



Memorandum

To: Tina Rivard, Town of Dracut - Assistant Director of Public Works / Stormwater Manager

From: Neal Campbell, CDM Smith

Date: June 30, 2022

Subject: Best Management Practice (BMPs) Retrofits for Town Owned Properties

The following memorandum discusses Minimum Control Measure #5 (Stormwater Management in New Development and Redevelopment) in the 2017 NPDES Small Municipal Separate Storm Sewer Systems (MS4) Permit. The Town of Dracut during Year 4 of the permit term is required to identify a minimum of five Dracut-owned properties that could potentially be modified or retrofitted with Best Management Practices (BMPs) designed to reduce the frequency, volume and pollutant loads of stormwater discharges through the reduction of impervious area.

CDM Smith, in consultation with the Town of Dracut, reviewed existing Town-owned properties that have the potential to be retrofitted. Recommendations for potential BMPs was based on reviewing existing GIS data. Before any suggested BMP can be implemented a complete investigation of site conditions will be required to confirm feasibility. Below is a summary of the six properties that were identified for potential retrofitting:

Dracut Department of Public Works: The Department of Public Works property will be undergoing an upgrade to include a new administration building and new garage. Potential BMPs at the site include a bioretention area located between the new administration building and Hildreth Street; a new subsurface storage or bioretention area located north of and adjacent to the new garage; a new bioswale located along the driveway at the rear of the site. The new subsurface storage or bioretention area potentially could collect stormwater runoff from the existing closed drainage system for treatment and infiltration prior to discharge at the outfall. During the upgrade, the Town will also investigate directing stormwater to the existing detention pond.

Beaver Brook Farm: The Town is planning upgrades at Beaver Brook Farm to enhance its use as a public amenity. The existing residence at the farm will be separated from the rest of the farm to become a privately-owned parcel. The existing driveway at Mammoth Road will be relocated to the west and could potentially include the creation of the new parking lot. A bioswale is proposed along the new driveway. A new bioretention area is also proposed along the northern end of the

proposed parking lot. Current building and structures depicted on the Town's GIS will need to be updated with new aerial photos to accurately depict the existing conditions.

Carrick Park: This park currently has two ball fields with a parking lot. At the southern end of the park, a new playground area with rubberized mats is proposed. The parking lot will be resurfaced and regraded. The entrance driveway to the parking lot could be replaced with precast pervious concrete panels. The eastern edge of the parking lot could be lined with curbing to direct stormwater runoff to a new bioretention area along the edge of the parking lot. In addition to providing water quality treatment and recharge to groundwater, this bioretention area may also provide peak attenuation before discharging to the existing drainage system in Mammoth Road.

Dracut Fire Station: Strip malls are located on the eastern and western sides of the decommissioned Fire Station property. In this section of Lakeview Avenue, there is no curbing between the road and the parking lots for the strip malls. To improve safety, the Town would like to add curbing along Lakeview Avenue and limit access through the Fire Station lot. In the right-of-way area between Lakeview Avenue and the parking lots, the Town is proposing to add a vegetated strip with curb cuts to collect the stormwater from Lakeview Avenue. Since the final disposition of the existing Fire Station is unknown, a potential new layout of the Fire Station parking lot has not been developed. The Town anticipates reconfiguring the parking lot with permeable pavement and bioretention areas.

Monahan Park: Monahan Park consists of two Town-owned parcels. One parcel includes four ballfields, a skate park, and a concessions/storage building. On this parcel, the existing entrance driveway could be resurfaced with permeable pavement. At the eastern edge of this parcel, the Town is considering a future parking lot with an entrance at Aiken Avenue. The new parking lot would have stormwater treatment BMPs, located adjacent to the parking lot. The second parcel includes an existing parking lot and a restroom facility. The parking lot would be resurfaced with the addition of stormwater treatment BMPs.

Joseph A. Campbell Elementary School: The Town is planning to renovate the school property. As part of renovations to the school, the Town will consider adding rainwater harvesting and stormwater treatment BMPs.

Tally Ho Road: A seventh Town Owned location on Tally Ho Road is set to begin construction later in 2022. This location includes drain improvements along this 700-foot long dead end street located off Fox Avenue. The improvements include narrowing the road by 8-feet and adding a 5-foot wide sidewalk on the west side resulting in a reduction of impervious area. The project also included replacement of the existing closed drainage system, underdrains, and new deep sump catch basins with hoods to control floatables.

Appendix A provides figures for each of seven properties depicting the potential BMP retrofits. Draft Drawings for the preferred alternative on Tally Ho Road are also attached in **Appendix A**

In addition to the proposal stormwater improvements with BMPs, the Town of Dracut has completed site improvements with BMP retrofits at several other Town Owner Properties in the recent years. The following is a summary of the work completed at each location.

Veteran's Park: The Town completed BMP retrofits at Veteran's Park located off Broadway Road. The park includes two ball fields, multi-use fields and a parking lot. The improvements included new drains, drain manholes, catch basins and culverts. The new infrastructure greatly improved site runoff and provided better floatable control. The park also has several stormwater basins around the site to attenuate flow from various storm events. Drawings for the drain improvements are attached in **Appendix B**.

Hovey Park: The Town completed BMP retrofits at Hovey Park located off Aiken Avenue. The park included a multi-use field, small playground, and parking lot. The improvements included new perforated drain pipes to mitigate parking lot runoff and irrigation sleeves to improve field drainage. A drawing for the drain improvements is attached in **Appendix C**.

Mathew G. Boule Memorial Park: The Town completed BMP retrofits at Boule Park located off Lakeview Avenue. The park improvements included removal of the rundown Sewer Department building, relocated parking lot, closed drainage system, tree/bush plantings and additional grass area. The improvements reduced the impervious area and the new catch basins will reduce sediment and floatables. Drawings for the drain improvements are attached in **Appendix D**.

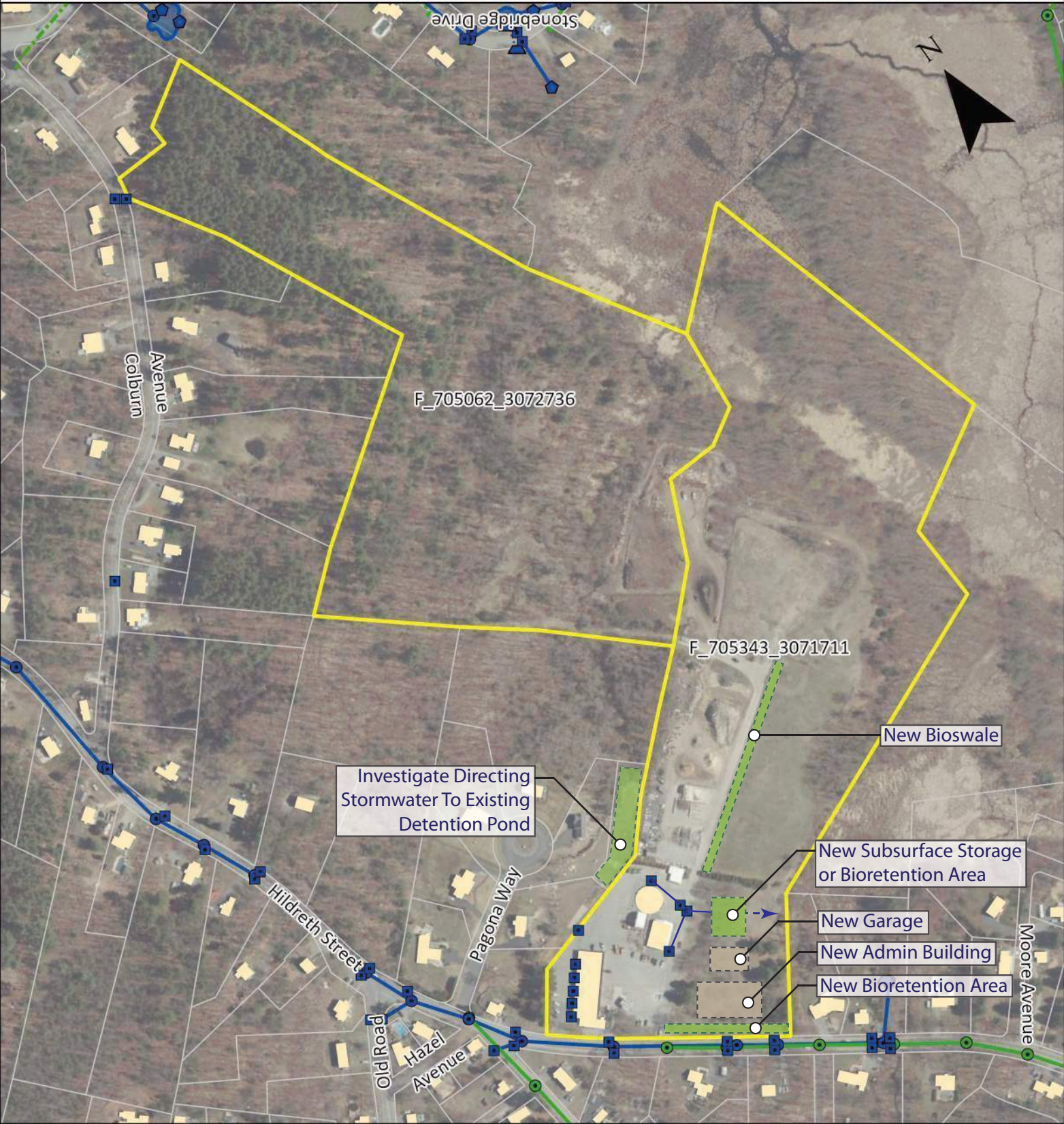
Nashua Road Improvements: The Town completed BMP retrofits along Nashua Road located in the northwest part of Town. The drain improvements included approximately 5,000 linear feet of new drainage pipe, drain manholes, sidewalks/curb and catch basins. The project benefits include better runoff management and reduced sediment and floatable control. Drawings for the drain improvements are attached in **Appendix E**.

