

BEGIN PROJECT
STA 10+80

LOCUS MAP
N.T.S.

END PROJECT
STA 38+37

CITY OF CAMBRIDGE, MASSACHUSETTS

DEPARTMENT OF PUBLIC WORKS

BROADWAY ROADWAY AND SIDEWALK IMPROVEMENT PROJECT (PORTLAND TO PROSPECT)

INDEX

SHEET NO.	DESCRIPTION
1.	TITLE SHEET
2.	LEGEND & GENERAL NOTES (GN-1)
3-4.	DETAILS (DT-1 to DT-2)
5-13.	CONSTRUCTION AND GRADING PLAN (C-1 to C-9)
14-16.	PAVEMENT MARKING PLAN (C-14 to C-16)

APRIL 2011



Weston & Sampson®

Weston & Sampson, Inc. 100
Foxborough Blvd., S.250,
Foxborough, MA

GENERAL SYMBOLS

EXISTING	PROPOSED	
CB □ (OR GI, LB)	CB □	CATCH BASIN (OR GUTTER INLET, OR LEACHING BASIN)
CBCI □ (OR GICI)	□ (OR GICI)	CATCH BASIN (OR GUTTER INLET) WITH CURB INLET
---	---	CURB (OR BERM)-TYPE NOTED
---	---	EDGE OF ROAD
○ EHH	○ EHH	ELECTRIC HANDHOLE (NUMBER AS NOTED)
○ EMH	○ EMH	ELECTRIC MANHOLE
○ TMH	○ TMH	TELEPHONE MANHOLE
○ WMH	○ WMH	WATER MANHOLE
○ SMH	○ SMH	SEWER MANHOLE
○ DMH	○ DMH	DRAINAGE MANHOLE
○ GG	○ GG	GAS GATE
○ WG	○ WG	WATER GATE
○ CS	○ CS	CURB STOP
▽	▽	HYDRANT
○ FB	○ FB	FIRE ALARM BOX
○	○	PARKING METER
*	*	STREET LIGHT
○	○	WOODEN POLE
○	○	GUY POLE
— D —	— D —	DRAIN PIPE
— S —	— S —	SEWER MAIN
— E —	— E —	ELECTRIC DUCT
— G —	— G —	GAS MAIN
— W —	— W —	WATER MAIN
— T —	— T —	TELEPHONE DUCT
□ MB	■ MB	MAIL BOX
—	—	HIGHWAY GUARD (TYPE NOTED)
□ MHB,SB,CB	■ MHB,SB,CB	HIGHWAY / PROPERTY BOUND (TYPE NOTED)
LABEL / DATE	LABEL / DATE	CITY OR TOWN OR COUNTY LAYOUT LINE
NAME		CITY,TOWN OR COUNTY BOUNDARY
12 N00°00'00"E		STATE BOUNDARY
+57.59 PC	+57.59 PC	BASE OR SURVEY LINE
---	---	CENTERLINE OF CONSTRUCTION
---	---	PEDESTRIAN RAMP (WCR)
---	---	TREE (SIZE AND TYPE NOTED)
---	---	FENCE (SIZE AND TYPE NOTED)
---	---	EASEMENT LINE

PAVEMENT MARKINGS AND SIGN SYMBOLS

EXISTING	PROPOSED	
---	---	PAVEMENT ARROW AND LEGEND
	---	CROSSWALK, 24" WHITE LINES, 24" SPACING (SEE SHEET DT-2)
---	---	STOP LINE, 12" WHITE LINE 4' BEHIND CROSSWALK (TYP.)
---	---	BIKE LANE
---	---	SOLID WHITE LANE LINE - 4"
---	---	BROKEN WHITE LANE LINE - 4"
---	---	SOLID WHITE CHANNELIZING LINE - SIZE AS NOTED
---	---	SOLID YELLOW CHANNELIZATION LINE - SIZE AS NOTED
---	---	BROKEN YELLOW CENTERLINE - 4"
---	---	DOUBLE YELLOW CENTERLINE-2-4" LINES
---	---	SOLID WHITE EDGE LINE - 4"
---	---	SIGN AND POST
---	---	DELINEATOR

GENERAL NOTES

1. TOPOGRAPHICAL INFORMATION BASED ON A GROUND SURVEY PERFORMED BY CHAPELL ENGINEERING, SUMMER 2010 FOR THE CITY OF CAMBRIDGE.
2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
3. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
4. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY OWNER AT NO ADDITIONAL COST TO THE CITY.
5. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
6. THE TERM "PROPOSED (PROP)" INDICATES WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET (R&R)".
7. JOINTS BETWEEN NEW BITUMINOUS CONCRETE ROADWAY PAVEMENT AND SAWCUT EXISTING PAVEMENT SHALL BE SEALED WITH BITUMEN AND BACKSANDED AT NO ADDITIONAL COST TO THE OWNER.
8. ALL EXISTING STATE, COUNTY AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATION ARE NOT GUARANTEED.
9. TREES AND SHRUBS WITHIN THE LIMITS OF WORK SHALL BE REMOVED ONLY UPON THE APPROVAL OF THE ENGINEER OR AS NOTED ON THE PLANS.
10. THE CONTRACTOR SHALL CALL DIGSAFE AT 1-888-344-7233 AT LEAST 72 HOURS, SATURDAYS, AND HOLIDAYS EXCLUDED, PRIOR TO EXCAVATING AT ANY LOCATION. A COPY OF THE DIGSAFE PROJECT REFERENCE NUMBER(S) SHALL BE GIVEN TO THE OWNER PRIOR TO EXCAVATION.
11. TEST PITS TO LOCATE EXISTING UTILITIES MAY BE ORDERED BY THE ENGINEER TO DETERMINE WHETHER TO RAISE OR LOWER THE PROPOSED DRAIN, TO CLEAR EXISTING UTILITIES, OR VERIFY EXISTING UTILITY LOCATION, SIZE AND TYPE.
12. ALL STREET EXCAVATIONS SHALL BE COMPLETELY CLOSED AT THE END OF EACH WORKING DAY BY BACKFILLING. COVERING WITH STEEL PLATES MAY BE ALLOWED IF APPROVED BY THE ENGINEER.
13. VERTICAL DATUM BASED ON THE CITY OF CAMBRIDGE DATUM.
14. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE STANDARDS AND DIMENSIONS OF MUTCD, LATEST EDITION.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PROPOSED GRADES CONFORMING TO AAB/ADA REGULATIONS. IF AT ANY TIME THE PROPOSED GRADES DO NOT CONFORM TO AAB/ADA REGULATION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND/OR OWNER AND RECTIFY THE SITUATION AT NO ADDITIONAL COST TO THE OWNER.

ABBREVIATIONS

UTILITIES

GICI	GUTTER INLET W/ CURB INLET
CBCI	CATCH BASIN W/ CURB INLET
CB	CATCH BASIN
C.I.T.	CHANGE IN TYPE
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
RCP	REINFORCED CONCRETE PIPE
CI	CURB INLET
DI	DUCTILE IRON PIPE
CMP	CORRUGATED METAL PIPE
DIP	DUCTILE IRON PIPE
GI	GUTTER INLET
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
HYD	HYDRANT
INV. ELEV.	INVERT ELEVATION
UP	UTILITY POLE
SMH	SEWER MANHOLE
WG	WATER GATE
DS	DOWN SPOUT
HDPE	HIGH DENSITY POLYETHYLENE PIPE
RCP	REINFORCED CONCRETE PIPE
DMH	DRAIN MANHOLE

ALIGNMENT/GRADING

PI	POINT OF INTERSECTION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PRC	POINT OF REVERSE CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVC	POINT OF VERTICAL CURVATURE
PVT	POINT OF VERTICAL TANGENCY
ELEV.	ELEVATION
CC	CENTER OF CURVE
H.P.	HIGH POINT
L.P.	LOW POINT
R	RADIUS OF CURVATURE
STA	STATION
S.S.D.	STOPPING SIGHT DISTANCE

GENERAL

PROP.	PROPOSED
ADJ.	ADJUST
BIT. CONC.	BITUMINOUS CONCRETE
CEM. CONC.	CEMENT CONCRETE
℄	BASELINE
N.T.S.	NOT TO SCALE
B.M.	BENCH MARK
ABAN.	ABANDON
MB	MAIL BOX
GRAN. CURB	GRANITE CURB
EXIST.(OR EX.)	EXISTING
FDN.	FOUNDATION
F.L. (OR ℄)	FLOW LINE
℄	PROPERTY LINE
PVMT	PAVEMENT
P.W.W.	PAVED WATERWAY
RC	REINFORCED CONCRETE
M.H.B.	MASSACHUSETTS HIGHWAY BOUND
ME	MEET EXISTING
REM.	REMOVE
REMOD.	REMODEL
RET.	RETAIN
R.O.W.	RIGHT-OF- WAY
R.R.	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
SB	STONE BOUND

Weston&Sampson
100 Foborough Blvd., S.200, Foborough, MA
(508) 688-3034 (800) SAMPSON
www.westonandsampson.com

4-13-12
DATE

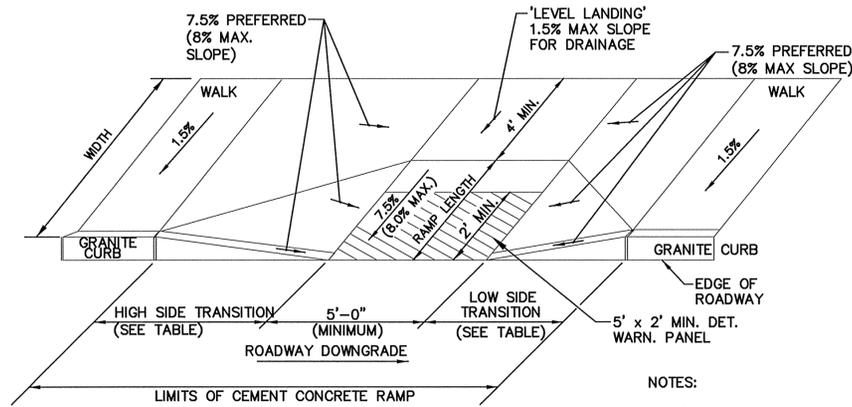
REGISTERED PROFESSIONAL ENGINEER
Lawrence F. Kellogg



CAMBRIDGE, MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
BROADWAY ROADWAY AND SIDEWALK IMPROVEMENT PROJECT - PHASE I AND PHASE II
LEGEND AND GENERAL NOTES
JOB NO. 2100200
CONTRACT: NONE
SCALE: 1"=100'
CADD NO. LON
DR BY: GTS
CHK BY: WGP
APP BY: LFK

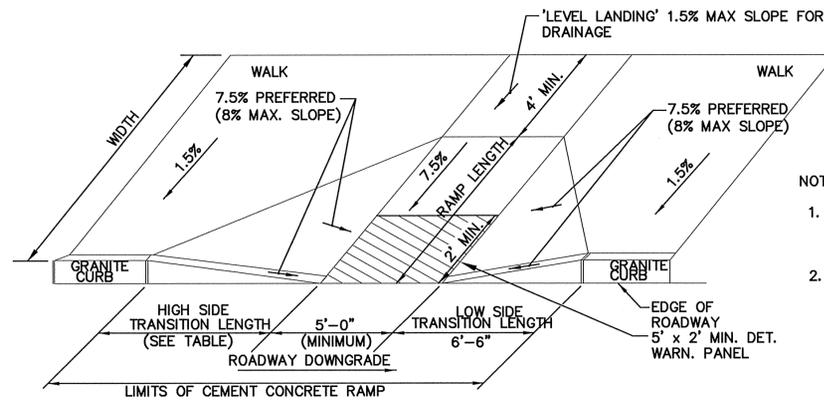
FILE NO. 2100200
GN-1

Z:\M&F\obor-Projects\Cambridge MA\2100200 - Broadway Biney\Gillis\CA\Design\Browway 2100200.dwg 03/10/12



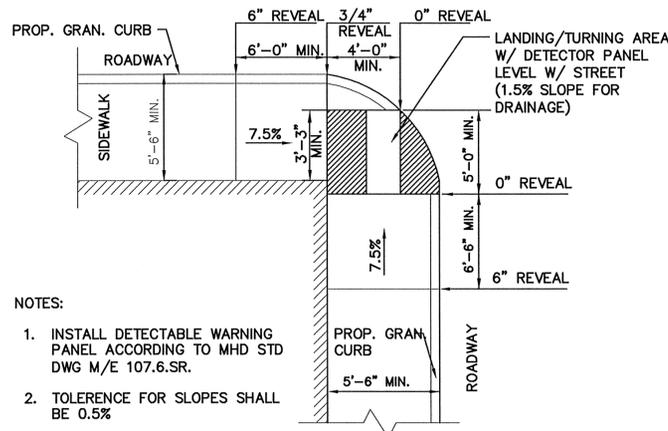
CEMENT CONCRETE WHEELCHAIR RAMP TYPE-1
(LESS THAN 12'-4" WALK)
N.T.S.

- NOTES:
1. INSTALL DETECTABLE WARNING PANEL ACCORDING TO MHD STD DWG M/E 107.6.SR.
 2. TOLERANCE FOR SLOPES SHALL BE 0.5%



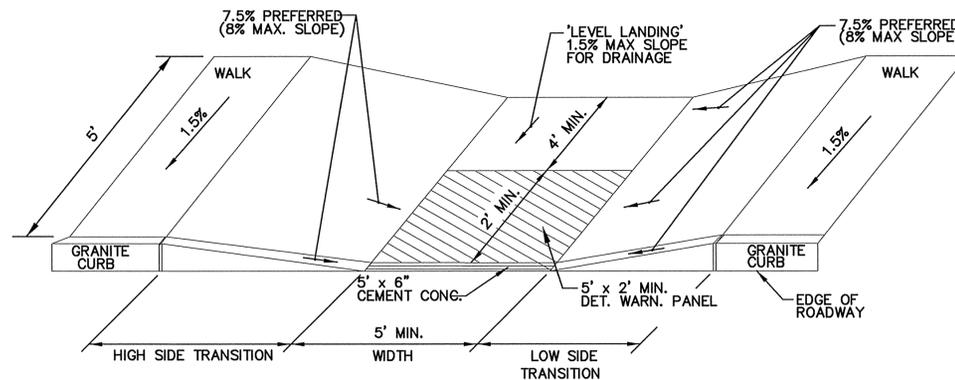
CEMENT CONCRETE WHEELCHAIR RAMP TYPE-2
(GREATER THAN 12'-4" WALK)
N.T.S.

