

# SITE DEVELOPMENT PLANS

## FOR NEWTON NEXUS NEWTON, MA

JANUARY 9, 2015

SHEET INDEX			
SHEET No.	DESCRIPTION	LATEST REVISED DATE	CONSTRUCTION REVISIONS
1	COVER SHEET	03/30/15	
2	VICINITY PLAN	03/30/15	
3	EXISTING CONDITIONS PLAN	03/30/15	
4	LAYOUT PLAN	03/30/15	
5	GRADING PLAN	03/30/15	
6	SEWER & DRAINAGE PLAN	03/30/15	
7	UTILITY & UTILITY ABANDONMENT PLAN	03/30/15	
8	DETAIL SHEET	03/30/15	
9	DETAIL SHEET	03/30/15	
10	DETAIL SHEET	03/30/15	

### OWNER/APPLICANT:

WELLFORD CORP.  
C/O CROSSPOINT ASSOCIATES, INC.  
300 THIRD AVENUE, SUITE 2  
WALTHAM, MA 02451

### CIVIL ENGINEERS:

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

### ARCHITECT:

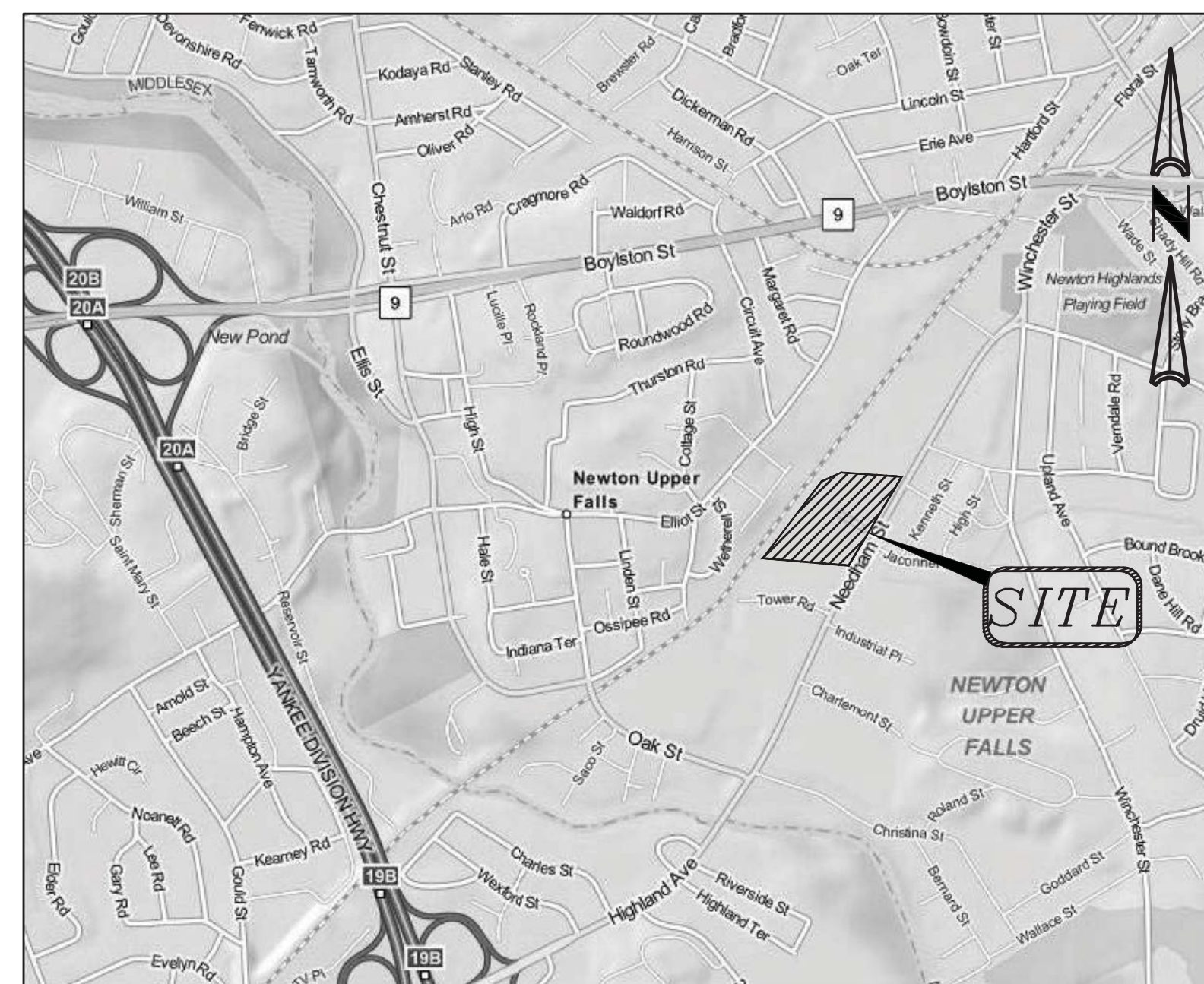
ALLEVATO ARCHITECTS, INC.  
31 HAYWARD STREET  
FRANKLIN, MA 02038

### LANDSCAPE ARCHITECT:

SHADLEY ASSOCIATES, P.C.  
1730 MASSACHUSETTS AVENUE  
LEXINGTON, MA 02420

### TRAFFIC ENGINEER:

STANTEC  
55 GREEN MOUNTAIN DRIVE  
SOUTH BURLINGTON, VT 05403



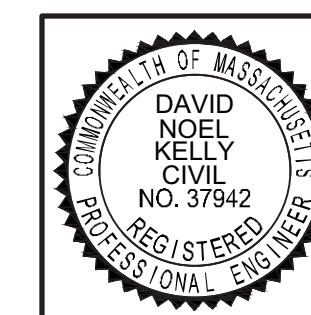
LOCATION MAP

David Noel Kelly  
2015.03.31  
10:05:29 -04'00'

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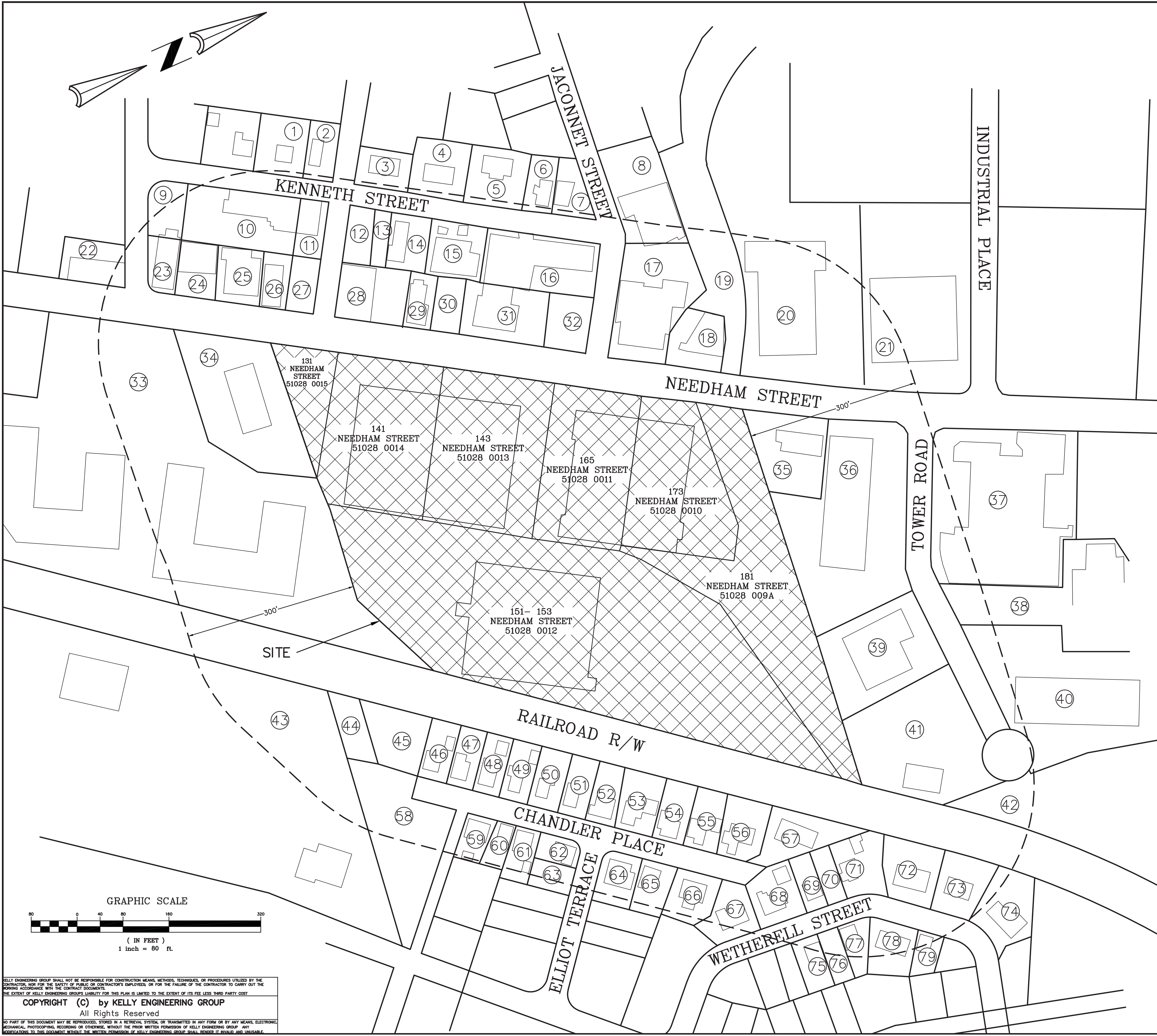
SCALE	DISK REF. NO.
DATE	DRAWN BY
SHEET	CHKD BY
PLAN NO.	APPD BY

131, 141-143, 151-153, 165, 173  
& 181 NEEDHAM ST. NEWTON, MA

**KELLY ENGINEERING GROUP, INC.**  
CIVIL ENGINEERING CONSULTANTS

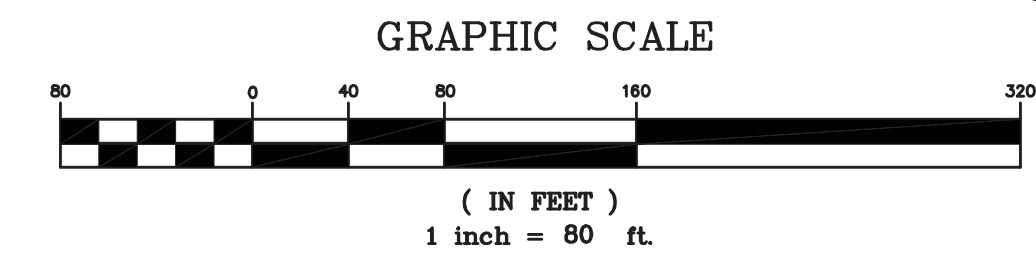
0 CAMPANELLI DRIVE · BRAINTREE MA · 02184  
PHONE: 781 843 4333 FAX: 781 843 0028

SHEET NO.  
**1**



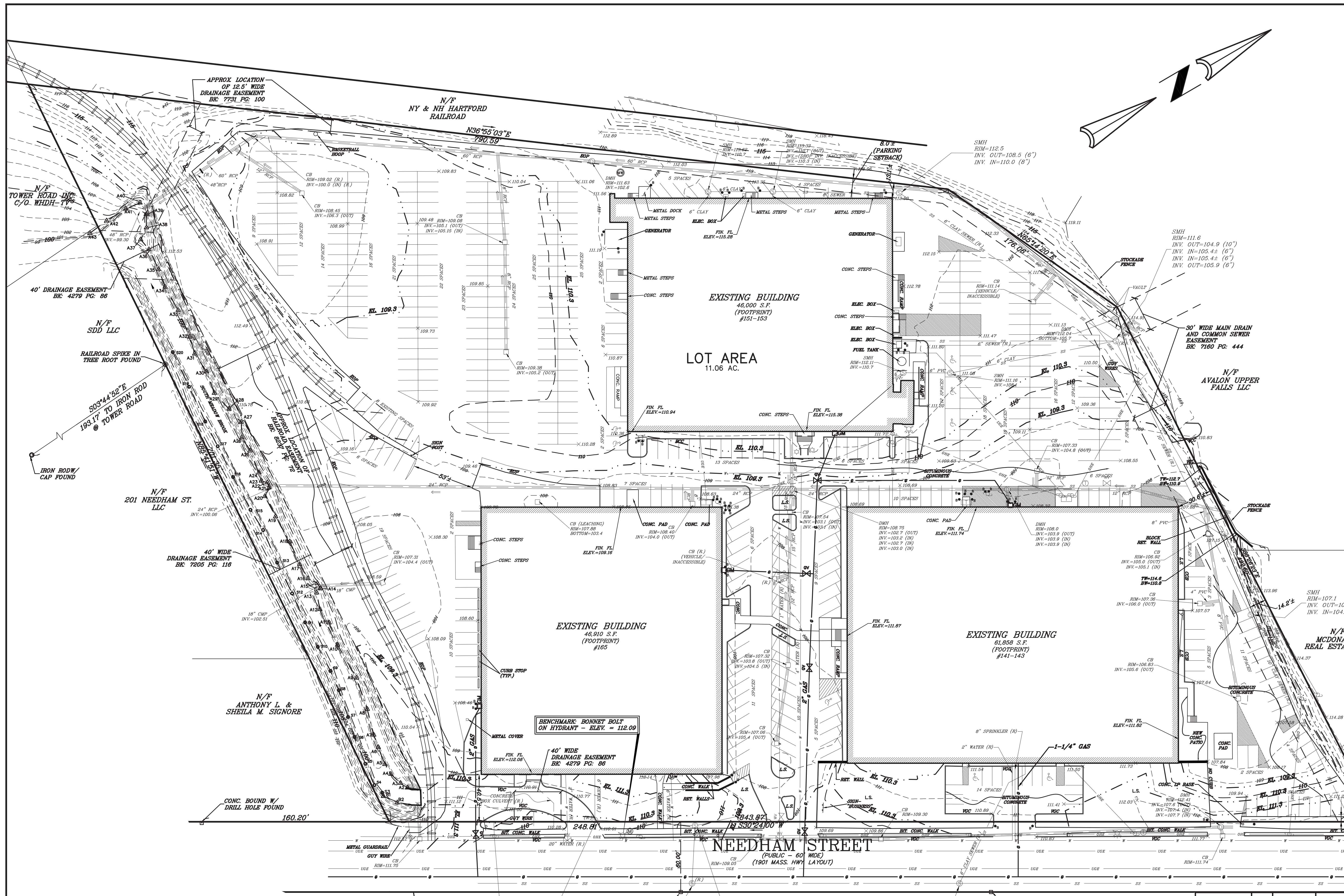
#	PARCEL ID	N/F
1	83015 0009	KWAN DAVID Y
2	83015 0008	KASAI KUNIIKO
3	83014 0013	WONG KING T & LINDA L TRS
4	83014 0012	YIP RAYMOND
5	83014 0011	DEODATO JOSEPH
6	83014 0010	SANCHEZ CONNIE
7	83014 0009	COMPAGONE JOSEPH TR
8	83028 0003	SALETT SEYMOUR TR
9	83012 0002	CTO NEEDHAM LLC
10	83012 0003	WALCOTT CORP
11	83012 0004	WALCOTT CORP
12	83013 0001	DAGATA FILOMENA TR
13	83013 0002	DAGATA FILOMENA TR
14	83013 0003	DAGATA FILOMENA TR
15	83013 0004	WIGGIN ERMA N TR
16	83013 0005	RECCO JOHN JR TR
17	83028 0002	NEEDHAM CHESTNUT RLTY LLC
18	83028 0001	180 NEEDHAM STREET LLC
19	83028 0081	188 NEEDHAM STREET LTD PARTNERSHIP
20	83028 0084	188 NEEDHAM ST LTD PTRNSHP
21	83028 0083	210 NEEDHAM ST LTD PTRNSHP
22	83011 0023	SUMMERFIELD MARTIN A
23	83012 0001	CTO NEEDHAM LLC
24	83012 0008	TERRAZZINO SAMUEL TR
25	83012 0007	112 NEEDHAM ST LLC
26	83012 0006	WALCOTT CORP
27	83012 0005	WALCOTT CORP
28	83013 0013	DRUCKER C GERARD & WILLIAM B TRS
29	83013 0012	138 NEEDHAM ST LLC
30	83013 0011	138 NEEDHAM ST LLC
31	83013 0010	RECCO JOHN JR TR
32	83013 0009	RECCO JOHN JR TR
33	51028 0017	AVALON UPPER FALLS LLC
34	51028 0016	MCDONALDS REAL ESTATE CO
35	51028 0008E	SIGNORE LLC
36	51028 0008B	201 NEEDHAM ST LLC
37	51028 0008G	JPMCC 2007-CIBC19 NEEDHAM RETL LLC
38	51028 0008A	AGY PROPERTIES LLC
39	51028 0008C	APT LENDING LLC
40	51028 0008F	BIGELOW OIL CO INC
41	51028 0008D	TOWER ROAD INC
42	51028 0005	NORTHLAND TOWER ROAD
43	51029 0037	CITY OF NEWTON
44	51029 0036	CITY OF NEWTON
45	51029 0034	CITY OF NEWTON
46	51029 0033	HE HAO RAN
47	51029 0032	VISCO LAWRENCE J & JEAN F
48	51029 0031	BODOZIAN STEPHEN & JUNE
49	51029 0030	LI KIN WING
50	51029 0029	YANG JUN
51	51029 0028	PRENDERGAST MARY D TR
52	51029 0027	HART JOHN T
53	51029 0026	PENZO MICHAEL A & JEANINE A
54	51029 0025	HART JOHN T & TERRI L
55	51029 0024	COHEN GILAH F
56	51029 0023	POUTAS JOHN J & KATHALEEN A
57	51029 0022A	ZHU YE
58	51029 0035	CITY OF NEWTON
59	51030 0005	RASOOL FAHEEN
60	51030 0006	SWEENEY STEVEN M & SUSAN JB
61	51030 0007	PRESTERA ESTHER & JOSEPH
62	51030 0008	POWERS SYLVIA WOOL
63	51030 0009	POWERS SYLVIA WOOL
64	51029 0019	KANTAR JONATHAN A
65	51029 0020	LO WAIHUNG STEVEN
66	51029 0021	SPINK DAVID W & PAULA M
67	51029 0016	DEMICHELE HENRY A & DOROTHY M TRS
68	51029 0015	SOCKOL AARON & LOIS F TRS
69	51029 0014	BALKUS ELLEN
70	51029 0013	BALKUS ELLEN
71	51029 0012	ASHCHIAN ROSE & KARLO TRS T/C
72	51029 0009	MALKASIAN MARTIN MANUEL
73	51029 0007	MELNICK PATRICIA A
74	51029 0005	CUNNINGHAM KENNETH E TR
75	51031 0013	TRAINI ROSEMARY
76	51031 0014	TRAINI ROSEMARY
77	51031 0015	KAZARIAN DANIEL & MAUREEN
78	51031 0016	FENG JIANWEN
79	51031 0018	LEONE RITA

David Noel Kelly  
2015.03.31  
10:05:58 -04'00'



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SCALE 1" = 80'	DATE 01/09/15	NO CHANGE	
SHEET 2 OF 10	REV 1	03/30/15	BY
PLAN NO. 075-MI-LOCUS	DATE	REVISION	
DISK REF NO. F:\P\2013-075	<b>CROSSPOINT ASSOCIATES, INC.</b> 131, 141-143, 151-153, 165, 173, & 181 NEEDHAM ST. NEWTON, MASSACHUSETTS <b>VICINITY PLAN</b>		
DRAWN BY C.J.L.			
CHKD BY DAM			
APPD BY DNK	<b>KELLY ENGINEERING GROUP</b> CIVIL ENGINEERING CONSULTANTS 40 PEARL STREET · BRAintree MA · 02184 PHONE: 781 843 4333 FAX: 781 843 0028		
	SHEET NO.		<b>2</b>



### LEGEND

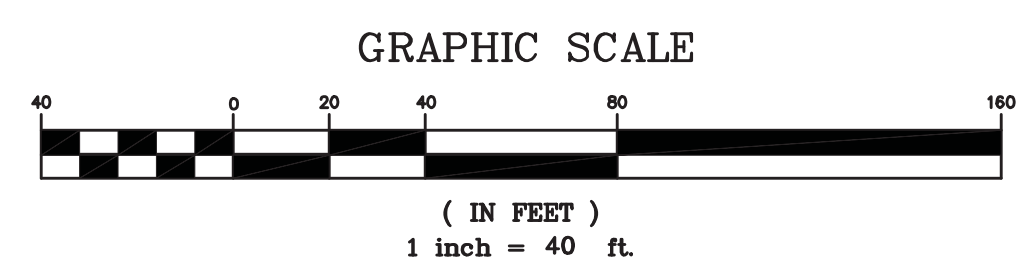
	CATCH BASIN
	DRAIN MANHOLE
	DRAINLINE
	DRAINAGE FLOW
	SEWER MANHOLE
	SEWER LINE
	WATER LINE
	WATER VALVE
	HYDRANT
	OVERHEAD ELECTRIC
	TRANSFORMER
	UTILITY POLE
	LIGHT POLE
	GAS METER
	GAS LINE
	GAS VALVE
	EDGE OF PAVEMENT - NO CURB
	VERTICAL GRANITE CURB
	GUARDRAIL
	RECORD LOCATION
	FLOOD PLAIN ELEVATION
	CONTOUR MAJOR
	CONTOUR MINOR
	RAILROAD TRACKS
	SIGN
	BOLLARD
	EDGE OF WETLANDS
	WETLAND FLAGES
	EASEMENT

**OWNER OF RECORD:**  
 WELFORD CORP.  
 C/O MOYNIHAN PATRICK J.  
 CROSSPOINT ASSOCIATES, INC.

**DEED REFERENCE:**  
 DEED BK: 013229 PG: 0645

- NOTES:**
- 1.) THIS PLAN IS BASED UPON A FIELD INSTRUMENT SURVEY PERFORMED BY KELLY ENGINEERING GROUP, INC. THE AREA BETWEEN THE BUILDINGS REPRESENTS DESIGN INFORMATION SUPPLEMENTED BY INFORMATION FROM AN AERIAL IMAGE FOR WORK PERFORMED AFTER THE FIELD SURVEY.
  - 2.) ELEVATIONS ARE BASED UPON NATIONAL GEODESIC VERTICAL DATUM (NGVD) OF 1929.
  - 3.) BOUNDARY INFORMATION SHOWN WAS OBTAINED FROM A PLAN ENTITLED "ALTA/ACSM LAND TITLE SURVEY OF LAND IN NEWTON, MA, MIDDLESEX COUNTY (S.D.), 153 NEEDHAM STREET, PREPARED FOR: CROSSPOINT ASSOCIATES, INC., SCALE: 1"=40', DATED AUGUST 31, 1999", DRAWN BY PERIMETER LAND SERVICES, INC., 41 MEETINGHOUSE LN., SAGAMORE BEACH, MA 02562.
  - 4.) UNDERGROUND UTILITIES ARE BASED UPON RECORD INFORMATION PROVIDED TO US BY THE CLIENT.
  - 5.) THE SUBJECT PARCEL IS SHOWN IN THE CITY OF NEWTON ASSESSOR'S RECORDS AS LOTS 9A AND 10-15, INCLUSIVE, IN SECTION 51, BLOCK 2B.
  - 6.) FLOOD ELEVATIONS SHOWN WERE OBTAINED FROM THE FLOOD INSURANCE STUDY (FIS) PROFILE FOR THE SOUTH MEADOW BROOK. ELEVATIONS WERE CONVERTED FROM NAVD83, AS SHOWN IN THE FIS, TO NGVD29.

Steven M.  
 Horsfall  
 2015.03.31  
 10:42:26 -04'00'



SCALE	1" = 40'
DATE	01/09/15
REV	1. 03/30/15
SHEET	3 OF 10
PLAN NO.	XREF-EX00
DISK REF NO.	F:\P\2013-075
DRAWN BY	JPM
CHKD BY	SMH
APPD BY	SMH
PER CITY COMMENTS	
REVISION	
BY	
CROSSPOINT ASSOCIATES, INC.	
131, 141-143, 151-153, 165, 173, & 181 NEEDHAM ST.	
NEWTON, MASSACHUSETTS	
EXISTING CONDITIONS	
PLAN	
KELLY ENGINEERING GROUP, INC.	
CIVIL ENGINEERING CONSULTANTS	
0 CAMPANELLI DRIVE · BRAINTREE MA · 02184	
PHONE: 781 843 4333 FAX: 781 843 0028	
SHEET NO.	3

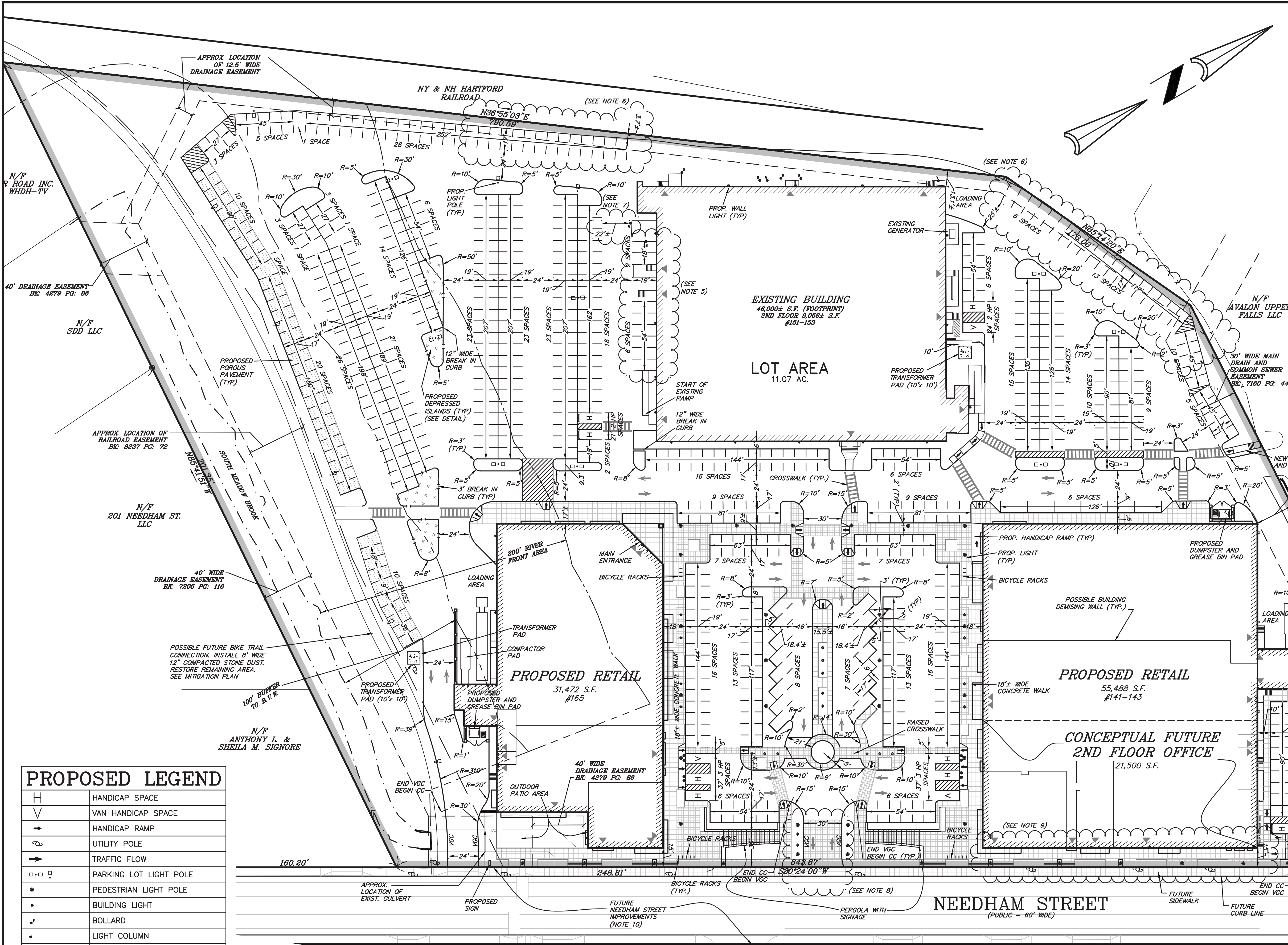
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# ZONING LEGEND