Cc: Ann Vandal – Town Manager
Mark Hamel – Town Engineer
Ed Patenaude – Director of Public Works
Alison Manugian – Community Development Director
Neal Campbell – CDM Smith
Ginny Roach – CDM Smith

Appendix A

Proposed BMP Retrofits on Town-Owned Property

Dracut Department of Public Works



Stormwater

- Headwall
- Discharge Point
- Manhole
- Catch Basin
- Gravity Main
- Lateral Line
- Culvert
- Detention Area

Sewer

- Manhole
- Gravity Main
- Pressurized Main

1 inch = 350 Feet



Beaver Brook Farm - Dracut,MA



Stormwater

- Headwall
- Discharge Point
- Manhole
- Catch Basin
- Gravity Main
- Lateral Line
- Culvert
- Detention Area

Sewer

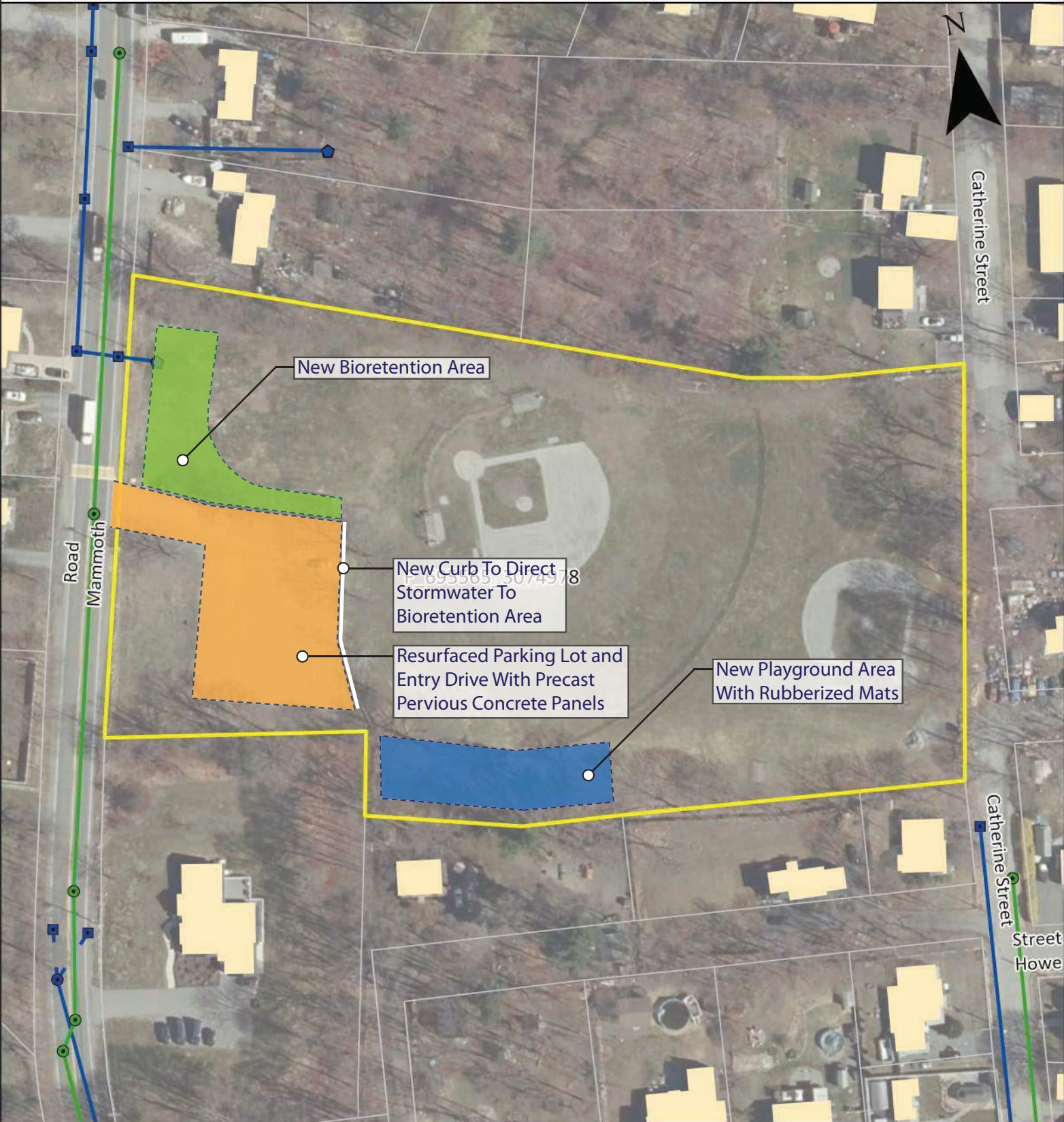
- Manhole
- Gravity Main
- Pressurized Main

1 inch = 250 Feet

0 125 250 Feet

**CDM
Smith**

Carrick Park - Dracut, MA



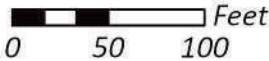
Stormwater

- Headwall
- Discharge Point
- Manhole
- Catch Basin
- Gravity Main
- Lateral Line
- Culvert
- Detention Area

Sewer

- Manhole
- Gravity Main
- Pressurized Main

1 inch = 100 Feet



Dracut Fire Station



Stormwater

- Headwall
- Discharge Point
- Manhole
- Catch Basin
- Gravity Main
- Lateral Line
- Culvert
- Detention Area

Sewer

- Manhole
- Gravity Main
- Pressurized Main

1 inch = 30 Feet



**CDM
Smith**

Monahan Park - Dracut, MA



Stormwater

- ▴ Headwall
- ⬢ Discharge Point
- Manhole

Catch Basin

- ▬ Gravity Main
- - Lateral Line
- ... Culvert
- ▬ Detention Area

Sewer

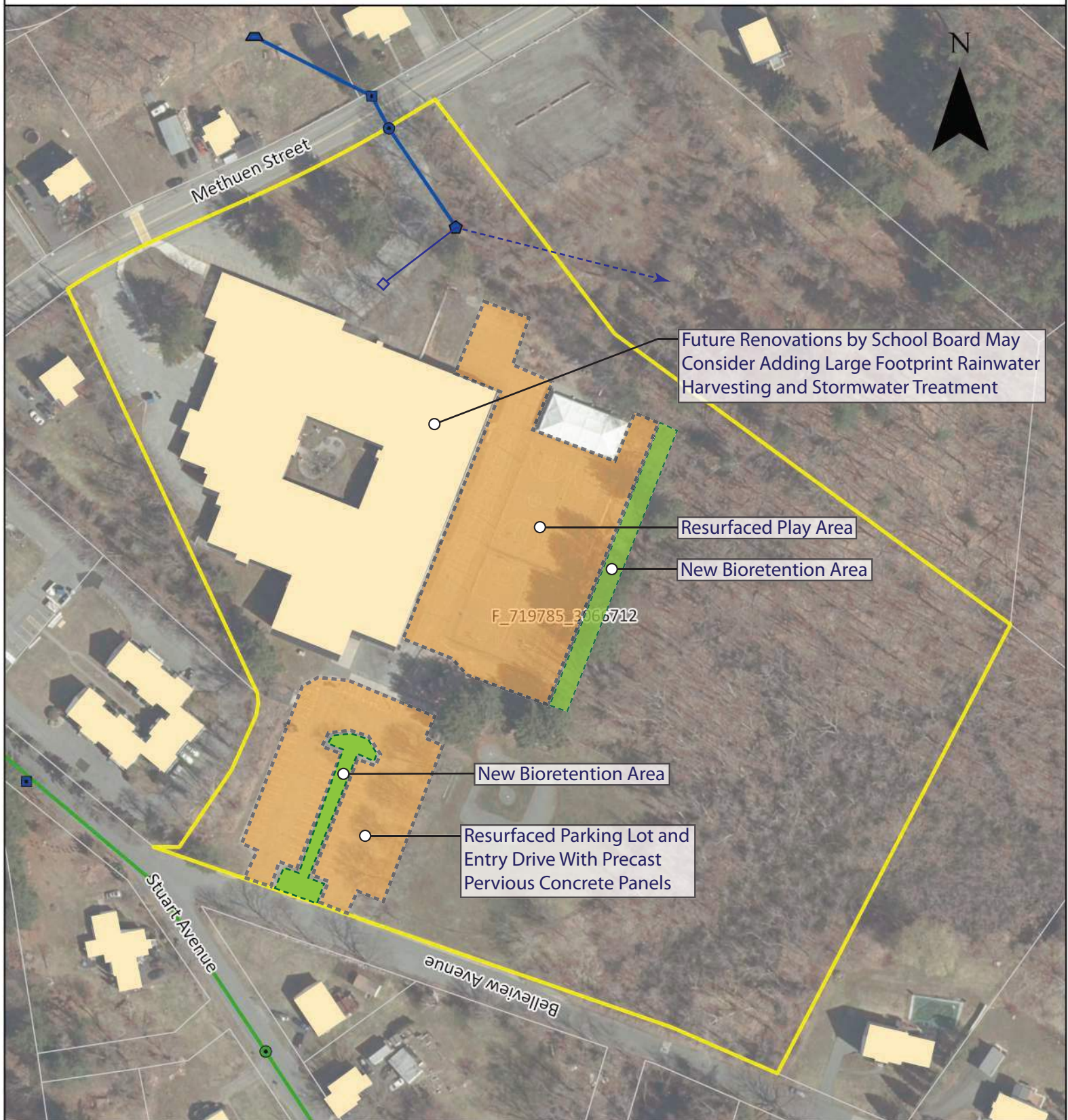
- Manhole
- ▬ Gravity Main
- - - Pressurized Main

