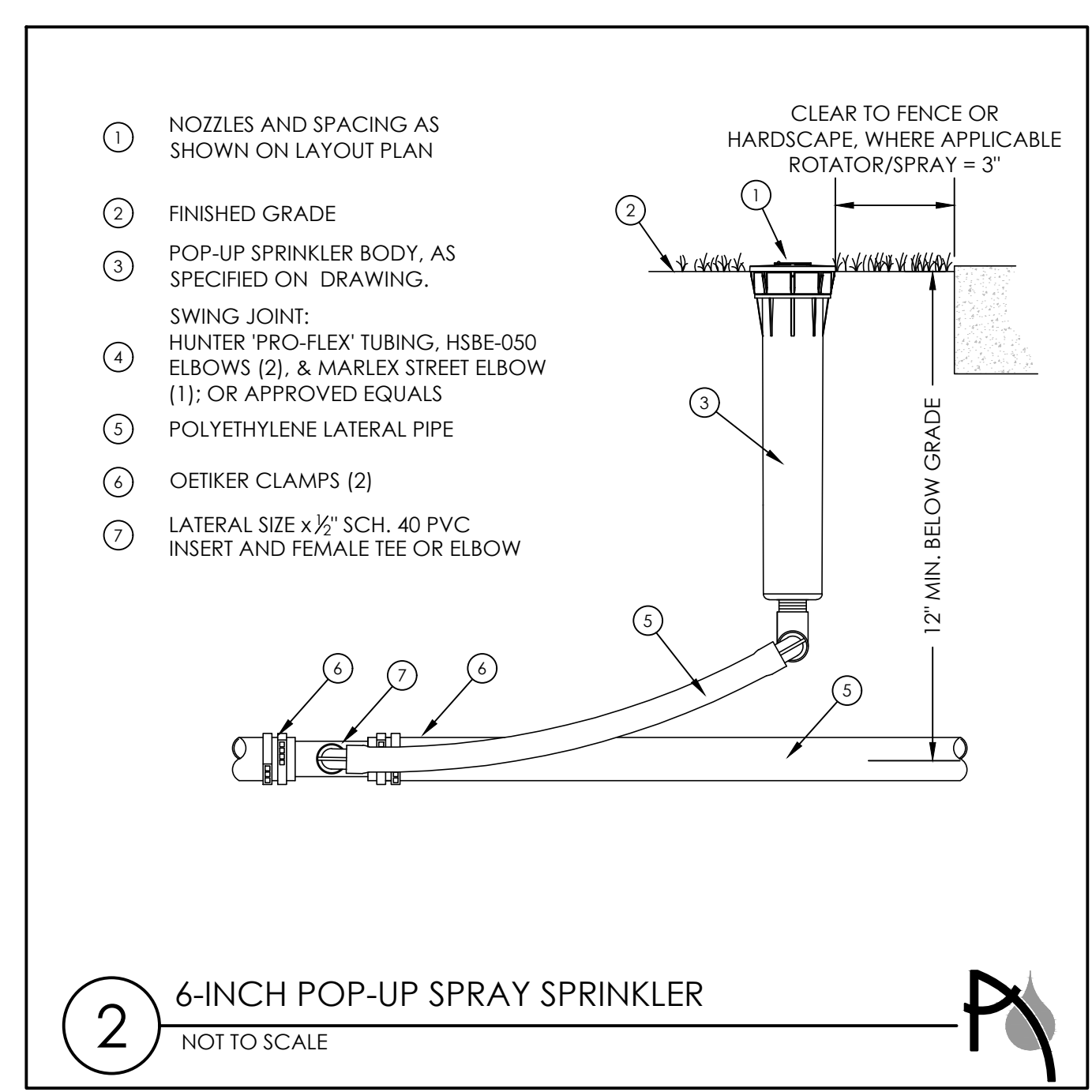
SCALE: AS SHOWN DATE: 05/03/2019

IRRIGATION LAYOUT PLAN

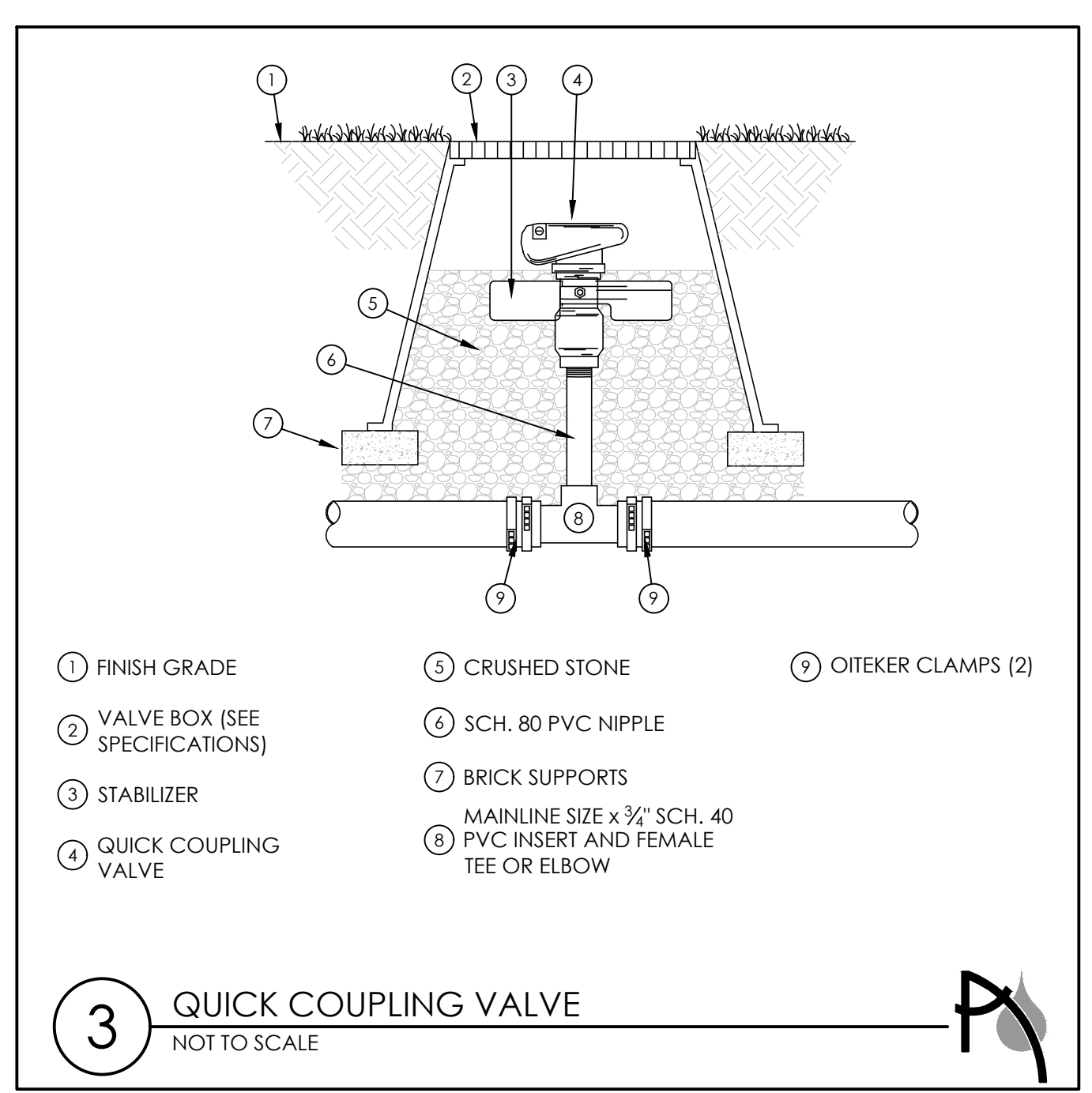
JOB NO. 18-0010
PLAN NO. IR-1.0



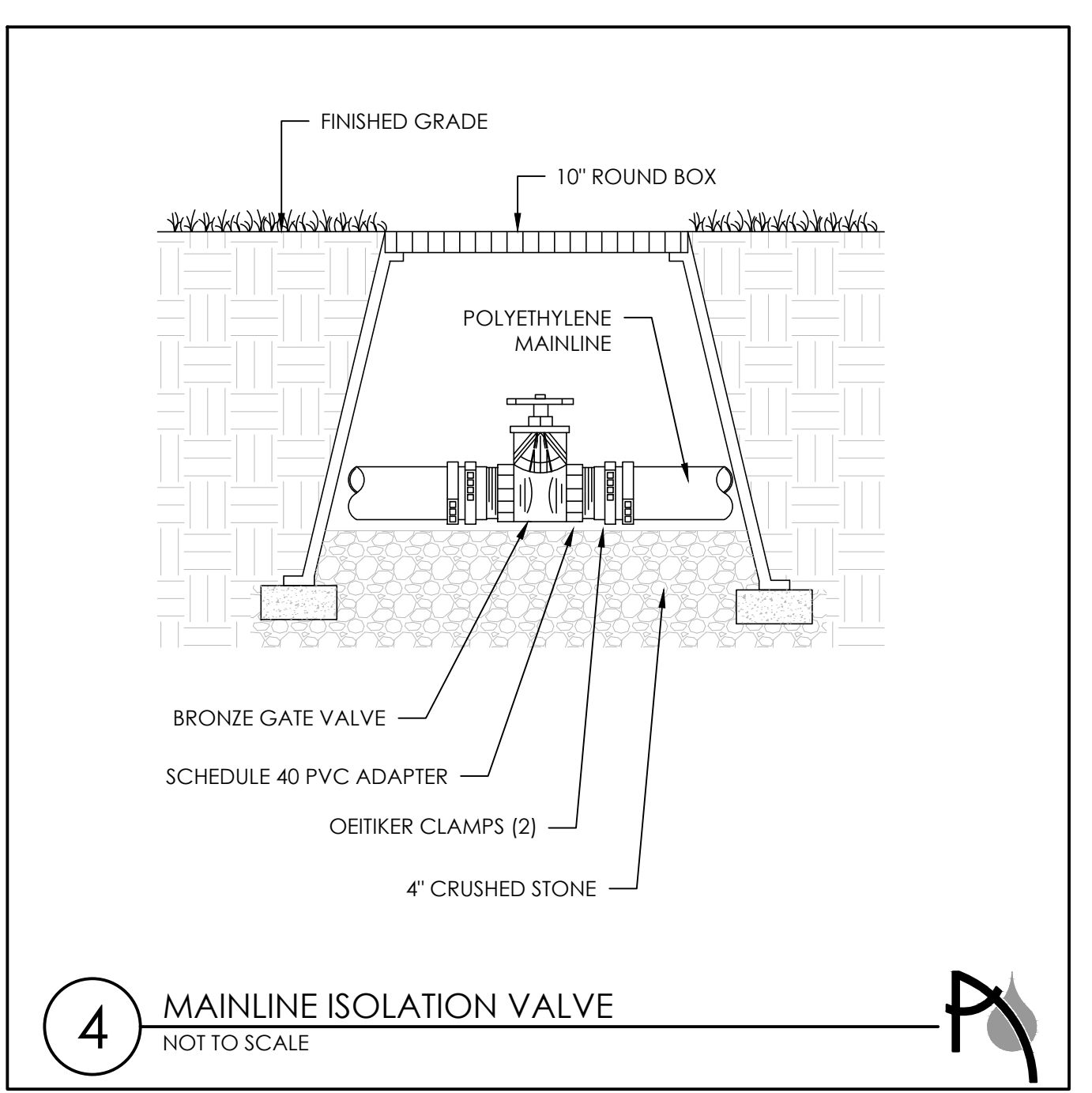