ZONING DISTRICT: MIXED USE 1

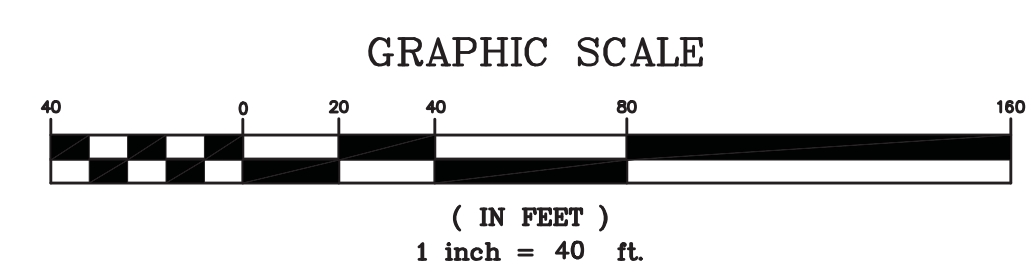
	REQUIRED/PERMITTED	EXISTING	PROVIDED	COMPLIANCE
MIN. AREA	40,000 S.F.	11.06 AC.	11.06 AC.	YES
MIN. FRONTAGE	80'	844'±	844'±	YES
MIN. YARD - FRONT	15'	40.5'	15' (NOTE 9)	YES
-SIDE	7.5'	30.6'±	30.6'±	YES
-REAR	7.5'	13.1'±	13.1'±	YES
MAX. STORIES	3	2	2	YES
MAX. HEIGHT	36'	<36'	36'	YES
FAR COVERAGE	1.5	0.34 (NOTE 1)	0.34 (NOTE 1)	YES
PARKING TOTAL	711 (NOTE 2)	488	518	SPECIAL PERMIT
-SIZE	9'x19' W/ 2' OVERHANG	VARIABLES	9'x19' OVERHANG 8'x21' PARALLEL	YES
-HANDICAP	11 (NOTE 3)	9	11	YES
-LOADING	3 (NOTE 4)	3±	3±	YES
PARKING SETBACK				
-FRONT	20'	4.3'±	9'± (NOTE 5)	NON EXISTING CONFORMING
-SIDE	5'	14.2'±	0'± (NOTE 6)	SPECIAL PERMIT
-REAR	5'	8'±	3.7'± (NOTE 6)	SPECIAL PERMIT
-BUILDING	5'	0'±	0'± (NOTE 5)	NON EXISTING CONFORMING
aisle width	24' (TWO WAY)	22'±	22'± (NOTE 7)	NON EXISTING CONFORMING
	12' (ONE WAY)	16'±	>12'	YES
MAX. DRVWY. WIDTH	25'	53'±	30' (NOTE 8)	NON EXISTING CONFORMING
BICYCLE PARKING	30	NA	30	YES
LANDSCAPE SCREENING	5'	0'	0' (NOTE 5 & 6)	NON EXISTING CONFORMING
INTERIOR LANDSCAPING	5%	<5%	>5%±	YES

- NOTES:
- FLOOR AREA RATIO:  
EXISTING FAR: (61,858 S.F. + 55,056 S.F. + 46,910 S.F.)/11.06 AC = 0.34±  
PROP. FAR: (76,988 S.F.\* + 55,056 S.F. + 31,472± S.F.)/11.06 AC = 0.34±  
\*INCLUDES CONCEPTUAL FUTURE SECOND STORE OFFICE
  - SEE PARKING CALCULATIONS ATTACHED WITH SPECIAL PERMIT APPLICATION.
  - REQUIRED HANDICAP STALLS: 2% OF STALLS
  - 10'WX35'LX12'H LOADING SPACES REQUIRED:  
OFFICE - 76,988 S.F. = 1 SPACE  
RETAIL - 88,960 S.F. = 2 SPACES
  - EXISTING PARKING SPACES ARE LOCATED WITHIN FRONT YARD SETBACK AND AGAINST BUILDING.
  - PROPOSED PARKING SPACES ARE LOCATED ALONG EXISTING DRIVE AISLES AND EDGE OF PAVEMENT FOR MORE EFFICIENT PARKING CONFIGURATION.
  - PARKING AISLES ARE 24' WIDE WITH EXCEPTION OF EXISTING AISLE LOCATED WITHIN LOADING AREA AND BOLLARD TO THE SOUTHWEST CORNER OF 151-153 NEEDHAM ST.
  - EXISTING NONCONFORMING DRIVEWAY WIDTH WILL BE REDUCED. DRIVEWAY WIDTH WILL BECOME LESS NONCONFORMING.
  - SECOND FLOOR OFFICE SHOWN FOR FUTURE PLANNING/INFORMATIONAL PURPOSES ONLY. SECOND FLOOR OFFICE IS NOT PROPOSED AT THIS TIME DUE TO N20 SECTION 30-15, TABLE 3, FOOTNOTE 9 WHICH WOULD REQUIRE A 36 FOOT SETBACK FOR A 2 STORY BUILDING OF 36 FEET HEIGHT.
  - AS SHOWN ON PLANS ENTITLED "MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION, HIGHLAND AVENUE/NEEDHAM STREET..." 25% SUBMITTED BY FST DATED 12-2013.
  - FOR WORK OUTSIDE OF CURB LIMITS (MATERIALS, FINISHES, PLANTER BOXES, ETC.) SEE PLAN BY LANDSCAPE ARCHITECT.



### PROPOSED LEGEND

H	HANDICAP SPACE
V	VAN HANDICAP SPACE
→	HANDICAP RAMP
⊙	UTILITY POLE
→	TRAFFIC FLOW
□	PARKING LOT LIGHT POLE
•	PEDESTRIAN LIGHT POLE
•	BUILDING LIGHT
•	BOLLARD
•	LIGHT COLUMN
+	DEPRESSED CURB
□	POROUS PAVEMENT



### EXISTING LEGEND

---	EDGE OF WETLANDS
---	100' BUFFER TO B.V.W.
---	200' RIVERFRONT AREA
---	PROPERTY LINE
---	EASEMENT

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SCALE: 1" = 40'

REV	DATE	PER CITY COMMENTS	BY
1.	03/30/15		

SHEET 4 OF 10

PLAN NO. 2013-075-LA01

DISK REF NO. F:\P\2013-075

DRAWN BY C.J.L.

CHKD BY DAM

APPD BY DNK

**CROSSPOINT ASSOCIATES, INC.**  
131, 141-143, 151-153, 165, 173, & 181 NEEDHAM ST.  
NEWTON, MASSACHUSETTS

**LAYOUT AND ZONING PLAN**

**KELLY ENGINEERING GROUP, INC.**  
CIVIL ENGINEERING CONSULTANTS  
0 CAMPANELLI DRIVE · BRAINTREE MA · 02184  
PHONE: 781 843 4333 FAX: 781 843 0028

David Noel Kelly  
2015.03.31  
10:06:24 -04'00'

SHEET NO. **4**

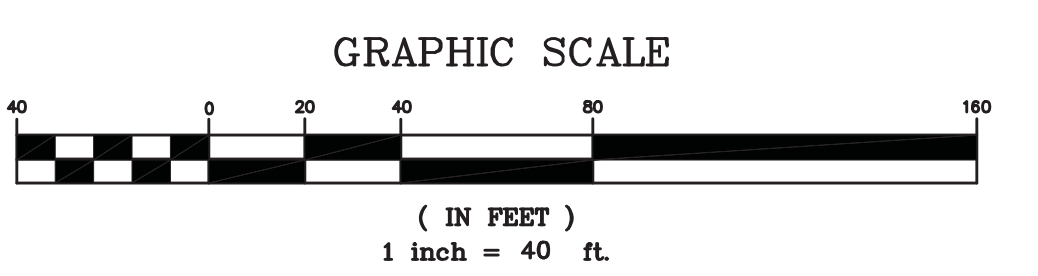
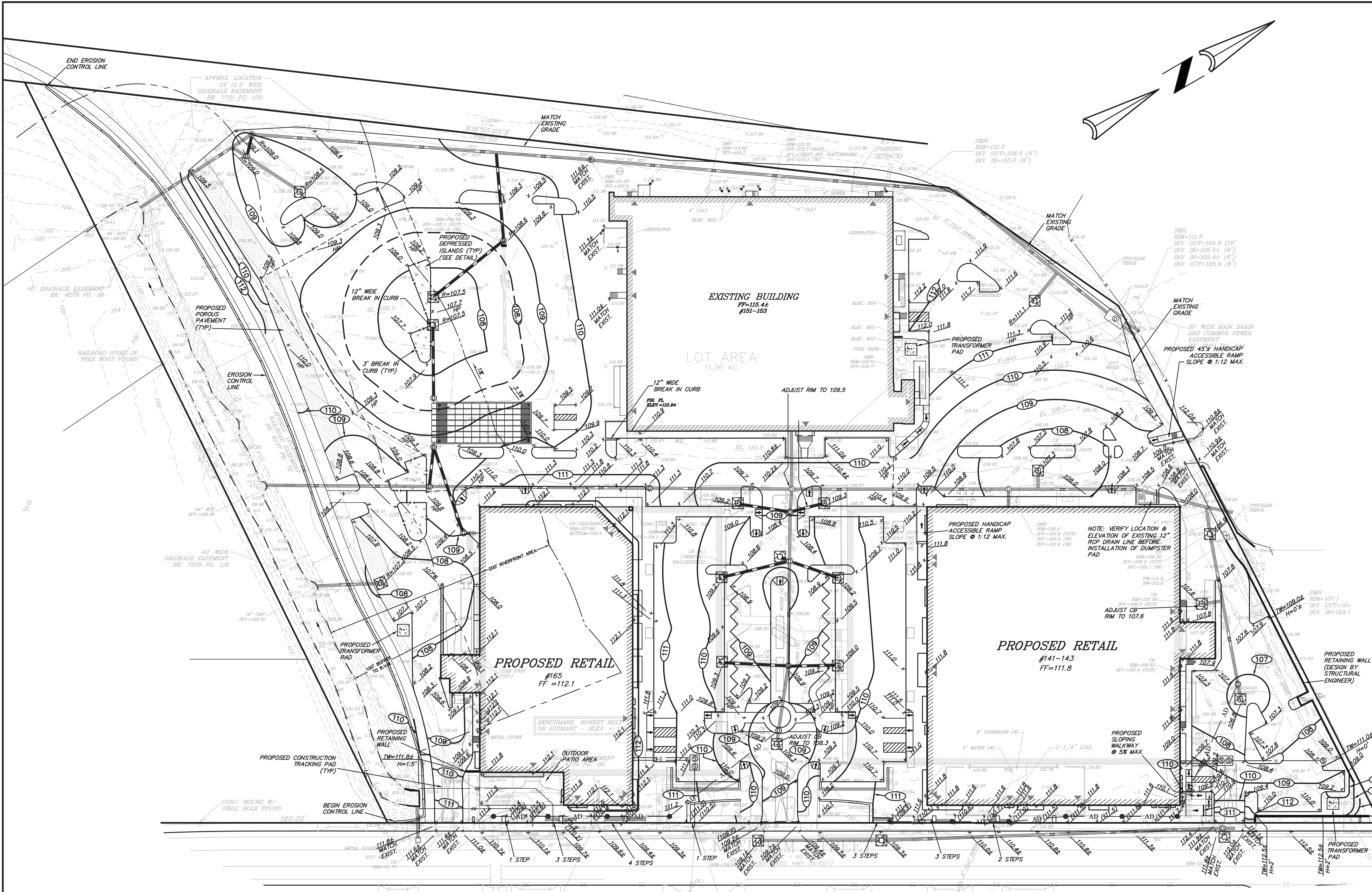
**EXISTING LEGEND**

	CATCH BASIN
	DRAIN MANHOLE
	DRAINLINE
	DRAINAGE FLOW
	SEWER MANHOLE
	SEWER LINE
	WATER LINE
	WATER VALVE
	HYDRANT
	OVERHEAD ELECTRIC
	TRANSFORMER
	UTILITY POLE
	LIGHT POLE
	GAS METER
	GAS LINE
	GAS VALVE
	EDGES OF PAVEMENT - NO CURB
	VERTICAL GRANITE CURB
	GUARDRAIL
	RECORD LOCATION
	FLOOD PLAIN LINE
	CONTOUR MAJOR
	CONTOUR MINOR
	RAILROAD TRACKS
	SIGN
	BOLLARD
	EDGES OF WETLANDS
	WETLAND FLAGES
	EASEMENT

**PROPOSED LEGEND**

	CATCH BASIN
	DRAIN MANHOLE
	DRAIN LINE
	ROOF DRAIN LINE
	SEWER CLEAN OUT
	SEWER LINE
	UTILITY POLE
	CONTOUR LINE
	SPOT GRADE
	NOTE 2
	HAYBALE DIKE
	EROSION CONTROL LINE
	100' BUFFER TO B.V.W.
	200' RIVERFRONT AREA
	DEPRESSED CURB
	POROUS PAVEMENT

NOTES:  
 1. ALL STRUCTURE INVERTS ARE LISTED WITH OUTLET FIRST THEN CLOCKWISE AROUND STRUCTURE.  
 2. ASSUMED APPROXIMATE GRADE AT BACK OF SIDEWALK AFTER NEEDHAM STREET RECONSTRUCTION



SCALE	1" = 40'
DATE	01/09/15
SHEET	5 OF 9
PLAN NO.	2013-075-GD01
DISK REF NO.	F:\P\2013-075
DRAWN BY	C.J.L.
CHKD BY	B.G.L.
APPD BY	DNK

REV	DATE	PER CITY COMMENTS	BY
1.	03/30/15	PER CITY COMMENTS	

**CROSSPOINT ASSOCIATES, INC.**  
 131, 141-143, 151-153, 165, 173, & 181 NEEDHAM ST.  
 NEWTON, MASSACHUSETTS

**GRADING PLAN**

**KELLY ENGINEERING GROUP, INC.**  
 CIVIL ENGINEERING CONSULTANTS  
 0 CAMPANELLI DRIVE · BRAINTREE MA · 02184  
 PHONE: 781 843 4333 FAX: 781 843 0028

SHEET NO. **5**

David Noel Kelly  
 2015.03.31  
 10:06:58  
 -04'00"

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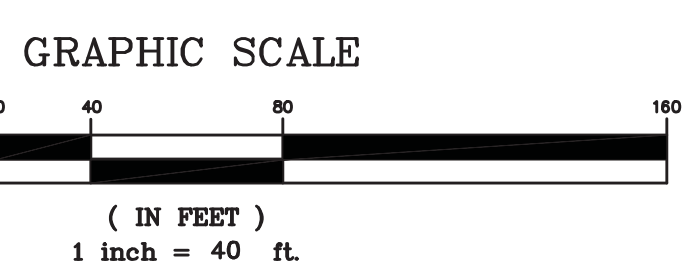
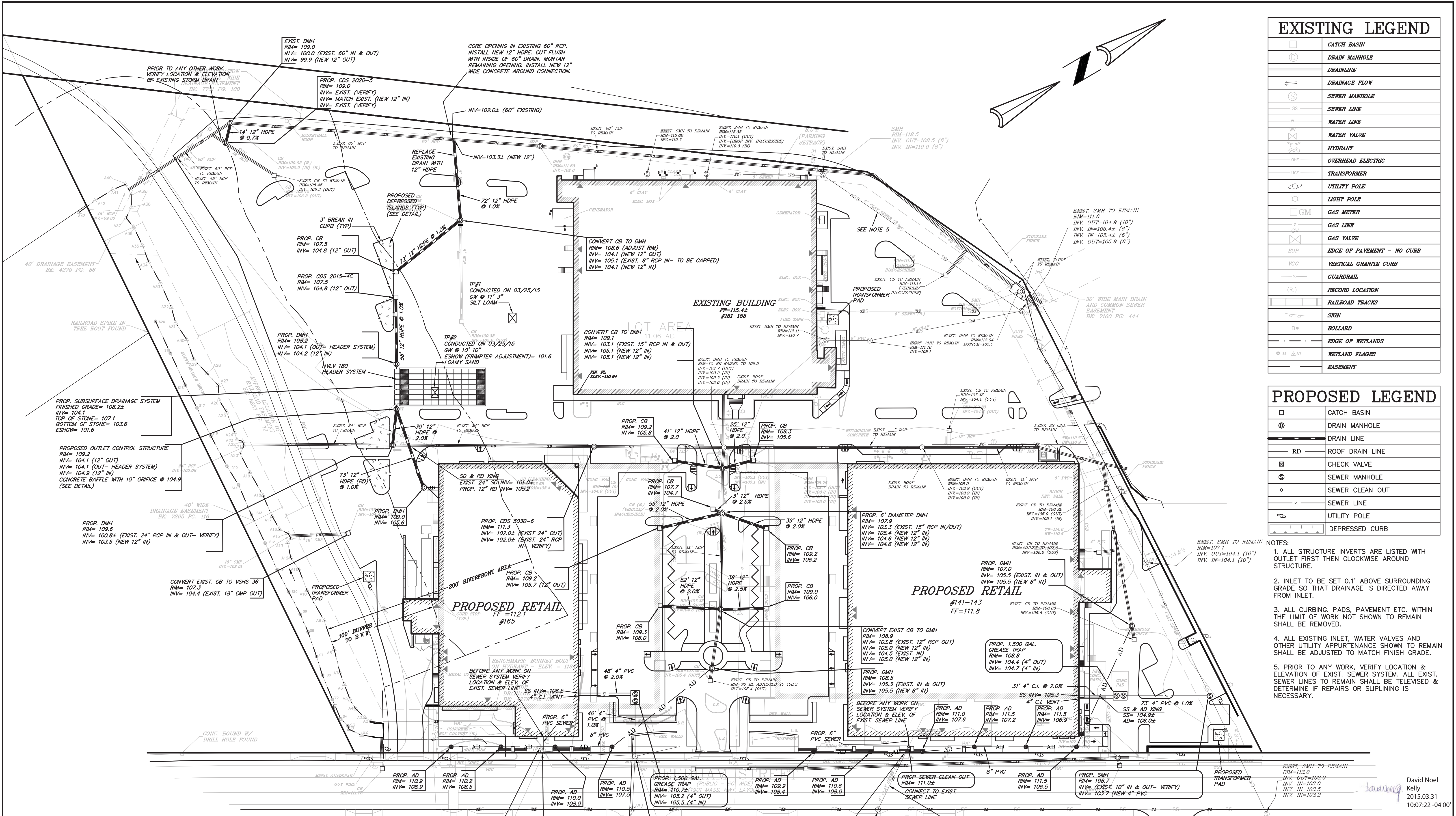
**EXISTING LEGEND**

	CATCH BASIN
	DRAIN MANHOLE
	DRAINLINE
	DRAINAGE FLOW
	SEWER MANHOLE
	WATER LINE
	WATER VALVE
	HYDRANT
	OVERHEAD ELECTRIC
	TRANSFORMER
	UTILITY POLE
	LIGHT POLE
	GAS METER
	GAS LINE
	GAS VALVE
	EDGES OF PAVEMENT - NO CURB
	VERTICAL GRANITE CURB
	GUARDRAIL
	RECORD LOCATION
	RAILROAD TRACKS
	SIGN
	BOLLARD
	EDGE OF WETLANDS
	WETLAND FLAGES
	EASEMENT

**PROPOSED LEGEND**

	CATCH BASIN
	DRAIN MANHOLE
	DRAIN LINE
	ROOF DRAIN LINE
	CHECK VALVE
	SEWER MANHOLE
	SEWER CLEAN OUT
	SEWER LINE
	UTILITY POLE
	DEPRESSED CURB

- NOTES:
1. ALL STRUCTURE INVERTS ARE LISTED WITH OUTLET FIRST THEN CLOCKWISE AROUND STRUCTURE.
  2. INLET TO BE SET 0.1' ABOVE SURROUNDING GRADE SO THAT DRAINAGE IS DIRECTED AWAY FROM INLET.
  3. ALL CURBING, PADS, PAVEMENT ETC. WITHIN THE LIMIT OF WORK NOT SHOWN TO REMAIN SHALL BE REMOVED.
  4. ALL EXISTING INLET, WATER VALVES AND OTHER UTILITY APPURTENANCE SHOWN TO REMAIN SHALL BE ADJUSTED TO MATCH FINISH GRADE.
  5. PRIOR TO ANY WORK, VERIFY LOCATION & ELEVATION OF EXIST. SEWER SYSTEM. ALL EXIST. SEWER LINES TO REMAIN SHALL BE TELEVIEWED & DETERMINE IF REPAIRS OR SLIPLINING IS NECESSARY.



KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDING TO THE CONTRACT DOCUMENTS. THE EXTENT OF KELLY ENGINEERING GROUP'S LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COSTS.

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SCALE	1" = 40'
DATE	01/09/15
REV	1 03/30/15
SHEET	6 OF 9
PLAN NO.	2013-075-SD01
DISK REF NO.	F:\P\2013-075
DRAWN BY	C.J.L.
CHKD BY	B.G.
APPD BY	DNK

1	03/30/15	PER CITY COMMENTS	BY
		REVISION	

**CROSSPOINT ASSOCIATES, INC.**  
131, 141-143, 151-153, 165, 173, & 181 NEEDHAM ST.  
NEWTON, MASSACHUSETTS

**SEWER & DRAINAGE PLAN**

**KELLY ENGINEERING GROUP, INC.**  
CIVIL ENGINEERING CONSULTANTS  
0 CAMPANELLI DRIVE • BRANTREE MA • 02184  
PHONE: 781 843 4333 FAX: 781 843 0028

David Noel  
Kelly  
2015.03.31  
10:07:22 -04'00'

DAVID NOEL  
KELLY  
CIVIL  
NO. 37942  
REGISTERED  
PROFESSIONAL ENGINEER

SHEET NO. **6**

**EXISTING LEGEND**

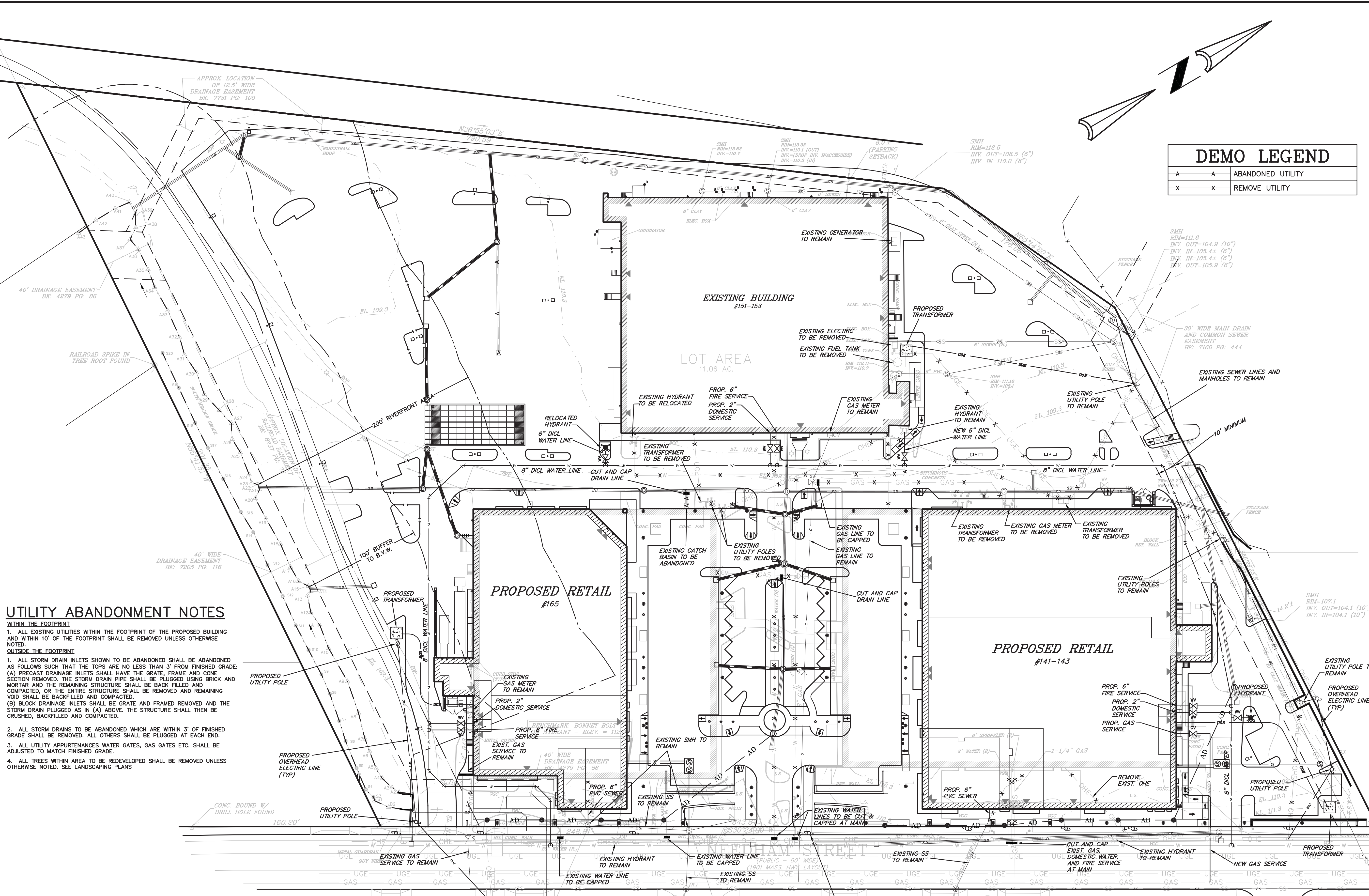
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	DRAINLINE
	DRAINAGE FLOW
	SEWER MANHOLE
	SEWER LINE
	WATER LINE
	WATER VALVE
	HYDRANT
	OVERHEAD ELECTRIC
	TRANSFORMER
	UTILITY POLE
	LIGHT POLE
	GAS METER
	GAS LINE
	GAS VALVE
	EDGE OF PAVEMENT - NO CURB
	VERTICAL GRANITE CURB
	GUARDRAIL
	RECORD LOCATION
	FLOOD PLAIN LINE
	CONTOUR MAJOR
	CONTOUR MINOR
	RAILROAD TRACKS
	SIGN
	BOLLARD
	EDGE OF WETLANDS
	WETLAND FLAGES
	EASEMENT
	PROPERTY LINE

**DEMO LEGEND**

A	ABANDONED UTILITY
X	REMOVE UTILITY

**PROPOSED LEGEND**

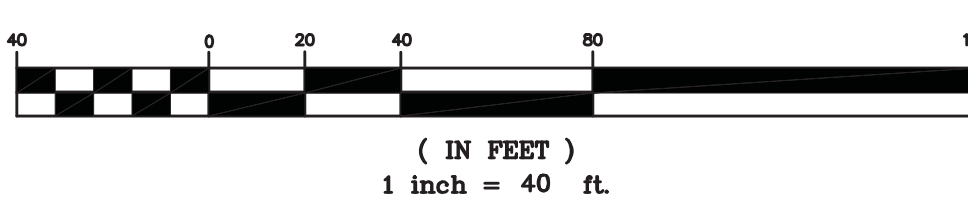
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	DRAIN MANHOLE
	6" DIA. DRAIN MANHOLE
	DRAIN LINE
	ROOF DRAIN LINE
	SEWER CLEAN OUT
	SEWER LINE
	GAS VALVE
	GAS LINE
	HYDRANT
	WATER VALVE
	WATER LINE
	UTILITY POLE
	PARKING LOT LIGHT POLE
	PEDESTRIAN LIGHT POLE
	BUILDING LIGHT
	OVERHEAD ELECTRIC LINE
	UNDERGROUND ELECTRIC LINE
	100' BUFFER TO B.V.W.
	200' RIVERFRONT AREA
X	UTILITY TO BE REMOVED
A	UTILITY TO BE ABANDONED



