



**TOWN OF NEWBURGH
PLANNING BOARD
TECHNICAL REVIEW COMMENTS**

PROJECT NAME: GARDNER RIDGE
PROJECT NO.: 2-29
PROJECT LOCATION: GARDNERTOWN ROAD NEAR GIDNEY AVENUE
SECTION 75, BLOCK 1, LOT 4.12
REVIEW DATE: 15 DECEMBER 2023
MEETING DATE: 21 DECEMBER 2023
PROJECT REPRESENTATIVE: DARREN DOCE, P.E.

1. Plans have been revised pursuant to a site meeting held with the Highway Superintendent. Highway Superintendent's comments regarding the Creek Run Road and site access plans should be received.
2. The applicants have identified an additional 5,000 cubic yards of excess material during construction. This material will be removed and disposed of on site. This volume of material is not anticipated to cause any issue regarding construction related traffic.
3. Orange County Department of Health approval for the revised waterline main layout is required. It is noted that the water main has been looped through the emergency access road to eliminate any potential dead ends.
4. Compliance with the Town's Senior Housing Code must be documented. Covenants must be filed with the County regarding the senior housing units. The applicant has requested these be a condition of any approvals.
5. Cost estimates for tree preservation, landscaping and stormwater management must be submitted prior to any final approvals. These cost estimates require approval from the Town Board prior to posting the necessary securities and inspection fees. Water and sewer fees are collected during building/water sewer permit process.
6. The applicant's representatives are requested to evaluate the collection of any roof run off to the rear of the westerly most buildings, Building 4 and Building 5. Run off from these back roofs will be tributary offsite based on existing topography. A depression exists on the southeast corner of the parcel where it abuts tax parcel 74-3-15. The applicants are requested to evaluate collecting and diverting any water tributary to that parcel.
7. The project is before the Board for a Public Hearing. Substantive comments received from the public should be addressed in writing by the applicant's representatives.

NEW YORK OFFICE

33 Airport Center Drive, Suite 202, New Windsor, NY 12553
845-567-3100 | F: 845-567-3232 | mheny@mhepc.com

PENNSYLVANIA OFFICE

111 Wheatfield Drive, Suite 1, Milford, PA 18337
570-296-2765 | F: 570-296-2767 | mhepa@mhepc.com

8. Comments from the Orange County Department of Planning are outstanding. Upon receipt of comments, the applicant should address these.

9. The applicants have identified a calculation regarding the tree preservation. The calculation identifies new trees to be planted and/or restoration fee required. The applicants are requested to identify how compliance with the Tree Preservation Ordinance will be undertaken whether tree planting within the landscaping plan or the restitution is to be paid into the tree fund.

Respectfully submitted,

MHE Engineering, D.P.C.



Patrick J. Hines
Principal

PJH/lm

Thomas B. Olley, P.E., P.L.L.C.
Engineering & Land Planning
152 Orange Avenue • Walden, NY 12586
(845) 778-5638 • Fax (845) 778-1137

December 8, 2023

Mr. John Ewasutyn, Chairman
Town of Newburgh Planning Board
308 Gardnertown Road
Newburgh, NY 12550

Re: **Gardner Ridge**
Gardnertown Road
Section 75, Block 1, Lot 4.12

Dear Mr. Ewasutyn:

We are submitting twelve (12) copies of the revised Amended Site Plan sheets on behalf of Gardner Ridge Associates.

The plans address the Highway Superintendent's recommendation to retain the present location of Creek Run Road. We have also addressed the most recent consultant and Planning Board Comments.

Brief responses to the consultants' most recent comments are provided below. Collier Engineering will address the Creek Run Road improvement comments related to their plans under separate cover.

MHE Engineering Comment Memo November 10, 2023

1. The November 16 meeting with the Town Highway Superintendent, The Board's engineering consultants and the Project design team resulted in the Highway Superintendent's decision to leave Creek Run Road at its present location. The plans have been revised to indicate this.
2. The Lead Agency comment is noted.
3. The Project is substantially a balanced earthwork design. However, the elimination of the Creek Run Road realignment will result in a net export of approximately 5000 cubic yards over the duration of construction. At the request of the Planning Board a note has been placed on the Grading Plan stating that the routing of trucks hauling export material must be approved by the Town Highway Superintendent and Town Engineer.
4. If blasting is required, the Project will incorporate the elements of the well monitoring plan for nearby properties that have individual wells. In

addition, the Project will adhere to all Federal, State, and Local regulations regarding blasting.

5. Health Department Approval will be renewed following the Board's SEQRA determination.
6. Hydrant locations have been reviewed and revised. Additional hydrants have been placed along the Entrance Road, near the Senior Apartments and between Buildings 4 and 5.
7. The water system has been looped by extending the main along the emergency access road and along Gardnertown Road to the Project entrance.
8. Hydrant locations have been reviewed and revised as necessary to meet the "Ten States Standards"
9. All documentation regarding the compliance with the Senior Housing Code will be completed prior to final approval.
10. Cost estimates will be provided prior to Final Approval for the purpose of establishing required surety.
11. A public Hearing has been scheduled for December 21.

Code Compliance and Board Comments

1. Sidewalks have been added along the entrance road and as a loop in front of the 5 apartment buildings.
2. An Emergency Access Plan has been added to the Set to illustrate turning movements of emergency vehicles, hydrant locations and building separation measurements. The Cronomer Valley Fire District 110 feet Aerial Ladder Truck dimensions were used to determine adequacy of all turning movements. This particular ladder truck has significant front and rear overhangs. It provides for the most restrictive turning movements.
3. Eustance and Horowitz, PC conducted an analysis of the proposed water system as part of the original plan approval. The calculations determined that 1522 gallons per minute would be available at the project high point with a residual pressure of 24 psi.

Those calculations remain valid. The original design consisted of a 1850 LF dead end connecting to Route 32 12" Main. The present Project was to provide a 1815 LF dead-end connection from a connection in Creek Run Road. However, as discussed above, the project will be looped from the entrance road intersection with Gardnertown Road. This modification will reduce the pressure losses due to pipe friction and provide a slightly

higher residual pressure. The proposed buildings are at approximately the same elevation as the original design (+/- 2 feet).

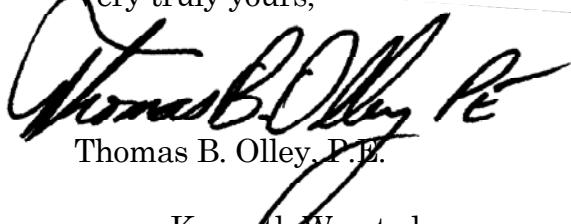
4. Electric Vehicle charging stations have been added to the plan. Twelve (12) Level 3 chargers will be provided throughout the site. In addition, the Project will provide 60 garages. The garages can support a Level 1 or Level 2 charger.
5. A photometrics Plan has been included in the plan set. The light poles will be limited to 12 feet tall. Period style full cut-off LED luminaires are proposed.

Revised Landscaping Plans are included with this submission. The Landscaping Consultant's comments are addressed under separate cover.

We believe that all of the comments have been fully addressed in the submission.

Please feel free to contact me should you have any questions regarding this matter.

Very truly yours,

A handwritten signature in black ink, appearing to read "Thomas B. Olley, P.E."

Thomas B. Olley, P.E.

cc: Kenneth Wersted
Dominic Cordisco
Patrick Hines
Joseph Millstein
Vince Doce

400 Columbus Avenue
Suite 180E
Valhalla New York 10595
Main: 877 627 3772
colliersengineering.com



December 6, 2023

Chairman John Ewasutyn
Town of Newburgh Planning Board
21 Hudson Valley Professional Plaza
Newburgh, NY 12550

Gardner Ridge
Town of Newburgh, Orange County, New York
Colliers Engineering & Design Project No. 14000375B

Dear Chairman Ewasutyn and Members of the Planning Board:

Enclosed are 12 copies of our revised offsite improvement plans, which reflect the comments obtained from the Highway Superintendent and as discussed at the November 16th meeting. These plans represent the sight distance improvements and the modifications at Creek Run Road including other related improvements along Gardnertown Road including the left turn at the access to the project.

Sincerely,

Colliers Engineering & Design, Architecture, Landscape Architecture, Surveying, CT P.C.

A handwritten signature in blue ink that reads "Philip Grealy".

Philip Grealy, Ph.D., P.E.
Geographic Discipline Leader

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Vincent J. Doce Associates
41 Mead Alley, Montgomery, NY 12549
Tel. 845 561-1170 Email: ddoce12@hotmail.com

Gardiner Ridge

Gardnertown Road, Town of Newburgh
Tax Parcel SBL 75-1-4.12
Town Project No. 02-29

Compliance with Tree Preservation and Protection Code

A trees survey was conducted by Lower Hudson Forestry Services LLC. Conclusions based on this tree survey are outlined below.

1. Specimen Trees:

- a. All Specimen Trees (trunk diameter equal to or greater than 24 in. DBH) were tagged, numbered, located and identified as to diameter and species (refer to the Tree Survey Plan in the plan set). Damaged or diseased trees were located but excluded from the total tree inches.
- b. The total inches in diameter of Specimen Trees was determined to be 3081.1 inches.
- c. The total inches in diameter of Specimen Trees that will be disturbed/removed due to the parcel's development was determined to be 2064.2 inches.
- d. The disturbance is greater than the 50% threshold allowed and will require reforestation or restitution.

$$\begin{aligned}\% \text{ of Specimen Tree inches removed} &= \frac{\text{Specimen Tree inches removed}}{\text{total Specimen Tree inches}} \\ &= \frac{2064.2 \text{ in.}}{3081.1 \text{ in.}} \\ &= 67\%\end{aligned}$$

- e. Tree inches removed over the 50% threshold: 523.6 in.

2. Significant Trees:

- a. The Significant trees (trunk diameter equal or greater than 14 in. DBH) were located and identified as to diameter and species on five $\frac{1}{2}$ acre sample plots distributed throughout the parcel (refer to the Tree Survey Plan in the plan set).
- b. For every 10 acres of parcel area two sample plots are required. The number of sample plots was determined as follows:
Sample Plots required = $2(\text{Site area}/10)$
Sample Plots required = $2(23.3)/10 \sim 5$
- c. The total inches of Significant Trees included on the sample plots was determined to be 1497.9 in.
- d. The total Significant Tree inches projected for the entire site is calculated as follows:

$$\text{Total Significant Tree in.} = \frac{\text{Significant Tree in. within sample plots (Site Acres)}}{\text{Acreage of Sample Plots}}$$

$$\begin{aligned}\text{Total Significant Tree in.} &= \frac{1497.9 \text{ in. (23.3 ac.)}}{2.5 \text{ ac.}} \\ &= 13,960.4 \text{ in.}\end{aligned}$$

Vincent J. Doce Associates
41 Mead Alley, Montgomery, NY 12549
Tel. 845 561-1170 Email: ddoce12@hotmail.com

- e. Disturbed Significant Tree in. = Significant Tree in. within sample plots (Dist. Acres)
Acreage of Sample Plots
= 1497.9 in. (12.59 ac.)
2.5 ac.
= 7,543.4
 - f. The disturbance to Significant Trees is greater than the allowable 50% threshold and will require reforestation or restitution.
% of Significant Tree inches removed = Significant Tree inches removed
total Significant Tree inches
= 7543.4 in./13,960.4 in.
= **54%**
 - g. Tree inches removed over the 50% threshold: 563.2 in.
3. **Reforestation of Restitution of Specimen and Significant Trees:**
- a. For every 1 inch of tree diameter that is removed/disturbed above the threshold, 1.25 inches of new trees must be planted, or restitution in the amount of \$5 per inch of new tree diameter must be paid.
 - b. New tree inches that must be replanted:
(1.25 in./1 in) 1086.8 in = 1358.5 in.
OR
Restitution required: (1358.5 in.)\$5 = \$6,792.50
4. **Protected Trees** (having a circumference, height and spread equal to or greater than 50% of the size identified on the NY Big Champion tree List):
- a. There were no Protected Trees found within the sample plot areas.
 - b. One Protected Tree was found when the Specimen Trees were being tagged and located. This tree was hollow and considered a hazard tree. Therefore, its removal does not require reforestation or restitution.

