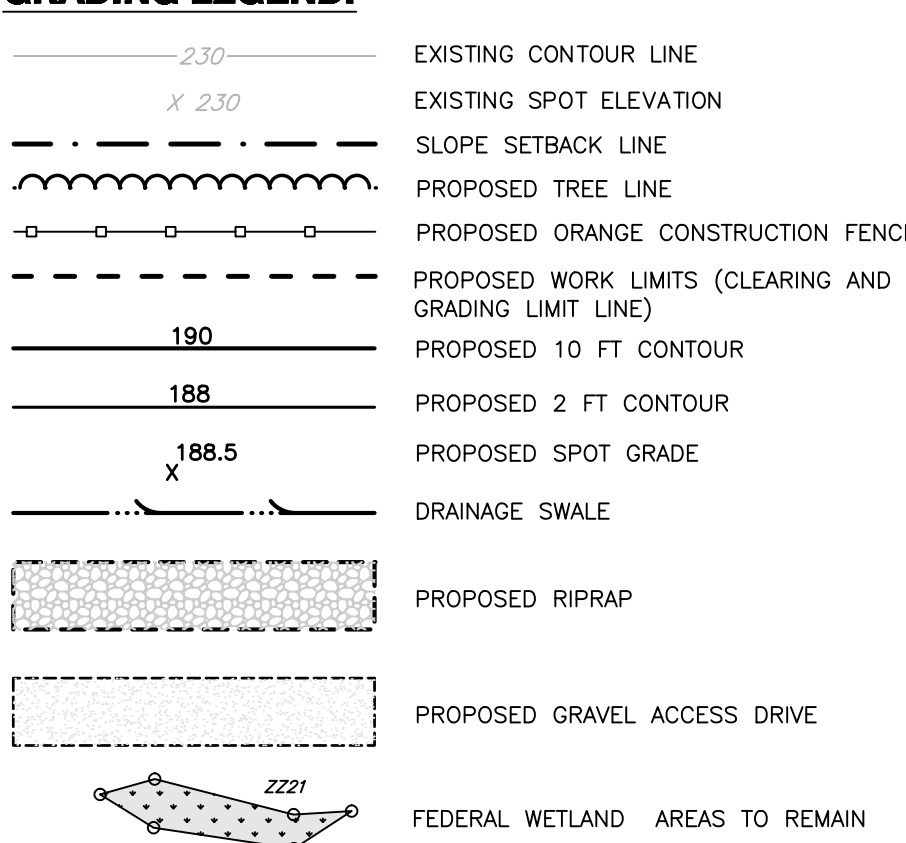




MATCH LINE - SEE SHEET S4.2



GRADING AND TREE PROTECTION NOTES:

1. ALL LANDSCAPING SHALL BE SMOOTHLY AND EVENLY BLENDED INTO EXISTING CONDITIONS.
2. THE EMPLOYER CONTRACTOR MEASURES DEPICTED ON THESE PLANS ARE THE MINIMUM MEASURES REQUIRED TO PROTECT THE EXISTING INFRASTRUCTURE INCLUDING ALL GENERAL AND PARTICULAR MEASURES AS DEEMED NECESSARY BY THE OWNER'S FIELD REPRESENTATIVES AND THE ENGINEER.
3. TEMPORARY PROTECTION: PROVIDE TEMPORARY FENCING, BARRICADES, OR OTHER SUITABLE GUARDS LOCATED OUTSIDE THE TREE'S OUTER PROTECTION PERIMETER TO PROTECT TREES AND OTHER PLANTS TO REMAIN, FROM DAMAGE.
4. PROTECT TREE ROOTS SYSTEMS FROM DAMAGE DUE TO NOXIOUS MATERIALS CAUSED BY RUNOFF OR SPILLAGE WHILE MIXING, PLACING OR CURING CONSTRUCTION MATERIALS. PROTECT ROOT SYSTEMS FROM FLOODING, EROSION OR EXCESSIVE WETTING CAUSED BY DEWATERING OPERATIONS.
5. DO NOT STORE CONSTRUCTION MATERIALS, DEBRIS OR EXCAVATED MATERIAL WITHIN TREE DRIP LINE OF REMAINING TREES. DO NOT STORE DEBRIS OR CONSTRUCTION MATERIALS ALONG TREE DRIP LINE, AND PREVENT SOIL COMPACTION OVER ROOT SYSTEMS.
6. WHERE EXCAVATION FOR NEW CONSTRUCTION IS REQUIRED WITHIN TREE DRIP LINE, HAND EXCAVATE TO MINIMIZE DAMAGE TO ROOT SYSTEMS. USE NARROWING CUTS, GRADING FORMS AND COMES SOIL TO EXPOSE ROOTS.
7. RELOCATE ROOTS IN BACKFILL AREAS WHEREVER POSSIBLE. IF ENCOUNTERING LARGE, MAIN LATERAL ROOTS OR ROOTS THAT BECOME CRITICAL TO THE STABILITY OF THE TREE, REMOVE AND RELOCATE WITH "OUT" BREAKING, IF ENCOUNTERING IMMEDIATELY ADJACENT OR OVERLAPPING OF NEW CONSTRUCTION, RELOCATION IS NOT PRACTICAL. RELOCATE TO A MINIMUM OF APPROXIMATELY 3 INCHES BACK FROM NEW CONSTRUCTION.
8. A. DO NOT ALLOW EXPOSED ROOTS TO DRY OUT BEFORE RELOCATION. B. DO NOT CUT MAIN LATERAL ROOTS OR ROOTS OVER PACK WITH PEAT MOSS AND WRAP WITH BURLAP. C. MAINTAIN AND MAINTAIN MOISTURE TO ROOTS WITH SHARP TEMPORARILY SUPPORT AND PROTECT ROOTS FROM DAMAGE DURING RELOCATION. THEY ARE PERMANENTLY RELOCATED AND COVERED WITH EARTH.
9. WHERE UTILITY TRENCHES ARE REQUIRED WITHIN TREE DRIP LINE, TUNNEL UNDER OR AROUND THE ROOTS BY DRILLING, BORING, PIPE JACQUET, OR DIGGING.
10. A. ROOT PRUNING: DO NOT CUT MAIN LATERAL ROOTS OR TOP ROOTS. CUT ONLY SMALLER ROOTS THAT INTERFERE WITH INSTALLATION OF NEW CONSTRUCTION WITH SHARP PRUNING INSTRUMENT; DO NOT BREAK OR CHOP.
11. GRADE LOWERING: WHERE NEW FINISHED GRADE IS INDICATED BELOW EXISTING GRADE AROUND TREES, SLOPE GRADE AWAY FROM TREES.
12. A. ROOT PRUNING: PRUNE TREE ROOTS EXPOSED WITHIN TREE DRIP LOWERING. DO NOT CUT MAIN LATERAL ROOTS OR TOP ROOTS; CUT ONLY SMALLER ROOTS. ROOTS CUT WITH SHARP PRUNING INSTRUMENTS.
13. MINOR FILL: WHERE EXISTING GRADE IS 6 INCHES OR LESS BELOW ELEVATION OF FINISHED GRADE SHOW AROUND TREES, FILL WITH TOPSOIL: PLACE TOPOIL TO A SINGLE CORNER EXISTING GRADE AND HANDED TO REPAIR TO REQUIRED FINISH ELEVATIONS.
14. DO NOT REGRADE MORE THAN 6 INCHES ABOVE EXISTING GRADE AROUND TREES. PROVIDE TREE PROTECTION FOR FILL OVER 6 INCHES.
15. PRUNE REMAINING TREES AFFECTED BY TEMPORARY AND NEW CONSTRUCTION.
16. PRUNE REMAINING TREES TO COMPENSATE FOR ROOT LOSS CAUSED BY DAMAGING OR CUTTING ROOT SYSTEM. PROVIDE SUBSEQUENT MAINTENANCE DURING GROWTH PERIOD.
17. PRUNING STANDARDS: PRUNE TREES ACCORDING TO THE NATIONAL ARBORIST ASSOCIATION'S "PRUNING STANDARDS FOR SHADE TREES".
18. CUT BRANCHES WITH SHARP PRUNING INSTRUMENTS; DO NOT BREAK OR CHOP.
19. CHIP BRANCHES REMOVED TO BE USED AS SPREADER LAYER WHERE SPECIFIED AS DIRECTED BY THE ENGINEER.

