

INDEX TO DRAWINGS

1. TITLE SHEET
2. GENERAL NOTES
3. EXISTING CONDITIONS PLAN
4. DEFINITIVE SUBDIVISION PLAN
(1"=100')
- 5-9. DEFINITIVE SUBDIVISION PLAN
(1"=40')
10. SITE DEVELOPMENT OVERVIEW PLAN
- 11-15. GRADING, DRAINAGE & EROSION
CONTROL PLAN
- 16-20. EROSION & SEDIMENT CONTROL
PLAN
- 21-22. WASHINGTON STREET PLAN &
PROFILE
- 23-24. EDGEWATER DRIVE PLAN & PROFILE
25. CROSS COUNTRY WATER MAIN PLAN
- 26-30. CONSTRUCTION DETAILS
- 31-32. PUMP STATION DETAILS

- | PERMITS & APPROVALS | | |
|-------------------------|--------------|---------------|
| TYPE | APPROVAL NO. | DATE APPROVED |
| DEP ORDER OF CONDITIONS | | |
| MCC ORDER OF CONDITIONS | | |

WAIVERS

<u>TYPE</u>	<u>APPROVAL NO.</u>	<u>DATE APPROVED</u>
DEP ORDER OF CONDITIONS		
MCC ORDER OF CONDITIONS		

Prepared for:
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

DATE OF FILING

DATE OF HEARING

DATE OF APPROVAL

PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

1 OF 32

LEGEND

	SLOPED GRANITE CURB
	VERTICAL GRANITE CURB
	SLOPED CONCRETE CURB
	VERTICAL CONCRETE CURB
	CAPE COD BERM
	DOUBLE SOLID LINE YELLOW
	DOUBLE DASHED LINE YELLOW
	SINGLE SOLID LINE YELLOW
	SINGLE SOLID LINE WHITE
	SINGLE DASHED LINE WHITE
	GAS LINE
	UNDERGROUND TELEPHONE
	WATER LINE
	UNDERGROUND ELECTRIC
	WOOD GUARDRAIL
	METAL GUARDRAIL
	CHAIN LINK FENCE
	STOCKADE FENCE
	POST & RAIL FENCE
	WIRE FENCE
	CONTOUR ELEVATION
	TREE
	UTILITY POLE
	GUY WIRE
	OVERHEAD WIRE
	TREELINE
	PULL BOX
	SIGN
	SPOT ELEVATION
	DRAIN MANHOLE
	CATCH BASIN
	ROOF DRAIN
	CLEANOUT
	VENT
	SEWER MANHOLE
	TELEPHONE MANHOLE
	ELECTRIC MANHOLE
	WATER MANHOLE
	MANHOLE
	GAS VALVE
	GAS SHUT OFF
	WATER VALVE
	WATER SHUT OFF
	FIRE HYDRANT
	BOLLARD
	GAS METER
	ELECTRIC METER
	MONITORING WELL
	LIGHT POLE
	BORING
	WETLAND LINE
	WATER FEATURE
	UNDERGROUND COMM
	DITCH LINE
	EASEMENT LINE
	PROPERTY LINE
	ABUTTER PROPERTY LINE
	BUILDING SETBACK
	SOIL TYPE LINE
	ZONE LINE
	FLOOD ZONE LINE
	TO BE REMOVED
	TO BE REMOVED
	NUMBER OF PARKING SPACES
	TIP DOWN CURB
	PROP. BIT. CONCRETE CURB (BCC)
	PROP. VERTICAL GRANITE CURB (VGC)
	PROP. XXXX CURB (XXX)
	PROP. XXXX CURB (XXX)
	PROP. CLEANOUT
	PROP. CATCH BASIN
	PROP. DRAIN MANHOLE
	MEET EXISTING GRADE
	PROP. SPOT ELEVATION
	PROP. CONTOUR ELEVATION
	TOP OF WALL ELEV.
	BOTTOM OF WALL ELEV.
	GRADE BREAK
	CASCADE GRATE
	PARTICLE SEPARATOR
	TEST PIT
	PROP. GATE VALVE
	PROP. SEDIMENT CONTROL FENCE

PROJECT NOTES:

- THE PURPOSE OF THIS PLAN IS TO SHOW A 29 LOT SINGLE FAMILY RESIDENTIAL DEVELOPMENT ON PARCELS 908-78E-66B, 908-78E-66D, 908-78E-66D, 908-78E-67E, AND 908-76-53C. THE PLANS ALSO SHOW A LOT LINE ADJUSTMENT FOR PARCEL 908-78E-67.
- 2) OWNER OF RECORD:
- PARCEL 908-78E-66B
PARCEL 908-78E-67E
WASHINGTON STREET HOLDINGS, LLC
16 KATA AVENUE
SALEM, NH 03079
- PARCEL 908-78E-66D
THE MCALLISTER SISTERS TRUST
GAYLE MCALLISTER, BEVERLY WARD, AND SUSAN DEMERS, TRUSTEES
7376 SW 98TH STREET
OCALA, FL 34481
- PARCEL 908-78E-53C
KAREN FITZPATRICK
240B WASHINGTON STREET
METHUEN, MA 01844
- PARCEL 908-78E-67
ETHAN CONLEY
PO BOX 1489
SALEM, NH 03079
- 3) THIS PLAN IS THE RESULT OF AN ON-THE-GROUND FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN APRIL 8, 2022 AND OCTOBER 17, 2023.
- 4) BEARINGS SHOWN HEREON ARE BASED ON NAD83 PER GPS OBSERVATIONS PERFORMED BY THIS OFFICE ON APRIL 11, 2022.
- 5) ELEVATIONS SHOWN HEREON ARE BASED ON NAVD88 PER AND OBTAINED FROM NOAA.GOV "2021 USGS LIDAR: CENTRAL EASTERN MASSACHUSETTS" DATA SET. THE ELEVATION DATA WAS VERIFIED BY THE FIELD GPS OBSERVATIONS PERFORMED BY THIS OFFICE IN APRIL 2022.
- SUPPLEMENTAL TOPOGRAPHIC DETAIL WAS OBTAINED ALONG OLD FERRY DRIVE AND WASHINGTON STREET THROUGH AN ON-THE-GROUND FIELD SURVEY PERFORMED BY THIS OFFICE ON OR BETWEEN APRIL 8, 2022 AND OCTOBER 17, 2023.
- 6) LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE ONLY. ADDITIONAL UNDERGROUND UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED. INVERTS ARE LISTED IN A CLOCKWISE DIRECTION ENDING WITH THE INVERT OUT (UNLESS OTHERWISE NOTED).
- 7) A PORTION OF THE SURVEY TRACT IS LOCATED IN SPECIAL FLOOD HAZARD AREA ZONE AE (1% ANNUAL CHANCE FLOOD) AND IN A FLOODWAY AREA PER FLOOD INSURANCE RATE MAP NUMBER 250080009F, WITH AN EFFECTIVE DATE OF JULY 3, 2012.
- 8) EDGE OF WETLANDS DELINEATED BY TIMOTHY FERWERDA OF FERWERDA MAPPING LLC IN APRIL 2021 ON JULY 22, 2022. SEE ORDER OF RESOURCE AREA DELINEATION DATED OCTOBER 7, 2022, DEP FILE NO. 21-1275.
- 9) EASEMENTS, RIGHTS AND RESTRICTIONS SHOWN OR IDENTIFIED ARE THOSE WHICH WERE FOUND DURING RESEARCH AT THE REGISTRY OF DEEDS, OTHER RIGHTS, RESTRICTIONS AND EASEMENTS MAY EXIST WHICH A TITLE EXAMINATION OF THE SUBJECT PARCEL(S) WOULD DETERMINE.

WAIVERS:

THE FOLLOWING WAIVERS FROM THE CITY OF METHUEN SUBDIVISION REGULATIONS ARE REQUESTED

- 1) SECTION 4.2.3.2 DEAD ENDS - STREET GREATER THAN 500' (WASHINGTON STREET 1,300', EDGEWATER DRIVE 1,500').
- 2) SECTION 5.3.1 STREETS AND ROADWAYS - GENERAL - 26' PAVEMENT WIDTH REQUIRED, 24' WIDE PROPOSED FOR WASHINGTON STREET AND 22' WIDE PROPOSED FOR EDGEWATER DRIVE.
- 3) SECTION 5.3.7 CURBS AND BERMS - SLOPED GRANITE CURBING REQUIRED, BITUMINOUS CONCRETE CURBING PROPOSED.
- 4) SECTION 5.7.1 SIDEWALK LOCATION - 5' WIDE SIDEWALKS ALONG BOTH SIDES REQUIRED, SIDEWALK ON ONLY ONE SIDE OF EPROPOSED.

CONSTRUCTION NOTES:

- 1) ALL DRAINAGE PIPE SHALL BE CORRUGATED HIGH-DENSITY POLYETHYLENE PIPE WITH STANDARD JOINTS, DUAL-WALL, SMOOTH INTERIOR, AS MANUFACTURED BY ADS, INC., OR APPROVED EQUAL UNLESS OTHERWISE NOTED ON PLAN.
- 2) ELEVATIONS ARE BASED ON NAVD88 DATUM.
- 3) ANY UTILITY FIELD ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER OF RECORD AND COORDINATED WITH THE APPROPRIATE LOCAL UTILITY COMPANY.
- 4) THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- 5) ALL CONSTRUCTION SHALL CONFORM TO MUNICIPAL DPW AND ALL APPLICABLE STATE AND FEDERAL STANDARDS.
- 6) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIG-SAFE (DIAL 811) PRIOR TO COMMENCING ANY EXCAVATION.
- 7) THIS SITE WILL REQUIRE A USEPA NPDES PERMIT FOR STORMWATER DISCHARGE FOR THE SITE. CONSTRUCTION SINCE THE DISTURBANCE EXCEEDS ONE ACRE (ACTUAL DISTURBANCE = 737,900 SF±). THE CONSTRUCTION SITE OPERATOR SHALL DEVELOP AND IMPLEMENT A CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN (SWPPP), WHICH SHALL REMAIN ON SITE AND MADE ACCESSIBLE TO THE PUBLIC. A NOTICE OF INTENT (NOI) SHALL BE FILED WITH THE EPA AT LEAST 14 CALENDAR DAYS PRIOR TO CONSTRUCTION. A COMPLETED NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO THE EPA WITHIN 30 DAYS AFTER EITHER OF THE FOLLOWING CONDITIONS HAVE BEEN MET: FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITTEE IS RESPONSIBLE; OR ANOTHER OPERATOR/PERMITTEE HAS ASSUMED CONTROL OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
- 8) ALL TRAFFIC CONTROL AND TEMPORARY CONSTRUCTION SIGNAGE ARRANGEMENTS, ACCEPTABLE TO MASSDOT AND THE CITY DEPARTMENT OF PUBLIC WORKS, SHALL BE EMPLOYED DURING OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY.
- 9) ALL PROPOSED CATCH BASINS SHALL HAVE 4" STUMPS AND OUTLETS EQUIPPED WITH "ELIMINATOR" OIL HOODS OR APPROVED EQUAL.
- 10) ALL PIPE DATA IS CALCULATED TO OPERATION OF STRUCTURE, TYPE, TYP.
- 11) CONTRACTOR TO REFER TO THE CENTER & MAINTENANCE (C&M) MANUAL FOR STORMWATER MANAGEMENT SYSTEMS & SITE MAINTENANCE DURING AND AFTER CONSTRUCTION.
- 12) THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT ALL TIMES.
- 13) ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
- 14) THE CONTRACTOR SHALL STABILIZE ALL DITCHES, SWALES, AND PONDS PRIOR TO DIRECTING STORMWATER RUN-OFF TO THEM.
- 15) PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONFIRM WITH THE ENGINEER THAT HE HAS THE MOST RECENT SET OF PLANS. SITE WORK SHALL BE CONSTRUCTED FROM A COMPLETE SET OF PLANS, NOT ALL FEATURES ARE DETAILED ON EVERY PLAN. THE ENGINEER IS TO BE NOTIFIED OF ANY CONFLICT WITHIN THIS PLAN SET.
- 16) CONTRACTOR SHALL CONFIRM WITH ENGINEER ALL LAYOUT TEMS NOT SHOWN OR ANNOTATED. THE CONTRACTOR SHALL IDENTIFY AND UTILIZE EXISTING CURBS PRIOR TO LAYING OUT OF PAVED AREAS. EXACT LOCATION OF PAVEMENT SHALL BE CONFIRMED WITH ENGINEER PRIOR TO PLACEMENT OF BINDER COURSE PAVEMENT.
- 17) SEE CONSTRUCTION DETAIL SHEETS FOR ADDITIONAL INFORMATION.
- 18) ROOF RUNOFF FROM ALL HOMES SHALL BE COLLECTED BY GUTTERS AND DOWNSPOUTS DIRECTED TO STORMWATER DITCHES (SEE DETAIL SHEET 2g). THE ROOF INFILTRATION UNITS SHALL BE MAINTAINED BY THE HOMEOWNER.
- 19) ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE CITY OF METHUEN AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- 20) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROL DEVICES SHOWN ON THE PLANS THROUGHOUT THE DURATION OF THE PROJECT IN ACCORDANCE WITH APPLICABLE STANDARDS. THE DETAILS PROVIDED SERVE AS A GUIDE ONLY.
- 21) CONTRACTOR SHALL VERIFY TBW ELEVATIONS PRIOR TO CONSTRUCTION.
- 22) THE CONTRACTOR SHALL COORDINATE MATERIALS AND INSTALLATION SPECIFICATIONS WITH THE INDIVIDUAL UTILITY AGENCIES/COMPANIES, AND ARRANGE FOR ALL INSPECTIONS.
- 23) THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES AND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE AGREED TO BY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIG SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE DIGGING.
- 24) CONTRACTOR SHALL DISPOSE OF ANY UNSUITABLE MATERIAL ONSITE (I.E. TRASH, STUMPS, ETC.) IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
- 25) STORM DRAINAGE SYSTEM SHALL BE CONSTRUCTED TO LINE AND GRADE AS SHOWN ON THE PLANS. CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO CITY OF METHUEN STANDARDS.
- 26) ALL RIMS AND GRATES TO BE SET AT FINISH PAVEMENT GRADE REGARDLESS OF STATED RIM ELEVATIONS.

TEMPORARY EROSION CONTROL MEASURES:

- 1) SEDIMENT TRAPS SHALL BE INSTALLED AS REQUIRED. BARRIERS AND TRAPS ARE TO BE MAINTAINED AND CLEANED UNTIL ALL SLOPES HAVE A HEALTHY STAND OF GRASS.
- 2) MULCH SHALL BE MOWINGS OF ACCEPTABLE HERBACEOUS GROWTH, FREE FROM NOXIOUS WEEDS OR WOODY STEMS, AND SHALL BE DRY. NO SALT YARD SHALL BE USED.
- 3) FILL MATERIAL SHALL BE FREE FROM STUMPS, WOOD, ROOTS, ETC.
- 4) STOCKPILED MATERIALS SHALL BE PLACED ONLY IN AREAS SHOWN ON THE PLANS. STOCKPILES SHALL BE PROTECTED BY SEDIMENT CONTROL FENCE AND SEEDED TO PREVENT EROSION. THESE MEASURES SHALL REMAIN UNTIL ALL MATERIAL HAS BEEN PLACED OR DISPOSED OFF SITE.
- 5) ALL DISTURBED AREAS SHALL BE LOAMED AND SEEDED. A MINIMUM OF 6 INCHES OF LOAM SHALL BE INSTALLED WITH NOT LESS THAN ONE POUND OF SEED PER 50 SQUARE YARDS OF AREA.
- 6) SEED MIX SHALL BE EQUAL PARTS OF RED FESCUE (CREEPING), KENTUCKY BLUEGRASS, REDTOP PERENNIAL RYEGRASS.
- 7) AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED THE TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED.
- 8) PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES. PROVIDE SWEEPING ON A DAILY BASIS OR AS DIRECTED BY THE CITY.
- 9) ALL CATCH BASIN INLETS WILL BE PROTECTED WITH INLET PROTECTION -- SEE DETAIL.
- 10) ALL Dewatering OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA.

CONSTRUCTION SEQUENCE:

- 1) INSTALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES AS REQUIRED.
- 2) CUT AND STUMP AREAS OF PROPOSED CONSTRUCTION.
- 3) REMOVE AND STOCKPILE TOPSOIL. STOCKPILE SHALL BE SEED TO PREVENT EROSION.
- 4) CONSTRUCT CLOSED DRAINAGE SYSTEM. PROTECT CULVERT INLETS AND CATCH BASINS WITH SEDIMENTATION BARRIERS.
- 5) PERFORM SITE GRADING, PLACING SEDIMENT CONTROLATION FENCES AS REQUIRED TO CONTROL SOIL EROSION.
- 6) INSTALL UNDERGROUND UTILITIES.
- 7) BEGIN TEMPORARY AND PERMANENT SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEED OR MULCHED IMMEDIATELY AFTER THEIR CONSTRUCTION.
- 8) DAILY, OR AS REQUIRED, CONSTRUCT, INSPECT, AND IF NECESSARY, RECONSTRUCT TEMPORARY BERM, DRAIN, DITCHES, SEDIMENT CONTROL FENCES AND SEDIMENT TRAPS INCLUDING MULCHING AND SEEDING. REFER TO OPERATION AND MAINTENANCE PLAN FOR ADDITIONAL REQUIREMENTS AND INFORMATION. COPIES OF ALL INSPECTION REPORTS ARE TO BE PROVIDED TO THE CONSERVATION COMMISSION DURING CONSTRUCTION AND AVAILABLE UPON REQUEST AFTER CONSTRUCTION IS COMPLETED.
- 9) BEGIN EXCAVATION FOR AND CONSTRUCTION OF HOMES.
- 10) FINISH PAVING ALL ROADWAYS.
- 11) COMPLETE PERMANENT SEEDING AND LANDSCAPING.
- 12) AFTER GRASS HAS BEEN FULLY GERMINATED IN ALL SEEDER AREAS, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.

OPERATIONS/MAINTENANCE PLAN FOR STORMWATER SYSTEM:

CONSTRUCTION PHASE:

- 1) THE CONTRACTOR IS TO INSTALL AND MAINTAIN DRAINAGE FACILITIES AS SHOWN ON THE SITE PLANS BY GREENMAN-PEDERSEN, INC.
- 2) PRIOR TO CONSTRUCTION, ALL EROSION/SEDIMENT CONTROL MEASURES SHOWN ON ABOVE PLAN ARE TO BE INSTALLED. TO PREVENT SEDIMENT CONTROL INTRUSION INTO SURROUNDING AREAS DURING CONSTRUCTION, THE CONTRACTOR IS TO SET SEDIMENT CONTROL FENCING AT ALL SLOPES WHICH MAY ERODE IN THE DIRECTION OF ANY OPEN DRAINAGE FACILITIES OR ADJUTING PROPERTY. SUCH PREVENTIVE MEASURES ARE TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS.
- 3) ALL CONSTRUCTION OF DRAINAGE FACILITIES IS TO BE INSPECTED BY INSPECTORS FROM THE CITY OF METHUEN AND BY AN AUTHORIZED AGENT TO VERIFY CONFORMANCE TO THE DESIGN PLAN.
- 4) THE SEQUENCE OF DRAINAGE CONSTRUCTION SHALL BE AS FOLLOWS:
 - A) CLEAR, GRUB, EXCAVATE AREAS FOR STORMWATER BASINS.
 - B) INSTALL CATCH BASINS, PIPES AND MANHOLES.
- 5) EROSION CONTROLS ARE TO BE INSPECTED AND MAINTAINED ON A DAILY BASIS. UPON DISCOVERY OF SEDIMENT CONTROLATION BUILD-UP IN ANY CATCH BASIN SUMP OR ANY OTHER STRUCTURE, CLEANING SHALL BE PERFORMED WITHIN 24 HOURS.
- 6) ALL EXPOSED SOILS SHALL BE IMMEDIATELY STABILIZED WITH A LAYER OF MULCH HAY.
- 7) UPON INSTALLATION OF CATCH BASINS, INLET PROTECTION – AS DESCRIBED ON FOREMENTIONED PLAN – SHALL BE INSTALLED AND MAINTAINED UNTIL READY FOR PAVING.
- 8) PRIOR TO CONSTRUCTION OF IMPERVIOUS AREAS, ALL DRAINAGE STRUCTURES AND PIPES SHALL BE INSTALLED AND INSPECTED FOR PROPER FUNCTION. DURING CONSTRUCTION OF OTHER SITE AREAS, ALL DRAINAGE FACILITIES SHALL BE INSPECTED ON A DAILY BASIS AND CLEANED/REPAIRED IMMEDIATELY UPON DISCOVERY OF SEDIMENT BUILD-UP OR DAMAGE.
- 9) AFTER PAVING IS INSTALLED, IT SHALL BE SWEEP CLEAN AS NEEDED.
- 10) INSPECTIONS ARE TO BE PERFORMED AND INSPECTION LOGS FILLED OUT IN ACCORDANCE WITH US EPA CGP REQUIREMENTS FROM THE START OF CONSTRUCTION THROUGH FINAL STABILIZATION. THE START OF CONSTRUCTION MEANS THE INITIAL DISTURBANCE OF SOILS ASSOCIATED WITH CONSTRUCTION. FINAL STABILIZATION MEANS 70% VEGETATIVE GROWTH FOR UNPAVED AREAS.

POST CONSTRUCTION PHASE:

SEE "OPERATION & MAINTENANCE PLAN AND LONG TERM POLLUTION PREVENTION PLAN FOR STORMWATER MANAGEMENT SYSTEMS".