1 GEAR-DRIVEN ROTOR SPRINKLER
NOT TO SCALE



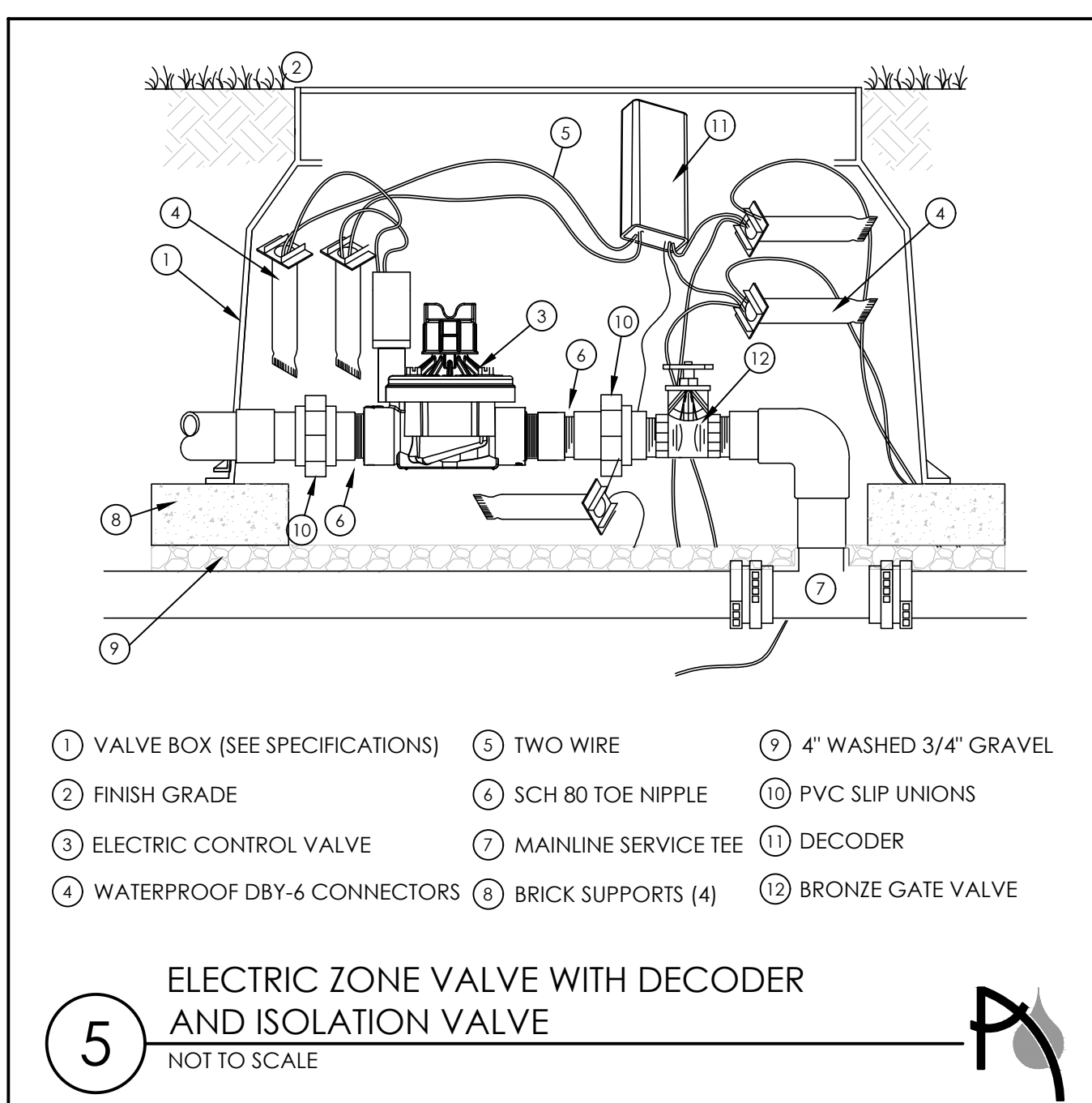
2 6-INCH POP-UP SPRAY SPRINKLER
NOT TO SCALE



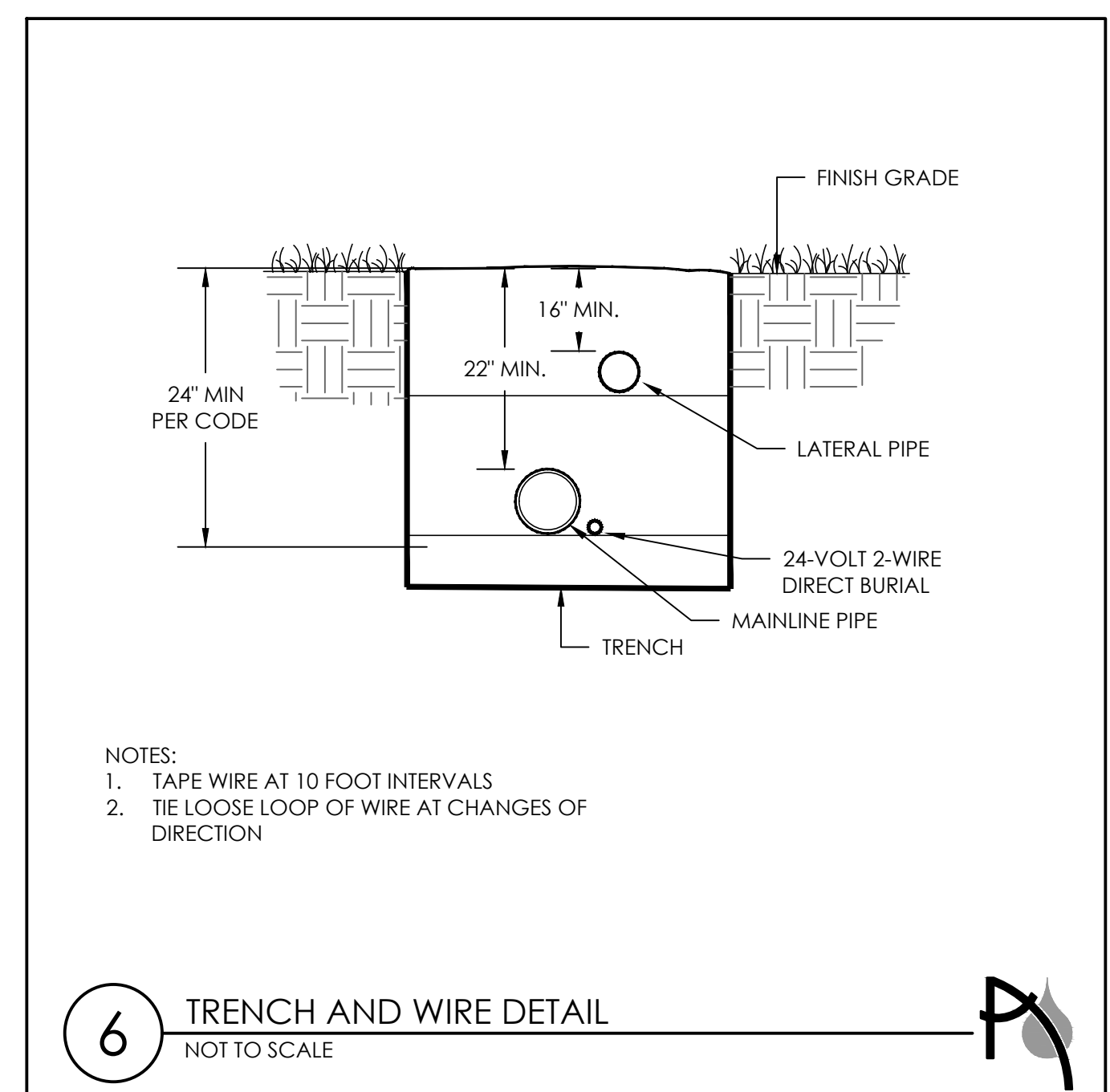
3 QUICK COUPLING VALVE
NOT TO SCALE



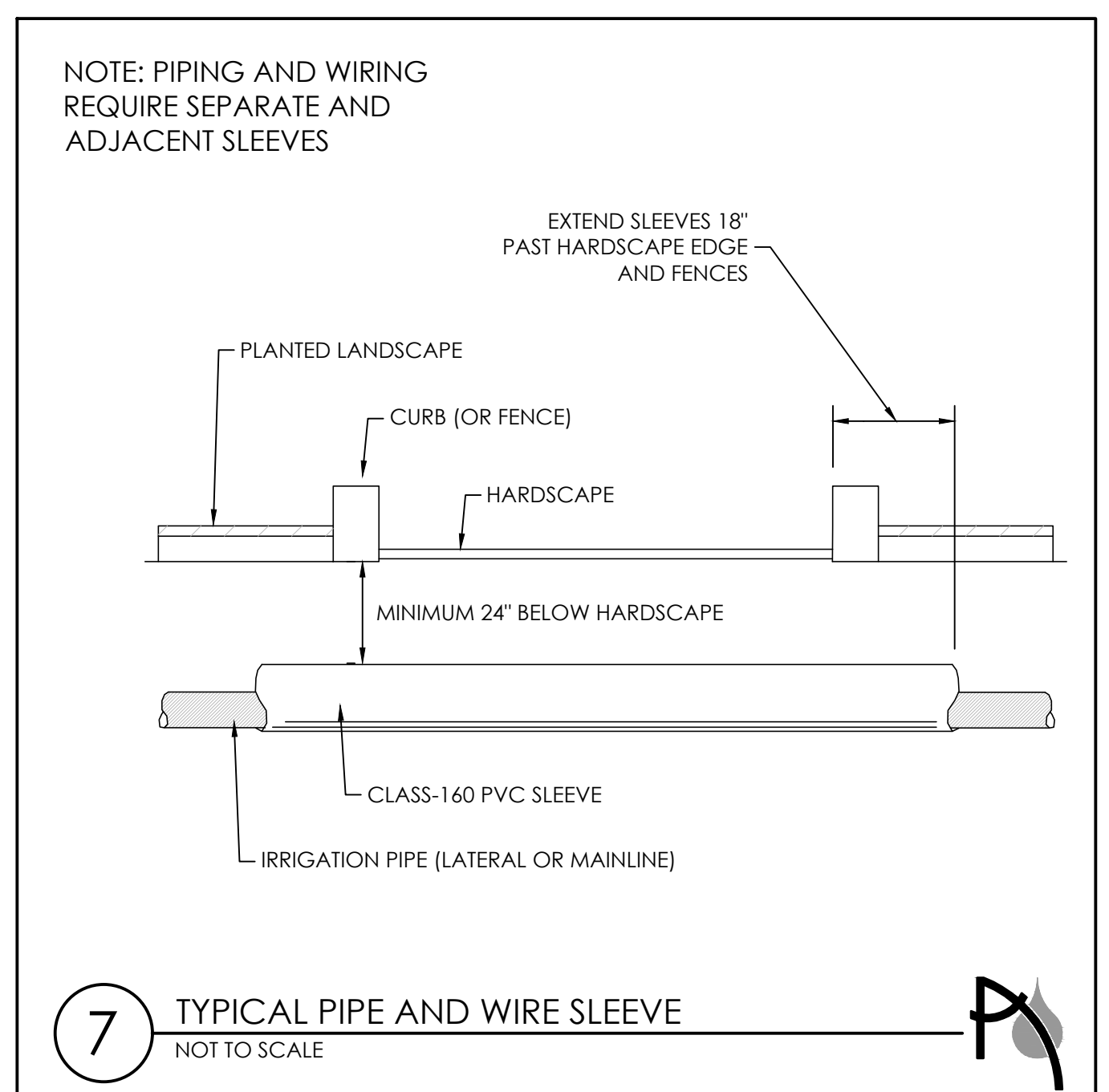