VINCENT J. DOCE ASSOCIATES

5 LINCOLNDALE ROAD, CAMPBELL HALL, NY 10916
TEL. 845-561-1170 EMAIL DDOCE12@HOTMAIL.COM

December 8, 2023

John Ewasutyn, Chairman
Town of Newburgh Planning Board
21 Hudson Valley Professional Plaza
Newburgh, NY 12550

Re: Gardner Ridge
Gardnertown Road
Town Project No. 2002-29

Dear Mr. Ewasutyn:

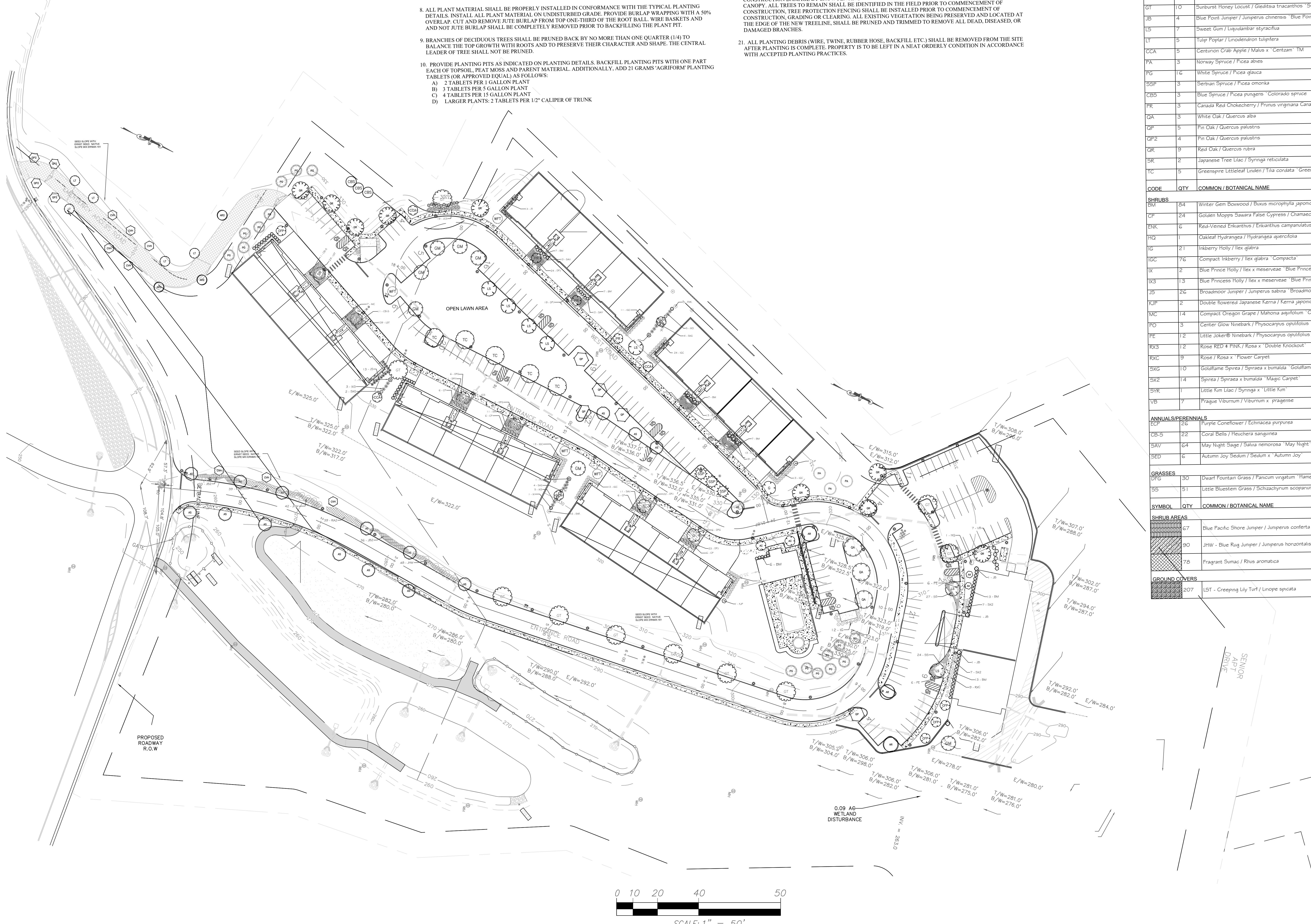
Included with this submission are preliminary landscape plans prepared by Ronald Haelen, RLA. Karen Arrent's initial comments are addressed as follows:

1. A summary of the tree survey is attached and it identifies the Specimen Trees that will be disturbed. The Significant Trees were located and identified in five sample plots. The total number of Significant Trees to be disturbed is projected as per the methodology outlined in the amendment to the "Tree Preservation and Protection" law. Since it's projected their actual locations can't be shown.
2. The attached summary also identifies the total inches of Specimen Trees and Significant Trees to be removed, as well as, the total tree inches removed over the 50% threshold (1086.8 trees inches). The summary also outlines the tree inches required to replanted (1.25 in. per 1 in. removed) and/or the restitution required (\$5 per inch of new tree diameter). New trees are proposed along the emergency access, the access road and throughout the parcel.
3. The landscaping plan shows plantings within the interior of the parking areas.
4. Sidewalks have been added along the entrance road and as a loop in front of the five apartment buildings.
5. Street trees have been provided along the proposed drive. Native plants have been specified.
6. Fencing and retaining wall colors and materials will be provided as architectural review progresses.
7. The landscape architect will investigate ways to incorporate the re-use of the existign stonewalls

Sincerely

Darren C Doce

Darren C. Doce



GENERAL PLANTING NOTES

- LANDSCAPE PLANS SHALL BE USED FOR LANDSCAPE PLANTING PURPOSES ONLY. EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES AND STRUCTURES AND NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR LOCATION CONFLICTS PRIOR TO PLANTING INSTALLATION.
- THE CONTRACTOR IS RESPONSIBLE TO LOCATE AND VERIFY LOCATION OF ALL UTILITIES ON SITE PRIOR TO CONSTRUCTION.
- ALL PLANT MATERIAL SHALL CONFORM TO GUIDELINES AS SET FORTH IN THE LATEST EDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARDS FOR NURSERY STOCK OR THE PLANT MATERIAL WILL BE UNACCEPTABLE. ALL PLANT MATERIAL SHALL BE TRUE TO SPECIES, VARIETY, SIZE AND BE CERTIFIED DISEASE AND INSECT FREE. THE OWNER AND/OR THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO APPROVE ALL PLANT MATERIAL ON SITE PRIOR TO INSTALLATION.
- NO PLANT SUBSTITUTIONS SHALL BE PERMITTED WITH REGARD TO SIZE, SPECIES, OR VARIETY WITHOUT WRITTEN PERMISSION FROM THE LANDSCAPE CONSULTANT FOR THE TOWN OF NEWBURGH. WRITTEN PROOF OF PLANT MATERIAL UNAVAILABILITY MUST BE DOCUMENTED.
- THE LOCATION OF ALL PLANT MATERIAL INDICATED ON THE LANDSCAPE PLANS ARE APPROXIMATE. THE PLACEMENT OF ALL PLANT MATERIAL AND PLANTING BED LINES SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE LANDSCAPE ARCHITECT. NO SHADE TREE, STREET TREE, ORNAMENTAL FLOWERING TREE OR EVERGREEN TREE SHALL BE PLANTED CLOSER THAN 10' FROM ANY SIDEWALK, DRIVEWAY, CURB OR UTILITY LOCATION UNLESS SPECIFICALLY DIMENSIONED ON THE LANDSCAPE PLAN OR INSTALLED WITH PHYSICAL ROADBLOCKS.
- ALL STREET TREES PLANTED NEAR PEDESTRIAN OR VEHICULAR ACCESS SHOULD NOT BE BOULEVARD LOWER THAN 8' ABOVE GRADE. ALL PLANT MATERIAL LOCATED WITHIN SIGHT TRIANGLE EASEMENTS SHALL NOT EXCEED A MATURE HEIGHT OF 30' ABOVE THE ELEVATION OF THE ADJACENT CURB. ALL STREET TREES PLANTED IN SIGHT TRIANGLE EASEMENTS SHALL BE PRUNED TO NOT HAVE BRANCHES BELOW 7'-0".
- THE PLANTING PLAN SHALL TAKE PRIORITY OVER THE PLANT SCHEDULE; SHOULD ANY PLANT QUANTITY DISCREPANCIES OCCUR.
- ALL PLANT MATERIAL SHALL BE PROPERLY INSTALLED IN CONFORMANCE WITH THE TYPICAL PLANTING DETAILS. INSTALL ALL PLANT MATERIAL ON UNDISTURBED GRADE. PROVIDE BURLAP WRAPPING WITH A 50% OVERLAP CUT AND REMOVE JUTE BURLAP FROM TOP ONE-THIRD OF THE ROOT BALL. WIRE BASKETS AND NOT JUTE BURLAP SHALL BE COMPLETELY REMOVED PRIOR TO BACKFILLING THE PLANT PIT.
- BRANCHES OF DECIDUOUS TREES SHALL BE PRUNED BACK BY NO MORE THAN ONE QUARTER (1/4) TO BALANCE THE TOP GROWTH WITH ROOTS AND TO PRESERVE THEIR CHARACTER AND SHAPE. THE CENTRAL LEADER OF TREE TRUNKS SHALL NOT BE PRUNED.
- PROVIDE PLANTING PITS AS INDICATED ON PLANTING DETAILS. BACKFILL PLANTING PITS WITH ONE PART EACHWAY SOIL AND ONE PART PLANT MATERIAL. ADDITIONALLY, ADD 21 GRAMS AGRIFORM PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS:
 - A) 2 TABLETS PER 1 GALLON PLANT
 - B) 3 TABLETS PER 5 GALLON PLANT
 - C) 4 TABLETS PER 15 GALLON PLANT
 - D) LARGER PLANTS: 2 TABLETS PER 1/2 CALIPER OF TRUNK

- IF WET SOIL CONDITIONS EXIST THEN PLANTING PITS SHALL BE EXCAVATED AN ADDITIONAL 12" AND FILLED WITH CRUSHED STONE.
- ALL PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO EXISTING GRADE AT NURSERY.
- OPTIMUM PLANTING TIME: DECIDUOUS - APRIL 1 TO JUNE 1 & OCTOBER 15 TO DECEMBER 15. CONIFEROUS - APRIL 1 TO JUNE 1 & SEPTEMBER 1 TO NOVEMBER 1.
- NEWLY INSTALLED PLANT MATERIAL SHALL BE WATERED AT THE TIME OF INSTALLATION. REGULAR WATERING SHALL BE PROVIDED BY THE CONTRACTOR TO ENSURE THE ESTABLISHMENT, GROWTH AND SURVIVAL OF ALL PLANTS FOR 1 YEAR AFTER CONSTRUCTION IS COMPLETE, AFTER WHICH TIME THE OWNER IS RESPONSIBLE.
- ALL PLANT MATERIAL SHALL BE WARRANTEE FOR A PERIOD OF ONE YEAR.
- PLANTS THAT ARE MISSING, MORE THAN 25% DEAD, WHICH DO NOT DEVELOP FROM PLANTING STOCK, THAT APPEAR UNHEALTHY OR UNISIGHTLY AND/OR HAVE LOST THEIR NATURAL SHAPE DUE TO DEAD BRANCHES, OR ANY TREE THAT LOSSES THE MAIN LEADER SHALL BE REPLACED.
- THE LANDSCAPE CONTRACTOR SHALL PROVIDE A MINIMUM 4" LAYER OF TOPSOIL IN ALL LAWN AREAS AND A MINIMUM OF 6" TOPSOIL IN ALL PLANTING AREAS. A FULL SOIL ANALYSIS SHALL BE CONDUCTED AFTER CONSTRUCTION AND PRIOR TO PLANTING TO DETERMINE THE EXTENT OF SOIL AMENDMENT REQUIRED. SOIL PH SHOULD BE 5.5-6.5.
- ALL DISTURBED LAWN AREAS SHALL BE STABILIZED WITH SEED AS INDICATED ON THE LANDSCAPE PLANS. SEED SHALL BE IN ACCORDANCE WITH THE SOIL EROSION AND SEDIMENT CONTROL NOTES AND THE GENERAL SEEDING NOTES ON THIS SHEET. ALL DISTURBED LAWN AREAS SHALL BE TOPSOILED, LIMED/FERTILIZED AND FINE GRADED PRIOR TO LAWN INSTALLATION.
- ALL PLANTING BEDS SHALL RECEIVE 3" OF SHREDDED HARDWOOD BARK MULCH. 19. ALL SHRUB MASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS.
- ALL EXISTING TREES AND SHRUBS TO BE PRESERVED ON SITE SHALL BE PROTECTED AGAINST CONSTRUCTION DAMAGE BY SNOW FENCING. ALL FENCING SHALL BE PLACED OUTSIDE THE INDIVIDUAL TREE CANOPY. ALL TREES TO REMAIN SHALL BE IDENTIFIED IN THE FIELD PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALL FENCE POSTS SHALL BE INSPECTED FOR DAMAGE OR OBSTRUCTION. REMOVAL, RELOCATION, OR CLEARING OF EXISTING VEGETATION BEING PRESERVED AND LOCATED AT THE EDGE OF THE NEW TREELINE, SHALL BE PRUNED AND TRIMMED TO REMOVE ALL DEAD, DISEASED, OR DAMAGED BRANCHES.
- ALL PLANTING DEBRIS (WIRE, TWINE, RUBBER HOSE, BACKFILL ETC.) SHALL BE REMOVED FROM THE SITE AFTER PLANTING IS COMPLETE. PROPERTY IS TO BE LEFT IN A NEAT ORDERLY CONDITION IN ACCORDANCE WITH ACCEPTED PLANTING PRACTICES.