- NOTES:
1. INSTALL DETECTABLE WARNING PANEL ACCORDING TO MHD STD DWG M/E 107.6.SR.
 2. TOLERANCE FOR SLOPES SHALL BE 0.5%



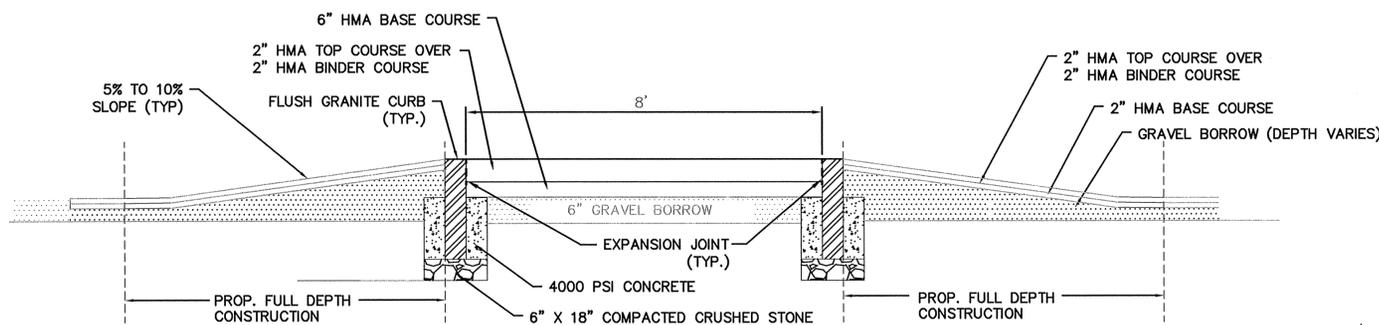
CEMENT CONCRETE WHEELCHAIR RAMP TYPE-3
(T" INTERSECTION WHEELCHAIR RAMP)
N.T.S.

- NOTES:
1. INSTALL DETECTABLE WARNING PANEL ACCORDING TO MHD STD DWG M/E 107.6.SR.
 2. TOLERANCE FOR SLOPES SHALL BE 0.5%

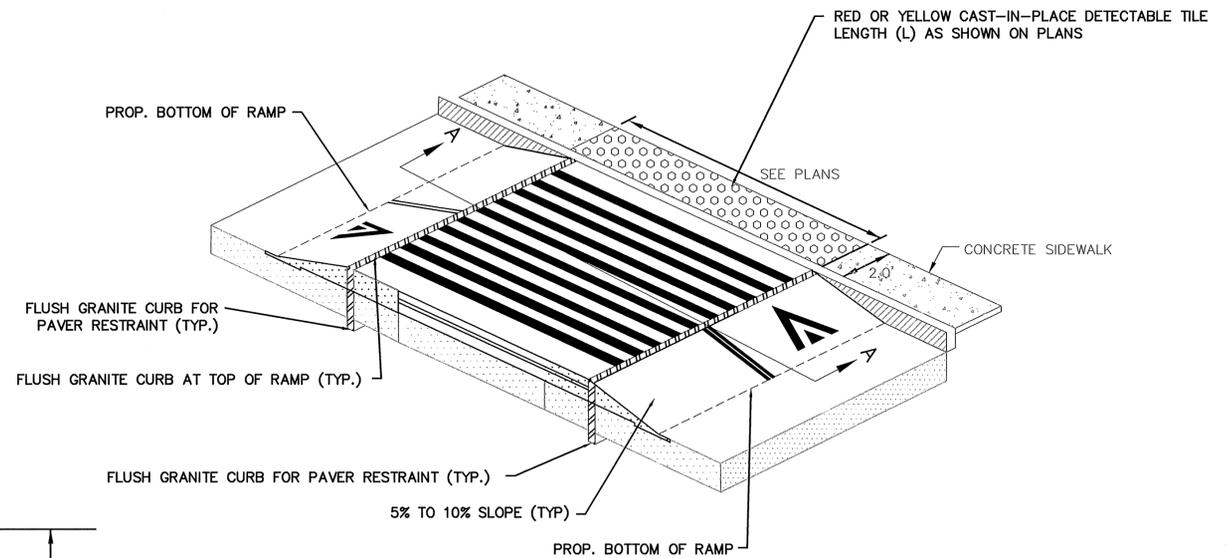


CEMENT CONCRETE WHEELCHAIR RAMP TYPE 4
N.T.S.

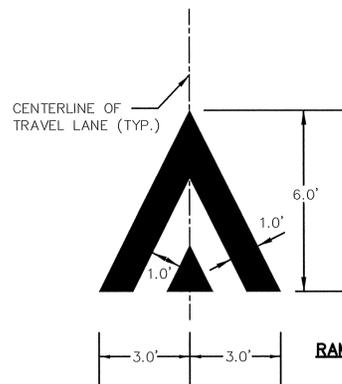
- NOTES:
1. INSTALL DETECTABLE WARNING PANEL ACCORDING TO MHD STD DWG M/E 107.6.SR.
 2. TOLERANCE FOR SLOPES SHALL BE 0.5%



SECTION A-A
NTS
RAISED CROSSWALK DETAILS



MID-BLOCK RAISED CROSSWALK ISOMETRIC PLAN
NTS



RAMP MARKING DETAIL
NTS

PAVEMENT NOTES

PROPOSED PAVEMENT MILLING AND OVERLAY:

SURFACE: 2" HOT MIX ASPHALT TOP COURSE

ASPHALT EMULSION FOR TACK COAT (RS-1) AT 0.07 GAL/SY OVER EXISTING PAVEMENT.
PAVEMENT MILLING VARIABLE DEPTH TO MEET PROPOSED GRADING

PROPOSED FULL DEPTH RECONSTRUCTION

SURFACE: 4 1/2" HOT MIX ASPHALT (1 1/2" SURFACE COURSE TYPE A OVER 3" BINDER COURSE TYPE A)

SUBBASE: 4" DENSE GRADED CRUSHED STONE OVER 8" GRAVEL BORROW, TYPE B

PROPOSED HOT MIX ASPHALT DRIVEWAY:

SURFACE: 3 1/2" HOT MIX ASPHALT (1 1/2" SURFACE COURSE TYPE A OVER 2" INTERMEDIATE COURSE TYPE A)

SUBBASE: 8" GRAVEL BORROW, TYPE B

PROPOSED CEMENT CONCRETE WALK:

SURFACE: 4" CEMENT CONCRETE

SUBBASE: 8" GRAVEL BORROW, TYPE B

PROPOSED CEMENT CONCRETE SIDEWALK AT DRIVE:

SURFACE: 6" CEMENT CONCRETE

SUBBASE: 8" GRAVEL BORROW, TYPE B

PROPOSED CEMENT CONCRETE WHEELCHAIR RAMP:

SURFACE: 4" CEMENT CONCRETE

SUBBASE: 8" GRAVEL BORROW, TYPE B

PROPOSED BRICK PAVER WALK

SURFACE: BRICK PAVER COURSE

SUBBASE: 3/4" SAND SETTING BED OVER 4" HOT MIX ASPHALT BASE OVER 8" GRAVEL BORROW, TYPE B

PROPOSED LOAM AND SEED:

4" LOAM BORROW, SEEDED

No.	Date	Dr. By	Chk. By	App. By	Description
					A P P R O V E D
					DATE: 4.13.12

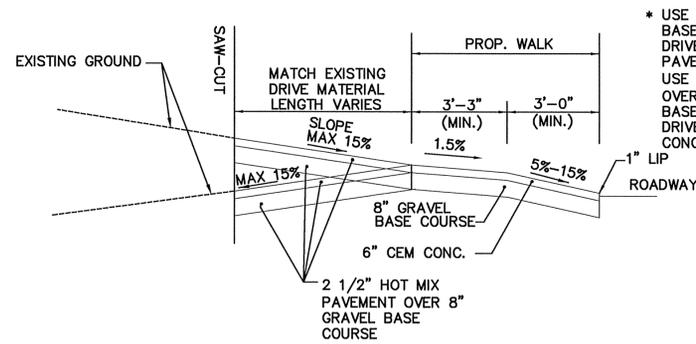
REGISTERED PROFESSIONAL ENGINEER
Lawrence A. Kelly



FILE NO.	2100200
CAAD NO.	2100200
SCALE:	AS NOTED
CONTRACT:	AS NOTED
JOB NO.	2100200
DR. BY:	GTS
DSN. BY:	GTS
CHK. BY:	WGP
APP. BY:	LFK

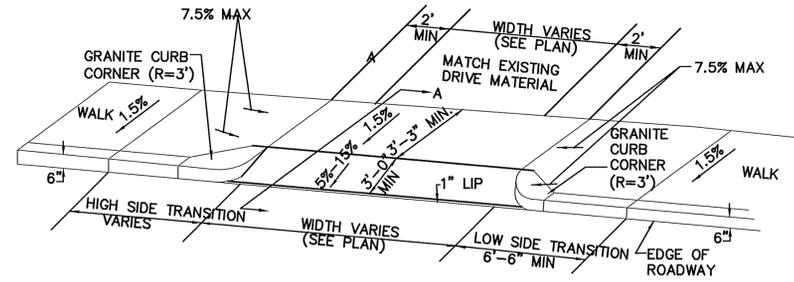
DT-1

Z:\MA-Feaborn-Projects\Cambridge MA\2100200\Drawings\3A-04 Const Details.dwg

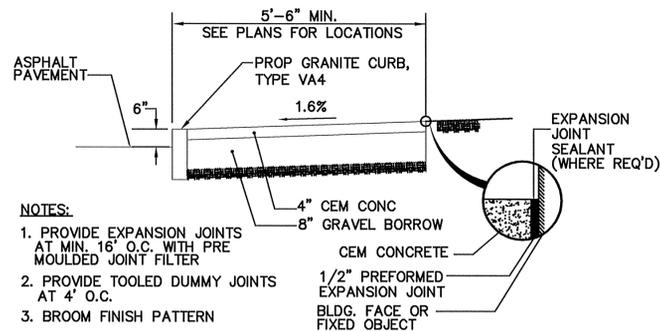


SECTION A-A

* USE 8" GRAVEL BASE COURSE FOR DRIVES WITH NO PAVED SURFACE. USE 4" CEM. CONC. OVER 8" GRAVEL BASE COURSE FOR DRIVES WITH CEM. CONC.



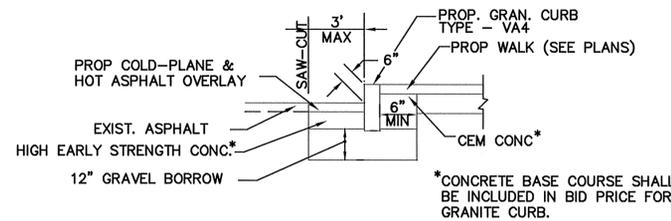
CEMENT CONCRETE DRIVE
N.T.S.



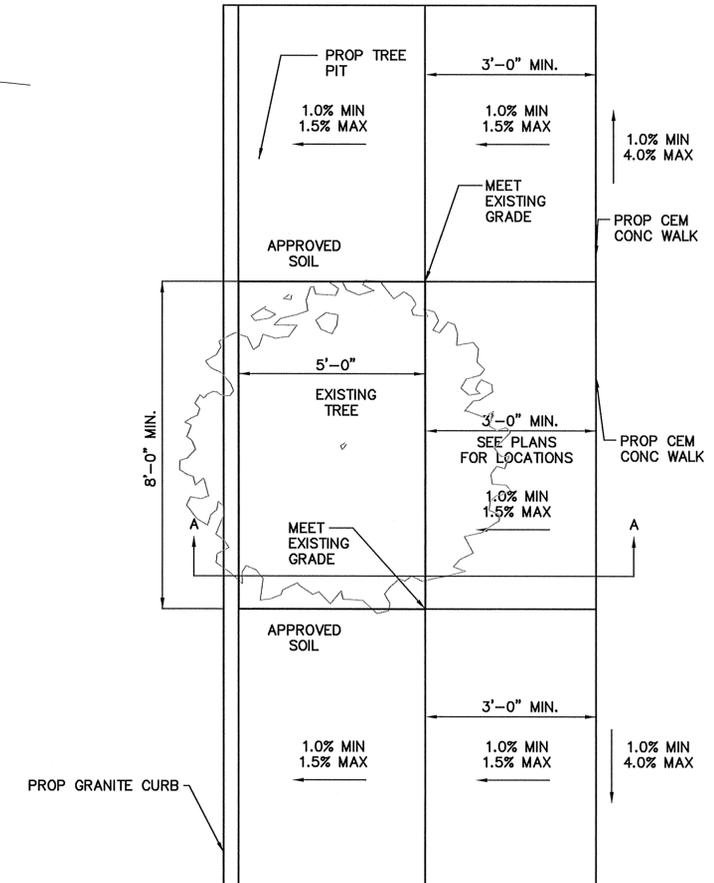
CEMENT CONCRETE WALK
N.T.S.

NOTES:

1. PROVIDE EXPANSION JOINTS AT MIN. 16' O.C. WITH PRE MOULDED JOINT FILTER
2. PROVIDE TOOLED DUMMY JOINTS AT 4' O.C.
3. BROOM FINISH PATTERN

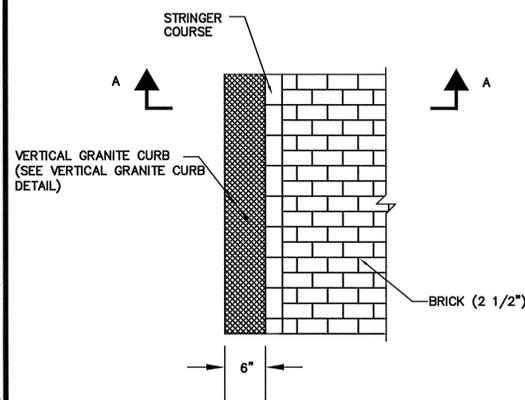


CURB INSTALLATION IN FULL DEPTH PAVEMENT LESS THAN 3' WIDE
N.T.S.

