

SITE DEVELOPMENT PLANS

FOR

176– 210 GROVE STREET FRANKLIN, MA

FEBRUARY 14, 2020

SHEET INDEX						
SHEET No.	DESCRIPTION	LATEST REVISED DATE	CONSTRUCTION	REVISIONS		
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2	OVERALL LAYOUT PLAN					
3	EXISTING CONDITIONS PLAN					
4	LAYOUT PLAN					
5	GRADING PLAN					
6	SEWER, DRAIN PLAN					
7	UTILITY PLAN					
8	DETAIL SHEET					
9	DETAIL SHEET					
10	DETAIL SHEET					

OWNER/APPLICANT:

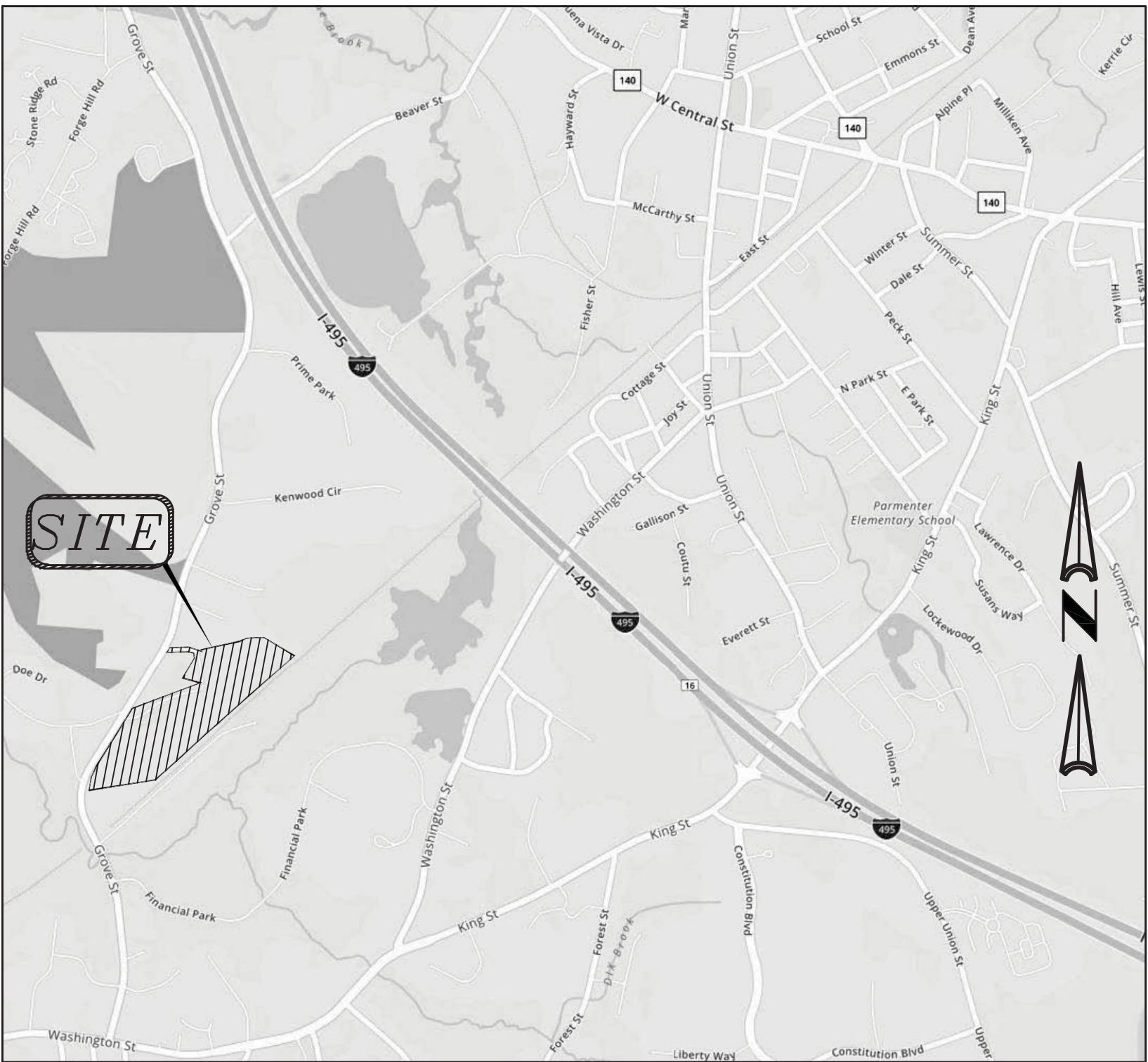
MCP III 176 GROVE LLC & MCP III 210 GROVE LLC
260 FRANKLIN STREET, STE 620
BOSTON, MA 02110

CIVIL ENGINEERS:

KELLY ENGINEERING GROUP, INC.
0 CAMPANELLI DRIVE
BRAINTREE, MA 02184

LANDSCAPE ARCHITECT:

HAWK DESIGN INC.
P.O. BOX 1309
SANDWICH, MA 02563



LOCATION MAP

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Digitally signed by David Noel Kelly
P.E.
DN: cn=David Noel Kelly P.E., o=Kelly Engineering Group, Inc., ou, email=dkelly@kellyengineeringgroup.com, c=US
Date: 2020.02.14 13:05:06 -0500

	SCALE NA	JOB # F:\P\2019-127	176– 210 GROVE STREET FRANKLIN, MA		KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com	SHEET NO. 1
	DATE 02/14/20	DRAWN BY C.L.				
	SHEET 1 OF 10	CHKD BY DAM				
	FILE # 2019-127-TS00	APPD BY DNK				

ZONE: INDUSTRIAL, WATER RESOURCE DISTRICT

		REQUIRED	PROVIDED	COMPLIANCE
MIN LOT AREA		40,000 S.F.	1,554,427 S.F.	YES
MIN. FRONTAGE		175'	>175'	YES
MIN. DEPTH		200'	>200'	YES
MIN. Width		157.5' DIA. CIRCLE	> 157.5'	YES
MIN YARD	FRONT	40'	125'+/-	YES
	SIDE	30'	30' +/- (NOTE 3)	YES
	REAR	30'	45' +/-	YES
MAX STORIES		3	1	YES
MAX HEIGHT		NA	<40'	N/A
LOT COVERAGE		80%	63.8%	YES
BUILDING COVERAGE		70%	31.2%	YES
PARKING	TOTAL	487	417	(NOTE 4)
	SIZE	9'X19'	9'X19'	YES
	aisle	24'	24'	YES
	HANDICAP	16	18	YES
PARKING SETBACKS	FRONT	10'	70'+/-	YES
	SIDE	N/A	53'+/-	N/A
	REAR	N/A	30'+/-	N/A
	BUILDING	N/A	20'	N/A

NOTES:

- TOTAL LOT AREA INCLUDING EXISTING 176 AND 210 GROVE STREET AND PROPOSED 200 GROVE STREET = 1,554,427 S.F.
- PARKING: REQUIRED PARKING FOR WAREHOUSE = 1 SPACE PER 1000 SF
- BUILDINGS 176 AND 210 ARE LESS THAN 30' HIGH. SIDE YARD SETBACKS ARE GREATER THAN 30'. PROPOSED BUILDING WILL BE APPROX. 40' HIGH. SIDE YARD SETBACK IS 102' AND THEREFORE SIDE YARD COMPLIES WITH BY LAW SECTION ATTACHMENT 9 FOOT NOTE 8 FOR SETBACKS TO A RESIDENTIAL USE.
- PER PLANNING BOARD DETERMINATION.

PARKING LEGEND

BUILDING	BUILDING AREA (SF)	PARKING REQUIRED (NOTE 2)	PARKING PROVIDED	HANDICAP PARKING REQUIRED	HANDICAP PARKING PROVIDED	LOADING PROVIDED
176 GROVE	169,968	170	195	6	6	65 +/-
200 GROVE	150,000	150	107	5	6	33
210 GROVE	166,757	167	113*	5	6	15 +/-
TOTAL	486,725	487	415	16	18	113 +/-

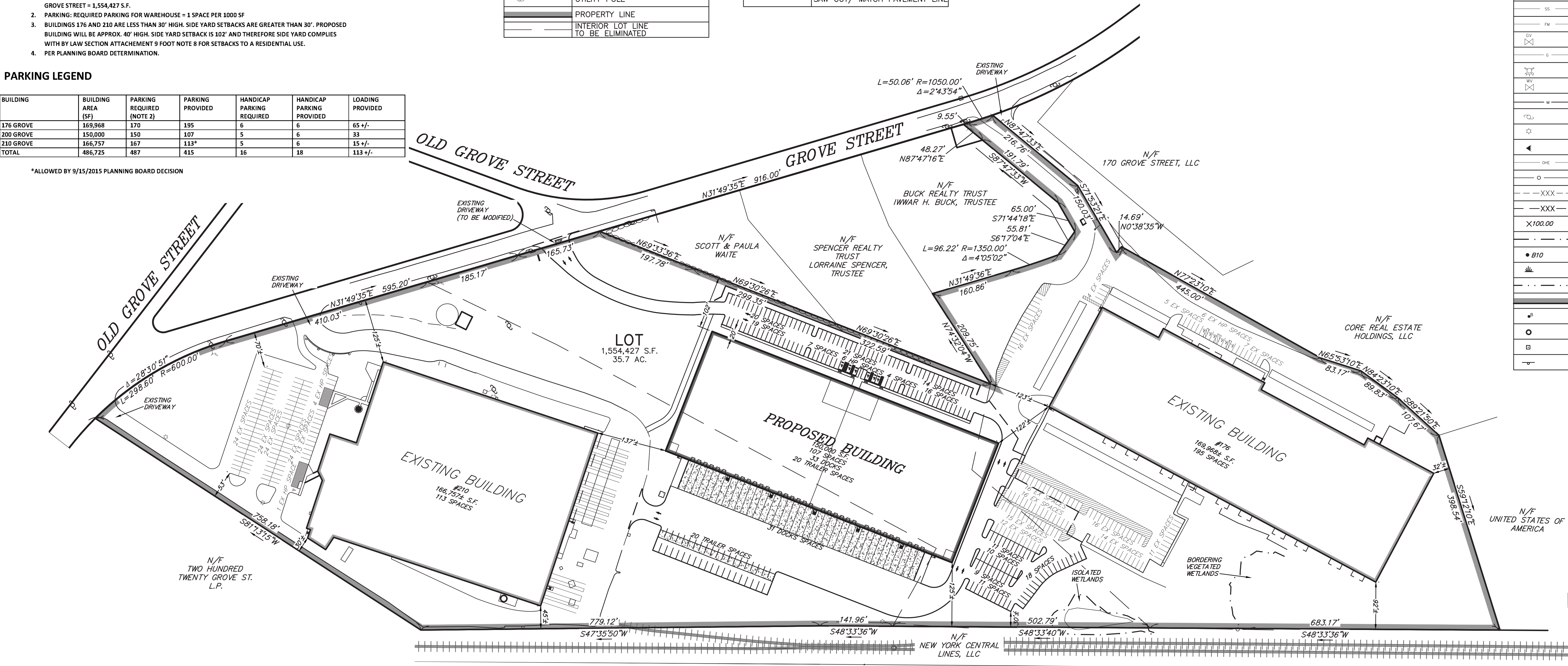
*ALLOWED BY 9/15/2015 PLANNING BOARD DECISION