1 inch = 150 Feet

0 75 150 Feet

**CDM
Smith**

Joseph A. Campbell Elementary School



Stormwater

- Headwall
- Discharge Point
- Manhole
- Catch Basin
- Gravity Main
- Lateral Line
- Culvert
- Detention Area

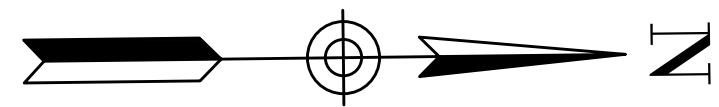
Sewer

- Manhole
- Gravity Main
- Pressurized Main

1 inch = 130 Feet

0 130 Feet

**CDM
Smith**



N/F
EILEEN M. KANE
BOOK 33660 PAGE 14
PARCEL ID: 37-0-56
147 FOX AVENUE

FOX AVENUE
(PUBLIC - VARIABLE WIDTH)

N/F
STEVEN R. BELLEY
& CAROLYN S. BELLEY
BOOK 24999 PAGE 120
PARCEL ID: 37-0-83
152 FOX AVENUE

N/F
WILLIAM C. ZIELINSKI
& MARIA L. ZEILINSKI
BOOK 5974 PAGE 199
PARCEL ID: 37-0-82
28 TALLY HO DRIVE

N/F
RICHARD E. DODGE
& FRANCES J. DODGE
BOOK 2089 PAGE 666
PARCEL ID: 37-0-57
159 FOX AVENUE

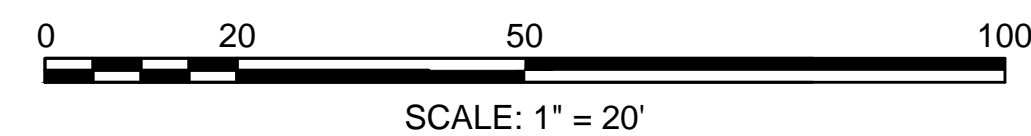
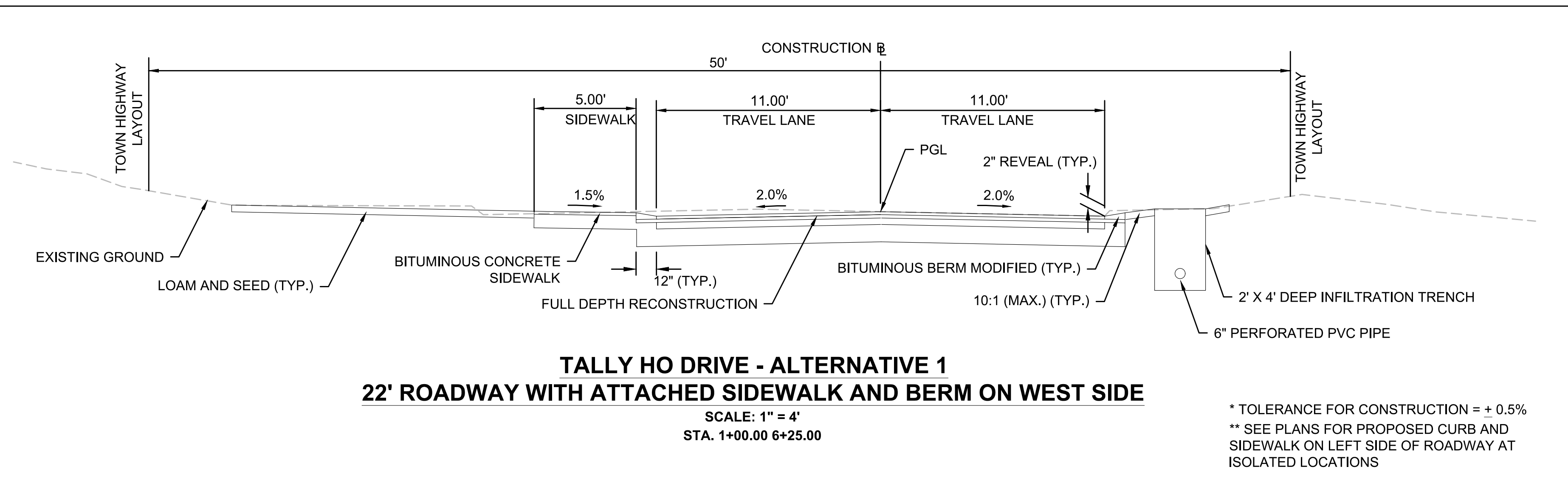
BENCHMARK: 1
AT MAG NAIL IN
UTILITY POLE #4781-1
EL=174.10'

N/F
TERANCE E. LACEY
& DENISE R. LACEY
BOOK 2139 PAGE 241
PARCEL ID: 37-0-16
162 FOX AVENUE

N/F
TARA MCDUGALL
BOOK 33515 PAGE 19
PARCEL ID: 37-13-7
25 TALLY HO DRIVE

2
N: 3072297.885'
E: 710164.474'
EL: 182.28'
MMAG

CONTINUED ON
SHEET NO. 1



PROJECT: DRACUT TALLY HO DRIVE RECONSTRUCTION		
DESIGN SUBMISSION: CONCEPTUAL		
DRAWING TITLE: ALTERNATIVE 1 PLAN 1		
PREPARED FOR: TOWN OF DRACUT PLANNING AND COMMUNITY DEVELOPMENT 62 ARLINGTON STREET DRACUT, MA 01826		
PREPARED BY: GREEN INTERNATIONAL AFFILIATES, INC. TRANSPORTATION STRUCTURAL WATER RESOURCES CIVIL/SITE 100 AMES POND DRIVE, SUITE 200, TEWKSBURY, MA 01876 978.923.0400 www.greenintl.com		
SCALE: AS NOTED	DESIGNED BY: SS	SHEET NO. 1 OF 2
DATE: 5/16/2022	DRAWN BY: MPC	
PROJECT NO. 22003	CHECKED BY: EA	

Appendix B

Veteran's Park

[illegible]

PARCEL 51-22-1
99 MONTAUP AVENUE
N/F
JONATHAN D. &
KIMBERLY A. PATCH
BK 7301 PG 327

NOTRE DAME
STREET

PARCEL 51-0-24
20 NOTRE DAME STREET
N/F
MICHAEL C. SOKOLOWSKI
BK 6310 PG 281

PARCEL 51-0-37
85 ANSONIA STREET
N/T
JOHN F. PACZKOWSKI, TR.,
SUNSET ROCK REALTY TRUST
BK 33051 PG 335

PARCEL: 51-0-36
97 ANSONIA STREET
N/F
PETER P. & KRISTINE A.
NUTTER
BX 6881 PG 158

PARCEL 51-0-35
113 ANSONIA STREET
N/F
DAVID A. & PAULINE M.
FARMER
BK 25271 PG 111

PARCEL 51-D-53
53 MONTAUF AVENUE
N/F
DORATHEA F. COOK, TR
THE 118 HORSESHOE
ROAD REALTY TRUST
BK 8712 PG 212

75' WIDE TOWN OF
DRACUT
MAINTENANCE
EASEMENT
PLAN BK 131 PLAN 4

PARCEL 51-D-55
59 MONTAUP AVENUE
N/F
TERESA M. &
THADDEUS J. NASTEK
BK 4170 PG 279

PARCEL 51-61-3
BROADWAY ROAD
N/F
TOWN OF DRACUT
BK 7977 PG 21
BK 9554 PG 138
BK 17280 PG 105

LEGEND PLAN REFERENCES

NOTES

1. THIS PLAN WAS PREPARED FROM AN ACTUAL ON THE GROUND FIELD SURVEY CONDUCTED BY WSP BETWEEN NOVEMBER 21 AND DECEMBER 11, 2013. BOTH HORIZONTAL DATUM (NAD83) BENCHMARKS AND VERTICAL DATUM (1988) BENCHMARKS WERE OBSERVED/LOCATED BY WSP ON NOVEMBER 21, 2013.
2. THE HORIZONTAL DATUM SHOWN HEREIN IS REFERENCED TO MASSACHUSETTS STATE PLANE COORDINATE SYSTEM NAD83 (USNS) WITH THE "NAD83" SOURCE REFERENCE STATION WILBURN.
3. THE VERTICAL DATUM SHOWN HEREIN REFERENCE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83), USING THE MEAN TECHNICAL SURFACE REFERENCE STATION WILBURN.
4. THE PROPERTY LINES OF LOT 608 PARCEL 91-01-13 HAVE BEEN COMPILED FROM RECORD PLANS AND ORDERS OF ABATEMENT PARCELS.
5. THE "WETLAND" CLASS OF WETLANDS WERE CLASSIFIED BY WSP ENVIRONMENTAL AND SITE INVESTIGATION WSP.
6. SEE SURVEY 1 OF LOT 608 ADJACENT MAP.