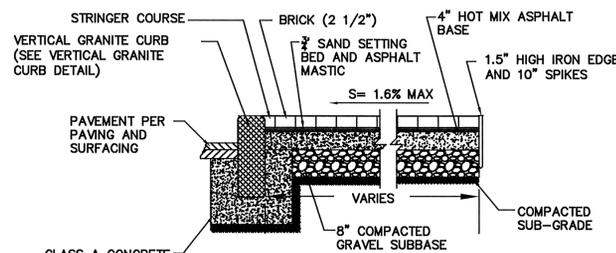


SECTION A-A

TREE PIT
N.T.S.



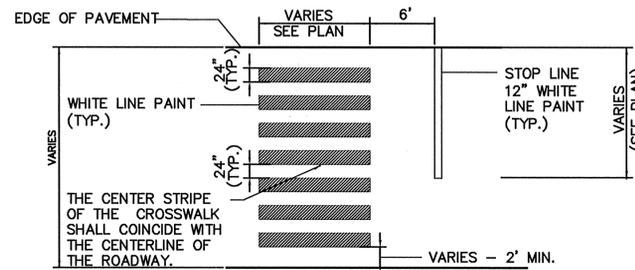
PLAN



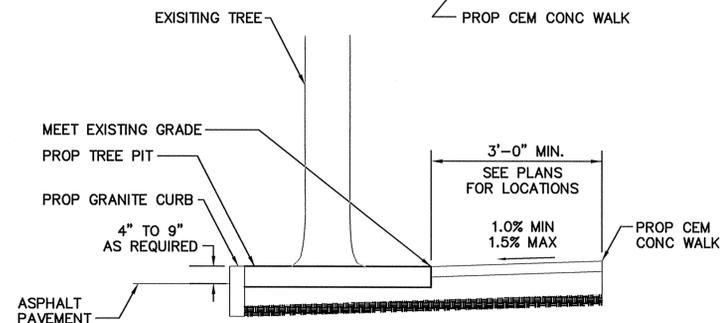
SECTION A-A

BRICK WALK
N.T.S.

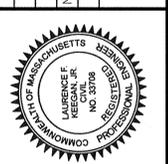
- NOTES:
1. SIDEWALKS SHALL MATCH WIDTH AND SLOPE OF EXISTING SIDEWALKS UNLESS OTHERWISE NOTED.



CROSSWALK MARKING DETAIL
N.T.S.

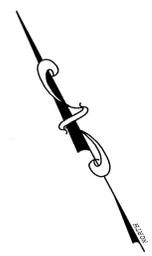


No.	Date	Dr. By	Ch. By	App. By	Description
					A P R O V E D
					4-13-12 DATE



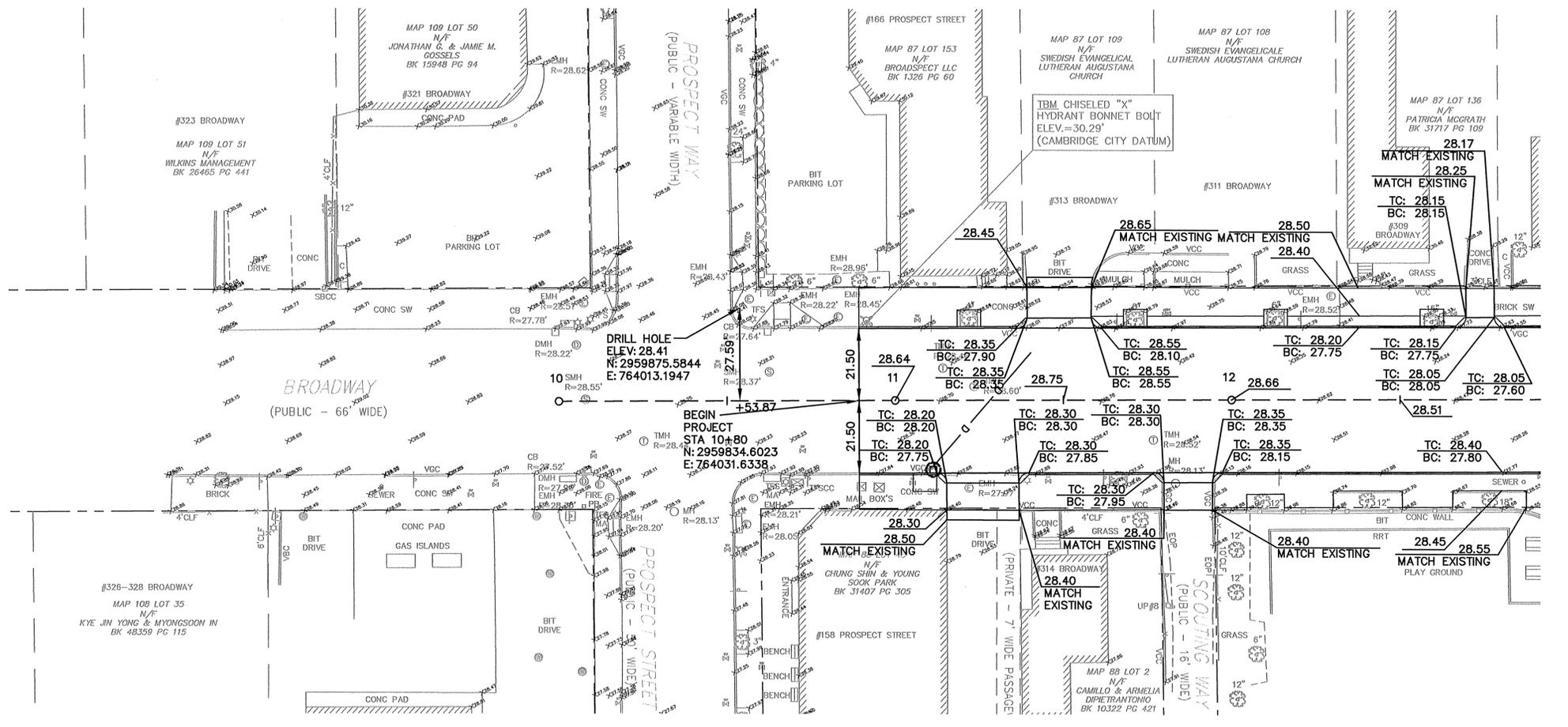
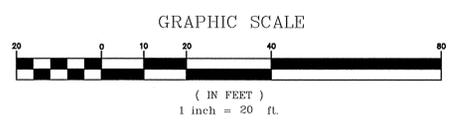
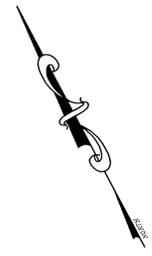
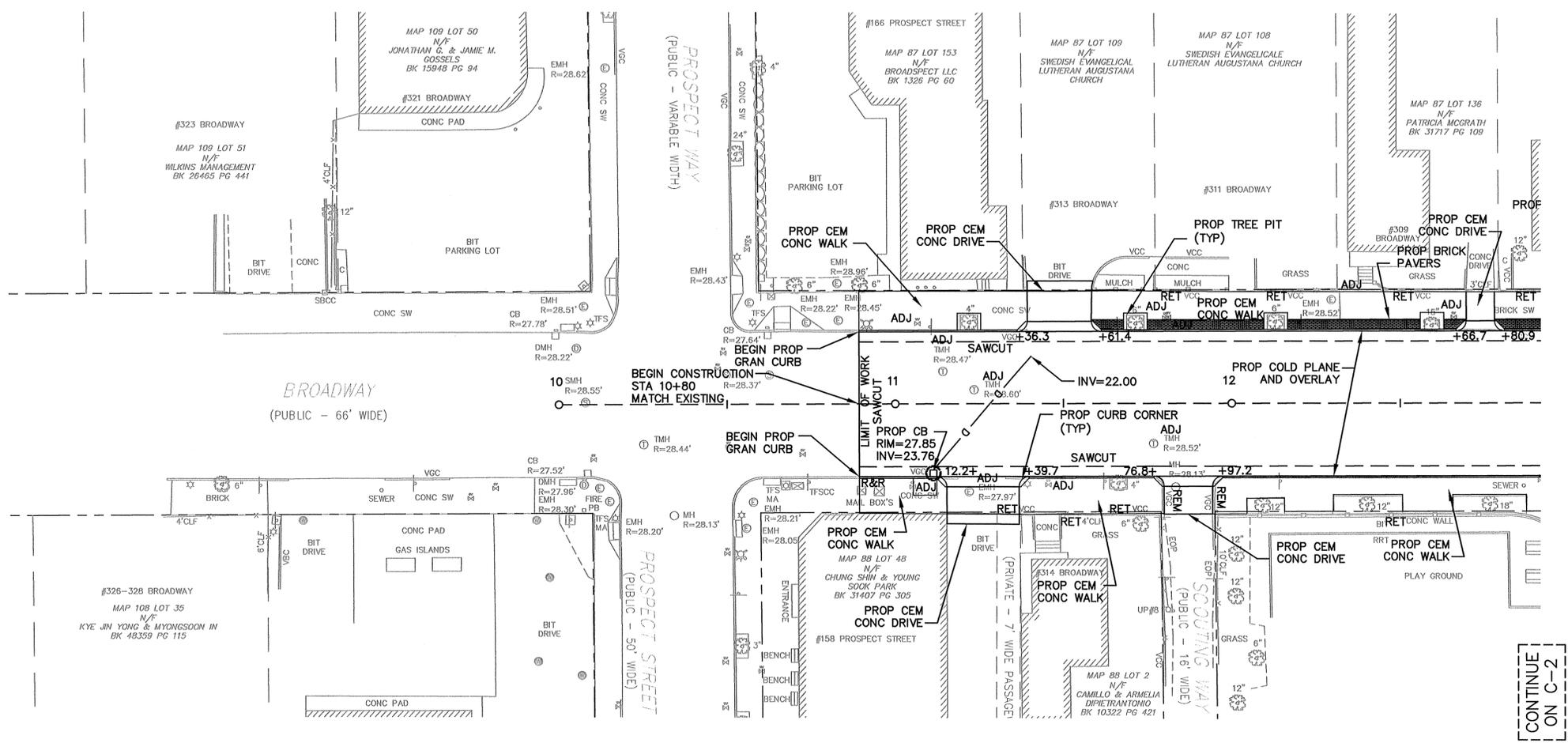
CADD NO.	2100200	CONTRACT	AS NOTED	SCALE	AS NOTED
FILE NO.	2100200	DR. BY	GTS	CHK. BY	WGP
		APP. BY	LFK		

Z:\M&E\Projects\Cambridge - Broadway, Binney, Gallies\CD\Drawings\2100200\DWG\03-04_Const_Details.dwg



CONSTRUCTION NOTES (ALL SHEETS):

1. THE CONTRACTOR SHALL REUSE AS MUCH OF THE EXISTING GRANITE CURB AS POSSIBLE. THE CONTRACTOR SHALL REPLACE GRANITE PIECES THAT ARE BROKEN OR HAVE SIGNIFICANT CHIPS OR GOUGES AS REQUIRED BY THE ENGINEER.
2. ALL UTILITY STRUCTURE COVERS WITHIN THE LIMITS OF PEDESTRIAN RAMPS SHALL BE REPLACED WITH A NON-SLIP EQUIVALENT.
3. ALL PROPOSED WALK SHALL BE CEMENT CONCRETE UNLESS OTHERWISE NOTED.
4. WHEN MEETING EXISTING CEMENT CONCRETE SIDEWALK PAVEMENT SHALL BE SAWCUT ON LIMIT LINES AS INDICATED ON PLANS.
5. ALL SIGNS SHALL BE REMOVED AND RESET AS REQUIRED BY THE ENGINEER AT NO ADDITIONAL COST TO THE CITY.
6. REMOVE AND REPLACE ALL EXISTING FRAME AND GRATES AS REQUIRED BY THE ENGINEER.
7. ALL SIDEWALK RECONSTRUCTION SHALL END AT THE LIMIT OF WORK UNLESS A COMPLIANT SECTION OF WALKWAY IS LOCATED WITHIN 15' OF THE LIMIT OF WORK.
8. ALL PROPOSED DRAIN LINE SHALL BE 12" PVC UNLESS OTHERWISE NOTED.



Weston & Sampson
 100 Foborough Blvd., S.250, Foborough, MA
 (508) 698-3034 (800) SAMPSON
 www.westonandsampson.com

No.	Date	Dr. By	Chk. By	App. By	Description

DATE: 4-13-12

REGISTERED PROFESSIONAL ENGINEER
Lawrence J. Kim



CAMBRIDGE, MASSACHUSETTS
 DEPARTMENT OF PUBLIC WORKS

BROADWAY ROADWAY AND SIDEWALK IMPROVEMENT PROJECT - PHASE I AND PHASE II

CONSTRUCTION AND GRADING PLAN

SCALE: AS NOTED

CONTRACT: 2100200

CADD NO.: 2100200

FILE NO.: 2100200

DR. BY: []

CHK. BY: []

