EXCAVATION PLAN

FOR

GREEN OAK REALTY DEVELOPMENT, LLC

TAX MAP 206 LOTS 10 & 11

KINGS HIGHWAY

NEW DURHAM, N.H.

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DETAILS PLAN	4
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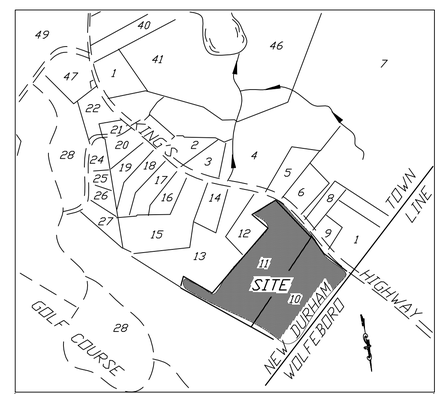
BOUNDARY SURVEY	ATTACHED



VICINITY MAP 1" = 1400'

TAX MAP 206

VARNEY ENGINEERING, LLC
93 POWDER MILL RD
ALTON, NH 03809
twvarney@worldpath.net
603-875-7110

OWNER:

Green Oak Realty Development, LLC
200 Suncook Valley Road
Chichester, N.H. 03258

ENGINEER:

Varney Engineering, Llc
93 Powder Mill Road
Alton, N.H. 03809
875-7110

WETLAND SCIENTIST:

Thomas W. Varney, C.W.S. N.H. # 211
93 Powder Mill Road
Alton, N.H. 03809

LAND SURVEYOR:

Prospect Mountain Survey
P.O. Box 1491
Alton, N.H. 03809
603-520-5938

Tax Map 255 Lot 4
Avery Heirs LLC
c/o Lovering
2 Millwood Drive
Wolfeboro, N.H. 03894

Tax Map 206 Lot 28
Lake winnipesaukee Resort LLC
c/o Upland Capital Corporation
745 Boylston Street, Suite 203
Boston, Ma. 02116

Tax Map 206 Lot 13
William J. Driscoll
215 Browns Ridge Road
Ossipee, N.H. 03864

Tax Map 206 Lot 12
John B. Buell &
Carolyn C. Lewis
395 Kings Highway
New Durham, N.H. 03855

Tax Map 278 Lot 43
Trites Family Rev. Trust
Thomas & Stacy Trites
Trustees
338 Midleton Road
Wolfeboro, N.H. 03894

Tax Map 278 Lot 41
Heidi M. Kendall
P.O. Box 492
Wolfeboro FaLLS, N.H.
03896

Tax Map 207 Lot 1
Paul W. Dumont
P.O. Box 969
Wolfeboro Falls,
N.H. 03896

Tax Map 207 Lot 2
Robert & Allyson Tuminowski Jr.
284 Nutes Road
Milton, N.H. 03851