**METHUEN COMMUNITY
DEVELOPMENT BOARD**

DATE OF FILING _____

DATE OF HEARING _____

DATE OF APPROVAL _____

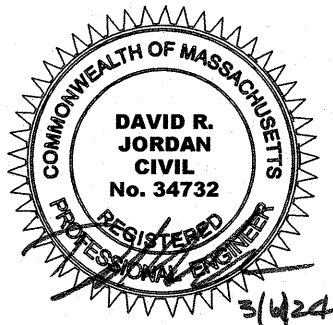
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	NEX-2200136

2 OF 32



PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



REVISIONS

[illegible]

MARCH 6. 2024

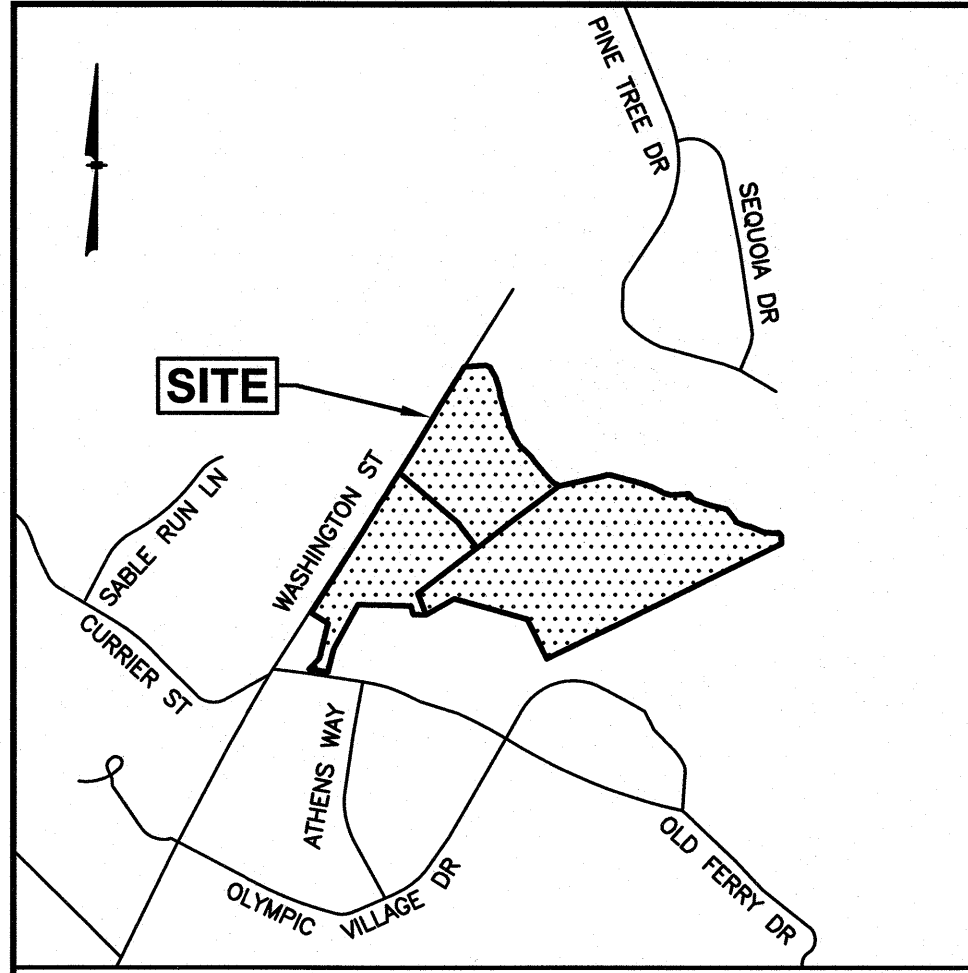
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GMP	DRJ
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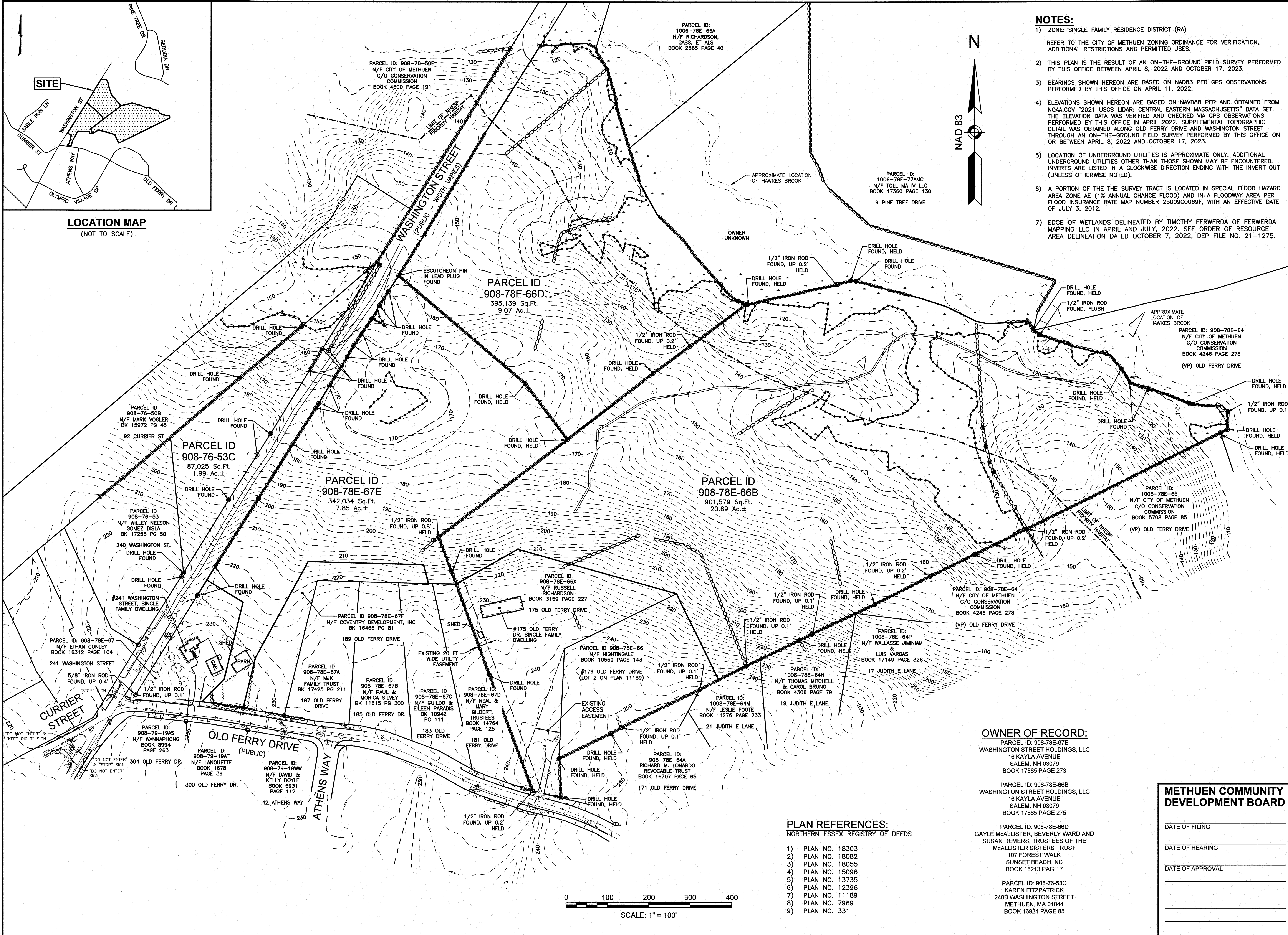
GENERAL NOTES

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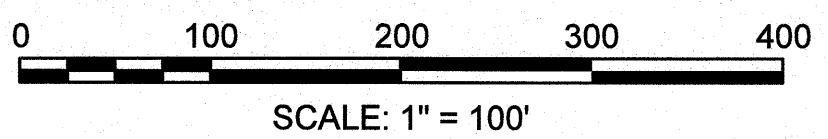
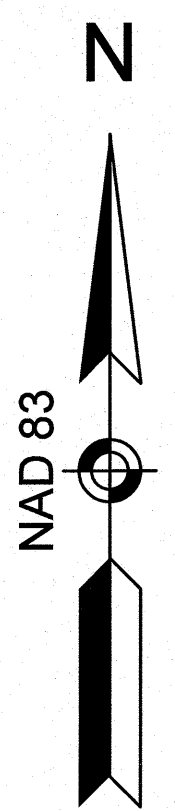
PROJECT NO.
NEX-2200136



LOCATION MAP
(NOT TO SCALE)



- NOTES:**
- 1) ZONE: SINGLE FAMILY RESIDENCE DISTRICT (RA)
REFER TO THE CITY OF METHUEN ZONING ORDINANCE FOR VERIFICATION, ADDITIONAL RESTRICTIONS AND PERMITTED USES.
 - 2) THIS PLAN IS THE RESULT OF AN ON-THE-GROUND FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN APRIL 8, 2022 AND OCTOBER 17, 2023.
 - 3) BEARINGS SHOWN HEREON ARE BASED ON NAD83 PER GPS OBSERVATIONS PERFORMED BY THIS OFFICE ON APRIL 11, 2022.
 - 4) ELEVATIONS SHOWN HEREON ARE BASED ON NAVD88 PER AND OBTAINED FROM NOAA.GOV "2021 USGS LIDAR: CENTRAL EASTERN MASSACHUSETTS" DATA SET. THE ELEVATION DATA WAS VERIFIED AND CHECKED VIA GPS OBSERVATIONS PERFORMED BY THIS OFFICE IN APRIL 2022. SUPPLEMENTAL TOPOGRAPHIC DETAIL WAS OBTAINED ALONG OLD FERRY DRIVE AND WASHINGTON STREET THROUGH AN ON-THE-GROUND FIELD SURVEY PERFORMED BY THIS OFFICE ON OR BETWEEN APRIL 8, 2022 AND OCTOBER 17, 2023.
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 - 6) A PORTION OF THE SURVEY TRACT IS LOCATED IN SPECIAL FLOOD HAZARD AREA ZONE AE (1% ANNUAL CHANCE FLOOD) AND IN A FLOODWAY AREA PER FLOOD INSURANCE RATE MAP NUMBER 25009C0069F, WITH AN EFFECTIVE DATE OF JULY 3, 2012.
 - 7) EDGE OF WETLANDS DELINEATED BY TIMOTHY FERWERDA OF FERWERDA MAPPING LLC IN APRIL AND JULY, 2022. SEE ORDER OF RESOURCE AREA DELINEATION DATED OCTOBER 7, 2022, DEP FILE NO. 21-1275.



- PLAN REFERENCES:**
NORTHERN ESSEX REGISTRY OF DEEDS
- 1) PLAN NO. 18303
 - 2) PLAN NO. 18082
 - 3) PLAN NO. 18055
 - 4) PLAN NO. 15096
 - 5) PLAN NO. 13735
 - 6) PLAN NO. 12396
 - 7) PLAN NO. 11189
 - 8) PLAN NO. 7969
 - 9) PLAN NO. 331

OWNER OF RECORD:
PARCEL ID: 908-78E-67E
WASHINGTON STREET HOLDINGS, LLC
16 KAYLA AVENUE
SALEM, NH 03079
BOOK 17865 PAGE 273

PARCEL ID: 908-78E-66B
WASHINGTON STREET HOLDINGS, LLC
16 KAYLA AVENUE
SALEM, NH 03079
BOOK 17865 PAGE 275

PARCEL ID: 908-78E-66D
GAYLE McALLISTER, BEVERLY WARD AND
SUSAN DEMERS, TRUSTEES OF THE
McALLISTER SISTERS TRUST
107 FOREST WALK
SUNSET BEACH, NC
BOOK 15213 PAGE 7

PARCEL ID: 908-76-53C
KAREN FITZPATRICK
240B WASHINGTON STREET
METHUEN, MA 01844
BOOK 16924 PAGE 85

METHUEN COMMUNITY DEVELOPMENT BOARD

DATE OF FILING	_____
DATE OF HEARING	_____
DATE OF APPROVAL	_____

GPI Engineering
Planning
Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Siles Road, Suite One
Salem, NH 03079

PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**

SEAL OF THE COMMONWEALTH OF MASSACHUSETTS
SCOTT M. LYTLE
REGISTERED PROFESSIONAL LAND SURVEYOR
3/6/2024

REVISIONS		
NO.	REVISION	DATE

MARCH 6, 2024

DRAWN/DESIGN BY	CHECKED BY
SML	DRJ

EXISTING CONDITIONS PLAN

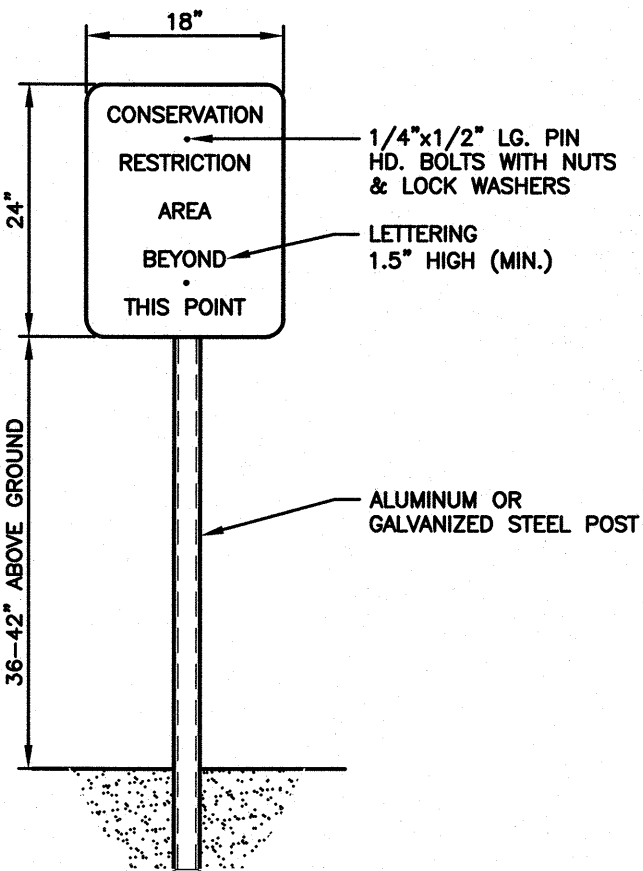
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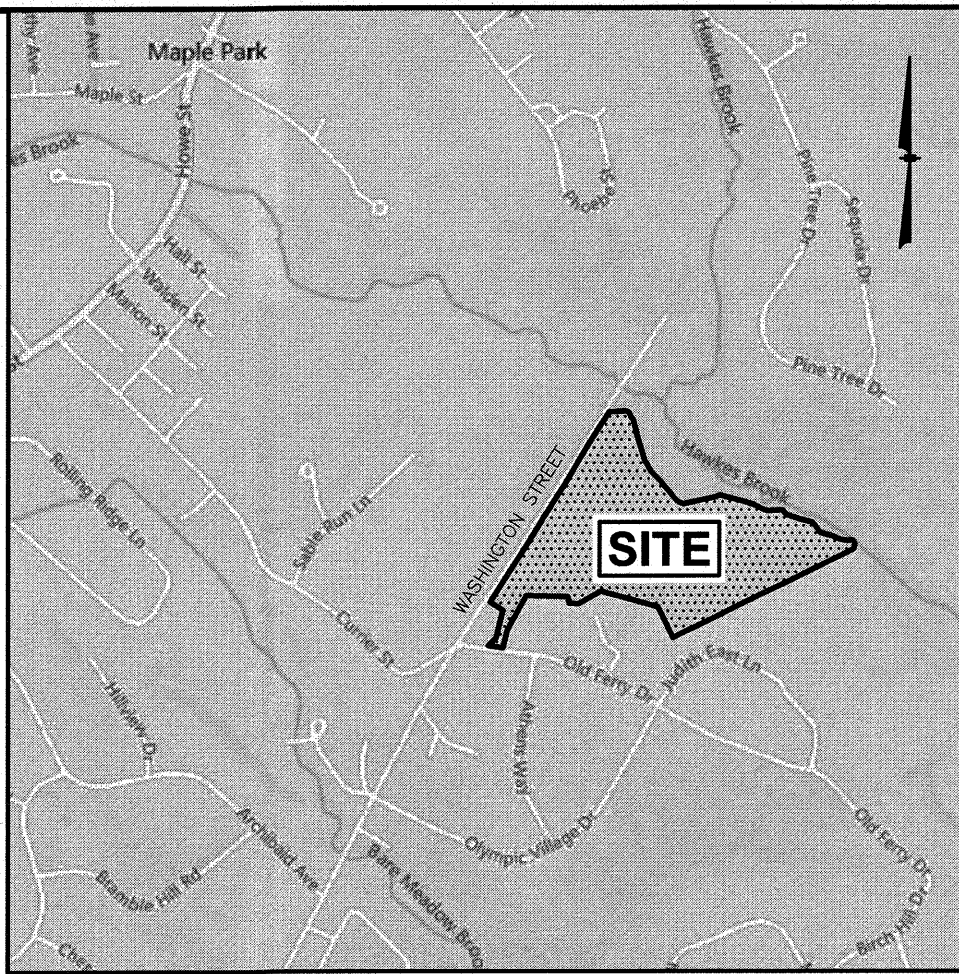
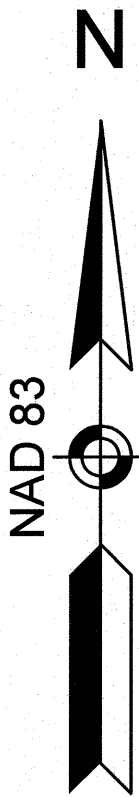
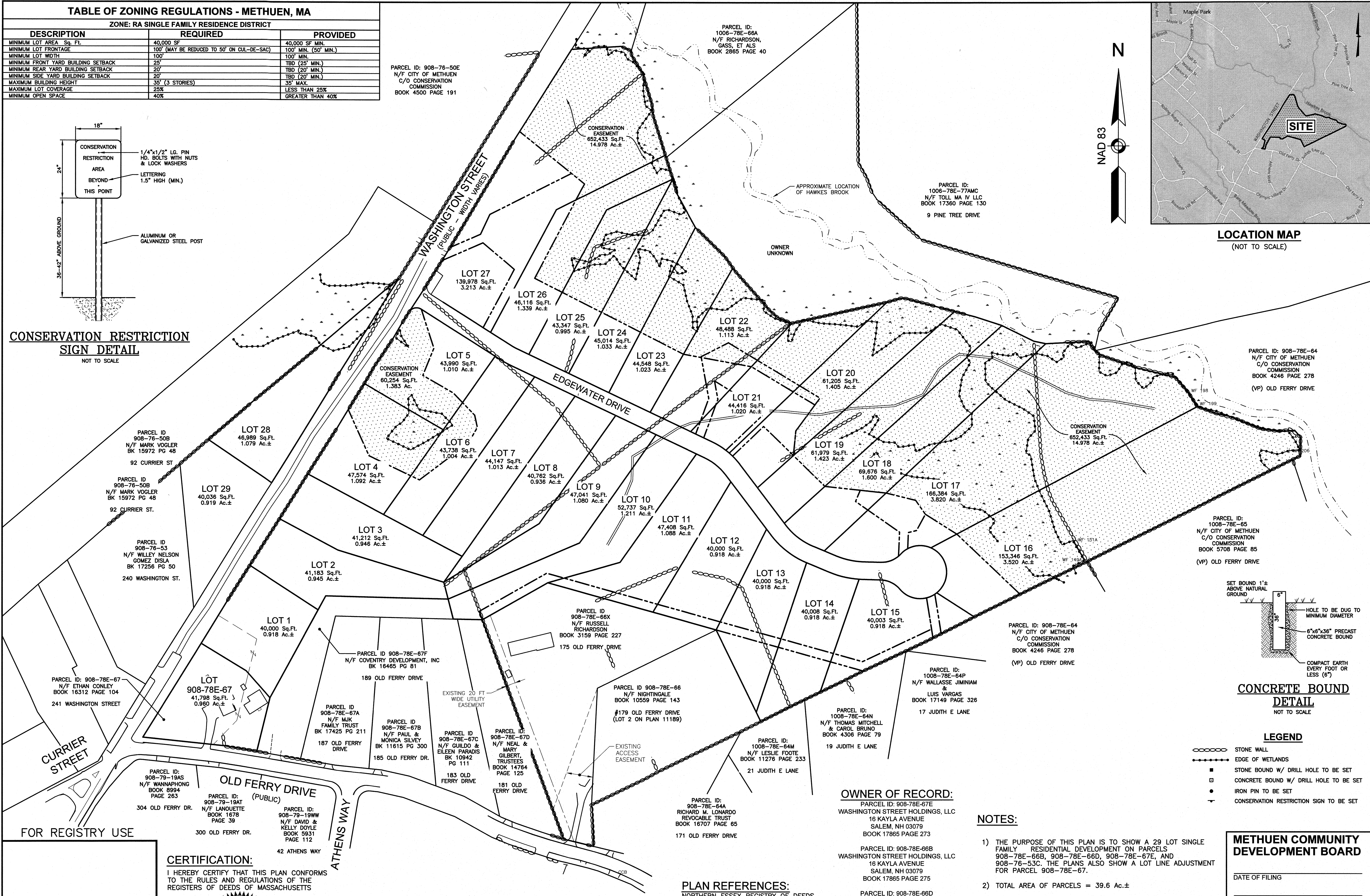
3 OF 33

TABLE OF ZONING REGULATIONS - METHUEN, MA		
ZONE: RA SINGLE FAMILY RESIDENCE DISTRICT		
DESCRIPTION	REQUIRED	PROVIDED
MINIMUM LOT AREA Sq. Ft.	40,000 SF	40,000 SF MIN.
MINIMUM LOT FRONTAGE	100' (MAY BE REDUCED TO 50' ON CUL-DE-SAC)	100' MIN. (50' MIN.)
MINIMUM LOT WIDTH	100'	100' MIN.
MINIMUM FRONT YARD BUILDING SETBACK	25'	TBD (25' MIN.)
MINIMUM REAR YARD BUILDING SETBACK	20'	TBD (20' MIN.)
MINIMUM SIDE YARD BUILDING SETBACK	20'	TBD (20' MIN.)
MAXIMUM BUILDING HEIGHT	35' (3 STORIES)	35' MAX.
MAXIMUM LOT COVERAGE	25%	LESS THAN 25%
MINIMUM OPEN SPACE	40%	GREATER THAN 40%

PARCEL ID: 908-78-50E
N/F CITY OF METHUEN
C/O CONSERVATION
COMMISSION
BOOK 4500 PAGE 191



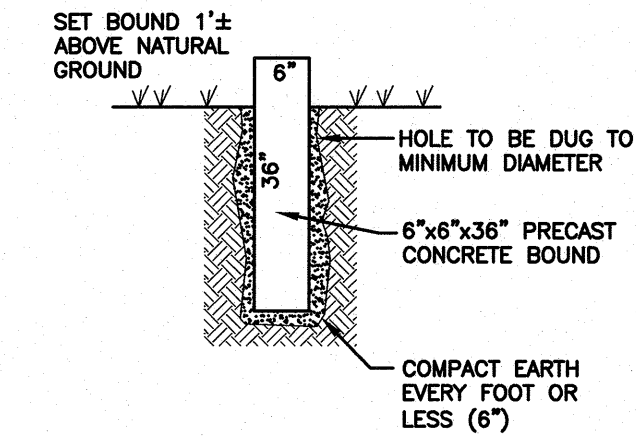
CONSERVATION RESTRICTION
SIGN DETAIL
NOT TO SCALE



LOCATION MAP
(NOT TO SCALE)

PARCEL ID: 908-78E-64
N/F CITY OF METHUEN
C/O CONSERVATION
COMMISSION
BOOK 4246 PAGE 278
(VP) OLD FERRY DRIVE

PARCEL ID: 1008-78E-65
N/F CITY OF METHUEN
C/O CONSERVATION
COMMISSION
BOOK 5708 PAGE 85
(VP) OLD FERRY DRIVE



CONCRETE BOUND
DETAIL
NOT TO SCALE

- LEGEND**
- STONE WALL
 - EDGE OF WETLANDS
 - STONE BOUND W/ DRILL HOLE TO BE SET
 - CONCRETE BOUND W/ DRILL HOLE TO BE SET
 - IRON PIN TO BE SET
 - CONSERVATION RESTRICTION SIGN TO BE SET

OWNER OF RECORD:
PARCEL ID: 908-78E-67E
WASHINGTON STREET HOLDINGS, LLC
16 KAYLA AVENUE
SALEM, NH 03079
BOOK 17865 PAGE 273

NOTES:

- 1) THE PURPOSE OF THIS PLAN IS TO SHOW A 29 LOT SINGLE FAMILY RESIDENTIAL DEVELOPMENT ON PARCELS 908-78E-66B, 908-78E-66D, 908-78E-67E, AND 908-78E-53C. THE PLANS ALSO SHOW A LOT LINE ADJUSTMENT FOR PARCEL 908-78E-67.
- 2) TOTAL AREA OF PARCELS = 39.6 Ac.±
- 3) A PORTION OF THE THE SURVEY TRACT IS LOCATED IN SPECIAL FLOOD HAZARD AREA ZONE AE (1% ANNUAL CHANCE FLOOD) AND IN A FLOODWAY AREA PER FLOOD INSURANCE RATE MAP NUMBER 25009C0069F, WITH AN EFFECTIVE DATE OF JULY 3, 2012.
- 4) EDGE OF WETLANDS DELINEATED BY TIMOTHY FERWERDA OF FERWERDA MAPPING LLC IN APRIL AND JULY, 2022. SEE ORDER OF RESOURCE AREA DELINEATION DATED OCTOBER 7, 2022, DEP FILE NO. 21-1275.
- 5) ALL LOTS TO BE SERVICED BY MUNICIPAL WATER AND SEWER.