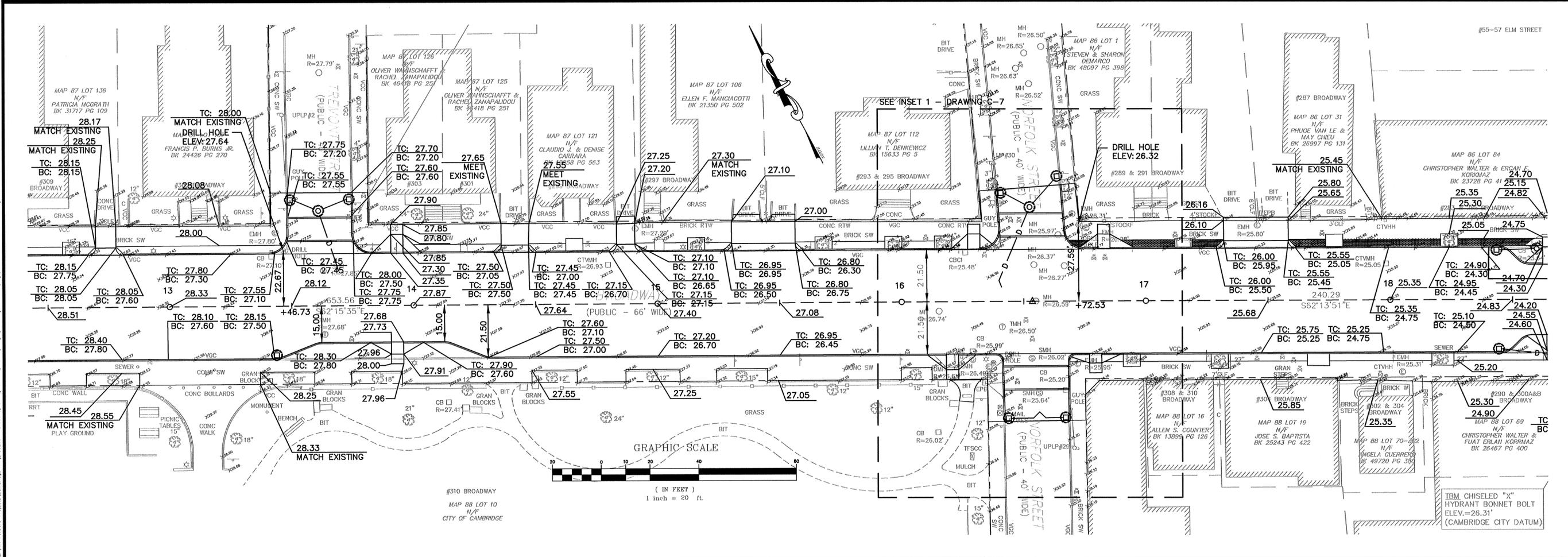
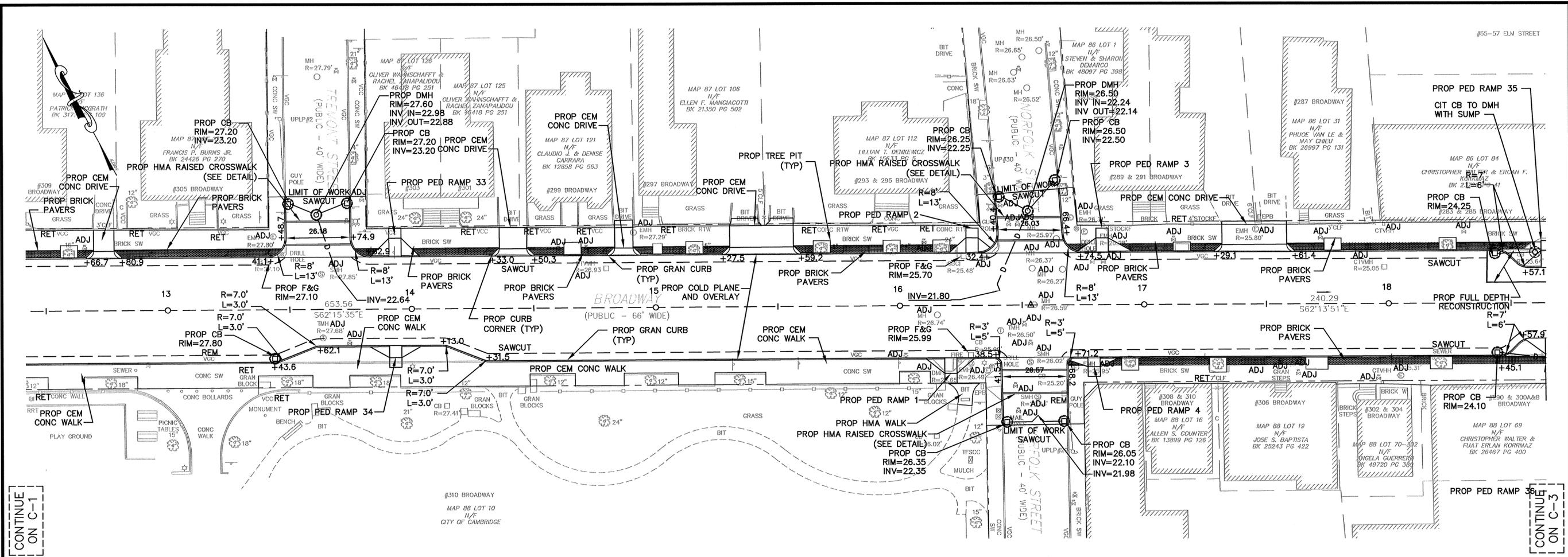
APP. BY: []

GTS: []

GTS: []

WGP: []

LFK: []



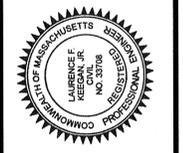
CONTINUE ON C-1

CONTINUE ON C-3

Weston&Sampson
 100 Foborough Blvd., 2.250, Foborough, MA
 (508) 699-3034 (800) 5AMPSON
 www.westonandsampson.com

No.	Date	Dr. By	Ck. By	App. By	Description
1					A P P R O V E D
					DATE 4.13.17

Lawrence J. Keegan
REGISTERED PROFESSIONAL ENGINEER



CAMBRIDGE, MASSACHUSETTS
 DEPARTMENT OF PUBLIC WORKS

BROADWAY ROADWAY AND SIDEWALK IMPROVEMENT PROJECT - PHASE I AND PHASE II

CONSTRUCTION AND GRADING PLAN

SCALE: AS NOTED

CONTRACT: 2100200

JOB NO. 2100200

FILE NO. 2100200

CAUD NO. 2100200

DR. BY: GTS

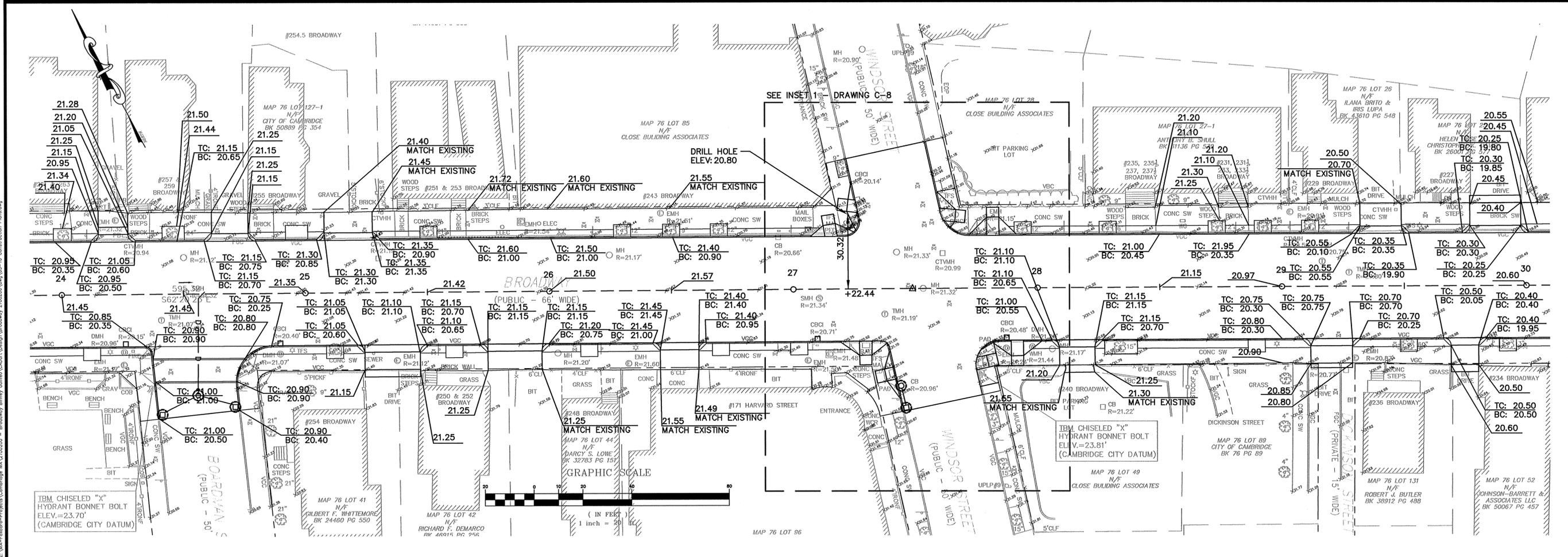
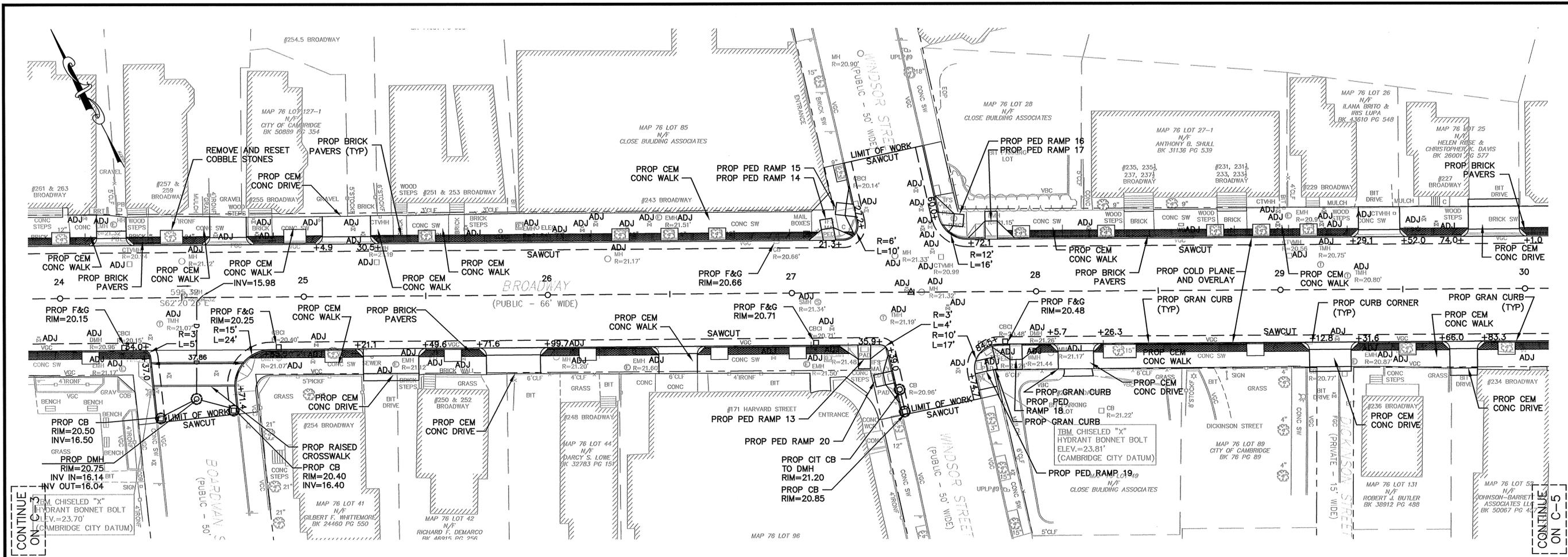
CHK. BY: WCP

APP. BY: LFK

AS NOTED

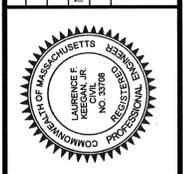
C-2

SHEET 6 OF 16

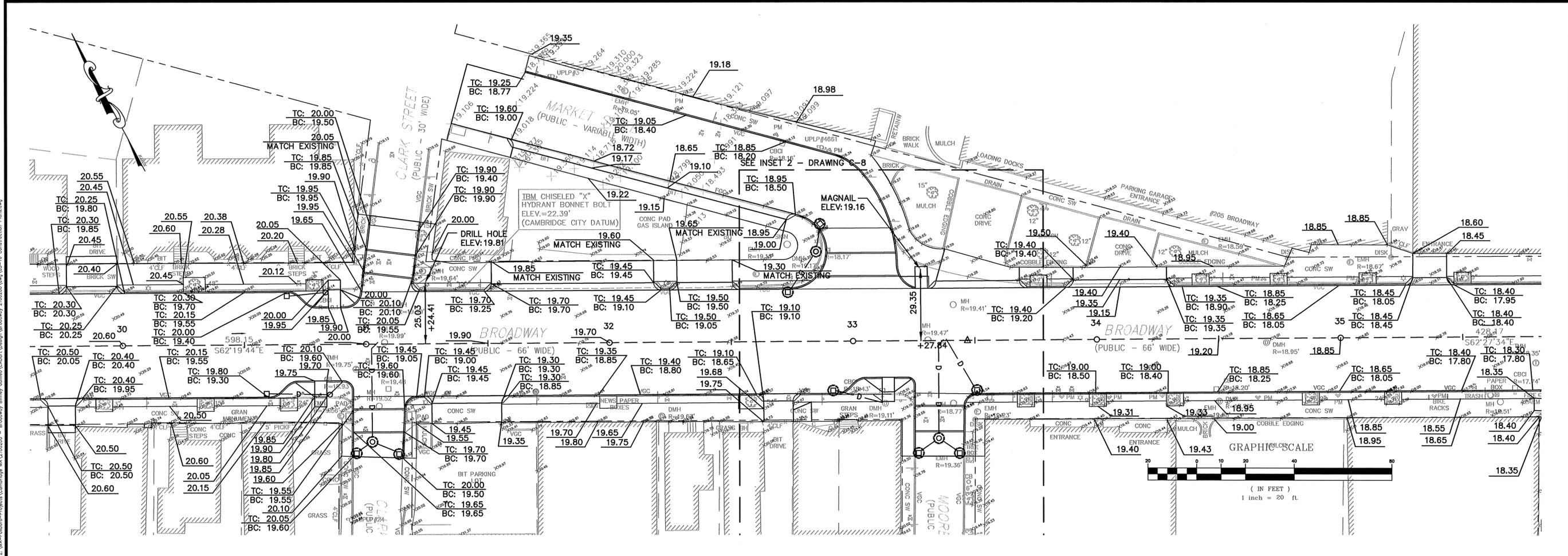
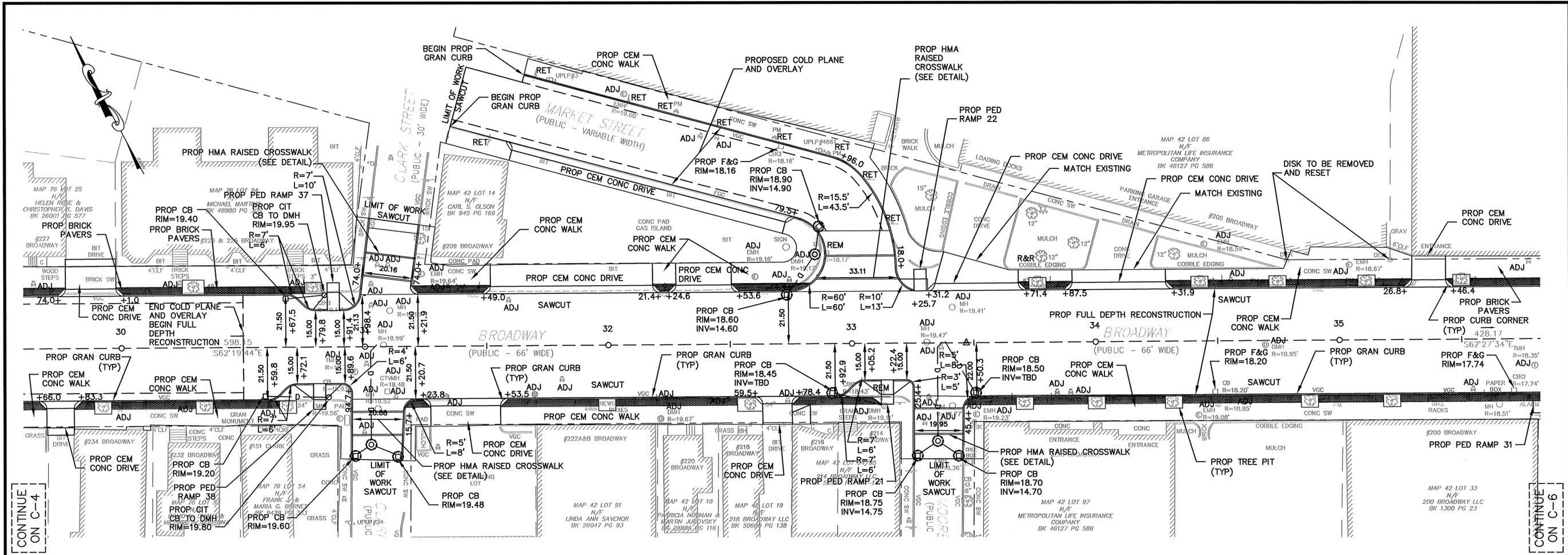