**UTILITY ABANDONMENT NOTES**

- WITHIN THE FOOTPRINT**
1. ALL EXISTING UTILITIES WITHIN THE FOOTPRINT OF THE PROPOSED BUILDING AND WITHIN 10' OF THE FOOTPRINT SHALL BE REMOVED UNLESS OTHERWISE NOTED.
- OUTSIDE THE FOOTPRINT**
1. 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.
  2. ALL STORM DRAINS TO BE ABANDONED WHICH ARE WITHIN 3' OF FINISHED GRADE SHALL BE REMOVED. ALL OTHERS SHALL BE PLUGGED AT EACH END.
  3. ALL UTILITY APPURTENANCES WATER GATES, GAS GATES ETC. SHALL BE ADJUSTED TO MATCH FINISHED GRADE.
  4. ALL TREES WITHIN AREA TO BE REDEVELOPED SHALL BE REMOVED UNLESS OTHERWISE NOTED. SEE LANDSCAPING PLANS

**GRAPHIC SCALE**



KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES, OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDING WITH THE CONTRACT DOCUMENTS.  
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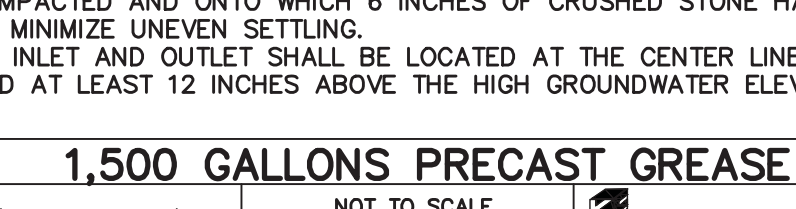
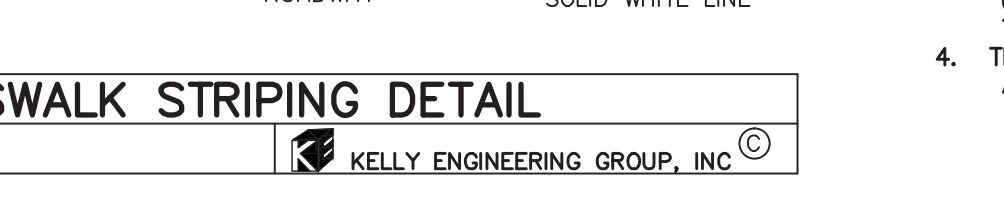
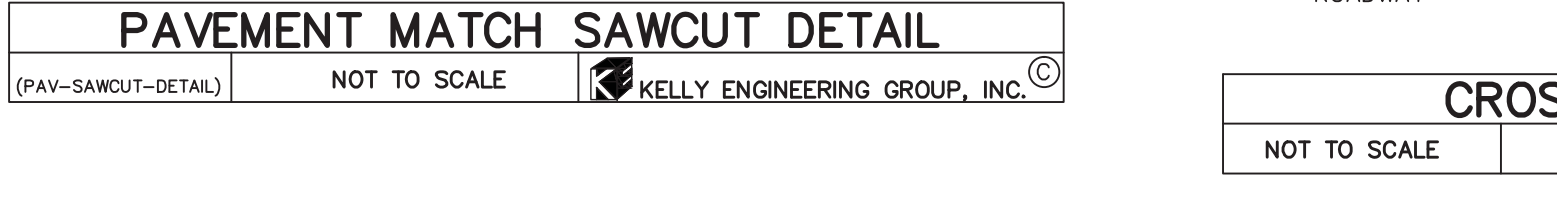
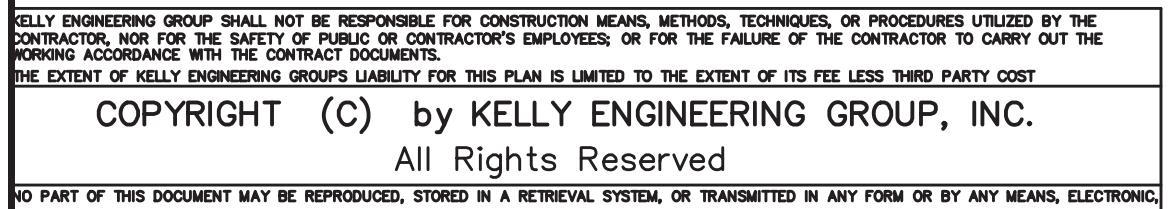
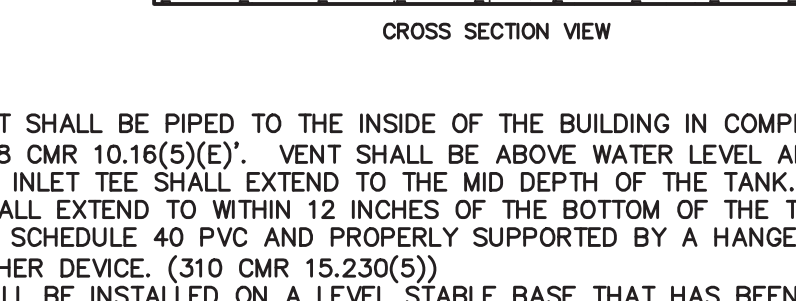