PLAN REFERENCES:
NORTHERN ESSEX REGISTRY OF DEEDS

- 1) PLAN NO. 18303
- 2) PLAN NO. 18082
- 3) PLAN NO. 18055
- 4) PLAN NO. 15096
- 5) PLAN NO. 13735
- 6) PLAN NO. 12396
- 7) PLAN NO. 11189
- 8) PLAN NO. 7969
- 9) PLAN NO. 331

CERTIFICATION:

I HEREBY CERTIFY THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF MASSACHUSETTS



3/6/2024
REGISTERED PROFESSIONAL LAND SURVEYOR

0 100 200 300 400
SCALE: 1" = 100'

GPI Engineering
Design
Planning
Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Siles Road, Suite One
Salem, NH 03079

PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**

DAVID R. JORDAN
CIVIL
No. 34732
3/6/24

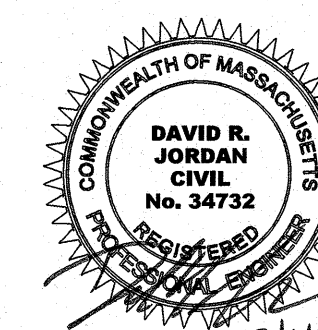
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NO.	REVISION	DATE

MARCH 6, 2024
DRAWN/DESIGN BY: KAC
CHECKED BY: SML/DRJ

**DEFINITIVE
SUBDIVISION
OVERVIEW
PLAN**

SCALE: 1"=100'
PROJECT NO. NEX-2200136
4 OF 32

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



REVISIONS

REVISIONS		
NO	REVISION	DATE

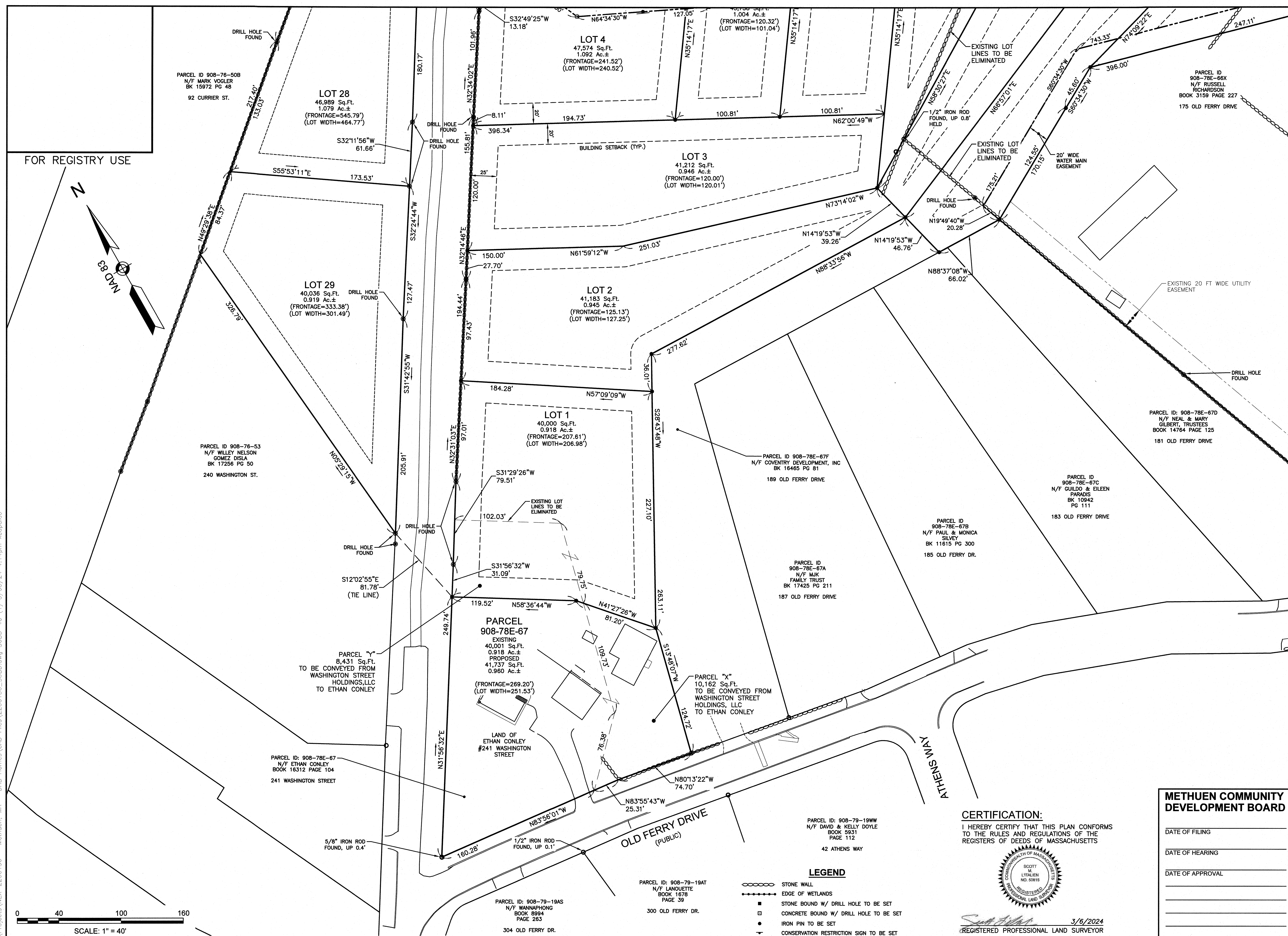
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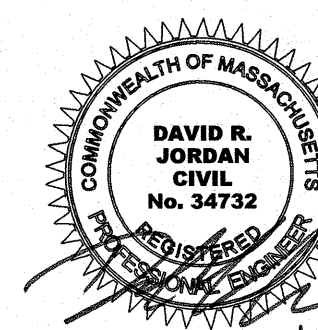
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SUBDIVISION
PLAN

SCALE:	1"=40'
PROJECT NO.	NEX-2200

5 OF 32



**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



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NO.	REVISION	DATE

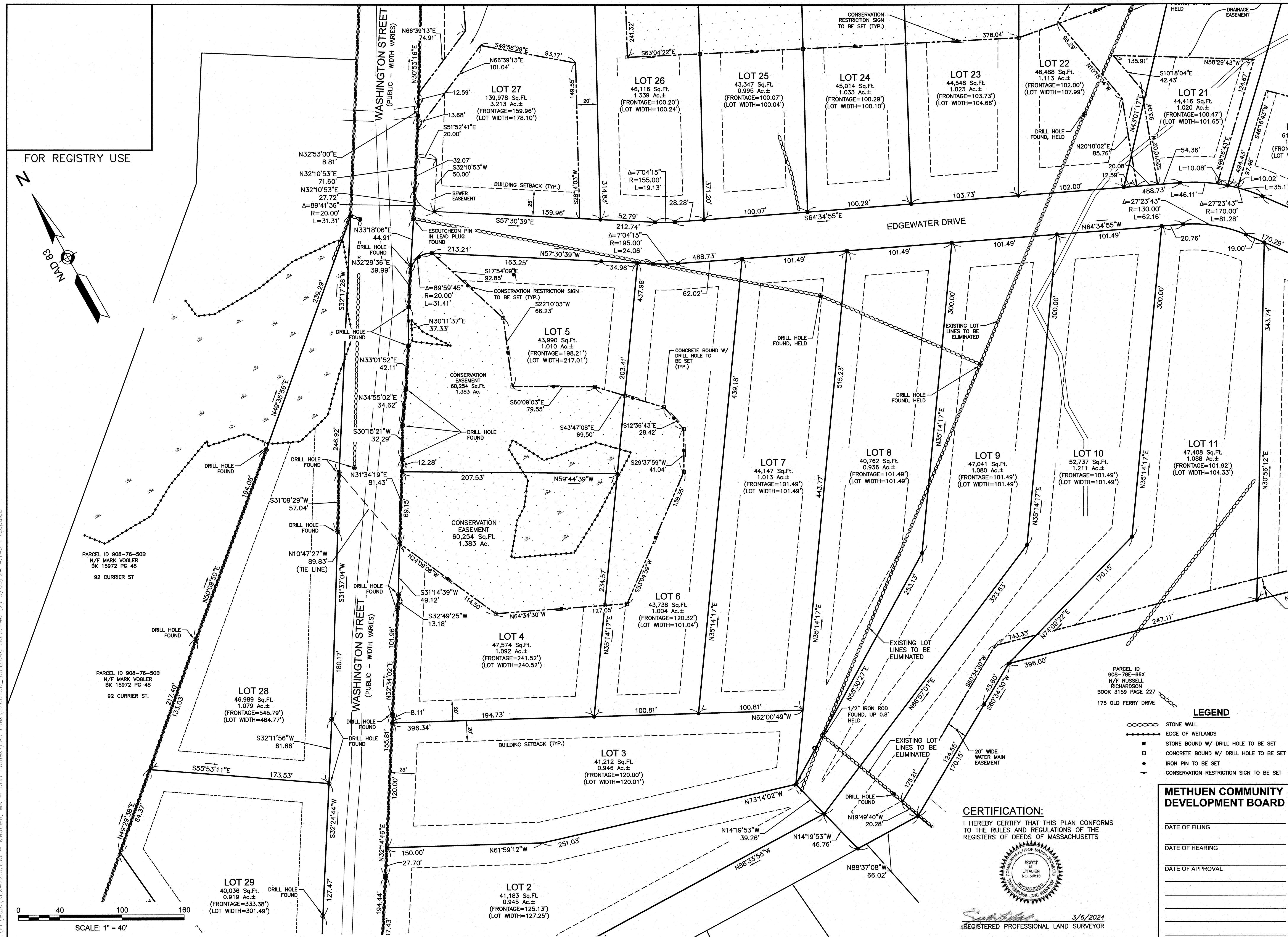
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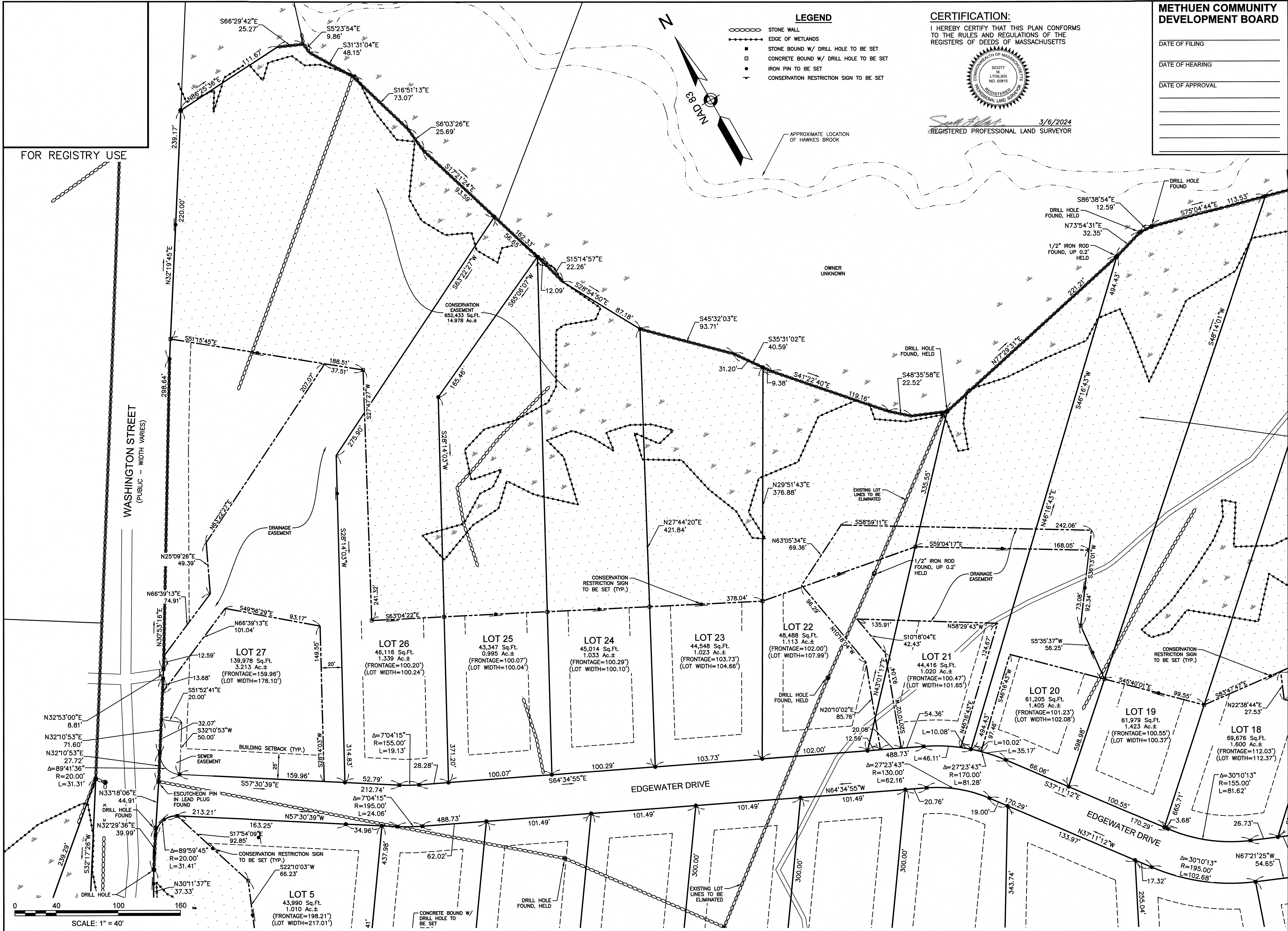
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SUBDIVISION
PLAN

SCALE:	1"=40'
PROJECT NO.	NEX-2200136

6 OF 32



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FOR REGISTRY USE

WASHINGTON STREET
(PUBLIC - WIDTH VARIES)

EDGEWATER DRIVE

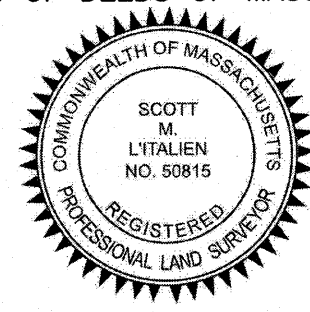
EDGEWATER DRIVE

LEGEND

- STONE WALL
- EDGE OF WETLANDS
- STONE BOUND W/ DRILL HOLE TO BE SET
- CONCRETE BOUND W/ DRILL HOLE TO BE SET
- IRON PIN TO BE SET
- CONSERVATION RESTRICTION SIGN TO BE SET

CERTIFICATION:

I HEREBY CERTIFY THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF MASSACHUSETTS



3/6/2024
REGISTERED PROFESSIONAL LAND SURVEYOR

METHUEN COMMUNITY DEVELOPMENT BOARD

DATE OF FILING

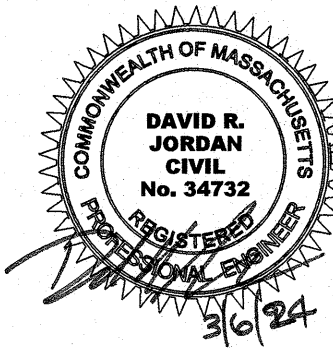
DATE OF HEARING

DATE OF APPROVAL



PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS



REVISIONS

NO.	REVISION	DATE

MARCH 6, 2024

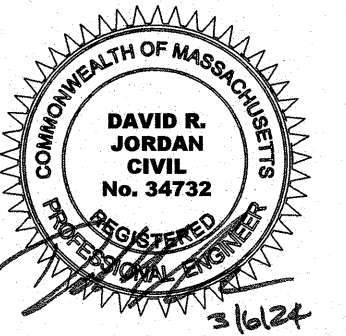
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CHECKED BY: SML/DRJ

DEFINITIVE SUBDIVISION PLAN

SCALE: 1"=40'

PROJECT NO. NEX-2200136

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



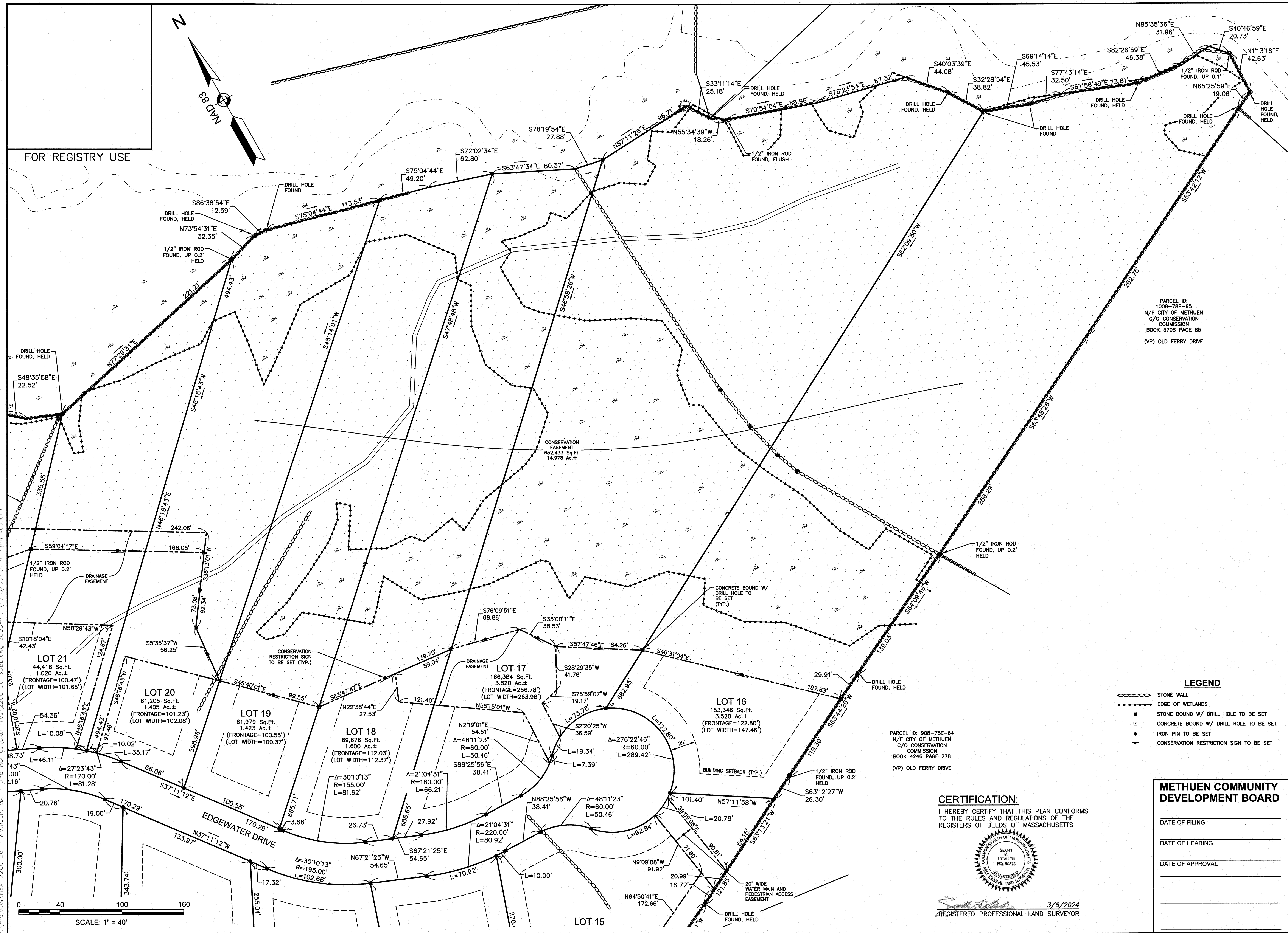
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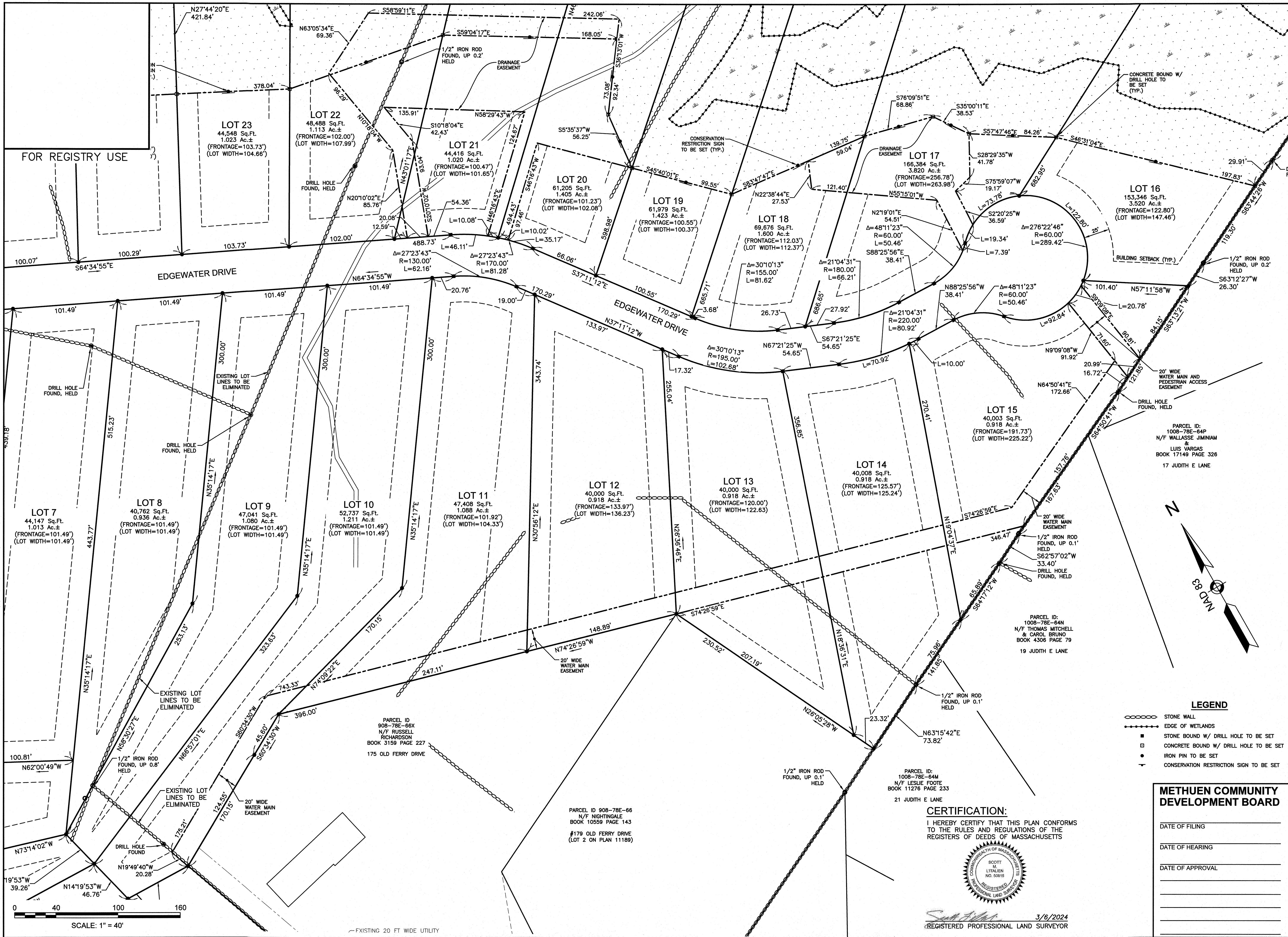
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SUBDIVISION
PLAN

SCALE: 1"=40'

PROJECT NO. NEX-2200136



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Planning
Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Siles Road, Suite One
Salem, NH 03079

PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**

DAVID R. JORDAN
CIVIL
No. 34732
3/6/24

REVISIONS		
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1	INITIAL	3/6/2024

DATE OF FILING

DATE OF HEARING

DATE OF APPROVAL

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KAC

CHECKED BY
SML/DRJ

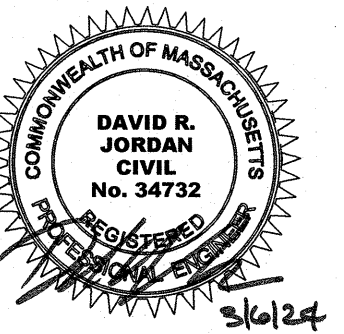
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SUBDIVISION
PLAN**

SCALE:
1"=40'