PLANT SCHEDULE

CODE	QTY	COMMON / BOTANICAL NAME	CONT	CAL	SIZE
TREES					
AR2	3	Red Maple / Acer rubrum	7 gal	1 1/2" CAL	
AR	3	Red Maple / Acer rubrum	B # B	2-1/2 -3" cal	
GM	7	October Glory Maple / Acer rubrum "October Glory"	2-1/2 -3" cal		
AS	16	Sugar Maple / Acer saccharum	2-1/2 -3" cal		
AA	2	Servicerberry / Amelanchier alnifolia	5 gal		
AC	2	Canadian Serviceberry / Amelanchier canadensis	9-10" ht		
CFP	4	Forest Paney Redoud / Cercis canadensis "Forest Paney" TM	2" CAL		
WFT	4	White Fringe Tree / Chionanthus virginicus	2"-2 1/2" CAL		
K	2	Kousa Dogwood / Cornus kousa	2" CAL		
CVH	6	Winter King Hawthorn / Crataegus viridis "Winter King"	7 gal	1 1/2" CAL	
G	5	Princeton Sentry Gingko / Gingko biloba "Princeton Sentry"	2-1/2 -3" cal		
GT	10	Sunburst Honey Locust / Gleditsia triacanthos "Sunburst"	2-1/2 -3" cal		
JB	4	Blue Point Juniper / Juniperus chinensis "Blue Point"	5 - 6" ht		
LS	7	Sweet Gum / Liquidambar styraciflua	B # B	2 1/2" CAL	
LT	5	Tulip Poplar / Liriodendron tulipifera	7 gal	1 1/2" CAL	
CCA	5	Centurion Crab Apple / Malus x "Centurion" TM	2-2 1/2" CAL		
PA	3	Norway Spruce / Picea abies	B # B	6" ht	
PG	16	White Spruce / Picea glauca	6-7" ht		
SSP	3	Serbian Spruce / Picea omorika	B # B	9-10" ht	
CBS	3	Blue Spruce / Picea pungens "Colorado spruce"	6-7" ht		
PR	3	Canada Red Chokeberry / Prunus virginiana Canada Red	B # B	2" CAL	
QA	3	White Oak / Quercus alba	2-1/2 -3" cal		
QP	5	Pin Oak / Quercus palustris	2-1/2 -3" cal		
QP2	4	Pin Oak / Quercus palustris	7 gal	1 1/2" CAL	
QR	3	Red Oak / Quercus rubra	2-1/2 -3" cal		
SK	2	Japanese Tree Lilac / Syringa reticulata	2-2 1/2" CAL		
TC	5	Greenspire Littleleaf Linden / Tilia cordata "Greenspire"	2-1/2 -3" cal		
SHRUBS					
BM	84	Winter Gem Boxwood / Buxus microphylla japonica "Winter Gem"	5 gal		
CP	24	Golden Mopps Sawara False Cypress / Chamaecyparis pisifera "Golden Mopps"	24" ht 3 GAL		
ENK	6	Red-Veined Enkianthus / Enkianthus campanulatus	5 gal		
HQ	1	Oakleaf Hydrangea / Hydrangea quercifolia	30 - 36" 5 GAL		
IG	21	Imperial Holly / Ilex glabra	30 - 36" 5 GAL		
IGC	76	Compact Impeckable Holly / Ilex glabra "Compacta"	5 gal		
IX	2	Blue Prince Holly / Ilex x meserveae "Blue Prince" TM	36-42" ht		
IX3	13	Blue Princess Holly / Ilex x meserveae "Blue Princess" TM	36-42" ht B4B		
JS	26	Broadmoor Juniper / Juniperus sabina "Broadmoor"	3 gal		
KJP	2	Double flowered Japanese Kerria / Kerria japonica Pleniflora	3 gal		
MC	14	Compact Oregon Grape / Mahonia aquifolium "Compacta"	3 gal		
PO	3	Center Glow Ninebark / Physocarpus opulifolius "Center Glow"	30 - 36" 5 GAL		
PE	12	Little Joker Ninebark / Physocarpus opulifolius "HoogOZI"	5 gal		
RX3	12	Rose RED 4 PINK / Rosa x "Double Knockout"	3 gal		
RXC	9	Rose / Rosa x "Flower Carpet"	5 gal		
SXG	10	Goldflame Spirea / Spiraea x bumalda "Goldflame"	5 gal		
SX2	14	Spiraea / Spiraea x bumalda "Magic Carpet"	15-18" ht		
SYR	1	Little Kim Ligustrum / Syringa x "Little Kim"	24-30" ht		
VB	7	Prague Viburnum / Viburnum x "Pragense"	3-4" ht		
ANNUALS/PERENNIALS					
ECF	26	Purple Coneflower / Echinacea purpurea	5 gal		
CB-S	22	Coral Bells / Heuchera sanguinea	4' pot		
BAV	64	May Night Sage / Salvia nemorosa "May Night"	1 gal		
SED	6	Autumn Joy Sedum / Sedum x "Autumn Joy"	1 gal		
GRASSES					
DFG	30	Dwarf Fountain Grass / Panicum virgatum "Hameln"	1 gal		
SS	51	Little Bluestem Grass / Schizachyrium scoparium	1 gal		
SYMBOLS					
SHRUB AREAS					
67		Blue Pacific Shore Juniper / Juniperus conferta "Blue Pacific"	1 gal		36" o.c.
90		JHW - Blue Rug Juniper / Juniperus horizontalis "Wiltonii"	1 gal		30" o.c.
78		Fragrant Sumac / Rhus aromatica	1 gal		36" o.c.
GROUND COVERS					
207		LST - Creeping Lily Turf / Linaria spicata	1 gal		18" o.c.

PRELIMINARY LANDSCAPE PLAN
GARDNER RIDGE
ROUTE 32

RONALD E. HAILEN, RLA
LANDSCAPE ARCHITECT
1215 ROUTE 211 WEST
MIDDLETOWN, NY 10940
(845) 551-1223

LA-1
DATE: 12/5/2023
FILE NO.




SHEET NO.
LA-2
DATE:
12/5/2023

PRELIMINARY LANDSCAPE PLAN
GARDNER RIDGE
ROUTE 32
TOWN OF NEWBURGH, ORANGE COUNTY, NY

RONALD E. HAELEN, RLA
LANDSCAPE ARCHITECT
1215 ROUTE 211 WEST
MIDDLETOWN, NY 10940
(845) 551-1223

REV.	DATE	DESCRIPTION	BY



PRELIMINARY LANDSCAPE PLAN
GARDNER RIDGE
ROUTE 32
TOWN OF NEWBURGH, ORANGE COUNTY, NY

RONALD E. HAELEN, RLA
LANDSCAPE ARCHITECT
1215 ROUTE 211 WEST
MIDDLETOWN, NY 10940
(845) 551-1223

SHEET NO.
LA-3
DATE: 12/5/2023
FILE NO.

REV.	DATE	REV. PLANTS AND LOCATION DESCRIPTION
3/21/17		



View across Parking - Looking Northwest 3



Rear of Buildings 4 & 5 - Looking Southwest 2



Front of Building 2 - Looking Southwest 1



Rear of Buildings 1 & 2 - Looking Southeast 2



Front of Building 4 - Looking Northeast

$12^{\text{in}} = 1^{\text{'}}0^{\text{"}}$

Berg+Moss Architects

BMA

BERG + MOSS ARCHITECTS PC
473 MAIN STREET No. 1
BEACON, NY 12508
T: 845 831 1318
INFO@BERGMOSS.COM

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GARDNER RD.

NEWBURGH, NEW YORK 12550

KEY PLAN



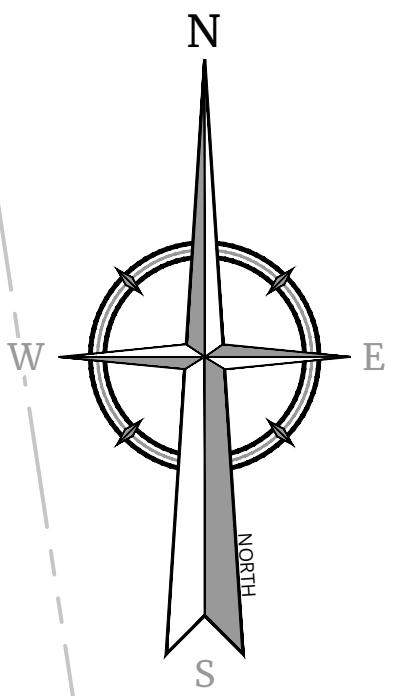
DRAWING TITLE

Exterior Renderings

DRAWING NO.
SK-001.00

SEAL & SIGNATURE	DATE: 12.01.2024 SCALE: 12" = 1'-0" DWG BY: Author CHK BY: Checker
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REV	DATE	DRAWN BY	DESCRIPTION
1	5/9/22	M.J.A.	REVISED PER TOWN COMMENTS
2	7/12/22	M.J.A.	REVISED PER CRETCHON MANNING COMMENT LETTER DATED 6/10/22.
3	8/23/22	M.J.A.	ADDED TURNING TRACKS & RIP RAP TO END SECTION.
4	8/31/22	M.J.A.	MODIFIED PER TOWN CONSULTANTS COMMENTS.
5	6/27/23	M.J.A.	REVISED PER TOWN HIGHWAY DEPARTMENT COMMENTS.
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7	8/2/23	M.J.A.	REVISED PER CRETCHON MANNING COMMENT LETTER DATED 6/10/22.
8	10/20/23	M.J.A.	FOR 10/20/23 PLANNING BOARD SUBMISSION.
9	12/1/23	M.J.A.	FOR 12/1/23 PLANNING BOARD SUBMISSION.



CONCEPTUAL
IMPROVEMENT PLAN
FOR
GARDNER RIDGE
ASSOCIATES, LLC

GARDNERTOWN ROAD &
CREEK RUN ROAD

TOWN OF NEWBURGH
ORANGE COUNTY
NEW YORK

WESTCHESTER
Colliers
Engineering & Design
400 Main Avenue,
Suite 180E
Valhalla, NY 10595
Phone: 914.247.7500
COLLIERS ENGINEERING & DESIGN,
ARCHITECTURE, LANDSCAPE ARCHITECTURE,
SURVEYING P.C.

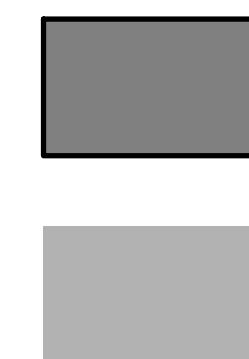
SCALE: AS SHOWN DATE: 8/27/21 DRAWN BY: M.J.A. CHECKED BY: P.J.G./A.P.R.
PROJECT NUMBER: 14000375 DRAWING NAME: R-PL01-EXBT-ALTN

SHEET TITLE: CONCEPT PLAN
(LAYOUT)

SHEET NUMBER: 1 ALT of 8

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

LEGEND:



NEW FULL DEPTH PAVEMENT

AREA TO BE CLEARED
FOR SIGHT LINES

AREA TO BE CLEARED FOR SIGHT LINES
INSTALL GEOTEXTILE SEPARATION FABRIC & RIP RAP FOR VEGETATION CONTROL AND SLOPE STABILIZATION

445 FT REQUIRED AASHTO
INTERSECTION SIGHT DISTANCE
TO BE MAINTAINED
SEE PLANS BY TOM B. OLLEY, P.E.

20' EMERGENCY
ACCESS ROAD

350' MEDIAN TAPER

EMERGENCY
GATE (TYP.)

SEE PLANS BY TOM B. OLLEY, P.E.

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EMERGENCY



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DATE	REVISION NUMBER	COMMENT
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10/20/23	MJ.A.	FOR 10/20/23 PLANNING BOARD SUBMISSION
12/1/23	MJ.A.	FOR 12/8/23 PLANNING BOARD SUBMISSION.
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CONCEPTUAL IMPROVEMENT PLAN

FOR
**GARDNER RIDGE
ASSOCIATES, LLC**

GARDNERTOWN ROAD & CREEK RUN ROAD

TOWN OF NEWBURGH
ORANGE COUNTY
NEW YORK

WESTCHESTER
400 Columbus Avenue,
Suite 180E
Valhalla, NY 10595
Phone: 914.347.7500
COLLIERS ENGINEERING & DESIGN,
ARCHITECTURE, LANDSCAPE ARCHITECTURE,
SURVEYING CT, P.C.

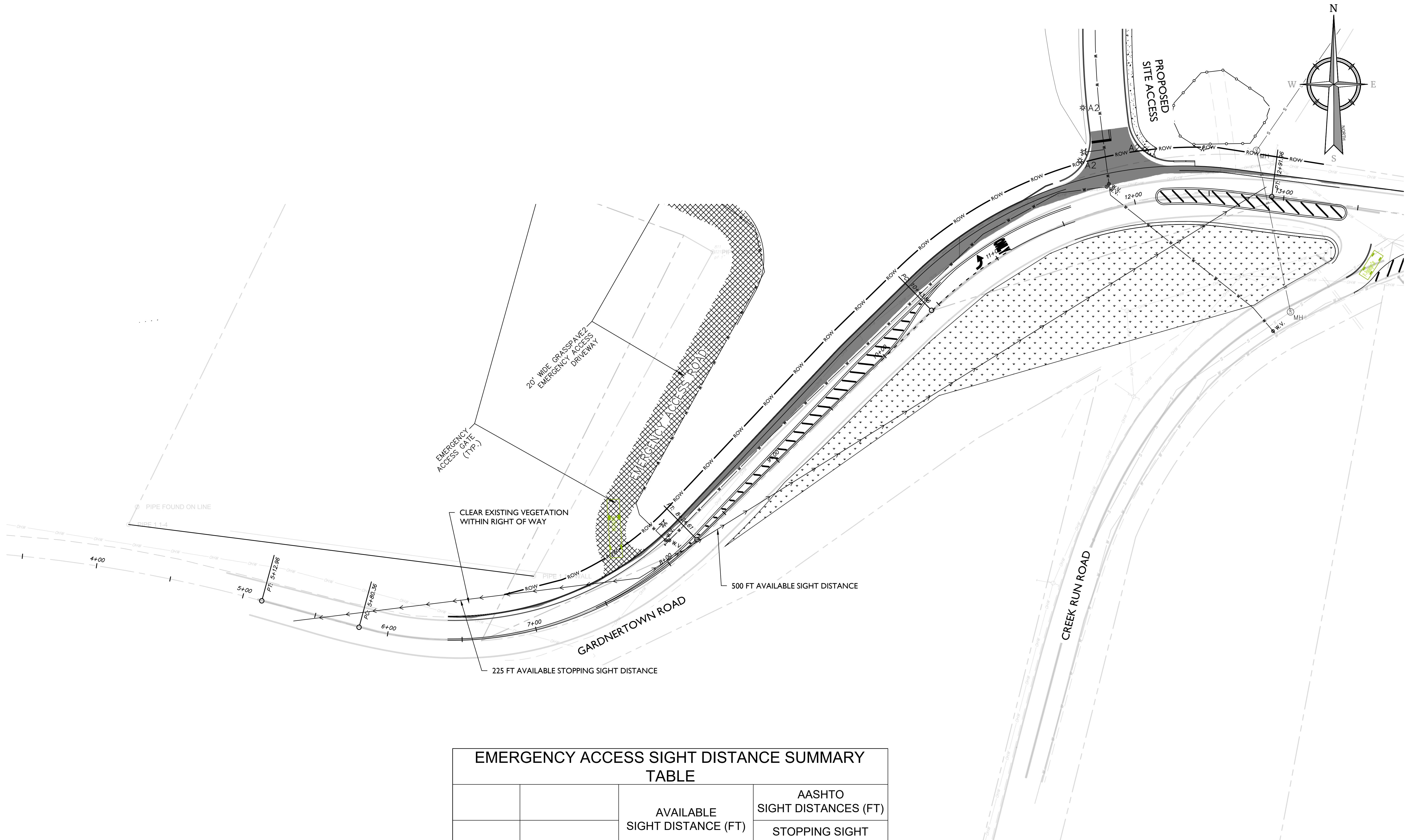
DATE:	DRAWN BY:	CHECKED BY:
WN NUMBER:	8/27/21 M.J.A.	P.J.G./A.P.R. DRAWING NAME: C-1001-FNT-101

EMERGENCY ACCESS

SIGHT DISTANCE PLAN

ZALI 01 8

THE DRAWINGS FOR CONSTRUCTION



EMERGENCY ACCESS SIGHT DISTANCE SUMMARY TABLE

		AVAILABLE SIGHT DISTANCE (FT)	AASHTO SIGHT DISTANCES (FT)
			STOPPING SIGHT DISTANCE
30 MPH	LOOKING LEFT	500	200
	LOOKING RIGHT	225	200

הנִזְקָנָה בְּבֵית־יְהוָה וְבַת־יְהוָה בְּבֵית־יְהוָה

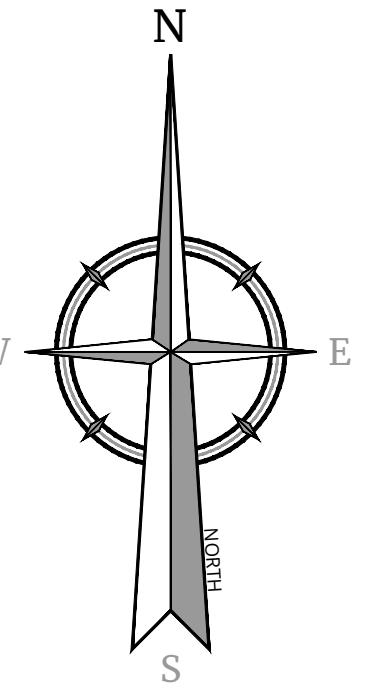
UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY OR ENGINEERING MAP BEARING A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ONLY MAPS WITH THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE LAND SURVEYOR OR PROFESSIONAL ENGINEER'S ORIGINAL WORK AND OPINION.