Weston&Sampson
 100 Foborough Blvd., S.250, Foborough, MA
 (508) 698-3034
 www.westonandsampson.com

No.	Date	Dr. By	Chk. By	App. By	Description
1	4-13-12	Source & Key			DATE



FILE NO. 2100200	CADD NO. 2100200	SCALE: AS NOTED	CONTRACT: 2100200	JOB NO. 2100200	DR. BY: GTS	CHK. BY: WGP	APP. BY: LFK
CONSTRUCTION AND GRADING PLAN							
BROADWAY ROADWAY AND SIDEWALK IMPROVEMENT PROJECT - PHASE I AND PHASE II							
CAMBRIDGE, MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS							



Weston & Sampson
 100 Foxborough Blvd., S.250, Foxborough, MA
 (508) 698-3034 (900) SAMPSON
 www.westonsampson.com

No.	Date	Dr. By	Ch. By	App. By	Description

DATE: 4-13-12
 REGISTERED PROFESSIONAL ENGINEER: Lawrence K. Kuge



CAMBRIDGE, MASSACHUSETTS
 DEPARTMENT OF PUBLIC WORKS
 BROADWAY ROADWAY AND SIDEWALK IMPROVEMENT PROJECT - PHASE I AND PHASE II

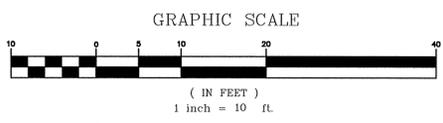
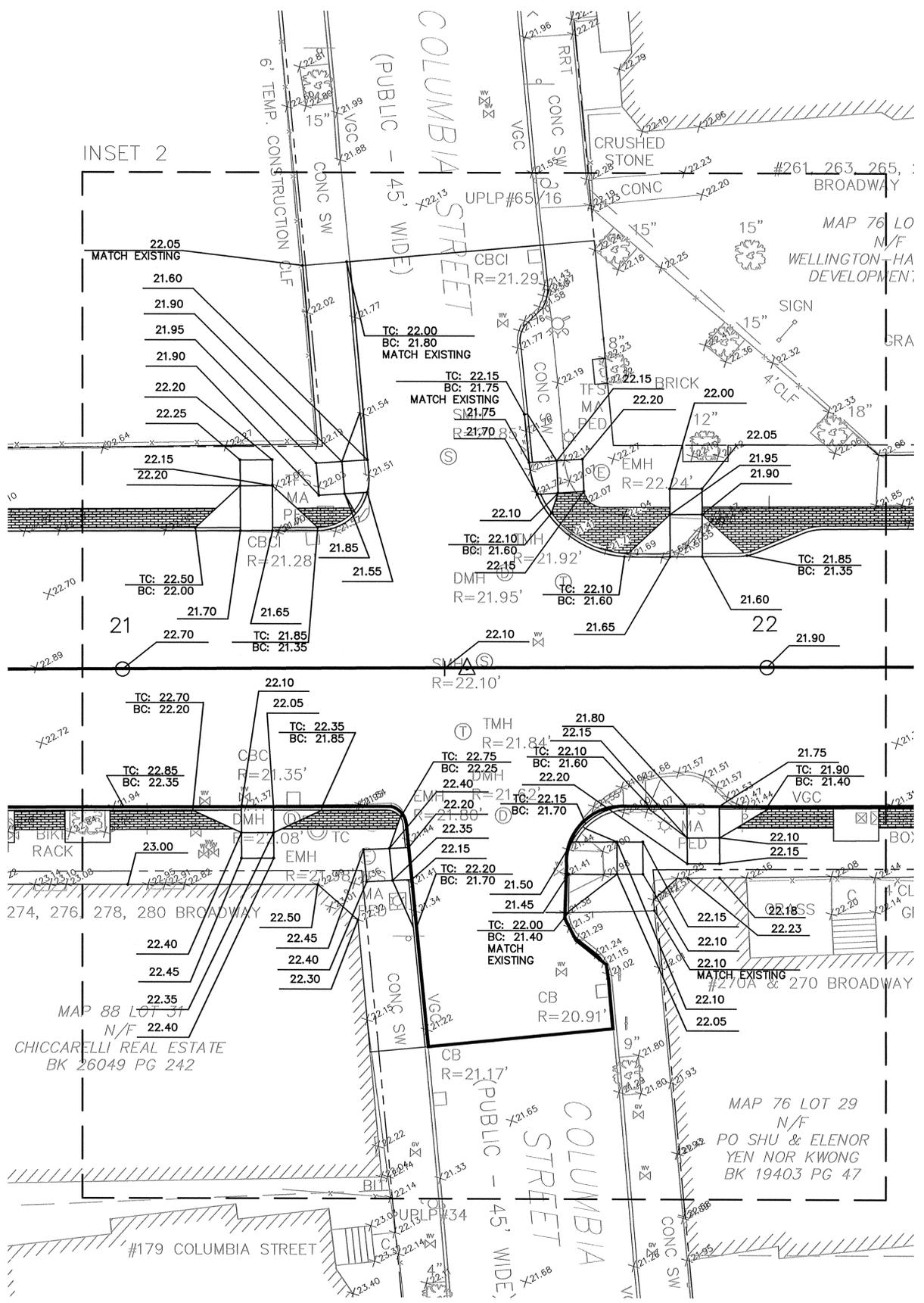
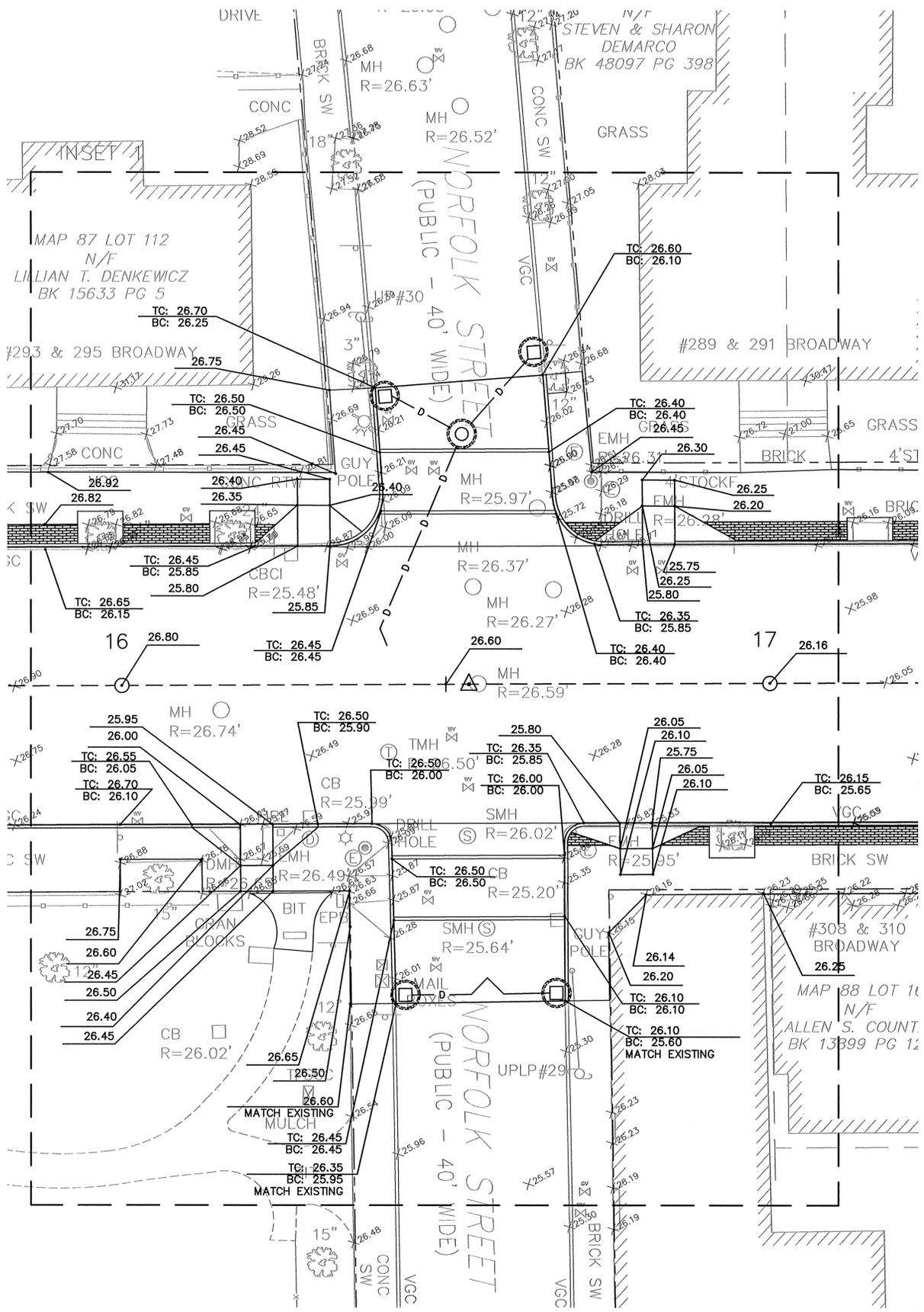
CONSTRUCTION AND GRADING PLAN

FILE NO. 2100200
 CADD NO. 2100200
 CONTRACT: AS NOTED
 JOB NO. 2100200
 DR. BY: GTS
 CHK. BY: WGP
 APP. BY: LFK

SCALE: AS NOTED

C-5

SHEET 9 OF 16



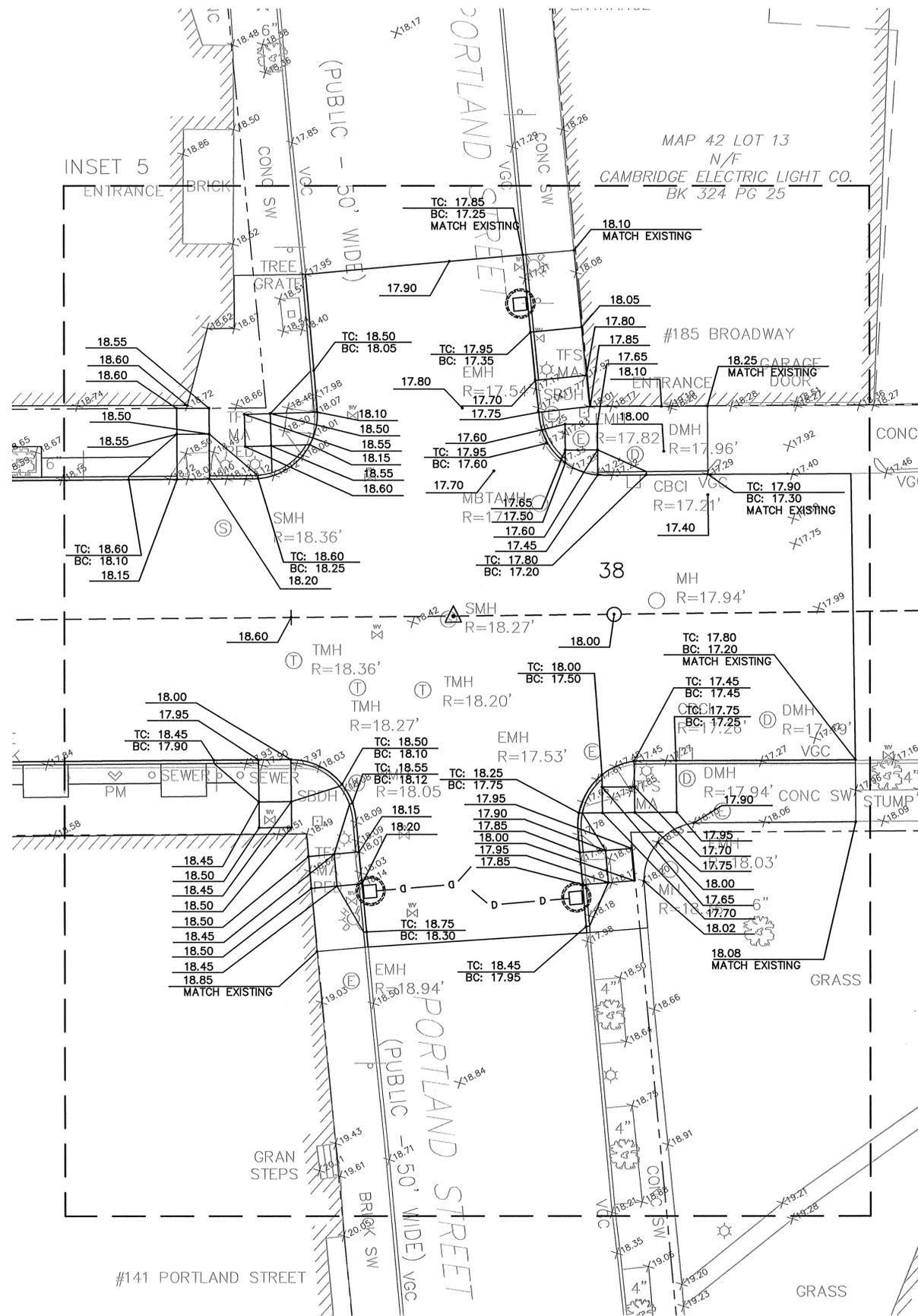
Z:\Mkr-Facore-Projects\Cambridge MA\2100200 - Broadway Binney Galileo\CA\Design\Broadway 2100200.dwg (04-18 Construction Plans.dwg