EXISTING LEGEND

	HANDICAP SPACE
	UTILITY POLE
	PROPERTY LINE
	INTERIOR LOT LINE TO BE ELIMINATED

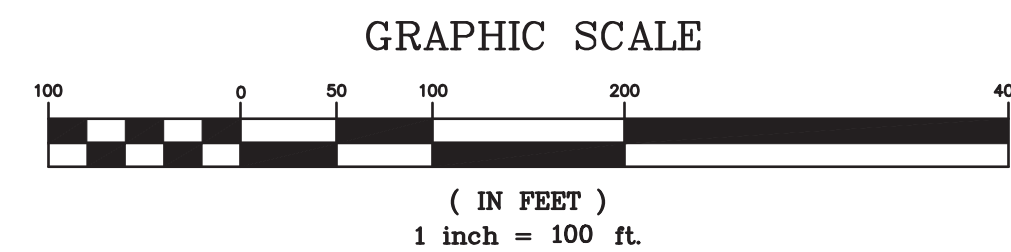
PROPOSED LEGEND

	HANDICAP SPACE
	SAW CUT/ MATCH PAVEMENT LINE



SHEET 2 LEGEND

CCB	CAPE COD BERM
VGC	VERTICAL GRANITE CURB
CONC.	CONCRETE
BCC	BITUMINOUS CONCRETE CURB
	HANDICAP SPACE
L.S	LANDSCAPED AREA
	CATCH BASIN
	DOUBLE CATCH BASIN
	AREA DRAIN
	TRENCH DRAIN
	DRAIN MANHOLE
	STORM CEPTOR
SD	DRAIN LINE
RD	ROOF DRAIN LINE
AD	AREA DRAIN LINE
	SEWER MANHOLE
SS	SEWER LINE
FM	SEWER FORCE MAIN
	GAS VALVE
G	GAS LINE
	HYDRANT
WV	WATER VALVE
W	WATER LINE
	UTILITY POLE
	LIGHT POLE
	FLOOD LIGHT
OHE	OVERHEAD ELECTRIC LINE
O	CHAIN LINK FENCE
XXX	CONTOUR LINE (MNR)
XXX	CONTOUR LINE (MJR)
X100.00	SPOT GRADE
---	EDGE OF WETLANDS
B10	WETLANDS FLAG
	WETLANDS
---	FLOOD PLAIN
	PROPERTY LINE
B	BOLLARD
O	IRON PIPE
	BOUND
	SIGN



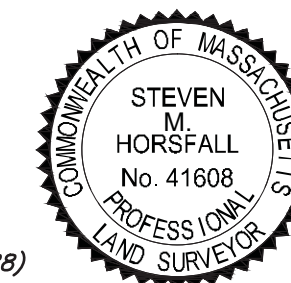
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NOTES: (FOR SHEET 2)

- UNDERGROUND FEATURES HAVE BEEN COMPILED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS. THIS INFORMATION IS TO BE CONSIDERED APPROXIMATE AND KELLY ENGINEERING GROUP, INC. DOES NOT TAKE RESPONSIBILITY FOR SUBSEQUENT ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS PLAN AS A RESULT. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO KELLY ENGINEERING GROUP, INC. THE SIZE, LOCATION, AND EXISTENCE OF ALL SUCH FEATURES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION.
- THE LOCATION OF ALL UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED USING ASCE 38-02 (STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA) QUALITY LEVEL C.
- THE SITE DETAIL AND SURFACE IMPROVEMENTS DEPICTED HEREON WERE OBTAINED FROM AN ON THE GROUND SURVEY PERFORMED BY KELLY ENGINEERING GROUP IN NOVEMBER AND DECEMBER OF 2019.
- ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) ESTABLISHED BY RTK GPS CONNECTED TO MoCORS. CONTOURS SHOWN WERE OBTAINED FROM ON THE GROUND SURVEY AND LIDAR DATA OBTAINED FROM NOAA AND CONFIRMED BY KELLY ENGINEERING GROUP, INC.
- WETLAND FLAGS SHOWN WERE FLAGGED BY ECOTEC, INC AND WERE LOCATED BY KELLY ENGINEERING GROUP, INC.

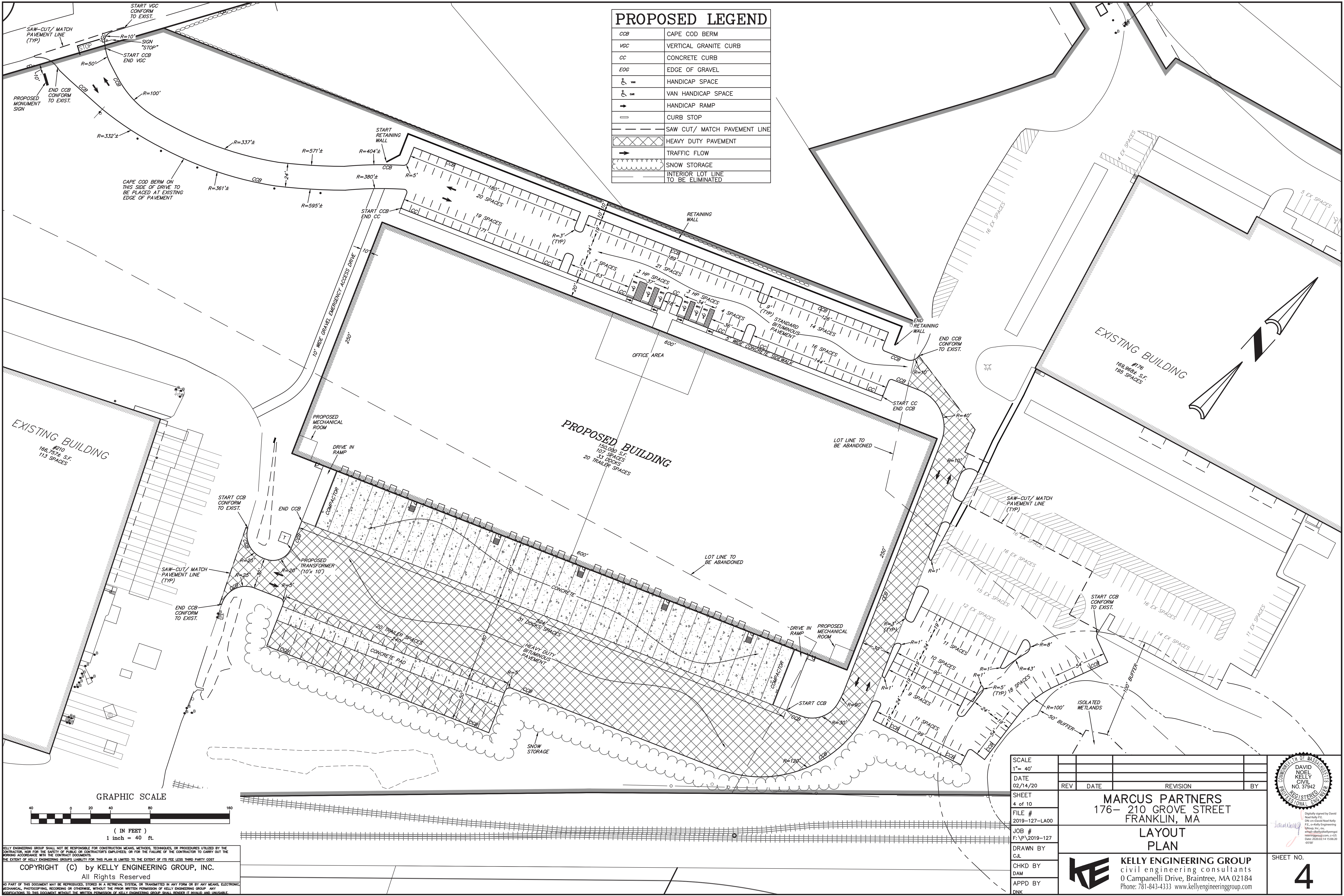


SCALE 1"= 100'				
DATE 02/14/20	REV	DATE	REVISION	BY
SHEET 2 of 10				
FILE # 2019-127-LA00				
JOB # F:\P\2019-127				
DRAWN BY CUL				
CHKD BY DAM				
APPD BY DNK				
MARCUS PARTNERS 176- 210 GROVE STREET FRANKLIN, MA OVERALL LAYOUT PLAN				
KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com				



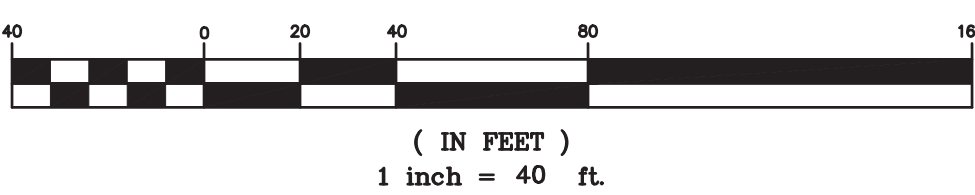
SHEET NO.

2



PROPOSED LEGEND	
CCB	CAPE COD BERM
VGC	VERTICAL GRANITE CURB
CC	CONCRETE CURB
EOG	EDGE OF GRAVEL
	HANDICAP SPACE
	VAN HANDICAP SPACE
	HANDICAP RAMP
	CURB STOP
	SAW CUT/ MATCH PAVEMENT LINE
	HEAVY DUTY PAVEMENT
	TRAFFIC FLOW
	SNOW STORAGE
	INTERIOR LOT LINE TO BE ELIMINATED

GRAPHIC SCALE



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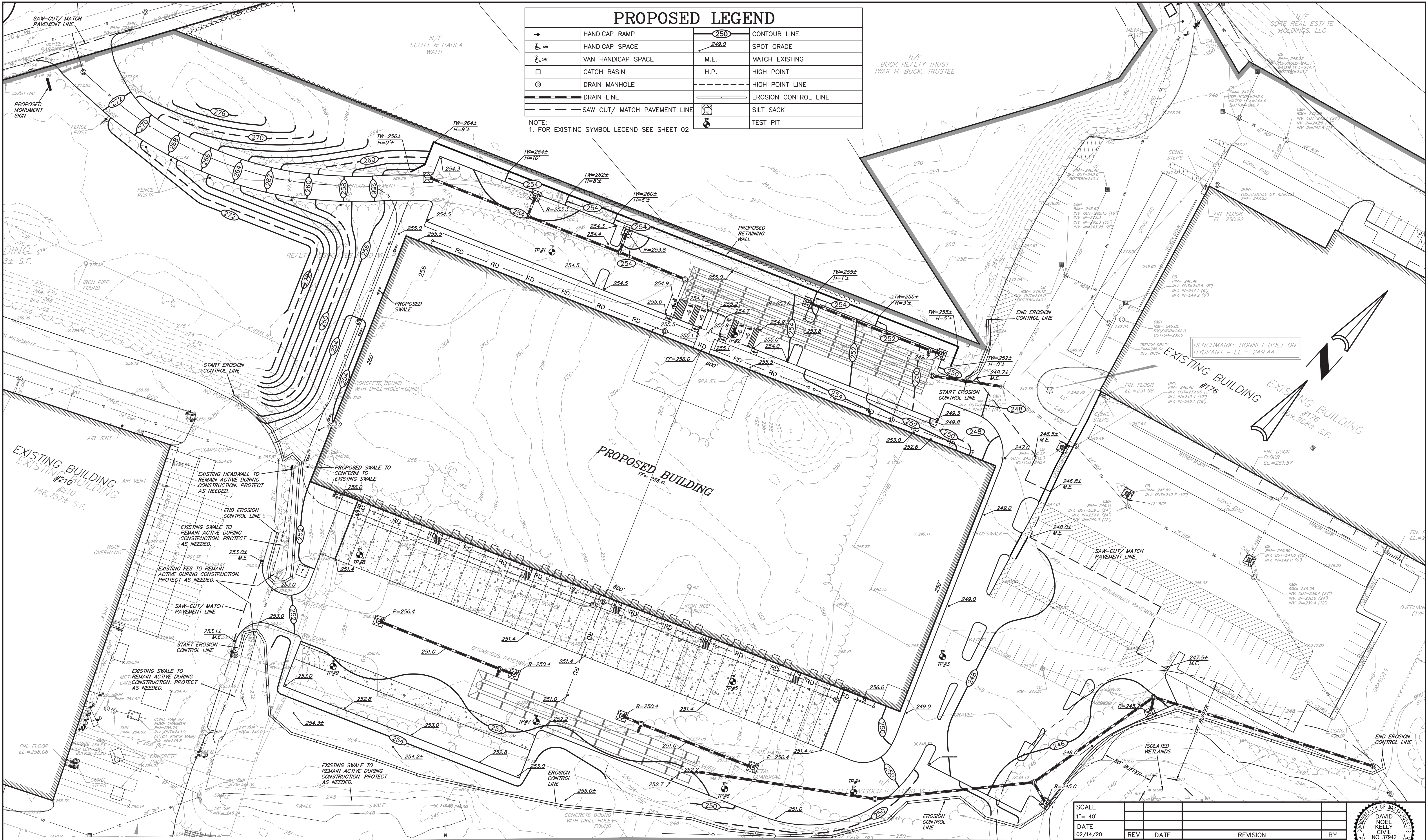
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SCALE 1" = 40'	REV	DATE	REVISION	BY
DATE 02/14/20				
SHEET 4 of 10				
FILE # 2019-127-LA00				
JOB # F:\P\2019-127				
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APPD BY DNK				
MARCUS PARTNERS 176- 210 GROVE STREET FRANKLIN, MA LAYOUT PLAN				
KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com				