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REV	DATE	DRAWN BY	DESCRIPTION
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9	12/1/23	M.J.A.	FOR 12/8/23 PLANNING BOARD SUBMISSION.

CONCEPTUAL IMPROVEMENT PLAN

FOR
**GARDNER RIDGE
ASSOCIATES, LLC**

GARDNERTOWN ROAD & CREEK RUN ROAD

**TOWN OF NEWBURGH
ORANGE COUNTY
NEW YORK**

WESTCHESTER

400 Columbus Avenue,
Suite 180E
Valhalla, NY 10595

Phone: 914.347.7500

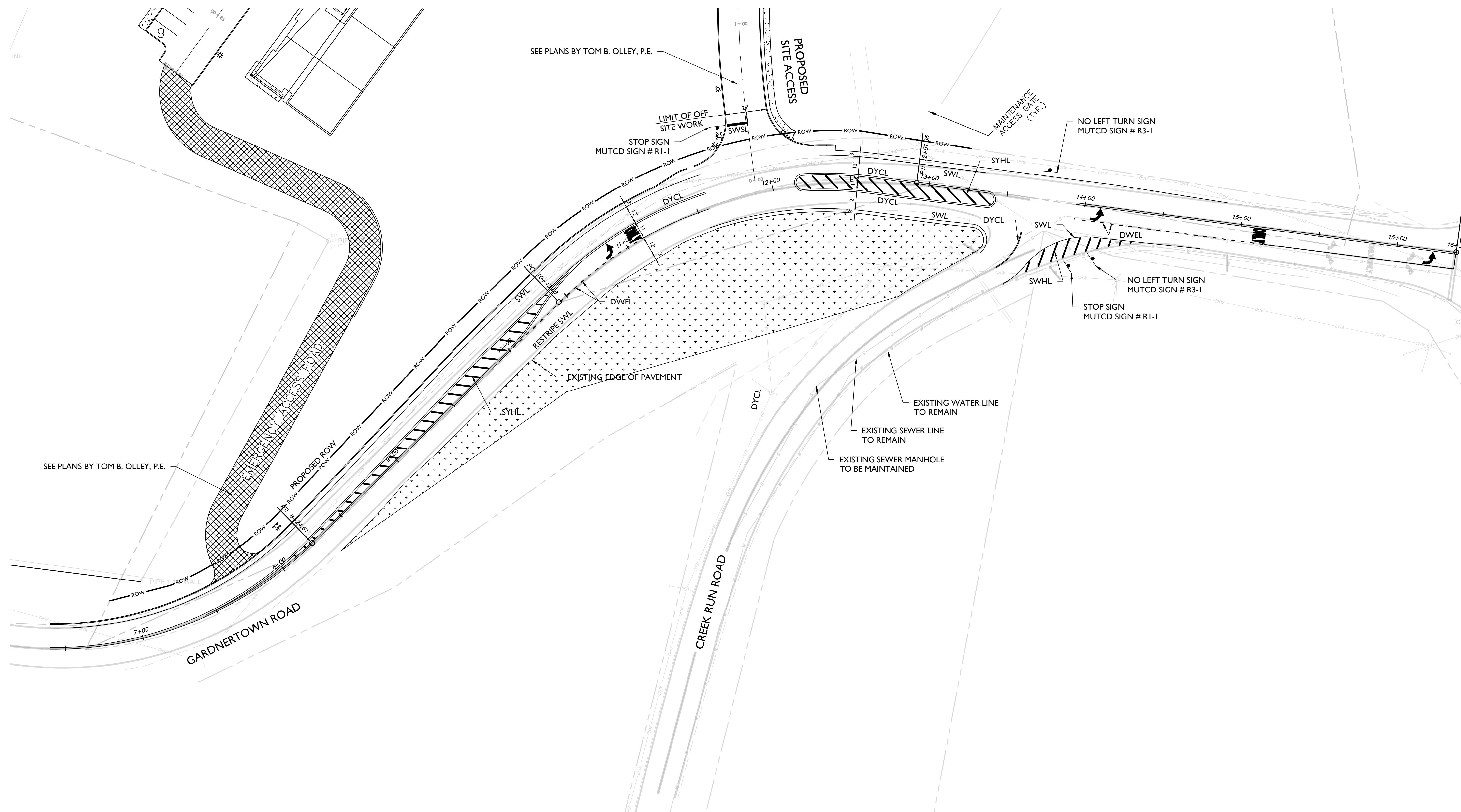
COLLIERS ENGINEERING & DESIGN,
ARCHITECTURE, LANDSCAPE ARCHITECTURE,
SURVEYING CT, P.C.

DATE:	8/27/21	DRAWN BY:	CHECKED BY:
ITEM NUMBER:	P.J.G./A.P.		
OBJECT NUMBER:	DRAWING NAME: R-PI 01-FXRT-AI TN		
14000275B			

CONCEPT PLAN (STRIPING)

PAGE NUMBER: 8

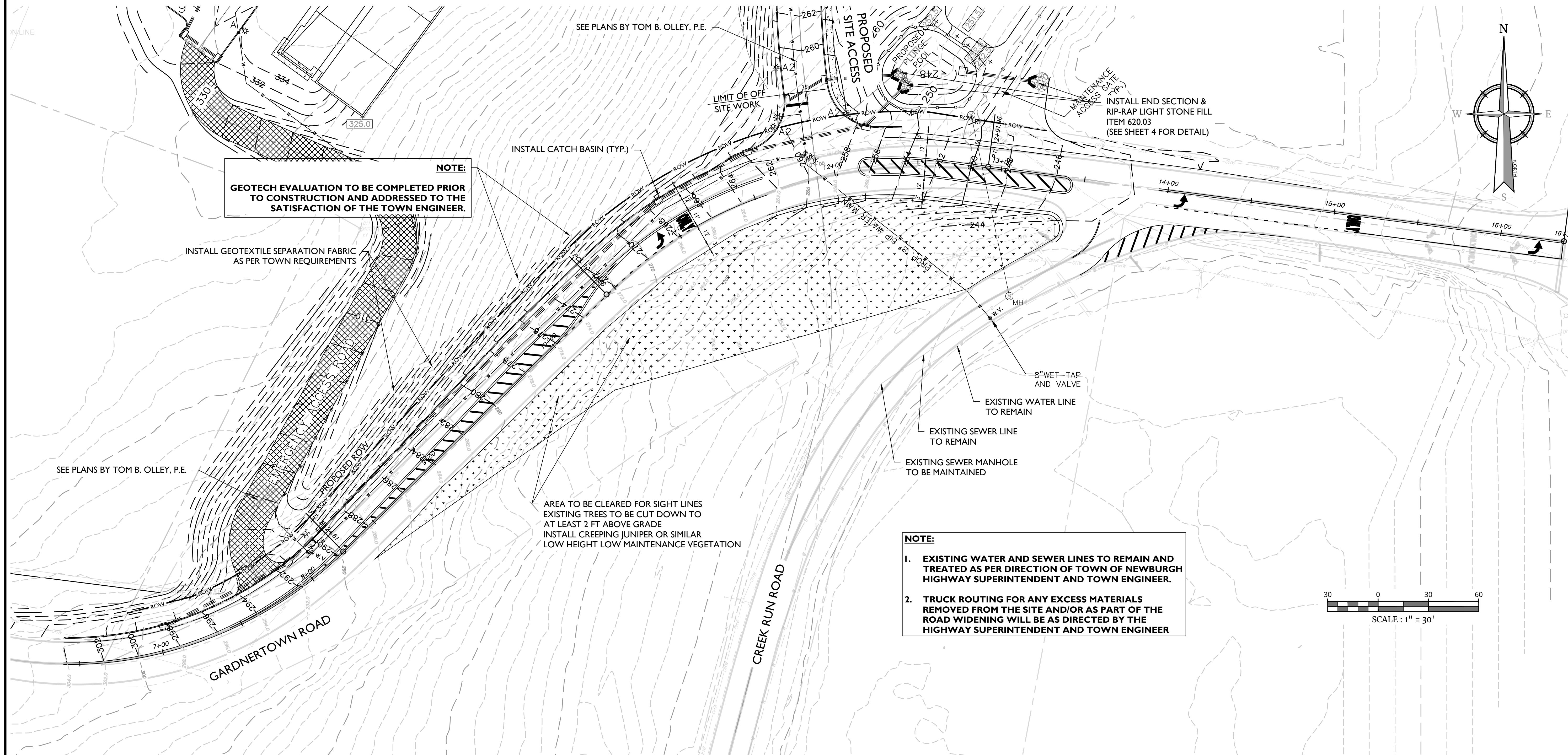
SCALE DRAWINGS FOR CONSTRUCTION



By: MAMENDOLA
2014\40003\5B\Transportation\Exhibits\R-PL03-EXB-AL\Ndwgr-PL03-CONCEP PLAN (STRIPPING)

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CONCEPTUAL IMPROVEMENT PLAN

FOR
**GARDNER RIDGE
ASSOCIATES, LLC**

GARDNERTOWN ROAD & CREEK RUN ROAD

TOWN OF NEWBURGH
ORANGE COUNTY
NEW YORK

WESTCHESTER
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SURVEYING CT, P.C.

DATE:	DRAWN BY:	CHECKED BY:
WN	8/27/21	M.J.A.
NUMBER: 00375B	DRAWING NAME: R-PL01-EXBT-ALTN	

LE: CONCEPT PLAN (GRADING)

MBER:
4ALT of 8

SITE PLAN GARDNER RIDGE APARTMENTS

GARDNERTOWN ROAD
TOWN OF NEWBURGH, ORANGE COUNTY, NY

JANUARY 28, 2016
REVISED OCTOBER 20, 2023

DENSITY CALCULATIONS:

TOTAL PARCEL AREA = 23.4± AC.
LESS WETLANDS, EASEMENTS/P.O.W.s = 7.4± AC.
100-YR FLOODPLAINS AND SLOPES 25% OR GREATER = 0.0± AC.
USEABLE AREA = 16.0± AC.

MULTIPLE FAMILY DWELLINGS MAXIMUM ALLOWABLE DENSITY= 6 DU/ACRE
ALLOWABLE NUMBER OF UNITS= 96 DWELLING UNITS

DENSITY BONUS FOR PROJECTS CONSISTING OF SENIOR CITIZEN
MULTIPLE DWELLING UNITS AND NON-SENIOR CITIZEN MULTIPLE DWELLING UNITS:
MAXIMUM DENSITY: 9 DU/ACRE
MAXIMUM ALLOWABLE UNITS= 144 UNITS
BONUS UNITS = 144 UNITS - 96 UNITS = 48 UNITS
NON-SENIOR APARTMENTS REQUIRED = 48 UNITS/3 = 16 UNITS
SENIOR HOUSING PROPOSED = 36 UNITS

TOTAL UNITS PROPOSED = 144 UNITS - 96 UNITS = 48 UNITS
BONUS UNITS PROPOSED = 144 UNITS - 96 UNITS = 48 UNITS
SENIOR HOUSING UNITS REQUIRED = 48 BONUS UNITS/3 = 16 UNITS
NON-SENIOR APARTMENTS PROPOSED = 108 UNITS
SENIOR HOUSING PROPOSED = 36 UNITS

PARKING CALCULATIONS:

108 NON-SENIOR APARTMENTS
SPACES REQUIRED (2 SPACES/DU REQ)= 216 SPACES

SPACES PROVIDED:
GARAGE = 60 SPACES
DRIVEWAY = 60 SPACES
PARKING LOT SPACES = 101 SPACES

NON-SENIOR APARTMENTS: SPACES PROPOSED = 221 SPACES

36 SENIOR HOUSING APARTMENTS

SPACES REQUIRED (2 SPACES/DU REQ)= 72 SPACES

SPACES PROVIDED:
PARKING LOT SPACES = 72 SPACES

CLUBHOUSE

SPACES PROVIDED = 9 SPACES

TOTAL PARKING PROVIDED: 307 SPACES

ACCESSIBLE PARKING SPACES (NYS BUILDING CODE SECTION 1106):
SPACES REQUIRED 301-400 SPACES = 8 SPACES

SPACES PROVIDED: 16 SPACES

PROVISIONS SHALL BE PLACED IN EACH LEASE AGREEMENT THAT REQUIRES EACH
TENANT WITH A GARAGE TO MAINTAIN THAT GARAGE FOR THE PURPOSE OF PARKING
A VEHICLE.