SLOPE SETBACK NOTE

1. THE FOLLOWING LOTS SHALL REQUIRE SITE SPECIFIC GEOTECHNICAL INVESTIGATION AND RECOMMENDATIONS PRIOR TO OBTAINING A BUILD PERMIT:

6 & 10 HERITAGE WAY
18, 32, 36, 48, & 60 SAVANNAH COURT

GEOTECHNICAL RECOMMENDATION NOTES:

FOUNDATIONS:

FOOTINGS SHALL BEAR ON VIRGIN SUBGRADES, IN THE BROWN SILTY MATERIAL. FOOTINGS SHALL NOT BEAR ON THE GRAY CLAYS ENCOUNTERED 10- TO 12- FEET BELOW GRADE WITHOUT SUBGRADE IMPROVEMENTS AS RECOMMENDED BY A GEOTECHNICAL ENGINEER. ALL BUILDINGS CONSTRUCTED ON SITE SHALL HAVE FOOTING DRAINS AROUND THE EXTERIOR PERIMETER OF FOOTINGS OR BASEMENTS, BACKFILLED WITH STONE FILL.

FILL MATERIAL

FILL MATERIALS:

ALL FILL MATERIALS SHALL BE FREE OF ORGANIC AND/OR FROZEN MATERIAL. ALL FILL MATERIALS SHOULD BE CLEARED OF ALL VEGETATION AND TOPSOIL/ORGANIC MATERIALS PRIOR TO PLACEMENT OF FILL MATERIALS. ALL FILL MATERIAL, PLACEMENT, AND COMPACTION SHALL BE APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER. THE FINE-GRAINED SILT MATERIALS ENCOUNTERED DURING THE GEOTECHNICAL INVESTIGATION CAN BE USED ON SITE AS NON-STRUCTURAL BACKFILL. THIS MATERIAL SHOULD NOT BE USED FOR STRUCTURAL BACKFILL, CONCRETE OR CURB STRUCTURES, AND SHOULD NOT BE SLOPED STEEPER THAN 3- HORIZONTAL TO 1- VERTICAL. RECOMMENDED FILL MATERIALS ARE OBTAINED BELOW:

STONE FILLS

STONE FILL SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 12-INCHES IN THICKNESS. A MINIMUM OF 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DENSITY (ASTM D1557) WILL BE REQUIRED. STONE FILL SHOULD CONFORM TO THE FOLLOWING GRADATION:

SIEVE SIZE	% PASSING BY WEIGHT
1 1/2 INCH	100
1.0 INCH	90-100
3/4 INCH	0-15
NO. 200	0-1.0

ENGINEERING FILL:
CLEAN, GRANULAR, ENGINEERING FILL CAN BE SPREAD IN LIFTS
NOT EXCEEDING 10-INCHES IN LOOSE THICKNESS. THESE
MATERIALS SHALL BE COMPACTED TO A MINIMUM OF 95
PERCENT OF THE MAXIMUM MODIFIED PROCTOR DENSITY (ASTM
D1557). ENGINEERING FILL SHOULD CONFORM TO THE FOLLOWING
CRITERIA:

SIEVE SIZE	% PASSING BY WEIGHT
4 INCH	100
NO. 40	0-70
NO. 200	0-10

NON-STRUCTURAL BACKFILL:

NON STRUCTURAL BACKFILL:
MATERIALS CONTAINING SIGNIFICANT PERCENTAGES OF
FINE-GRAINED SOILS OR COHESIVE MATERIALS ($>10\%$ PASSING
NO. 200 SIEVE) SHOULD BE SPREAD IN LIFTS NOT EXCEEDING
8-INCHES IN LOOSE THICKNESS AND COMPACTED TO A MINIMUM
OF 95 PERCENT OF THE MAXIMUM MODIFIED PROCTOR DENSITY
(ASTM D1557).