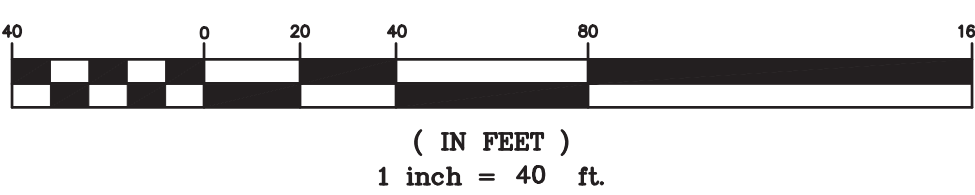
	SHEET NO. 4
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PROPOSED LEGEND			
	HANDICAP RAMP		CONTOUR LINE
	HANDICAP SPACE		SPOT GRADE
	VAN HANDICAP SPACE		MATCH EXISTING
	CATCH BASIN		HIGH POINT
	DRAIN MANHOLE		HIGH POINT LINE
	DRAIN LINE		EROSION CONTROL LINE
	SAW CUT/ MATCH PAVEMENT LINE		SILT SACK
			TEST PIT

NOTE:
1. FOR EXISTING SYMBOL LEGEND SEE SHEET 02



GRAPHIC SCALE



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DATE 02/14/20				
SHEET 5 of 10				
FILE # 2019-127-GD00				
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MARCUS PARTNERS
176- 210 GROVE STREET
FRANKLIN, MA

GRADING
PLAN

KE KELLY ENGINEERING GROUP
civil engineering consultants
0 Campanelli Drive, Braintree, MA 02184
Phone: 781-843-4333 www.kellyengineeringgroup.com

PROFESSIONAL SEAL OF MASSACHUSETTS
DAVID NOEL KELLY
CIVIL
NO. 37942
REGISTERED PROFESSIONAL ENGINEER

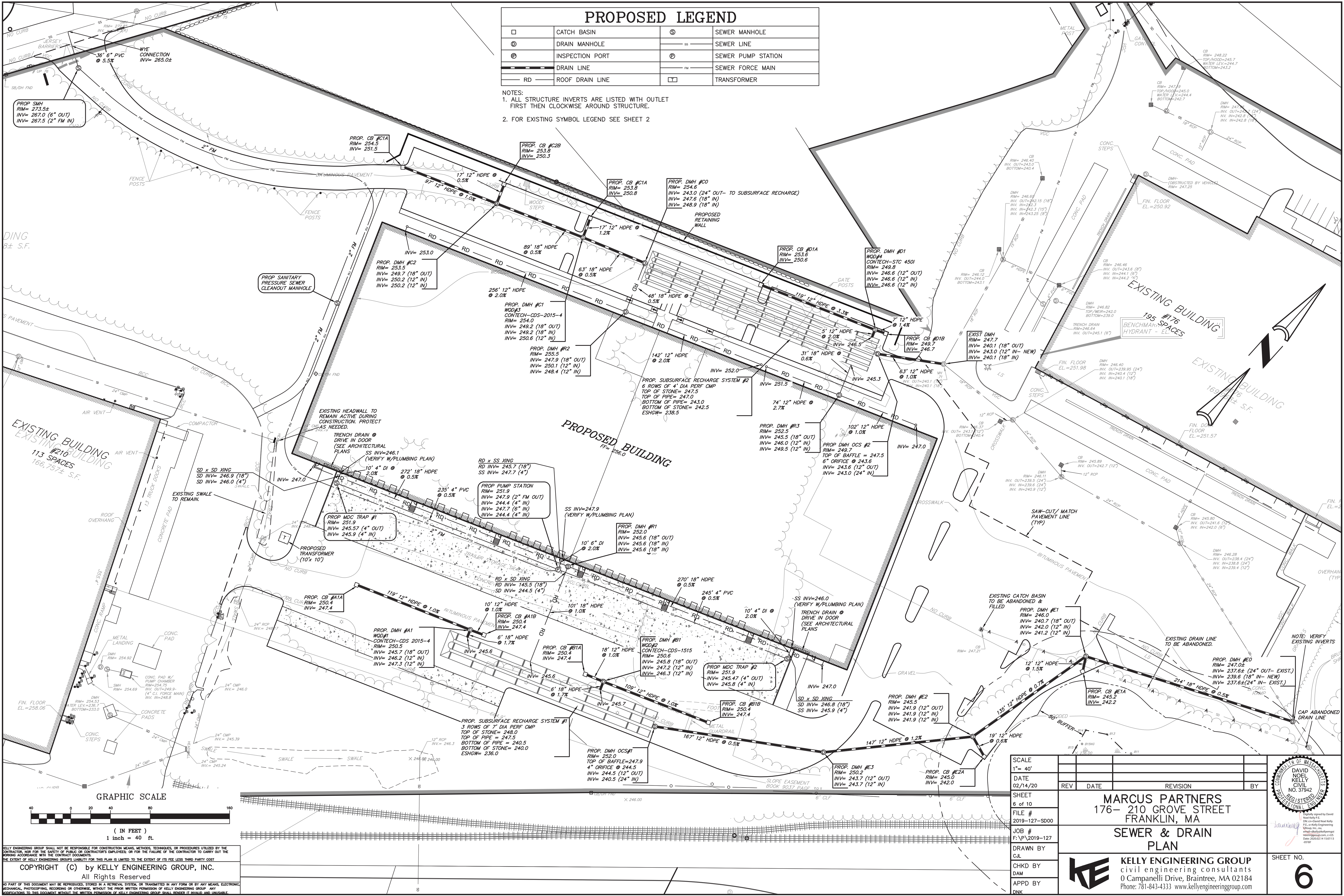
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Date: 2020.02.14 15:00:49 -0500

SHEET NO.

5

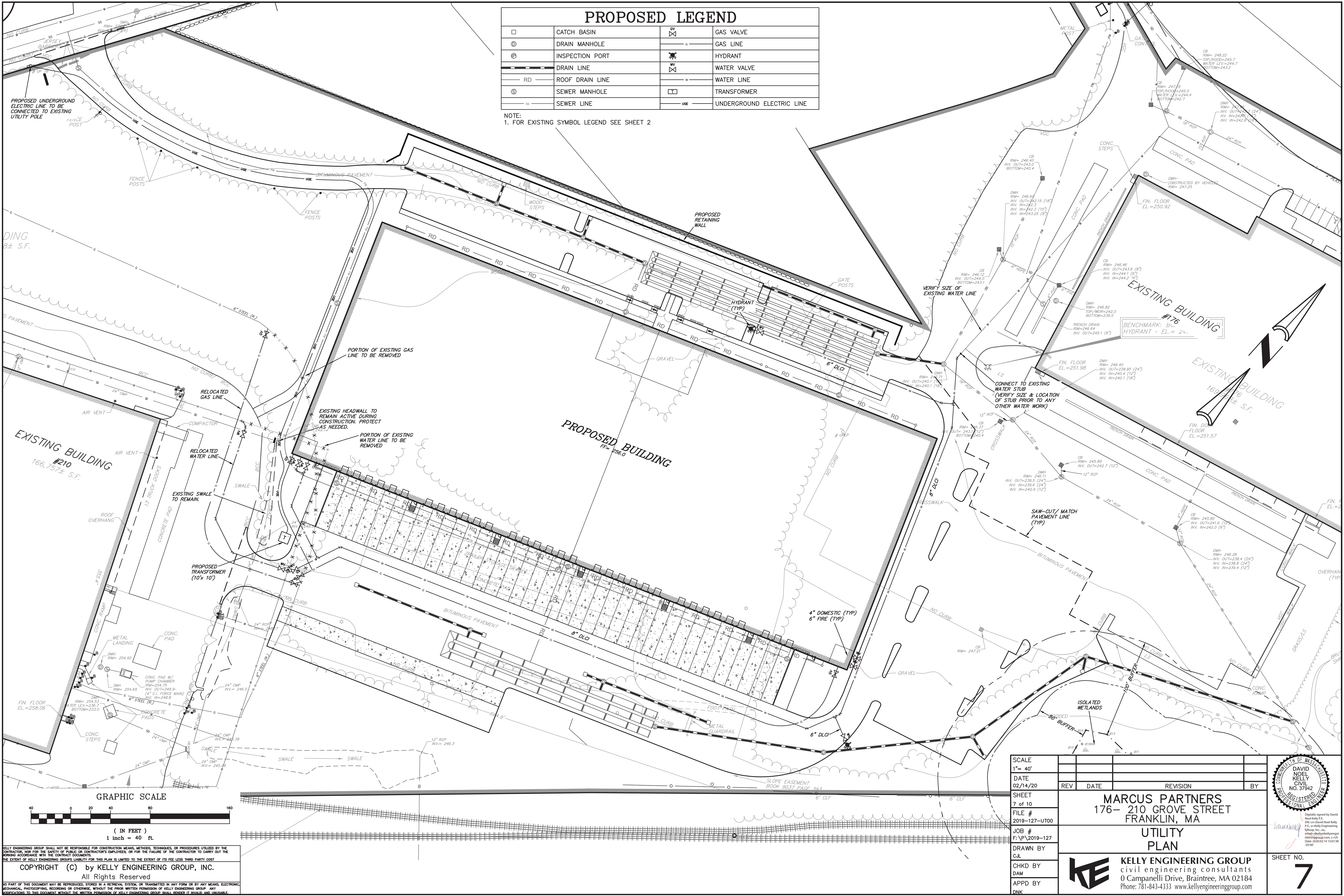
PROPOSED LEGEND			
□	CATCH BASIN	⊙	SEWER MANHOLE
⊖	DRAIN MANHOLE	—	SEWER LINE
⊕	INSPECTION PORT	⊖	SEWER PUMP STATION
—	DRAIN LINE	—	SEWER FORCE MAIN
—	RD	□	TRANSFORMER

- NOTES:
 1. ALL STRUCTURE INVERTS ARE LISTED WITH OUTLET FIRST THEN CLOCKWISE AROUND STRUCTURE.
 2. FOR EXISTING SYMBOL LEGEND SEE SHEET 2



SCALE 1" = 40'		DATE 02/14/20		REV		DATE		REVISION		BY	
SHEET 6 of 10		FILE # 2019-127-S000		JOB # F:\P\2019-127		DRAWN BY C.L.		CHKD BY DAM		APPD BY DNK	
MARCUS PARTNERS 176- 210 GROVE STREET FRANKLIN, MA SEWER & DRAIN PLAN											
						KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com					
SHEET NO. 6											

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PROPOSED LEGEND			
□	CATCH BASIN	⊠	GAS VALVE
⊙	DRAIN MANHOLE	—○—	GAS LINE
⊕	INSPECTION PORT	⊠	HYDRANT
—	DRAIN LINE	⊠	WATER VALVE
—RD—	ROOF DRAIN LINE	—	WATER LINE
⊕	SEWER MANHOLE	□	TRANSFORMER
—SS—	SEWER LINE	—	UNDERGROUND ELECTRIC LINE