SHEET INDEX

SHEET NO.	DESCRIPTION
CS	COVER SHEET
1	EXISTING CONDITIONS
2	OVERALL SITE PLAN
3	LAYOUT & DIMENSION PLAN
4	GRADING PLAN
5	ROCK REMOVAL PLAN
6	UTILITY PLAN
7	EROSION & SEDIMENT CONTROL PLAN
8	ROAD PROFILES
9	ROAD PROFILES
10	SANITARY SEWER PROFILES
11	SITE DETAILS
12	WATER DETAILS
13	SEWER DETAILS
14	DRAINAGE DETAILS
15	EROSION CONTROL DETAILS
16	TREE SURVEY
17	EMERGENCY ACCESS PLAN
18	LIGHTING PLAN

RECORD OWNER

GARDNER RIDGE ASSOCIATES
134 FAIRVIEW ROAD
ROCKAWAY, NJ 07866

CONSULTING ENGINEER

THOMAS B. OLLEY, PE, PLLC
152 ORANGE AVENUE
WALDEN, NY 12586
CONTACT: THOMAS B. OLLEY, PE
(845) 778-5638

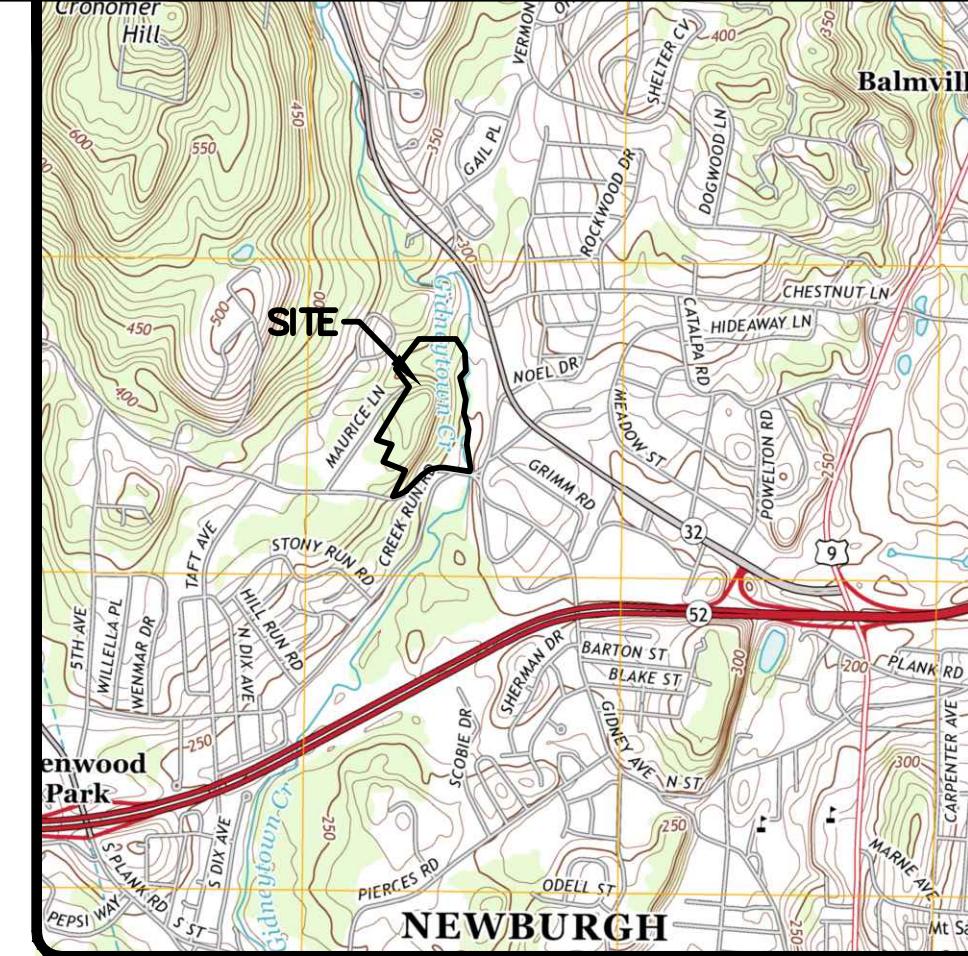
SURVEYOR:

MARTIN F. ANTHONISEN JR., PLS
1422 LONG MEADOW ROAD,
TUXEDO, NY

NOTES:

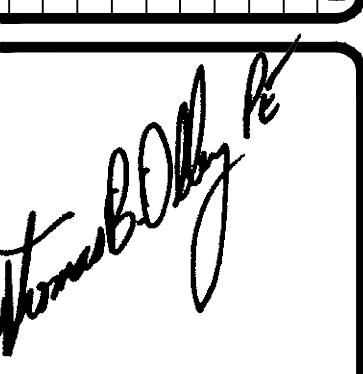
1. SENIOR CITIZEN UNITS ARE LIMITED TO 1000 S.F. MAXIMUM IN ACCORDANCE WITH TOWN OF NEWBURGH ZONING CODE SECTION 185-48 (4).
2. SENIOR CITIZEN UNITS SHALL BE DESIGNED AND CONSTRUCTED FOR THE NEEDS OF SENIORS AND IS SUBJECT TO THE MANAGEMENT OR OTHER LEGAL RESTRICTIONS THAT REQUIRE ALL UNITS DESIGNATED AS SENIOR CITIZEN HOUSING UNITS TO BE OCCUPIED BY PERSONS 55 YEARS OF AGE OR OLDER. NOTWITHSTANDING THE FOREGOING, ADULTS UNDER 55 YEARS OF AGE AND CHILDREN MAY RESIDE IN THE UNITS WHERE:

 - 2.1. THE ADULT IS THE SPOUSE OF A PERSON 55 YEARS OF AGE OR OLDER;
 - 2.2. THE ADULT'S PRESENCE IS ESSENTIAL FOR THE PHYSICAL CARE OF A PERSON 55 YEARS OF AGE OR OLDER;
 - 2.3. THE MINOR CHILDREN ARE RESIDING WITH THEIR PARENT, PARENTS OR LEGAL GUARDIANS WHERE THEIR PARENT, PARENTS OR LEGAL GUARDIANS ARE 55 YEARS OF AGE OR OLDER, AND THE MINOR CHILDREN RESIDING THEREIN ARE UNDER A PHYSICAL OR OTHER DISABILITY AND CANNOT CARE FOR THEMSELVES.



LOCATION MAP
NEWBURGH QUADRANGLE
SCALE: 1"=2000'

8	12/04/23	CREEK RUN ROAD, CONSULTANT AND BOARD COMMENTS	TBO
7	10/26/23	EMERGENCY ACCESS AND DRAINAGE REVISIONS	TBO
6	7/6/23	CONSULTANT COMMENTS	TBO
5	9/6/22	LAYOUT REVISION	MS
4	6/6/22	ENGINEERS COMMENTS	MS
3	6/21/17	CONSULTANT COMMENTS	MS
2	5/29/17	ENGINEERS COMMENTS	MS
1	3/15/16	CONSULTANT COMMENTS	MS
		REVISION DATE	BY



THOMAS B. OLLEY, P.E., PLLC	ENGINEERS AND PLANNERS	PHONE: 845-778-5638
		FAX: 845-778-5637
152 ORANGE AVENUE WALDEN, NY 12586		

EXISTING CONDITIONS	GARDNER RIDGE GARDNERTOWN ROAD	TOWN OF NEWBURGH, ORANGE COUNTY, NY
---------------------	-----------------------------------	-------------------------------------

SHEET NO.	CS
DATE:	JANUARY 28, 2016
FILE NO.	

LEGEND

—	EXISTING CONTOURS
- - -	EXISTING SITE BOUNDARY LINE
- - - -	EXISTING ADJOINING PROPERTY LINE
—	EXISTING STONE WALL
—	EXISTING TREE LINE
—	EXISTING TREES AND/OR BUSHES
—	EXISTING STREAM
□	EXISTING BUILDINGS
—	EXISTING STREET POLE
—	EXISTING STREET SIGN
—	EXISTING WATER MAIN
—	EXISTING HYDRANT
—	EXISTING WATER VALVE
—	EXISTING CLEANOUT
—	EXISTING CURB STOP
—	EXISTING SEWER MAIN AND MANHOLE
—	EXISTING PAVED ROAD/DRIVEWAY
—	EXISTING GRAVEL ROAD/DRIVEWAY
—	SOILS BOUNDARY
—	EXISTING FEDERAL WETLANDS BOUNDARY
—	100 YR FLOODPLAIN BOUNDARY

RECORD OWNER
GARDNER RIDGE ASSOCIATES, LLC
ROCKAWAY NJ, 08766

ZONING INFORMATION:
TAX LOT DATA: 75-1-4.12

TOTAL ACREAGE: 23.4 ACRES ±
ZONING DISTRICT: R-3

NOTES:

1. BOUNDARY SURVEY SHOWN HEREON IS FROM AN ACTUAL FIELD SURVEY PREPARED BY MARTIN F ANTHONISEN JR. ON DECEMBER 24, 2015.
2. THE TOPOGRAPHIC SURVEY SHOWN HEREON IS THE RESULT OF AN ACTUAL FIELD SURVEY PREPARED BY VINCENT DOGE ENGINEERING & SURVEYING IN APRIL 2003 AND SUPPLEMENTED WITH USGS 1 METER LIDAR (2014).
3. THE PROJECT SITE IS LOCATED WITHIN THE FOLLOWING DISTRICTS:
A. NEWBURGH SCHOOL DISTRICT.
B. CROMMERT FIRE DISTRICT.
C. CONSOLIDATED LIGHTING.
D. CONSOLIDATED WATER DISTRICT 1.
E. CONSOLIDATED WATER DISTRICT 2.
4. TOWN OF NEWBURGH SEWER AND WATER SERVICES ARE PROVIDED FOR THIS PROPERTY.

THOMAS B. OLLEY, P.E., P.L.C.
ENGINEERS AND PLANNERS

PHONE: 845-756-3338
FAX: 845-756-3337


12 ORANGE AVENUE
WALDEN, NY 12586


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
EXISTING CONDITIONS
GARDNER RIDGE
GARDNER TOWN ROAD


SHEET NO.
1 OF 18


DATE: JANUARY 28, 2016
FILE NO.











GARDNER RIDGE GARDNERTOWN ROAD


THOMAS D. OLEY, P.E., F.L.L.C.


ENGINEERS AND PLANNERS

12 CRAVEN AVENUE

WHITE PLAINS, NEW YORK 10601

2/04/23	ADDED WATER MAIN LOOP, EV CHARGERS, REVISED GREEK RUN RD	TBO
0/20/23	CONSULTANT COMMENTS	TBO
7/6/23	EMERGENCY ACCESS AND DRAINAGE REVISIONS	TBO
9/6/22	CONSULTANT COMMENTS	TBO