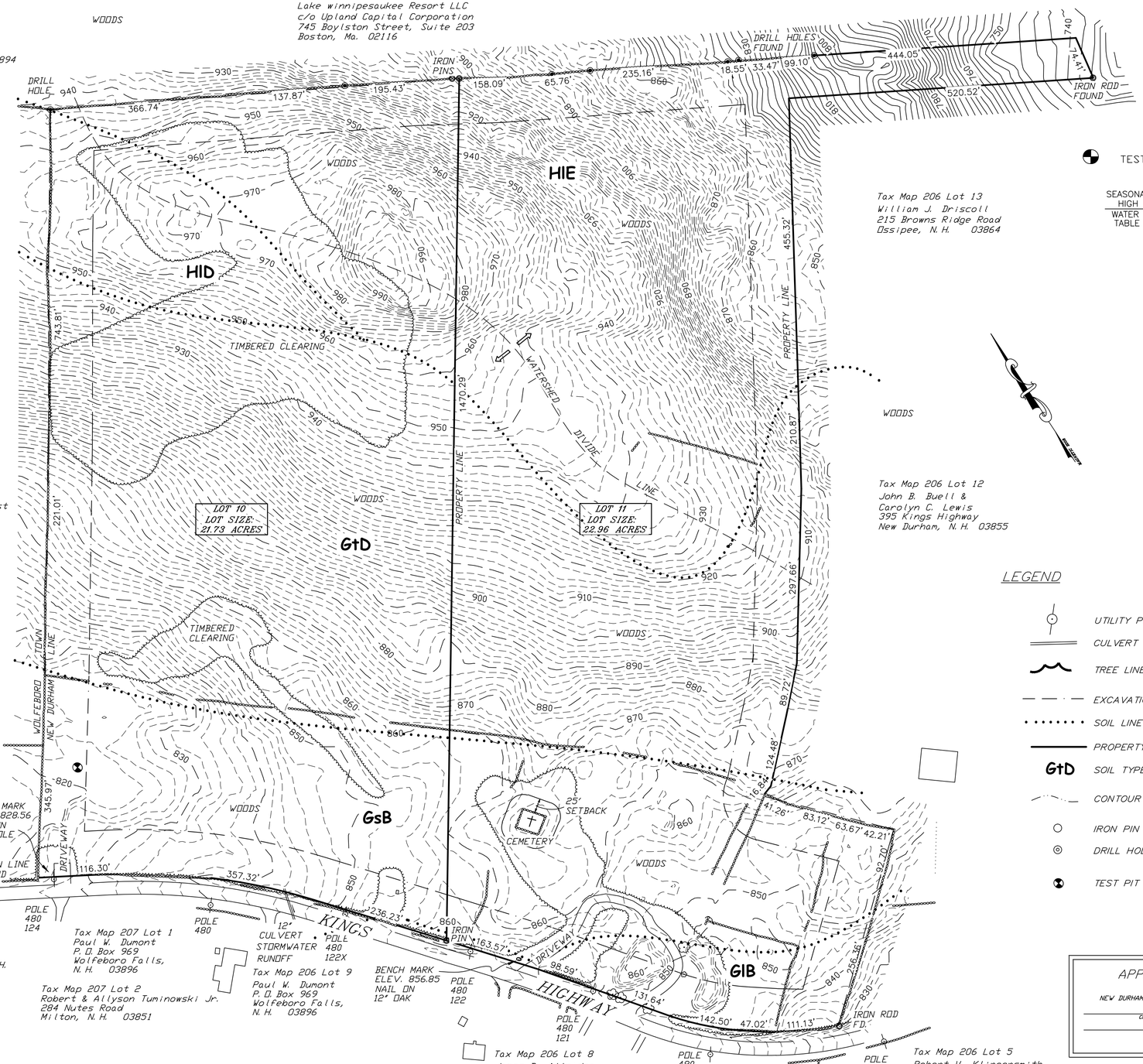
Tax Map 206 Lot 9
Paul W. Dumont
P.O. Box 969
Wolfeboro Falls,
N.H. 03896

Tax Map 206 Lot 8
James D. Attridge
36 Center St. Box 213
Wolfeboro, N.H. 03984

Tax Map 206 Lot 7
Beaver Brook Forest LLC
c/o Curvey Family Office
200 Seaport Boulevard S9A
Boston, Ma. 02210

Tax Map 206 Lot 6
Randy & Tiffany Bisson
P.O. Box 894
Alton, N.H. 03809

Tax Map 206 Lot 5
Robert W. Klingensmith
61 Middleton Road
Wolfeboro, N.H. 03894



TEST PIT 10/24/16

SEASONAL HIGH WATER TABLE 30"

8" loam
8–24" yellowish brown loamy sand, 10YR 6/6 loose, sandy
24–54" light yellowish brown sandy loam,10YR 6/4 loose, gravelly

LEGEND

- UTILITY POLE
- CULVERT
- TREE LINE
- EXCAVATION SETBACK LINE
- SOIL LINE
- PROPERTY LINE
- GtD SOIL TYPE
- CONTOUR LINE
- IRON PIN FOUND
- DRILL HOLE
- TEST PIT

NOTES:

Zone: Residential/Recreational/Agricultural
Steep Slope Conservation District
Reference deed: LOT 10: S.C.R.D. Book 4407 Page 34
LOT 11: S.C.R.D. Book 3832 Page 809
Reference survey "BOUNDARY PLAN for Keith Babb
Tax Map 206 Lots 10 & 11, King's Highway, New Durham, N.H." by Prospect Mountain Survey, P.O. Box 1491, Alton, N.H..
Wetland Determination by Thomas W. Varney, N.H. Wetland Scientist # 211
No wetlands obseved.
This property is not in a flood plain.
King's Highway is a town road.
This plan is to meet New Durham Earth Excavation Regulations.
Lot Size: Lot 10: 21.73 acres
Lot 11: 22.96 "
Total: 44.69 acres

Excavated area: 1.8 acres (4yr projection)
Plan is to operate a ledge excavation to produce crushed stone and to stockpile sand, gravel and loam for sale.
Future excavation volume is 3,000,0000 c.y.+-.
Soil types:
- GsB Gloucester very stony fine sandy loam
- GtD Gloucester extremely stony fine sandy loam
- GIB Gloucester fine sandy loam
- HID Hollis-Gloucester extremely rocky fine sandy loams
- HIE Hollis-Gloucester extremely rocky fine sandy loams

Strafford County Soils Map sheet #3

PERMITS:
New Durham Excavation Permit; pending
N.H.D.E.S. Site Specific Permit; pending
New Durham Driveway Permit.