PROJECT NO.
NEX-2200136

9 OF 32

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



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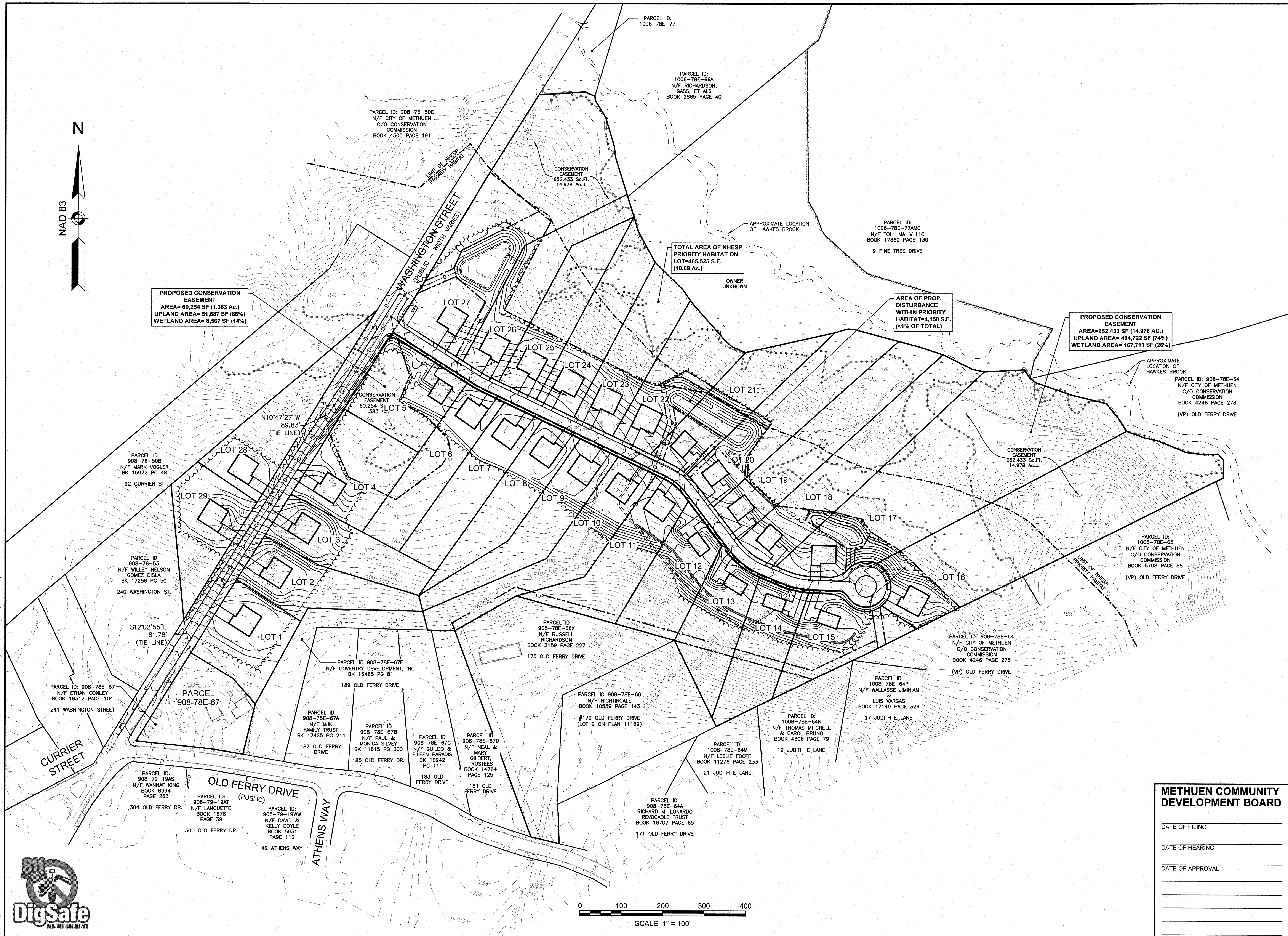
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GMP		DRJ	

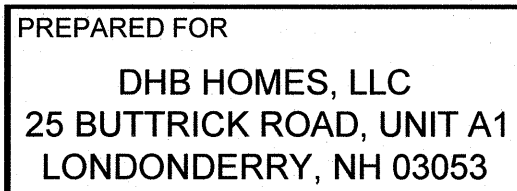
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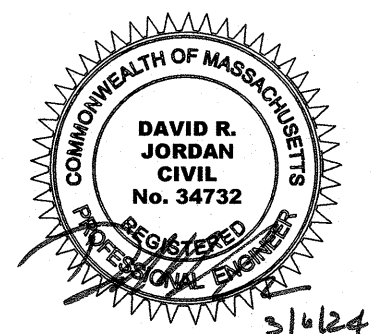
PROJECT NO. NEX-2200136

10 OF 32





**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



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NO.	REVISION	DATE

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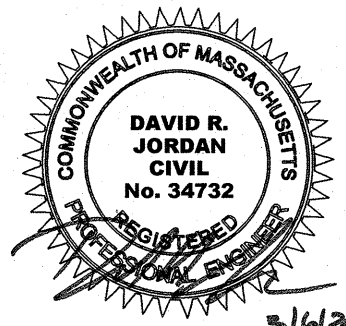
GRADING & DRAINAGE PLAN

SCALE:	1"=40'
PROJECT NO.	NEX-2200136

11 OF 32



**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



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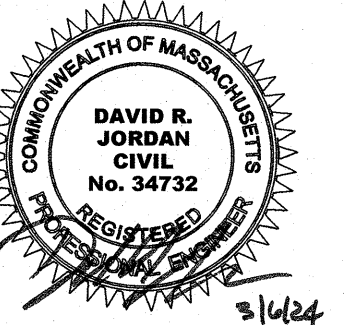
GRADING & DRAINAGE PLAN

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PROJECT NO.	NEX-2200136

12 OF 32



**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



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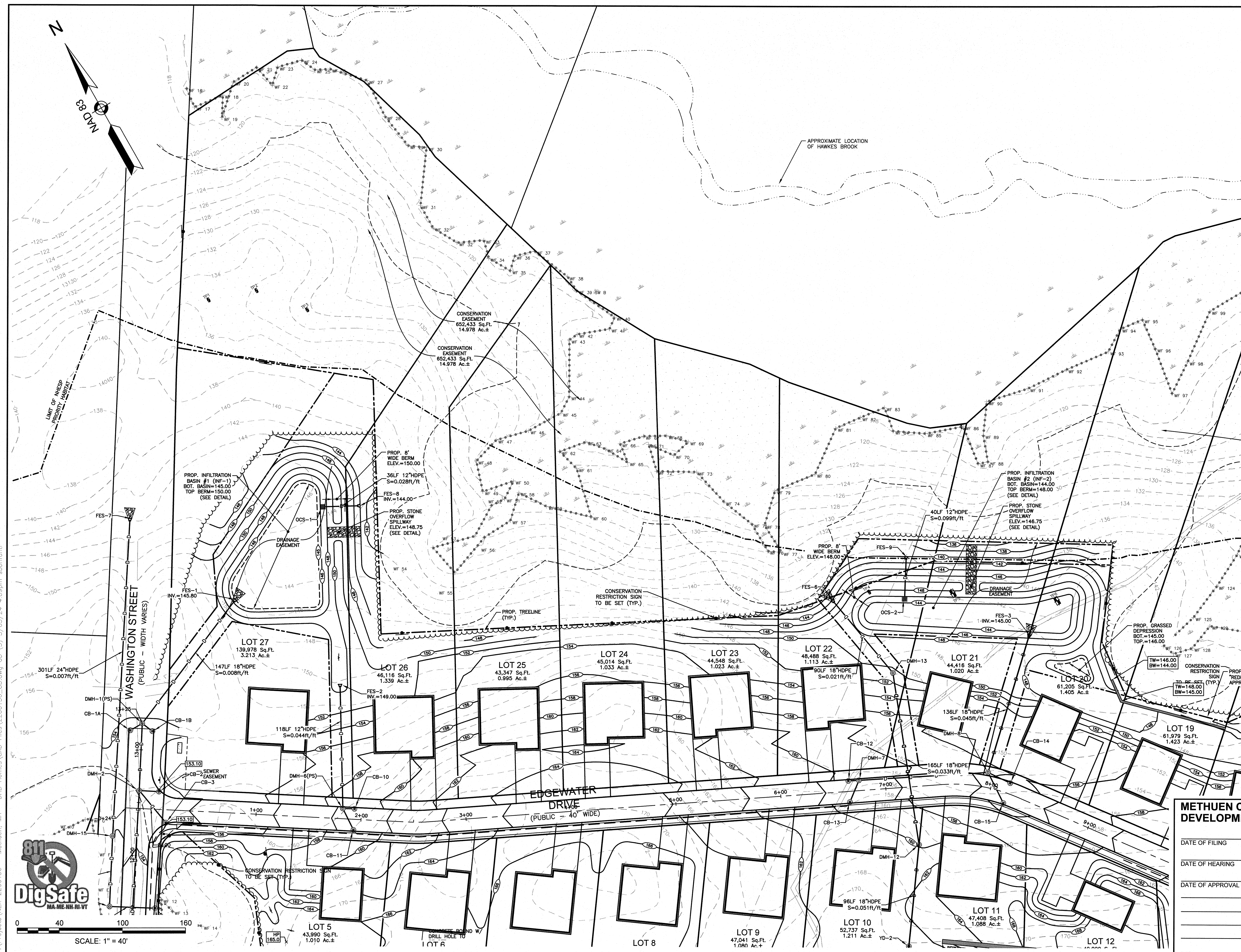
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GRADING & DRAINAGE PLAN

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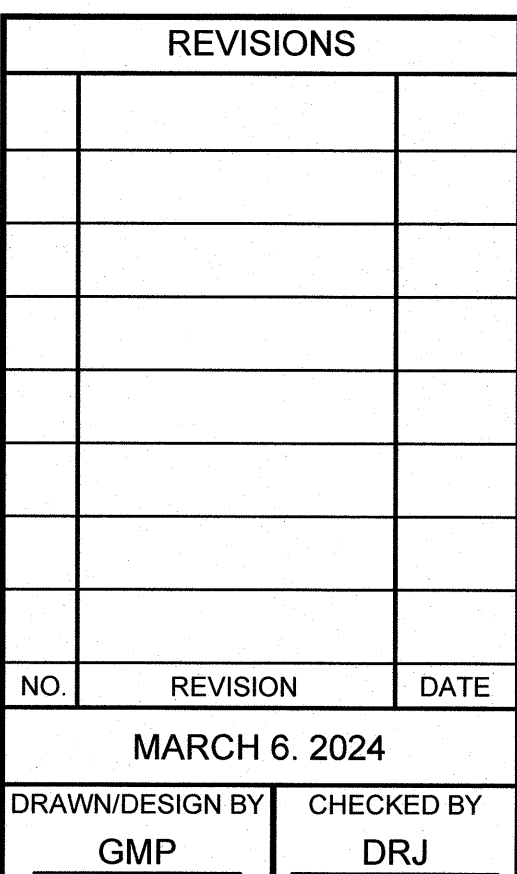
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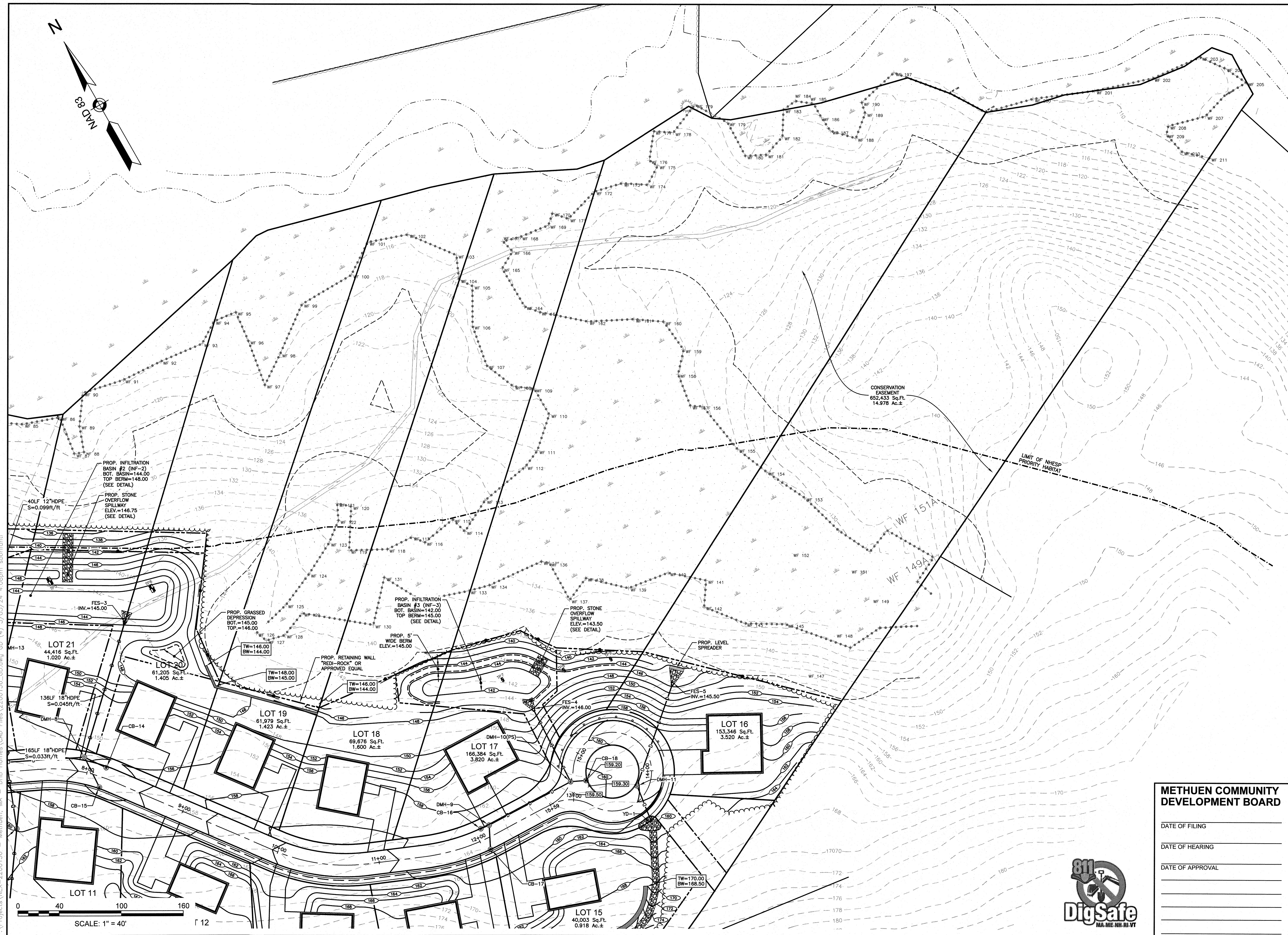
**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



GRADING & DRAINAGE PLAN

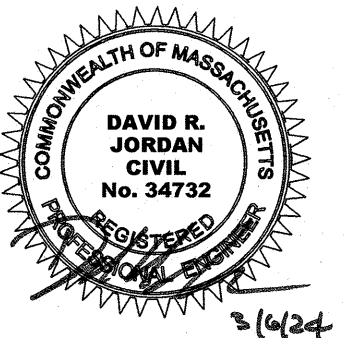
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**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



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EROSION & SEDIMENT CONTROL PLAN

SCALE:	1"=40'
PROJECT NO.	NEX-2200136

16 OF 32



**METHUEN COMMUNITY
DEVELOPMENT BOARD**

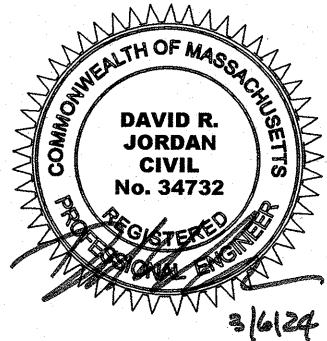
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DATE OF APPROVAL _____

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**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



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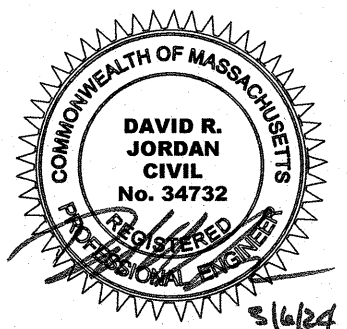
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EROSION & SEDIMENT CONTROL PLAN

SCALE:	1"=40'
PROJECT NO.	NEX-2200136
17 OF 32	



**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**

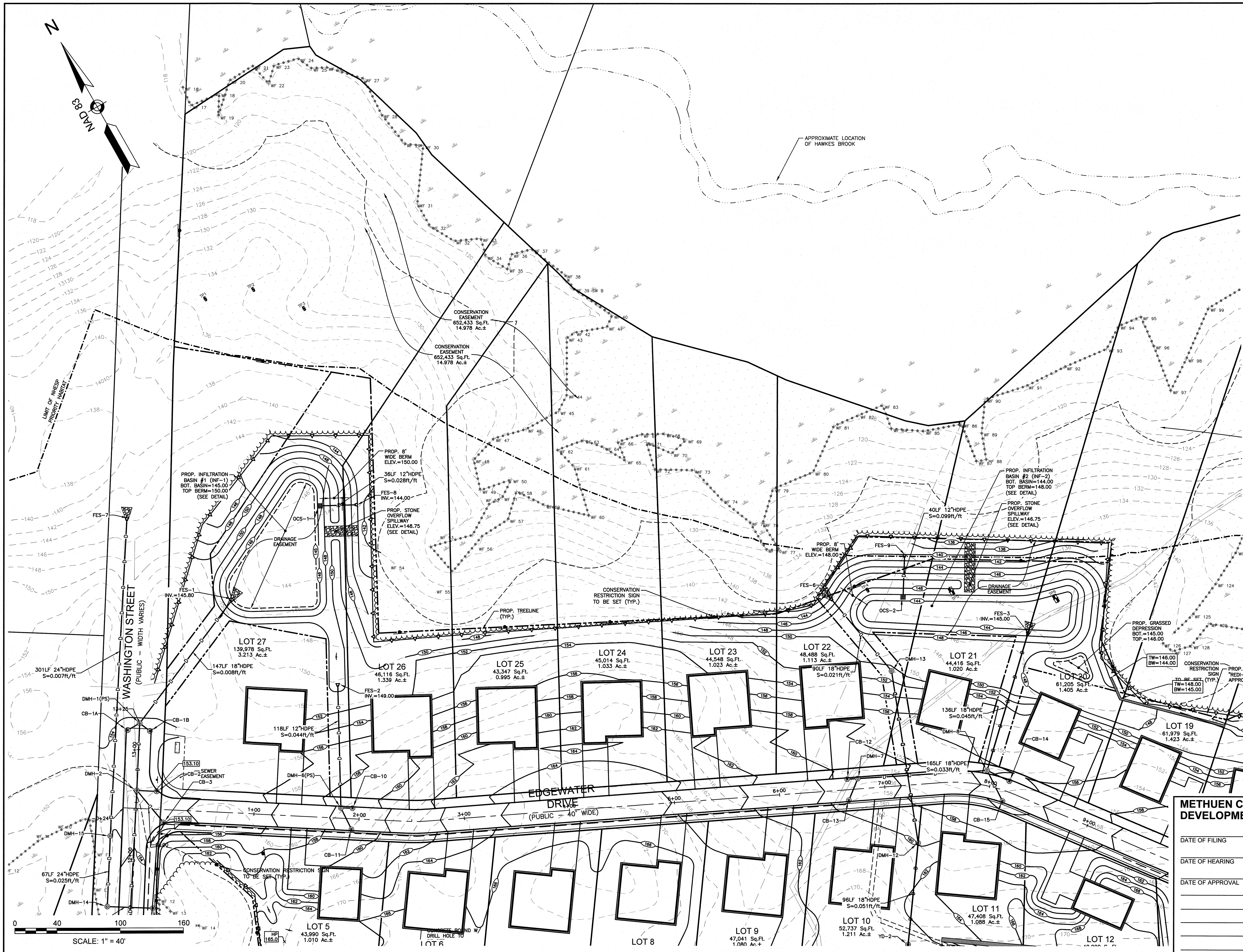


REVISIONS		
NO.	REVISION	DATE

DRAWN/DESIGN BY		CHECKED BY	
GMP		DRJ	

EROSION & SEDIMENT CONTROL PLAN

SCALE:	1"=40'
PROJECT NO.	NEX-2200136





Engineering
Design
Planning
Construction Management

603.883.0720
Greenman-Pedersen, Inc.
44 Stiles Road, Suite One
Salem, NH 03079

PREPARED FOR

DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**

REVISIONS		
NO.	REVISION	DATE

MARCH 6, 2024

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**METHUEN COMMUNITY
DEVELOPMENT BOARD**

DATE OF FILING _____

DATE OF HEARING _____

DATE OF APPROVAL _____

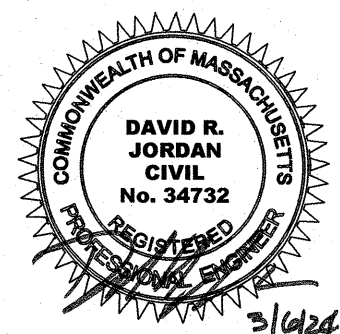
**EROSION &
SEDIMENT
CONTROL PLAN**

SCALE: 1"=40'

PROJECT NO.
NEX-2200136

19 OF 32

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



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NO.	REVISION	DATE

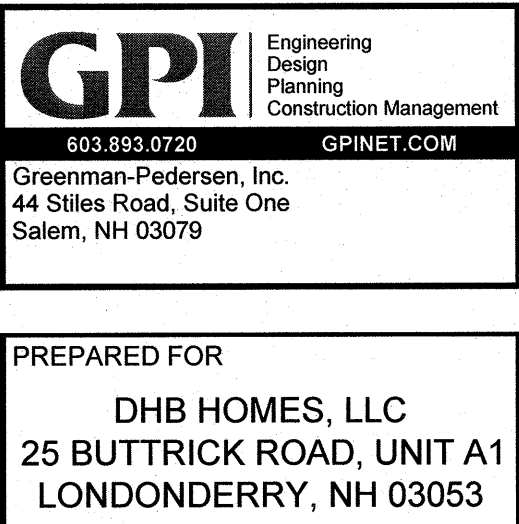
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EROSION & SEDIMENT CONTROL PLAN

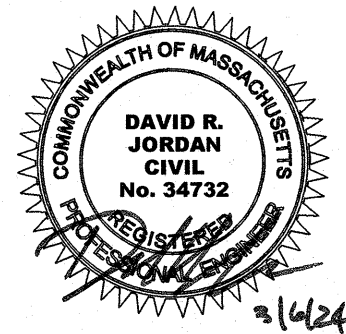
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PROJECT NO.	NEX-2200136