No.	Date	Dr. By	Chk. By	App. By	Description

DATE: **4.13.12**



CADD NO.	2100200	SCALE:	AS NOTED	CONTRACT:	
FILE NO.	2100200	DR. BY:	GTS	CHK. BY:	WGP
		APP. BY:	LFK		



PEDESTRIAN RAMP TABLE C-2

PEDESTRIAN RAMP	RAMP LENGTH (FT.)	PEDESTRIAN RAMP TYPE	TRANSITION LENGTH (FT.)	
			HIGH SIDE	LOW SIDE
1	6'-5"	1	7'-8"	6'-6"
2	6'-3"	1	5'-10"	6'-6"
3	6'-0"	1	7'-8"	6'-6"
4	4'-0"	1	7'-8"	6'-6"
33	5'-0"	1	7'-8"	6'-6"
34	7'-8"	1	7'-8"	6'-6"

PEDESTRIAN RAMP TABLE C-5

PEDESTRIAN RAMP NO.	RAMP LENGTH (FT.)	PEDESTRIAN RAMP TYPE	TRANSITION LENGTH (FT.)	
			HIGH SIDE	LOW SIDE
21	6'-0"	1	7'-8"	6'-6"
22	5'-0"	1	8'-5"	N/A
37	7'-6"	1	7'-8"	6'-6"
38	6'-6"	1	7'-8"	6'-6"

PEDESTRIAN RAMP TABLE C-3

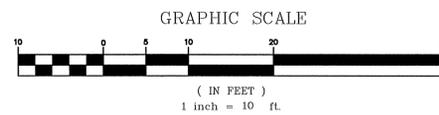
PEDESTRIAN RAMP NO.	RAMP LENGTH (FT.)	PEDESTRIAN RAMP TYPE	TRANSITION LENGTH (FT.)	
			HIGH SIDE	LOW SIDE
5	4'-0"	1	7'-8"	6'-6"
6	7'-0"	1	7'-8"	6'-6"
7	4'-0"	1	7'-8"	3'-10"
8	4'-0"	1	3'-10"	3'-6"
9	6'-7"	1	7'-8"	6'-6"
10	5'-0"	1	7'-8"	6'-6"
11	3'-0"	1	4'-10"	6'-6"
12	3'-0"	1	7'-8"	6'-6"
35	7'-0"	1	7'-8"	6'-6"
36	6'-6"	1	7'-8"	6'-6"

PEDESTRIAN RAMP TABLE C-6

PEDESTRIAN RAMP NO.	RAMP LENGTH (FT.)	PEDESTRIAN RAMP TYPE	TRANSITION LENGTH (FT.)	
			HIGH SIDE	LOW SIDE
23	6'-6"	1	9'-1"	6'-6"
24	7'-0"	1	7'-8"	6'-6"
25	7'-0"	1	7'-10"	6'-6"
26	7'-0"	4	5'-0"	6'-6"
27	3'-5"	1	9'-0"	6'-6"
28	3'-4"	1	7'-0"	6'-6"
29	4'-0"	1	7'-8"	6'-6"
30	3'-10"	1	7'-8"	6'-6"
31	4'-0"	1	2'-6"	3'-6"
32	5'-0"	1	2'-6"	9'-3"

PEDESTRIAN RAMP TABLE C-4

PEDESTRIAN RAMP NO.	RAMP LENGTH (FT.)	PEDESTRIAN RAMP TYPE	TRANSITION LENGTH (FT.)	
			HIGH SIDE	LOW SIDE
13	5'-10"	1	7'-8"	6'-6"
14	5'-3"	1	7'-8"	6'-6"
15	3'-9"	1	7'-8"	6'-6"
16	6'-0"	1	4'-1"	6'-6"
17	7'-6"	1	7'-8"	6'-6"
18	6'-6"	1	7'-8"	6'-6"
19	5'-0"	3	7'-8"	6'-6"
20	4'-0"	1	7'-8"	6'-6"



Z:\MA-FORUM-Projects\Cambridge - Broadway Boney Collins\Design\Broadway_2100200.dwg (5/18/18 Construction Plans.dwg)

Weston & Sampson
 100 Foxborough Blvd., S.250, Foxborough, MA
 (508) 698-3034 (800) SAMPSON
 www.westonandsampson.com

No.	Date	Dr. By	Ch. By	App. By	Description
					A P P R O V E D
					REGISTERED PROFESSIONAL ENGINEER

4-13-17 DATE



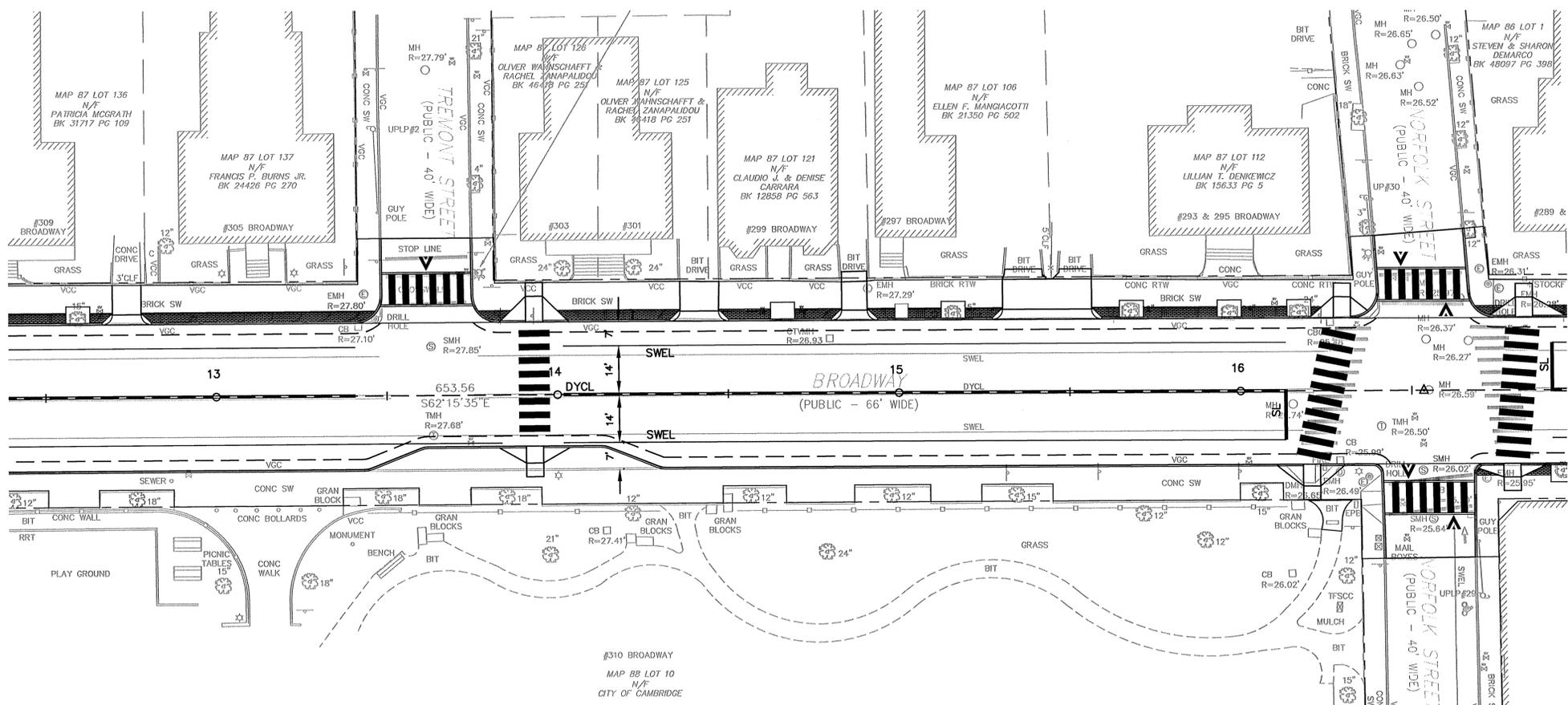
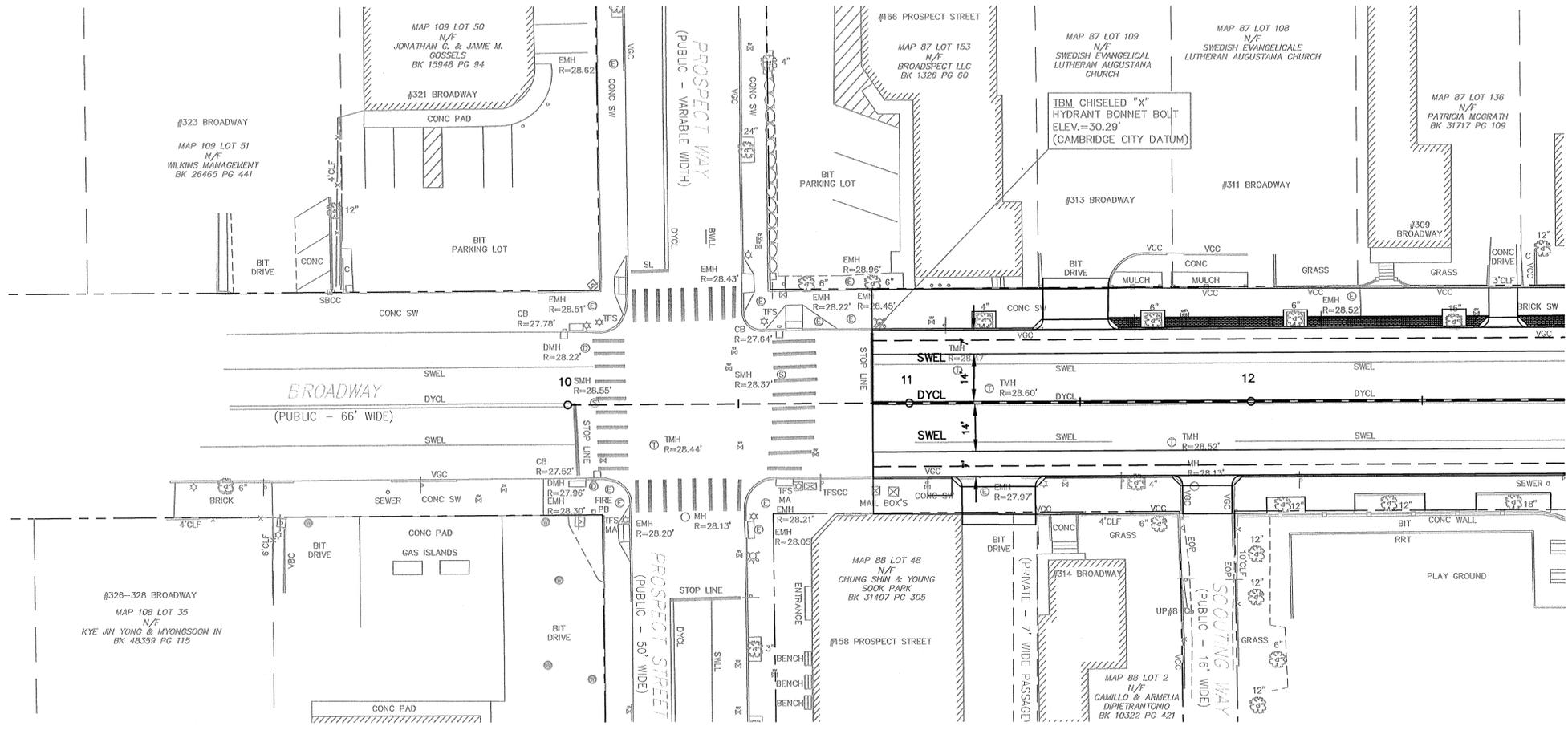
CAMBRIDGE, MASSACHUSETTS
 DEPARTMENT OF PUBLIC WORKS
 BROADWAY ROADWAY AND SIDEWALK IMPROVEMENT PROJECT - PHASE I AND PHASE II
CONSTRUCTION AND GRADING PLAN

FILE NO. 2100200
 CADD NO. 2100200
 CONTRACT - AS NOTED
 DR. BY GTS
 CHK. BY GTS
 APP. BY WGP
 LFK



NOTES:

1. ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC, PLACED AS SHOWN ON THE PLANS OR AS REQUIRED BY THE ENGINEER AND SHALL MATCH EXISTING MARKINGS AT THE LIMIT OF WORK.
2. ALL PROPOSED SYMBOL MARKINGS SHALL BE PAVEMENT MARKING TAPE (380 I SERIES).
3. LANE LINES SHALL BE 6 INCHES WIDE. STOP BARS SHALL BE 12 INCHES WIDE. CROSSWALKS SHALL BE 24 INCHES WIDE.
4. THE CONTRACTOR SHALL LAYOUT ALL PROPOSED PAVEMENT MARKINGS AND RECEIVE APPROVAL FROM CITY OFFICIALS PRIOR TO APPLICATION OF PAVEMENT MARKINGS.