SETBACKS:
75' for a disapproving abutter
25' for an approving abutter
150' to an existing dwelling
25' from a stream
25' from a cemetery

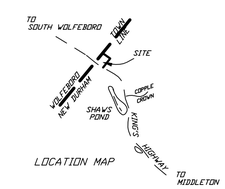
FUEL:
No fuel is to be stored on site.
Fuel is to be provided by offsite fuel truck.

EQUIPMENT LUBRICATION:
Motor oil, hydraulic oil, grease, antifreeze and similar to be contained in an onsite storage container (truck cargo body).
All regulated substances (as above) are to be handled in accordance with N.H.D.E.S. "Best Management Practices for Fueling and Maintenance of Excavation and Earthmoving Equipment".

HOURS OF OPERATION:
7am-6pm Monday through Friday
8 am-12noon Saturday

STORMWATER MANAGEMENT:
Stormwater infiltration areas are to contain runoff from the developed site.

MISCELLANEOUS:
Gates to be provided at entrance and existing drives.
No-cut buffer zone (75') to be maintained along Kings Highway for visual screen.
Chain link fence to be placed along edge of excavation. Danger signs to be placed along fence every 50'.



LOCATION MAP

OWNER:
Keith Babb
Green Oak Realty Development, LLC
200 Suncook Valley Road
Chichester, N.H. 03258
204-7300

ENGINEER:
Thomas W. Varney, P.E.
93 Powder Mill Road
Alton, NH
875-7110

APPROVED
NEW DURHAM PLANNING BOARD
CHAIRMAN
DATE

100 0 100 200 300
SCALE 1"=100'

VARNEY ENGINEERING, LLC
93 POWDER MILL RD
ALTON, NH 03809
twarney@worldpath.net
603-875-7110