4 MAINLINE ISOLATION VALVE
NOT TO SCALE



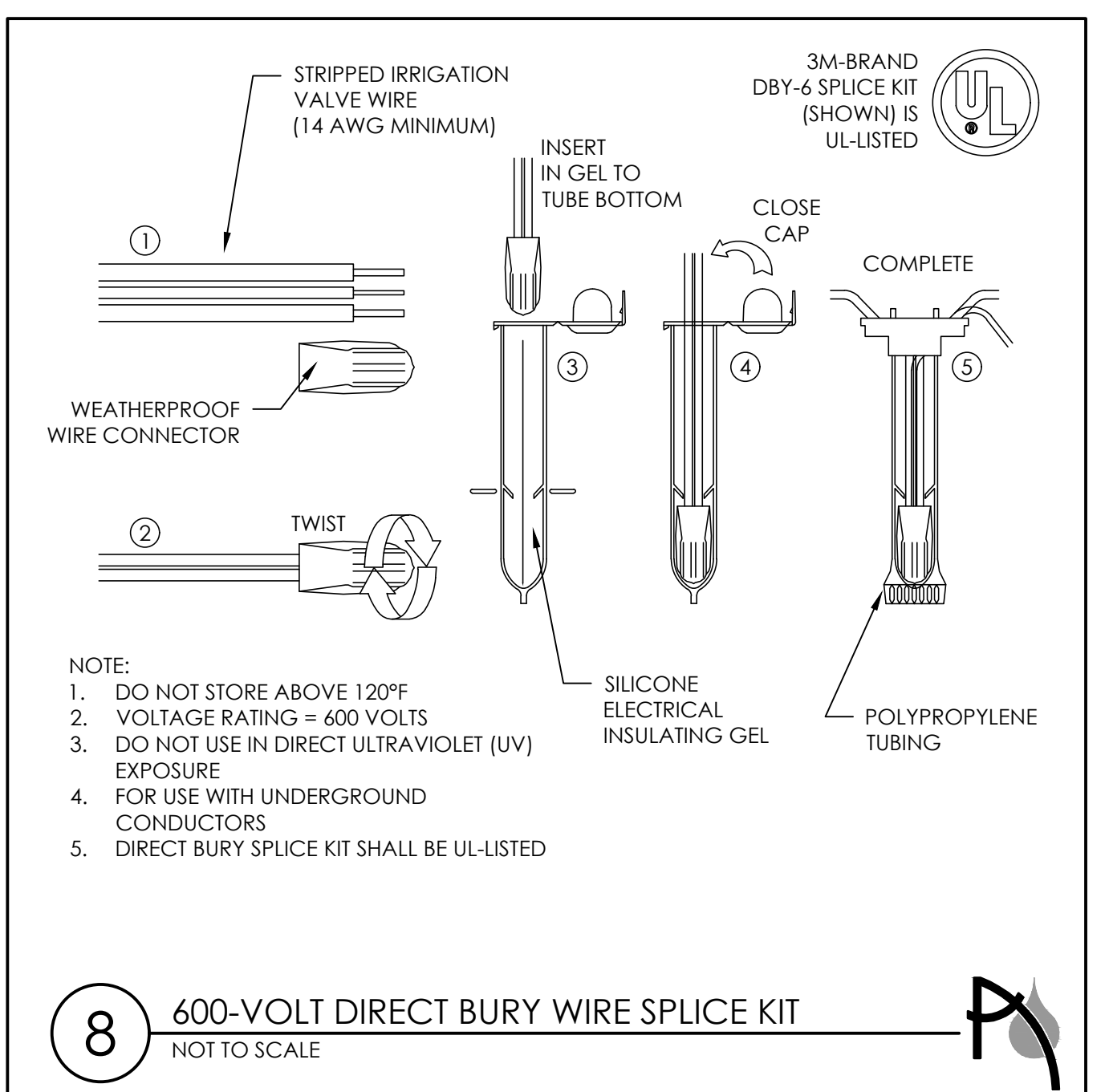
5 ELECTRIC ZONE VALVE WITH DECODER AND ISOLATION VALVE
NOT TO SCALE



6 TRENCH AND WIRE DETAIL
NOT TO SCALE



7 TYPICAL PIPE AND WIRE SLEEVE
NOT TO SCALE



8 600-VOLT DIRECT BURY WIRE SPLICE KIT
NOT TO SCALE

PREPARED FOR:

CITY OF WALTHAM
610 MAIN STREET
WALTHAM, MASSACHUSETTS

COPYRIGHT (C) BY BEALS AND THOMAS, INC. ALL RIGHTS RESERVED

PREPARED BY:

BEALS + THOMAS
Civil Engineers + Landscape Architects +
Land Surveyors + Planners +
Environmental Specialists

BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, Massachusetts 01772-2104
T 508.366.0560 | www.bealsandthomas.com