GRAPHIC SCALE

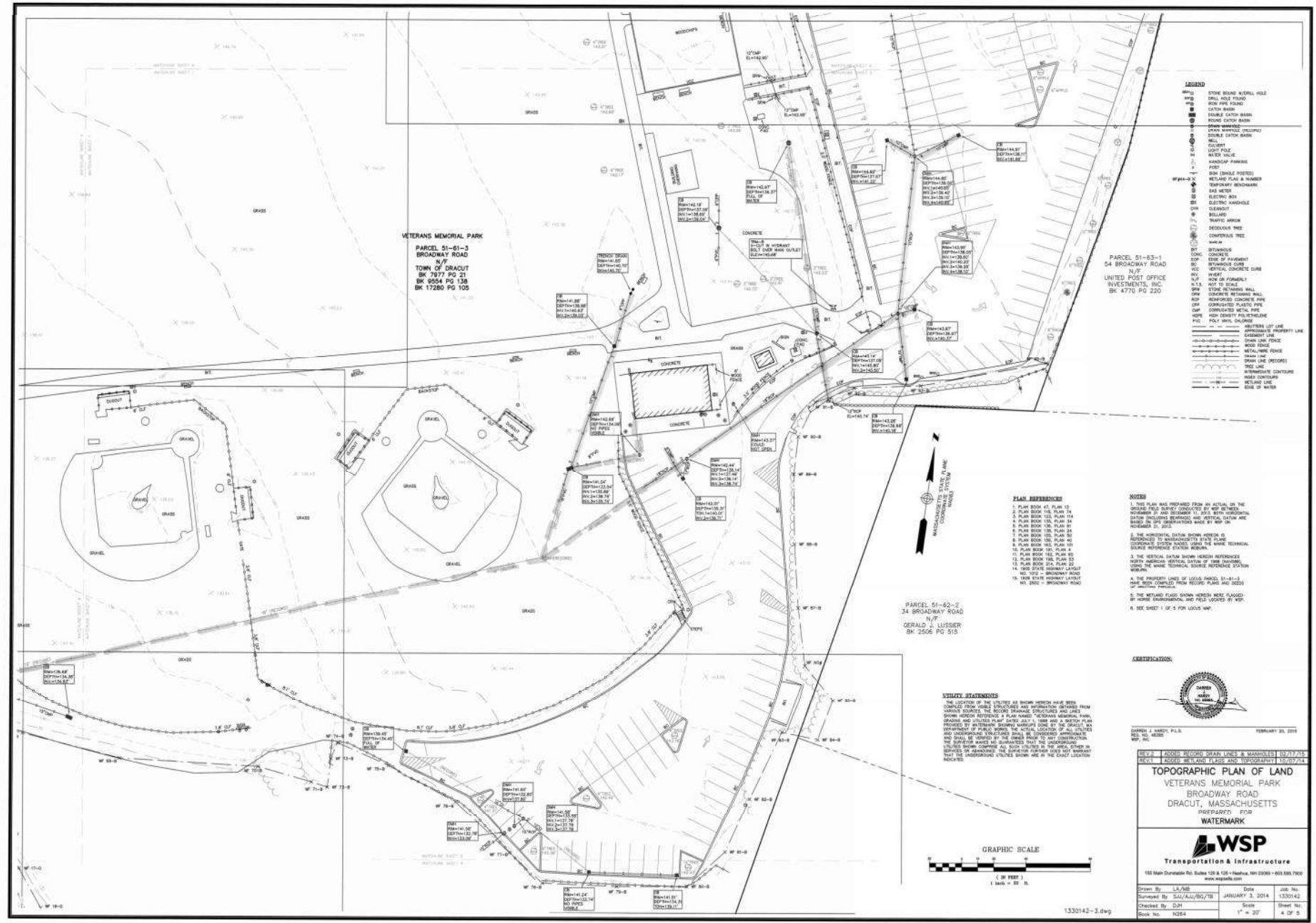
TOPOGRAPHIC PLAN OF LAND
VETERANS MEMORIAL PARK
BROADWAY ROAD
DRACUT, MASSACHUSETTS
PREPARED FOR
WATERMARK



WSP
transportation & infrastructure

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Born By	LA/MB	Date	JANUARY 3, 2014	Job No.	1330142
Surveyed By	SJJ/AJJ/BG/TB				
Checked By	DJH	Scale	1" = 20'	Sheet No.	1 OF 5
Book No.	N264				