NOTE:
1. FOR EXISTING SYMBOL LEGEND SEE SHEET 2

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SCALE 1" = 40'	REV	DATE	REVISION	BY
DATE 02/14/20				
SHEET 7 of 10				
FILE # 2019-127-UT00				
JOB # F:\P\2019-127				
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MARCUS PARTNERS
176- 210 GROVE STREET
FRANKLIN, MA

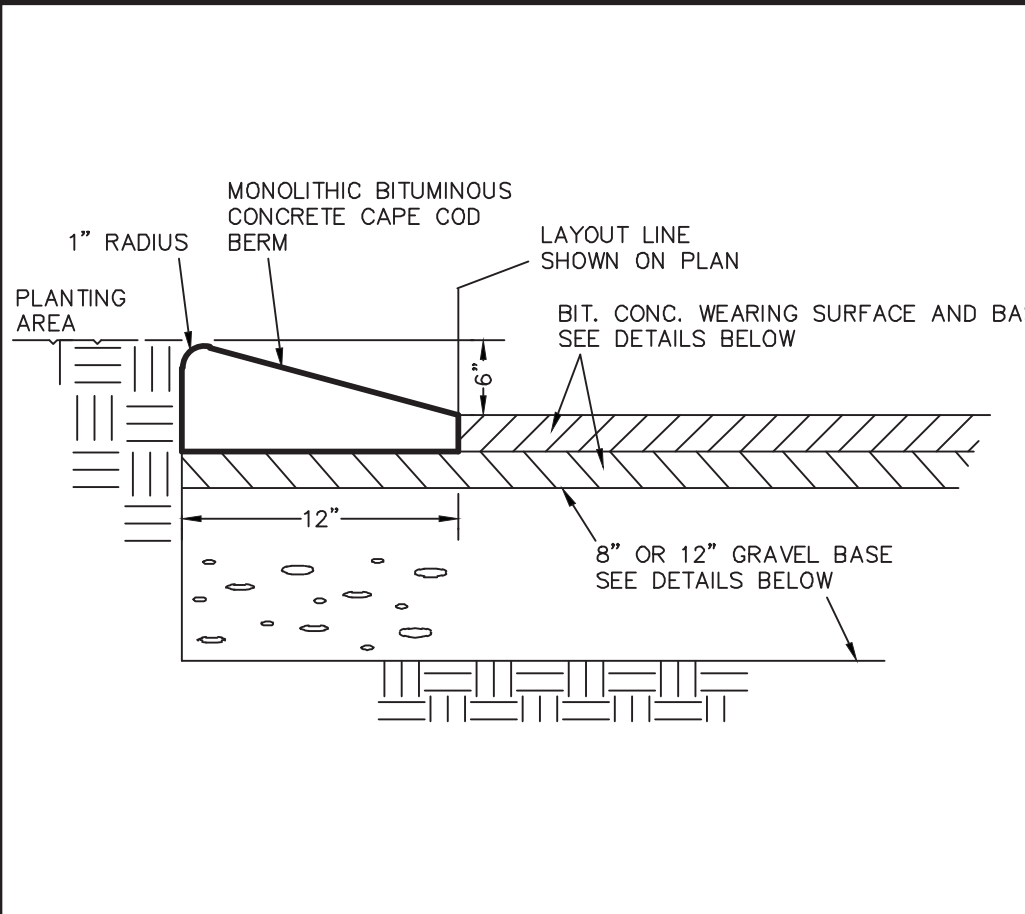
UTILITY PLAN

KELLY ENGINEERING GROUP
civil engineering consultants
0 Campanelli Drive, Braintree, MA 02184
Phone: 781-843-4333 www.kellyengineeringgroup.com

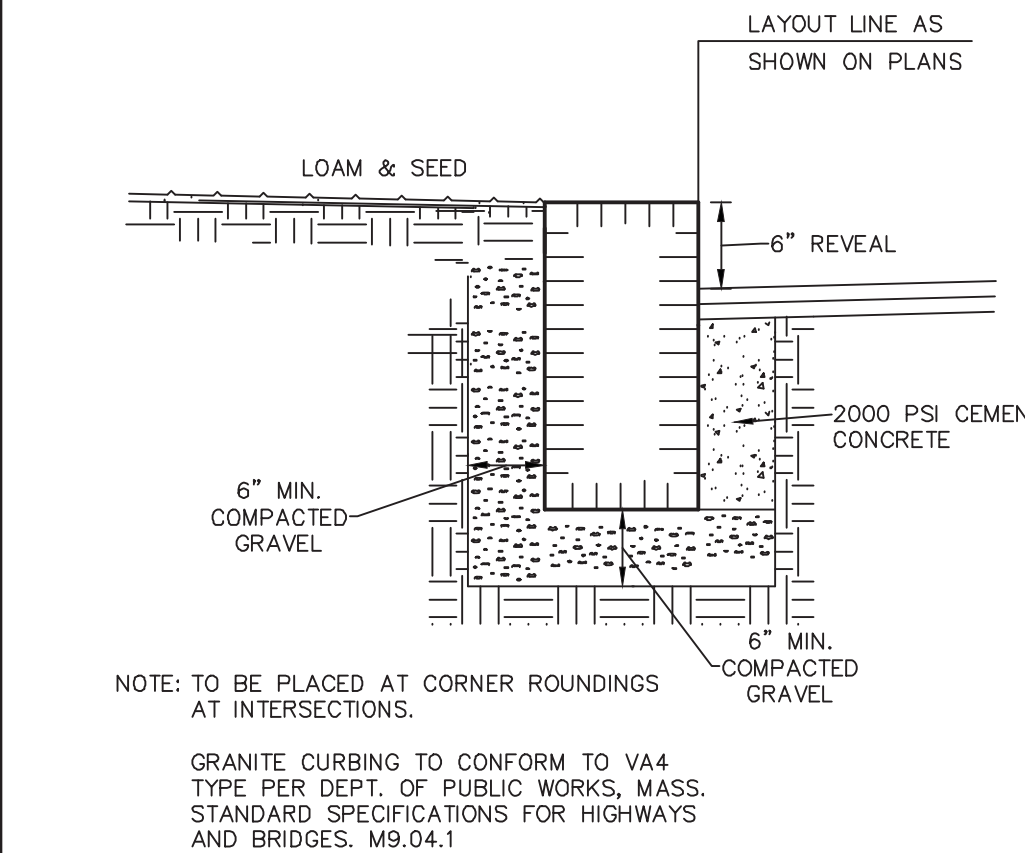
DAVID NOEL KELLY
CIVIL
NO. 37942

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DN: cn=David Noel Kelly
o=Kelly Engineering Group, Inc., ou=Engineering
email=dkelly@kellyeng.com, c=US
Date: 2020.02.14 15:03:38 -05'00'

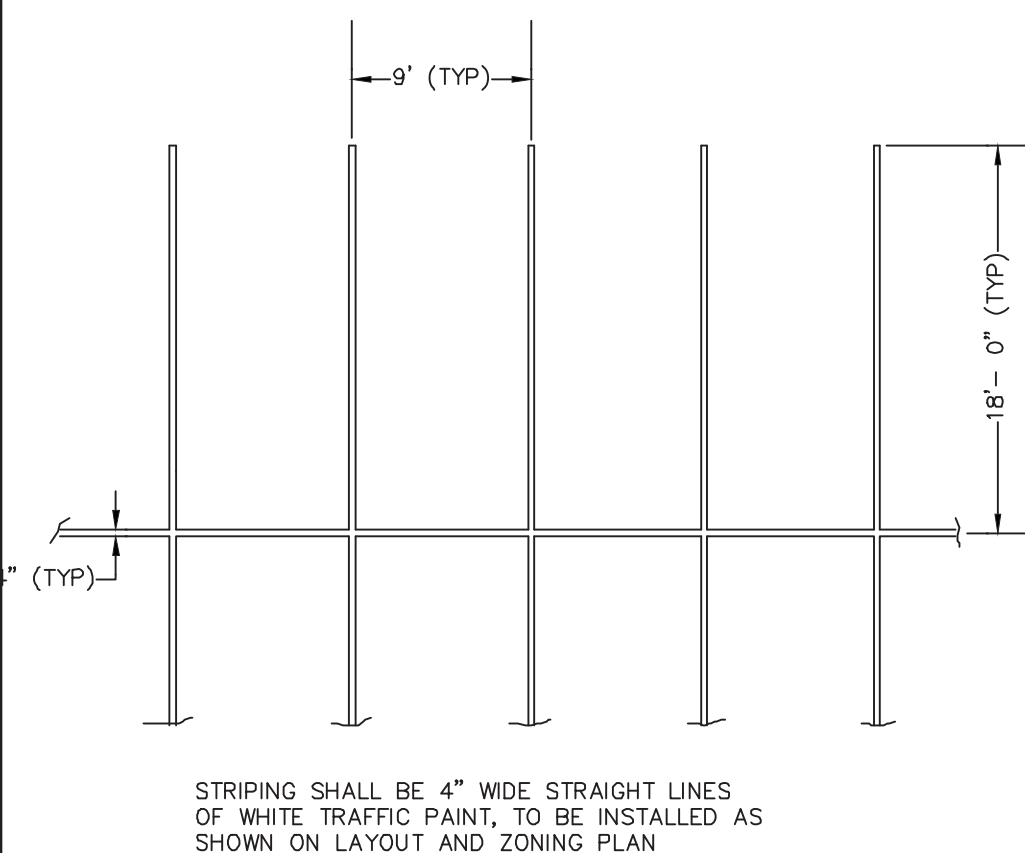
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7



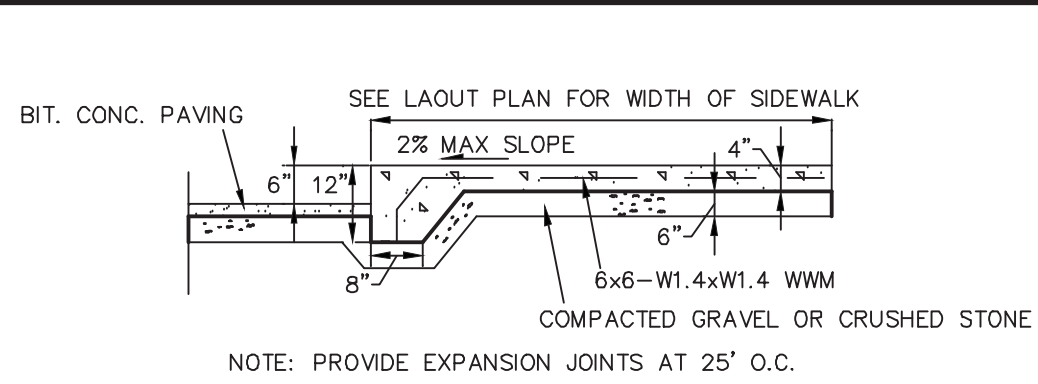
CAPE COD BERM DETAIL
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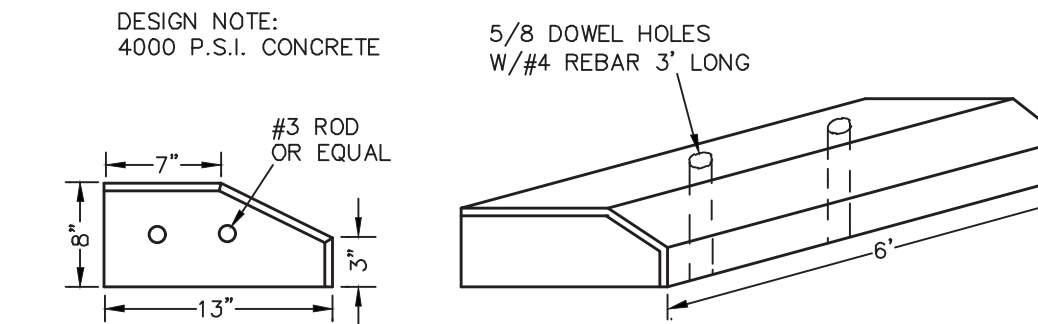
VERTICAL GRANITE CURB DETAIL
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KELLY ENGINEERING GROUP, INC.