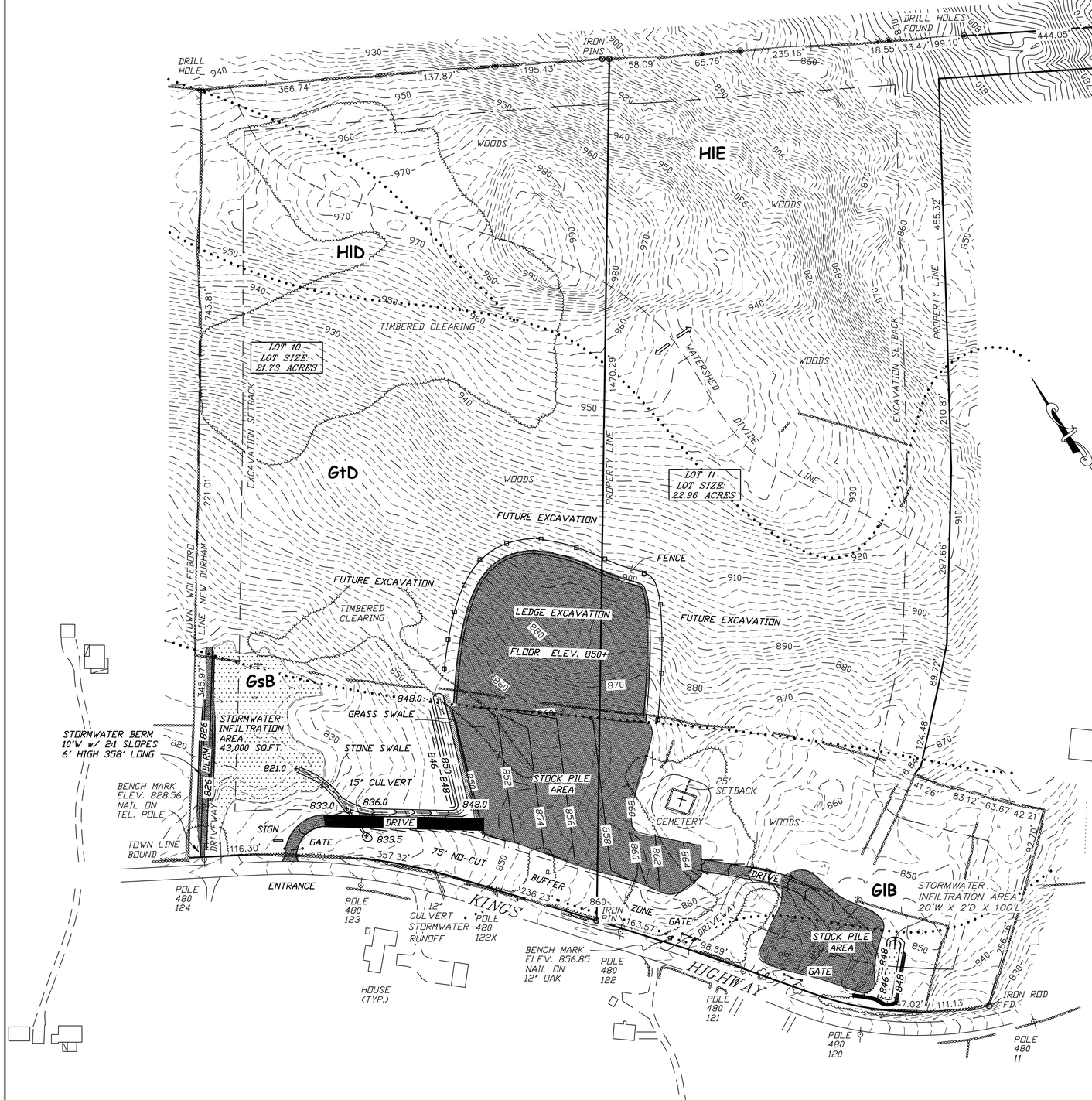
REVISION	DATE

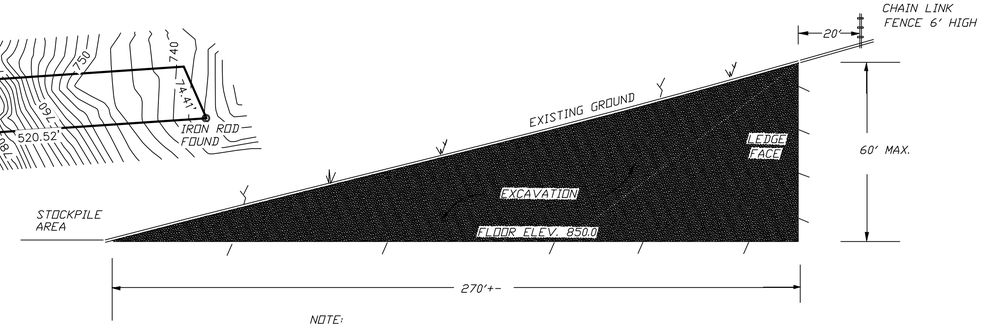
EXCAVATION PLAN
LAND OF
GREEN OAK REALTY DEVELOPMENT, LLC
EXISTING CONDITIONS

TAX MAP 206 LOTS 10 & 11
KINGS HIGHWAY

NEW DURHAM NH

SHEET 1 of 5 OCTOBER 24, 2016





NOTE:

LEDGE EXCAVATION IS A BLAST AREA TO GENERATE ROCK CRUSHING MATERIAL.

FULL DEVELOPMENT OF EXCAVATION AREA WILL TAKE MORE THAN FOUR YEARS.

LEDGE FACE TO BE MAXIMUM 60' HIGH

EXCAVATION BLASTS ARE 7-10,000 C.Y. EACH

3-4 BLASTS PER YEAR

CROSS SECTION

LEGEND

- UTILITY POLE
- CULVERT
- TREE LINE
- EXCAVATION SETBACK LINE
- SOIL LINE
- PROPERTY LINE
- GtD SOIL TYPE
- CONTOUR LINE
- IRON PIN FOUND
- DRILL HOLE
- TEST PIT
- FENCE
- DEVELOPED AREA
- INFILTRATION AREA
- GRASS SWALE

BLASTING NOTES:

Best Management Practices for Blasting:

All activities related to blasting shall follow Best Management Practices (BMP's) to prevent contamination of groundwater including preparing, reveiwing and following an approved blasting plan;proper drilling, explosive handling and loading procedures; observing the entire blasting procedures; evaluating blasting performance; and handling and storage of blasted rock.

Loading practices. The following blasthole loading practices to minimize environmental effects shall be followed:

(a) Drilling logs shall be maintained by the driller and communicated directly to the blaster. The logs shall indicate depths and lengths of voids or other weak zones encountered as well as groundwater conditions.
(b) Explosive products shall be managed on-site so that they are either used in the borehole, returned to the delivery vehicle, or placed in secure containers for off-site disposal.
(c) Spillage around the borehole shall either be placed in the borehole or cleaned up and returned to an appropriate vehicle for handling or placement in secured containers for off-site disposal.
(d) Loaded explosives shall be detonated as soon as possible and shall not be left in the blastholes overnight, unless weather or other safety concerns reasonably dictate that detonation should be postponed.
(e) Loading equipment shall be cleaned in an area where wastewater can be properly contained and handled in a manner that prevents release of contaminents to the environment.
(f) Explosives shall be loaded to maintain good continuity in the column load to promote complete detonation. Industry accepted loading practices for priming, stemming, decking and column rise need to be attended to.

Explosive Selection. The following BMP's shall be followed to reduce the potential for groundwater contamination when explosives are used:

(a) Explosive products shall be selected that are appropriate for site conditions and safe blast execution.
(b) Explosive products shll be selected that have the appropriate water resistance for the site conditions and safe blast execution.