2. WA - Fuboro - Projects/Comps/MA/21002000 - Broadway, Tremont, Scituate, Cabot, Chelsea, Broadway, 21002000, View 05-16, Construction Plans.dwg

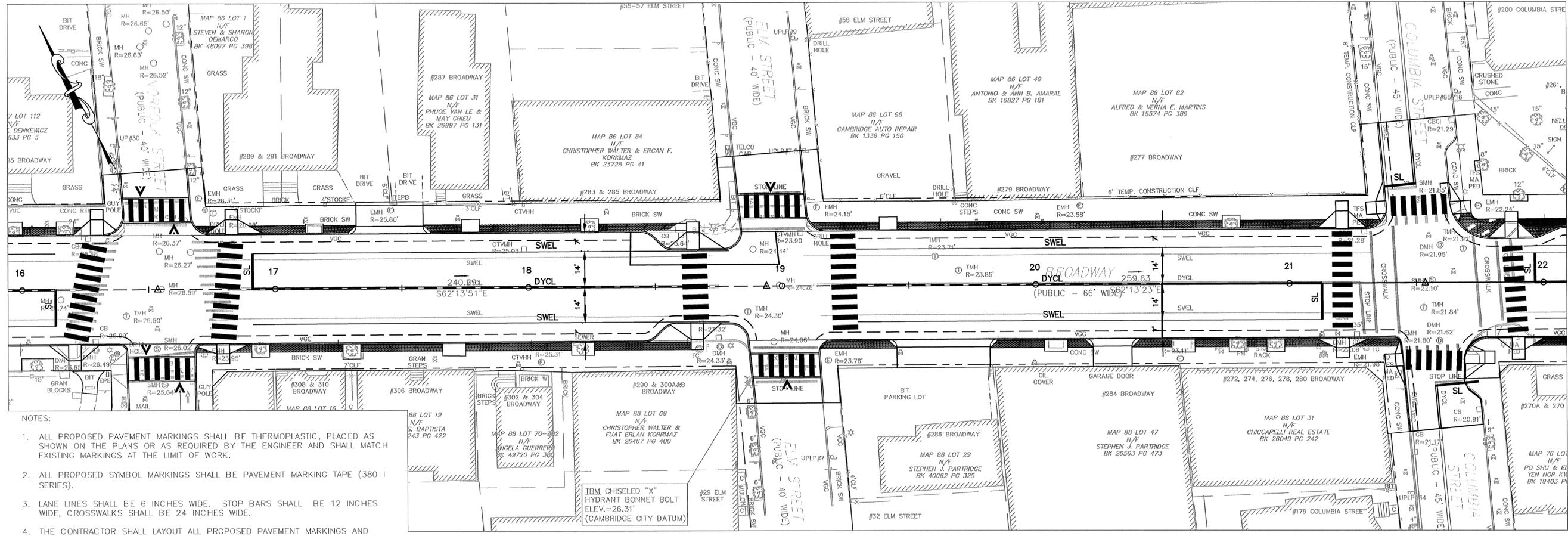
Weston & Sampson
 100 Foborough Blvd., S.250, Foborough, MA
 (508) 698-3034 (800) SAMPSON
 www.westonandsampson.com

No.	Date	Dr. By	Ch. By	App. By	Description	DATE
						4-13-12

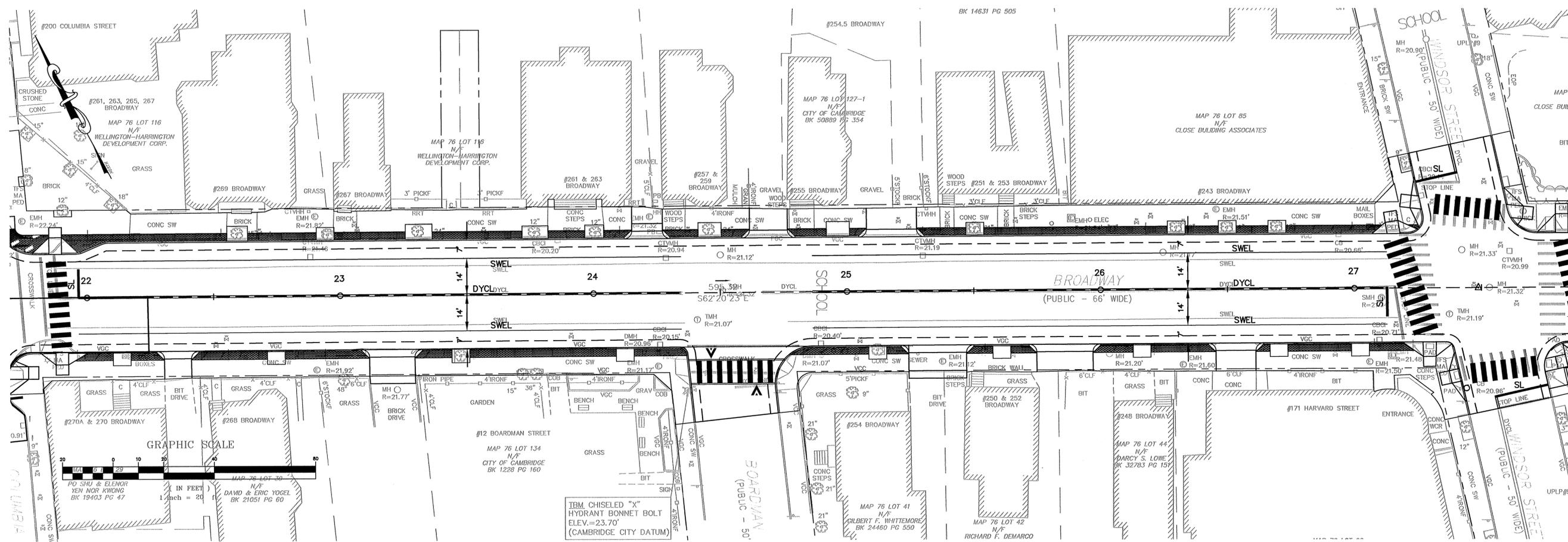
Lawrence J. Kugel
 REGISTERED PROFESSIONAL ENGINEER



CADD NO.	2100200	CONTRACT	AS NOTED	SCALE	AS NOTED	DR. BY	GTS	CHK. BY	WGP	APP. BY	LFK
FILE NO.	2100200	CAMBRIDGE, MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS BROADWAY ROADWAY AND SIDEWALK IMPROVEMENT PROJECT - PHASE I AND PHASE II PAVEMENT MARKING PLAN									



- NOTES:
1. ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC, PLACED AS SHOWN ON THE PLANS OR AS REQUIRED BY THE ENGINEER AND SHALL MATCH EXISTING MARKINGS AT THE LIMIT OF WORK.
 2. ALL PROPOSED SYMBOL MARKINGS SHALL BE PAVEMENT MARKING TAPE (380 I SERIES).
 3. LANE LINES SHALL BE 6 INCHES WIDE. STOP BARS SHALL BE 12 INCHES WIDE, CROSSWALKS SHALL BE 24 INCHES WIDE.
 4. THE CONTRACTOR SHALL LAYOUT ALL PROPOSED PAVEMENT MARKINGS AND RECEIVE APPROVAL FROM CITY OFFICIALS PRIOR TO APPLICATION OF PAVEMENT MARKINGS.



Weston & Sampson
 100 Foborough Blvd., S.250, Foborough, MA
 (508) 698-3034 (800) 5AMPSON
 www.westonandsampson.com

No.	Date	Dr. By	Ck. By	App. By	Description
1					

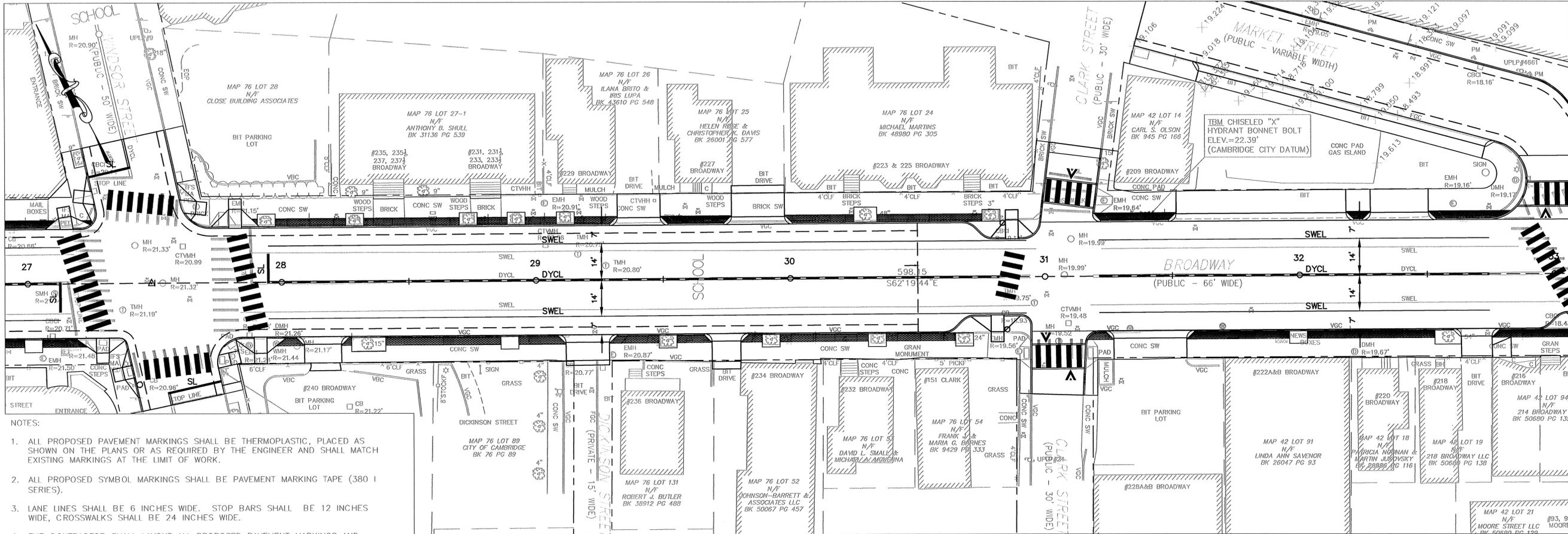
DATE: 4-13-12

REGISTERED PROFESSIONAL ENGINEER
Lawrence J. Kery

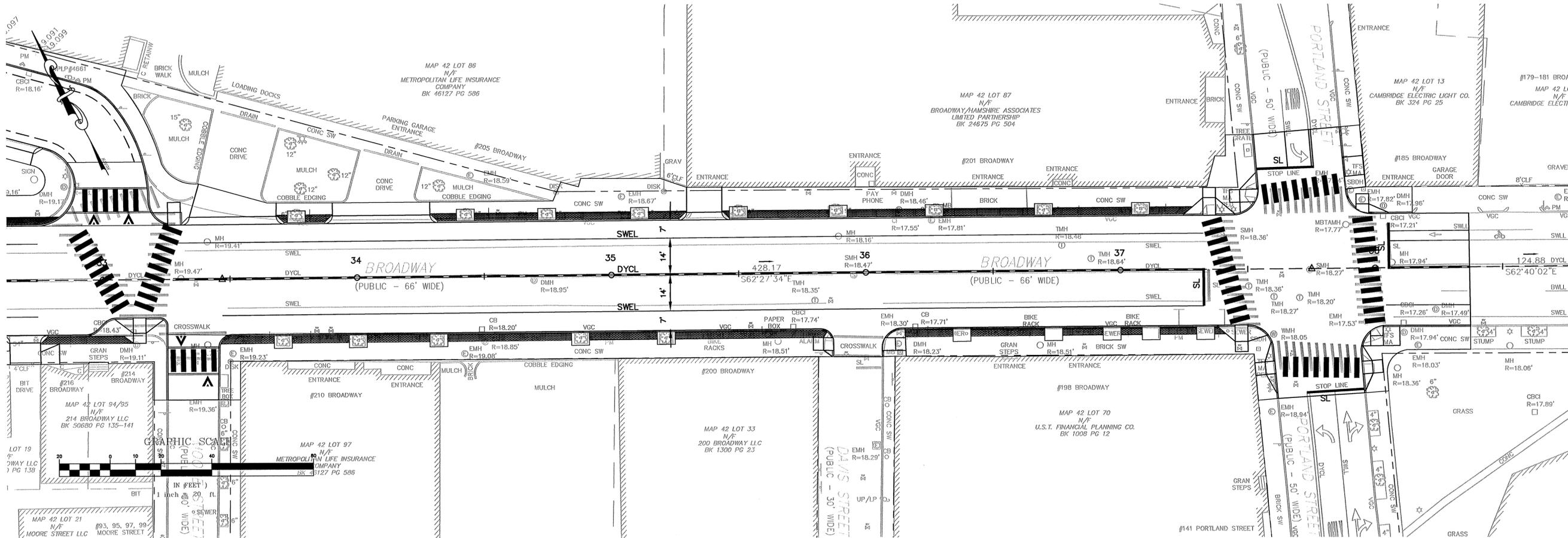


CADD NO.	2100200
SCALE:	AS NOTED
CONTRACT:	
JOB NO.	2100200
DR. BY:	GTS
CHK. BY:	WGP
APP. BY:	LFK

CAMBRIDGE, MASSACHUSETTS
 DEPARTMENT OF PUBLIC WORKS
 BROADWAY ROADWAY AND SIDEWALK IMPROVEMENT PROJECT - PHASE I AND PHASE II
 PAVEMENT MARKING PLAN



- NOTES:
1. ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC, PLACED AS SHOWN ON THE PLANS OR AS REQUIRED BY THE ENGINEER AND SHALL MATCH EXISTING MARKINGS AT THE LIMIT OF WORK.
 2. ALL PROPOSED SYMBOL MARKINGS SHALL BE PAVEMENT MARKING TAPE (380 I SERIES).
 3. LANE LINES SHALL BE 6 INCHES WIDE. STOP BARS SHALL BE 12 INCHES WIDE, CROSSWALKS SHALL BE 24 INCHES WIDE.
 4. THE CONTRACTOR SHALL LAYOUT ALL PROPOSED PAVEMENT MARKINGS AND RECEIVE APPROVAL FROM CITY OFFICIALS PRIOR TO APPLICATION OF PAVEMENT MARKINGS.