1330142-3.dwp

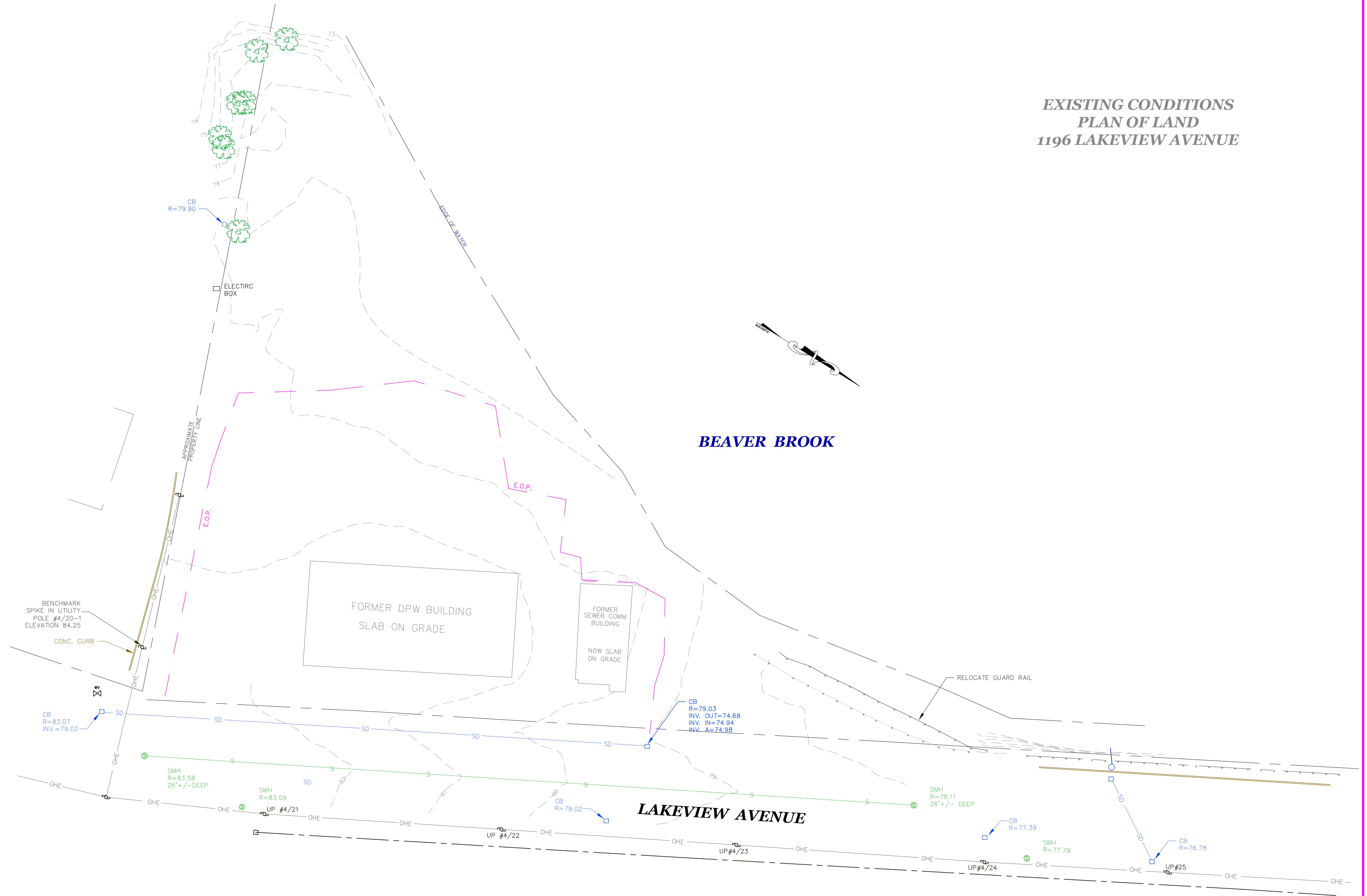
Appendix C

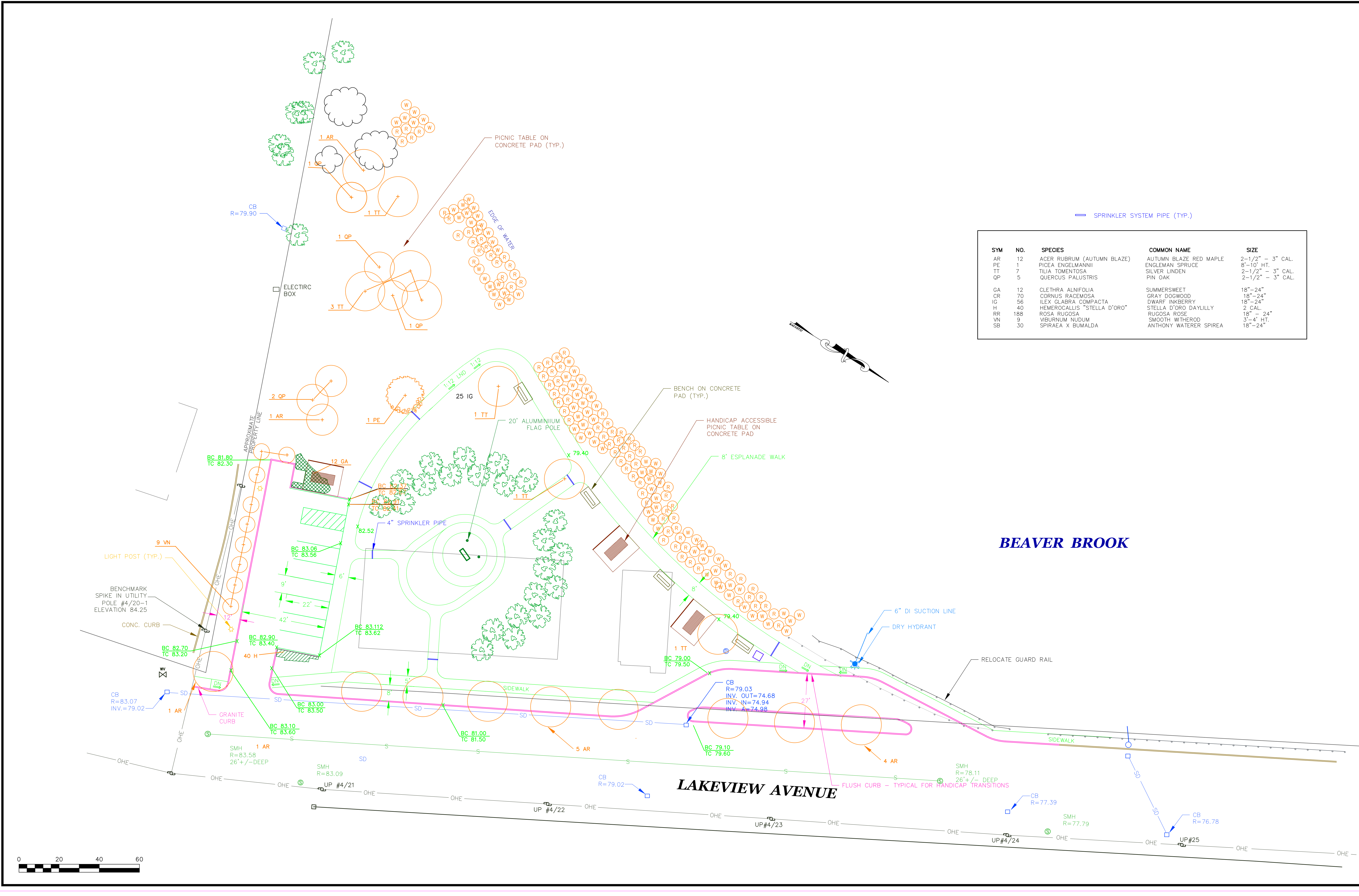
Hovey Park

Appendix D

Matthew G. Boule Memorial Park

**EXISTING CONDITIONS
PLAN OF LAND
1196 LAKEVIEW AVENUE**

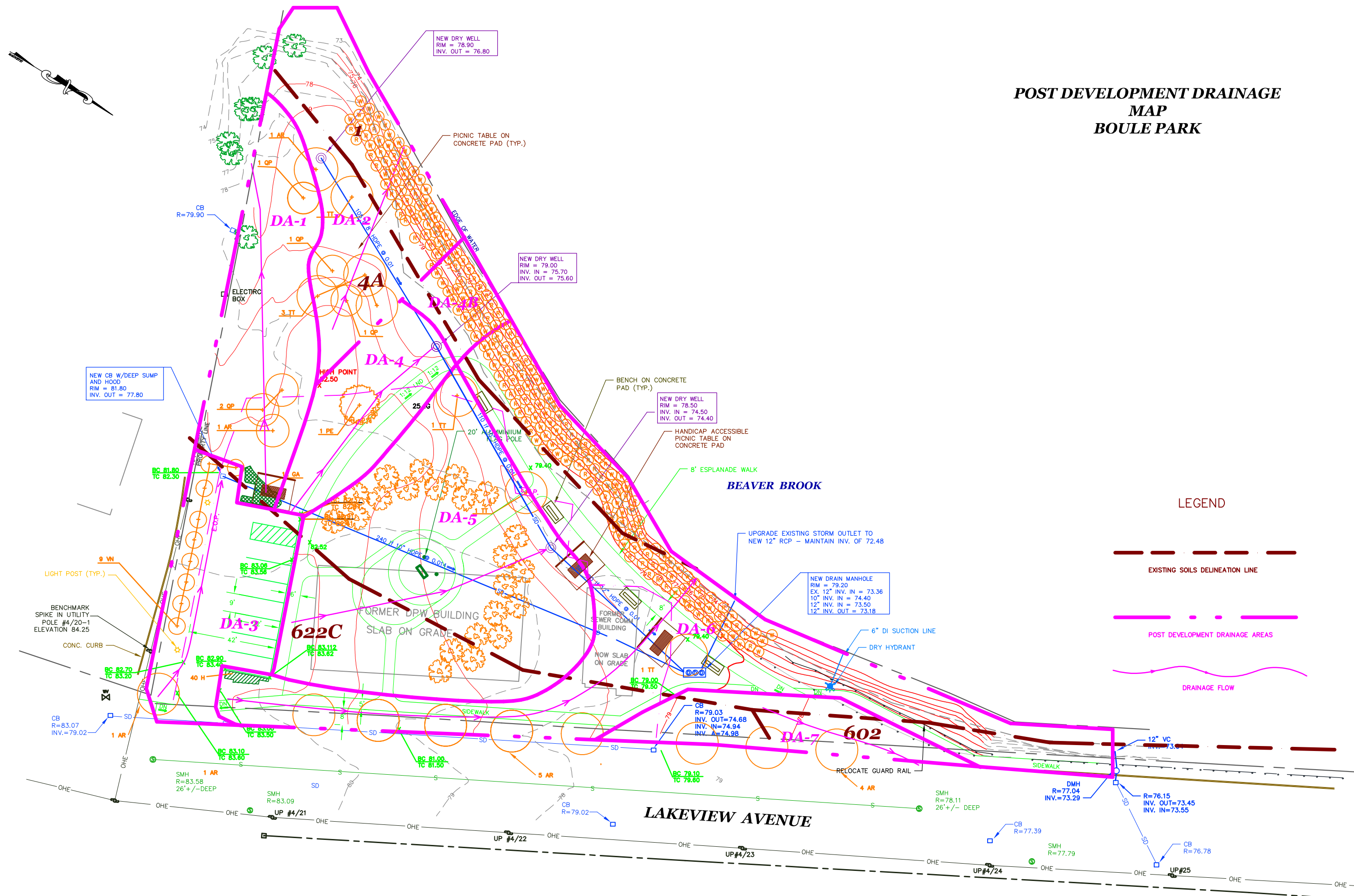




SYM	NO.	SPECIES	COMMON NAME	SIZE
AR	12	ACER RUBRUM (AUTUMN BLAZE)	AUTUMN BLAZE RED MAPLE	2-1/2" - 3" CAL.
PE	1	PICEA ENGELMANNII	ENGLEMAN SPRUCE	8'-10' HT.
TT	7	TILIA TOMENTOSA	SILVER LINDEN	2-1/2" - 3" CAL.
QP	5	QUERCUS PALUSTRIS	PIN OAK	2-1/2" - 3" CAL.
GA	12	CLETHRA ALNIFOLIA	SUMMERSWEET	18"-24"
CR	70	CORNUS RACEMOSA	GRAY DOGWOOD	18"-24"
IG	56	ILEX GLABRA COMPACTA	DWARF INKBERRY	18"-24"
H	40	HEMEROCALLIS "STELLA D'ORO"	STELLA D'ORO DAYLILLY	2 CAL.
RR	188	ROSA RUGOSA	RUGOSA ROSE	18" - 24"
VN	9	VIBURNUM NUDUM	SMOOTH WITHEROD	3'-4' HT.
SB	30	SPIRAEA X BUMALDA	ANTHONY WATERER SPIREA	18"-24"



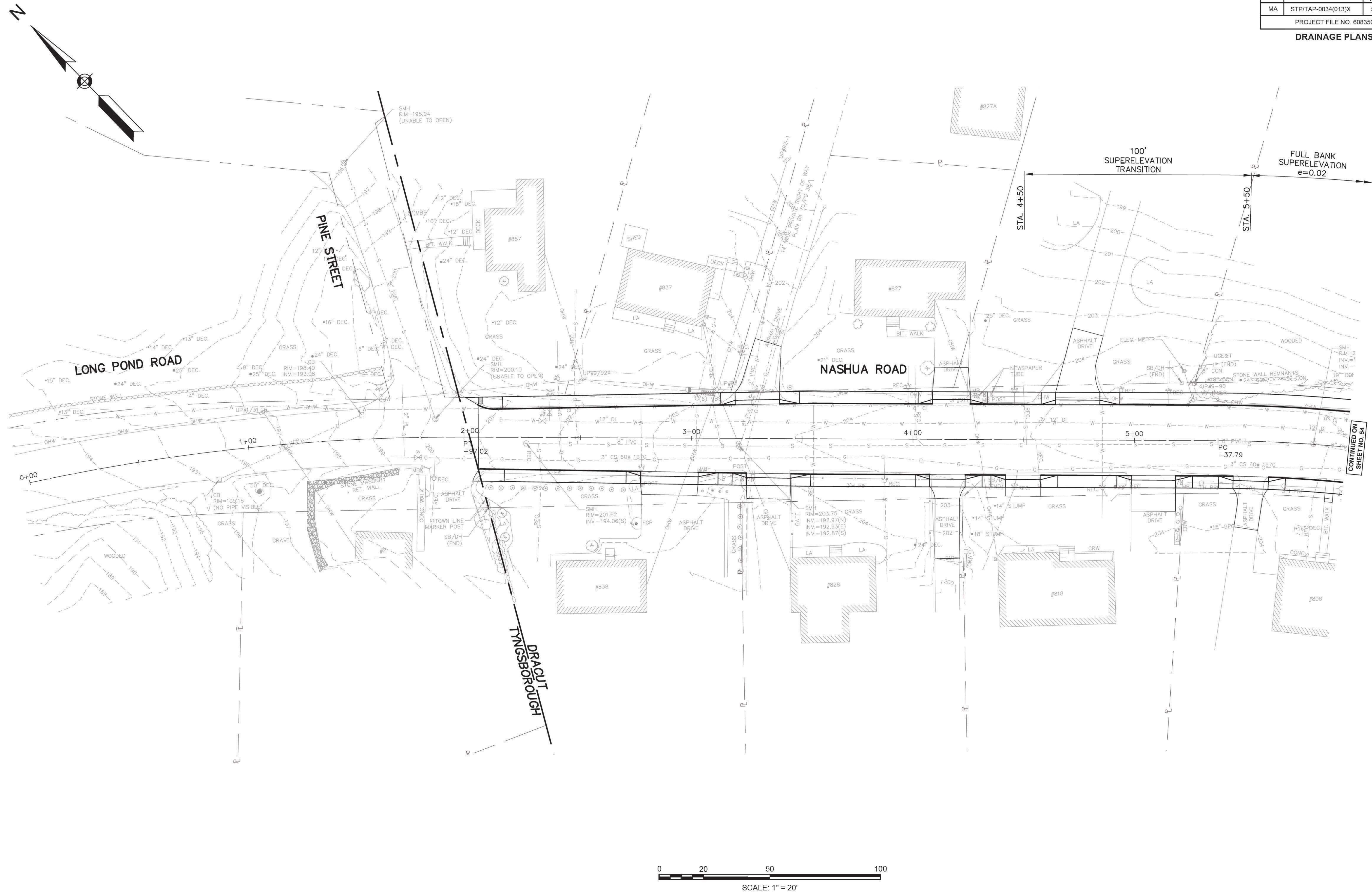
POST DEVELOPMENT DRAINAGE
MAP
BOULE PARK