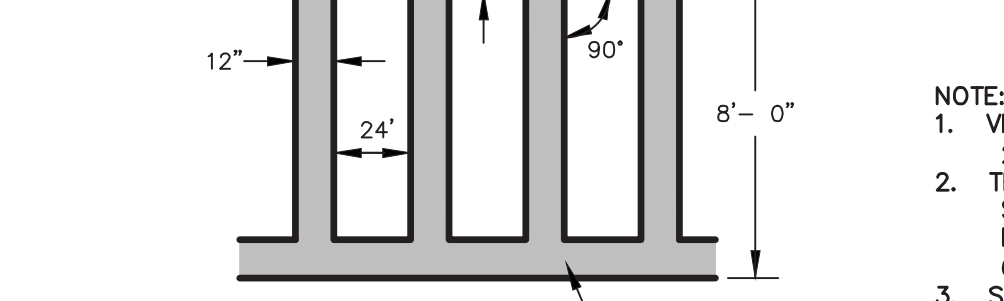
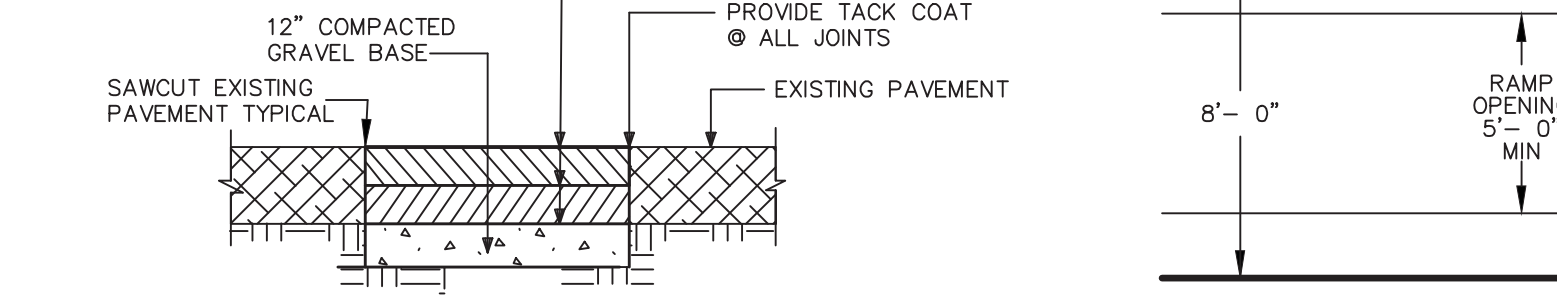
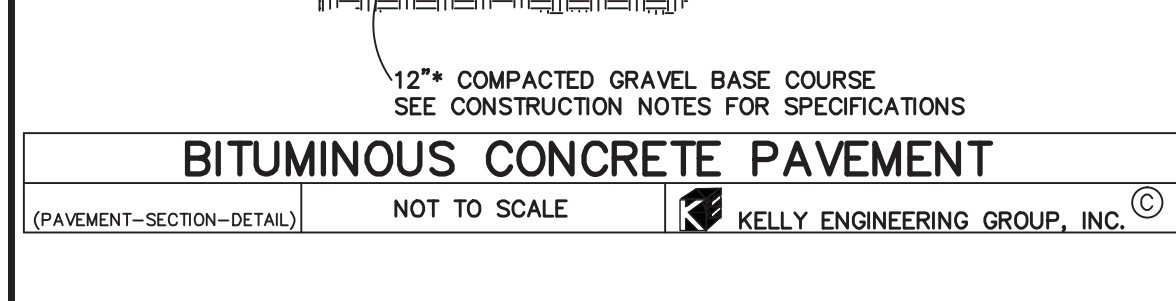
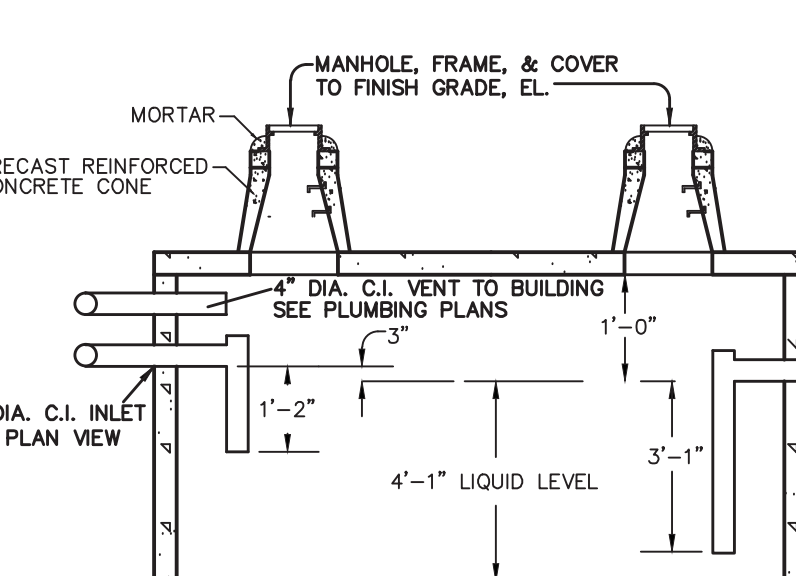
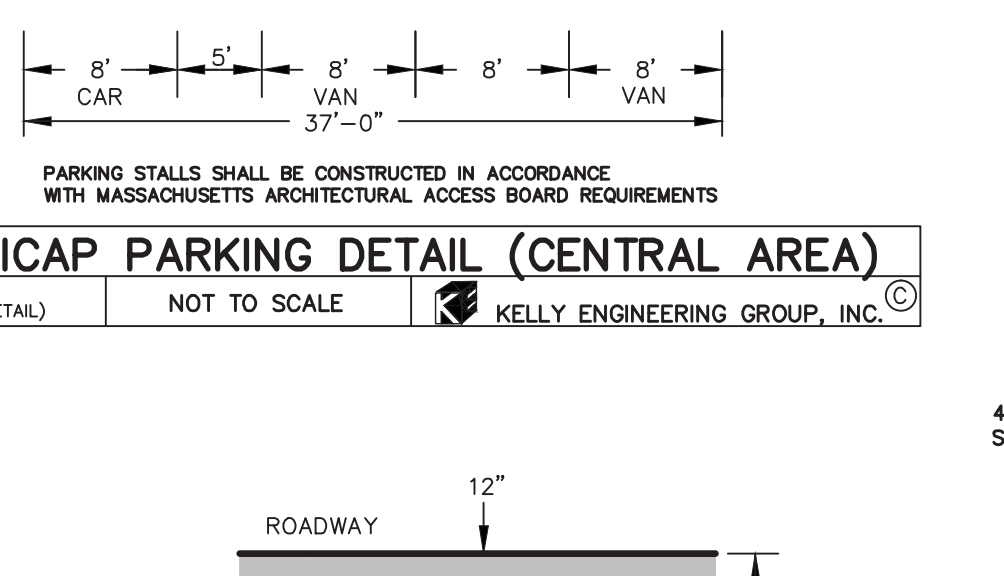
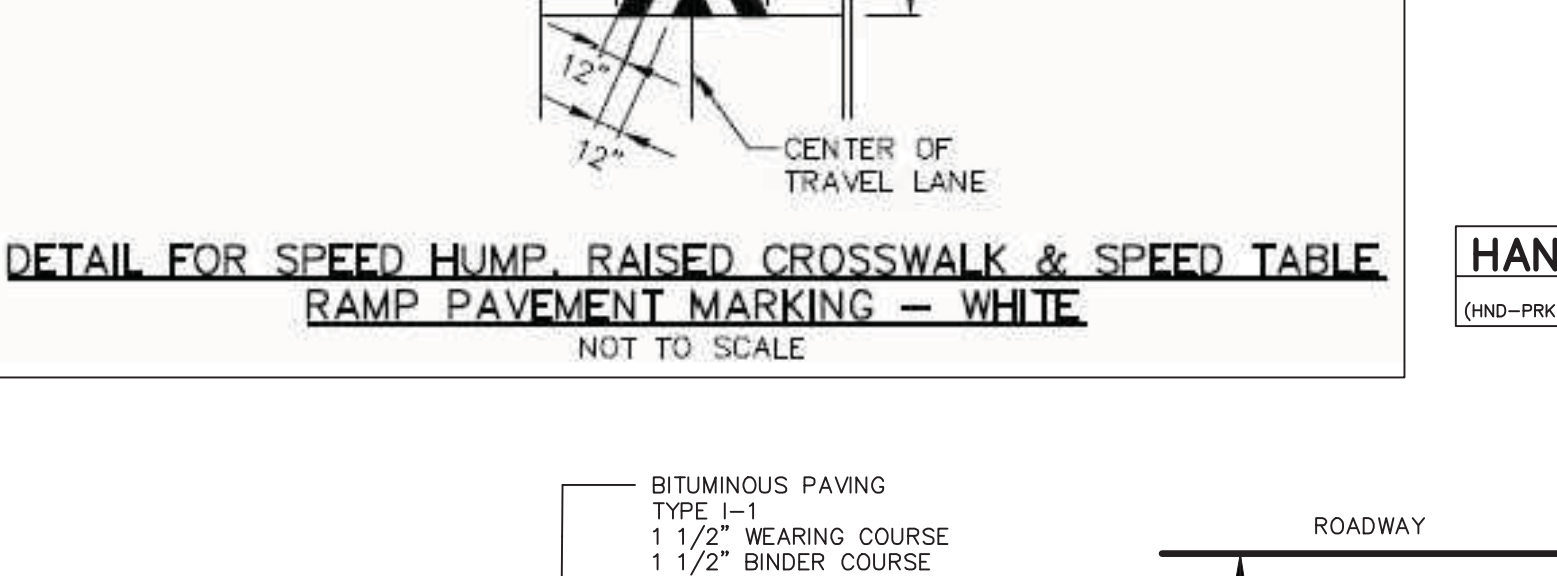
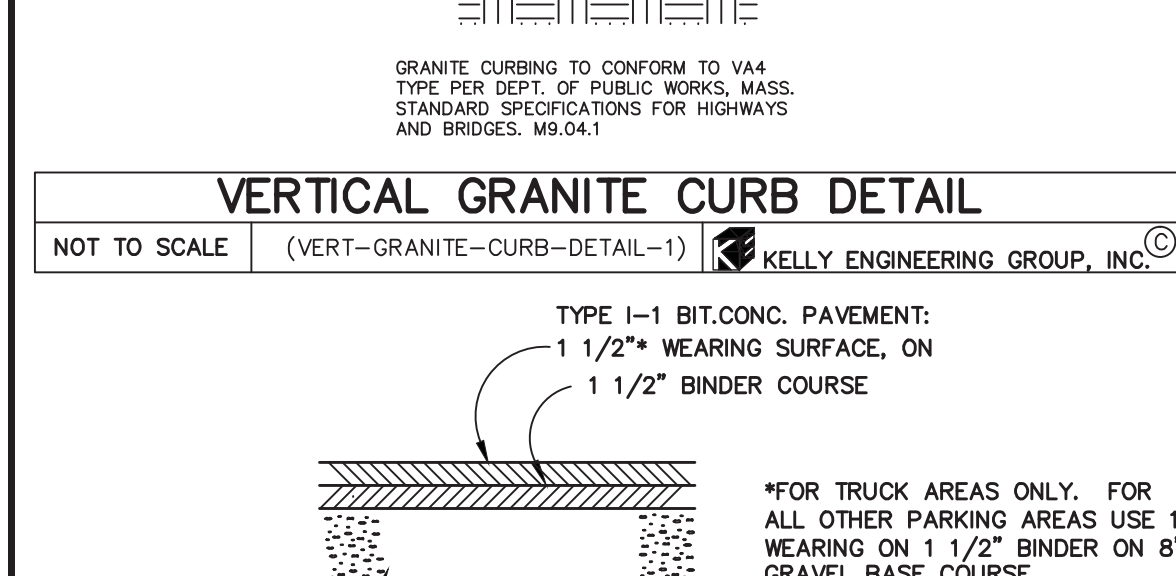
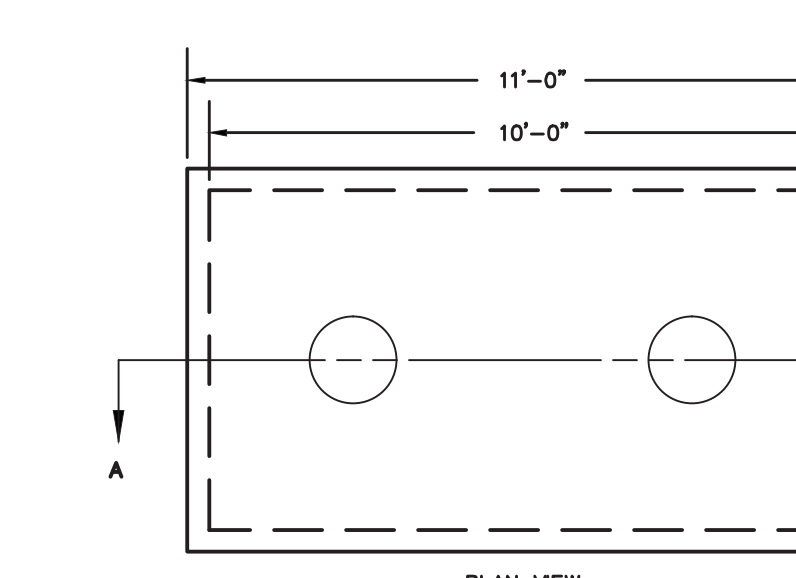
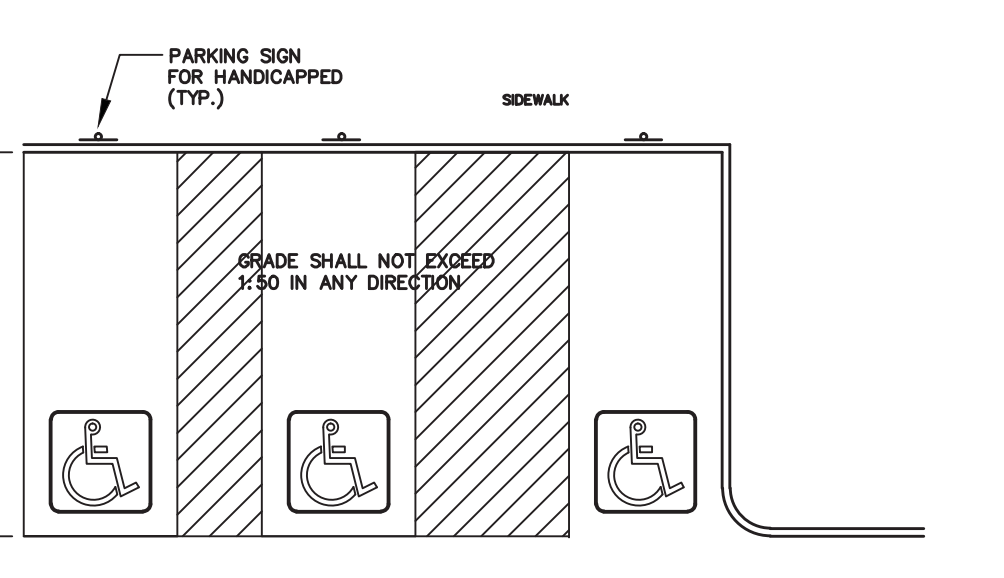
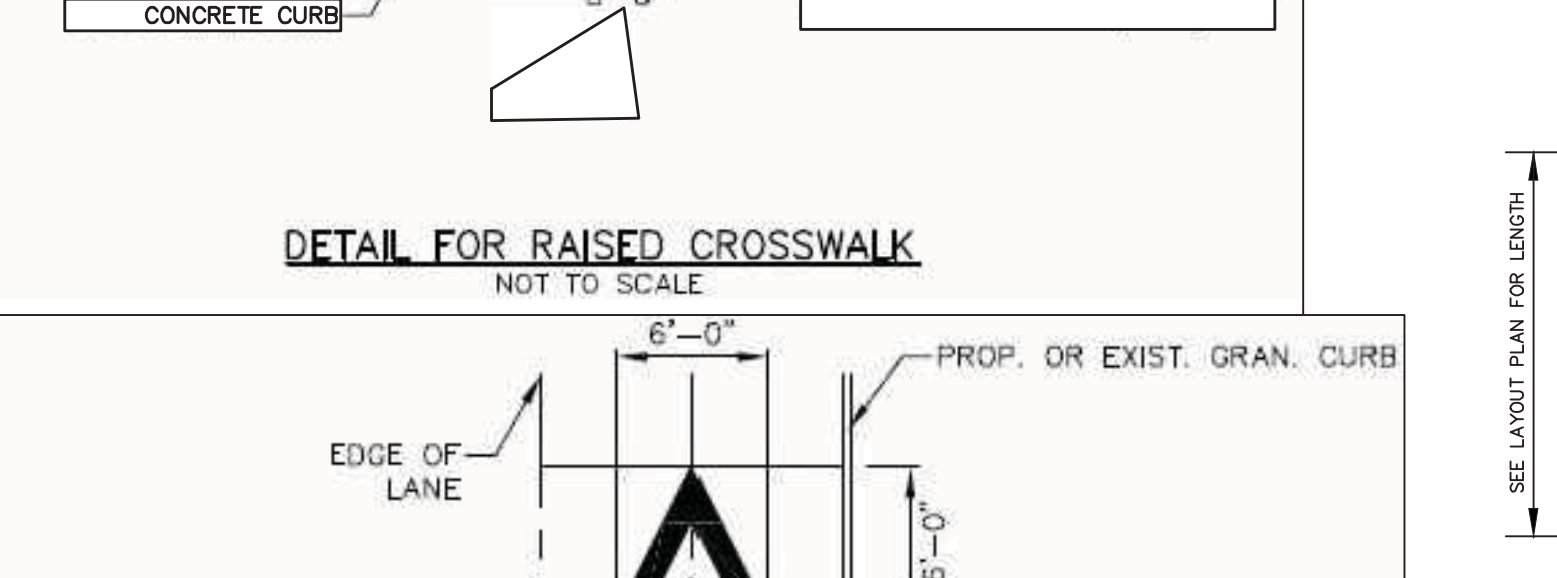
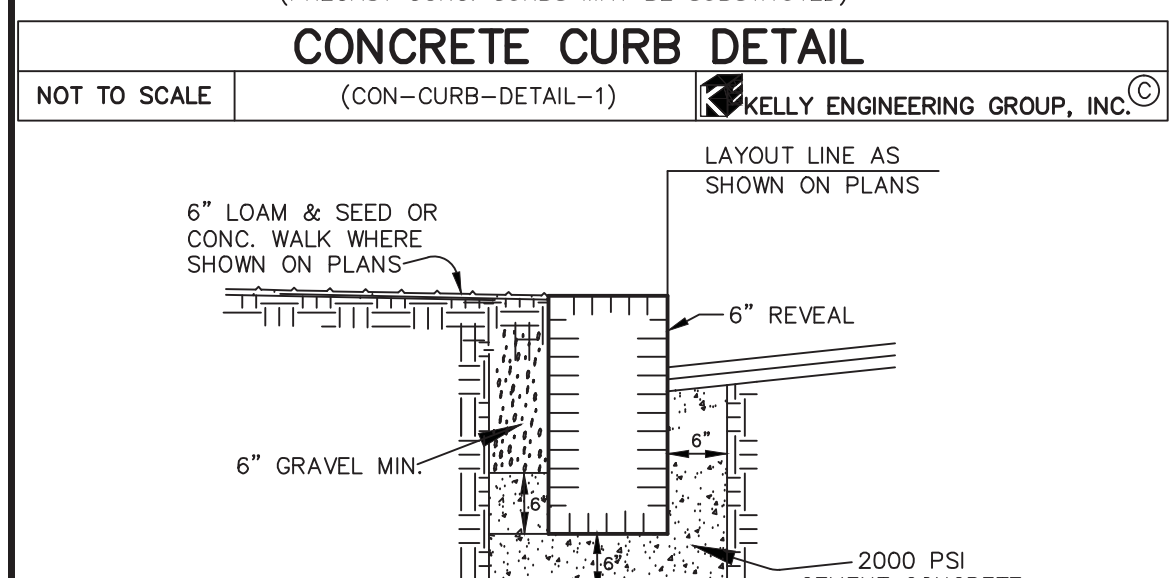
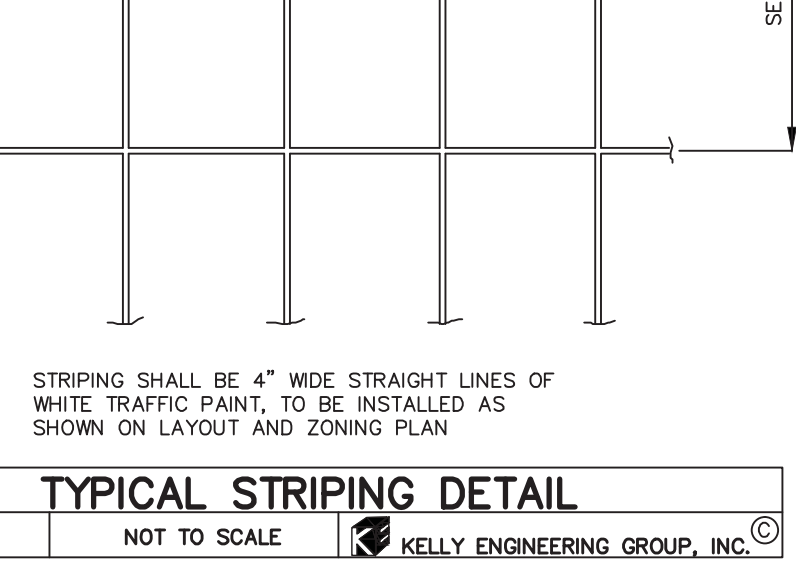
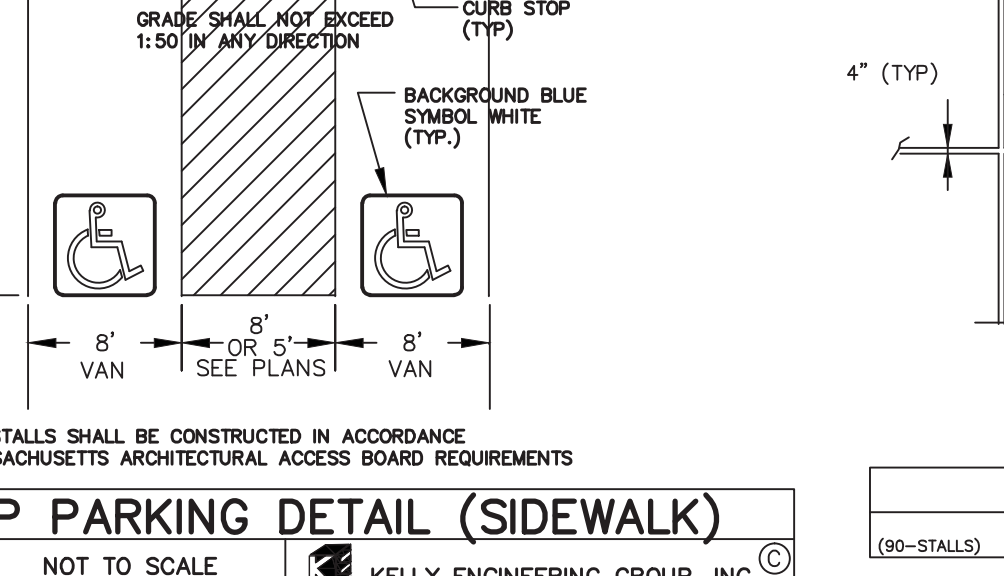
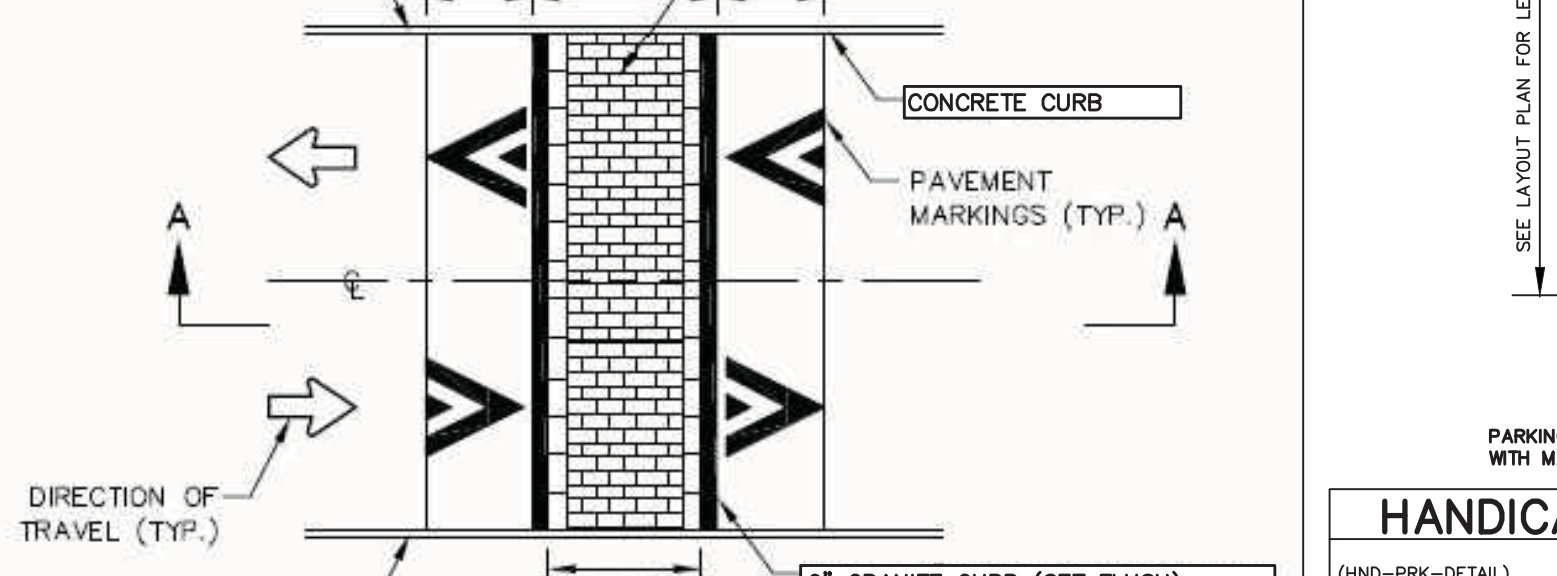
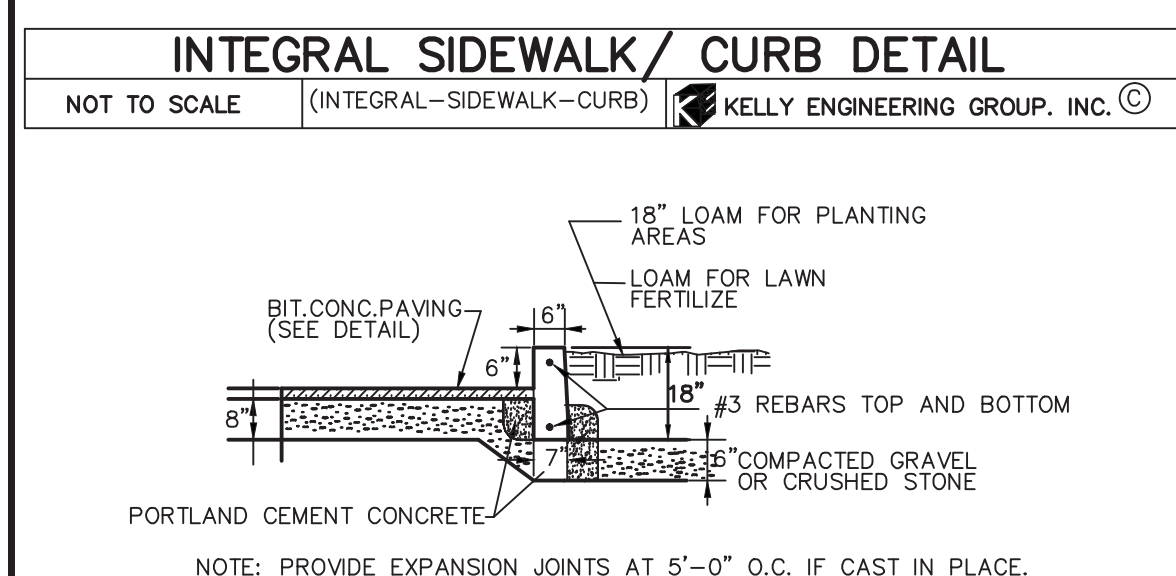
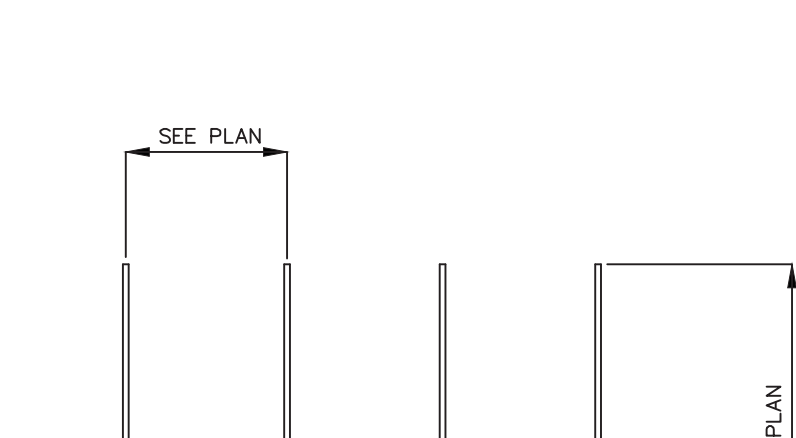
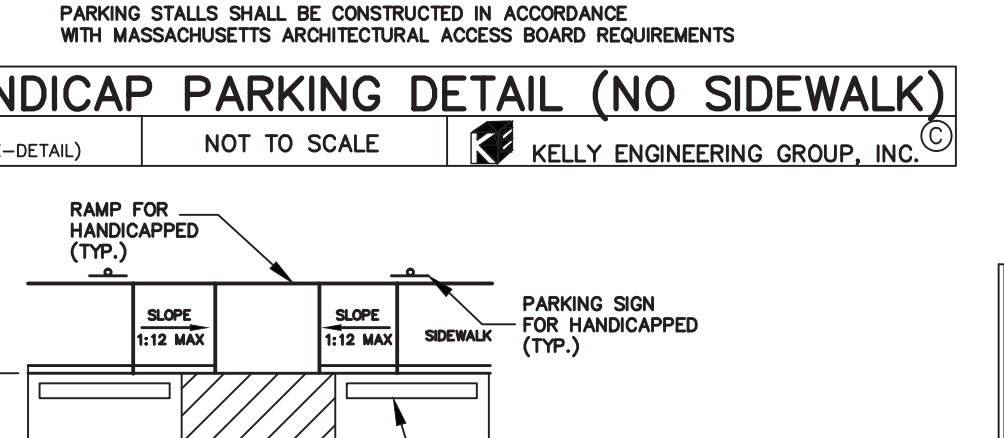
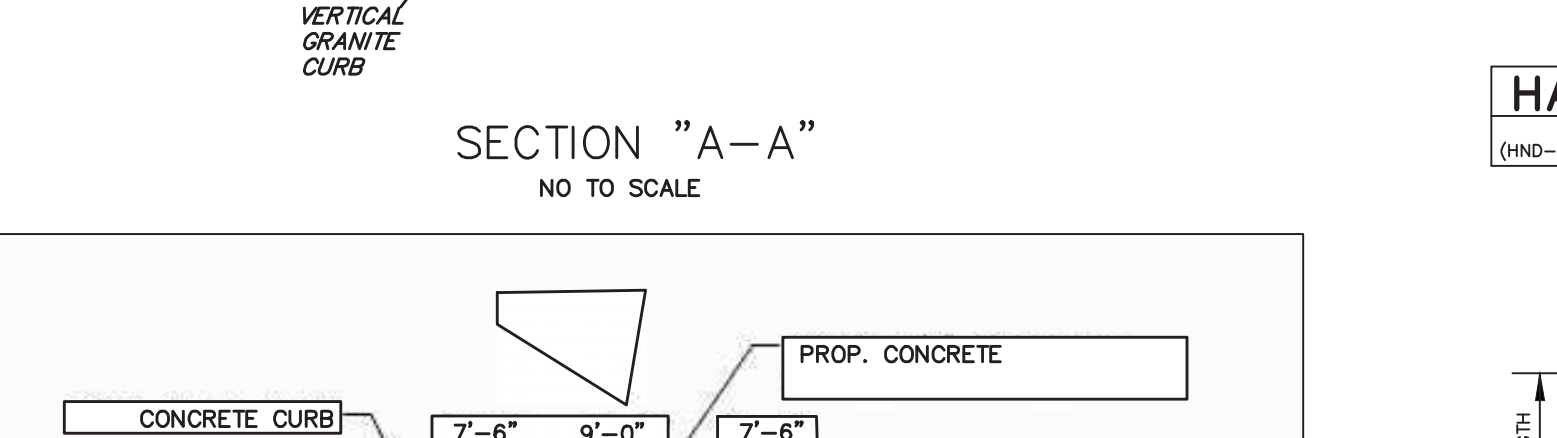
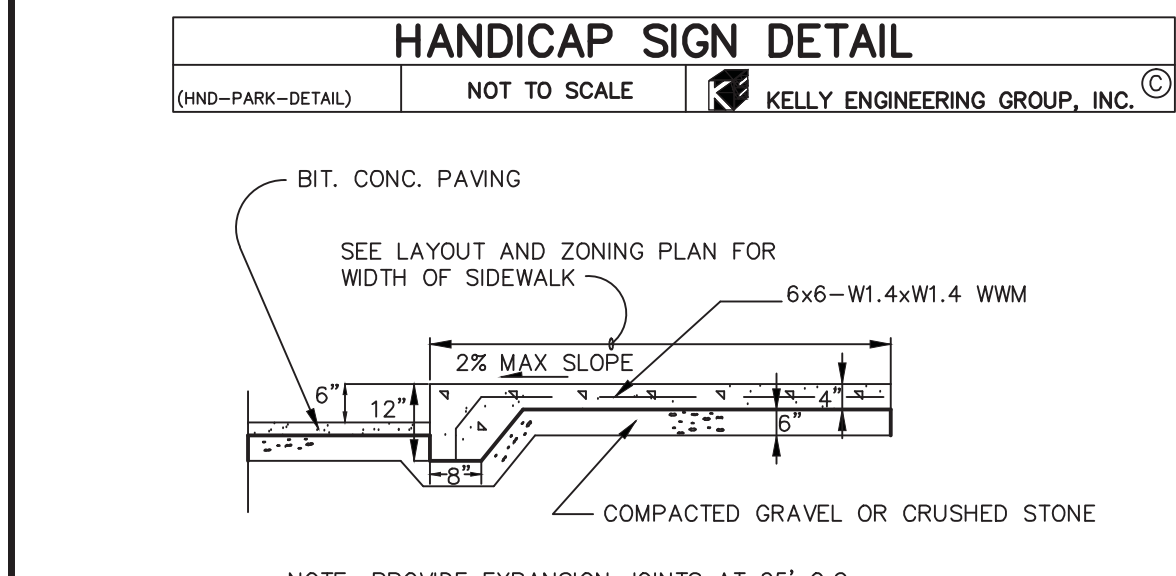
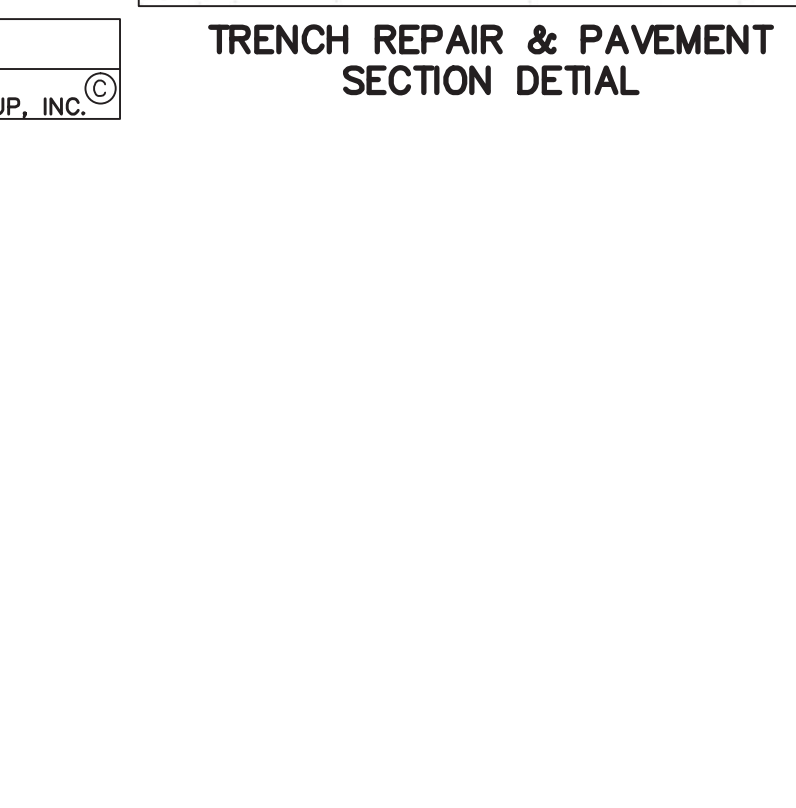
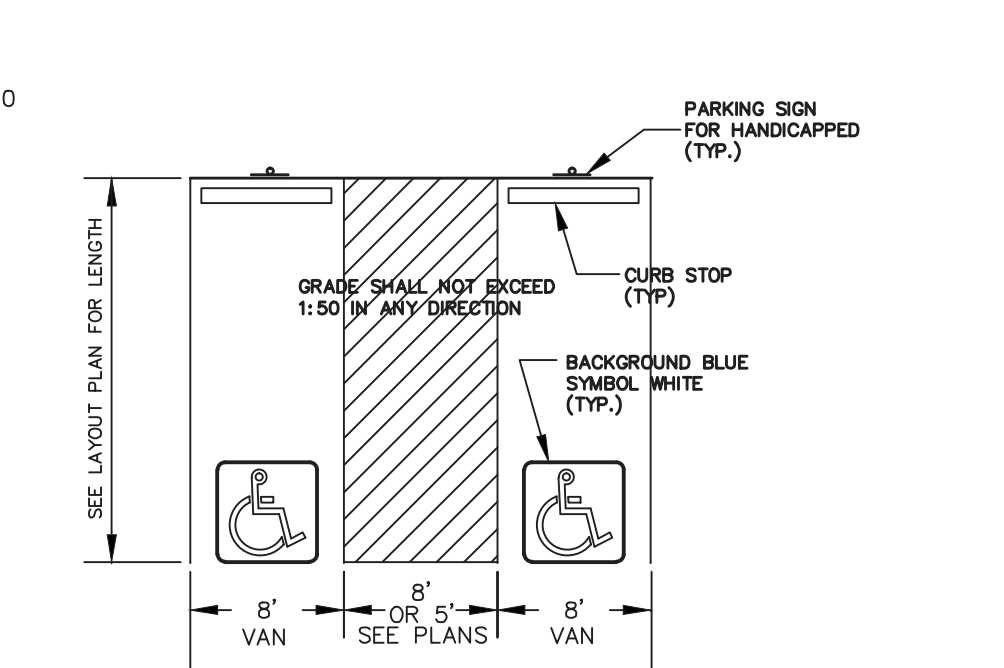
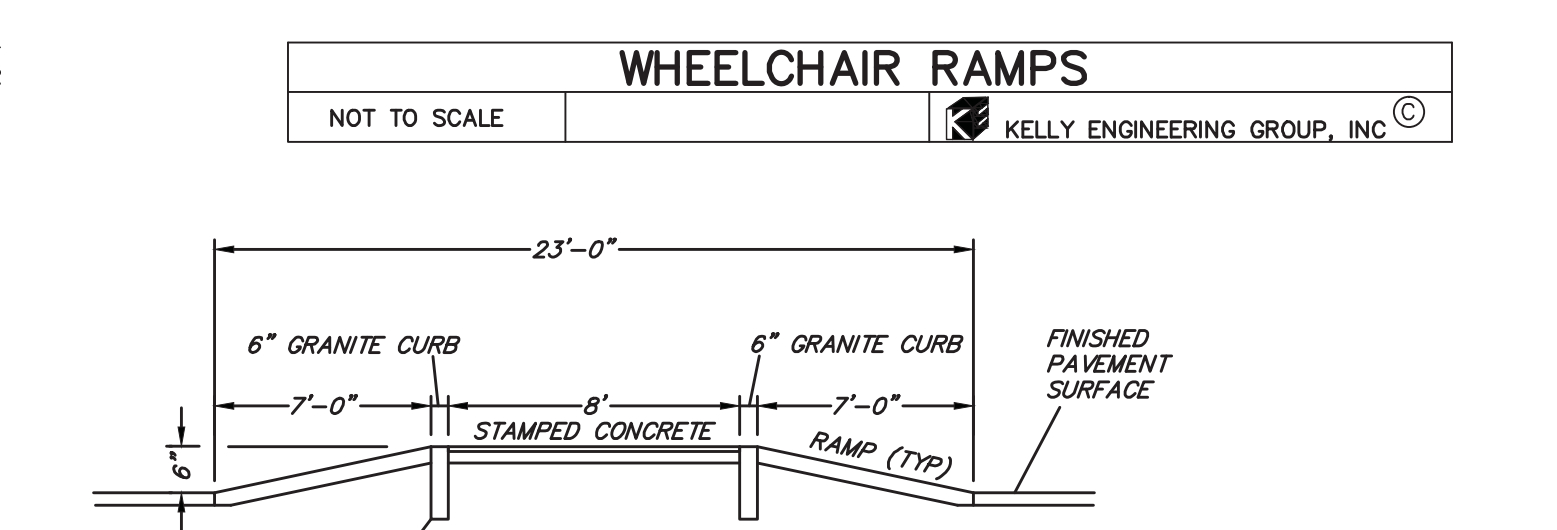
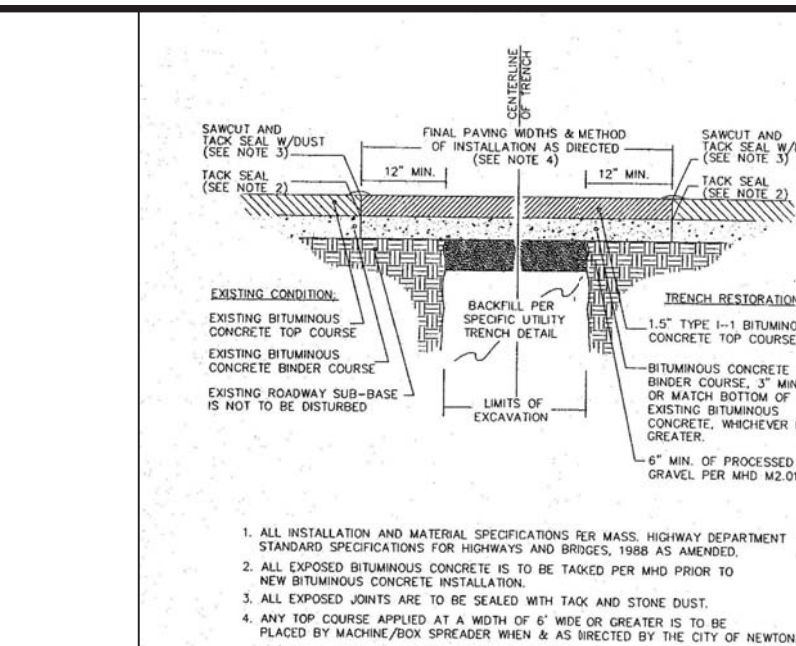
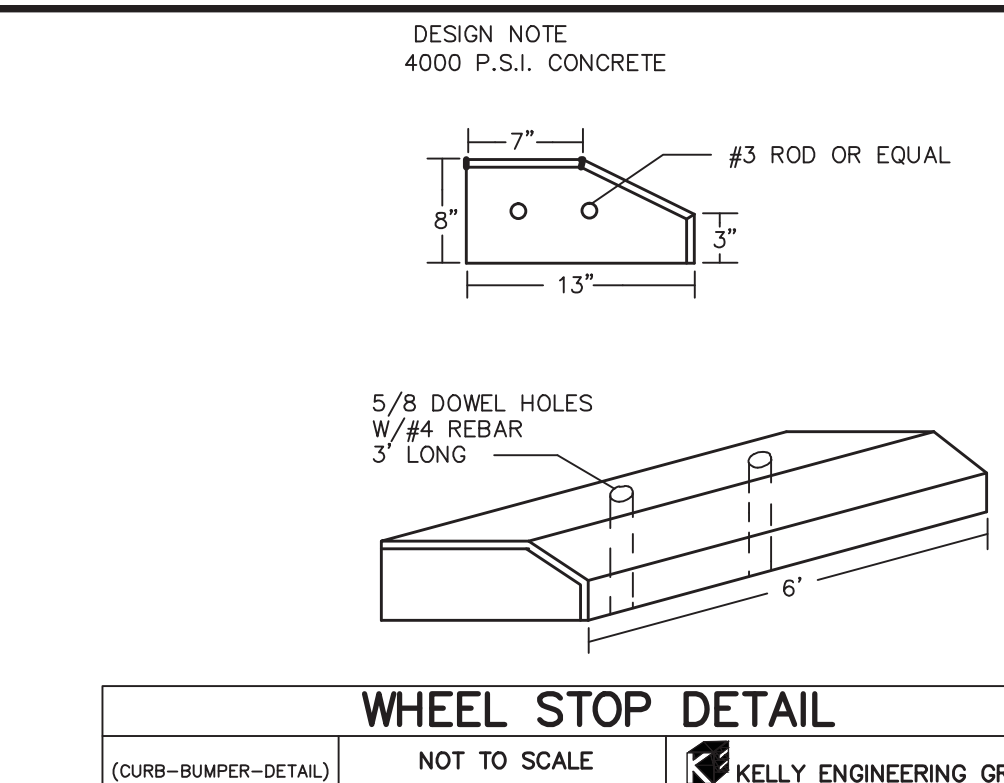
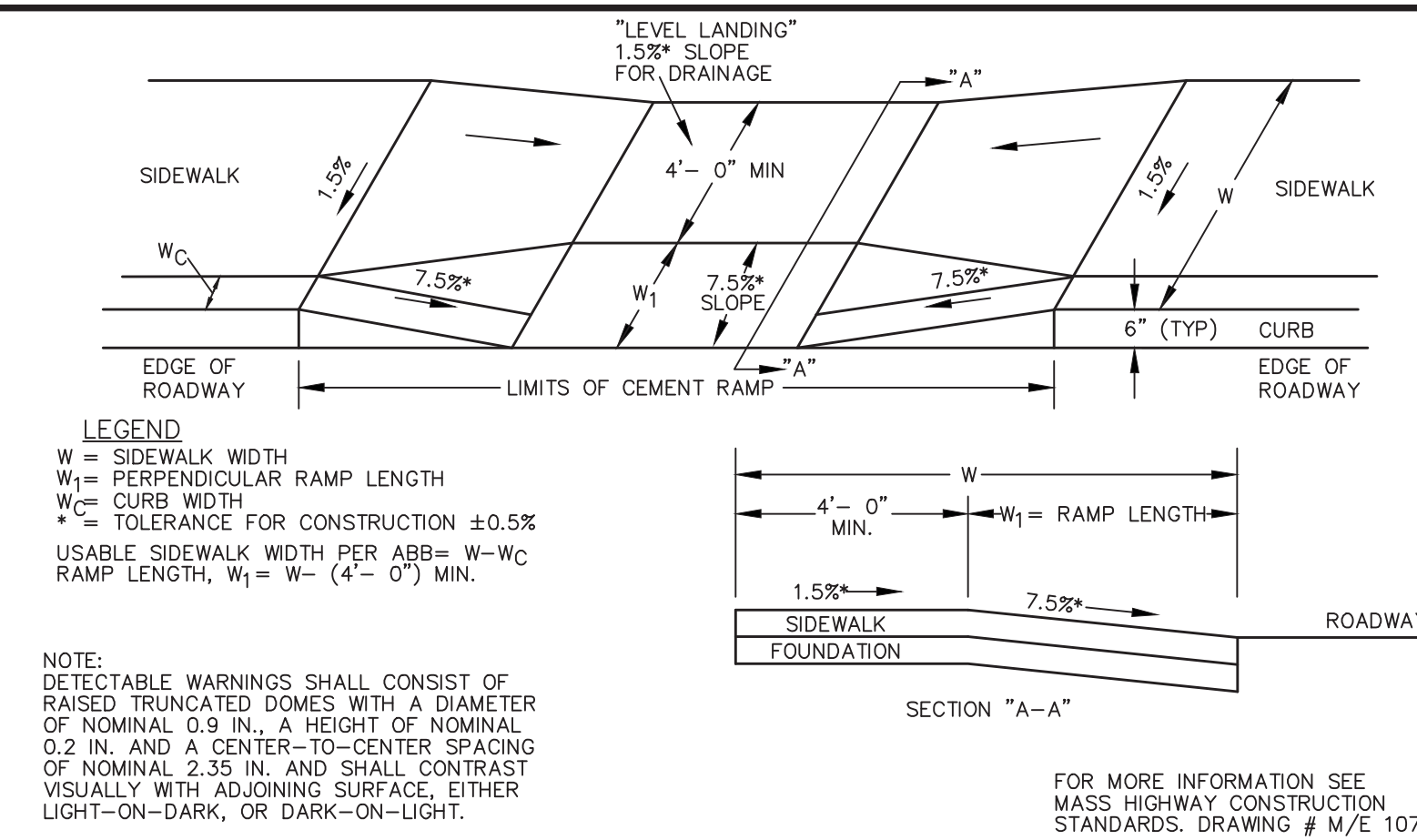
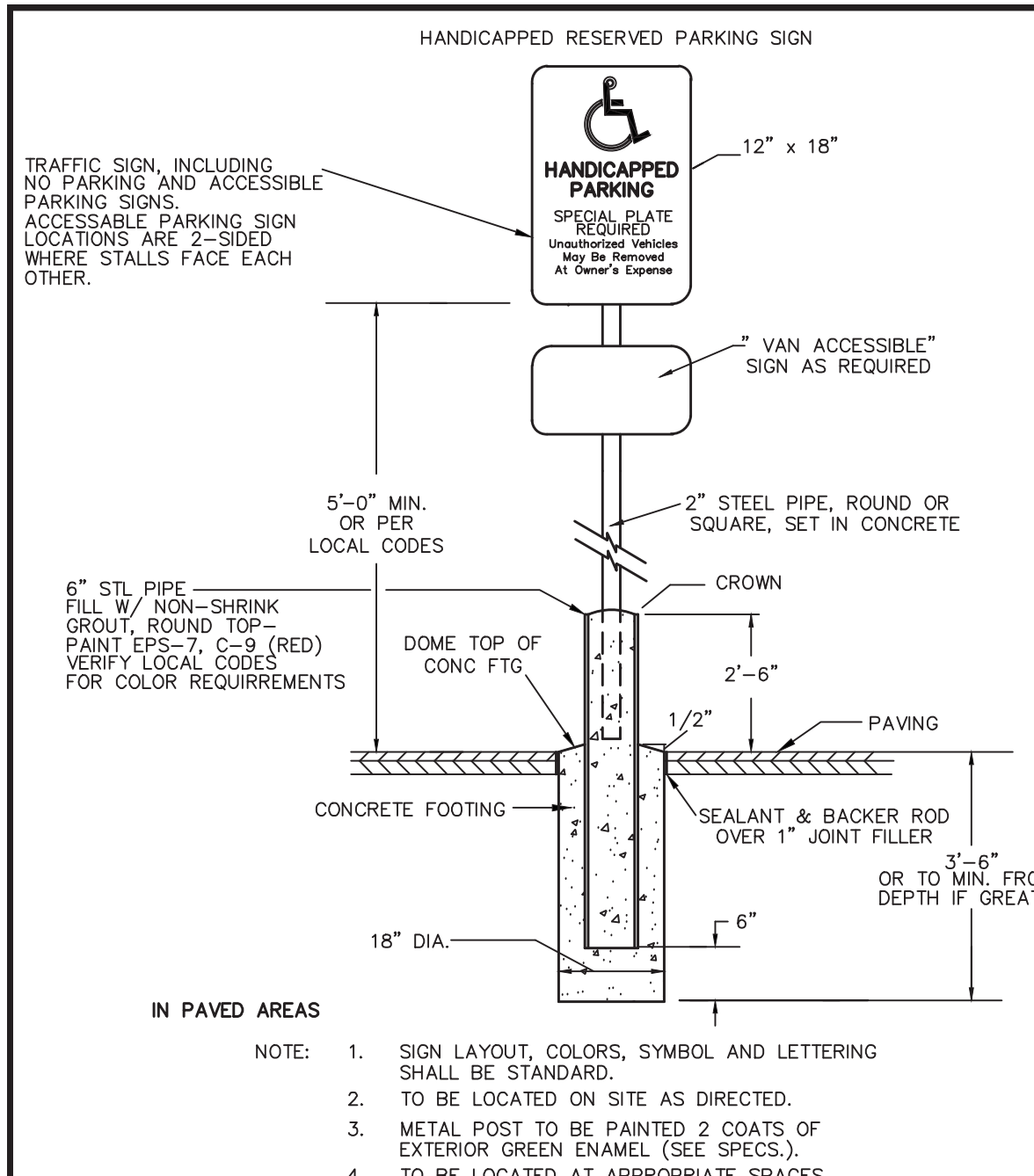
SCALE: 1" = 40'