Prevention of Misfires. Appropriate practices shall be developed and inplemented to prevent misfires.

Muck Pile Management. Muck piles (the blasted pieces of rock) and rock piles shall be managed in a manner to reduce the potential for contamination by inplementing the following measures:

(a) Remove the muck pile from the blast area as soon as reasonably possible.
(b) Manage the interaction of blasted rock piles and stormwater to prevent contamination of water supply wells or surface water.

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875-7110

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twvarney@worldpath.net
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SCALE 1"=100'

REVISION	DATE

EXCAVATION PLAN

LAND OF

GREEN OAK REALTY DEVELOPMENT, LLC

OPERATION PLAN

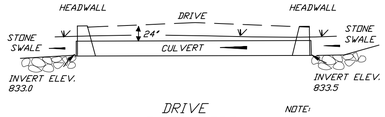
TAX MAP 206 LOTS 10 & 11

KINGS HIGHWAY

NEW DURHAM NH

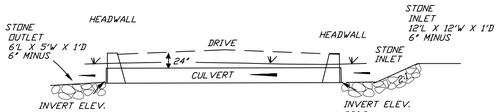
SHEET 2 of 5

SEPTEMBER 20, 2016



DRIVE
15" CULVERT
CROSS SECTION

NOTE:
CULVERT TO BE 15" HDPEP

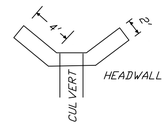


ENTRANCE
15" CULVERT
CROSS SECTION

NOTE:
CULVERT TO BE 15" HDPEP

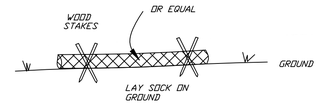
CROSS SECTION

FRONT VIEW

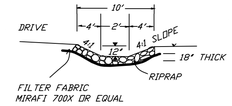


PLAN VIEW

CULVERT HEADWALL DETAILS
NOT TO SCALE

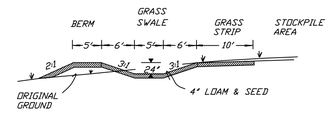


SILT SOCK DETAIL



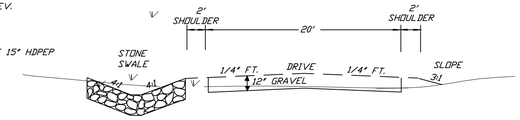
CROSS SECTION
STONE SWALE
NOT TO SCALE

RIP RAP GRADATION: STONE SIZE D50 =6"	
% FINER BY WEIGHT	
2"	0-15%
4"	20-35%
6"	35-50%
8"	50-65%
10"	60-80%
12"	75-100%

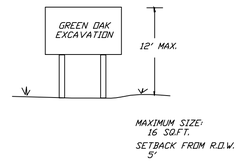


NOTES:
SWALE TO BE FREE OF IRREGULARITIES TO IMPEDE INFILTRATION.
WATERWAY TO BE STABILIZED WITH " BEST MANAGEMENT PRACTICES".
MAINTENANCE OF THE VEGETATION IN THE GRASSED WATERWAY IS IMPORTANT TO PREVENT EROSION AND FAILURE OF THE SWALE.
FERTILIZE ON A AS NEEDED BASIS TO MAINTAIN A HEALTHY STAND OF GRASS.

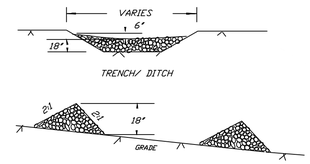
CROSS SECTION
GRASS SWALE
& GRASS STRIP
NOT TO SCALE



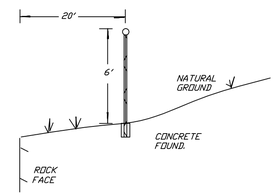
DRIVE
CROSS SECTION



SIGN DETAIL



STONE CHECK DAM



CHAIN-LINK FENCE DETAIL

EROSION CONTROL:

The following erosion control measures are to be installed:
- Grass swale
- Stone swale
- Silt sock in all locations shown on plan.
- Stone check dams

These measures are for erosion control and treatment of runoff.

The grass swale is to be kept free of silt or debris as to allow infiltration of storm runoff.

Seeding & Mulching:

Lime and fertilizer should be applied prior to or at the time of seeding and incorporated into the soil.
Lime (agricultural): at 2 tons/acre
Fertilizer: 500lbs/acre of 10-20-20 or 1,000lbs/acre of 5-10-10
Seed:

Mixture:	lbs/acre
Tall fescue	20
Creeping red fescue	20
Birdsfoot trefoil	8
Total	48 lbs/acre

Mulch:
A minimum of 1.5 tons/acre of mulch shall be applied.