20 OF 32





**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



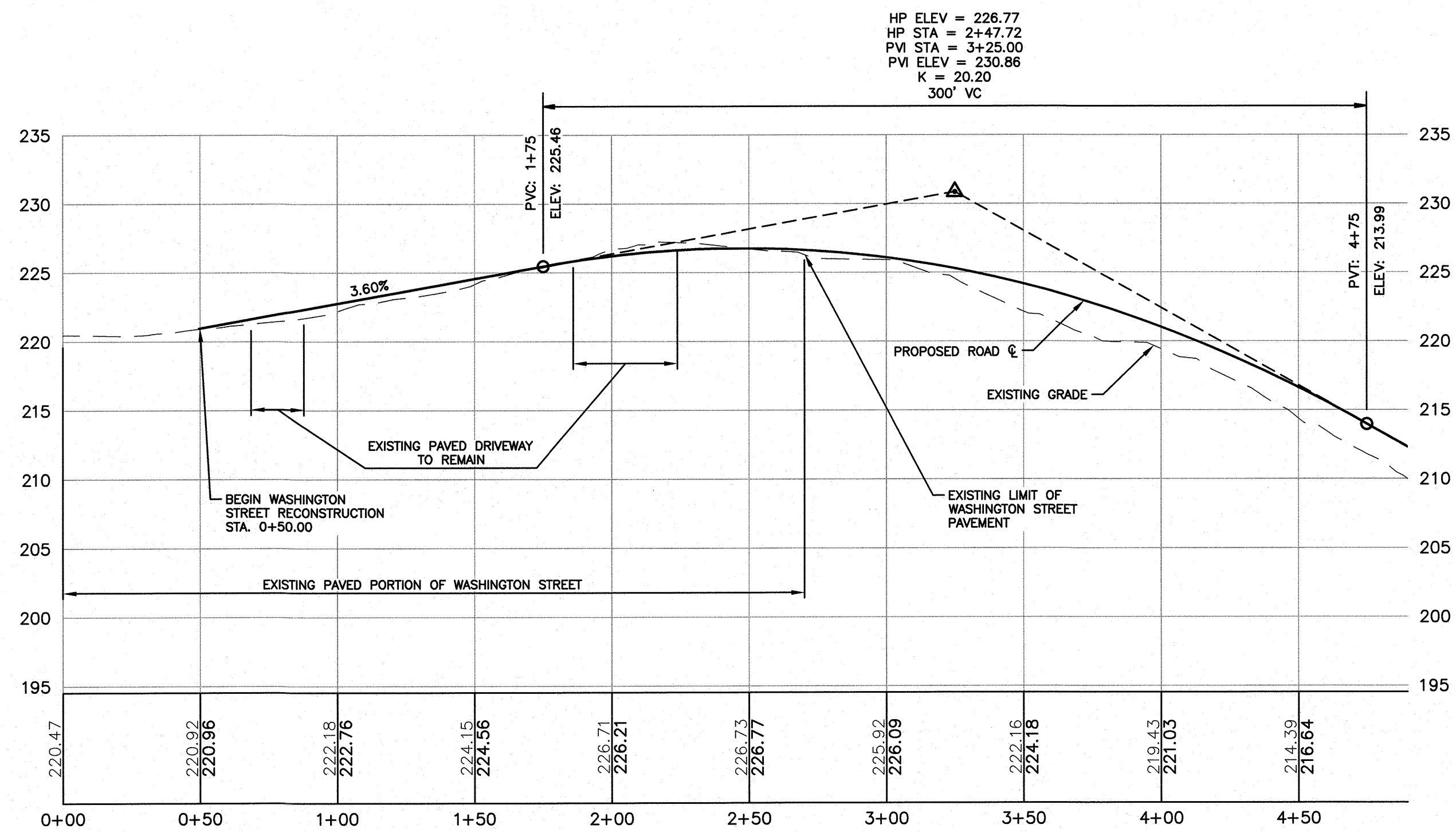
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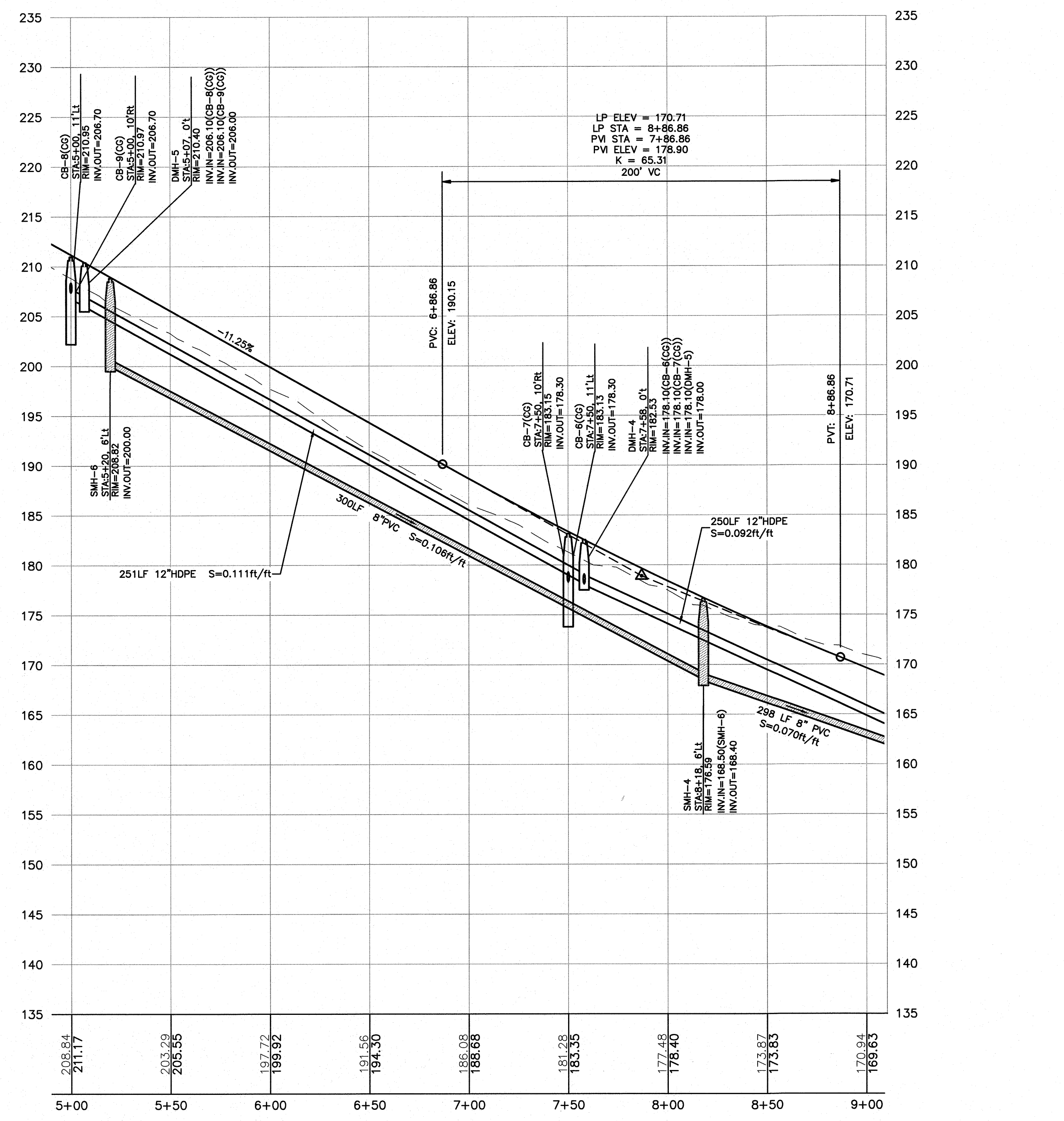
WASHINGTON STREET PLAN & PROFILE

SCALE: 1"=40' HORIZ.
1"=8' VERT.

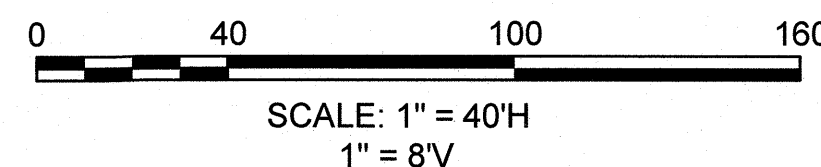
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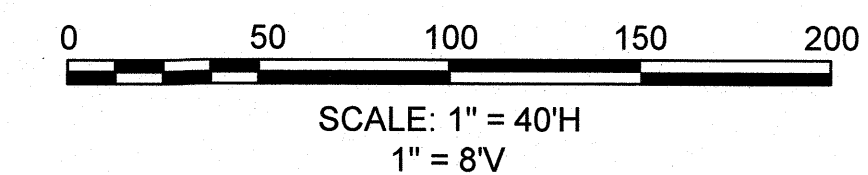


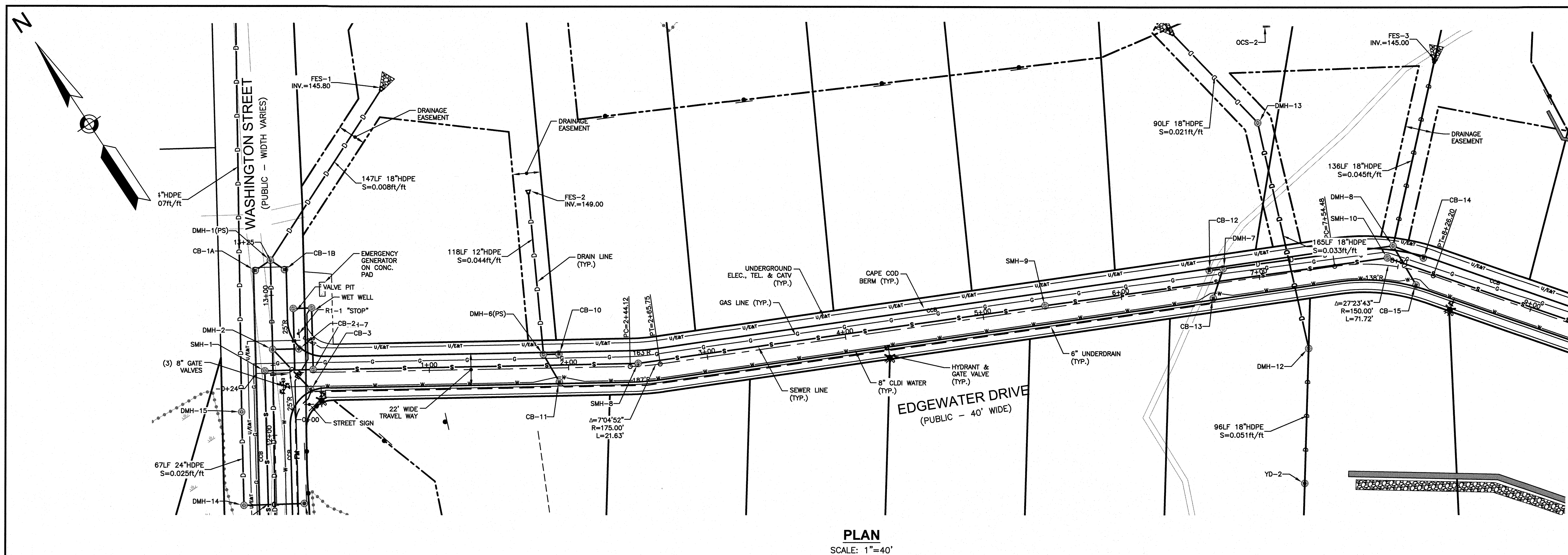
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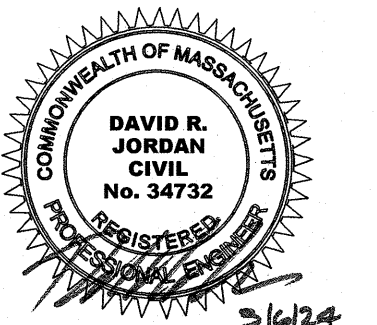
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**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



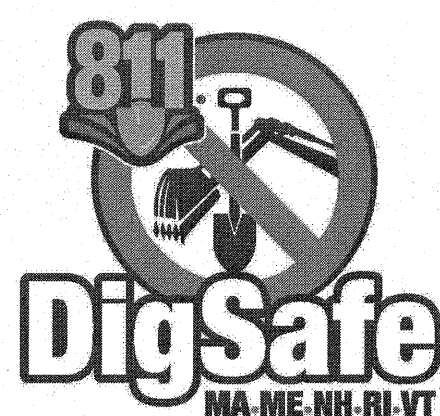
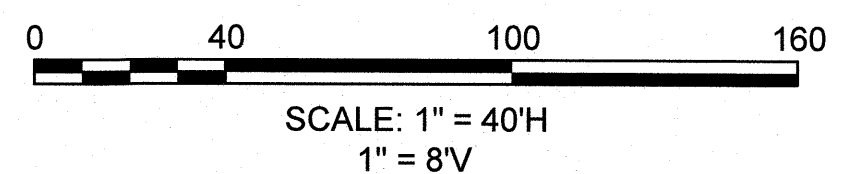
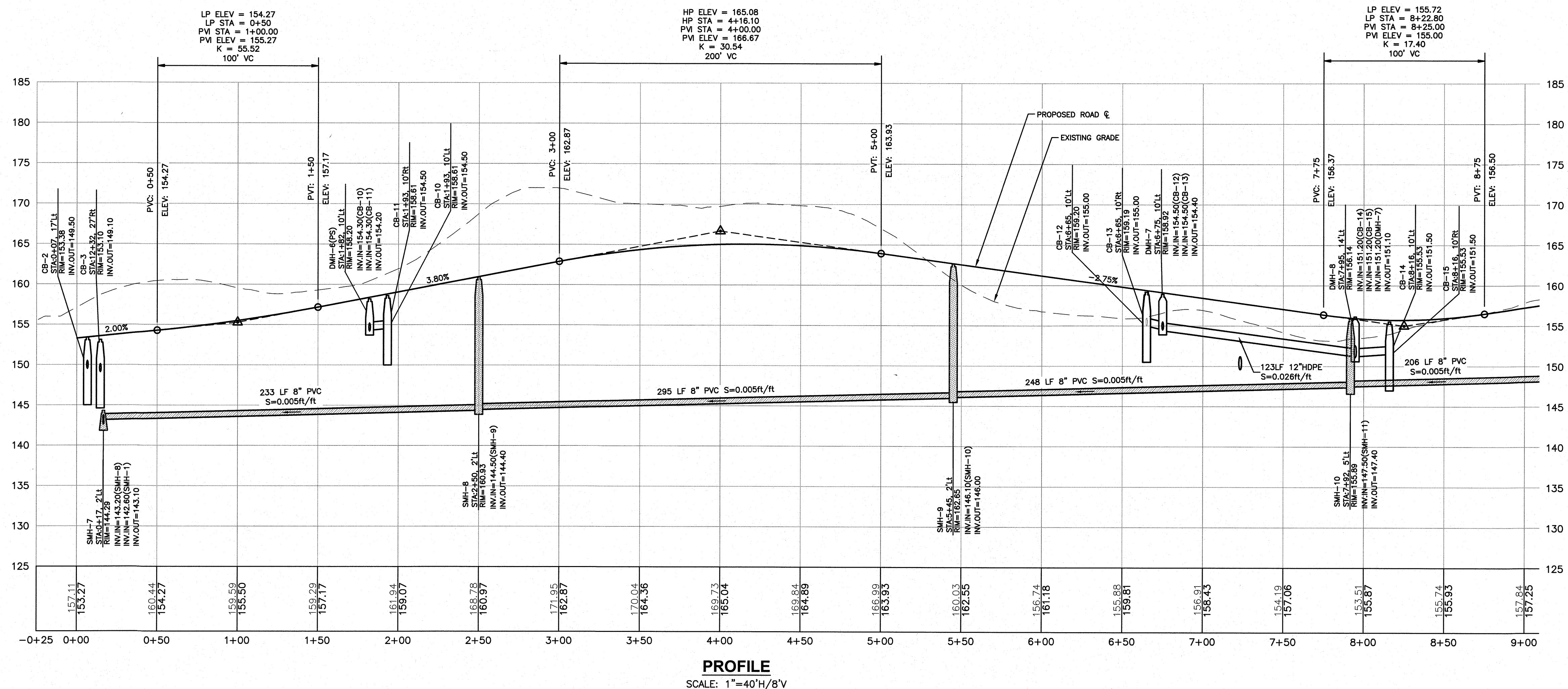
REVISIONS		
NO.	REVISION	DATE
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DRAWN/DESIGN BY GMP		CHECKED BY DRJ

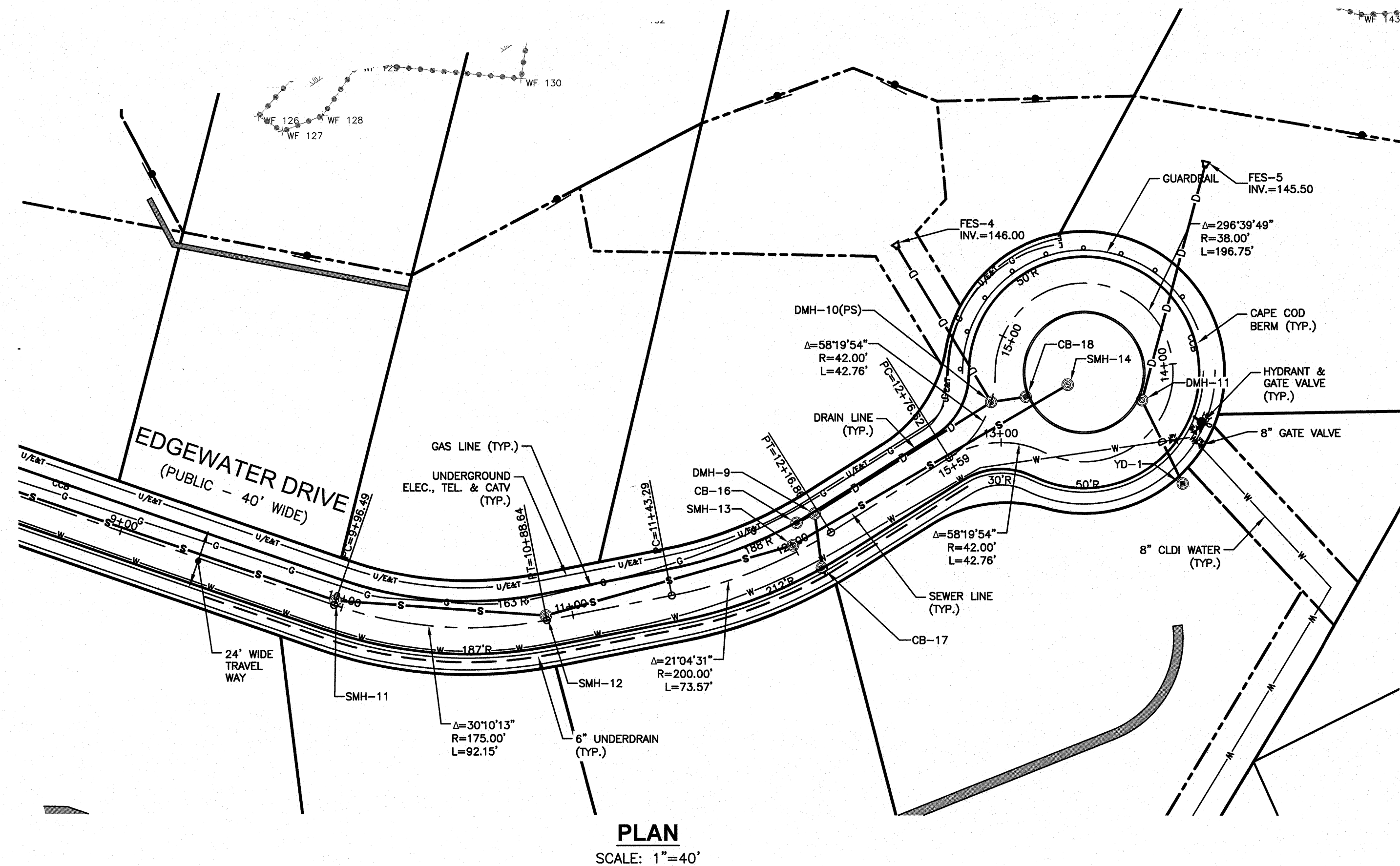
EDGEWATER DRIVE PLAN & PROFILE

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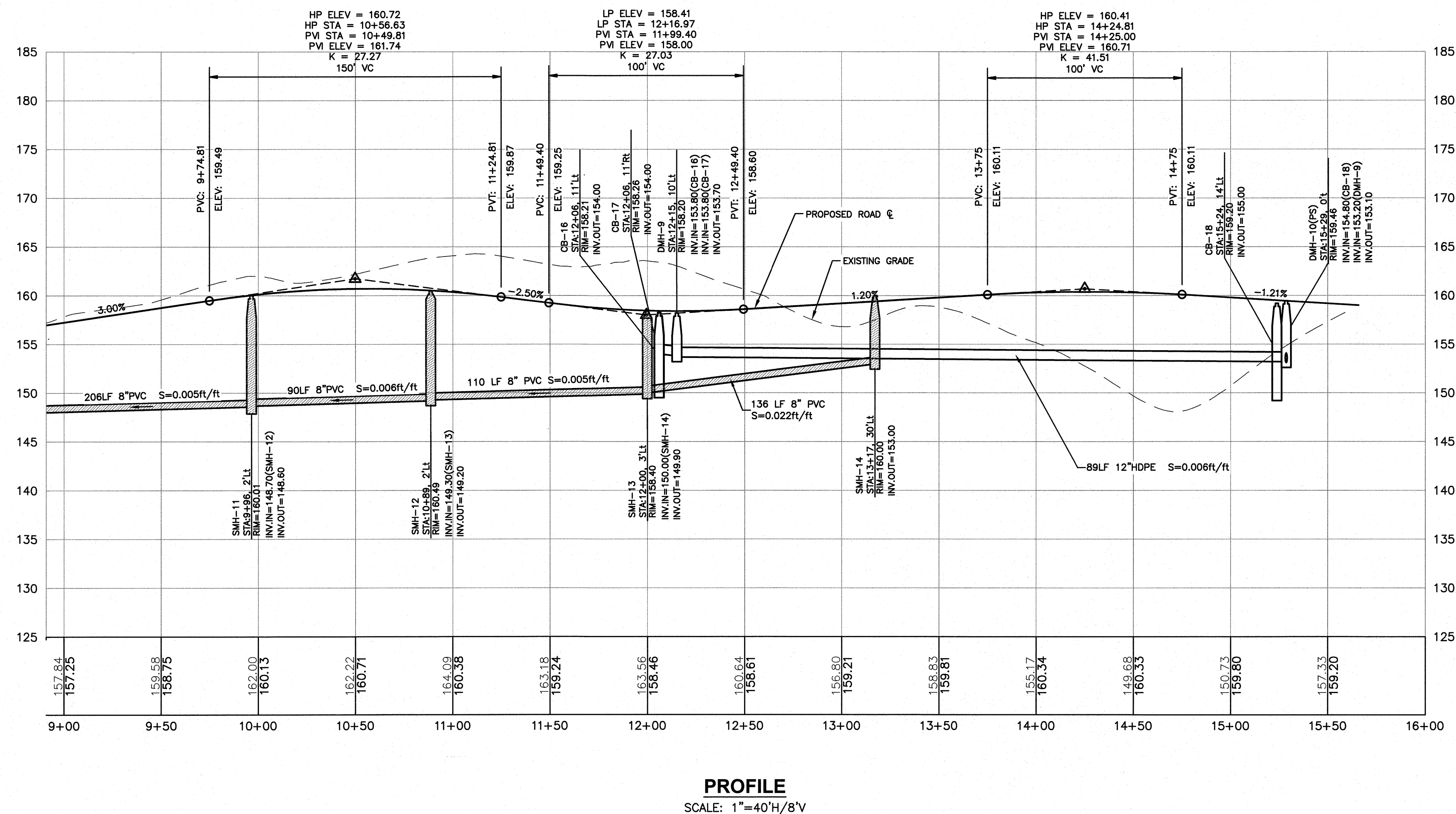
PROJECT NO.
NEX-2200136

23 OF 32





PLAN
SCALE: 1"=40'



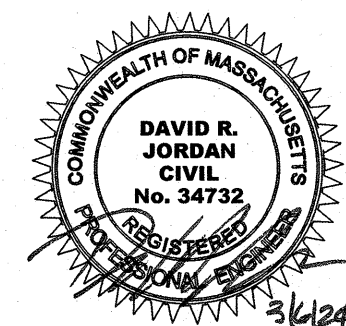
0 40 100 160

SCALE: 1" = 40'H
1" = 8'V



PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**

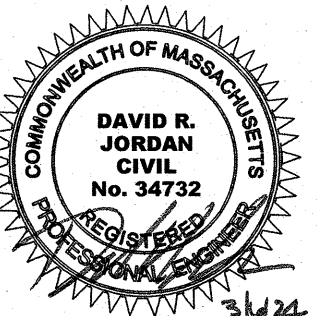


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NO.	REVISION	DATE
MARCH 6, 2024		
DRAWN/DESIGN BY GMP		CHECKED BY DRJ