DATE: 01/09/15	REV: 1	DATE: 03/30/15	PER CITY COMMENTS
SHEET: 7 OF 10	REV: 2	DATE:	REVISION
PLAN NO.: 2013-075-UT01	CROSSPOINT ASSOCIATES, INC.		
DISK REF NO.: F:\P\2013-075	131, 141-143, 151-153, 165, 173, & 181 NEEDHAM ST.		
DRAWN BY: C.J.L.	NEWTON, MASSACHUSETTS		
CHKD BY: B.G.	UTILITY AND UTILITY ABANDONMENT PLAN		
APPD BY: DNK	KELLY ENGINEERING GROUP, INC.		
	CIVIL ENGINEERING CONSULTANTS		
	0 CAMPANELLI DRIVE · BRAINTREE MA · 02184		
	PHONE: 781 843 4333 FAX: 781 843 0028		

David Noel Kelly  
 2015.03.31  
 10:07:47 -04'00'

DAVID NOEL KELLY  
 NO. 37942  
 REGISTERED PROFESSIONAL ENGINEER

SHEET NO. **7**



**CITY OF NEWTON NOTES**

- ALL STRUCTURE INVERTS ARE LISTED WITH OUTLET FIRST THEN CLOCKWISE AROUND STRUCTURE.
- FLOOD ZONE PER CURRENT FEMA MAPPING EL=109.5 NVD, EL=108.5 NVD 88.
- WHEN A CONNECTION TO THE CITY'S DRAINAGE SYSTEM IS PROPOSED, PRIOR TO APPROVAL OF THE BUILDING PERMIT A CLOSED CIRCUIT TELEVISION (CCTV) INSPECTION SHALL BE PERFORMED AND WITNESSED BY THE ENGINEERING DIVISION. THE APPLICANT SHALL RETAIN A CONTRACTOR THAT SPECIALIZES IN CCTV INSPECTION. THE APPLICANT SHALL CONTACT THE ENGINEERING DIVISION 48 HOURS IN ADVANCE TO SCHEDULE AN APPOINTMENT. AT THE END OF THE INSPECTION THE VIDEO OR CD SHALL BE GIVEN TO THE INSPECTOR. FURTHERMORE, UPON COMPLETION OF THE CONNECTION TO THE DRAINAGE SYSTEM A POST-CONSTRUCTION VIDEO INSPECTION SHALL ALSO TAKE PLACE AND WITNESSED AS DESCRIBED ABOVE. THIS IS REQUIRED REGARDLESS OF THE CONNECTION POINT. THE INTENT IS TO ENSURE THAT THERE ARE NO DOWNSTREAM BLOCKAGES OR DAMAGED PIPE SO THAT THE CONTRACTOR OF RECORD IS NOT HELD ACCOUNTABLE FOR PREEXISTING CONDITIONS.
- WITH THE EXCEPTION OF NATURAL GAS SERVICE(S), ALL UTILITY TRENCHES WITHIN THE RIGHT OF WAY SHALL BE BACKFILLED WITH CONTROL DENSITY FILL (CDF) EXCAVATABLE TYPE. DETAIL IS AVAILABLE IN THE CITY OF NEWTON CONSTRUCTION STANDARDS DETAIL BOOK.
- ALL NEW SEWER SERVICE AND/OR STRUCTURES SHALL BE PRESSURE TESTED OR VIDEO-TAPED AFTER FINAL INSTALLATION IS COMPLETE. METHOD OF FINAL INSPECTION SHALL BE DETERMINED SOLELY BY THE CONSTRUCTION INSPECTOR FROM THE CITY ENGINEERING DIVISION. ALL SEWER MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE TO THE CITY'S CONSTRUCTION STANDARDS & SPECIFICATIONS. THE SEWER SERVICE WILL NOT BE ACCEPTED UNTIL ONE OF THE TWO METHODS STATED ABOVE IS COMPLETED. ALL TESTING MUST BE WITNESSED BY A REPRESENTATIVE OF THE ENGINEERING DIVISION. A CERTIFICATE OF OCCUPANCY WILL NOT BE RECOMMENDED UNTIL THIS TEST IS COMPLETED AND A WRITTEN REPORT IS RECEIVED BY THE CITY ENGINEER.
- ALL SEWER MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE TO THE CITY'S CONSTRUCTION STANDARDS & SPECIFICATIONS. THE SEWER SERVICE WILL NOT BE ACCEPTED UNTIL ONE OF THE TWO METHODS STATED ABOVE IS COMPLETED. ALL TESTING MUST BE WITNESSED BY A REPRESENTATIVE OF THE ENGINEERING DIVISION. A CERTIFICATE OF OCCUPANCY WILL NOT BE RECOMMENDED UNTIL THIS TEST IS COMPLETED AND A WRITTEN REPORT IS RECEIVED BY THE CITY ENGINEER.
- ALL WATER CONNECTIONS SHALL BE CHLORINATED & PRESSURE TESTED IN ACCORDANCE TO ANWA AND THE CITY OF NEWTON CONSTRUCTION STANDARDS & SPECIFICATIONS PRIOR TO OPENING THE CONNECTION TO EXISTING PIPES.
- APPROVAL OF THE FINAL CONFIGURATION OF THE WATER SERVICE(S) SHALL BE DETERMINED BY THE UTILITIES DIVISION. THE ENGINEER OF RECORD SHOULD SUBMIT A PLAN TO THE DIRECTOR OF UTILITIES FOR APPROVAL.
- ALL TRENCH EXCAVATION CONTRACTORS SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82A, TRENCH EXCAVATION SAFETY REQUIREMENTS, TO PROTECT THE GENERAL PUBLIC FROM UNAUTHORIZED ACCESS TO UNATTENDED TRENCHES. TRENCH EXCAVATION PERMITS TO PROTECT THE GENERAL PUBLIC FROM UNAUTHORIZED ACCESS TO UNATTENDED TRENCHES. TRENCH EXCAVATION PERMITS TO PROTECT THE GENERAL PUBLIC FROM UNAUTHORIZED ACCESS TO UNATTENDED TRENCHES.
- ALL TREE REMOVAL SHALL COMPLY WITH THE CITY'S TREE ORDINANCE.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ENGINEERING DIVISION AND SCHEDULING AN APPOINTMENT 48 HOURS PRIOR TO THE DATE WHEN THE UTILITIES WILL BE MADE AVAILABLE FOR AN INSPECTION OF WATER SERVICES, SEWER SERVICE, AND DRAINAGE SYSTEM INSTALLATION. THE UTILITY IS QUESTION SHALL BE FULLY EXPOSED FOR THE INSPECTOR TO VIEW. BACKFILLING SHALL ONLY TAKE PLACE WHEN THE CITY'S INSPECTOR HAS GIVEN THEIR APPROVAL.
- THE APPLICANT SHALL APPLY FOR STREET OPENING, SIDEWALK CROSSING, AND UTILITIES CONNECTING PERMITS WITH THE CITY OF NEWTON DEPARTMENT OF PUBLIC WORKS PRIOR TO ANY CONSTRUCTION.
- THE APPLICANT WILL HAVE TO APPLY FOR A BUILDING PERMITS WITH THE DEPARTMENT OF INSPECTIONAL SERVICE PRIOR TO ANY CONSTRUCTION.
- PRIOR TO OCCUPANCY PERMIT BEING ISSUED, AN AS-BUILT PLAN SHALL BE SUBMITTED TO THE ENGINEERING DIVISION IN DIGITAL FORMAT AND HARD COPY. THE PLAN SHOULD SHOW ALL UTILITIES AND FINAL GRADES, ANY EASEMENTS AND FINAL GRADING.
- ALL SITE WORK MUST BE COMPLETED FOR A CERTIFICATE OF OCCUPANCY.
- EXISTING SEWER SERVICE TO BE COMPLETELY REMOVED FROM THE MAIN ALL THE WAY TO THE BUILDING AND PROPERLY BACKFILLED. THE EXISTING TEE WILL BE REUSED. THE ENGINEERING DIVISION MUST BE GIVEN 48-HOUR NOTICE TO INSPECT THIS WORK.
- IF VERTICAL SEPARATION BETWEEN WATER LINES AND SEWER LINES IS LESS THAN 18" THEN SEWER MUST BE ENCASED IN CONCRETE 10" IN EACH DIRECTION FROM THE POINT OF CROSSING.

**CONSTRUCTION NOTES**

- 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.
- THE CONTRACTOR SHALL NOTIFY THE CITY OF NEWTON DEPARTMENT OF PUBLIC WORKS AT LEAST 48 HOURS IN ADVANCE OF ANY REQUIRED INSPECTIONS.
- 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.
- ALL WORK SHALL CONFORM TO A SPECIAL PERMIT TO BE ISSUED BY THE CITY OF NEWTON.
- FOR ANY PROJECT THAT INVOLVES 1 ACRE OR MORE OF DISTURBANCE THE CONTRACTOR SHALL SECURE A PERMIT PRIOR TO BEGINNING ANY GRADING ACTIVITIES.
- ALL WORK SHALL CONFORM TO AN ORDER OF CONDITIONS TO BE ISSUED BY THE CITY OF NEWTON CONSERVATION COMMISSION.
- ALL WORK SHALL CONFORM TO THE GEOTECHNICAL REPORT.
- 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 WHERE POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL CONTRACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. DIG SAFE TELEPHONE NUMBER IS 1-888-344-7233.
- THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO TAPPING INTO, CROSSING OR EXTENDING THEM. IF THE NEW WORK POSSES A CONFLICT WITH EXISTING UTILITIES, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR AND THE CONTRACTOR SHALL CONDUCT.
- REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSION AND DOOR LOCATIONS.
- REFER TO PLUMBING PLANS FOR EXACT SIZE AND LOCATION OF SANITARY AND WATER CONNECTIONS.
- REFER TO ELECTRICAL PLANS FOR THE LIGHTING CIRCUITS, FIXTURE DETAIL AND BUILDING CONNECTION LOCATION.
- 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.
- 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.
- WALKS SHALL BE 4" THICK AND SHALL BE CONSTRUCTED ON 6" OF COMPACTED BANK GRAVEL. CONCRETE FOR WALKS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI. WALKS SHALL BE REINFORCED WITH W/M 6 x 6 W1.4/W1.4 CONFORMING TO ASTM A184.
- 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 PROVIDED IT MEETS THIS SPECIFICATION. AREAS TO BE REPAIRED SHALL BE PULVERIZED AND AVAILABLE 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.
- TRANSFORMER PAD SHALL BE INSTALLED PER PROVIDER'S SPECIFICATIONS.
- 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 III.
- 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.
- DUMPSTER PAD SHALL BE 8" THICK REINFORCED CONCRETE SLAB WITH CONTRAST STRIPE JOINTS EVERY 10'. THE PAD SHALL BE CONSTRUCTED OVER 6" OF GRAVEL BASE, COMPACT TO 95% REINFORCEMENT SHALL BE W/M 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.
- ALL EXISTING PAVING TO BE DISTURBED SHALL BE CUT ALONG A STRAIGHT LINE THROUGH ITS ENTIRE THICKNESS, BUT NEW PAVING INTO THE EXISTING PAVEMENT TO REMAIN AND TACK TO THE JOINT.
- 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.
- ALL AREAS TO BE PLANTED WITH GRASS SHALL BE PLANTED WITH 100 POUNDS OF GROUND LIMESTONE PER 1,000 S.F. OF AREA TREATED. 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.
- ALL LANDSCAPED AREAS TO BE LOAMED AND SEEDED SHALL HAVE THE FOLLOWING MIX:  
PERENNIAL RYE 25%  
KENTUCKY BLUE GRASS 25%  
CREEPING RED FESCUE OR PENNLAWN FESCUE 50%  
SEED AT THE RATE OF 5#/1,000 S.F.
- ALL AREAS INDICATED TO BE LOAMED AND SEEDED 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.
- 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.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTITUTE EROSION CONTROL MEASURES ON AN AS NECESSARY BASIS, SUCH THAT EXCESSIVE SOIL EROSION DOES NOT OCCUR. MEASURES SHALL INCLUDE HAY BALE DIKES AROUND DRAINAGE INLETS, MULCHING AND PLANTING OF DISTURBED AREAS.
- PRIOR TO THE COMMENCEMENT OF ANY OTHER WORK A SILT SACK SHALL BE INSTALLED IN EACH EXISTING DRAINAGE INLET.
- AFTER INSTALLATION OF EACH DRAINAGE INLET A SILT SACK SHALL BE INSTALLED IN EACH INLET TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM.
- AT THE END OF CONSTRUCTION ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS.
- 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.

**CROSSPOINT ASSOCIATES, INC.**  
131, 141-143, 151-153, 165, 173, & 181 NEEDHAM ST.  
NEWTON, MASSACHUSETTS

**SCALE** N/A  
**DATE** 01/09/15  
**REV** 1  
**DATE** 03/30/15  
**PER CITY COMMENTS**  
**REVISION**  
**BY**

**SHEET** 8 OF 10  
**PLAN NO.** 2013-075-DT01  
**F:\P\2013-075**  
**DRAWN BY** C.J.L.  
**CHKD BY** B.G.  
**APPD BY** D.N.K.