THOMAS D. VALLEY, P.E., F.L.L.C.
ENGINEERS AND PLANNERS
152 ORANGE AVENUE
PHONE: (845) 777-5638

OLLEY, F.E.,

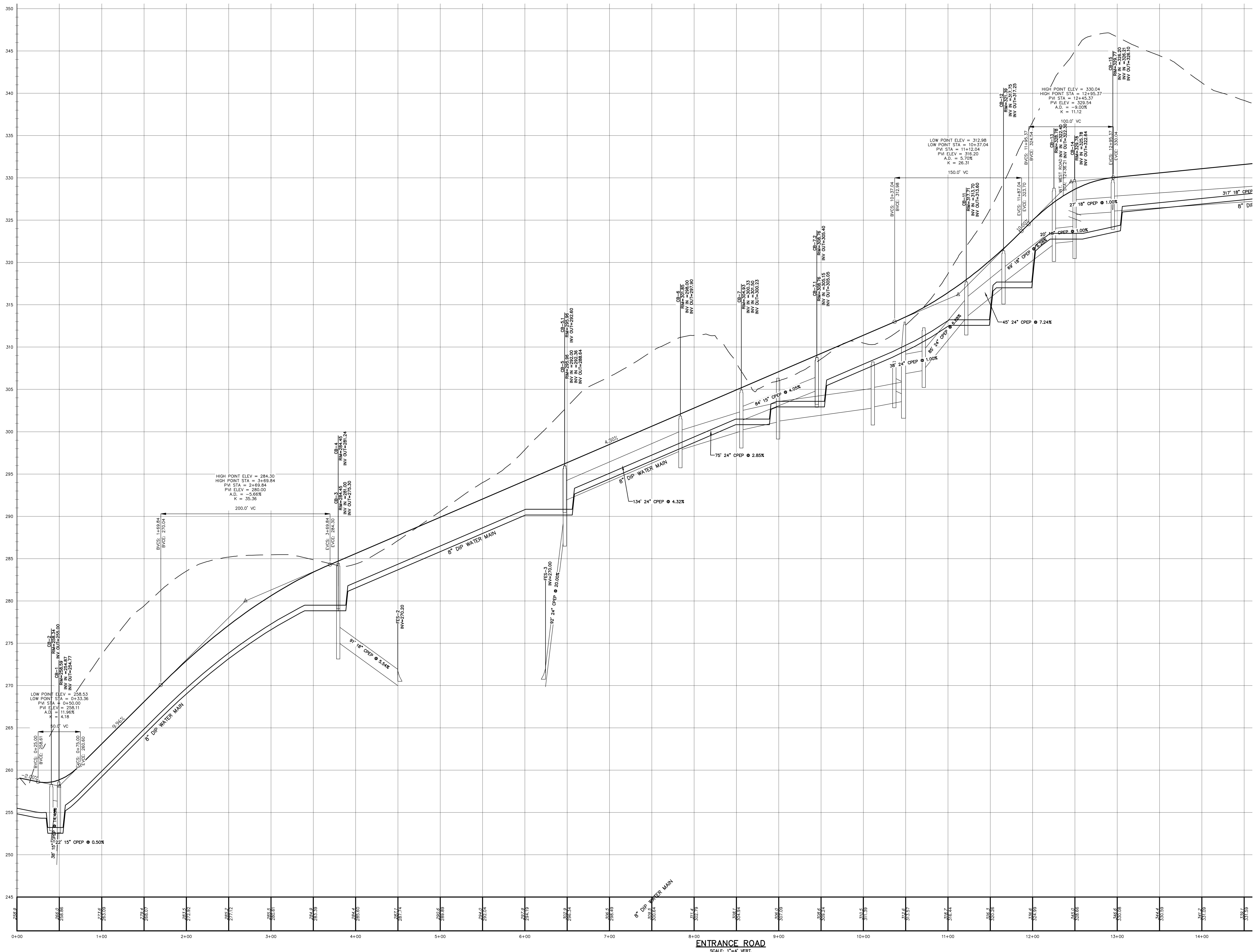
EV CHARGERS

10 of 10

STREET NO

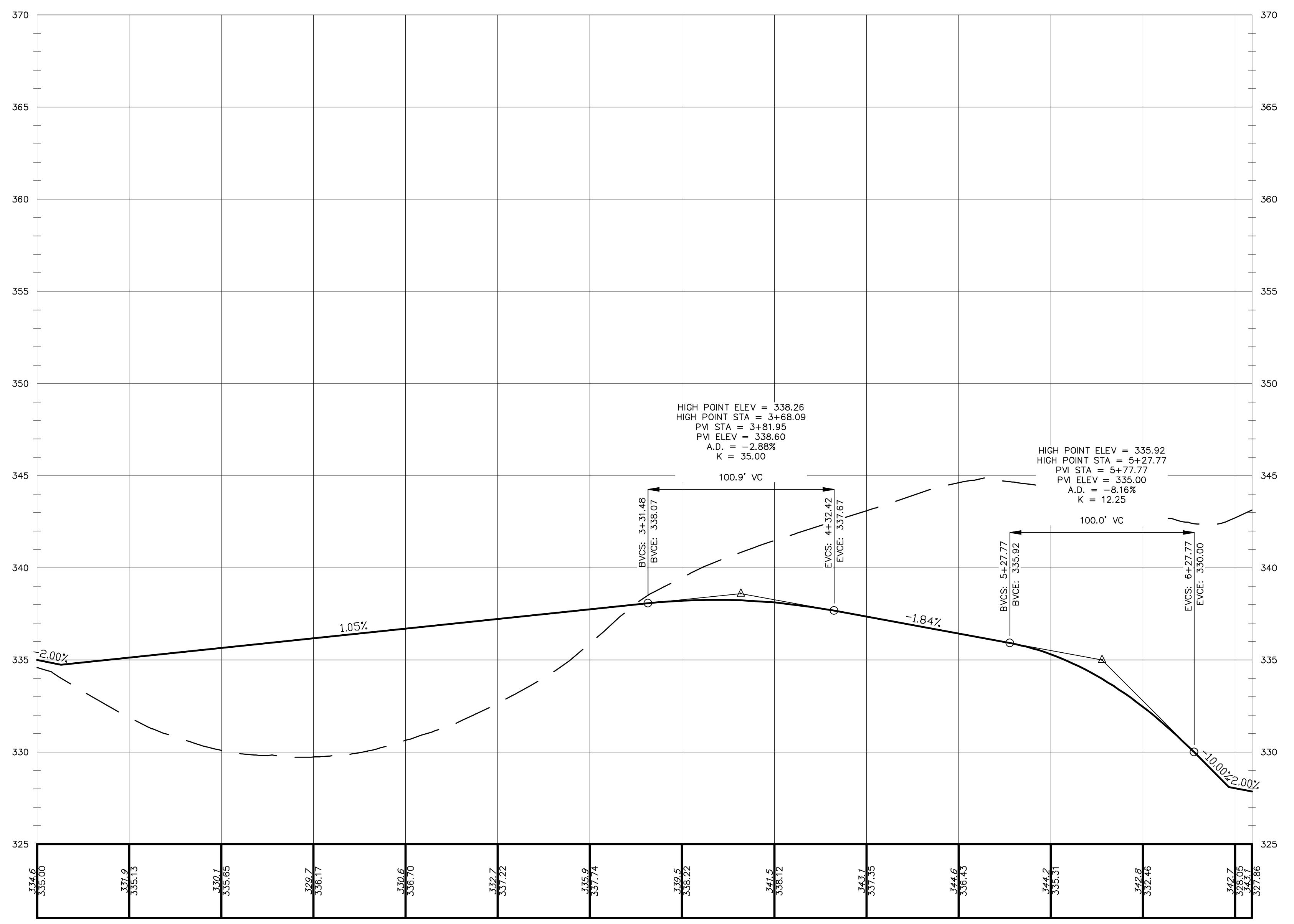
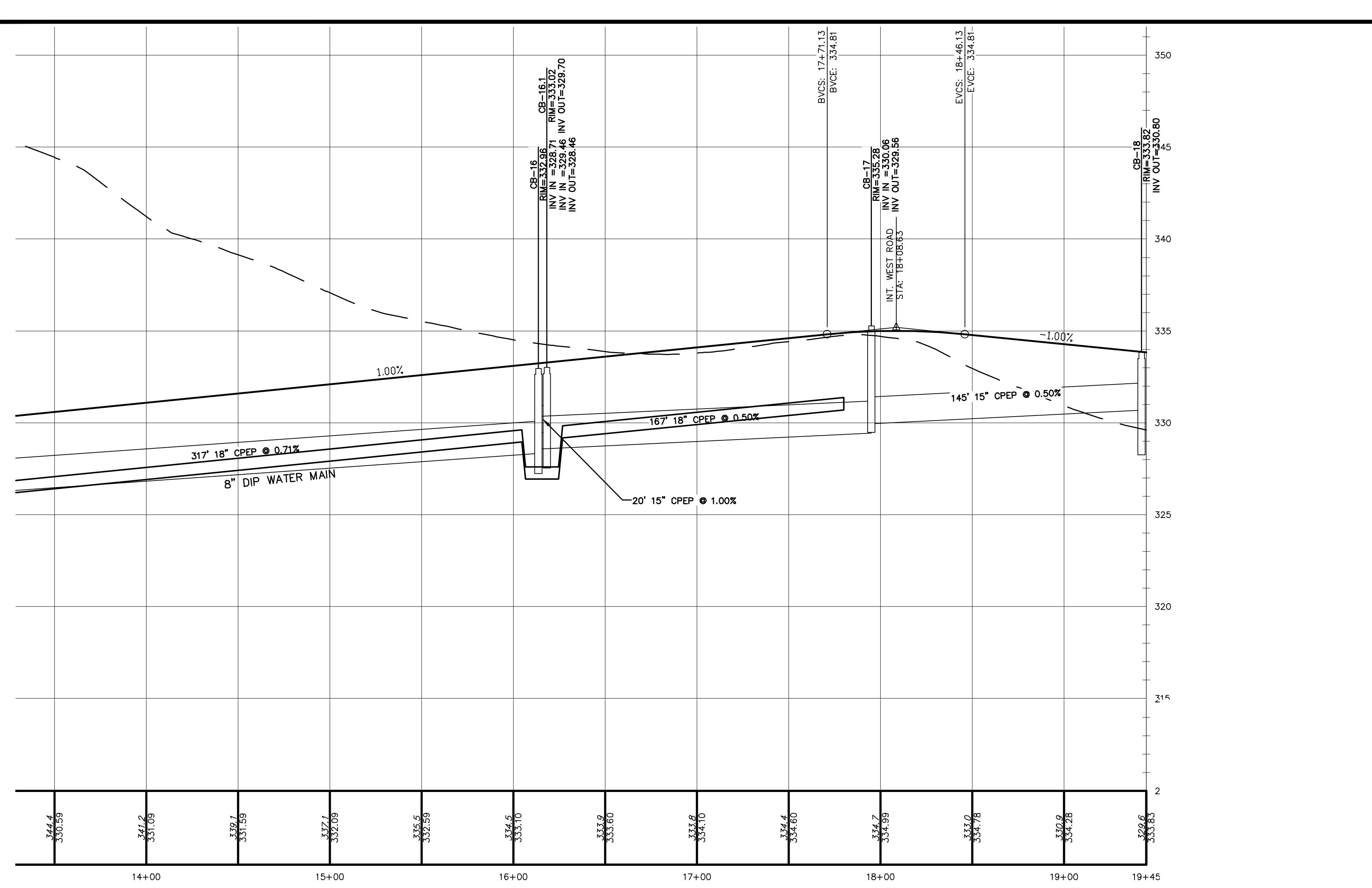
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DATE: JA



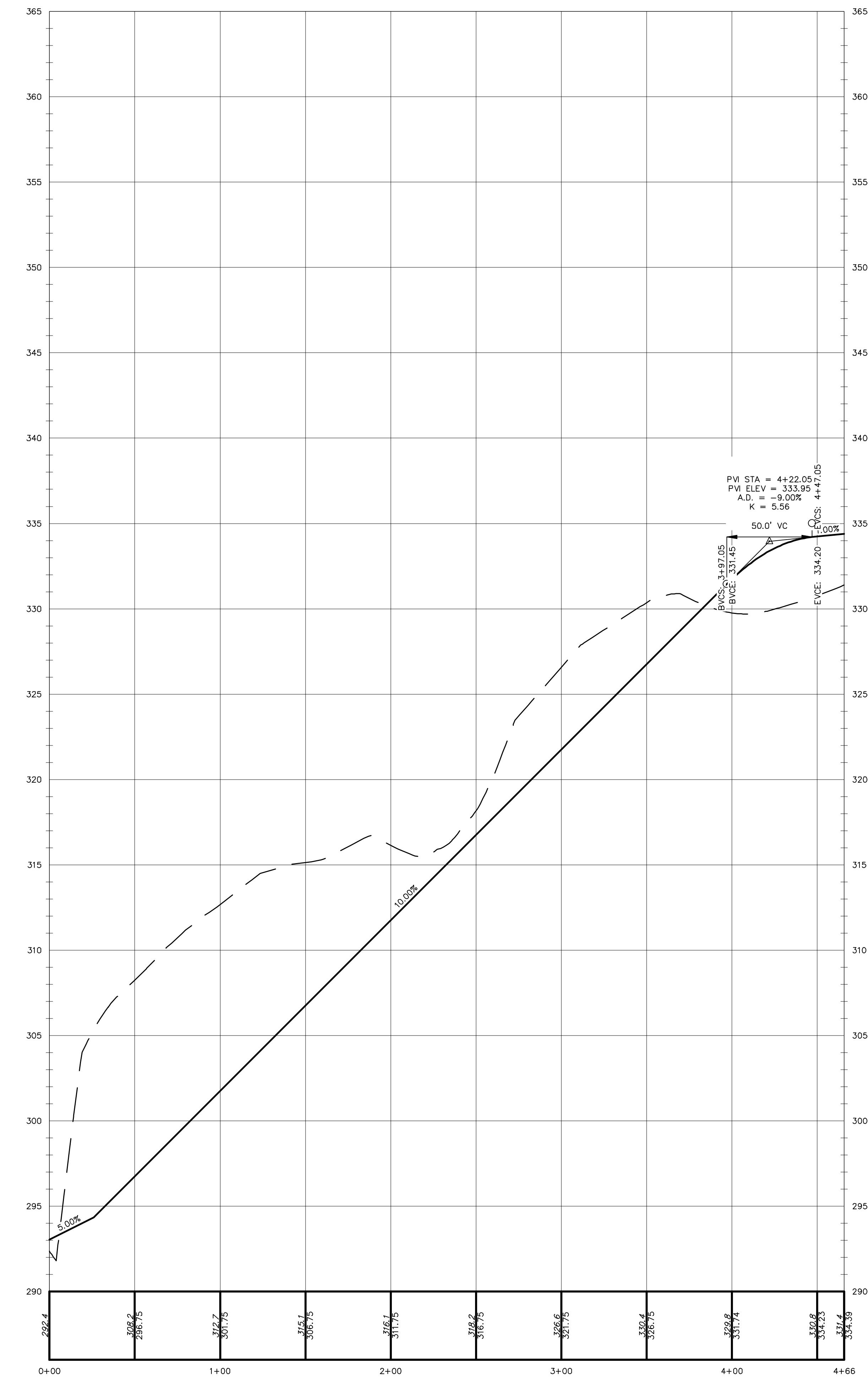
ROAD PROFILES
GARDNER RIDGE
GARDNERTOWN ROAD
TOWN OF NEWBURGH, ORANGE COUNTY, NY

Sheet No. 8 OF 18
Date: January 28, 2016
File No.:



WEST ROADWAY

SCALE: 1"=4' VERT.
1"=40' HOR.



**GARDNER RIDGE
GARDNERTOWN ROAD**

TOWN OF NEWBURGH, ORANGE COUNTY, NY

SHEET NO. 9 OF 18

DATE: JANUARY 28, 2016

FILE NO.

THOMAS B. OLLIEY, PE, PLLC.