SITE CLEARING:

SITE CLEARING:
CONSTRUCTION AREAS SHOULD BE CLEARED AND GRUBBED OF ALL ORGANIC TOPSOIL AND VEGETATION. ORGANIC TOPSOIL SHOULD BE STOCKPILED ON SITE TO BE RE-USED AT PROJECT COMPLETION. ANY UNCONTROLLED FILL AND DEBRIS SHOULD BE STRIPPED FROM THE SITE.

SITE GRADING:

SITE GRADING:
CUT OR FILL SLOPES WITHIN THE BROWN SILTY SAND MATERIALS SHOULD NOT EXCEED A 3- HORIZONTAL TO 1- VERTICAL SLOPE. CUT OR FILL SLOPES WITHIN THE GRAY CLAY MATERIAL SHOULD NOT EXCEED 4- HORIZONTAL TO 1- VERTICAL. IF STEEPER SLOPES ARE USED, THEY MUST BE DESIGNED BY A GEOTECHNICAL ENGINEER. FILL SLOPES SHOULD BE PLACED IN COMPACTED LIFTS NOT EXCEEDING 10-INCHES IN LOOSE THICKNESS AND COMPACTED TO A MINIMUM OF 95 PERCENT OF THE STANDARD PROCTOR DENSITY (ASTM D698).

CONTROL OF WATER:

OBSERVATION DURING CONSTRUCTION:

THE FINAL BEARING SURFACE FOR ALL FOUNDATIONS SHOULD BE CAREFULLY INSPECTED BY A QUALIFIED GEOTECHNICAL ENGINEER TO ASCERTAIN THAT THE SUBGRADE HAS BEEN PROPERLY PREPARED. MEASUREMENTS SHOULD BE MADE AT THE PROPOSED FOUNDATION LOCATIONS AT SELECTED LOCATIONS, SPECIFICALLY WHERE LOAD-BEARING

TOWN OF BETHLEHEM SOILS NOTES:

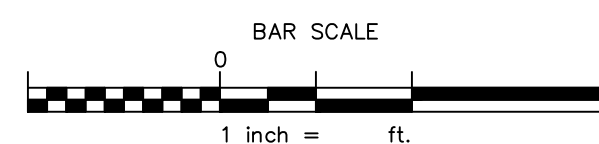
1. THE DEVELOPERS SHALL HAVE A SITE-SPECIFIC SOILS REPORT WRITTEN FOR ANY LOT THAT HAS A PROPOSED FOUNDATION FOOTPRINT THAT IS NOT SHOWN OR IDENTIFIED PURTALLY ON THE DONNELL SIDE OF THE SLOPE SETBACK LINE AS SHOWN ON THE GRADING PLAN, ADDRESSING THE FOLLOWING ISSUES: (1) HAVING BEEN DULY PREPARED BY A LICENSED GEOTECHNICAL ENGINEER, (2) BEING SUBMITTED TO THE TOWN BUILDING INSPECTOR PRIOR TO THE COMMENCEMENT OF BUILDING CONSTRUCTION, AND (3) THAT THE DEVELOPER SHALL ALSO INCLUDE A DEED NOTICE IN THE DEED FOR THAT LOT, AS REQUIRED BY THE TOWN ORDINANCE. THIS PERTAINS TO, BUT IS NOT LIMITED TO, THE FOLLOWING LOTS:
- 6 & 10 HERITAGE WAY
18, 32, 36, 48, & 60 SAVANNAH COURT
2. IN ADDITION TO THE ABOVE LOTS, THE DEVELOPER SHALL INCLUDE A DEED NOTICE IN THE DEED FOR ANY ADDITIONAL LOTS THAT HAVE A SLOPE SETBACK LINE SHOWN ON IT AS SHOWN ON THE GRADING PLAN, AND A DEED NOTICE IN THE DEED FOR ANY ADDITIONAL LOTS THAT ARE