EDGEWATER DRIVE PLAN & PROFILE

SCALE:	1"=40'
PROJECT NO.	NEX-2200136

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



REVISIONS		
NO.	REVISION	DATE

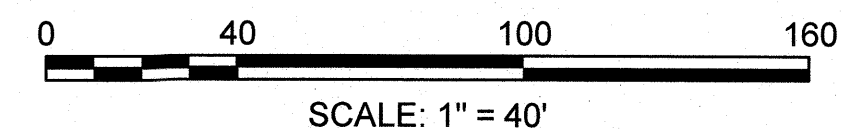
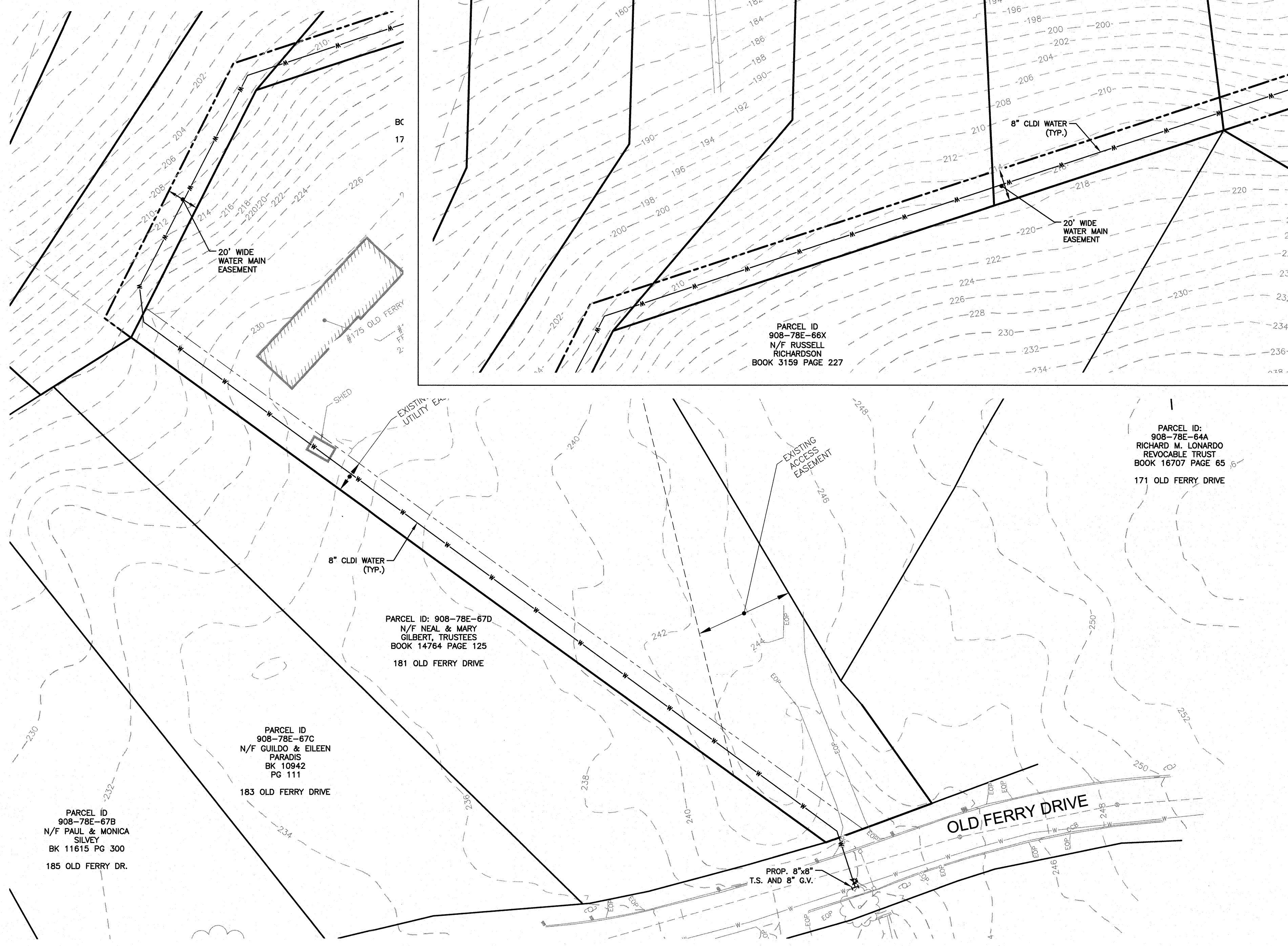
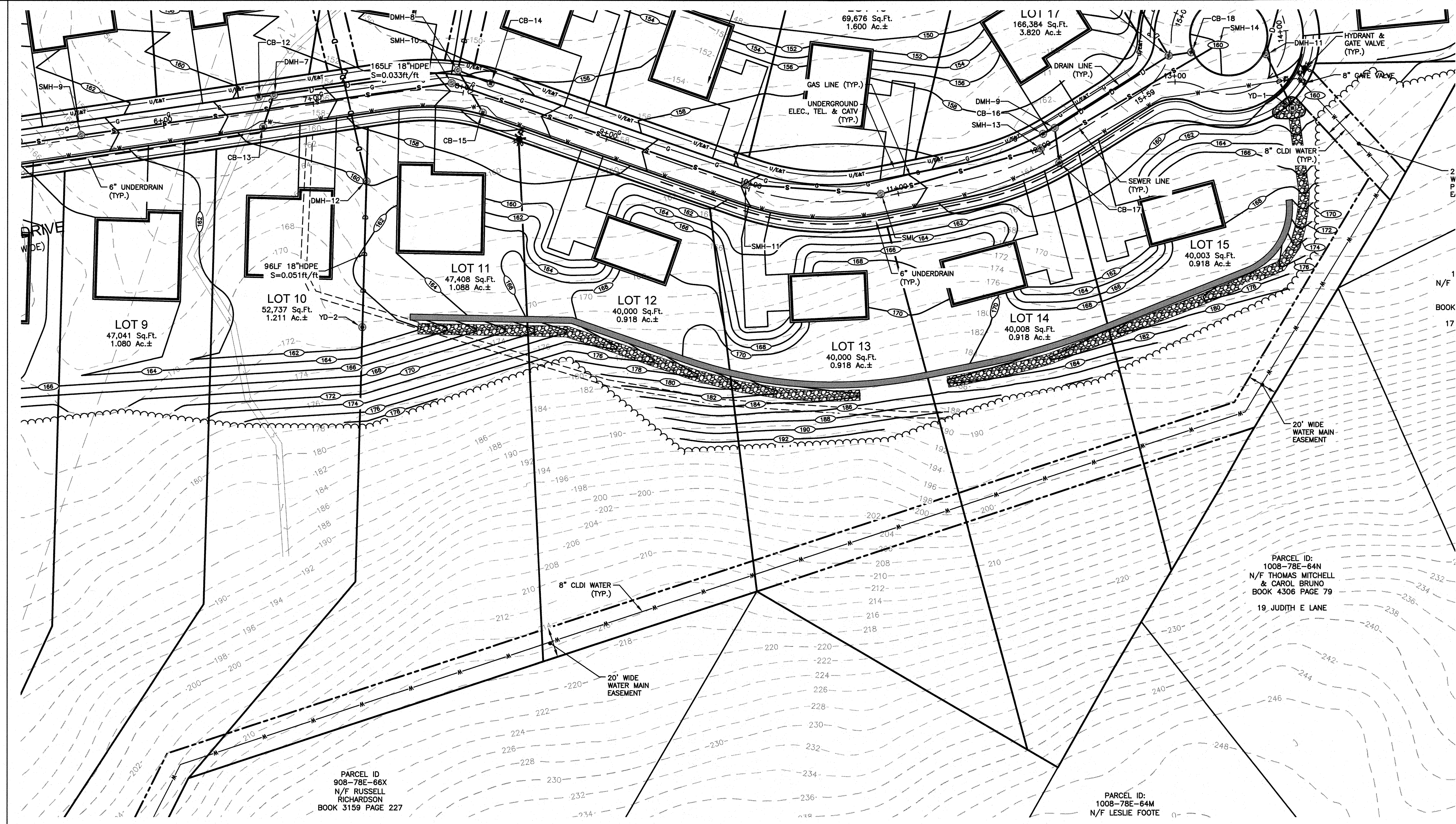
MARCH 6, 2024	
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CROSS COUNTRY WATER MAIN PLAN

SCALE: 1"=40'

PROJECT NO. NEX-2200136

25 OF 32

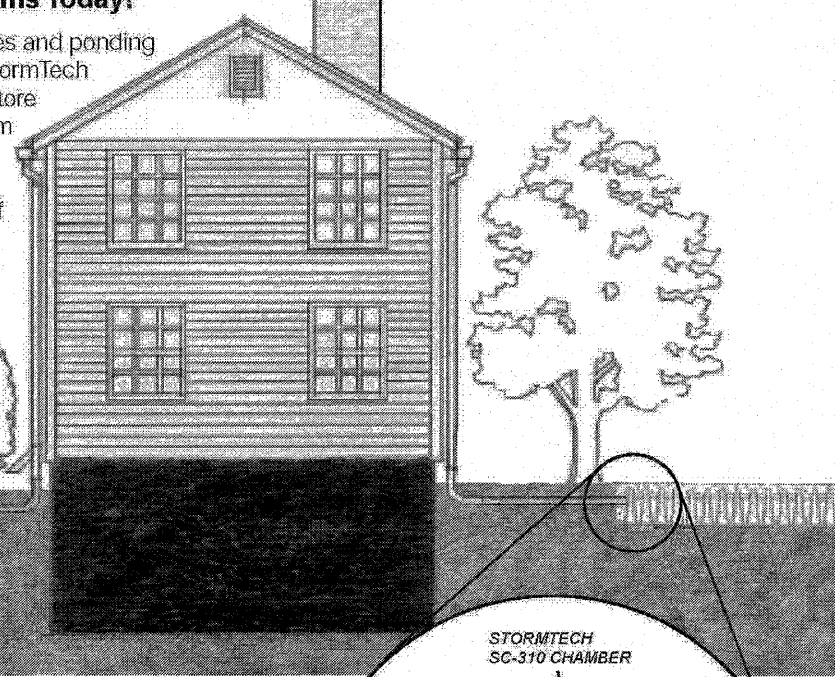


StormTech Chambers
For Residential Downspout
Drainage Systems.



Solve Your Puddle Problems Today!

Keep your yard free from puddles and ponding during heavy rain storms with StormTech chambers. The chambers can store water from roofs or other problem areas underground, eliminating water logged or slippery frozen water conditions. Constructed of polypropylene plastic, StormTech chambers are light-weight and inherently resistant to environmental stress cracking and chemicals typically found in stormwater runoff.



The StormTech Downspout Drainage System.

StormTech offers two chamber sizes to manage water from downspouts or ponded areas. Residential gutters gather rainwater and deliver it to the chambers via the downspout or other inlet pipe. To prevent soil erosion, either a small amount of stone or filter fabric along the bottom of the trench is needed.

StormTech Drainage Benefits.

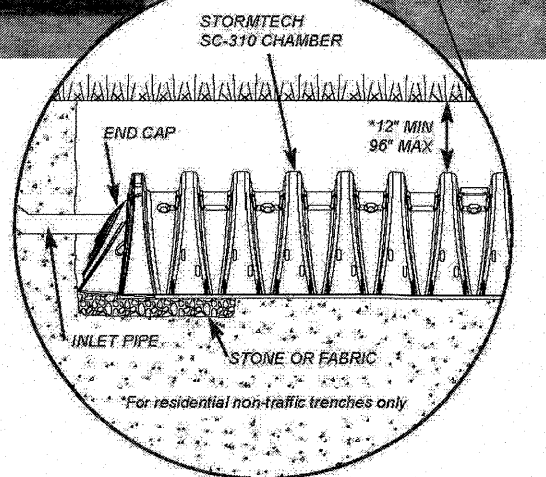
Installation. StormTech chambers can easily be hand-carried into position and installed without the use of heavy construction equipment. StormTech chambers require an excavated area, piping material and filter fabric.

Aesthetics. Runoff can be diverted away and stored safely and neatly underground. No more ponding water, frozen walkways or soil erosion contributing to the negative aesthetics of your yard.

Environmental. The chambers help recharge groundwater resources by replicating nature's own process of infiltration.

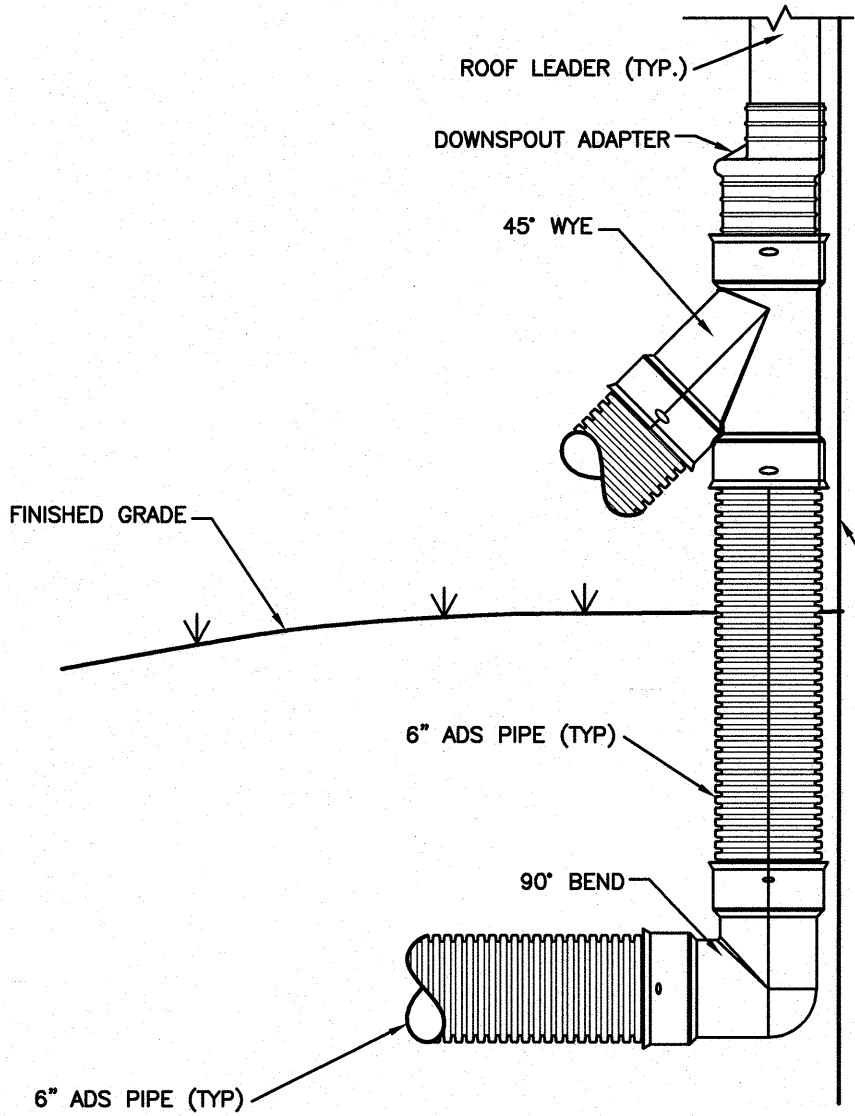
Safety. Because the chambers are underground, they eliminate erosion ditches and potential hazards caused by conventional roof drains and ice build-up in the winter.

Versatility. StormTech chambers are ideal for storing water from residential rooftops, driveways, tennis courts or ponded areas in the yard.

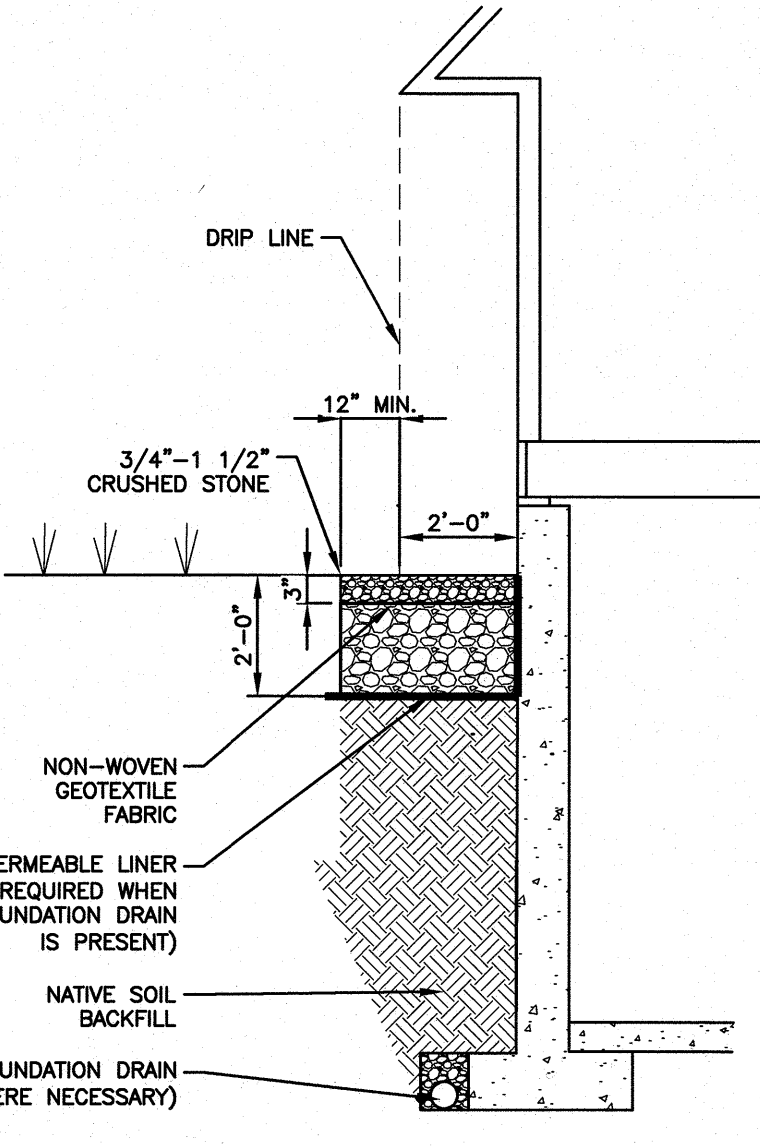


- NOTE: 1) PROVIDE ONE STORMTECH SC-310 CHAMBER FOR EVERY 220 SF OF ROOF AREA
- 2) THE INSTALLATION AND MAINTENANCE OF THE ROOF INFILTRATION UNITS IS A REQUIREMENT PURSUANT TO THE ALTERATION OF TERRAIN PERMIT.
- 3) EACH ROW OF CHAMBERS SHALL BE SET ON A 6 INCH STONE BASE WITH 12 INCHES OF STONE ON ALL SIDES AND 6 INCHES OF STONE OVER THE TOP OF THE CHAMBERS.
- 4) THE BASE STONE SHALL BE INSTALLED ABOVE THE SEASONAL HIGH WATER TABLE.

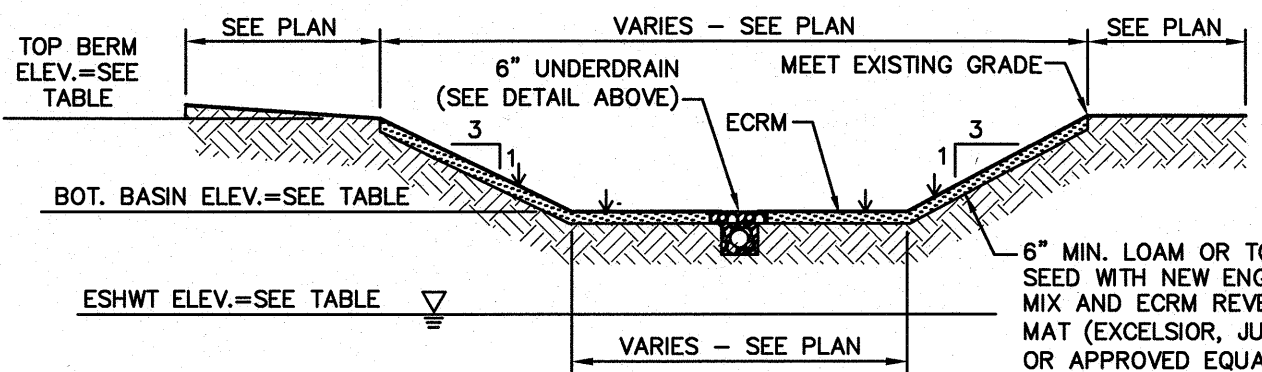
STORMTECH ROOF RECHARGE
NOT TO SCALE



ROOF DRAIN DETAIL WITH OVERFLOW
NOT TO SCALE



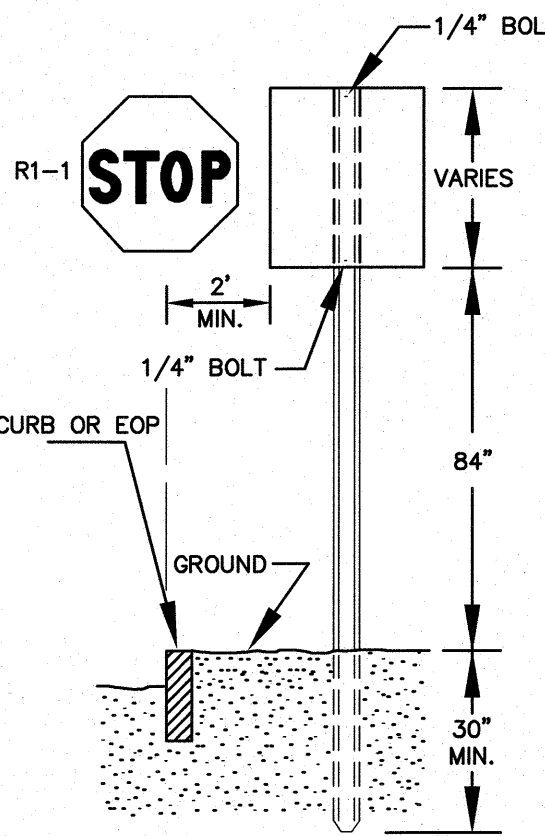
STONE DRIP EDGE
NOT TO SCALE



BASIN	TOP BERM ELEVATION	BOT. BERM ELEVATION
#1	145.00	150.00
#2	144.00	148.00
#3	142.00	145.00

- 1) DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.
- 2) AFTER THE INFILTRATION SYSTEM AREA IS EXCAVATED TO THE FINAL DESIGN ELEVATION, THE FLOOR SHOULD BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG.
- 3) DO NOT PLACE INFILTRATION SYSTEMS INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.

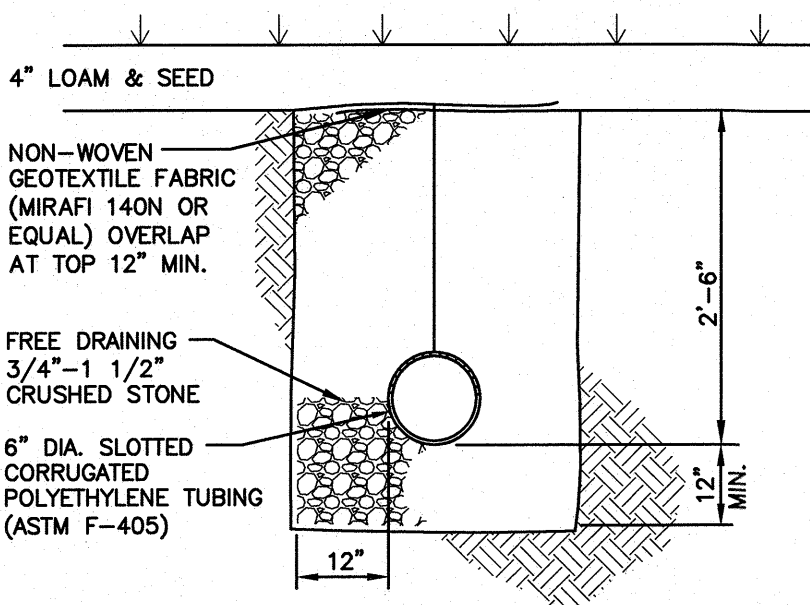
INFILTRATION BASIN - TYP. CROSS SECTION
NOT TO SCALE



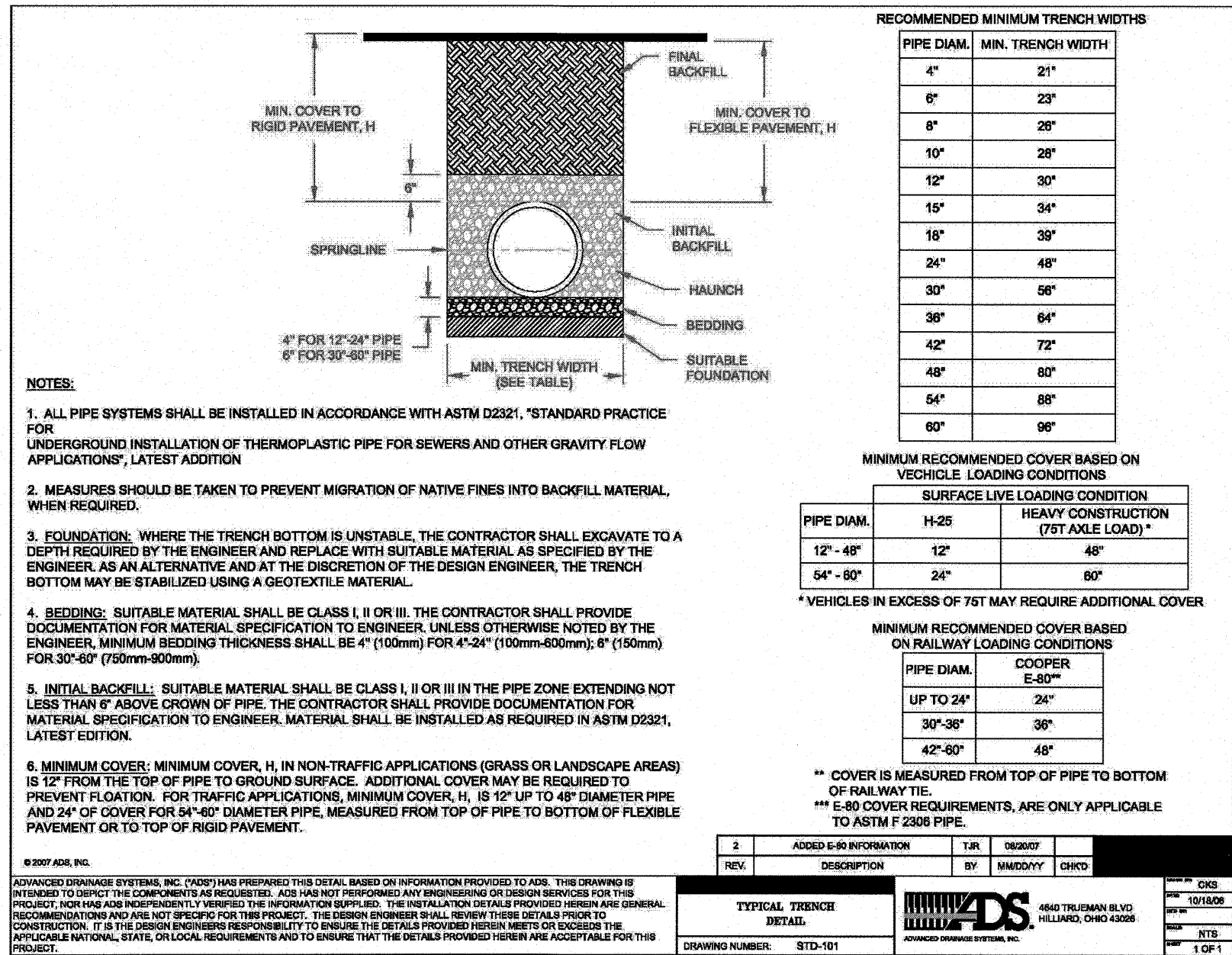
NOTES

1. POSTS SHALL BE PLUMB; ANY POST BENT OR OTHERWISE DAMAGED SHALL BE REMOVED AND PROPERLY REPLACED. POSTS MAY BE SET OR DRIVEN.
2. WHEN POSTS ARE SET, HOLES SHALL BE DUG TO THE PROPER DEPTH; AFTER INSERTING POSTS, THE HOLES SHALL BE BACKFILLED WITH SUITABLE MATERIAL IN CARE BEING TAKEN TO PRESERVE THE ALIGNMENT OF THE POST.
3. WHEN POSTS ARE DRIVEN, A SUITABLE DRIVING CAP SHALL BE USED AND AFTER DRIVING THE TOP OF THE POST SHALL HAVE SUBSTANTIALLY THE SAME CROSS-SECTIONAL DIMENSION AS THE BODY OF THE POST; BATTERED HEADS WILL NOT BE ACCEPTED.
4. POSTS SHALL NOT BE DRIVEN WITH THE SIGN ATTACHED TO THE POST.
5. SIGNS SHALL BE ERECTED IN CONFORMANCE WITH THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
6. WHEN SIGN IS IN PLACE NO PART OF POST SHALL EXTEND ABOVE THE SIGN.