5	
4	
3	
2	
1	
0	05/22/19 CITY SPECIFICATIONS
	ISSUE DATE DESCRIPTION
MI	MI MI MI
DES	DWN CHK'D APP'D

PROJECT:
CORNELIA WARREN PARK
WALTHAM,
MASSACHUSETTS

SCALE: AS SHOWN DATE: 05/03/2019

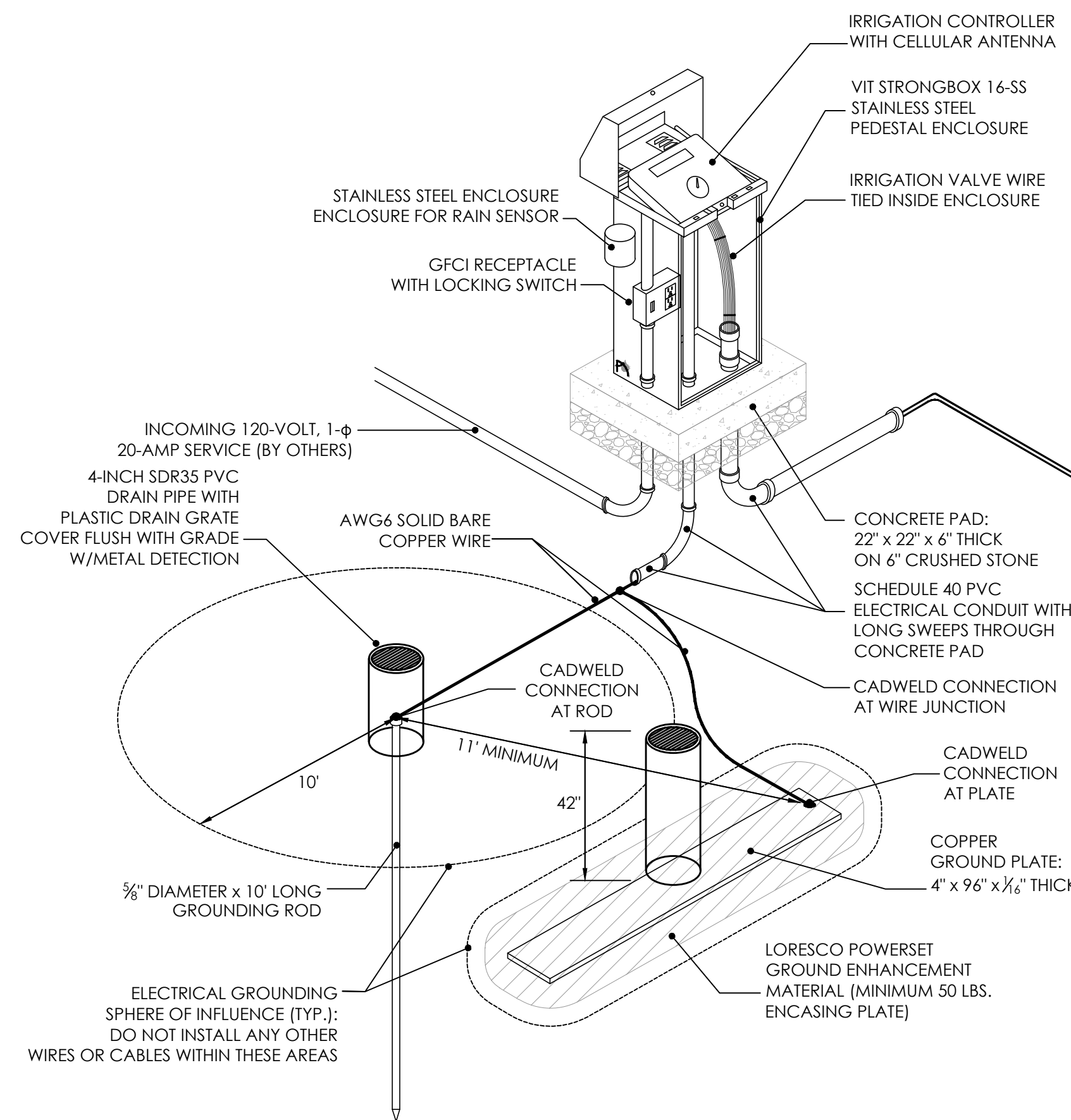
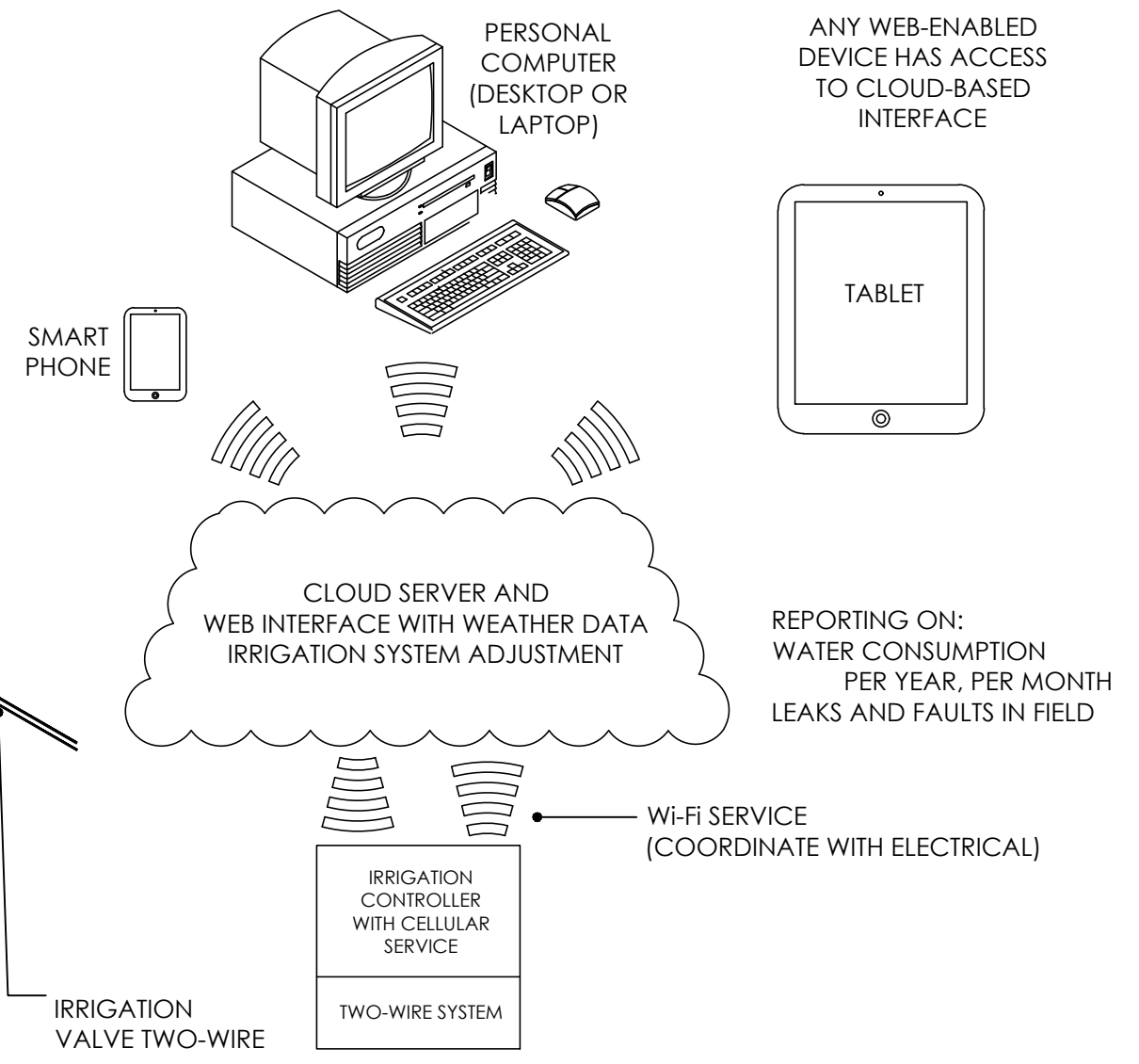
IRRIGATION DETAILS

JOB NO. 18-0010
PLAN NO. IR-2.0

PREPARED FOR:

CITY OF WALTHAM
610 MAIN STREET
WALTHAM, MASSACHUSETTS

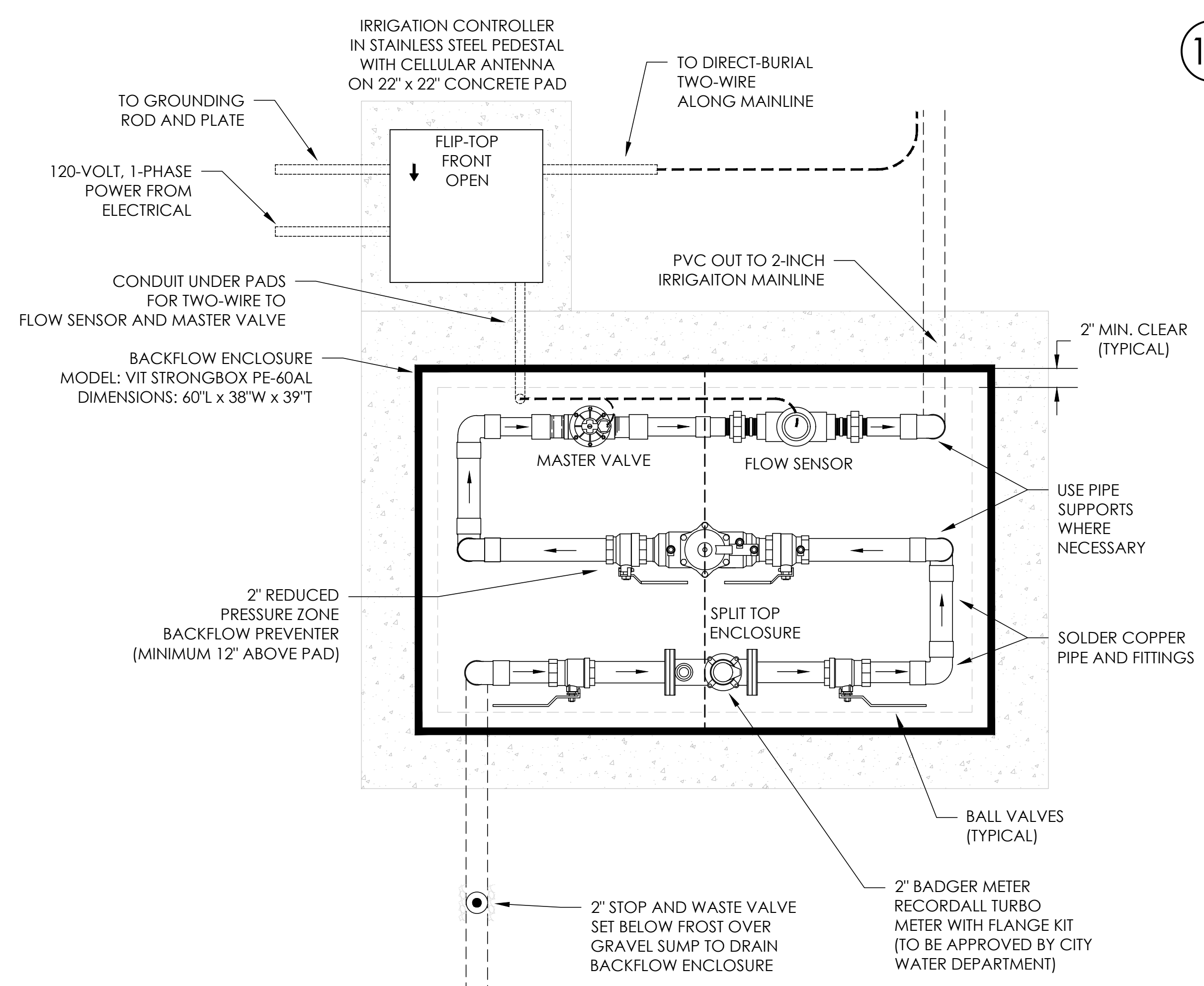
CENTRAL AND REMOTE CONTROL OPTIONS



9 PEDESTAL MOUNT CONTROLLER
NOT TO SCALE



10 BACKFLOW & METER ENCLOSURE WITH FLOW SENSOR AND MASTER VALVE
NOT TO SCALE



BACKFLOW & METER ENCLOSURE SHALL BE VIT STRONGBOX, MODEL PE-60AL OR APPROVED EQUAL MEETING FOLLOWING SPECIFICATIONS:

DIMENSIONS: 60" LONG x 38" WIDE x 39" TALL

ENCLOSURE SHALL BE CONSTRUCTED OF A VANDAL AND WEATHER RESISTANT NATURE, MANUFACTURED ENTIRELY OF MARINE GRADE ALUMINUM ALLOY 5052-H32 WITH A WALL THICKNESS OF 1/8-INCH.

MOUNTING BASE SHALL BE MANUFACTURED ENTIRELY OF STAINLESS STEEL.

MAIN HOUSING SHALL BE A SOLID SHEET CONSTRUCTION PUNCHED ON THE ENDS WITH LOUVERS FOR VENTILATION.

ENCLOSURE SHALL BE A CENTER SPLIT DESIGN, HAVING MOUNTING LIPS ON EACH END.

MOUNTING BASE SHALL BE SUBMERGED INTO CONCRETE PAD A MINIMUM OF 2 INCHES, POSITIONING ENCLOSURE 2 1/2 INCHES ABOVE CONCRETE FOR DRAINAGE.

LOCKING MECHANISM SHALL BE A FULL RELEASE TYPE WHICH ALLOWS FOR COMPLETE REMOVAL OF THE ENCLOSURE FROM ITS MOUNTING BASE WITHOUT USE OF TOOLS.

LOCKING MECHANISM SHALL BE A STAINLESS STEEL CROSS BAR STYLE AND PROVIDE FOR A PADLOCK.

ALTERNATIVES AND APPROVED EQUALS FOR BACKFLOW & METER ENCLOSURE SHALL ALSO SUBMIT SHOP DRAWINGS TO DEMONSTRATE ADEQUATE SPACE FOR BACKFLOW PREVENTER AND CITY METER.

PREPARED BY:



BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, Massachusetts 01772-2104
T 508.366.0560 | www.bealsandthomas.com

ISSUE DATE	DESCRIPTION
05/22/19	CITY SPECIFICATIONS
MI	MI
DES	DWN
MI	CHK'D
MI	APP'D

PROJECT:
CORNELIA WARREN PARK
WALTHAM, MASSACHUSETTS

SCALE: AS SHOWN DATE: 05/03/2019

IRRIGATION WATER SUPPLY

JOB NO. 18-0010
PLAN NO. **IR-3.0**