Appendix E

Nashua Road Improvements

DRACUT NASHUA ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0034(013)X	53	145
PROJECT FILE NO. 608350			
DRAINAGE PLANS			



CONTINUED ON
SHEET NO. 54

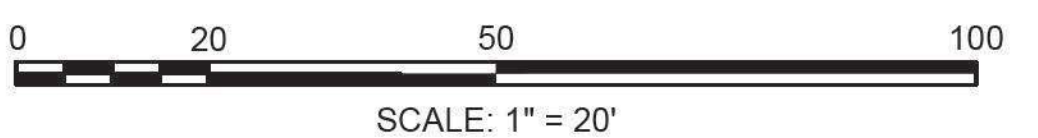
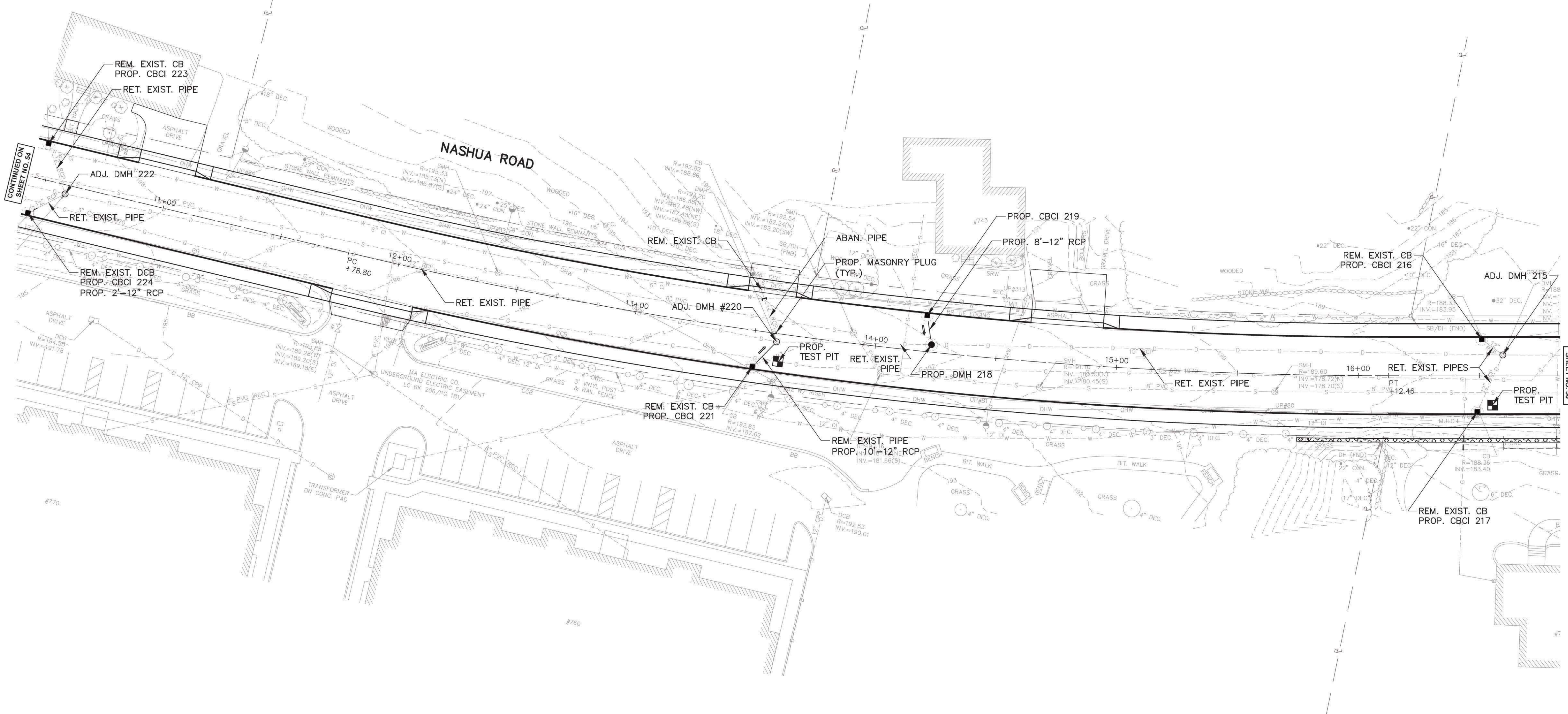
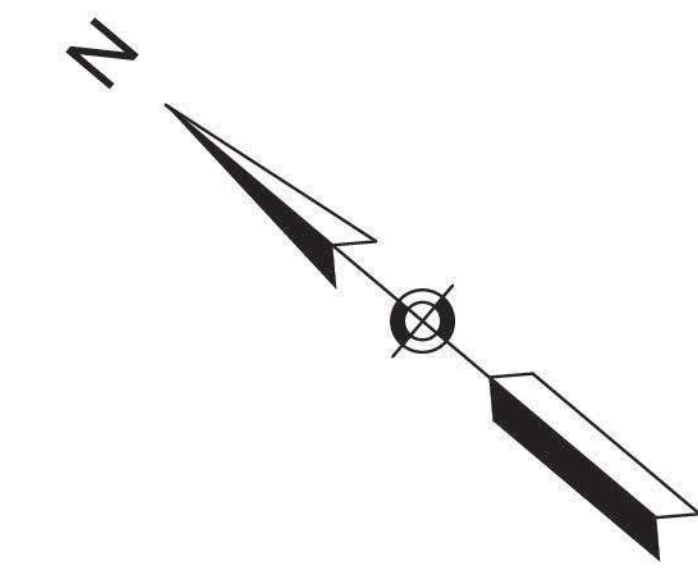


DRACUT
NASHUA ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0034(013)X	55	145

PROJECT FILE NO. 608350

DRAINAGE PLANS



CONTINUED ON
SHEET NO. 54

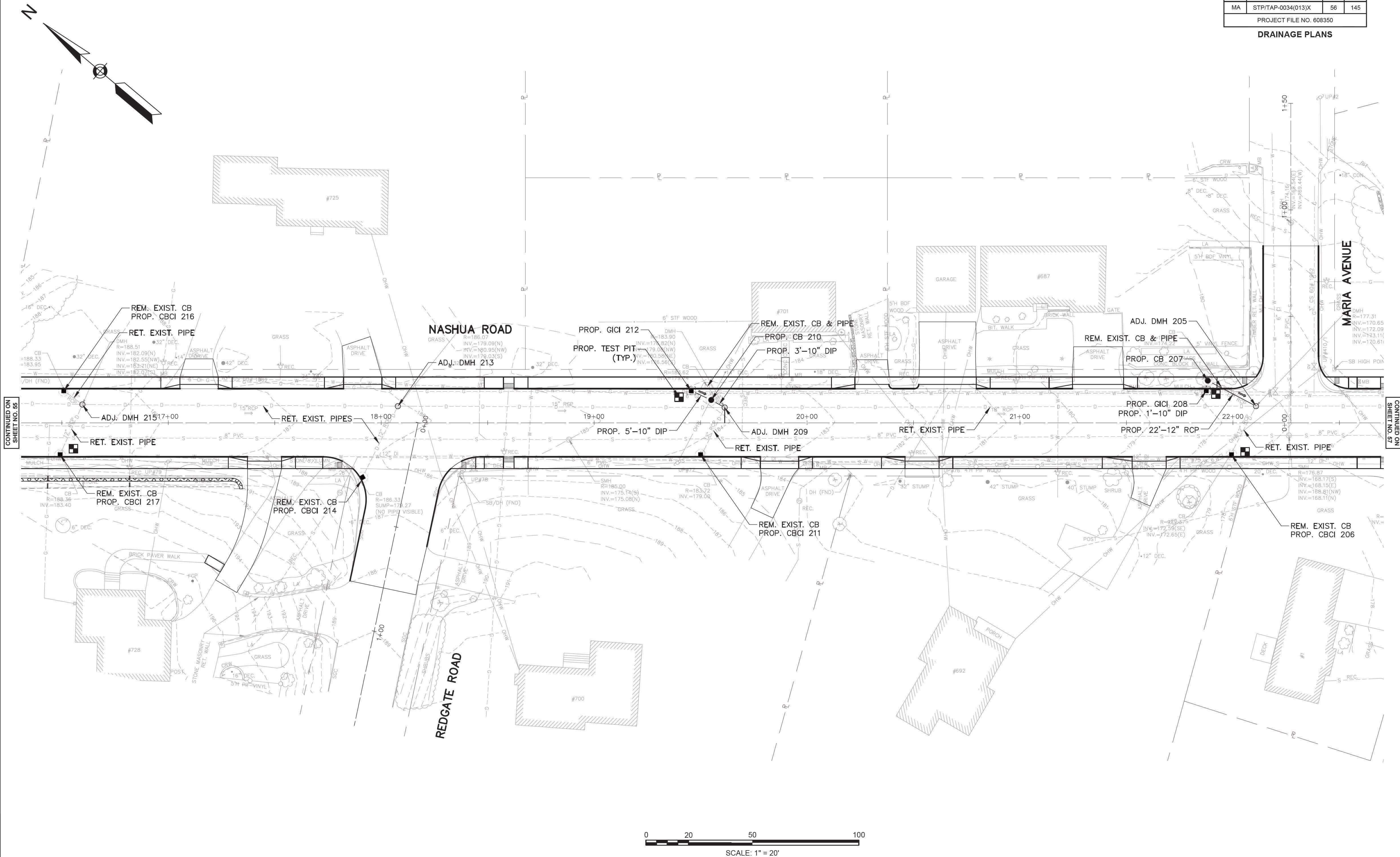
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SHEET NO. 56