Weston & Sampson
 100 Foborough Blvd., S.250, Foborough, MA
 (508) 698-3034 (800) 5AMPSON
 www.westonsampson.com

No.	Date	Dr. By	Chk. By	App. By	Description		
A		P	R	O	V	E	D

4.13.12 DATE

Lawrence H. Keegan
 REGISTERED PROFESSIONAL ENGINEER

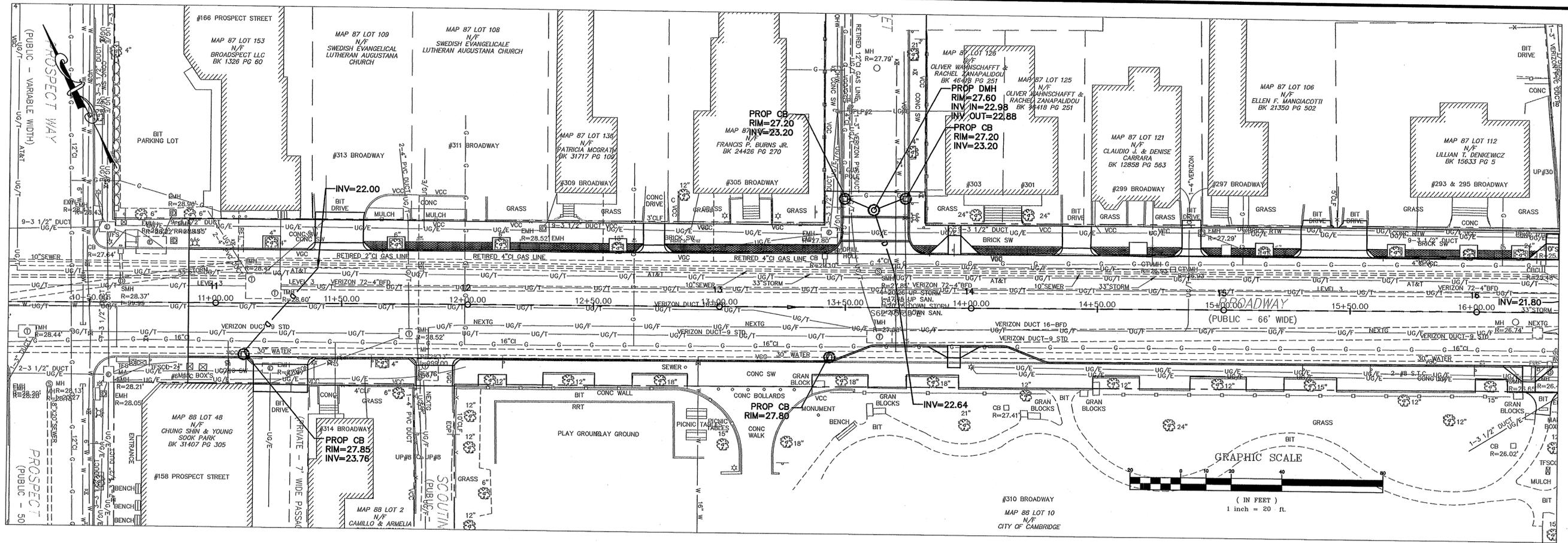


CAMBRIDGE, MASSACHUSETTS
 DEPARTMENT OF PUBLIC WORKS

BROADWAY ROADWAY AND SIDEWALK IMPROVEMENT PROJECT - PHASE I AND PHASE II

PAVEMENT MARKING PLAN

SCALE:	AS NOTED
CONTRACT:	2100200
JOB NO.:	GTS
DR. BY:	GTS
CHK. BY:	WGP
APP. BY:	LFK



NOTES:

- UNLESS OTHERWISE NOTED ALL PROPOSED DRAIN PIPE SHALL BE 12" PVC.
- THE CONTRACTOR SHALL VERIFY ALL DRAINAGE STRUCTURE LOCATIONS AND INVERTS PRIOR TO INSTALLATION. ANY CONFLICTS WITH EXISTING UTILITIES SHALL BE RESOLVED WITH COORDINATION OF THE CITY OF CAMBRIDGE PRIOR TO STRUCTURE INSTALLATION.

Weston & Sampson
 100 Foborough Blvd., S.250, Foborough, MA
 (508) 698-3034 (800) 5AMPSON
 www.westonandsampson.com

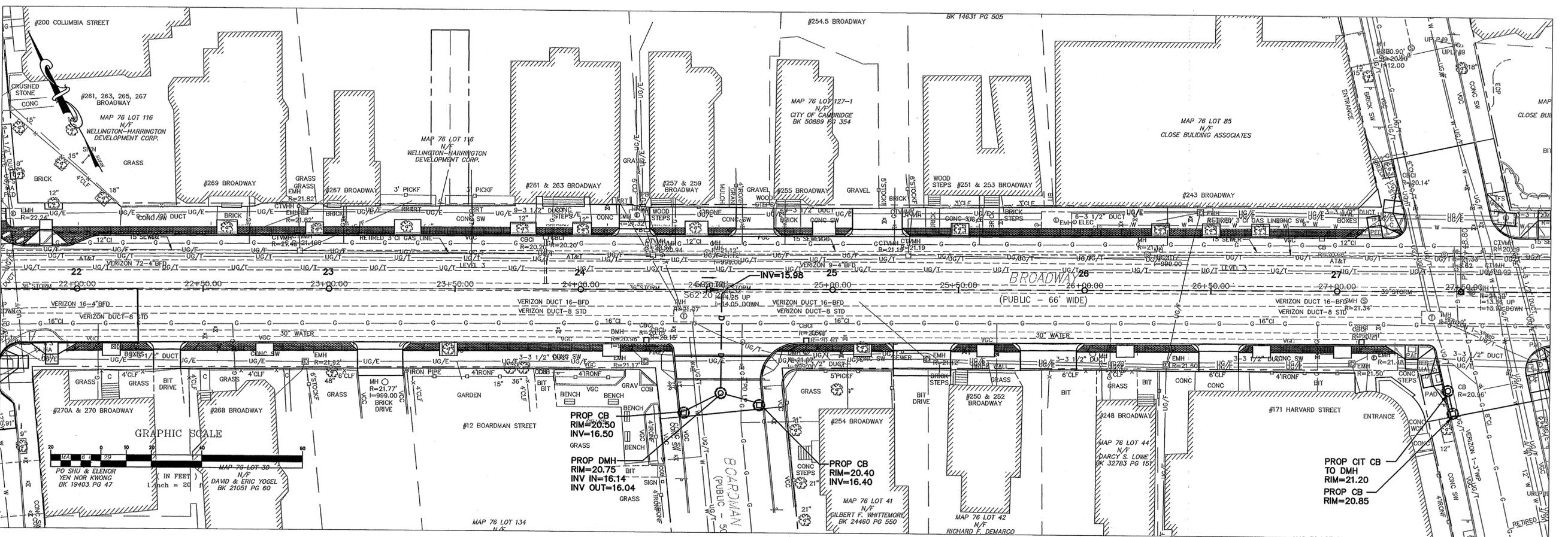
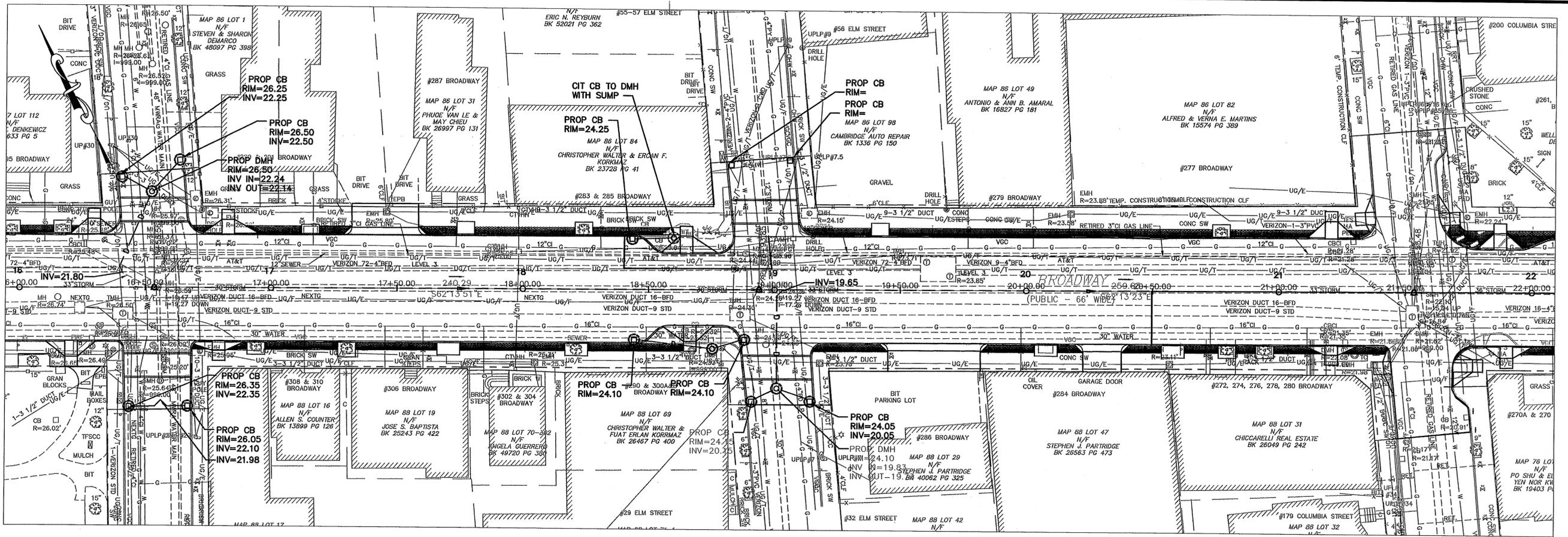
No.	Date	Dr. By	Ck. By	App. By	Description
					A P R O V E D
					DATE 4-14-12

REGISTERED PROFESSIONAL ENGINEER
Joseph H. Kelly



CAMBRIDGE, MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS	
BROADWAY ROADWAY AND SIDEWALK IMPROVEMENT PROJECT - PHASE I AND PHASE II	
UTILITY PLAN	
FILE NO. 2100200	CONTRACT: AS NOTED
JOB NO. 2100200	SCALE: AS NOTED
DR. BY GTS	CHK. BY GTS
APP. BY LFK	APP. BY LFK

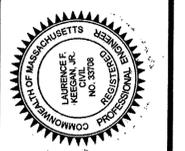
UT-1



Weston & Sampson
 100 Faneuil Hall Bldg., S.250, Faneuil Hall, MA
 (608) 698-3034 (800) 5AMPSON
 www.westonandsampson.com

No.	Date	Dr. By	Chk. By	App. By	Description
					A P P R O V E D
					DATE 4.14.12

James J. Kelly
 REGISTERED PROFESSIONAL ENGINEER



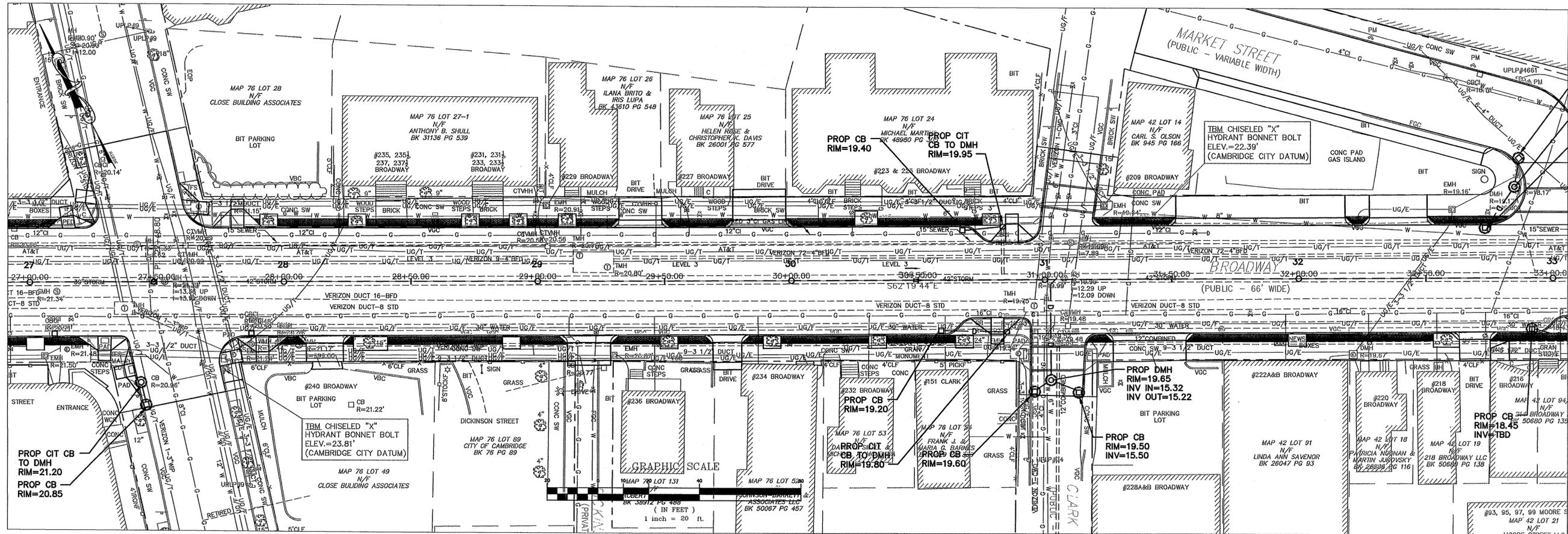
CAMBRIDGE, MASSACHUSETTS
 DEPARTMENT OF PUBLIC WORKS
 BROADWAY ROADWAY AND SIDEWALK IMPROVEMENT PROJECT - PHASE I AND PHASE II
 UTILITY PLAN

SCALE: AS NOTED
 CONTRACT: 2100200
 JOB NO.: 2100200
 FILE NO.: 2100200

DR. BY: GTS
 DS. BY: GTS
 CHK. BY: WOP
 APP. BY: LFK

UT-2
 SHEET 18 OF 19

E:\Cambridge_MA\2100200 - Broadway Roadway and Sidewalk Improvement Project\Drawings\2100200\UT-19 Utility Plans.dwg
 Date: 4/14/12 10:58:11 AM



No.	Date	Dr. By	App. By	Description
1	4-14-12	James A. Kuge		REGISTERED PROFESSIONAL ENGINEER



FILE NO.	CADD NO.	SCALE	CONTRACT	JOB NO.	DR BY	DS BY	CHK BY	APP BY
2100200	2100200	AS NOTED	2100200	2100200	GTS	GTS	WGP	LFK

UTILITY PLAN
 CAMBRIDGE MASSACHUSETTS
 DEPARTMENT OF PUBLIC WORKS
 BROADWAY ROADWAY AND SIDEWALK IMPROVEMENT PROJECT - PHASE I AND PHASE II