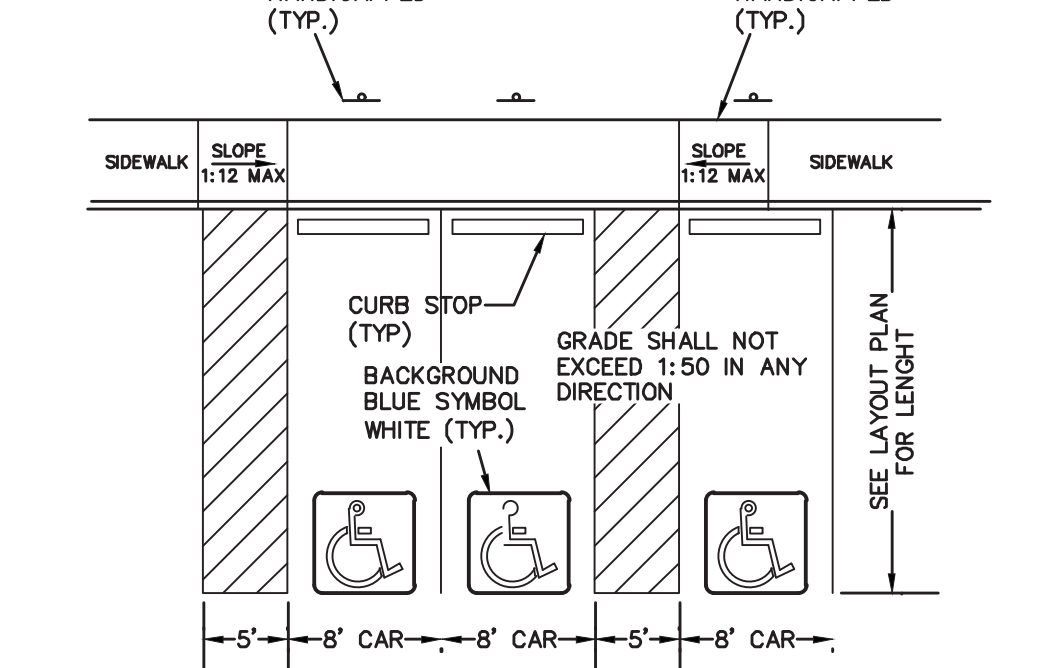
TYPICAL STRIPING DETAIL
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KELLY ENGINEERING GROUP, INC.



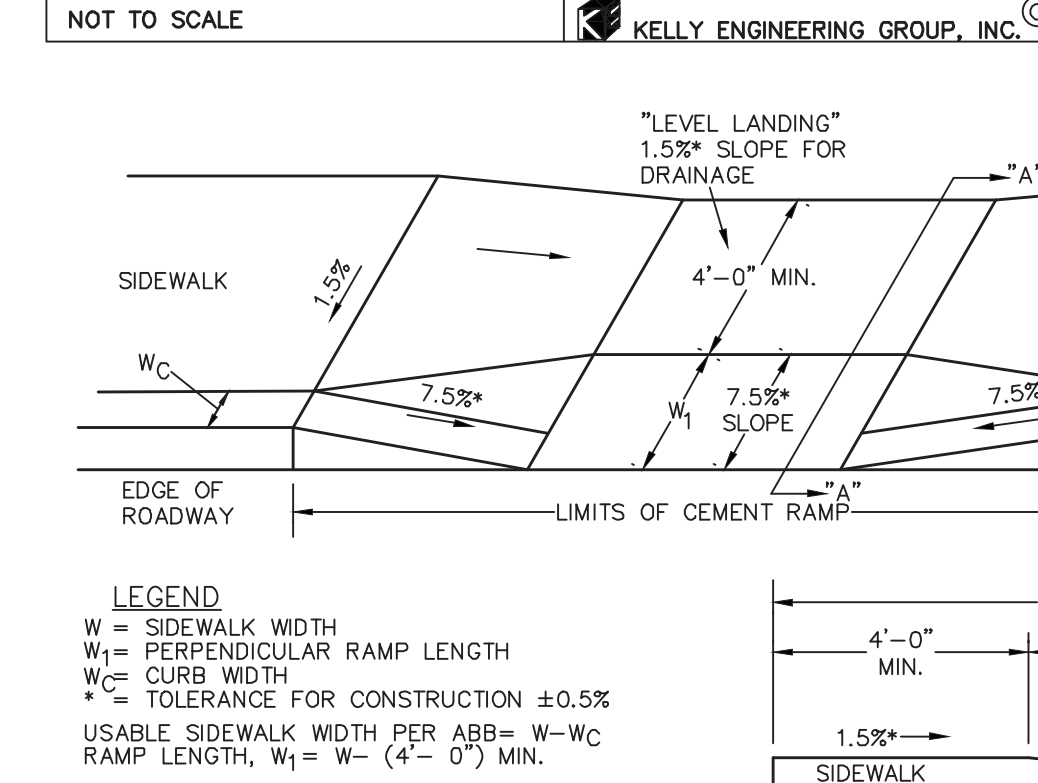
INTEGRAL SIDEWALK/ CURB DETAIL
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.



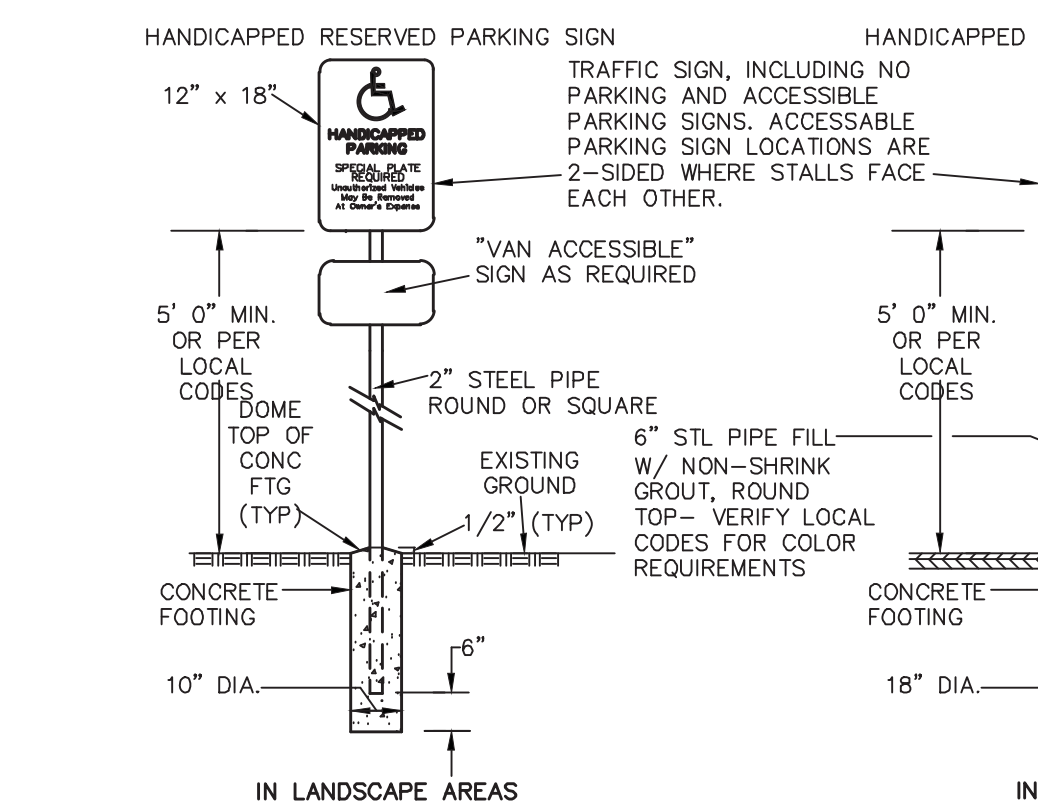
CURB STOP DETAIL
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KELLY ENGINEERING GROUP, INC.



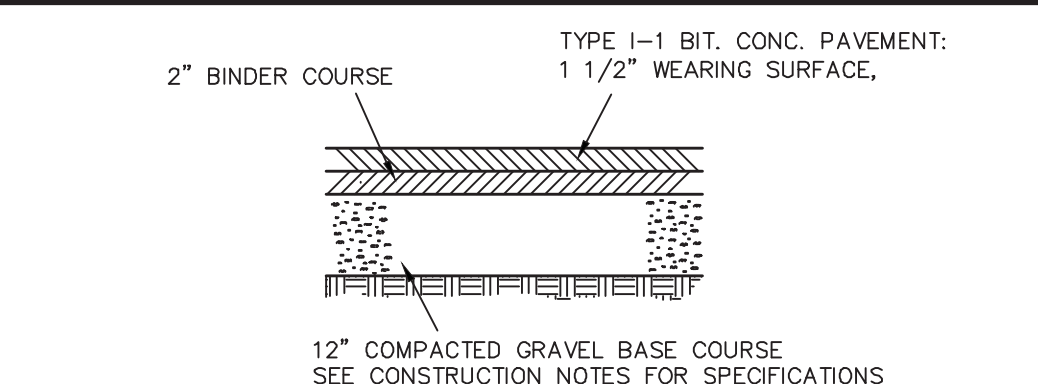
HANDICAP PARKING DETAIL
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KELLY ENGINEERING GROUP, INC.



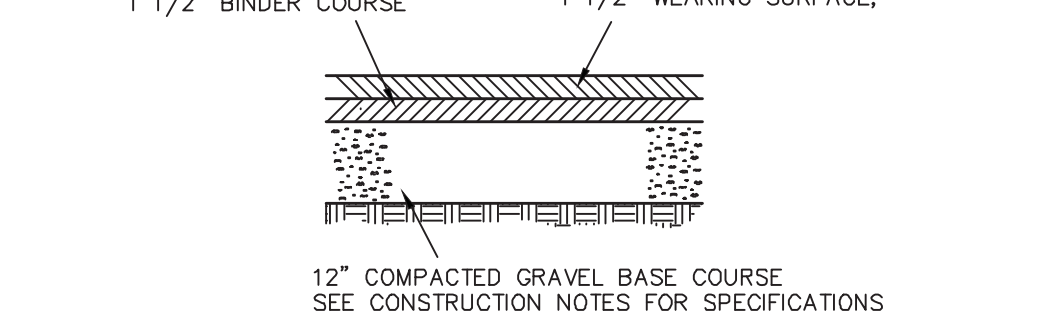
WHEELCHAIR RAMPS
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.



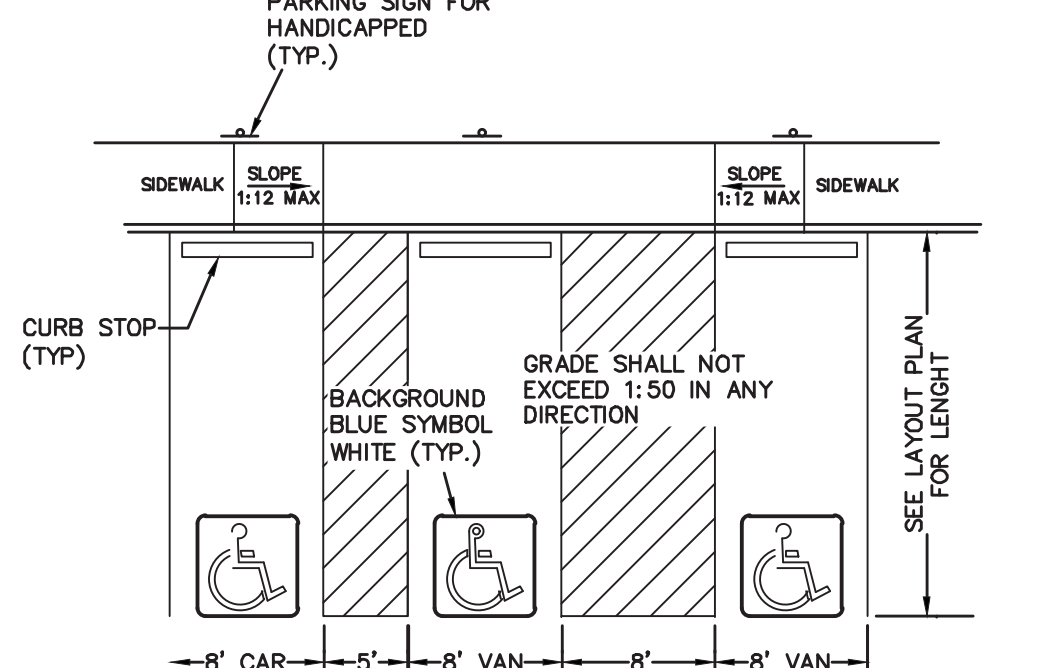
HANDICAP SIGN DETAIL
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.