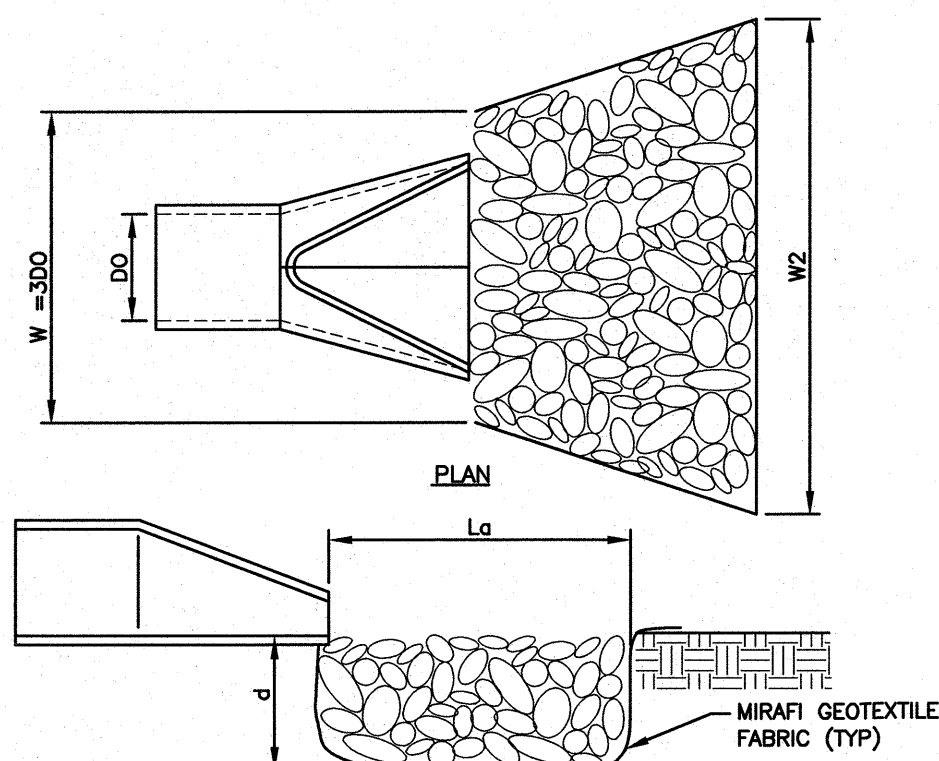
MUTCD SIGN
NOT TO SCALE



UNDERDRAIN
NOT TO SCALE



HDPE PIPE TRENCH
NOT TO SCALE



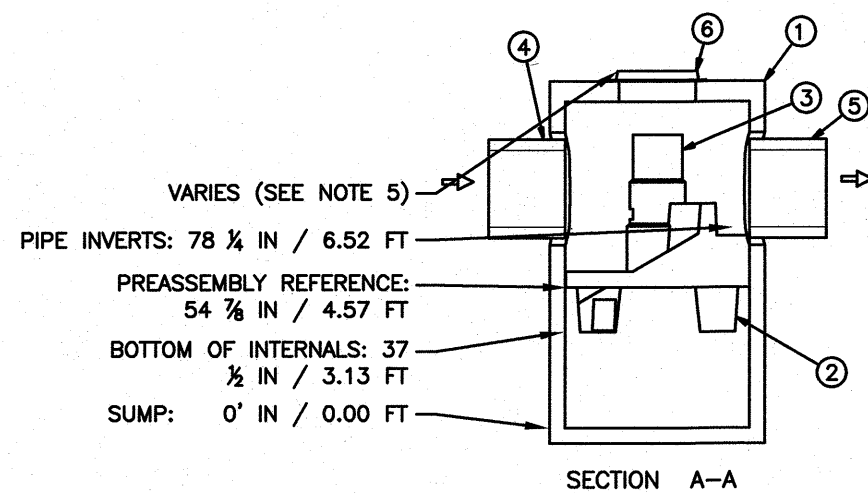
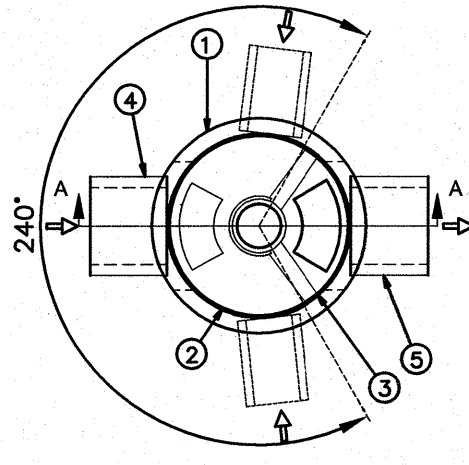
OUTLET	Do	Lo	W1	W2	d50	d
FES-1	24"	15'	6'	21'	3"	8"
FES-2	18"	19.5'	4.5'	12.5'	3"	8"
FES-3	15"	17.5'	4'	11'	3"	8"
FES-4	24"	8'	6'	9'	3"	8"

ROCK RIP-RAP GRADATION	% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE IN INCHES
100	4.5 TO 6.0	
85	3.9 TO 5.4	
50	3.0 TO 4.5	
15	0.9 TO 1.5	

CONSTRUCTION NOTES:

1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP-RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIP-RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP-RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIP-RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
5. THE MEDIAN STONE DIAMETER FOR THE RIP-RAP APRON IS 450. FIFTY PERCENT BY WEIGHT OF THE RIP-RAP MIXTURE SHALL BE SMALLER THAN THE MEDIAN STONE SIZE. THE LARGEST STONE SIZE IN THE MIXTURE SHALL BE 1.5 d50.

STONE OUTLET APRON
NOT TO SCALE



VARIES (SEE NOTE 5)

PIPE INVERTS: 78 1/2 IN / 6.52 FT

PREASSEMBLY REFERENCE: 54 3/4 IN / 4.57 FT

BOTTOM OF INTERALS: 37 1/2 IN / 3.13 FT

SUMP: 0' IN / 0.00 FT

GENERAL NOTES:

1. GENERAL ARRANGEMENT DRAWINGS ONLY. CONTACT HYDRO INTERNATIONAL FOR SITE SPECIFIC FABRICATION DRAWINGS.
2. THE DIAMETER OF THE INLET & OUTLET PIPES MAY BE NO MORE THAN 24".
3. MULTIPLE INLET PIPES POSSIBLE (REFER TO PROJECT PLANS).
4. INLET/OUTLET PIPE ANGLE CAN VARY TO ALIGN WITH DRAINAGE NETWORK (REFER TO PROJECT PLANS).
5. PEAK FLOW RATE AND MINIMUM HEIGHT LIMITED BY AVAILABLE COVER AND PIPE DIAMETER.
6. LARGER SEDIMENT STORAGE CAPACITY MAY BE PROVIDED WITH A DEEPER SUMP DEPTH.

PRODUCT SPECIFICATIONS:

- A. THE TREATMENT SYSTEM SHALL USE AN INDUCED VORTEX TO SEPARATE POLLUTANTS FROM STORMWATER RUNOFF.
- B. THE TREATMENT SYSTEM SHALL FIT WITHIN THE LIMITS OF EXCAVATION (AREA AND DEPTH) AS SHOWN IN THE PROJECT PLANS AND WILL NOT EXCEED THE DIMENSIONS FOR THE DESIGN FLOW RATES SPECIFIED HEREIN.
- C. THE TREATMENT SYSTEM SHALL REMOVE GREATER THAN OR EQUAL TO 80% OF TSS BASED ON THE TARGET PARTICLE SIZE (TPS) OF 106 MICRONS AND/OR 80% OF TSS BASED ON THE TPS OF 230 MICRONS AT 0.7 CFS AND 1.2 CFS, RESPECTIVELY.
- D. THE TREATMENT SYSTEM SHALL CONVEY THE PEAK ON-LINE FLOW RATES OF UP TO 18 CFS WITHOUT CAUSING UPSTREAM SURCHARGE CONDITIONS. FULL-SCALE INDEPENDENT LABORATORY SCOUR TESTING SHALL DEMONSTRATE EFFLUENT CONTROL OF LESS THAN OR EQUAL TO 5 MG/L FOR ALL FLOWS UP TO 200% OF MFR-106.
- E. THE TREATMENT SYSTEM SHALL BE CAPABLE OF CAPTURING AND RETAINING FINE SILT AND SAND SIZE PARTICLES. ANALYSIS OF CAPTURED SEDIMENT FROM FULL-SCALE FIELD INSTALLATIONS SHALL DEMONSTRATE PARTICLE SIZES PREDOMINANTLY IN THE 20-MICRON RANGE.

"FIRST DEFENSE" UNIT DETAIL - FD-6HC
(OR APPROVED EQUAL)

NOTE: CONTRACTOR SHOULD CONFIRM SYSTEM PARTS AND OBTAIN SHOP DRAWINGS FROM MANUFACTURER PRIOR TO CONSTRUCTION.

METHUEN COMMUNITY
DEVELOPMENT BOARD

DATE OF FILING

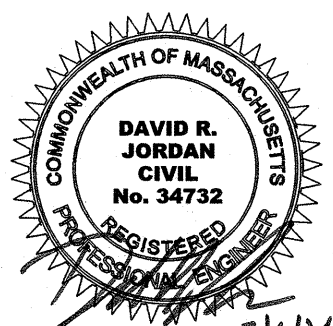
DATE OF HEARING

DATE OF APPROVAL

GPI Engineering
Design
Planning
Construction Management
603.883.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road, Suite One
Salem, NH 03079

PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS



REVISIONS

NO.	REVISION	DATE

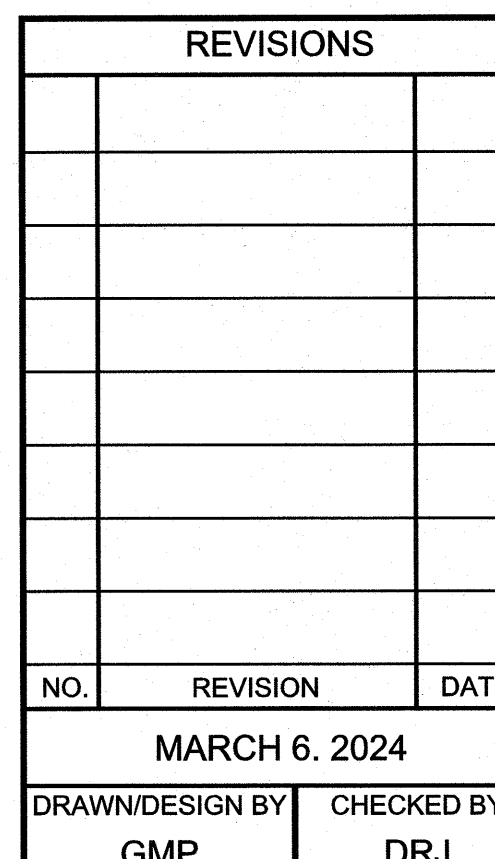
MARCH 6, 2024

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CHECKED BY DRJ

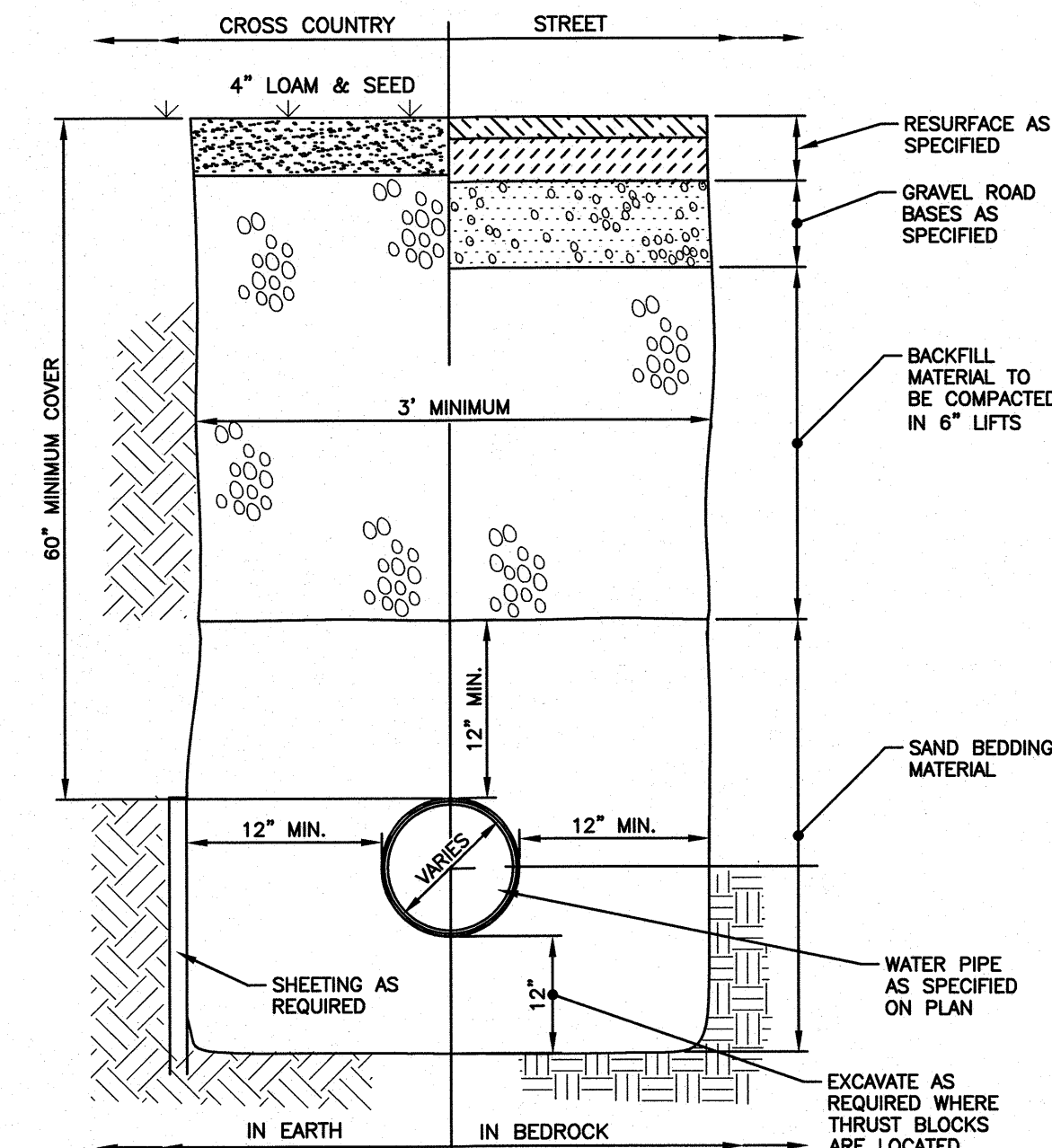
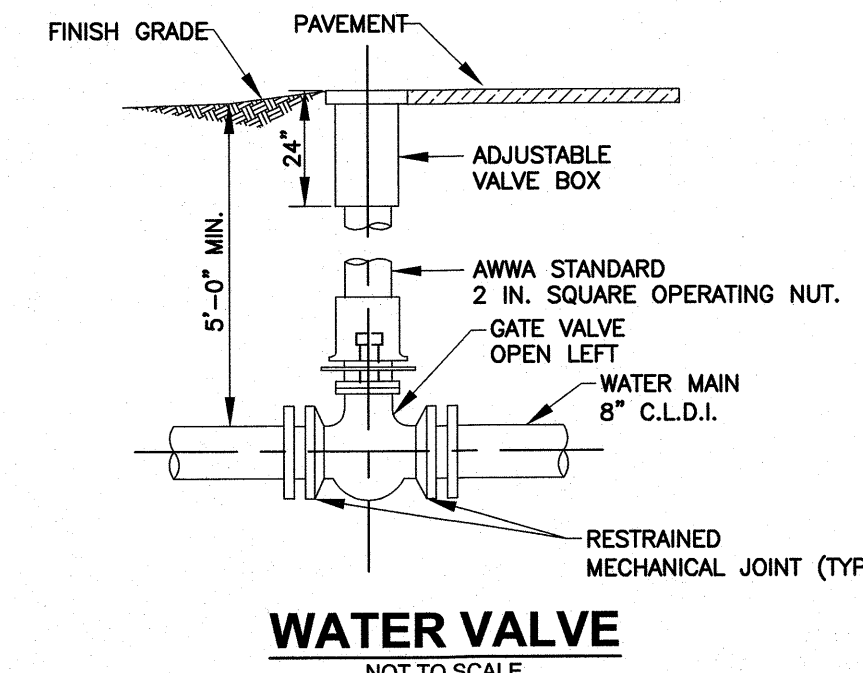
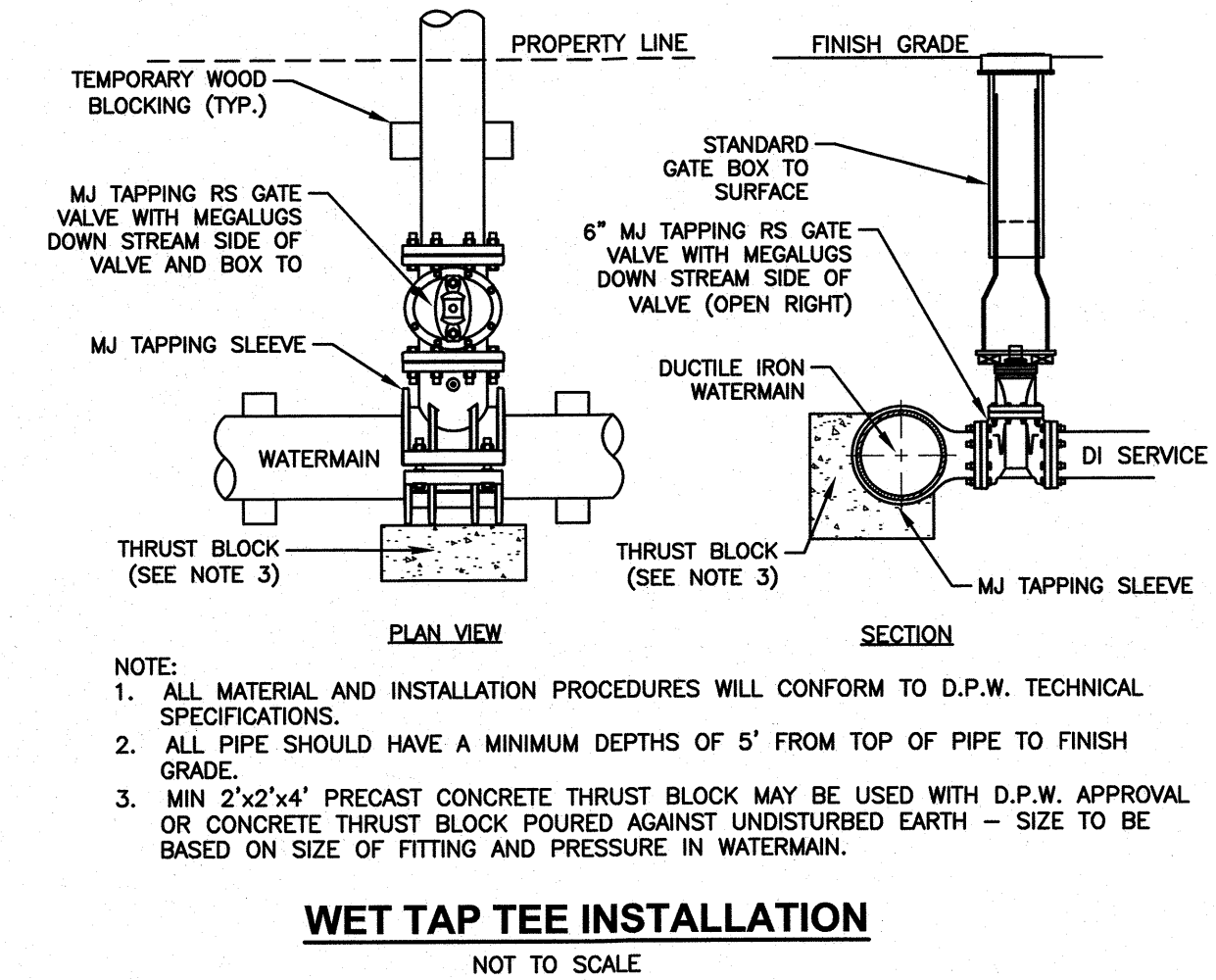
CONSTRUCTION
DETAILS

SCALE: AS SHOWN

PROJECT NO.
NEX-2200136



SCALE:	AS SHOWN
PROJECT NO.	NEX-2200136
30 OF 32	

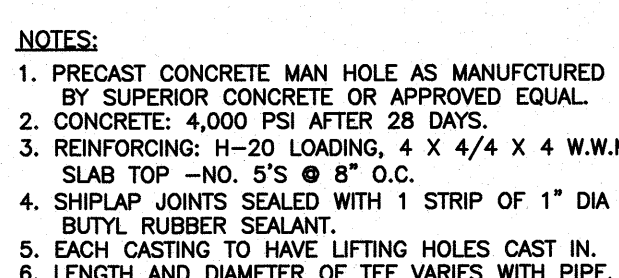


**METHUEN COMMUNITY
DEVELOPMENT BOARD**

DATE OF FILING _____

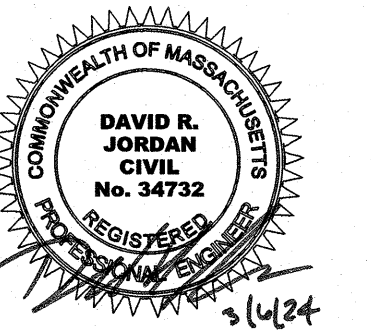
DATE OF HEARING _____

DATE OF APPROVAL _____



OUTLET CONTROL STRUCTURE TABLE								
OCS	RIM	ORIFICE SIZE	SIZE (IN.)	ELEV.	IN/IN (SIZE)	IN/IN (ELEV)	IN/OUT (SIZE)	IN/OUT (ELEV)
#1	149.00	A	6" DIA.	146.00	24"	145.50	12"	145.00
		B	—	—				
		C	12" DIA.	148.00				
#2	147.00	A	—	—	24"	144.50	12"	144.00
		B	—	—				
		C	12" DIA.	146.00				

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



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MARCH 6, 2024		
DRAWN/DESIGN BY GMP		CHECKED BY DRJ

SCALE:	AS SHOWN
PROJECT NO.	NEX-2200136



SECTION
NOT TO SCALE

PUMP STATION SPECS	
INV. IN	
INV. OUT	
RIM	
AVERAGE DAILY FLOW	13,200 GPD (9 GPM)
PEAK FLOW (PF=2.5)	23 GPM
PUMP:	BARNES 4SHVB20082
HORSE POWER	20
VOLTS	480
PHASE	3
RPM	3,450
CALC'D PERFORMANCE	

1. ANY DISCREPANCIES OR UNUSUAL CONDITIONS SHALL BE REPORTED TO THE DESIGNER BEFORE CONTINUING WITH THE INSTALLATION.
2. DO NOT SCALE FROM DRAWING. IF A REQUIRED DIMENSION IS NOT GIVEN, CONSULT THE ENGINEER.
3. FORCE MAIN TO BE DUCTILE IRON (D.I.).
4. PUMP STATION TO BE 8'Ø MANHOLE WITH PRECAST COVER PLACED AT FINISH GRADE TO ACCEPT DOOR.
5. PUMP STATION AND ALL JOINTS TO BE SEALED AGAINST GROUND WATER INFILTRATION.
6. EMERGENCY GENERATOR TO BE PROVIDED. CONTRACTOR TO COORDINATE SPECIFICATIONS WITH ENGINEER.