ENGINEERS AND PLANNERS

15 ORANGE AVENUE

WILMINGTON, NY 12589

PHONE: 845-787-5258

FAX: 845-787-5107

CONSULTANT COMMENTS
EMERGENCY ACCESS AND DRAINAGE REVISIONS
6 7 10/20/23
CONTRACTOR COMMENTS
5 9/6/22
LAYOUT REVISION
4 6/6/22
ENGINEERS COMMENTS
3 6/21/17
REV. DATE
BY

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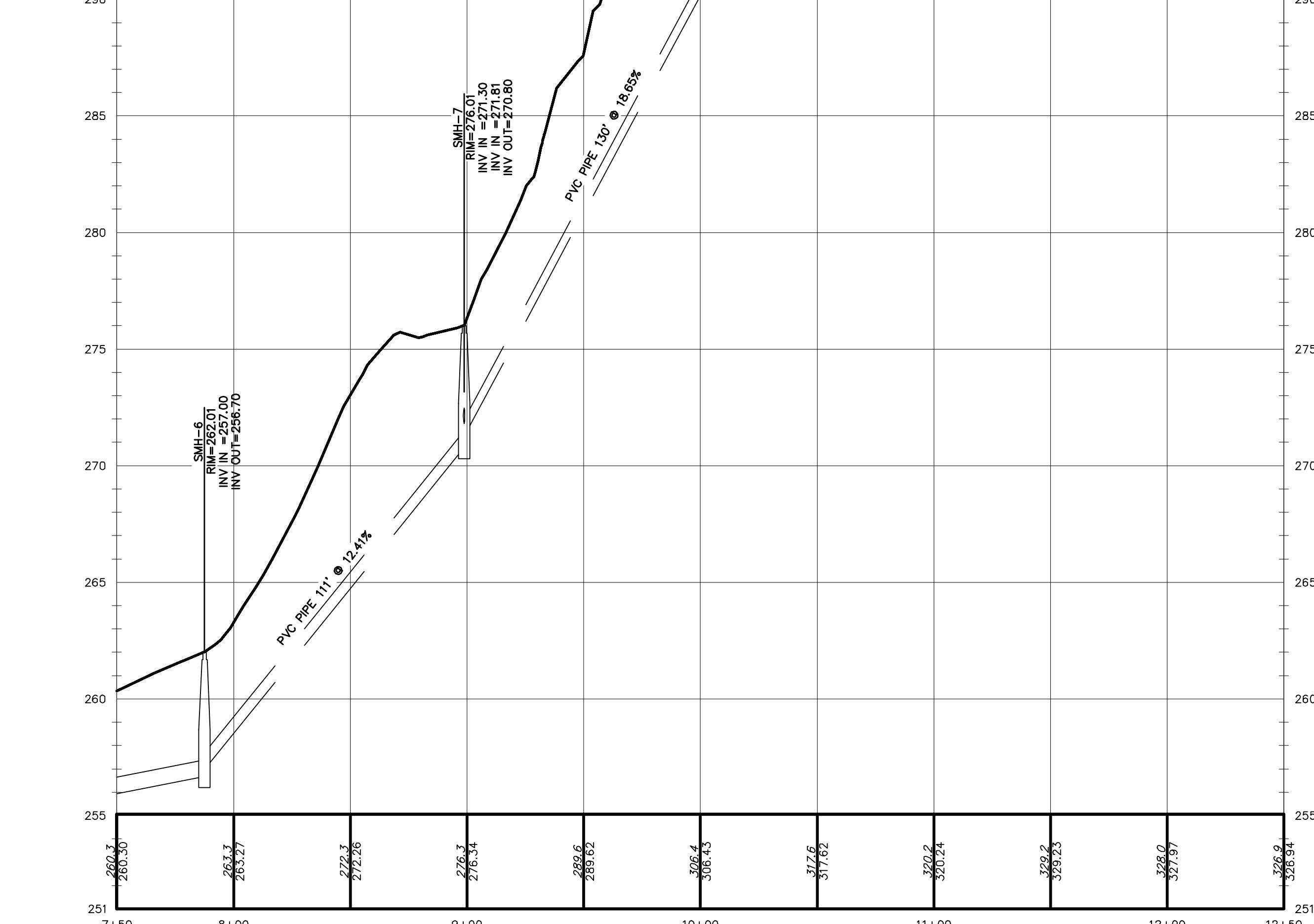
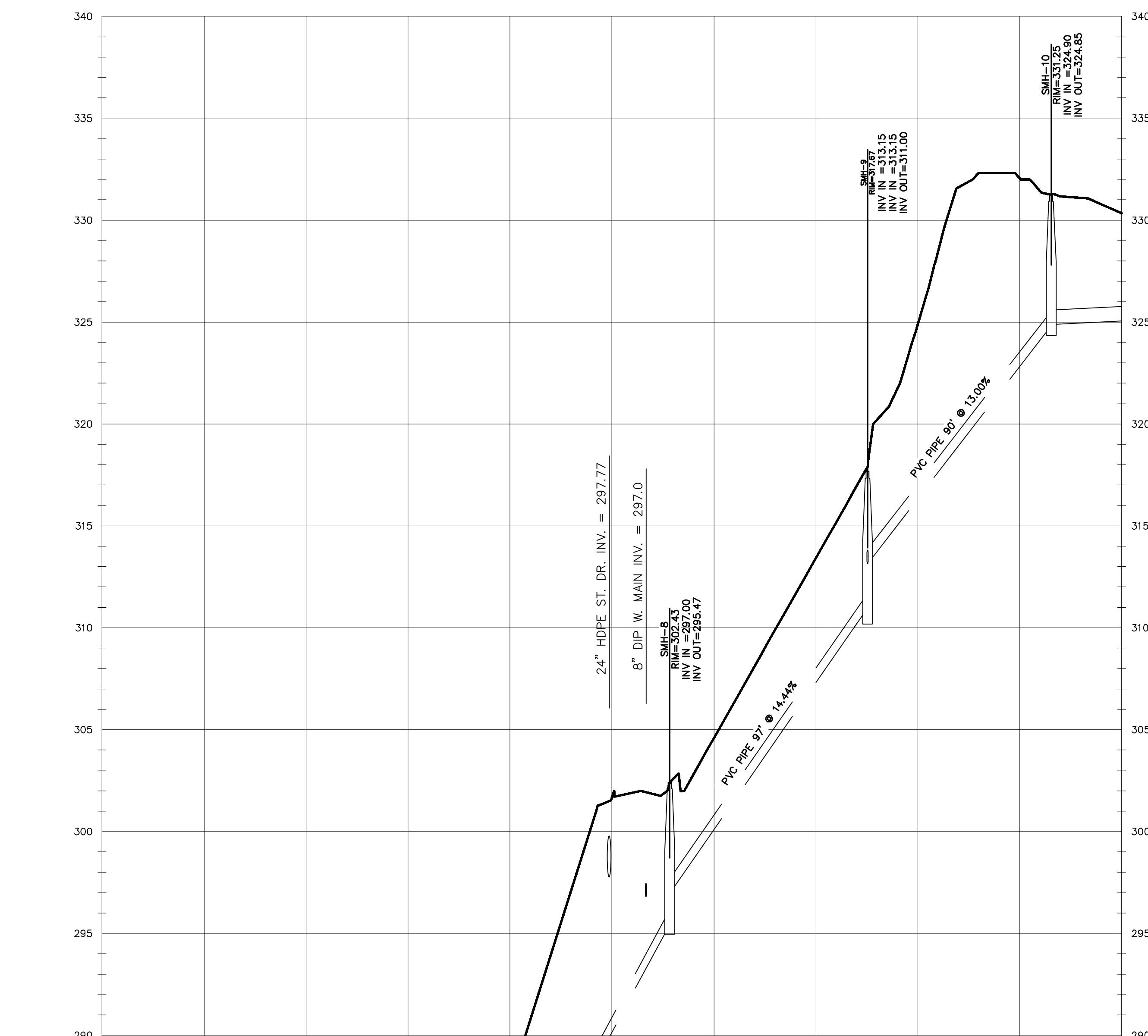
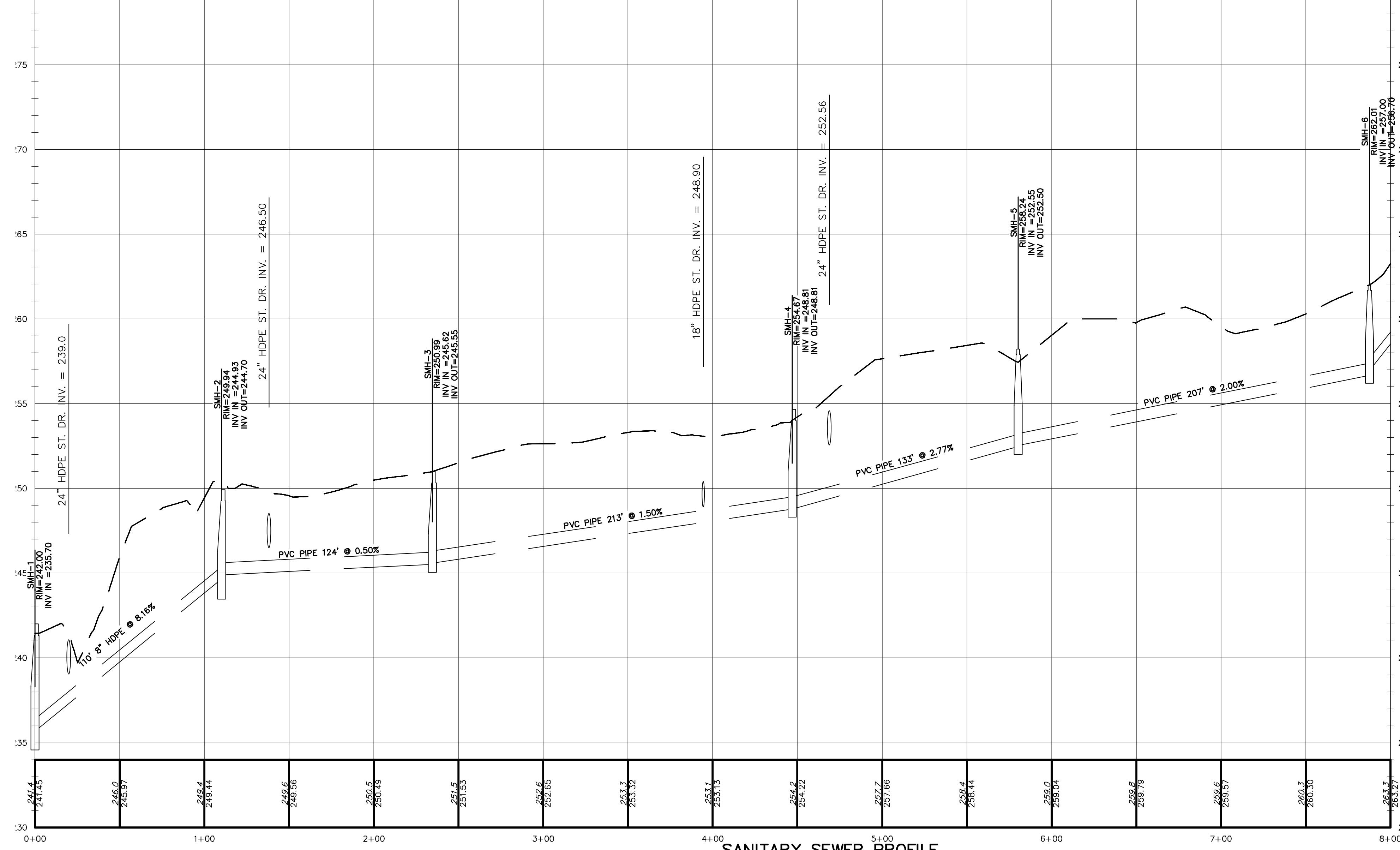
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THOMAS B. OLEY, P.E., P.L.L.C.

ENGINEERS AND PLANNERS

**152 ORANGE AVENUE
WALDEN, NY 12886**

TOWN OF NEWBURY ORANGE COUNTY NY

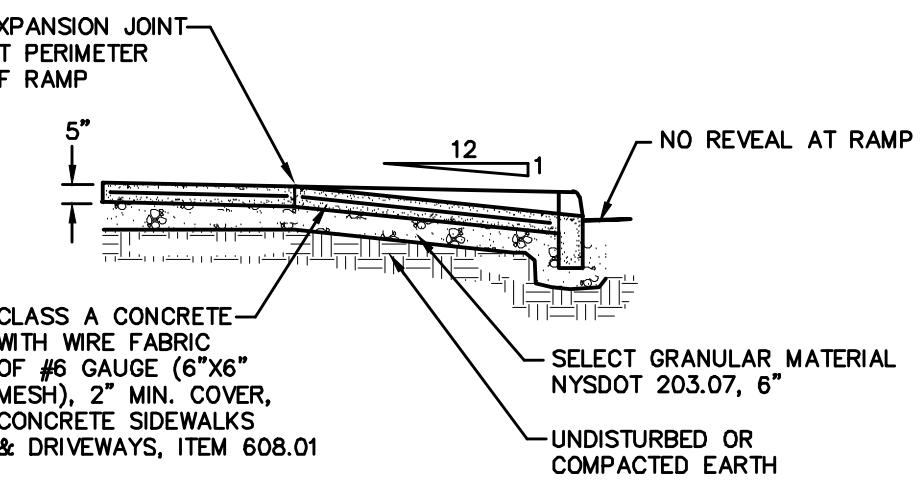
GARDNER RIDGE ROAD PROFILES

TOWN OF NEWBURY ORANGE COUNTY NY

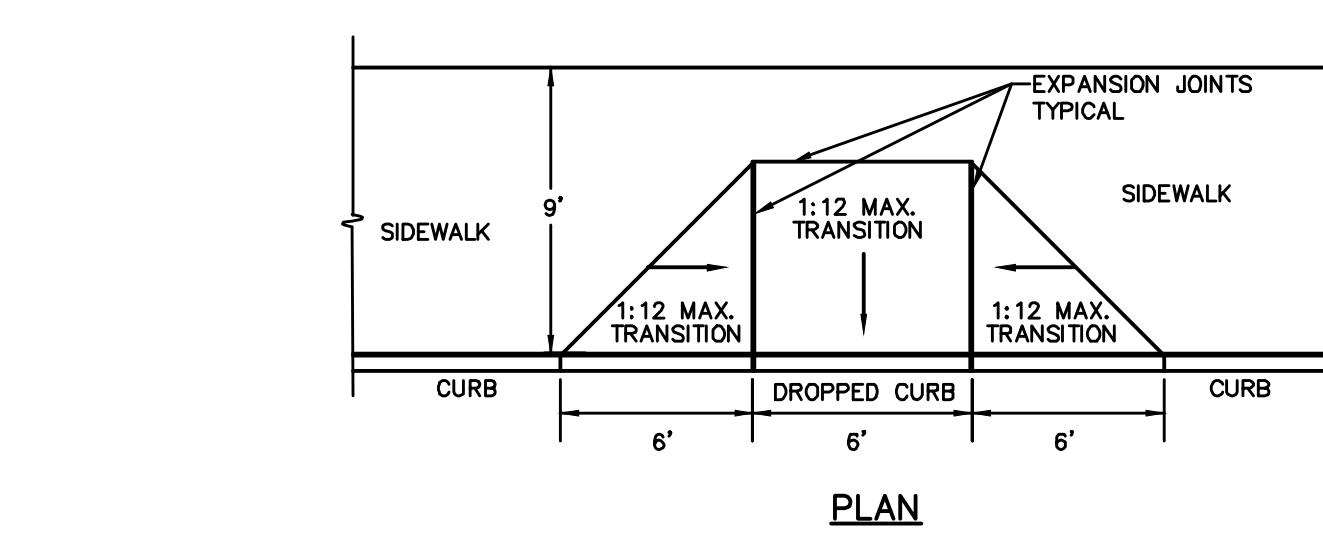
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10 OF 1