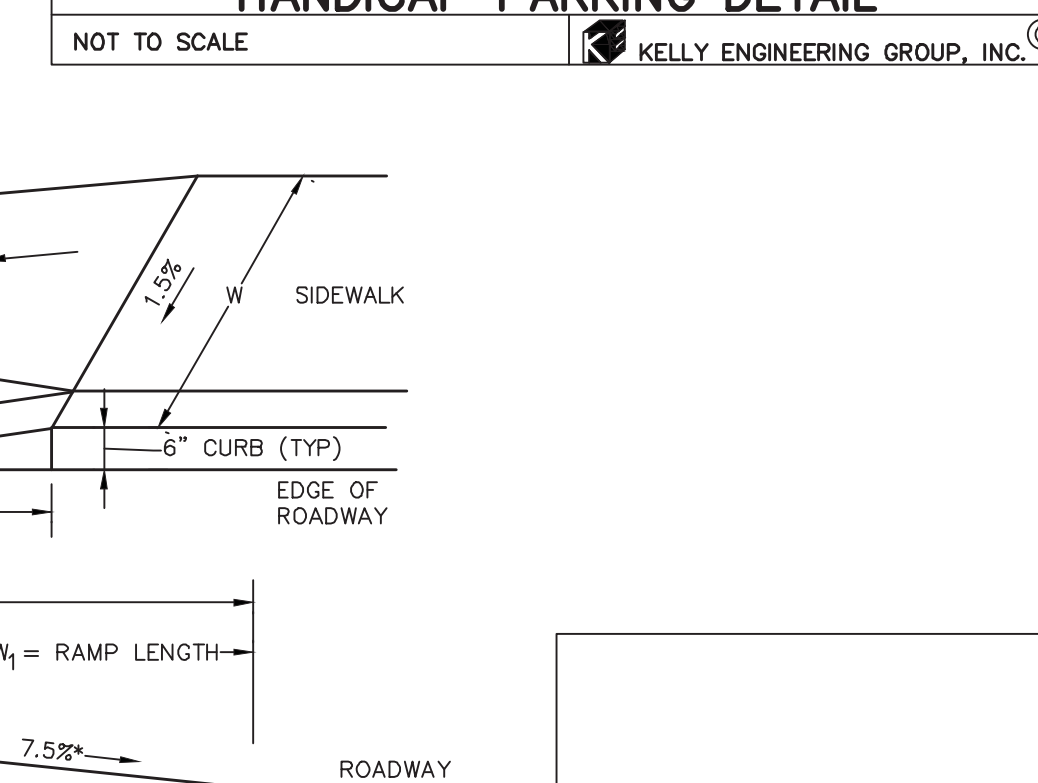
BITUMINOUS CONCRETE PAVEMENT (HEAVY DUTY)
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.



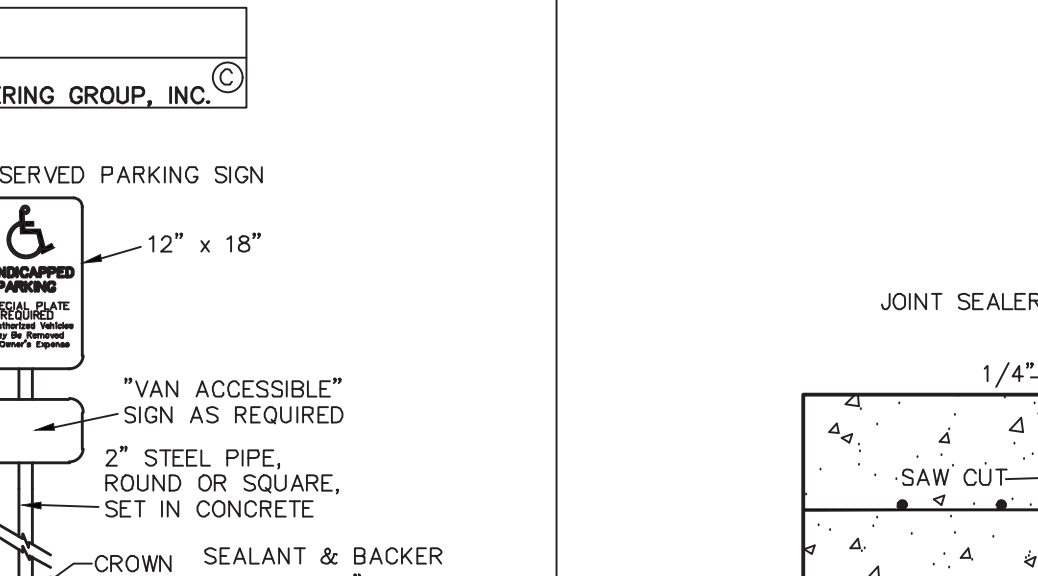
BITUMINOUS CONCRETE PAVEMENT (STANDARD)
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.



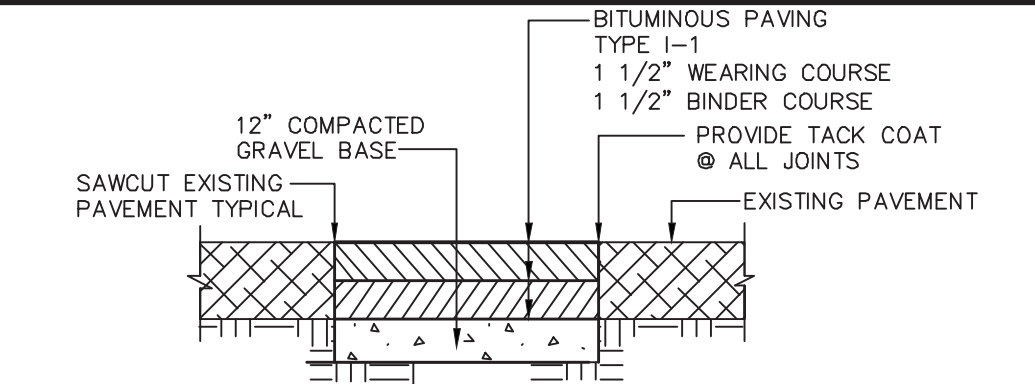
HANDICAP PARKING DETAIL
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KELLY ENGINEERING GROUP, INC.



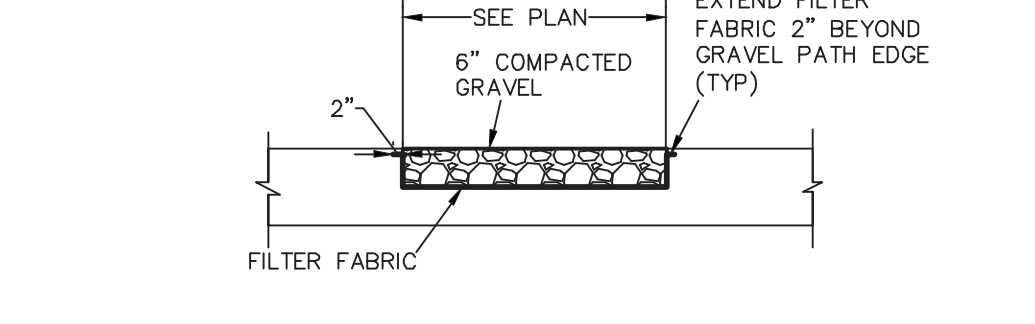
TRENCH PATCHING DETAIL
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.



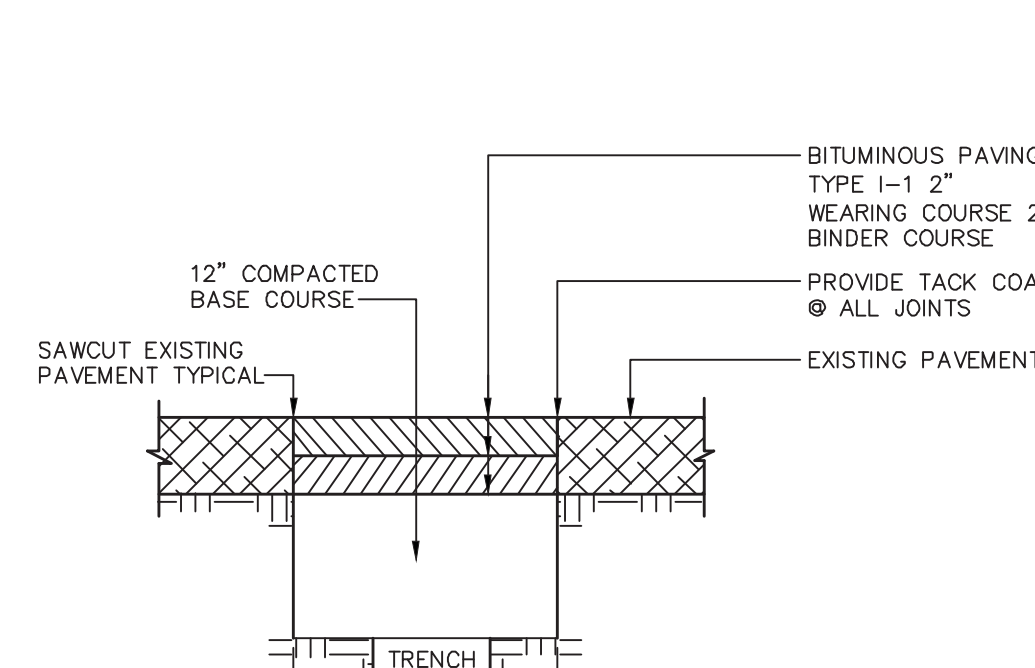
CONCRETE PAD DETAIL
NOT TO SCALE
KELLY ENGINEERING GROUP, INC.



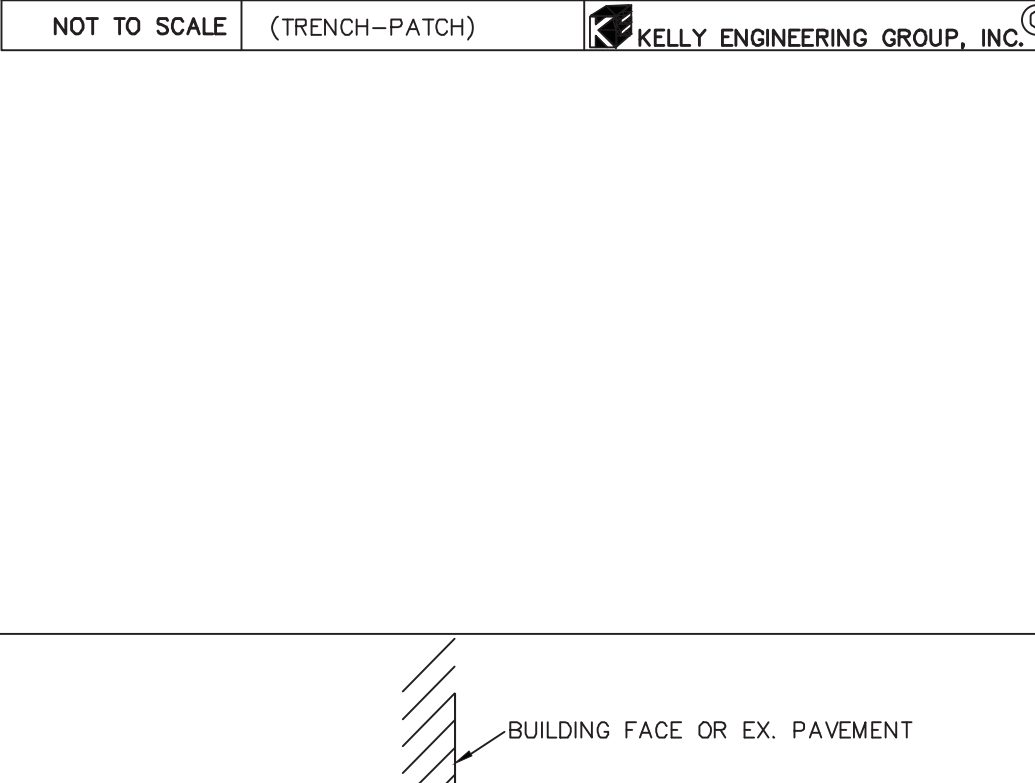
PAVEMENT MATCH/ SAW-CUT DETAIL
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KELLY ENGINEERING GROUP, INC.