- THE DEVELOPER SHALL PLACE A CONDITION IN THE CONTRACT FOR PURCHASE AND SALE OF REAL ESTATE FOR ANY LOT THAT WILL BE ADJACENT TO OR WITHIN FLOODPLAIN ZONE C-1. SUCH NOTICE FOR THE TRANSACTION WILL HAVE A DEED NOTICE AS WRITTEN IN ITEM A BELOW.
- A SLOPE STATEMENT IS THE SLOPE-RELATED DEED NOTICE TO BE PLACED IN THE DEEDS OF THE SPECIFIED LOTS:
- "SUBJECT TO THIS NOTICE OF SITE CONDITIONS, WHICH SHOULD BE CONSIDERED BEFORE IMPROVEMENTS ARE MADE TO THE LOT, DUE TO THE SLURPAGE-PHONE NATURE OF THE SOIL CONDITIONS ASSOCIATED WITH THE PROPERTY, THERE MAY BE CHANGES TO THE EXISTING GEOTECHNICAL ENGINEERING SHOULD BE OBTAINED BEFORE ANY CHANGES ARE MADE ON THE PROPERTY, SUCH AS PLACING FLIK, RE-GRADING, GRASS SEEDING, PAVING DRIVEWAYS, DRIVEWAYS, SIDEWALKS, DRIVING CHANGING SURFACE OR SUB-SURFACE DRAINAGE PATTERNS, ALTERING ANY STREAMS THAT MAY BE ON THE PROPERTY, ETC. A SITE-SPECIFIC GEOTECHNICAL INVESTIGATION BY AN ENGINEER LICENSED IN ILLINOIS HAS BEEN REQUIRED FOR TOWN SUBDIVISION APPROVAL OF THIS LOT, IN WHICH CASE THE REPORT WOULD BE ON FILE AND AVAILABLE AT THE TOWN OF

BUILDING FOOTPRINT GRADING NOTES

1. SEE TOWN OF BETHLEHEM STANDARD NOTE NO. 5 SHEET 2.1.
2. GARAGE FINISHED FLOOR ELEVATIONS SHALL BE SET AT LEAST 18" INCHES HIGHER THAN THE ROADWAY CENTERLINE ELEVATION OPPOSITE THE GARAGE.
3. FINAL DRIVEWAY SHALL SLOPE TOWARDS ROADWAY WITH A MAXIMUM SLOPE OF 10%.

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ALBANY, NY 12203
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Drawing Name: S:\3\30300-30399\30337_00\ENG\DWG\01_S4.1-S4.3_30337-00 GRADING.dwg
Xrefs Attached: XTB-30377-00-34x44; XENO-30337.00; XKEY50-30337.00; XBM-30337.00; XCON-30337.00
Date Printed: Aug 26, 2009, 10:23am

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THE
Chazen
COMPANIES
Engineers/Surveyors
Planners
Environmental Scientists

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9	2/19/09	REVISED GRADING
8	6/13/08	REVISED PER TOWN 5/13/08 COMMENTS
7	02/26/08	GENERAL REVISIONS PER TOWN AND ACOE COMMENTS
6	11/6/07	REVISED PER TOWN 11/5/07
5	9/27/07	REV PER TOWN 5/23/07 COMMENTS
4	2/20/07	REVISED BASIN LOCATIONS
3	9/15/06	REVISED PER TOWN 07/12/06 COMMENTS
2	12/27/05	REVISED PER TOWN 12/16/05 COMMENTS
1	3/4/05	REVISED PER TOWN COMMENTS
rev.	date	description

ELM AVENUE EAST RESIDENTIAL DEVELOPMENT

GRADING PLAN

TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK

drawn CJB	checked
date 12/19/03	scale 1" = 1'
project no. 30337	
sheet no. S4.1	