**1,500 GALLONS PRECAST GREASE TRAP**  
(1,500-GAL-GRS-TRP) NOT TO SCALE

**CROSSPOINT ASSOCIATES, INC.**  
8 CAMPANELLI DRIVE • BRAINTREE MA • 02184  
PHONE: 781 843 4333 FAX: 781 843 0028

**DAVID NOEL**  
2015.03.31  
10:08:19 -05'00"

**DAVID NOEL**  
REGISTERED PROFESSIONAL ENGINEER  
STATE OF MASSACHUSETTS  
LICENSE NO. 10000

**8**

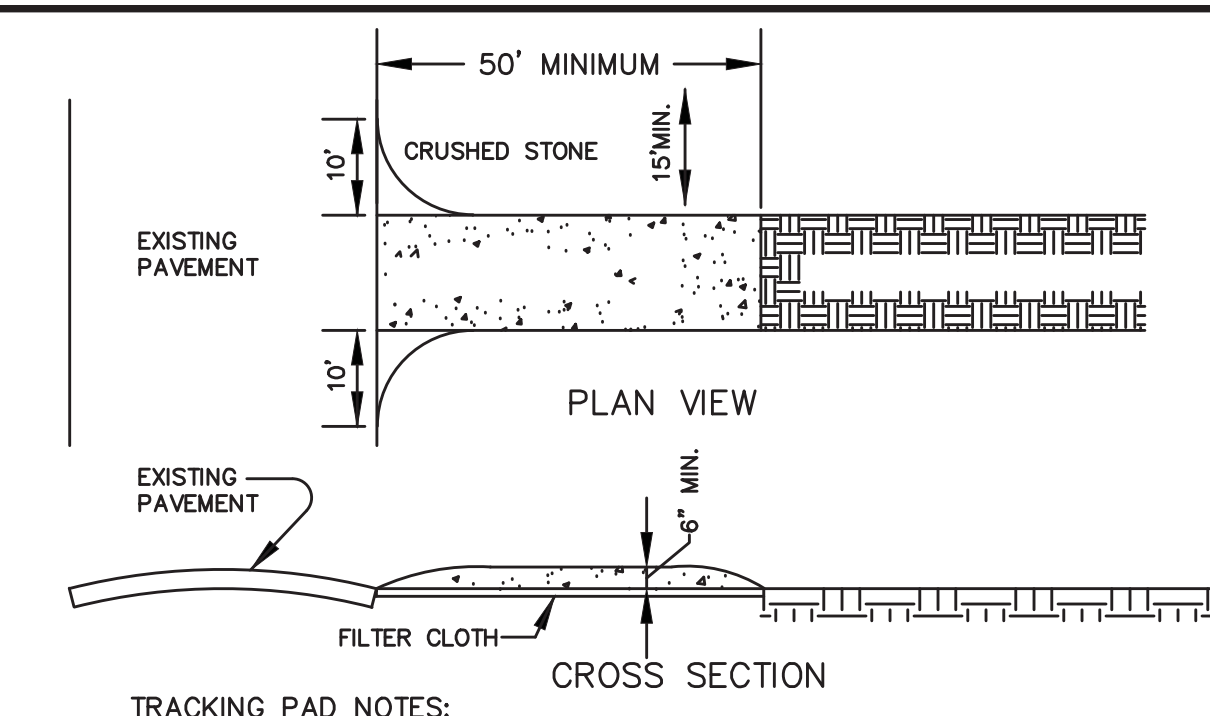
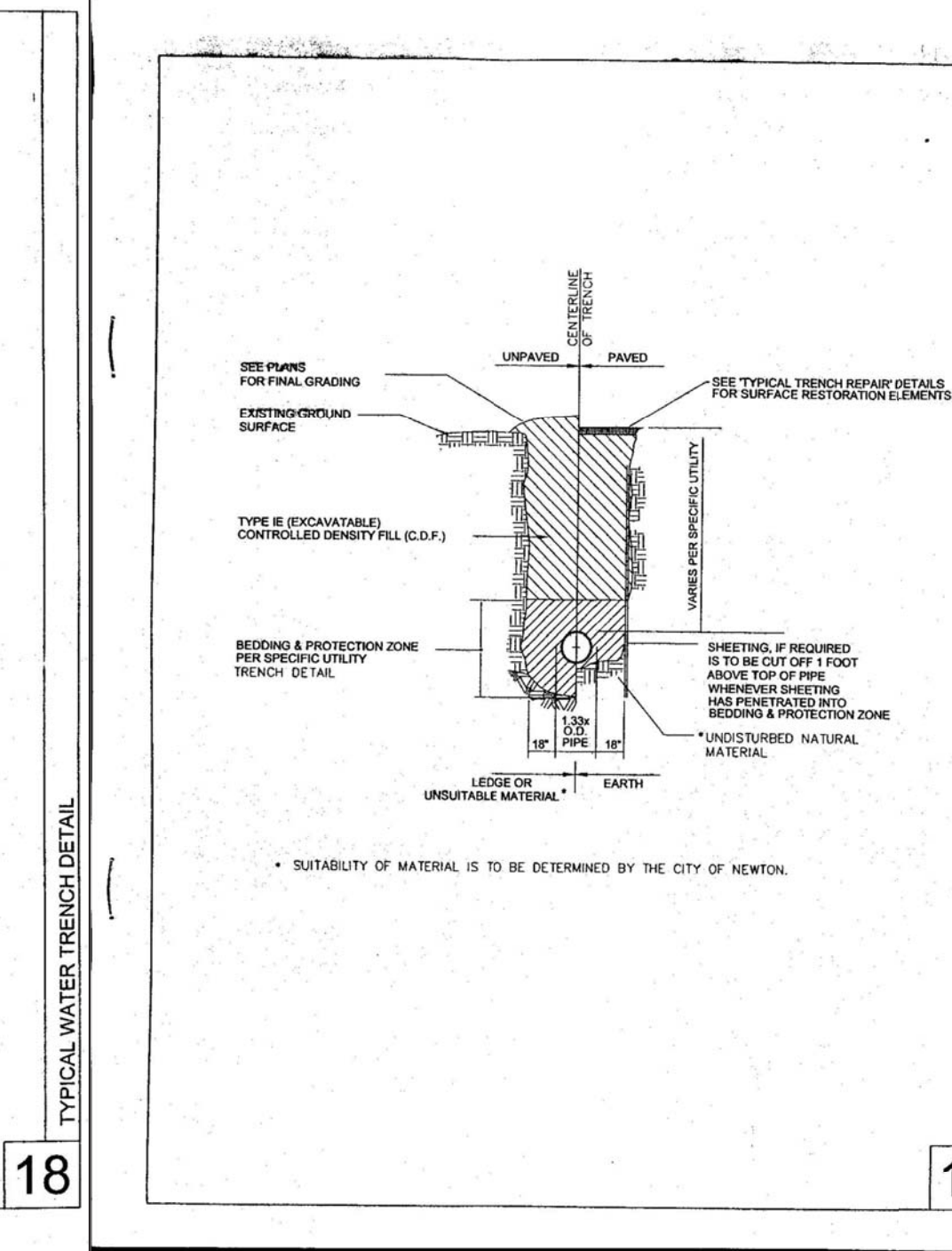
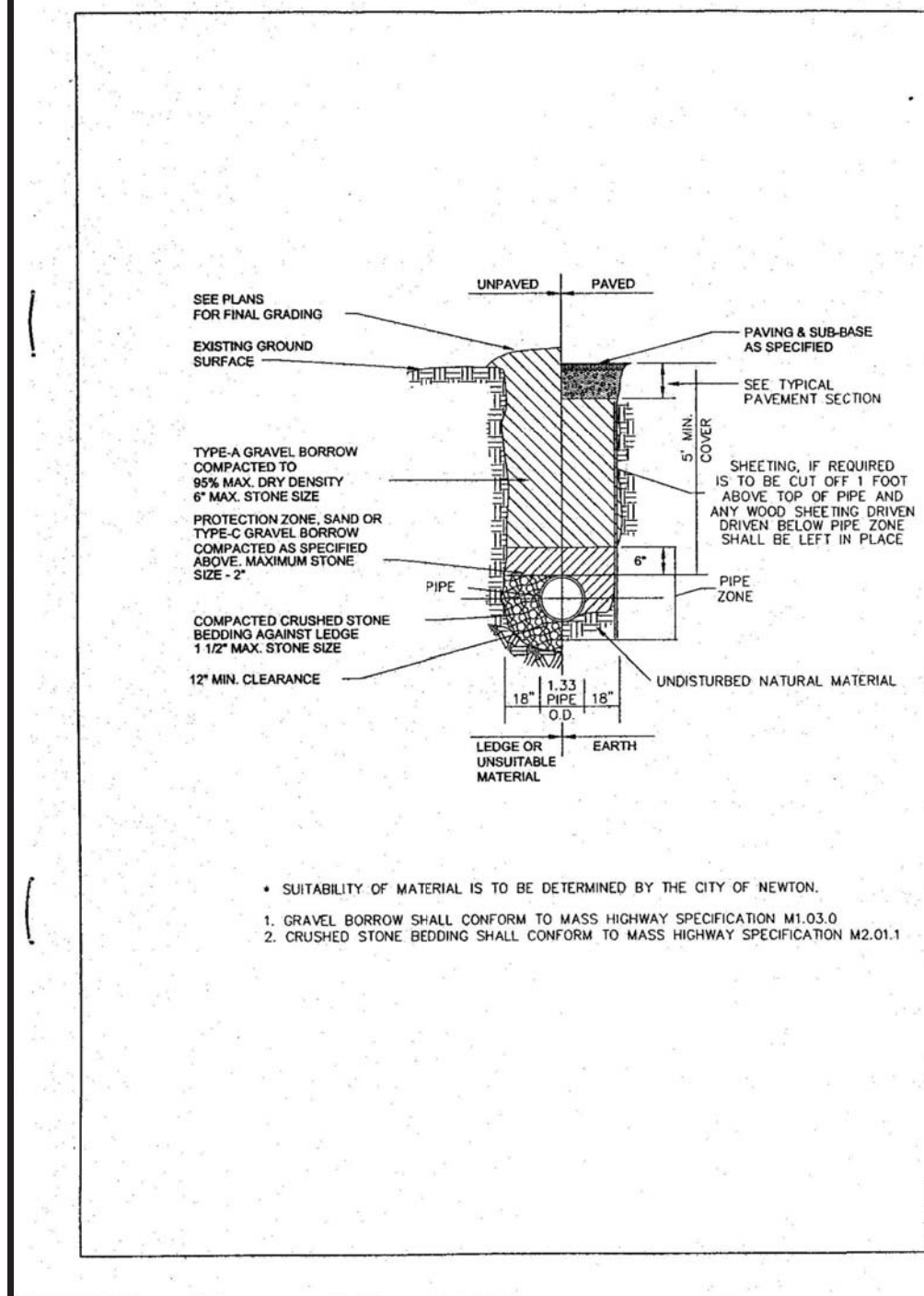
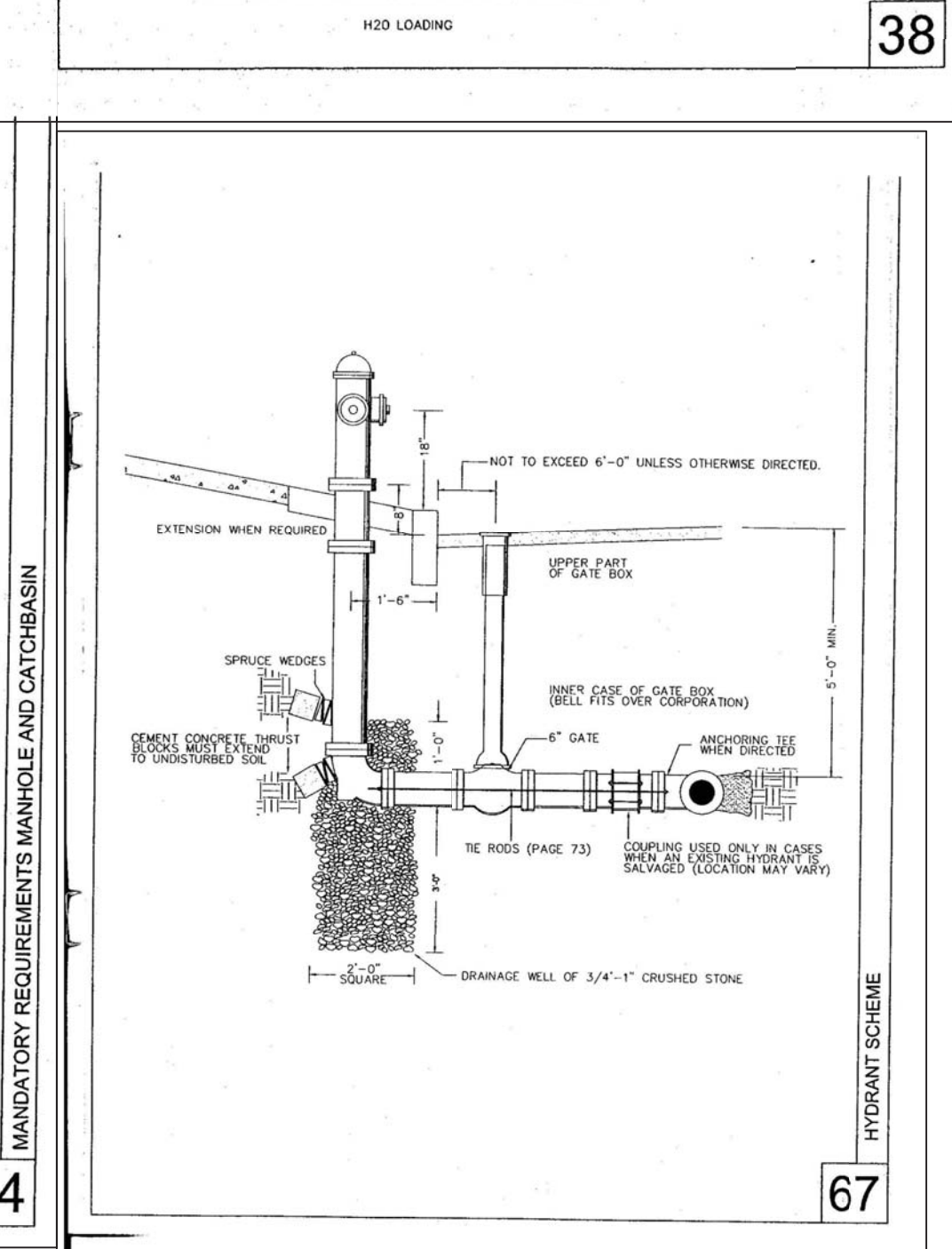
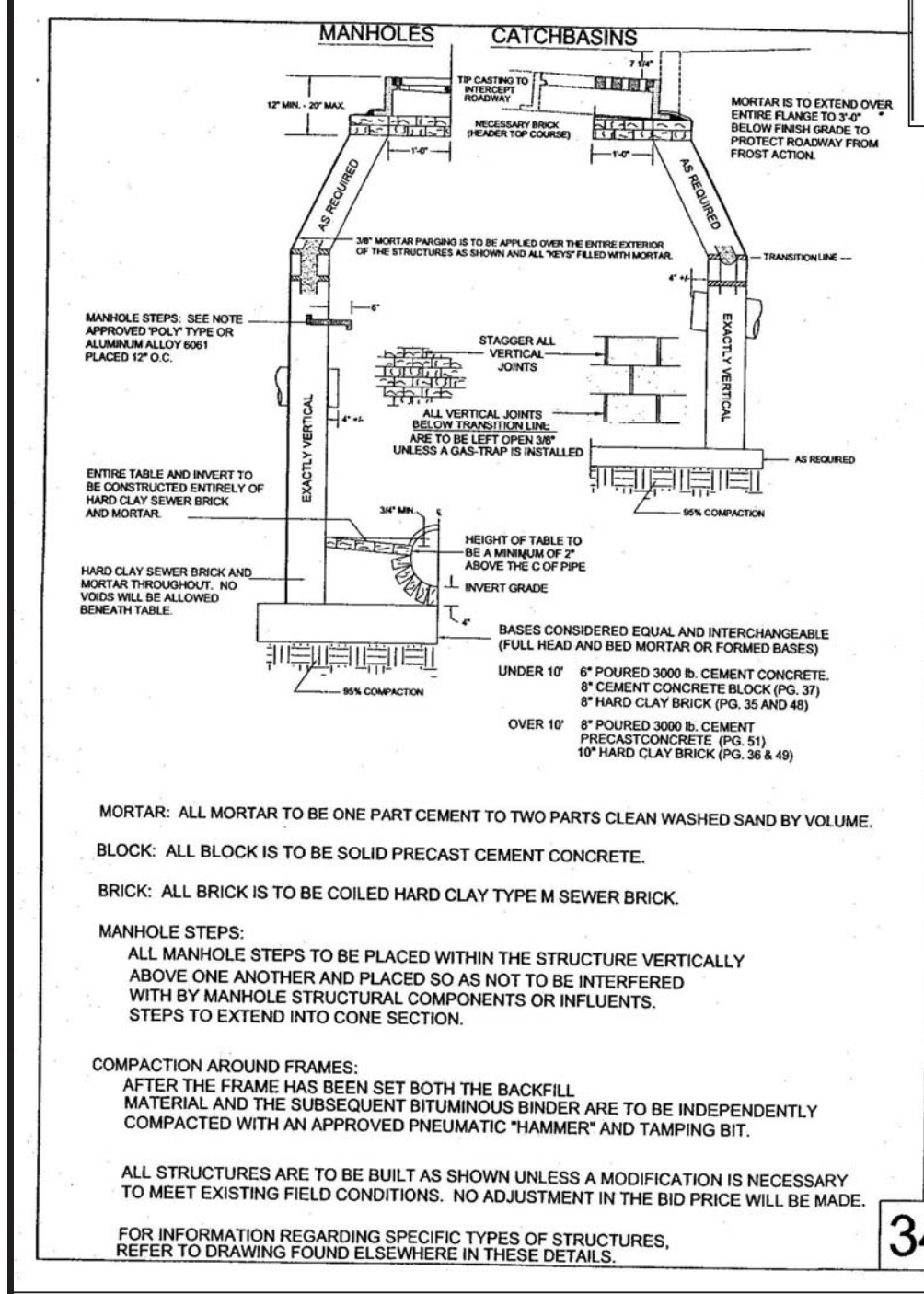
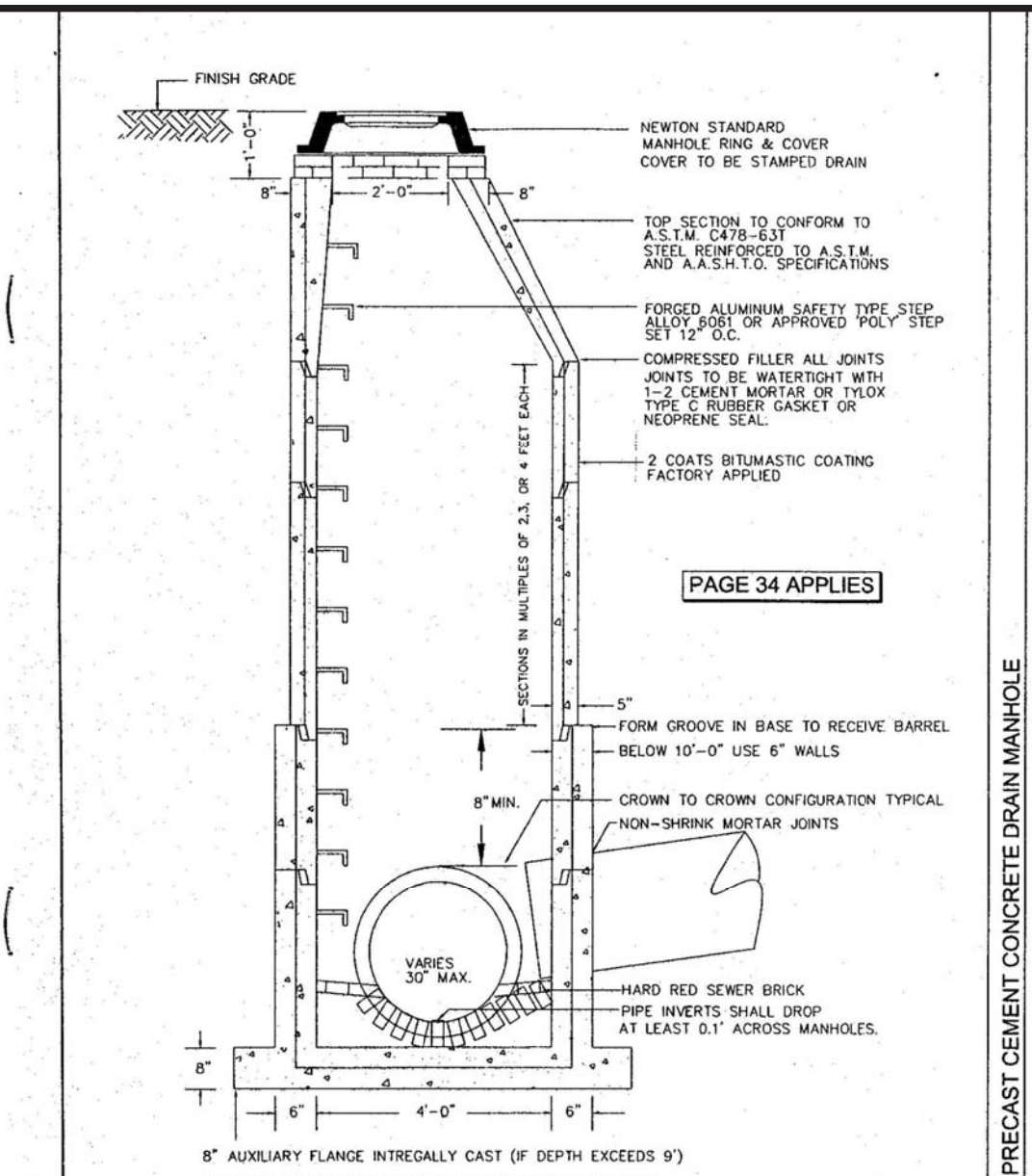
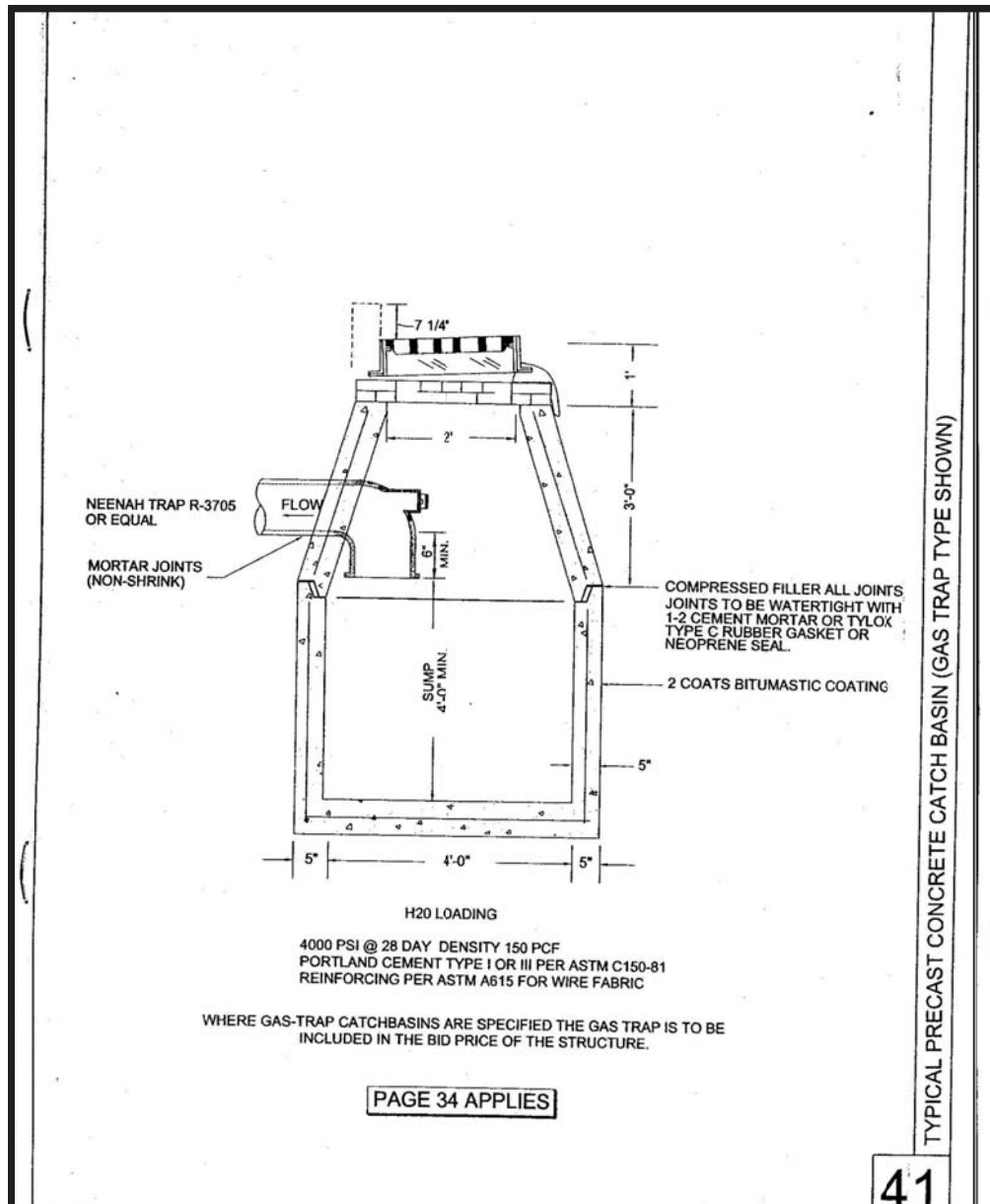
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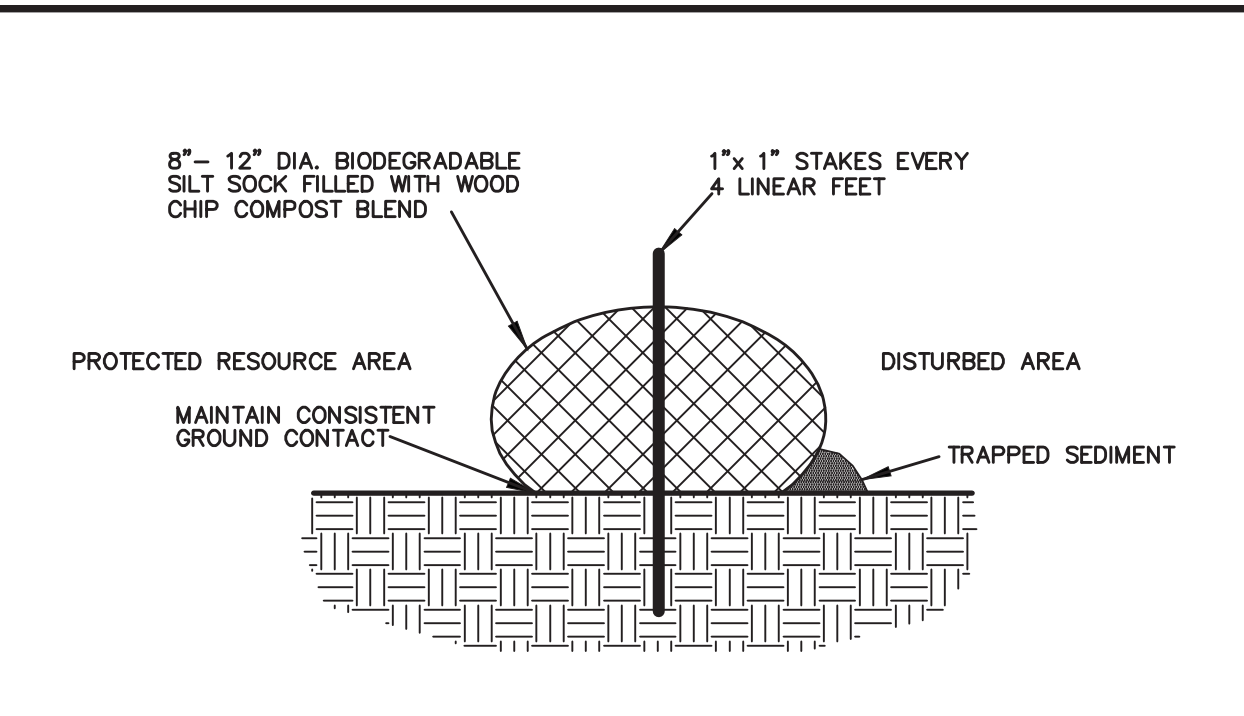
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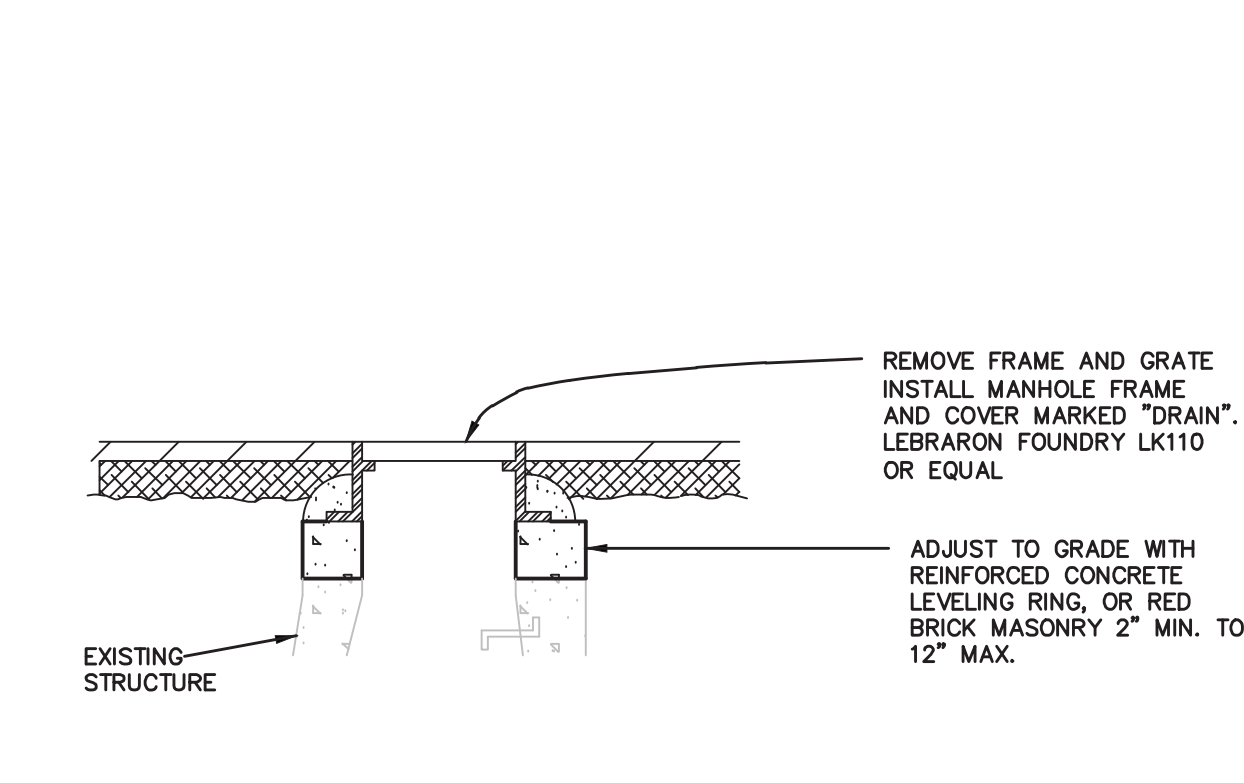


**TRACKING PAD NOTES:**  
 STONE SIZE - USE 2" CRUSHED STONE  
 FILTER CLOTH - SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.  
 SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHOULD BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM SHOULD BE PERMITTED.  
 MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH PREVENTS TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANING OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

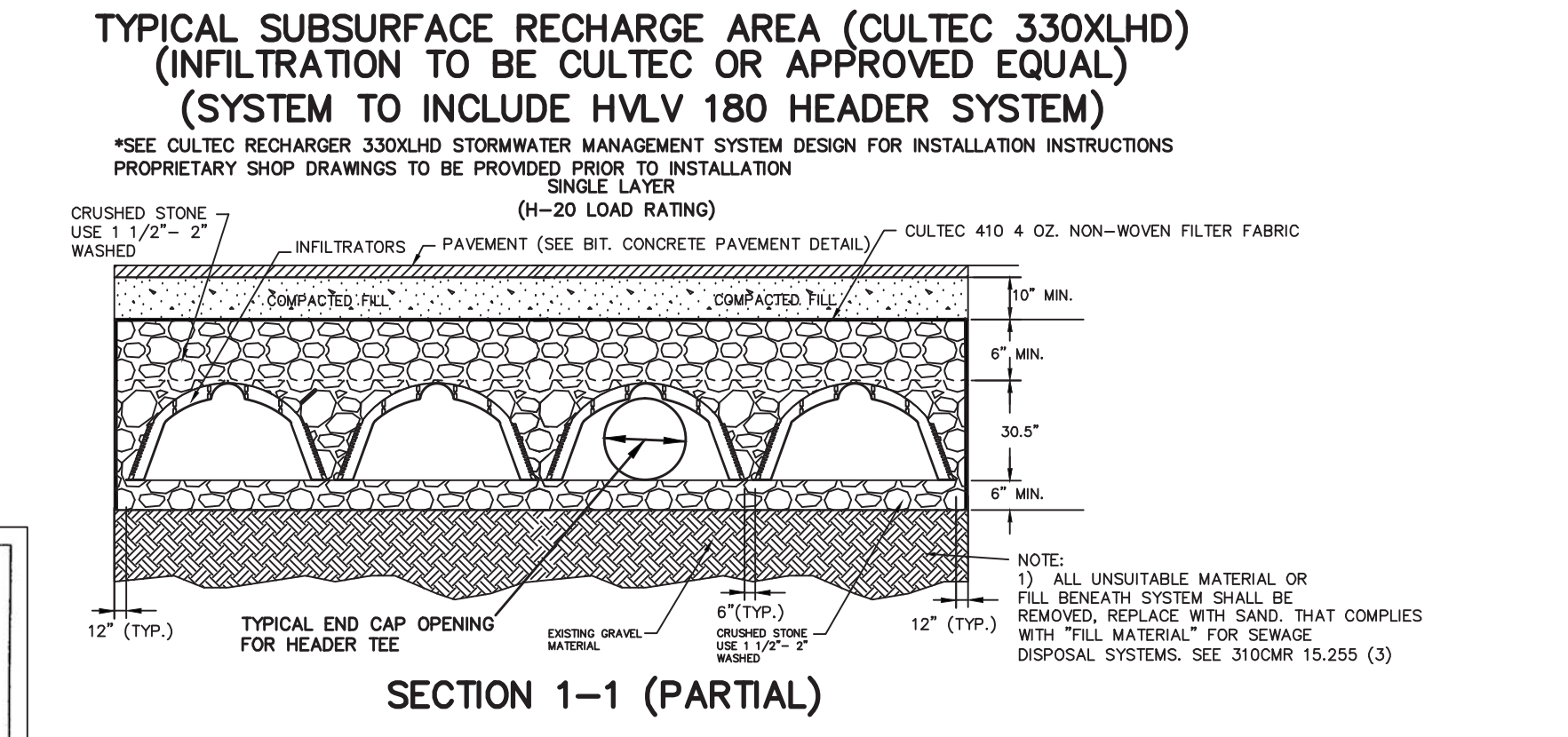
**CONSTRUCTION TRACKING PAD**  
 (TRACKING-PAD) NOT TO SCALE KELLY ENGINEERING GROUP, INC. ©



**SILT SOCK LINE DETAIL**  
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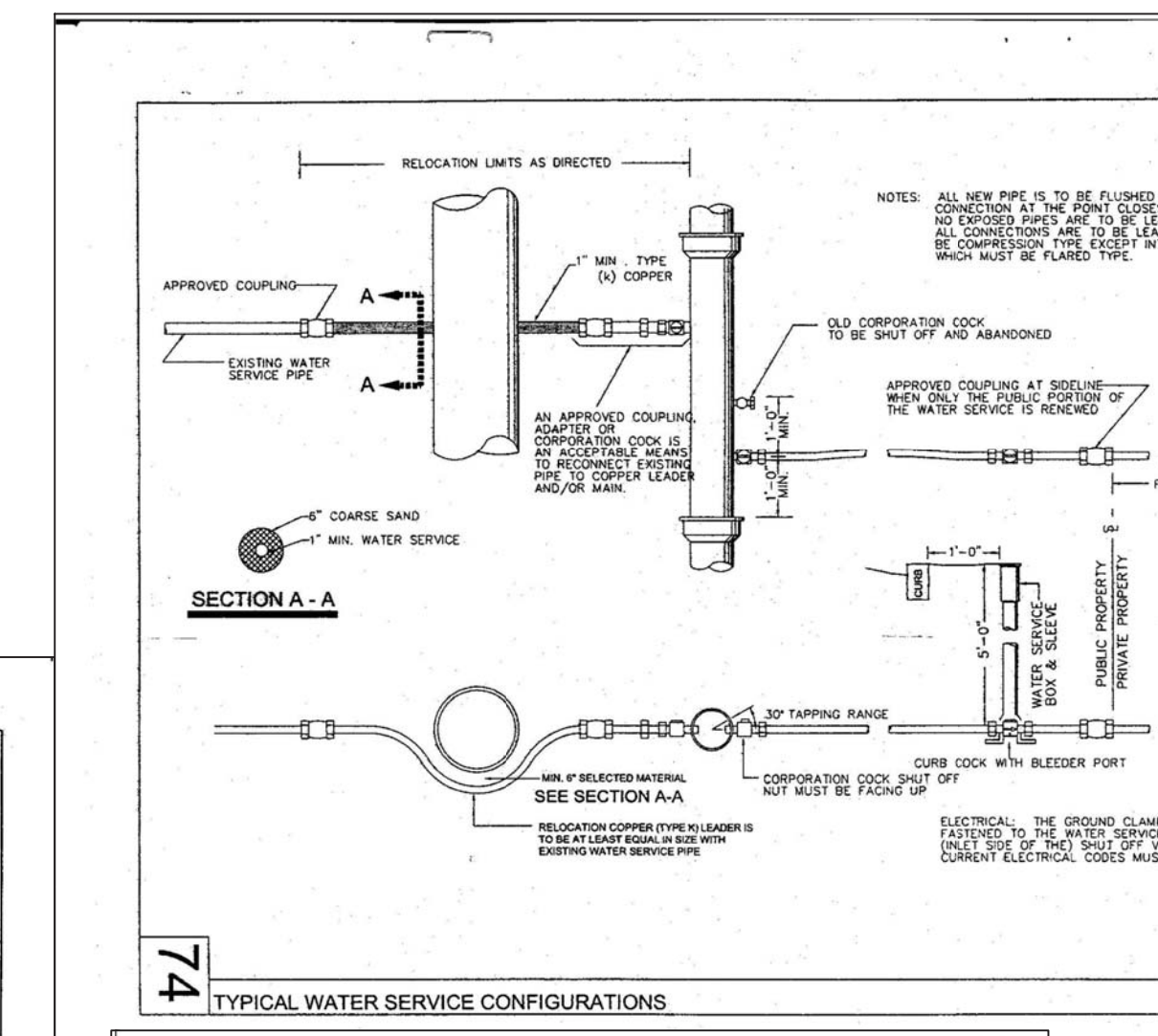
**CATCH BASIN TO MANHOLE CONVERSION DETAIL**  
 NOT TO SCALE (PRECAST-DRAIN-MANHOLE) KELLY ENGINEERING GROUP, INC. ©