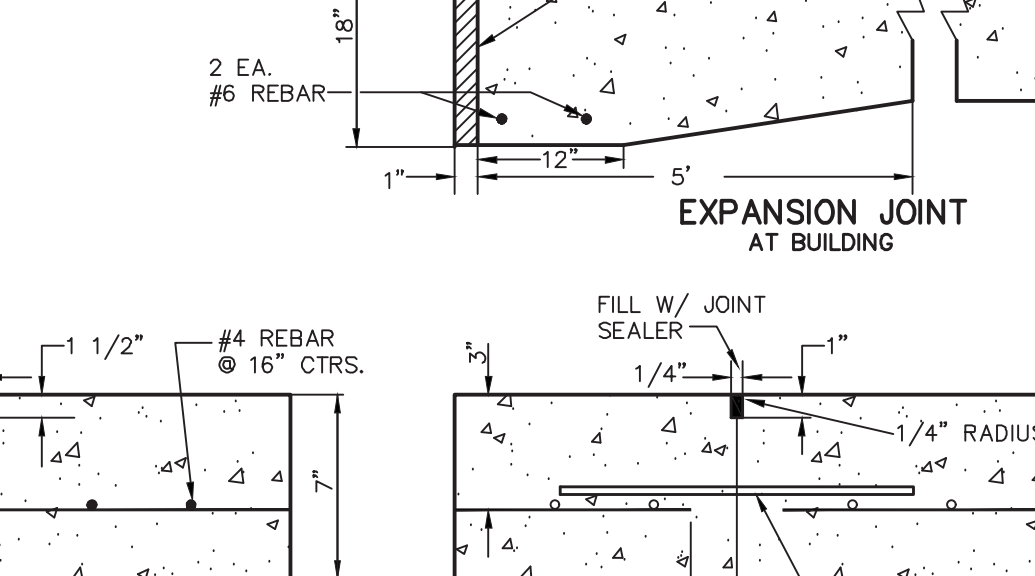
GRAVEL ACCESS DRIVE DETAIL
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KELLY ENGINEERING GROUP, INC.



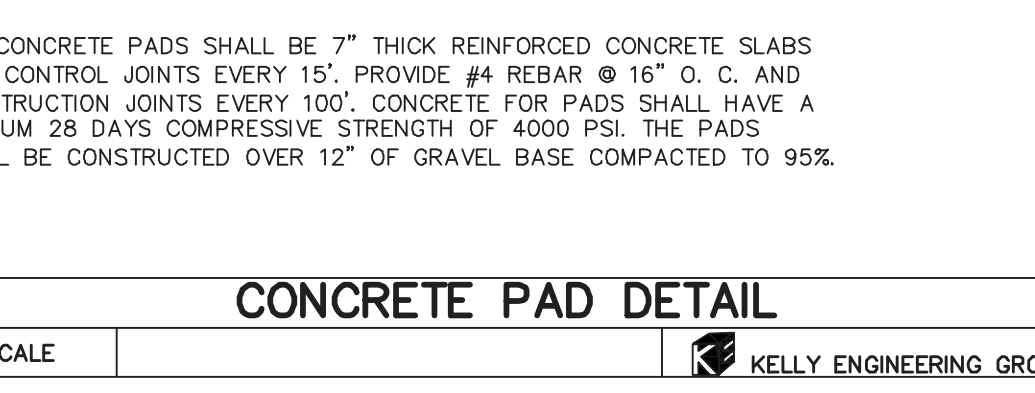
TRENCH PATCHING DETAIL
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EXPANSION JOINT AT BUILDING
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CONSTRUCTION JOINT
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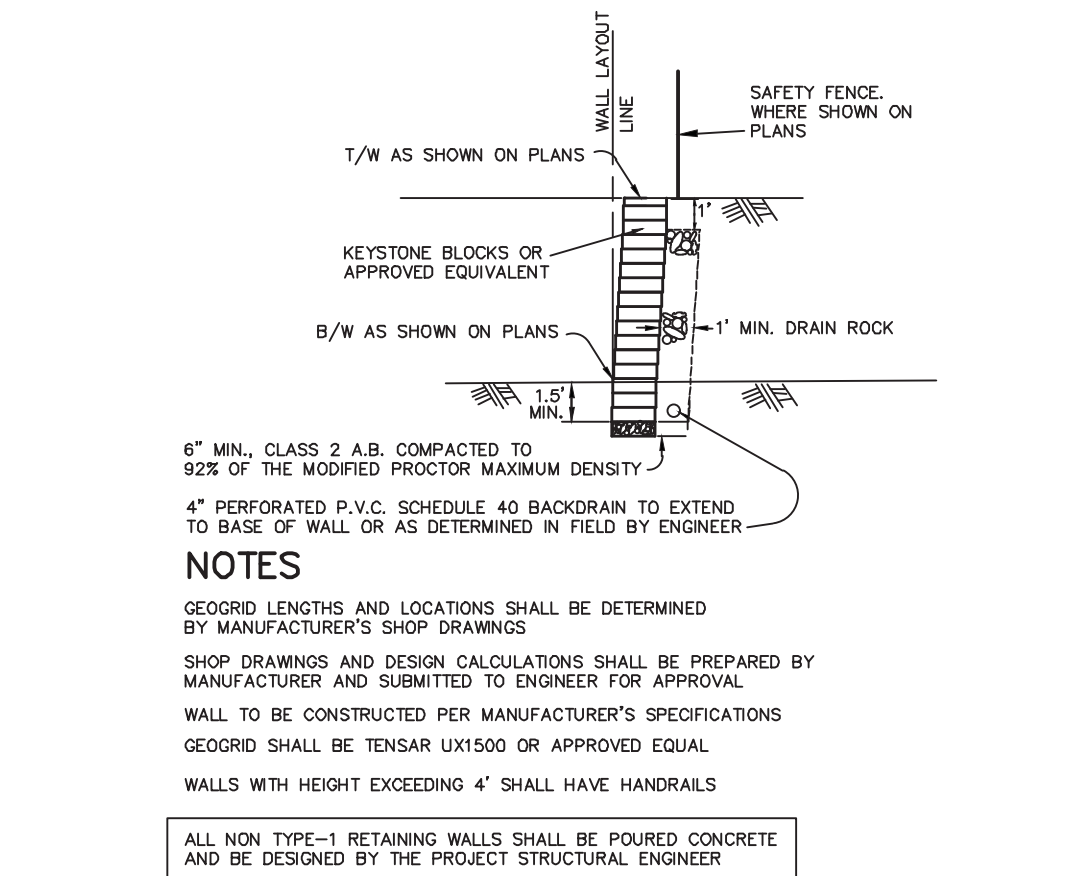
CONCRETE PAD DETAIL
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KELLY ENGINEERING GROUP, INC.

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL REPORT TO THE OWNER AND ENGINEER OF ANY SIGNIFICANT VARIATIONS IN EXISTING SITE CONDITIONS FROM THOSE SHOWN ON THESE PLANS. ANY PROPOSED REVISIONS TO THE WORK, IF REQUIRED BY THESE SITE CONDITIONS, SHALL NOT BE UNDERTAKEN UNTIL REVIEWED AND APPROVED BY THE OWNER AND THE ENGINEER.
2. THE CONTRACTOR SHALL NOTIFY THE TOWN OF DEPARTMENT OF PUBLIC WORKS AT LEAST 48 HOURS IN ADVANCE OF ANY REQUIRED INSPECTIONS.
3. IN ORDER TO PROTECT THE PUBLIC SAFETY DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING AT ALL TIMES ALL NECESSARY SAFETY DEVICES AND PERSONNEL, WARNING LIGHTS, BARRICADES, AND POLICE OFFICERS.
4. ALL WORK SHALL CONFORM TO A SPECIAL PERMIT TO BE ISSUED BY THE TOWN OF.
5. FOR ANY PROJECT THAT INVOLVES 1 ACRE OR MORE OF DISTURBANCE, CONTRACTOR SHALL SECURE A NPDES PERMIT PRIOR TO BEGINNING ANY GRADING ACTIVITIES.
6. ALL WORK SHALL CONFORM TO AN ORDER OF CONDITIONS TO BE ISSUED BY THE TOWN OF.
7. ALL WORK SHALL CONFORM TO THE GEOTECHNICAL REPORT BY DATED.
8. THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON PLANS AND INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES OR MUNICIPAL DEPARTMENTS SUPPLEMENTED BY FIELD IDENTIFICATION WHEREVER POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL CONTRADICTORY SAFE AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. DIG SAFE TELEPHONE NUMBER IS 1-888-344-7233.
9. THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO TAPPING INTO, CROSSING OR EXTENDING THEM. IF THE NEW WORK POSES A CONFLICT WITH EXISTING UTILITIES, THE ENGINEER SHALL BE NOTIFIED PRIOR TO THE CONTRACTOR CONTINUING.
10. REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSION AND DOOR LOCATIONS.
11. BENCHMARK ELEVATION IS _____ LOCATED AT _____ DATUM IS NGVD.
12. ALL PROPOSED SITE GAS, ELECTRIC, TELEPHONE, CATV FEATURES SHOWN ON SITE DEVELOPMENT PLANS ARE INTENDED AS SUPPLEMENTAL TO THE FINAL CONFIGURATION TO BE CONFIRMED WITH PROJECT MEP ENGINEER AND UTILITY PROVIDER.
13. REFER TO PLUMBING PLANS FOR EXACT SIZE AND LOCATION OF SANITARY AND WATER CONNECTIONS.
14. REFER TO ELECTRICAL PLANS FOR THE LIGHTING CIRCUITS, FIXTURE DETAIL AND BUILDING CONNECTION LOCATION.
15. ALL H.D.P.E. HIGH DENSITY POLYETHYLENE PIPE SHALL BE ADS N-12 OR APPROVED EQUAL. SEWER SHALL BE SDR 35 WITH RUBBER RING JOINTS. WATER LINES SHALL BE CL 52 D.I.P. (DUCTILE IRON PIPE), REINFORCED CONCRETE PIPE RCP SHALL BE CLASS III.
16. NO LEDGE, BOULDERS, OR OTHER UNYIELDING MATERIALS ARE TO BE LEFT WITHIN 6" OF THE SEWER IN THE TRENCH, NOR ARE THEY TO BE USED FOR BACKFILL FOR THE FIRST 12" ABOVE THE PIPES.
17. WALKS SHALL BE 4" THICK AND SHALL BE CONSTRUCTED ON 6" OF COMPACTED BANK GRAVEL. CONCRETE FOR WALKS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 4,000 PSI. WALKS SHALL BE REINFORCED WITH WMM 6x 6 W1.4/W1.4 CONFORMING TO ASTM A184.
18. BASE MATERIAL SHALL BE CLEAN BANK RUN GRAVEL, CONFORMING TO M.D.P.W. M1.03.1, WITH NO STONES LARGER THAN THREE (3) INCHES IN DIAMETER AND SHALL BE PLACED AND ROLLED WITH AT LEAST A TEN TON ROLLER. THE SURFACES SHALL BE WET DURING ROLLING TO BIND THE MATERIAL. ALL STONES OF 4" DIAMETER OR LARGER SHALL BE REMOVED FROM THE SUB-BASE PRIOR TO PLACING BASE MATERIAL. PULVERIZED MATERIAL MAY BE USED AS BASE MATERIAL PROVIDING IT MEETS THIS SPECIFICATIONS. AREAS TO BE REPAVED SHALL BE PULVERIZED AND REGRADED TO PROVIDE POSITIVE FLOW TO DRAINAGE AND AWAY FROM BUILDING. PAVE WITH 1 1/2" WEARING COURSE ON 1 1/2" BINDER COURSE. ALL VALVES BOXES, MANHOLES AND OTHER UTILITIES APPURTENANCES SHALL BE ADJUSTED TO CONFORM TO FINAL GRADE.
19. TRANSFORMER PAD SHALL BE INSTALLED PER PROVIDERS SPECIFICATIONS. GENERATOR PADS SHALL BE INSTALLED PER MANUFACTURING SPECIFICATIONS.
20. PAVEMENT AREA SHALL BE PAVED TO A THICKNESS AS SHOWN ON THE PLANS MEASURED AFTER COMPACTION, WITH A BINDER COURSE AND TOP COURSE OF CLASS I BITUMINOUS CONCRETE PAVEMENT, TYPE I-1.
21. THE AGGREGATE SHALL BE COMPOSED, MIXED AND LAID HOT IN TWO COURSES AS SPECIFIED IN THE "COMMONWEALTH OF MASSACHUSETTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGE", 1988 EDITION. SECTION 460 FOR CLASS I BITUMINOUS CONCRETE PAVEMENT, AS SPECIFICALLY SET FORTH IN SECTION 460.20 AND 460.82.