DRACUT
NASHUA ROAD

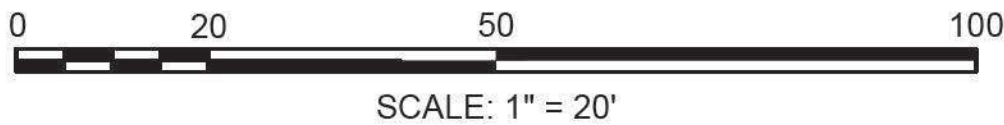
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MA	STP/TAP-0034(013)X	56	145

PROJECT FILE NO. 608350

DRAINAGE PLANS

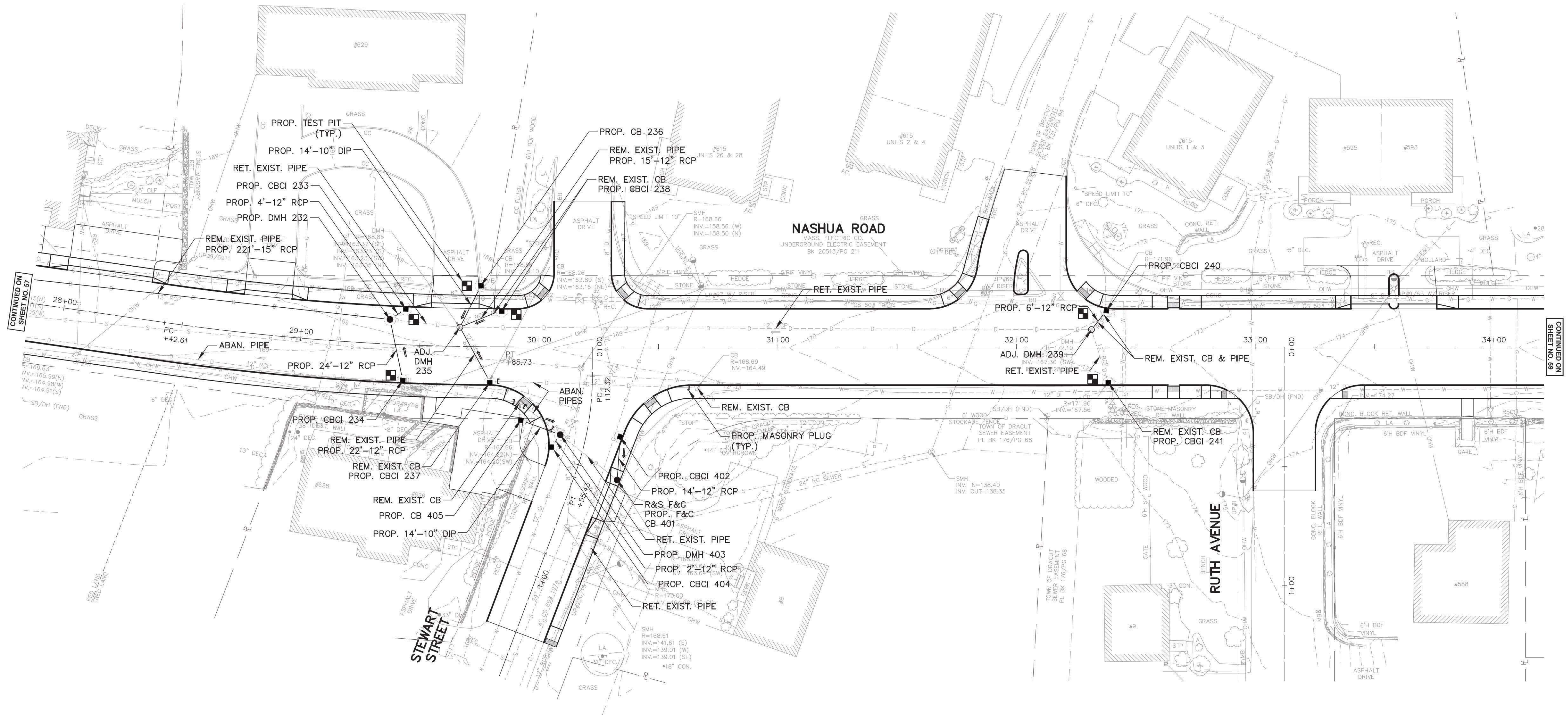


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PROJECT FILE NO. 608350			

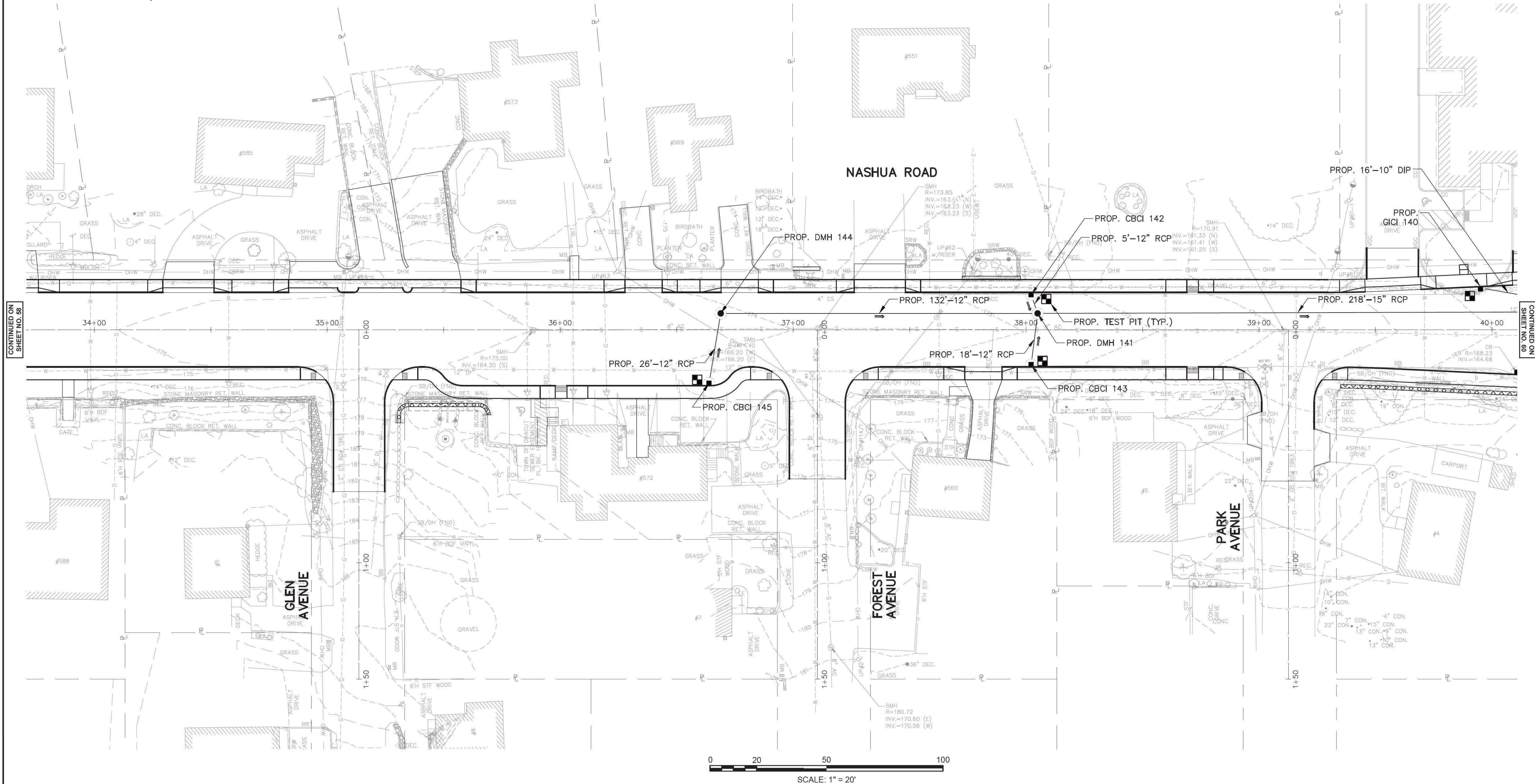
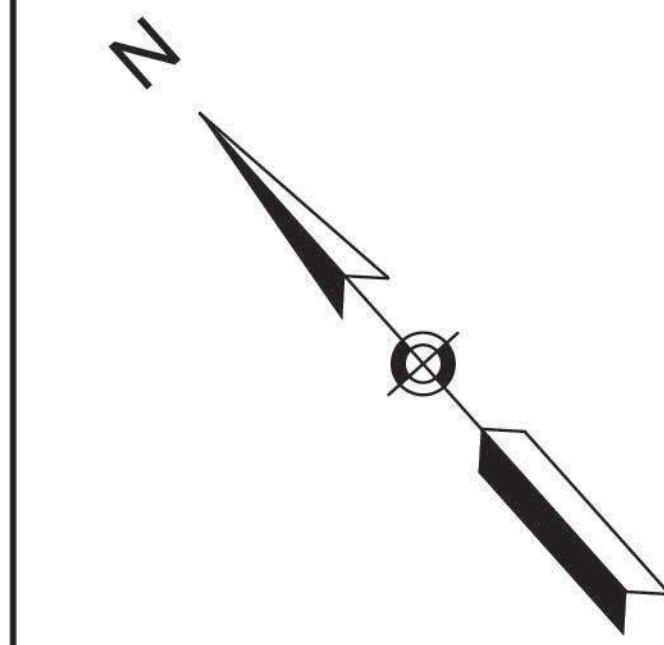


304 DRAINAGE PLANS.DWG Plotted on 17-Nov-2021 12:43 PM

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PROJECT FILE NO. 608350			



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0034(013)X	59	145
PROJECT FILE NO. 608350			