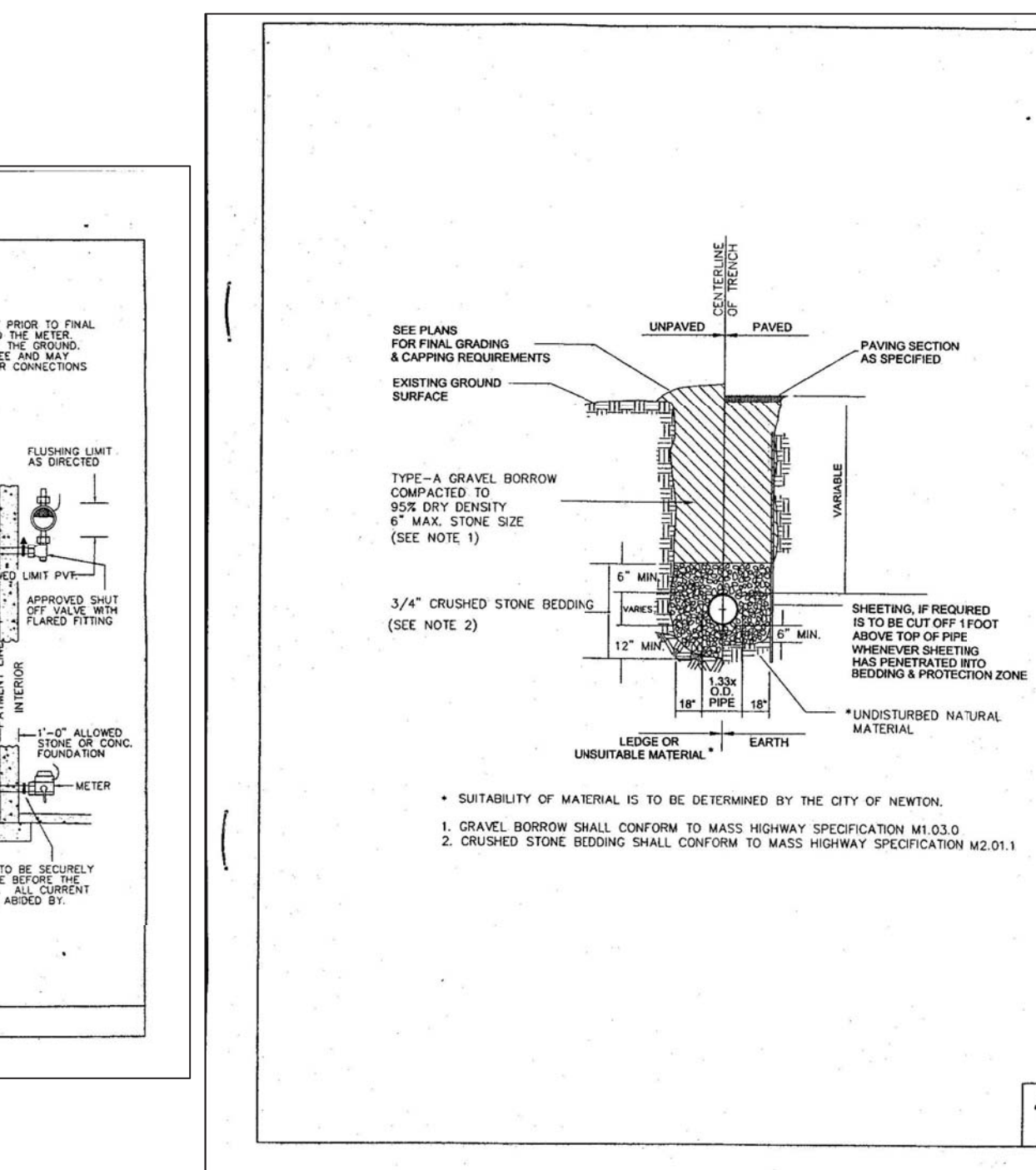
**STORMWATER MANAGEMENT SYSTEM CONSTRUCTION OPERATION + MAINTENANCE NOTES:**  
 1. EXTREME CARE SHALL BE TAKEN DURING CONSTRUCTION TO AVOID SILTATION DURING THE CONSTRUCTION PROCESS. SILT CAGES AND HAYBALE DIKES SHALL BE INSPECTED DAILY AND REPLACED IF NECESSARY.  
 2. EXTREME CARE SHALL BE TAKEN TO PREVENT COMPACTION OF UNDISTURBED SOILS BENEATH RECHARGE SYSTEM.  
 3. THERE SHALL BE NO DISCHARGE OF WATER FOR CONSTRUCTION DEWATERING ACTIVITIES INTO THE STORMWATER MANAGEMENT SYSTEM.  
 4. THERE SHALL BE NO DISCHARGE OF STORMWATER INTO THE RECHARGE SYSTEM UNTIL THE SITE HAS BEEN STABILIZED.

**CONSTRUCTION INSPECTION AND MAINTENANCE SCHEDULE:**  
**CONSTRUCTION INSPECTION SCHEDULE**  
 1. WEEKLY INSPECTIONS SHALL BE PERFORMED BY THE APPLICANTS ENGINEER AND A REPRESENTATIVE FROM THE CITY'S ENGINEERING DEPARTMENT.  
 2. INSPECTIONS SHALL INCLUDE THE PAVEMENT TO DETERMINE IF ACCUMULATED SEDIMENT IS TO BE REMOVED, OF THE CATCH BASINS TO DETERMINE DEPTH OF SEDIMENTS AND REQUIRED CLEANING, INSPECTION OF THE WATER QUALITY DEVICES TO DETERMINE IF CLEANING IS NECESSARY AND INSPECTION OF THE LEACHING SYSTEM SHALL BE CONDUCTED BY THE ENGINEER AND THE CITY'S ENGINEERING DEPARTMENT.  
 3. AN INSPECTION OF THE EXCAVATION OF THE LEACHING SYSTEM SHALL BE CONDUCTED BY THE ENGINEER AND A REPRESENTATIVE OF THE CITY'S ENGINEERING DEPARTMENT PRIOR TO PLACEMENT OF ANY MATERIAL OR CHAMBERS.

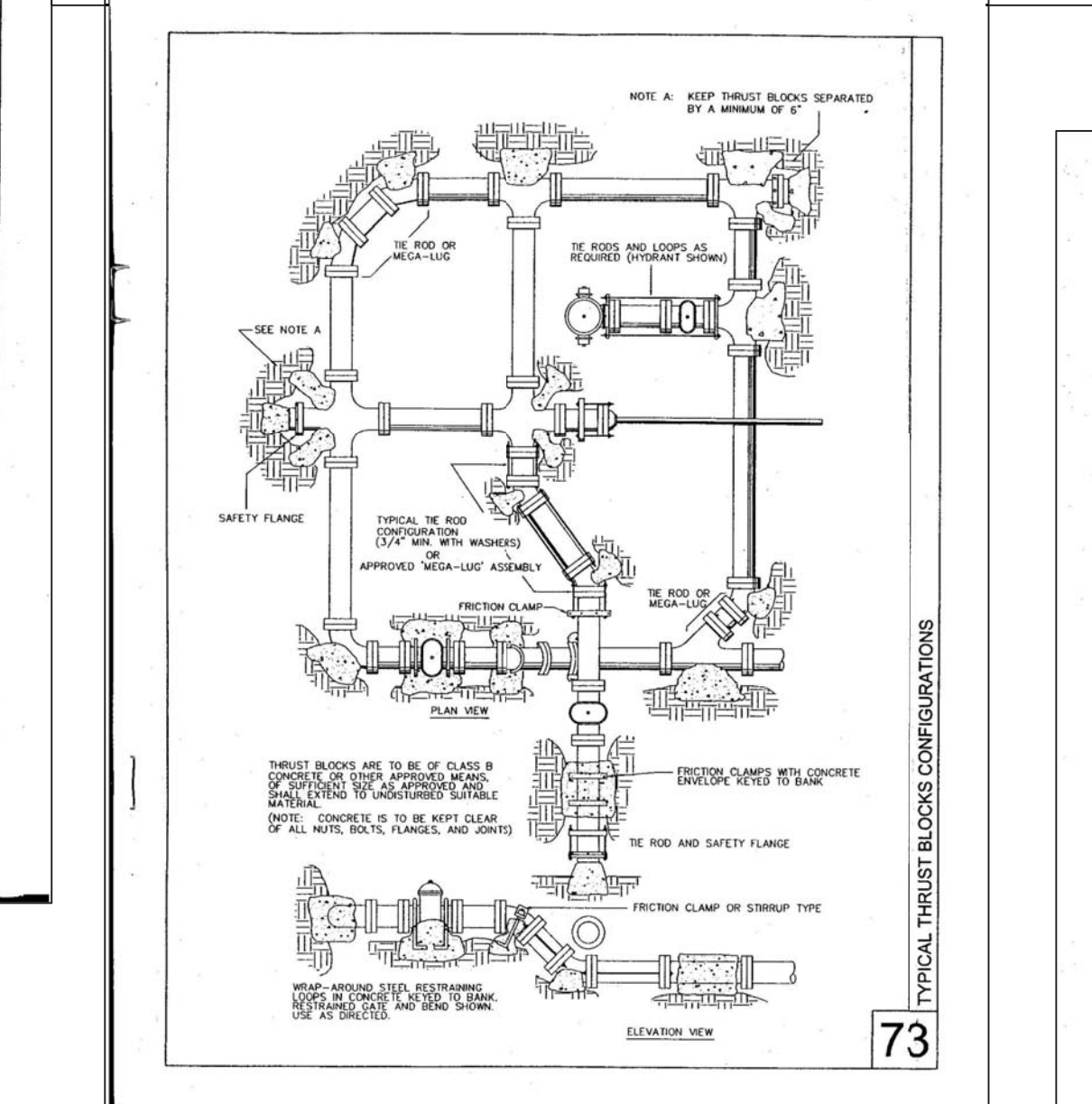
**CONSTRUCTION MAINTENANCE SCHEDULE**  
 1. WHEN THE BINDER COURSE HAS BEEN INSTALLED THE PAVEMENT SHALL BE KEPT CLEAR OF ACCUMULATED SEDIMENTS. IF ACCUMULATED SEDIMENTS ARE DEPOSITED ON THE PAVEMENT THE SEDIMENT SHALL BE CLEANED IMMEDIATELY. THE PAVEMENT SHALL BE SWEEP AS NECESSARY BASED ON THE WEEKLY INSPECTIONS. THE CONTRACTOR SHALL INSPECT THE PAVEMENT ON A DAILY BASIS AND REMOVE ACCUMULATED SEDIMENTS AS NECESSARY.  
 2. "SILT SAKS" SHALL BE INSTALLED AT ALL CATCH BASIN AND DROP INLET LOCATIONS. THE CONTRACTOR SHALL INSPECT THE "SILT SAKS" ON A WEEKLY BASIS AND AFTER HEAVY RAINSTORMS AND EMPTIED BASED ON MANUFACTURERS RECOMMENDATIONS.  
 3. THE CATCH BASINS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER HEAVY RAINSTORMS. THE CATCH BASINS SHALL BE CLEANED WHEN 6" OF SEDIMENT HAS ACCUMULATED IN THE JUMP.  
 4. THE WATER QUALITY DEVICES SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER HEAVY RAINSTORMS. THEY SHALL BE CLEANED BASED ON THE MANUFACTURERS RECOMMENDATIONS.  
 5. THE INFILTRATION GALLEYS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER HEAVY RAINSTORMS AND SHALL BE CLEANED WHEN 2" OF SEDIMENT HAS ACCUMULATED IN THE INLET CHAMBER.



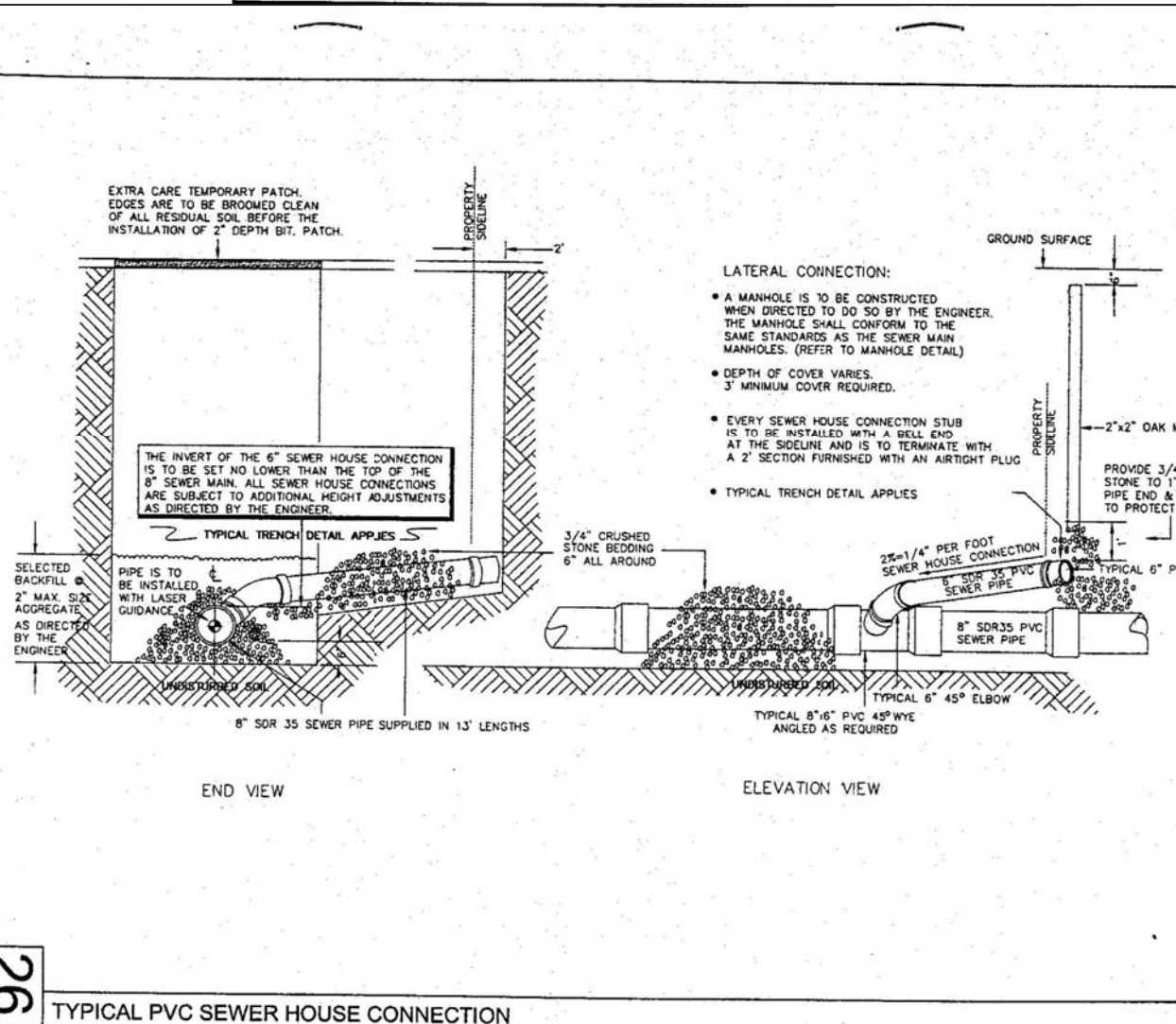
**TYPICAL WATER SERVICE CONFIGURATIONS**



**GRAVITY SEWER TRENCH DETAIL**



**TYPICAL THRUST BLOCKS CONFIGURATIONS**



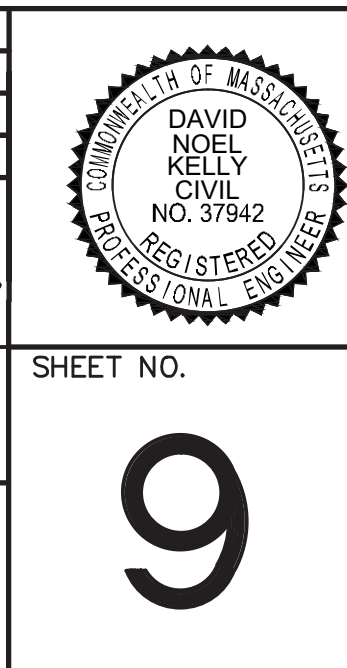
**TYPICAL PVC SEWER HOUSE CONNECTION**

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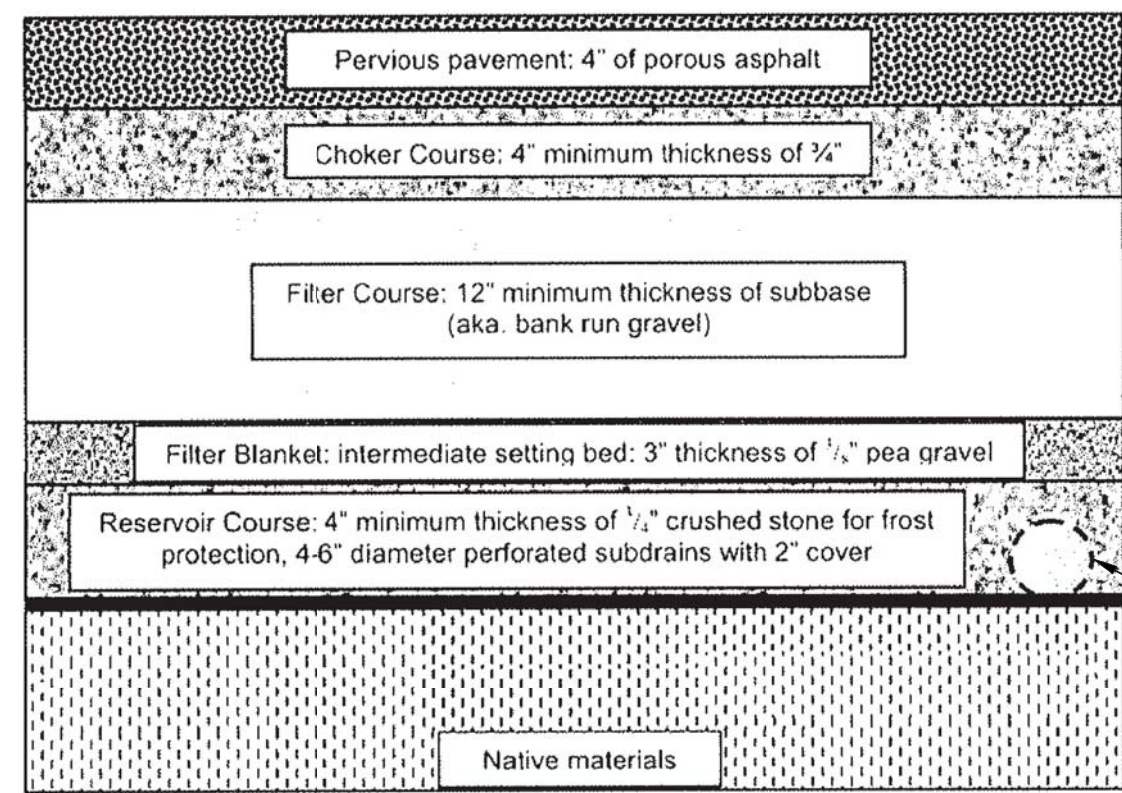
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SCALE	N/A	DATE	01/09/15	REV	1	DATE	03/30/15	PER CITY COMMENTS
SHEET	9 OF 10	DATE		REVISION		BY		
PLAN NO.	2013-075-DT01	CROSSPOINT ASSOCIATES, INC.						
DISK REF NO.	F:\P\2013-075	131, 141-143, 151-153, 165, 173, & 181 NEEDHAM ST.						
DRAWN BY	C.J.L.	NEWTON, MASSACHUSETTS						
CHKD BY	B.G.L.	DETAIL SHEET						
APPD BY	DNK	KELLY ENGINEERING GROUP, INC.						
		CIVIL ENGINEERING CONSULTANTS						
		0 CAMPANELLI DRIVE · BRAINTREE MA · 02184						
		PHONE: 781 843 4333 FAX: 781 843 0028						

David Noel  
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SHEET NO. 9



adapted from the University of New Hampshire

4\"/>

**Maintenance**

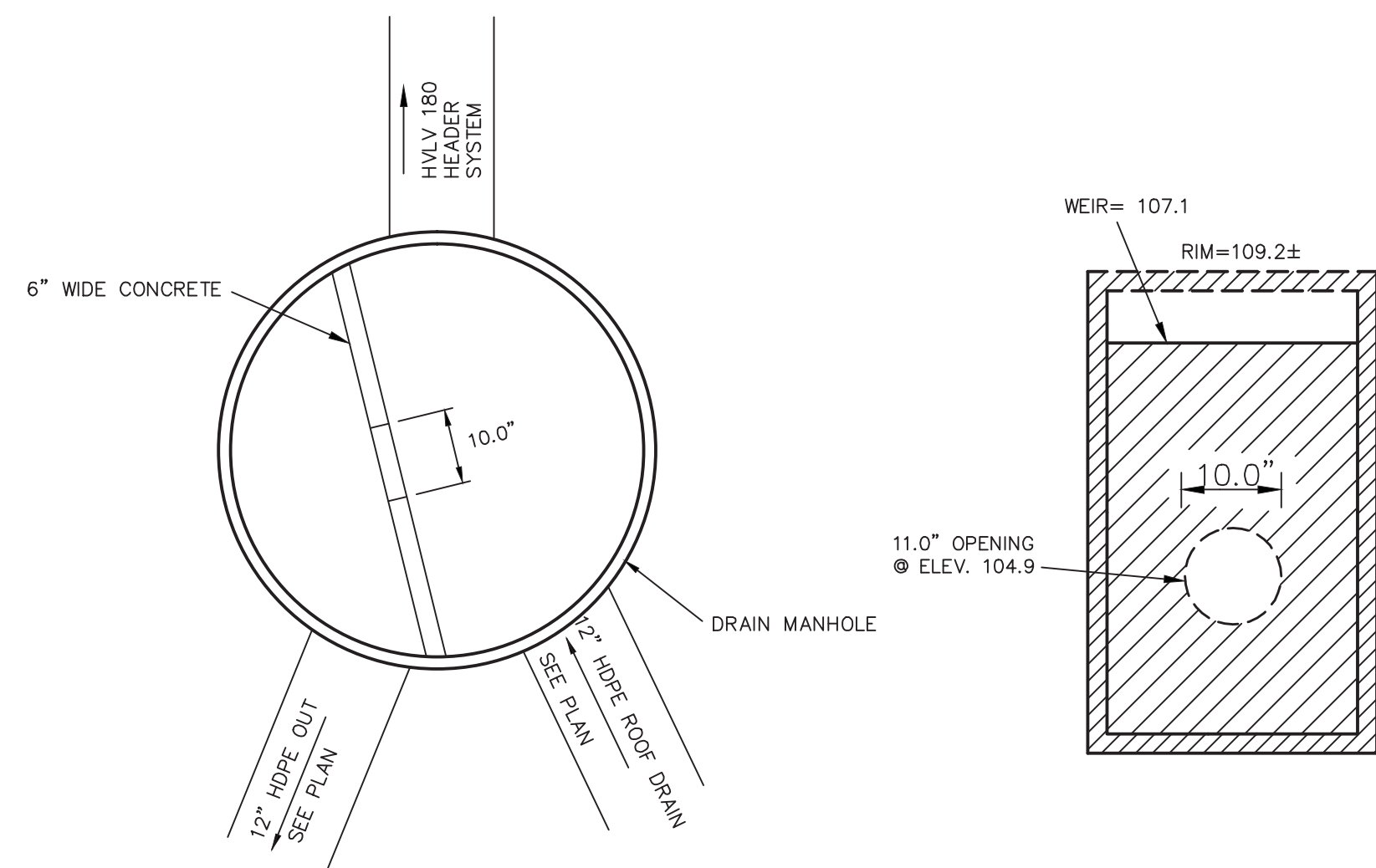
Activity	Frequency
Monitor to ensure that the paving surface drains properly after storms	As needed
For porous asphalts and concretes, clean the surface using power washer to dislodge trapped particles and then vacuum sweep the area. For paving stones, add joint material (sand) to replace material that has been transported.	As needed
Inspect the surface annually for deterioration	Annually
Assess exfiltration capability at least once a year. When exfiltration capacity is found to decline, implement measures from the Operation and Maintenance Plan to restore original exfiltration capacity.	As needed, but at least once a year

**NOTES**

- REFER TO SPECIFICATIONS DEVELOPED BY THE UNIVERSITY OF NEW HAMPSHIRE STORMWATER CENTER (UNHSC) FOR MATERIALS AND METHODS FOR COLD CLIMATE PVIOUS PAVEMENT CONSTRUCTION (JULY 2007).
- REFER TO NATIONAL ASPHALT PAVEMENT ASSOCIATION (NAPA) SPECIFICATIONS FOR POROUS ASPHALT PAVEMENT (LATEST EDITION), WITH MODIFIED PERFORMANCE GRADE ASPHALT BINDER (PGAB) MIX.
- FILTER FABRIC OR GEOTEXTILE LINER IS NOT REQUIRED FOR PARKING LOT.
- POROUS ASPHALT MIXING PLANT FOR HOT MIX ASPHALT SHALL COMPLY WITH NEW HAMPSHIRE D.O.T., SECTION 401 PLANT MIX PAVEMENT SPECIFICATIONS.

**POROUS PAVEMENT DETAIL**

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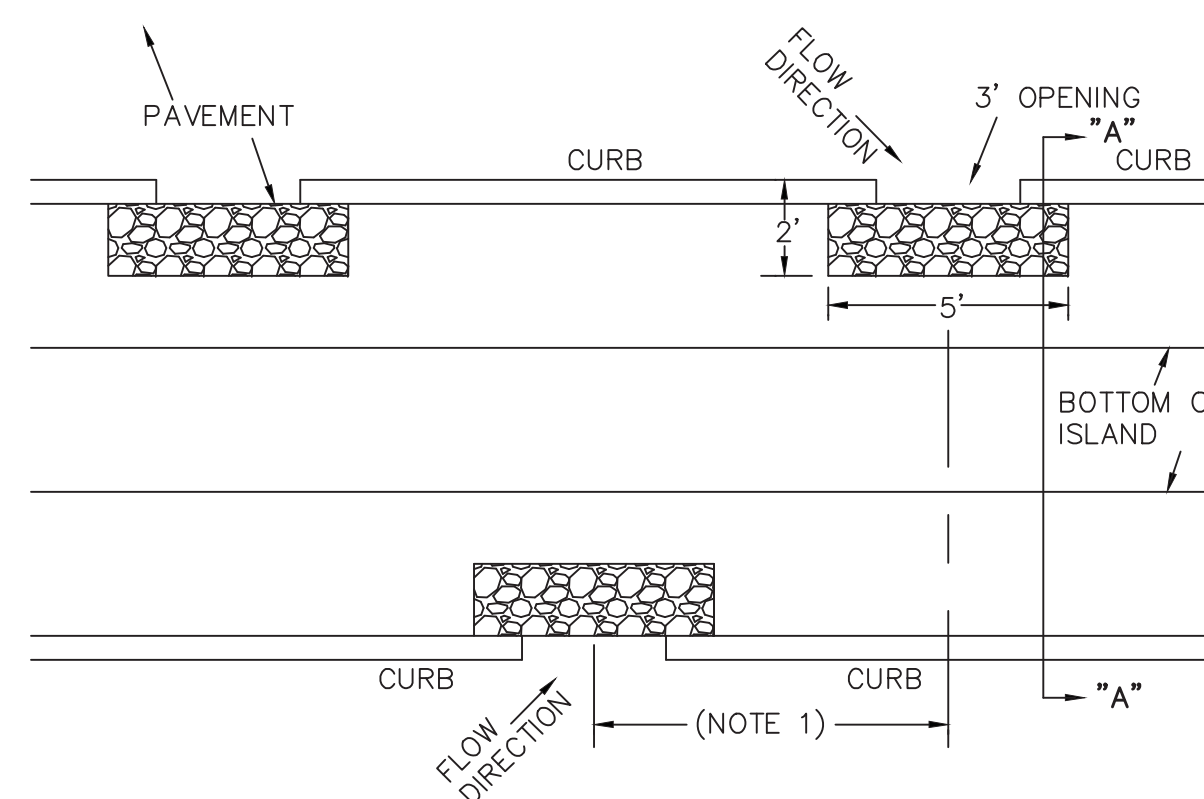
TOP VIEW

SECTION

**OUTLET CONTROL STRUCTURE MANHOLE**

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NOTE: FOR OTHER NOTES AND DETAILS SEE TYPICAL DRAIN MANHOLE DETAIL



- NOTES
- DO NOT INSTALL OPENINGS OPPOSITE EACH OTHER.