22. DUMPSTER PAD SHALL BE 8" THICK REINFORCED CONCRETE SLAB WITH CONTROL JOINTS EVERY 10'. THE PAD SHALL BE CONSTRUCTED OVER 6" OF GRAVEL BASE, COMPACT TO 95% REINFORCEMENT SHALL BE WMF 6x6-W1.4 x W1.4 PLACED AT THE CENTER OF THE SLAB. THE FRONT END OF COMPACTOR PAD SHALL HAVE EMBEDDED A 6"x 6"x 3/8" STEEL ANGLE.
23. THE DOLLY PADS SHALL BE 6" THICK REINFORCED CONCRETE SLABS WITH CONTROL JOINTS EVERY 10' AND ISOLATION JOINTS WHERE SLAB ABUTS BUILDING. THE PADS SHALL BE CONSTRUCTED OVER 12" OF GRAVEL BASE COMPACTED TO 95% REINFORCEMENT SHALL BE WMF 6 x 6- 2 W1.4 x W1.4 PLACED AT CENTER OF SLAB.
24. ALL EXISTING PAVING TO BE DISTURBED SHALL BE CUT ALONG A STRAIGHT LINE THROUGH ITS ENTIRE THICKNESS, BUTT NEW PAVING INTO THE EXISTING PAVEMENT TO REMAIN AND TACK COAT THE JOINT.
25. ANY PAVEMENT REMOVED FOR UTILITY TRENCH EXCAVATION OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED WITH A PAVEMENT SECTION CONSISTING OF 1 1/2" WEARING COURSE OVERLAYING A 1 1/2" BINDER COURSE OVERLAYING A 12" COMPACTED GRAVEL BASE COURSE.
26. ALL AREAS TO BE PLANTED WITH GRASS SHALL BE TREATED WITH 100 POUNDS OF GROUND LIMESTONE PER 1,000 S.F. OF AREA PLANTED. ALL AREAS TO BE PLANTED WITH GRASS SHALL BE FERTILIZED WITH 10-10-10 AT THE RATE OF 1,000 POUNDS PER ACRE OR AS REQUIRED BY SOIL TEST. 40% OF THE NITROGEN SHALL BE ORGANIC FORM.
27. ALL LANDSCAPED AREAS TO BE LOAMED AND SEEDING SHALL HAVE THE FOLLOWING MIX:

PERENNIAL RYE	25%
KENTUCKY BLUE	25%
CREeping RED FESCUE OR	
PENNLAWN FESCUE	50%
SEED AT THE RATE OF 5#/1,000 S.F.	
28. ALL DISTURBED AREAS TO BE LOAMED AND SEEDING SHALL HAVE A MINIMUM OF 4 INCHES OF TOPSOIL SPREAD EVENLY THROUGHOUT. PROVIDE EROSION CONTROL MEASURES AS NECESSARY TO PROVIDE SLOPE STABILITY UNTIL VEGETATION IS ESTABLISHED. (NOTE: IF THERE IS A CONFLICT BETWEEN THESE PLANS AND LANDSCAPE PLANS THE LANDSCAPE PLANS SHALL DICTATE).
29. THE CONTRACTOR SHALL REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEANUP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE. ALL DEMOLITION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE SITE TO A LEGAL DUMP SITE. ALL TRUCKS LEAVING THE SITE SHALL BE COVERED.
30. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTITUTE EROSION CONTROL MEASURES ON AN AS NECESSARY BASIS, SUCH THAT EXCESSIVE SOIL EROSION DOES NOT OCCUR. MEASURES SHALL INCLUDE SILT SACKS IN DRAINAGE INLETS, MULCHING AND PLANTING OF DISTURBED AREAS.
31. PRIOR TO THE COMMENCEMENT OF ANY OTHER WORK A SILT SACK SHALL BE INSTALLED IN EACH EXISTING DRAINAGE INLET.
32. AFTER INSTALLATION OF EACH DRAINAGE INLET A SILT SACK SHALL BE INSTALLED IN EACH INLET TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM.
33. AT THE END OF CONSTRUCTION ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS.
34. DURING CONSTRUCTION THE EROSION CONTROL MEASURES SHALL BE INSPECTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORM EVENT GENERATING MORE THAN 1/2" OF RAINFALL. THE EROSION CONTROL MEASURES SHALL BE CLEANED REGULARLY AND ADJUSTED IF NECESSARY TO ENSURE THAT NO SILT OR DEBRIS LEAVES THE SITE.
35. STABILIZATION MEASURES (SEEDING OR PLANTING, APPLYING MULCH OR OTHER NON-VEGETATIVE PRODUCT) OF EXPOSED SOILS SHALL BEGIN AS SOON AS PRACTICABLE AND IMMEDIATELY AFTER EARTH-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED. STABILIZATION TO BE COMPLETED WITHIN 14 DAYS.
36. SILT SOCKS SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF ALL STOCK PILES.
37. SPARE EROSION/SEDIMENT CONTROL MATERIALS SHALL BE AVAILABLE ON SITE FOR USE IN CONTINGENCY CONDITIONS OR AT THE DIRECTION OF CODE ENFORCEMENT PERSONNEL.
38. ALL STORM DRAIN INLETS SHOWN TO BE ABANDONED SHALL BE ABANDONED AS FOLLOWS SUCH THAT THE TOPS ARE NO LESS THAN 3' FROM FINISHED GRADE: (A) PRECAST DRAINAGE INLETS SHALL HAVE THE GRATE, FRAME AND CONE SECTION REMOVED. THE STORM DRAIN PIPE SHALL BE PLUGGED USING BRICK AND MORTAR AND THE REMAINING STRUCTURE SHALL BE BACK FILLED AND COMPACTED, OR THE ENTIRE STRUCTURE SHALL BE REMOVED AND REMAINING VOID SHALL BE BACKFILLED AND COMPACTED. (B) BLOCK DRAINAGE INLETS SHALL BE GRATE AND FRAMED REMOVED AND THE STORM DRAIN PLUGGED AS IN (A) ABOVE. THE STRUCTURE SHALL THEN BE CRUSHED, BACKFILLED AND COMPACTED.
39. ALL STORM DRAINS TO BE ABANDONED WHICH ARE WITHIN 3' OF FINISHED GRADE SHALL BE REMOVED. ALL OTHERS SHALL BE PLUGGED AT EACH END.



RETAINING WALL DETAIL TYPE-1
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KELLY ENGINEERING GROUP, INC.

SCALE	DATE	REV	DATE	REVISION	BY
NA	02/14/20				
SHEET 8 of 10					
FILE # 2019-027-DT00					
JOB # F:\P\2019-127					
DRAWN BY CUL					
CHKD BY GSH					
APPD BY DPK					

MARCUS PARTNERS
176- 210 GROVE STREET
FRANKLIN, MA

DETAIL SHEET

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DAVID KELLY
REGISTERED PROFESSIONAL ENGINEER
NO. 37942
EXPIRATION DATE 12/31/2024

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DN: cn=David Kelly, o=Kelly Engineering Group, Inc., email=dkelly@kellyengr.com, c=US
Date: 2020.02.14 15:00:01 -0500

SHEET NO. 8

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THE EXTENT OF KELLY ENGINEERING GROUPS LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COST

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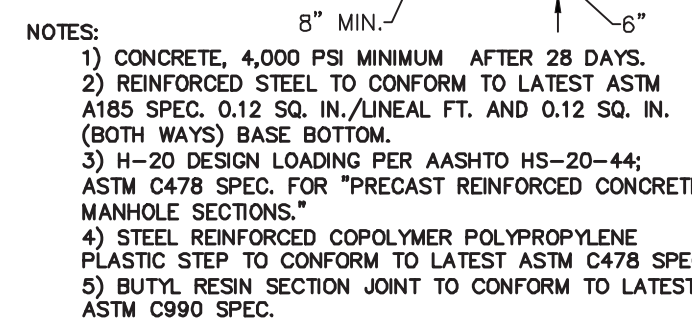
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Diagram illustrating the installation of a silt sock for erosion control.

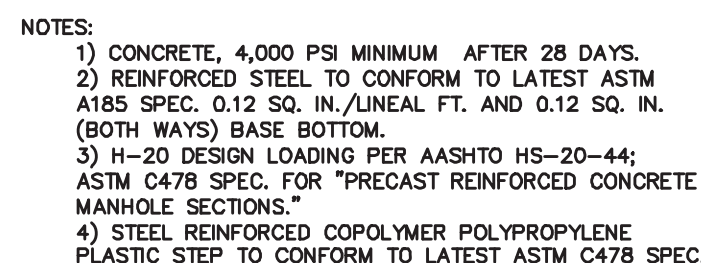
Labels and components shown:

- OPTIONAL OVERFLOW
- INSERT 1" REBAR FOR BAG REMOVAL INLET.
- SILT SACK
- DUMP LOOPS
- EXPANSION RESTRAINT
- 12"-18" DIA. BIODEGRADABLE SILT SOCK FILLED WITH WOOD CHIP COMPOST BLEND
- 1"x 1" STAKES, INSTALL AS NEEDED TO HOLD SOCK IN PLACE
- PROTECTED RESOURCE AREA
- MAINTAIN CONSISTENT GROUND CONTACT
- DISTURBED AREA
- FLOW
- TRAPPED SEDIMENT

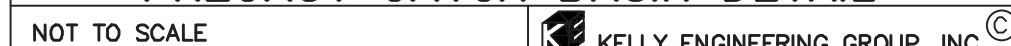


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PIPING MATERIAL NOTES:
A.NO-HUB CAST IRON PRODUCT-APPROVED
STAINLESS STEEL CLAMPS
B.SERVICE WEIGHT CAST IRON WITH
PRODUCT-APPROVED RESILIENT GASKETS OR
LEAD & OAKUM JOINTS.
C.EXTRA HEAVY CAST IRON WITH
PRODUCT-APPROVED RESILIENT GASKETS OR
LEAD & OAKUM JOINTS.

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NO. 37942
REGISTERED
PROFESSIONAL ENGINEER

Commonwealth of Massachusetts

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Date: 2020.10.24 15:08:24 -0500

SHEET NO. 9

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