CONTINUED ON
SHEET NO. 58

CONTINUED ON
SHEET NO. 60

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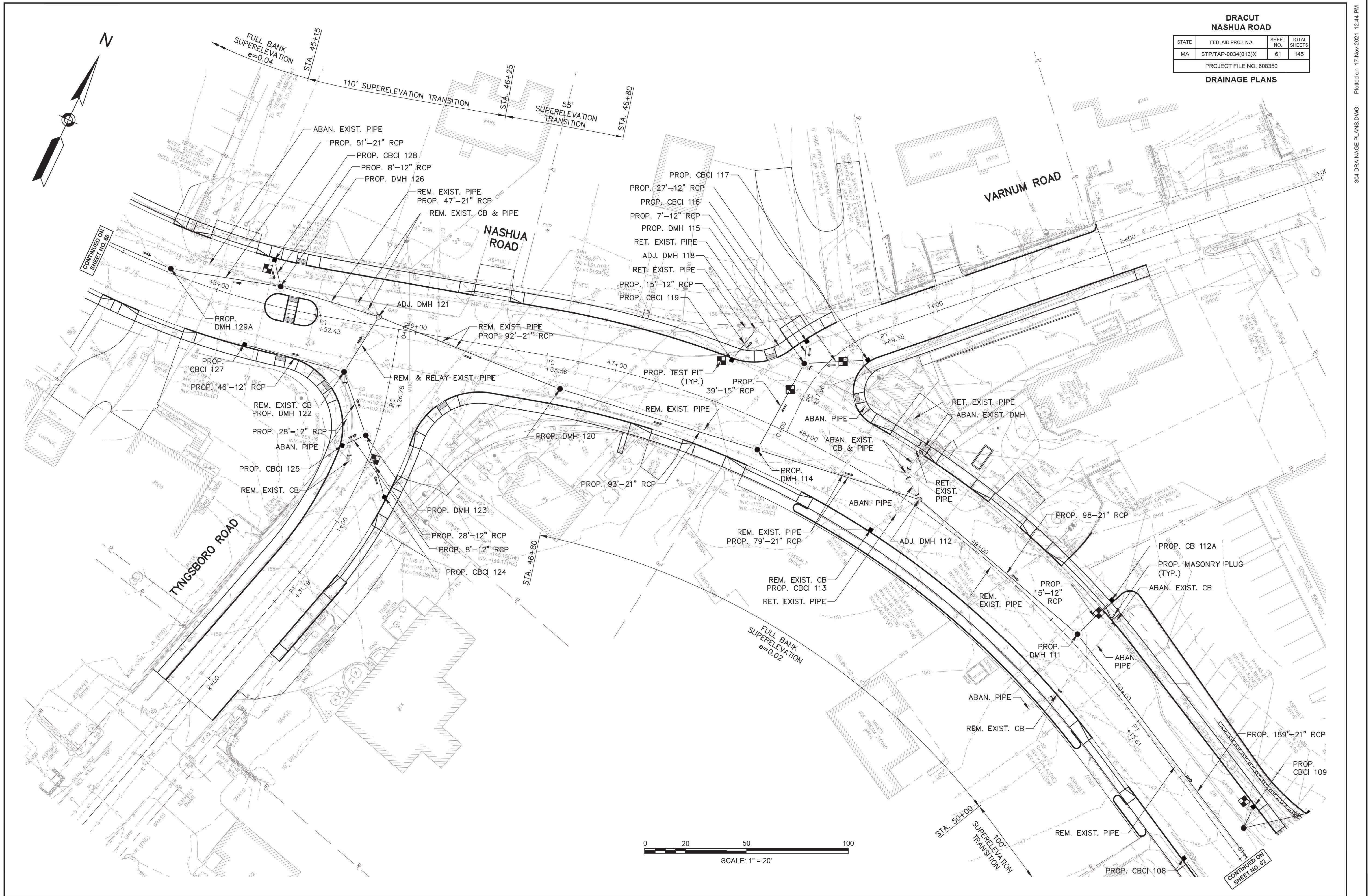


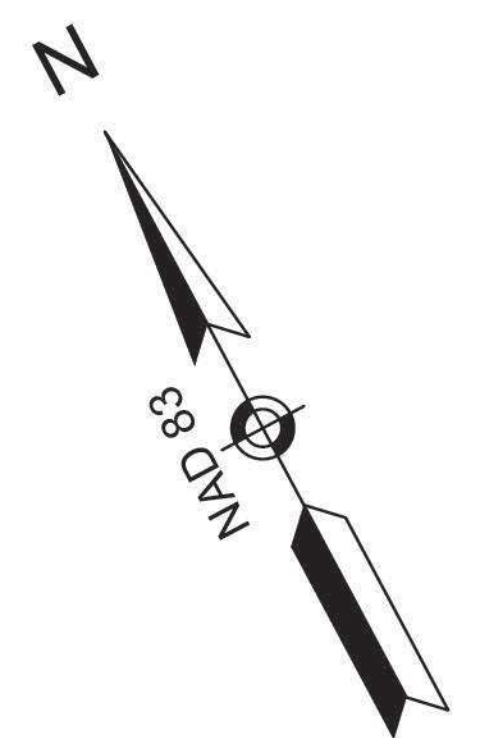
DRACUT
NASHUA ROAD

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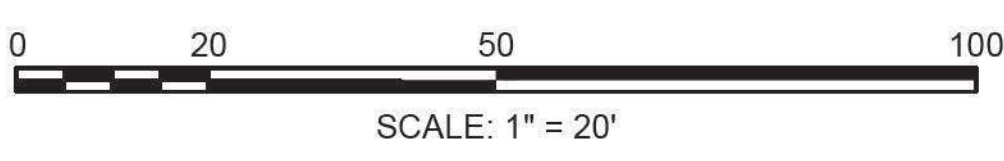
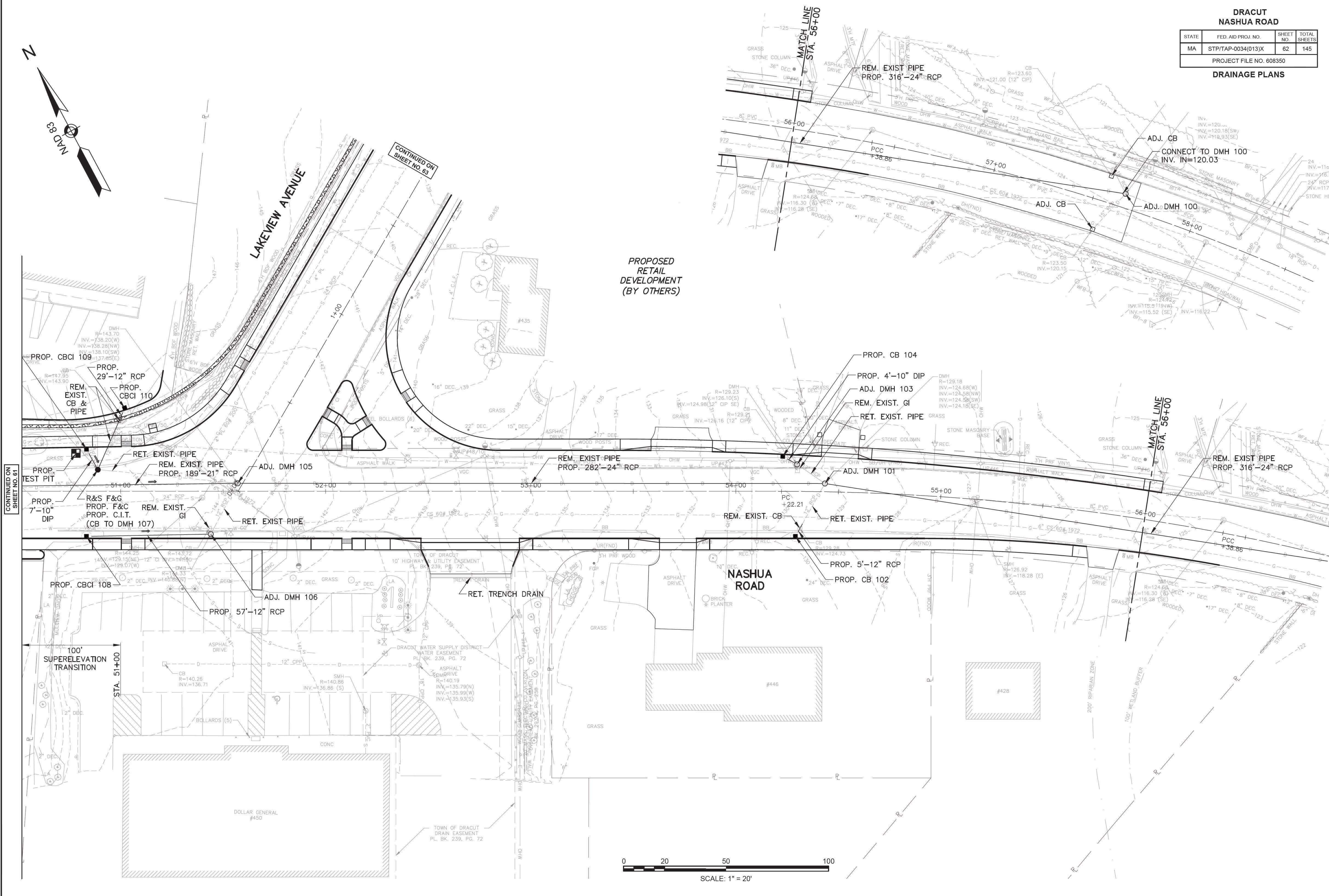
PROJECT FILE NO. 608350

DRAINAGE PLANS





DRACUT NASHUA ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0034(013)X	62	145
PROJECT FILE NO. 608350			
DRAINAGE PLANS			



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0034(013)X	63	145
PROJECT FILE NO. 608350			