30 4-BEDROOM DWELLINGS (110GPD/BEDROOM) = 13,200 GPD

1. USE PUMP MANUFACTURER'S RECOMMENDED FLOAT SWITCHED AND CONTROLS TO CONTROL DUPLEX PUMP OPERATION AS FOLLOWS:
 - 1) PUMP OFF
 - 2) LEAD PUMP ON
 - 3) ALARM ON
 - 4) LAG PUMP ON

THE LEAD/LAG PUMPS SHALL AUTOMATICALLY SWITCH OPERATION. AUDIO AND VISUAL ALARM TO BE INSTALLED AT CONTROL PANEL. CONTROLS AND DUPLEX PANEL SHALL BE RATED AS NEMA 4.
2. PUMP STATION POWER, CONTROLS, ALARM & VENT LOCATIONS TO BE COORDINATED WITH THE ENGINEER.
3. POWER FOR THE PUMPS AND ALARMS IS TO BE PROVIDED ON SEPARATE CIRCUITS.
4. CONTRACTOR TO FURNISH OWNER WITH TWO (2) OPERATION AND MAINTENANCE MANUALS PER PUMP MANUFACTURER'S SPECIFICATIONS.

1. CONTRACTOR TO VERIFY INVERT OF INFLUENT SEWER LINE PRIOR TO CONSTRUCTION.
2. OSHA CONFINED SPACE REGULATIONS TO BE ADHERED TO PRIOR TO ENTERING PUMP STATION.
3. STAINLESS STEEL GUIDE RAIL SYSTEM TO HAVE INTERMEDIATE SUPPORTS LOCATED APPROXIMATELY 6' O.C. OR AS RECOMMENDED BY PUMP MANUFACTURER TO MAINTAIN STRAIGHT & RIGID ALIGNMENT.
4. PRECAST CONCRETE WET WELL AND VALVE PIT TO MEET OR EXCEED:
 - A. REQUIREMENTS OF ASTM C-478 AND HS20-44 LOADING.
 - B. CONCRETE COMPRESSIVE STRENGTH = 4,000PSI @ 28 DAYS
 - C. JOINTS SEALED WITH BUTYL RUBBER
 - D. OUTSIDE SURFACE TO BE BITUMINOUS COATED.
 - E. STRUCTURE TO BE PLACED ON 12" MINIMUM COMPACTED LAYER OF 3/4" CRUSHED STONE OR GRAVEL (MIN 95% MODIFIED PROCTOR).
 - F. SUBGRADE MATERIAL TO BE FIRM AND FREE OF ORGANIC AND OTHER DELETERIOUS MATERIAL.
5. CHECK VALVES TO BE SWING-FLEX VALVE WITH DUCTILE IRON BODY AS MANUFACTURED BY VALMATIC OR APPROVED ALTERNATE. SWING CHECK TO HAVE TOP MOUNTED ACCESS PORT FOR MAINTENANCE PURPOSES. PLUG VALVES TO BE CAST IRON ECCENTRIC PLUG VALVES CONFORMING TO AWWA C509 AS MANUFACTURED BY VALMATIC OR APPROVED ALTERNATE. CHECK VALVE AND PLUG VALVE TO BE FLANGED IN ACCORDANCE WITH ANSI B16.1 CLASS 125 AS WELL AS UL/FM APPROVED.
6. ALL PIPE CONNECTIONS TO PRECAST CONCRETE STRUCTURE TO BE KOR-N-SEAL FLEXIBLE BOOTS OR EQUAL AS APPROVED BY ENGINEER.
7. PIPE SUPPORTS IN VALVE PIT TO BE SADDLE TYPE (MODEL CS2) SUPPORTS WITH NEOPRENE LINER TO ENSURE TIGHT FIT AS MANUFACTURED BY MATERIAL RESOURCES INC. OF HILLSBORO, OREGON OR APPROVED ALTERNATE.
8. USE NON-SHRINK GROUT BETWEEN BOOM AND 4" D.I. DRAIN AT WET WELL AND VALVE PIT LOCATIONS.
9. A NATURAL GAS FIRED EMERGENCY GENERATOR WITH AN AUTOMATIC TRANSFER SWITCH SHALL BE PROVIDED.
10. RUN TIME METERS SHALL BE INSTALLED ON THE MOTOR CONTROL OF EACH PUMP.
11. ALL ELECTRICAL EQUIPMENT IN THE WETWELL SHALL BE EXPLOSION PROOF AND CORROSION RESISTANT.

DATE OF FILING _____

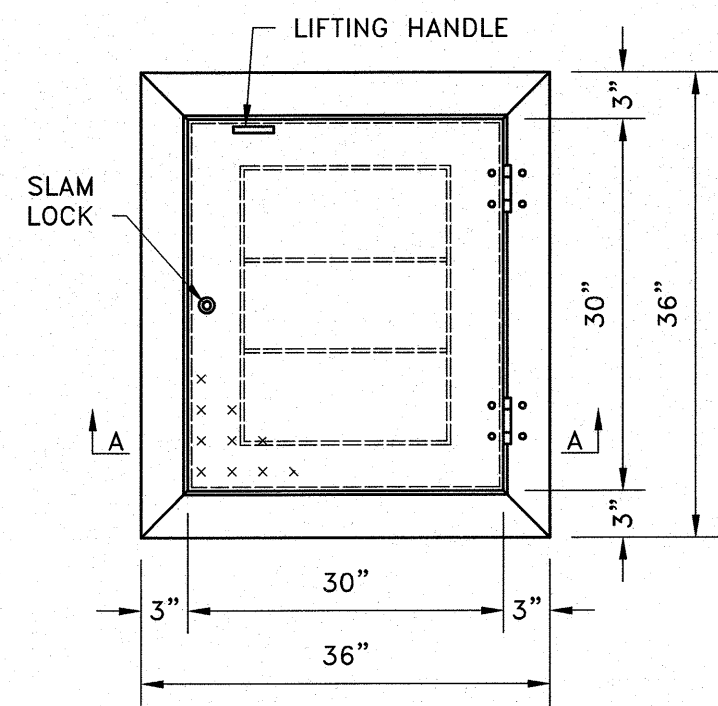
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DATE OF APPROVAL _____

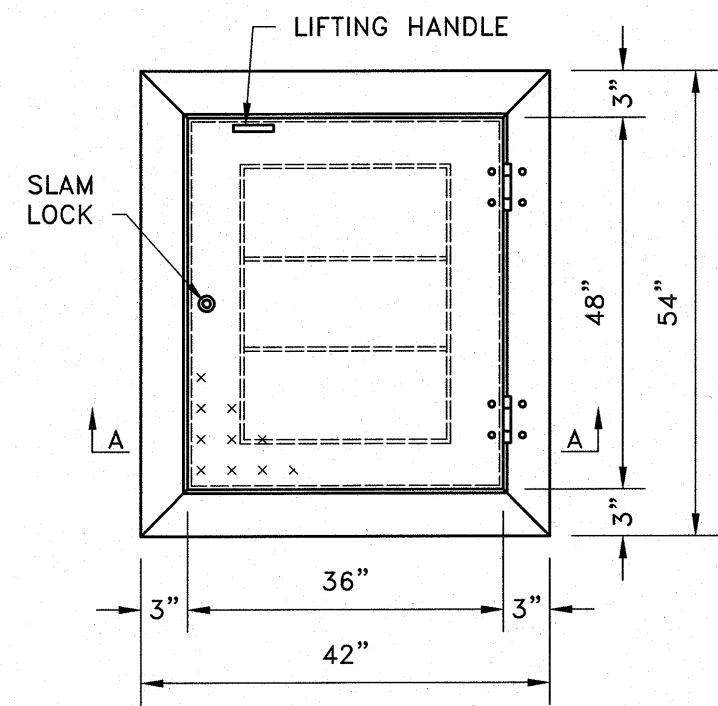
SCALE: AS SHOWN

PROJECT NO.
NEX-2200136

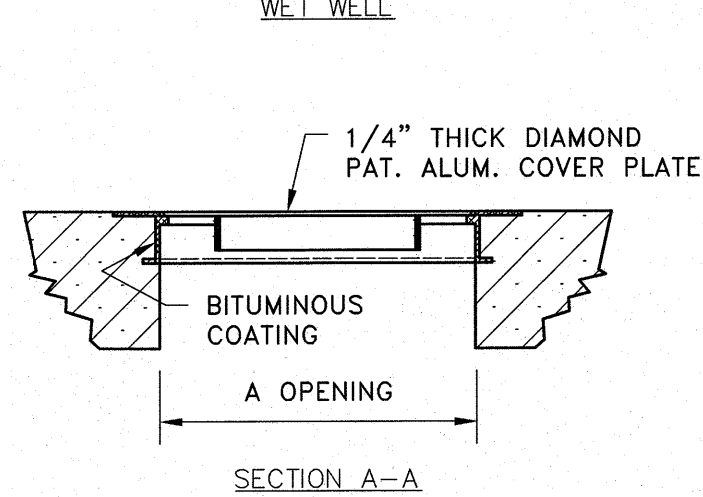
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VALVE PIT



WET WELL

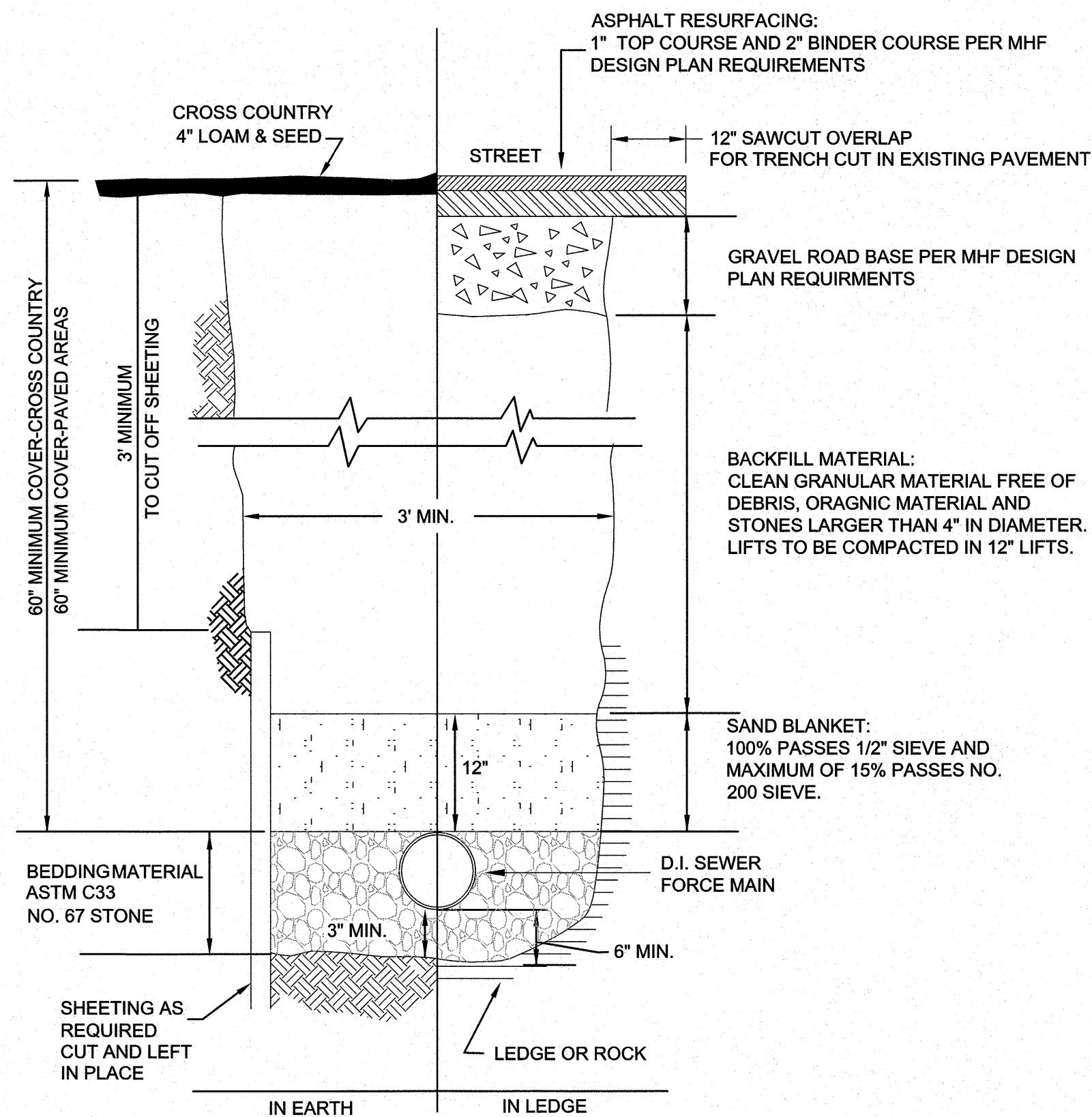
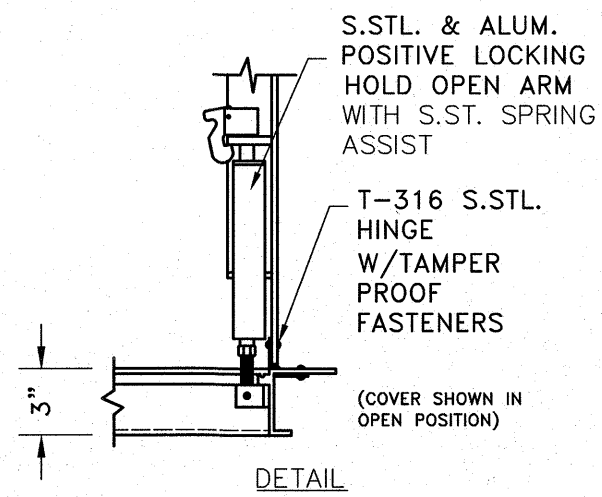


ALUMINUM HATCH DETAILS
NOT TO SCALE

**WET WELL: MODEL S1S3648
VALVE PIT: MODEL S1S3648
SERIES S1S ACCESS DOOR**

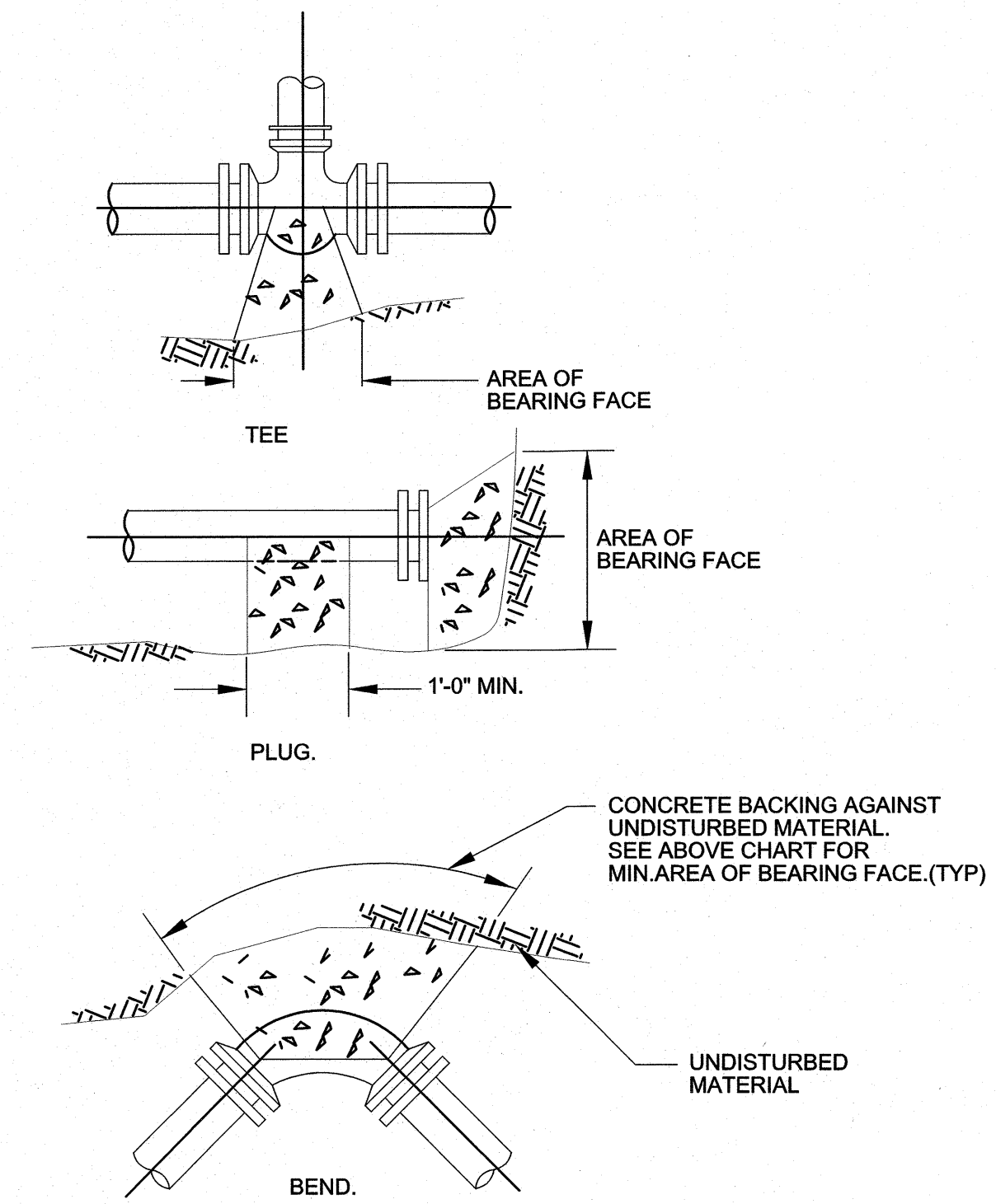
- STANDARD FEATURES:**
1. AUTO-LOCK T-316 STAINLESS STEEL HOLD OPEN ARM WITH RELEASE HANDLE
 2. T-316 STAINLESS STEEL HINGES AND ATTACHING HARDWARE
 3. T-316 STAINLESS STEEL SLAM LOCK W/REMOVABLE KEY
 4. STAINLESS STEEL COMPRESSION SPRING ASSIST
 5. BUILT-IN NEOPRENE CUSHION/GASKET
 6. NON-OZONE DEPLETING BITUMINOUS COATING
 7. SINGLE LEAF CONSTRUCTION
 8. 300 LBS. PER SQ. FT. LOAD RATING
 9. EXTRUDED ALUMINUM FRAME
 10. RECESSED LIFTING HANDLE

NOTE:
ACCESS HATCH TO BE SUPPLIED BY:
HALLIDAY PRODUCTS
6401 EDGEWATER DRIVE
ORLANDO, FLORIDA 32810
(OR APPROVED EQUAL)

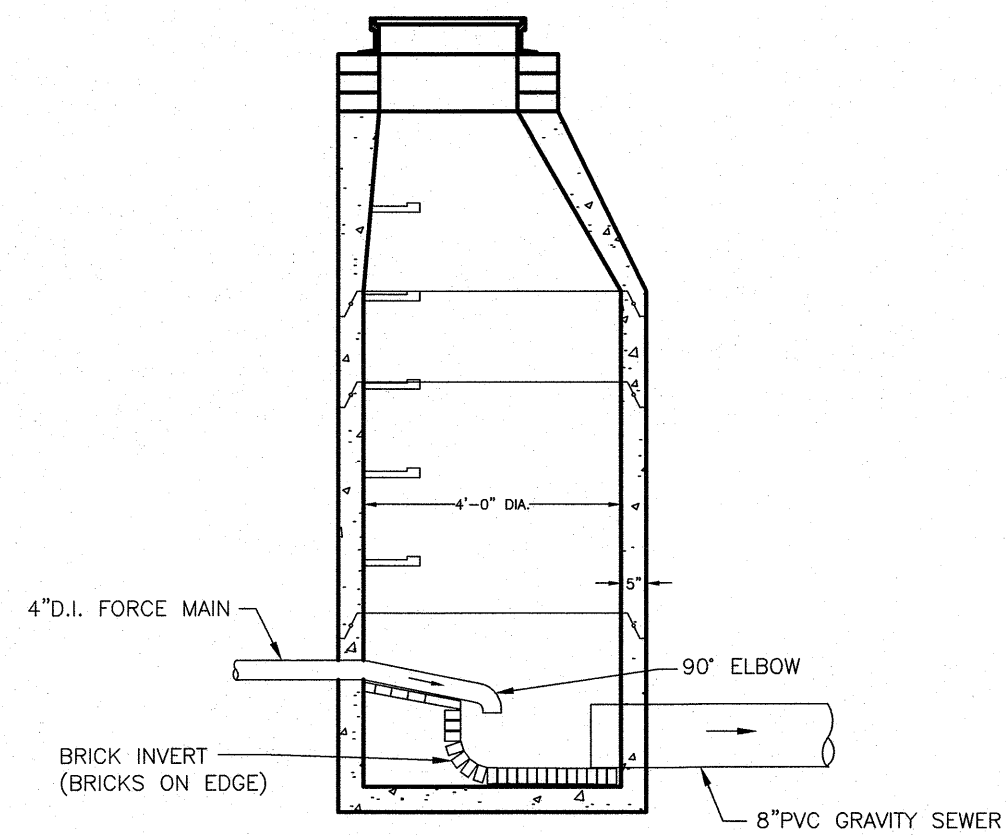


FORCE MAIN TRENCH SECTION
NOT TO SCALE

AREA OF BEARING FACE OF CONCRETE THRUST BLOCKS IN SQUARE FEET BASED ON 450 P.S.I. & TON/S.F. ALLOWABLE SOIL BEARING CAPACITY			
PIPE SIZE IN.	1/4 BEND	1/8 BEND	PLUS & TEE
4, 6, 8	8	4	6
10	13	7	9
12	18	9	13
16	32	16	23



TYPICAL CONCRETE BACKING
NOT TO SCALE



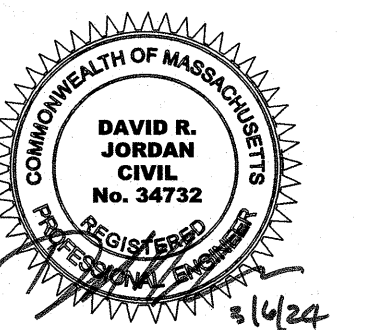
FORCE MAIN CONNECTION
TO GRAVITY SEWER
NOT TO SCALE

**METHUEN COMMUNITY
DEVELOPMENT BOARD**

DATE OF FILING	_____
DATE OF HEARING	_____
DATE OF APPROVAL	_____
_____	_____
_____	_____
_____	_____

PREPARED FOR
DHB HOMES, LLC
25 BUTTRICK ROAD, UNIT A1
LONDONDERRY, NH 03053

**BROOKVIEW HEIGHTS
DEFINITIVE SUBDIVISION PLAN
DHB HOMES, LLC
LAND OFF WASHINGTON STREET
METHUEN, MASSACHUSETTS**



REVISIONS

NO.	REVISION	DATE

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DRAWN/DESIGN BY: GMP
CHECKED BY: DRJ

**PUMP STATION
DETAILS**

SCALE: AS SHOWN
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