**DEPRESSED ISLAND DETAIL**

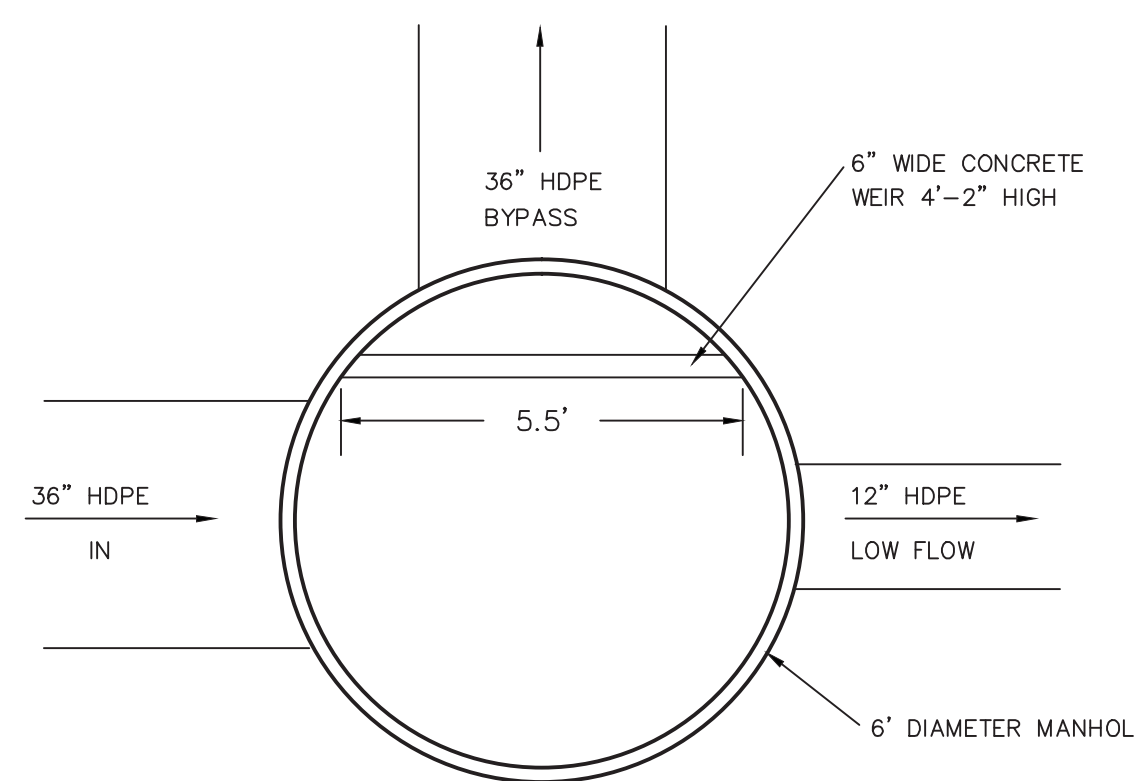
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\* BOTTOM WIDTH VARIES.

- BIORETENTION SOIL MIX SHOULD BE A MIXTURE OF 40% SAND, 20-30% TOPSOIL, AND 30-40% COMPOST.
  - THE SOIL MIX MUST BE UNIFORM, FREE OF STONES, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN 2-INCHES. THE CLAY CONTENT SHALL NOT EXCEEDING 5%.
  - SOIL PH SHOULD BE BETWEEN 5.5-6.5.
  - SOILS SHOULD BE 1.5%-3% ORGANIC CONTENT AND A MAXIMUM 500 ppm CONCENTRATION OF SOLUBLE SALTS.
  - THE SAND COMPONENT SHOULD BE GRAVELLY SAND THAT MEETS ASTM D 422
- | SEIVE SIZE  | PERCENT PASSING |
|-------------|-----------------|
| 2-INCH      | 100             |
| 3/4-INCH    | 70-100          |
| 1/4-INCH    | 50-80           |
| U.S. No.40  | 15-40           |
| U.S. No.200 | 0-5             |
- THE TOPSOIL COMPONENT SHALL BE A SANDY LOAM, LOAMY SAND, OR LOAM TEXTURE.
  - THE COMPOST COMPONENT MUST BE PROCESSED FROM YARD WASTE IN ACCORDANCE WITH MASSDEP GUIDELINES (SEE WWW.MASS.GOV/DEP/RECYCLE/REDUCE/LEAFGUID.DOC). THE COMPOST SHALL NOT CONTAIN BIOSOLIDS.
  - SOILS SHOULD BE PLACED IN 1'-2' LIFTS, COMPACTED WITH MINIMAL PRESSURE, UNTIL DESIRED DEPTH IS REACHED. BIORETENTION SOIL SHALL BE PLACED AND GRADED USING LOW GROUND-CONTACT PRESSURE EQUIPMENT.
  - PLANTINGS SHOULD NOT REQUIRE FERTILIZERS AND PESTICIDES.
  - CONSTRUCTION RELATED RUNOFF OR WATER FROM DEWATERING ACTIVITIES IS PROHIBITED FROM DISCHARGING INTO THESE ISLANDS AREAS AT ANY POINT DURING OR AFTER INSTALLATION.

**OPERATION AND MAINTENANCE**

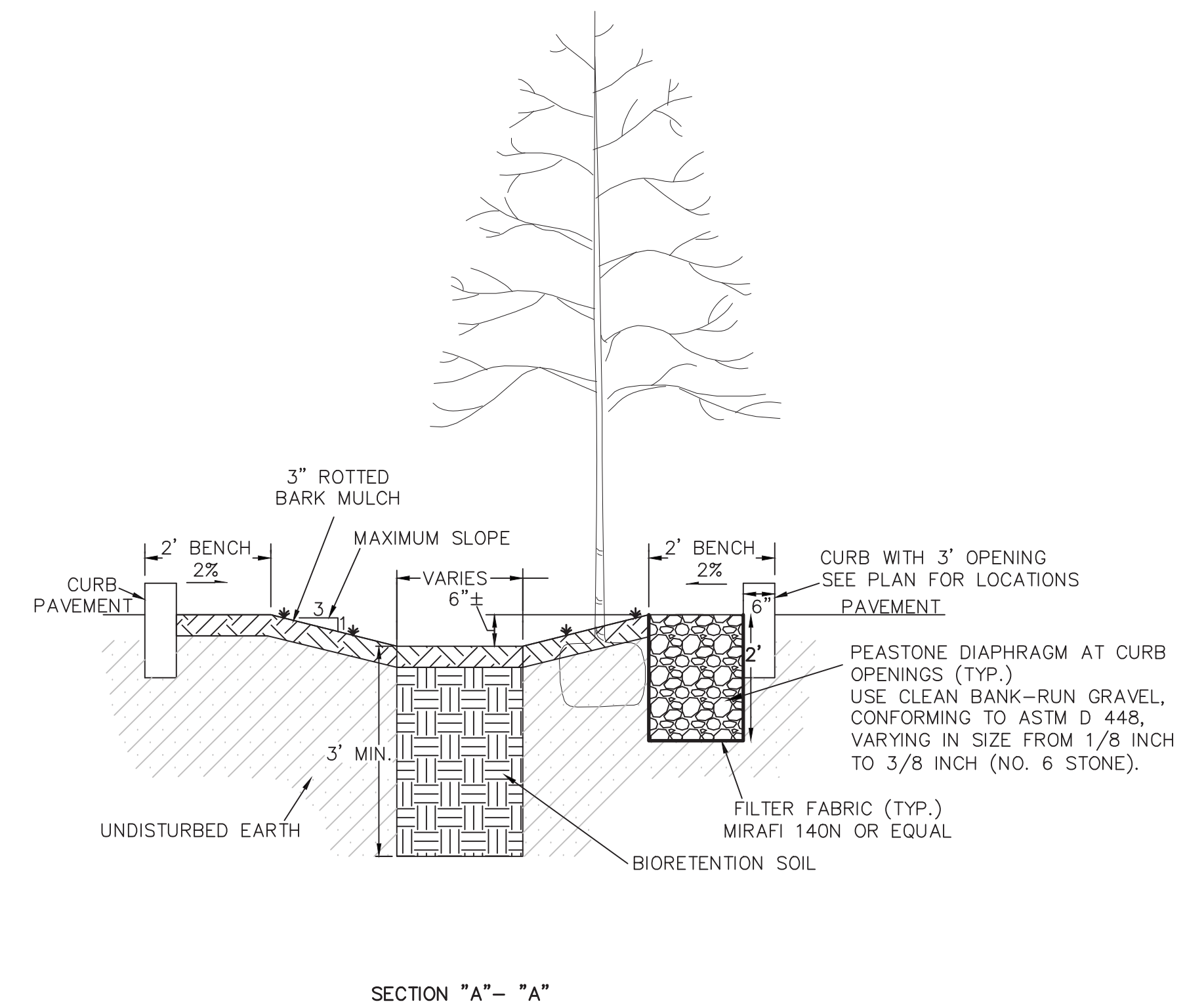
- INSPECT REGULARLY FOR SEDIMENT BUILD-UP, STRUCTURAL DAMAGE, AND STANDING WATER.
- INSPECT SOIL AND REPAIR ERODED AREAS MONTHLY. REMOVE LITTER AND DEBRIS MONTHLY.
- TWICE PER YEAR (SPRING AND FALL), REMULCH WHERE NEEDED. GRASS SHALL BE MOWED, TREES AND SHRUBS SHALL BE INSPECTED, PRUNED, AND REPAIRED TO EVALUATE THEIR HEALTH. REMOVE ANY DEAD OR SEVERLY DISEASED VEGETATION. DISEASED VEGETATION SHOULD BE TREATED AS NECESSARY USING PREVENTATIVE AND LOW-TOXIC MEASURES TO THE EXTENT POSSIBLE.
- APPLY AN ALKALINE PRODUCT SUCH AS LIMESTONE ONE TO TWO TIMES PER YEAR TO COUNTERACT SOIL ACIDITY RESULTING FROM ACIDIC PRECIPITATION AND RUNOFF. BEFORE APPLYING LIMESTONE, DETERMINE THE PH OF THE SOIL TO DETERMINE QUANTITY OF LIMESTONE NEEDED.
- UPON FAILURE WHEN THE SYSTEM CLOGS (STANDING WATER OR SATURATED SOIL CONDITIONS FOR MORE THAN 24 HOURS FOLLOWING A STORM EVENT 5+ YEARS), EXCAVATE AND REPLACE THE TOP 6" OF THE BIORETENTION SOIL, SCARIFY BOTTOM AND SIDES.
- DO NOT STORE SNOW IN DEPRESSED ISLAND AREAS.



**BYPASS MANHOLE DETAIL**

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NOTE: FOR OTHER NOTES AND DETAILS SEE TYPICAL DRAIN MANHOLE DETAIL



SECTION "A" - "A"

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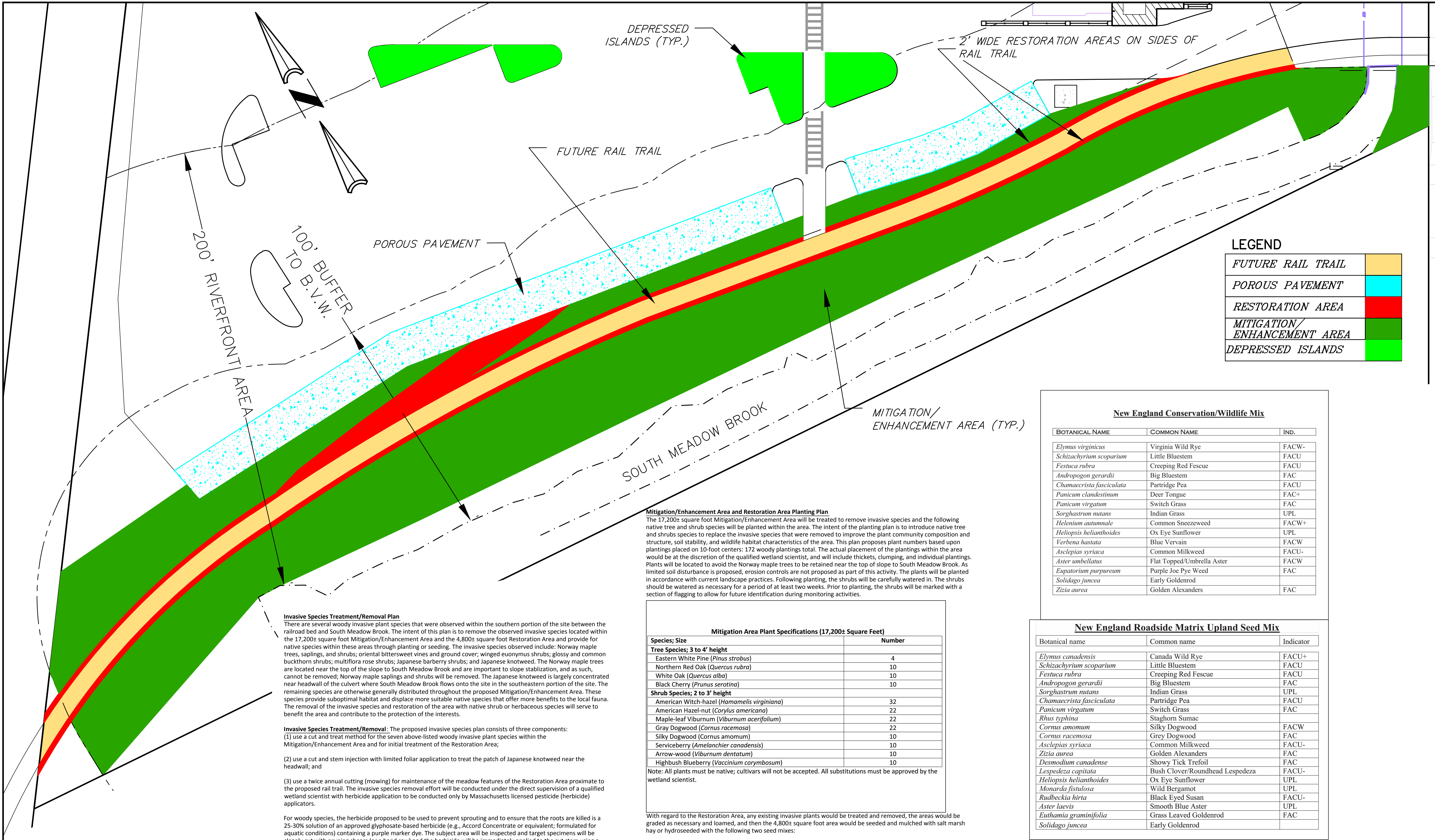


SCALE N/A			
DATE 01/09/15	1. 03/30/15	PER CITY COMMENTS	
SHEET 10 OF 10	REV	DATE	REVISION
PLAN NO. 2013-075-DT01	CROSSPOINT ASSOCIATES, INC. 131, 141-143, 151-153, 165, 173, & 181 NEEDHAM ST. NEWTON, MASSACHUSETTS		
DISK REF NO. F:\P\2013-075	DETAIL SHEET		
DRAWN BY C.J.L.	SHEET NO. <b>10</b>		
CHKD BY B.G.L.	KELLY ENGINEERING GROUP, INC. CIVIL ENGINEERING CONSULTANTS		
APPD BY DNK	0 CAMPANELLI DRIVE · BRAINTREE MA · 02184 PHONE: 781 843 4333 FAX: 781 843 0028		

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**LEGEND**

FUTURE RAIL TRAIL	[Yellow]
POROUS PAVEMENT	[Cyan]
RESTORATION AREA	[Red]
MITIGATION/ ENHANCEMENT AREA	[Green]
DEPRESSED ISLANDS	[Light Green]

**Mitigation/Enhancement Area and Restoration Area Planting Plan**  
 The 17,200± square foot Mitigation/Enhancement Area will be treated to remove invasive species and the following native tree and shrub species will be planted within the area. The intent of the planting plan is to introduce native tree and shrubs species to replace the invasive species that were removed to improve the plant community composition and structure, soil stability, and wildlife habitat characteristics of the area. This plan proposes plant numbers based upon plantings placed on 10-foot centers: 172 woody plantings total. The actual placement of the plantings within the area would be at the discretion of the qualified wetland scientist, and will include thickets, clumping, and individual plantings. Plants will be located to avoid the Norway maple trees to be retained near the top of slope to South Meadow Brook. As limited soil disturbance is proposed, erosion controls are not proposed as part of this activity. The plants will be planted in accordance with current landscape practices. Following planting, the shrubs will be carefully watered in. The shrubs should be watered as necessary for a period of at least two weeks. Prior to planting, the shrubs will be marked with a section of flagging to allow for future identification during monitoring activities.

**Mitigation Area Plant Specifications (17,200± Square Feet)**

Species; Size	Number
<b>Tree Species; 3 to 4' height</b>	
Eastern White Pine ( <i>Pinus strobus</i> )	4
Northern Red Oak ( <i>Quercus rubra</i> )	10
White Oak ( <i>Quercus alba</i> )	10
Black Cherry ( <i>Prunus serotina</i> )	10
<b>Shrub Species; 2 to 3' height</b>	
American Witch-hazel ( <i>Hamamelis virginiana</i> )	32
American Hazel-nut ( <i>Corylus americana</i> )	22
Maple-leaf Viburnum ( <i>Viburnum acerifolium</i> )	22
Gray Dogwood ( <i>Cornus racemosa</i> )	22
Silky Dogwood ( <i>Cornus amomum</i> )	10
Serviceberry ( <i>Amelanchier canadensis</i> )	10
Arrow-wood ( <i>Viburnum dentatum</i> )	10
Highbush Blueberry ( <i>Vaccinium corymbosum</i> )	10

Note: All plants must be native; cultivars will not be accepted. All substitutions must be approved by the wetland scientist.

**Invasive Species Treatment/Removal Plan**  
 There are several woody invasive plant species that were observed within the southern portion of the site between the railroad bed and South Meadow Brook. The intent of this plan is to remove the observed invasive species located within the 17,200± square foot Mitigation/Enhancement Area and the 4,800± square foot Restoration Area and provide for native species within these areas through planting or seeding. The invasive species observed include: Norway maple trees, saplings, and shrubs; oriental bittersweet vines and ground cover; winged euonymus shrubs; glossy and common buckthorn shrubs; multiflora rose shrubs; Japanese barberry shrubs; and Japanese knotweed. The Norway maple trees are located near the top of the slope to South Meadow Brook and are important to slope stabilization, and as such, cannot be removed; Norway maple saplings and shrubs will be removed. The Japanese knotweed is largely concentrated near headwall of the culvert where South Meadow Brook flows onto the site in the southeastern portion of the site. The remaining species are otherwise generally distributed throughout the proposed Mitigation/Enhancement Area. These species provide suboptimal habitat and displace more suitable native species that offer more benefits to the local fauna. The removal of the invasive species and restoration of the area with native shrub or herbaceous species will serve to benefit the area and contribute to the protection of the interests.

**Invasive Species Treatment/Removal:** The proposed invasive species plan consists of three components:  
 (1) use a cut and treat method for the seven above-listed woody invasive plant species within the Mitigation/Enhancement Area and for initial treatment of the Restoration Area;  
 (2) use a cut and stem injection with limited foliar application to treat the patch of Japanese knotweed near the headwall; and  
 (3) use a twice annual cutting (mowing) for maintenance of the meadow features of the Restoration Area proximate to the proposed rail trail. The invasive species removal effort will be conducted under the direct supervision of a qualified wetland scientist with herbicide application to be conducted only by Massachusetts licensed pesticide (herbicide) applicators.

For woody species, the herbicide proposed to be used to prevent sprouting and to ensure that the roots are killed is a 25-30% solution of an approved glyphosate-based herbicide (e.g., Accord Concentrate or equivalent; formulated for aquatic conditions) containing a purple marker dye. The subject area will be inspected and target specimens will be cleanly cut with pruning shears (for a hand saw) and the herbicide will be immediately applied to the cut stem using a wick applicator to avoid affecting non-target plants. Smaller specimens may be cut and treated or pulled by hand. Foliar application of herbicide for these species is not proposed. The cut materials which contain berries/seeds will be disposed of off-site. The best results are achieved by treating the woody species during the growing season, generally in the summer and fall. The application of herbicide to cut stems in the spring while the sap is running should be avoided. With regard to the Japanese knotweed patch, a somewhat different method is proposed. A two year program to control this patch is proposed. In Year 1, the patch will be treated with a stem by stem injection of an approved glyphosate-based herbicide with debris removed from the site. In Year 2, the patch will be treated with a stem by stem and/or foliar application (for stalks too narrow to inject) of an approved glyphosate-based herbicide with debris removed from the site. The two years of aggressive treatment will significantly reduce the number of stems found in the area. This treatment is proposed annually for two years during the growing season before the plants go to seed. Limited follow-up treatment in subsequent years is expected to be needed to eradicate the patch. Within the Restoration Area, invasive species control is proposed through twice annual cutting of the areas along the walking trail. As noted below, this area will be brought to grade with loam, and will be seeded with a seed mixture to provide cover by native herbaceous species. Twice annual cutting of this area will maintain these areas as meadow and will serve to limit the development of invasive species in the area proximate to the walking trail.

Following the initial and subsequent invasive species treatment and removal, a brief completion report will be provided to the Commission in a timely manner. As noted below, observations for invasive species will be made during the annual monitoring efforts for two years following completion of the work in the Mitigation/Enhancement Area and Restoration Area.

With regard to the Restoration Area, any existing invasive plants would be treated and removed, the areas would be graded as necessary and loamed, and then the 4,800± square foot area would be seeded and mulched with salt marsh hay or hydroseeded with the following two seed mixes:  
 1. New England Conservation/Wildlife Mix (4 pounds); and  
 2. New England Roadside Matrix Upland Seed Mixture (4 pounds).

The amount of seed specified above allows for re-seeding of bare spots following the initial seeding. The species lists for these seed mixes are attached to this letter. The area would be watered regularly until the vegetation in the area has become established. The areas would be cut twice annually to maintain the meadow nature of these areas and to control invasive species.

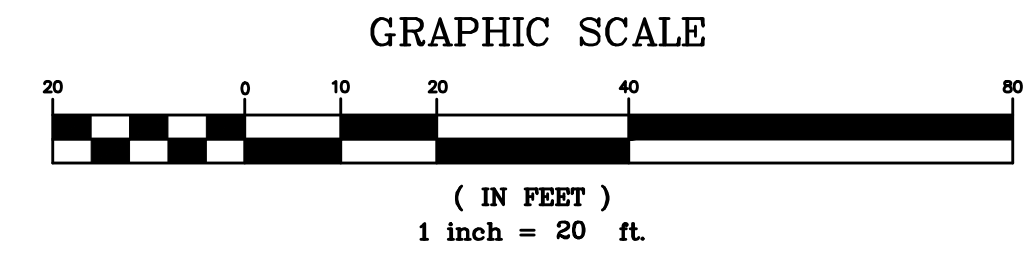
**Mitigation/Enhancement Area and Restoration Area Monitoring:**  
 The Mitigation/Enhancement Area and the Restoration Area will be monitored near the end of the growing season for two years after they are established. During each inspection, which will be conducted by a qualified wetland scientist, the condition of the Mitigation/Enhancement Area and the number and species of saplings and shrubs and their condition will be documented. Within the Restoration Area, the herbaceous species and overall percent cover will be documented. Any woody invasive species observed within the area will be documented. Photographs of the areas shall be taken and representative photographs shall be included in the report. To be considered a success, the proposed woody plantings shall have a 75% survival rate; in seeded areas, the area needs to be vegetatively stable with at least 75% of the surface area covered with seeded and native volunteer species. The findings of each inspection will be documented in a report that will be submitted in a timely manner to the Commission. Each report will include any necessary recommendations to bring the applicable area into compliance.

**New England Conservation/Wildlife Mix**

BOTANICAL NAME	COMMON NAME	IND.
<i>Elymus virginicus</i>	Virginia Wild Rye	FACW-
<i>Schizachyrium scoparium</i>	Little Bluestem	FACU
<i>Festuca rubra</i>	Creeping Red Fescue	FACU
<i>Andropogon gerardii</i>	Big Bluestem	FAC
<i>Chamaecrista fasciculata</i>	Partridge Pea	FACU
<i>Panicum clandestinum</i>	Deer Tongue	FAC+
<i>Panicum virgatum</i>	Switch Grass	FAC
<i>Sorghastrum nutans</i>	Indian Grass	UPL
<i>Helenium autumnale</i>	Common Sneezeweed	FACW+
<i>Heliopsis helianthoides</i>	Ox Eye Sunflower	UPL
<i>Verbena hastata</i>	Blue Vervain	FACW
<i>Asclepias syriaca</i>	Common Milkweed	FACU-
<i>Aster umbellatus</i>	Flat Topped/Umbrella Aster	FACW
<i>Eupatorium purpureum</i>	Purple Joe Pye Weed	FAC
<i>Solidago juncea</i>	Early Goldenrod	FAC
<i>Zizia aurea</i>	Golden Alexanders	FAC

**New England Roadside Matrix Upland Seed Mix**

Botanical name	Common name	Indicator
<i>Elymus canadensis</i>	Canada Wild Rye	FACU+
<i>Schizachyrium scoparium</i>	Little Bluestem	FACU
<i>Festuca rubra</i>	Creeping Red Fescue	FACU
<i>Andropogon gerardii</i>	Big Bluestem	FAC
<i>Sorghastrum nutans</i>	Indian Grass	UPL
<i>Chamaecrista fasciculata</i>	Partridge Pea	FACU
<i>Panicum virgatum</i>	Switch Grass	FAC
<i>Rhus typhina</i>	Staghorn Sumac	
<i>Cornus amomum</i>	Silky Dogwood	FACW
<i>Cornus racemosa</i>	Grey Dogwood	FAC
<i>Asclepias syriaca</i>	Common Milkweed	FACU-
<i>Zizia aurea</i>	Golden Alexanders	FAC
<i>Desmodium canadense</i>	Showy Tick Trefoil	FAC
<i>Lespedeza capitata</i>	Bush Clover/Roundhead Lespedeza	FACU-
<i>Heliopsis helianthoides</i>	Ox Eye Sunflower	UPL
<i>Monarda fistulosa</i>	Wild Bergamot	UPL
<i>Rudbeckia hirta</i>	Black Eyed Susan	FACU-
<i>Aster laevis</i>	Smooth Blue Aster	UPL
<i>Euthamia graminifolia</i>	Grass Leaved Goldenrod	FAC
<i>Solidago juncea</i>	Early Goldenrod	FAC



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SCALE 1" = 40'			
DATE 03/30/15	REV	DATE	REVISION
SHEET 1 OF 1			BY
PLAN NO. MITIGATION PLAN	<b>CROSSPOINT ASSOCIATES, INC.</b> 131, 141-143, 151-153, 165, 173, & 181 NEEDHAM ST. NEWTON, MASSACHUSETTS		
DISK REF NO. F:\P\2013-075	<b>INVASIVE SPECIES REMOVAL, MITIGATION &amp; RESTORATION PLANTING PLAN</b>		
DRAWN BY C.L.	SHEET NO.		
CHKD BY BGL	1		
APPD BY DNK	<b>KELLY ENGINEERING GROUP, INC.</b> CIVIL ENGINEERING CONSULTANTS 0 CAMPANELLI DRIVE · BRAINTREE MA · 02184 PHONE: 781 843 4333 FAX: 781 843 0028		