CONSTRUCTION SEQUENCE/ EROSION CONTROL

The project is to be managed in a manner that meets the requirements and intent of RSA 430:53 and chapter Agr 3800 relative to invasive species.
Perimeter controls to be installed prior to resumption of excavation.
Grass swale and stone swale shall be installed early on in resumption of excavation.
All swales shall be stabilized prior to directing runoff to them.

The definition of the word "stable":
An area shall be considered stable if one of the following has occurred:
A minimum of 85 percent vegetated growth has been established.
A minimum of 3 inches of non-erosive material such stone or riprap has been installed.
Or, erosion control blankets have been properly installed.

All erosion controls shall be inspected weekly AND after every half-inch of rainfall.

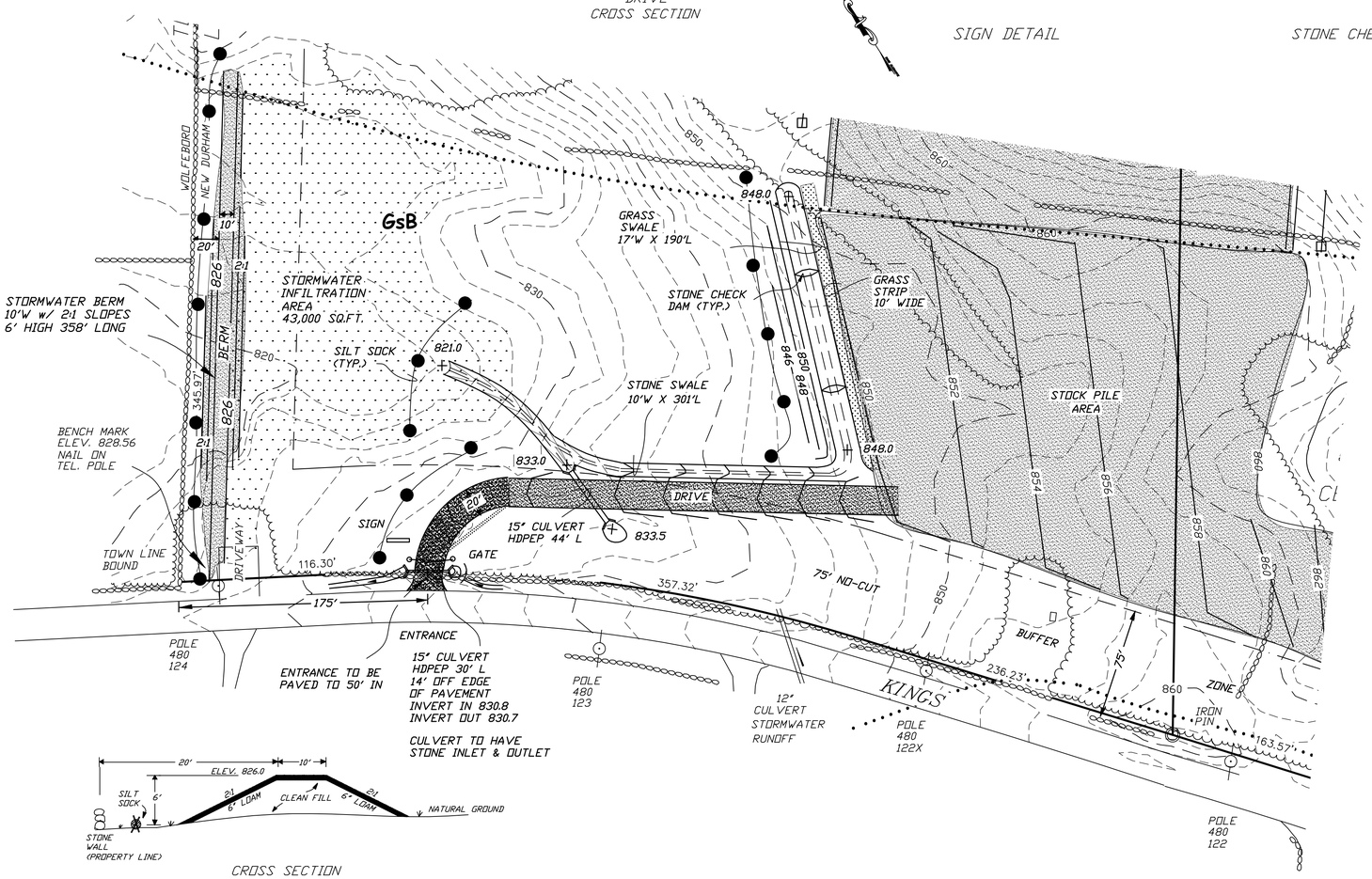
WINTER NOTES:

All proposed vegetated areas that do not exhibit a minimum of 85 percent vegetative growth by October 15, or which are disturbed after October 15, shall be stabilized by seeding and and installing erosion control blankets on slopes greater than 3:1, and seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting.
The installation of erosion control blankets or mulch and netting shall not occur over accumulated snow or on frozen ground and shall be completed in advance of thaw or spring melt events.

All swales which do not exhibit a minimum of 85 percent vegetative growth by October 15, or which are disturbed after October 15, shall be stabilized temporarily with stone or erosion control blankets apropriate for the design flow conditions.

Pit owner must submit to the Department of Environmental Services a written update of the project and revised plans documenting the project status every five years from the date of the Alteration of Terrain permit.

Dust Control:
Pit operator is to implement dust control measures as needed to prevent airborne dust particles from leaving the site.



CROSS SECTION
STORMWATER BERM

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50 0 50 100 150

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LAND OF
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DETAILS, EROSION CONTROL

TAX MAP 206 LOTS 10 & 11
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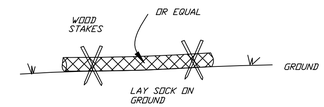
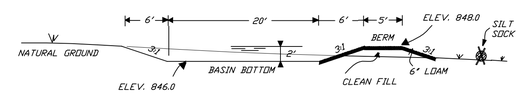
NEW DURHAM NH

SHEET 3 of 5

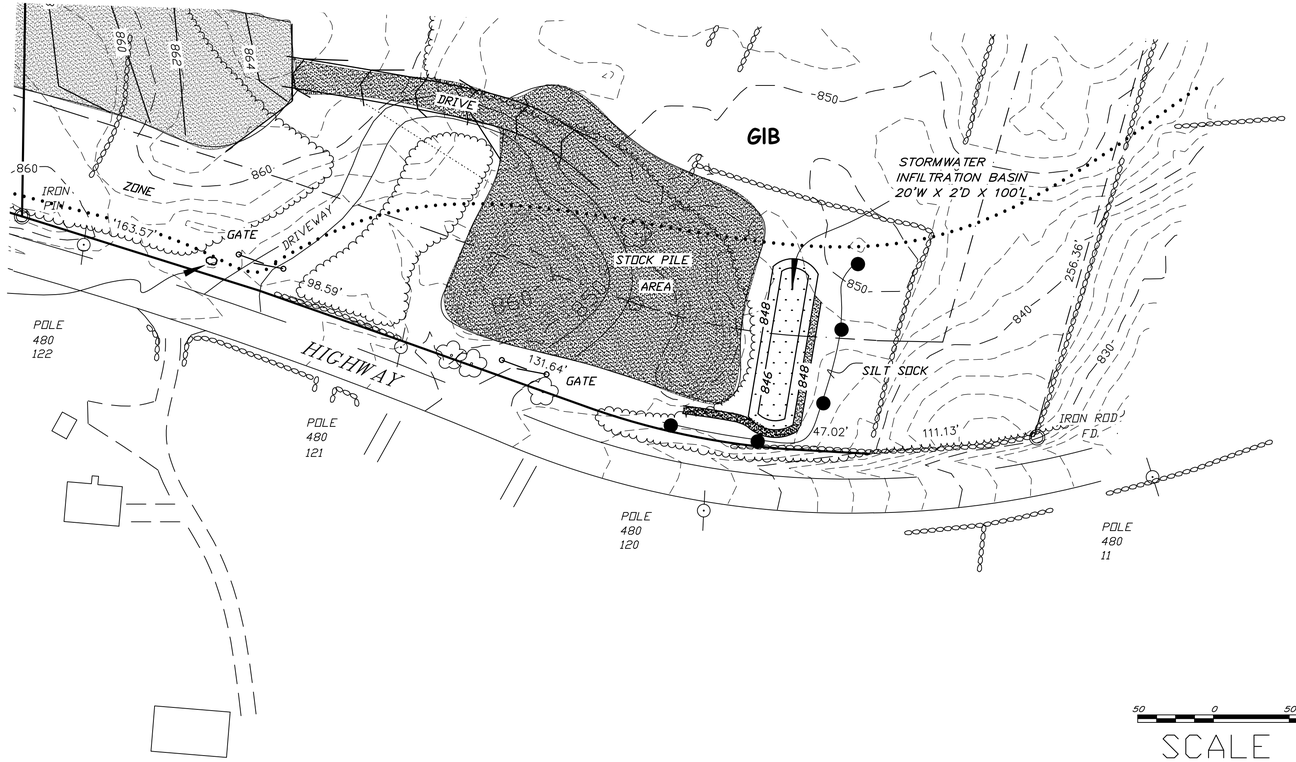
SEPTEMBER 20, 2016



SILT SOCK DETAIL



CROSS SECTION
INFILTRATION BASIN



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EXCAVATION PLAN
LAND OF
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DETAILS

TAX MAP 206 LOTS 10 & 11
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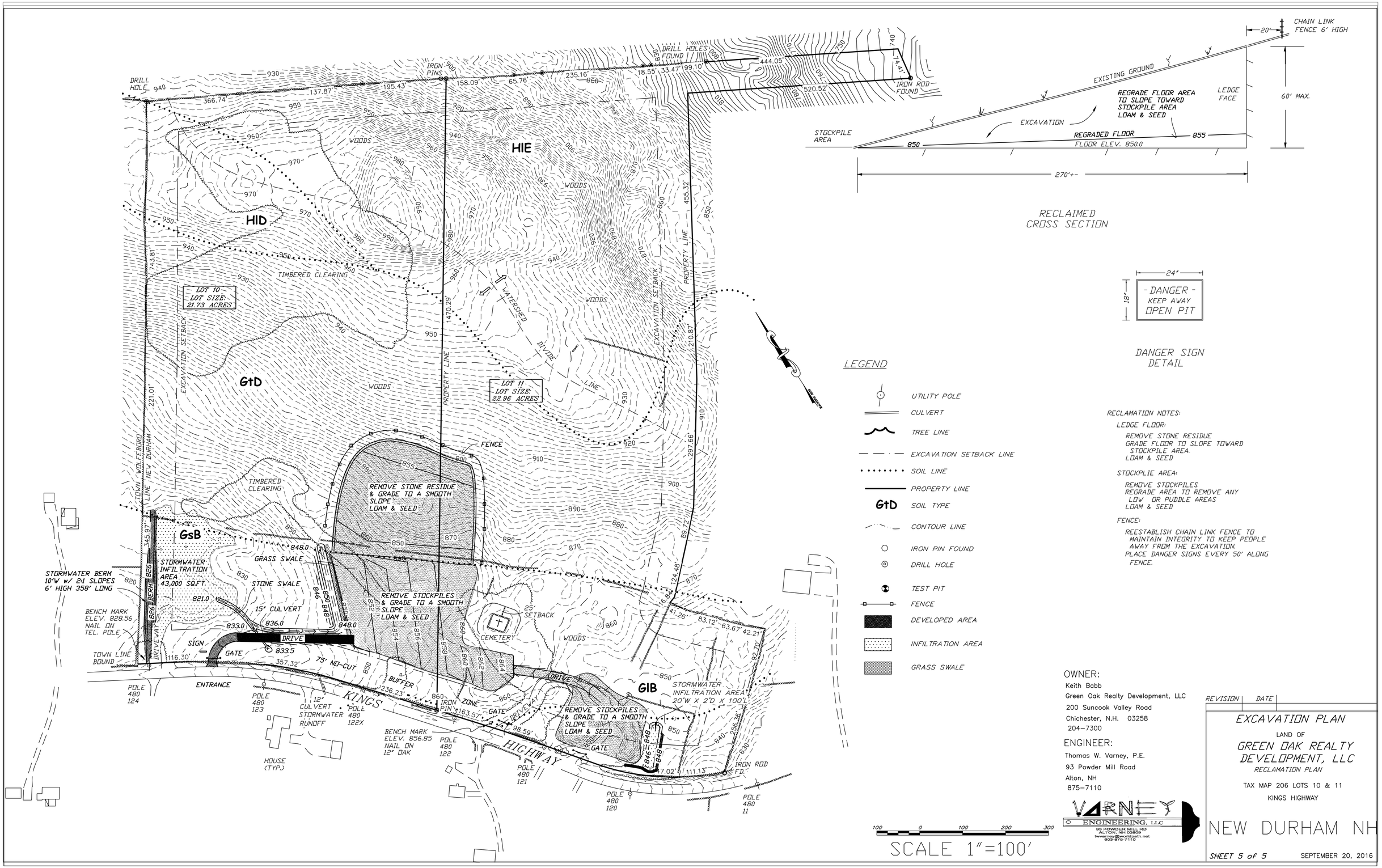
NEW DURHAM NH

SHEET 4 of 5

SEPTEMBER 20, 2016



RECLAMATION NOTES:

LEDGE FLOOR:

REMOVE STONE RESIDUE
GRADE FLOOR TO SLOPE TOWARD STOCKPILE AREA.
LOAM & SEED

STOCKPLIE AREA:

REMOVE STOCKPILES
REGRADE AREA TO REMOVE ANY LOW OR PUDDLE AREAS
LOAM & SEED

FENCE:

REESTABLISH CHAIN LINK FENCE TO MAINTAIN INTEGRITY TO KEEP PEOPLE AWAY FROM THE EXCAVATION.
PLACE DANGER SIGNS EVERY 50' ALONG FENCE.

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EXCAVATION PLAN
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RECLAMATION PLAN

TAX MAP 206 LOTS 10 & 11
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SHEET 5 of 5

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