DATE: JANUARY 28, 2010

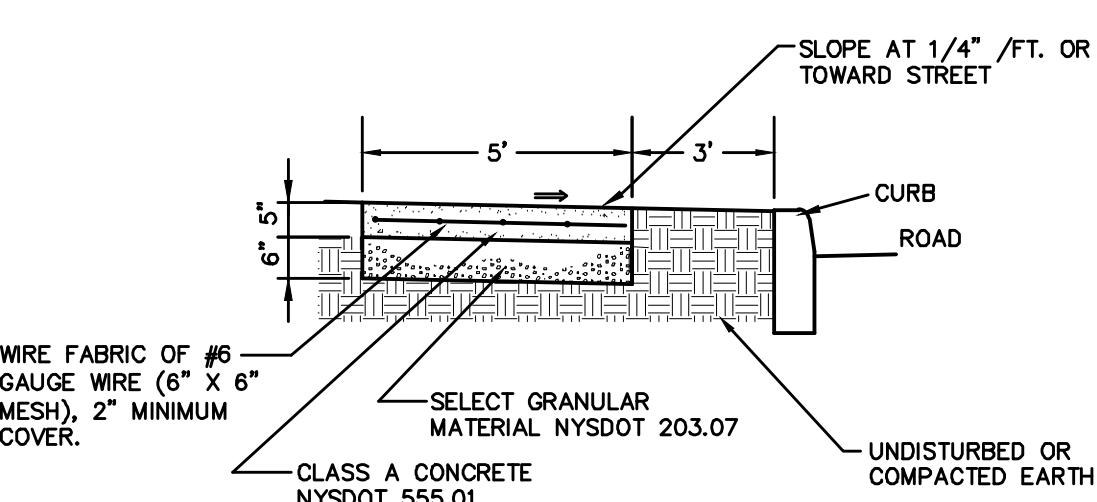
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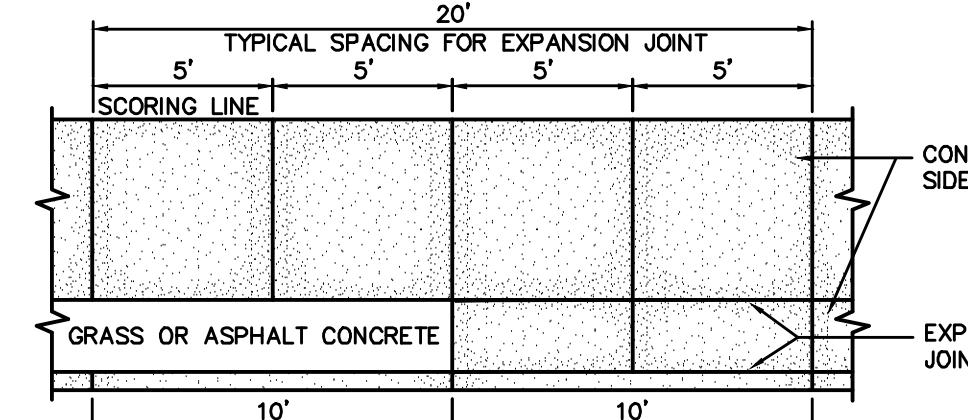
PEDESTRIAN RAMP – SECTION



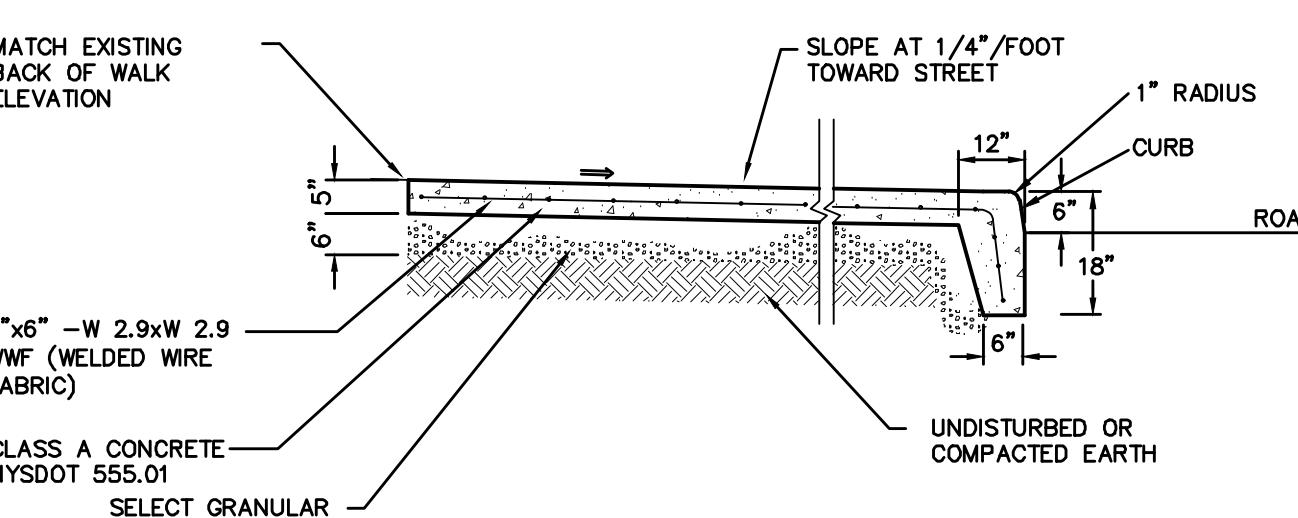
PLAN



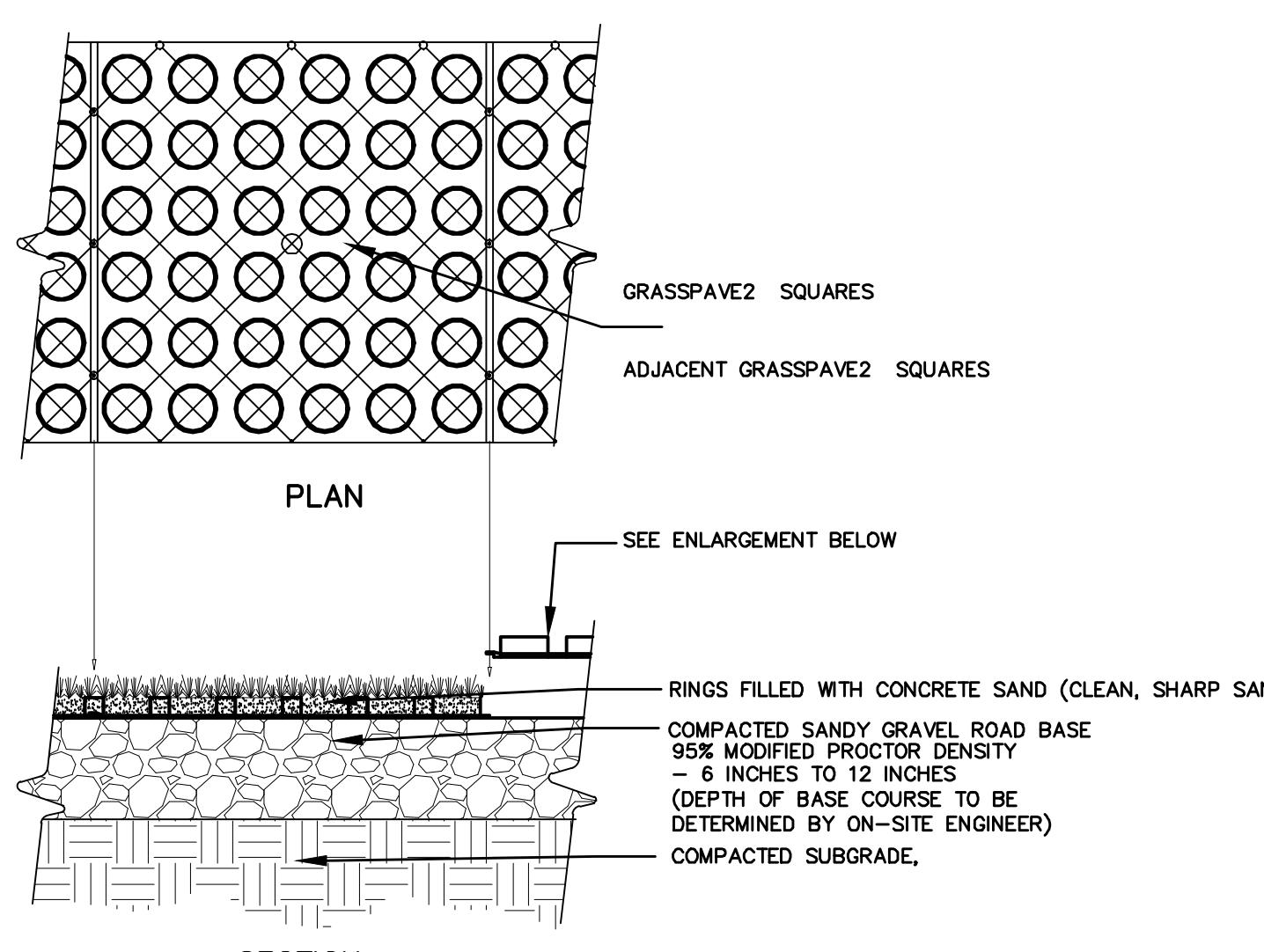
CONCRETE SIDEWALK



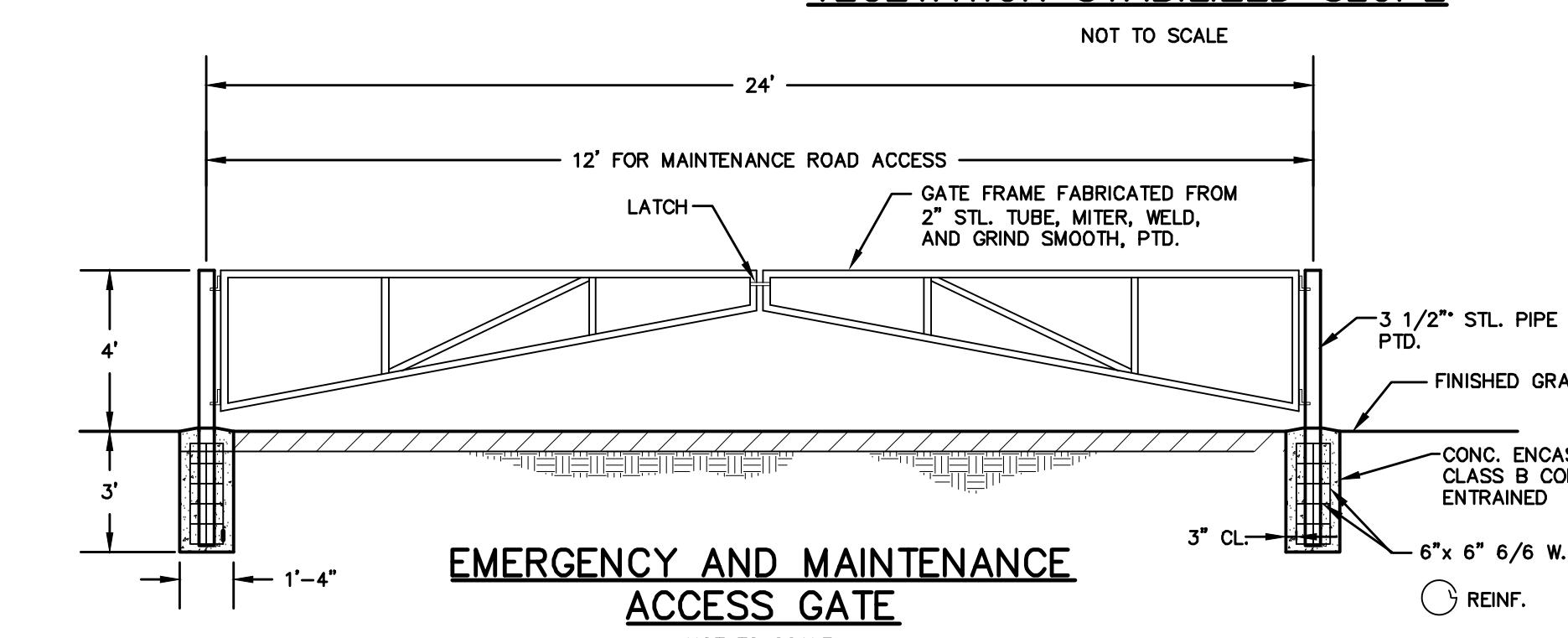
CONCRETE SIDEWALK AND CURB – PLAN OF SCORING AND EXPANSION JOINTS



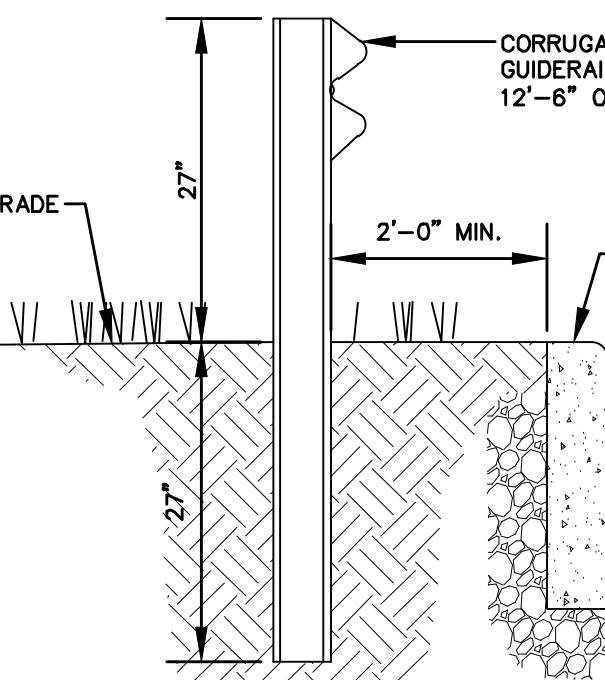
CONCRETE SIDEWALK WITH INTEGRAL CURB



VEGETATION STABILIZED SLOPE

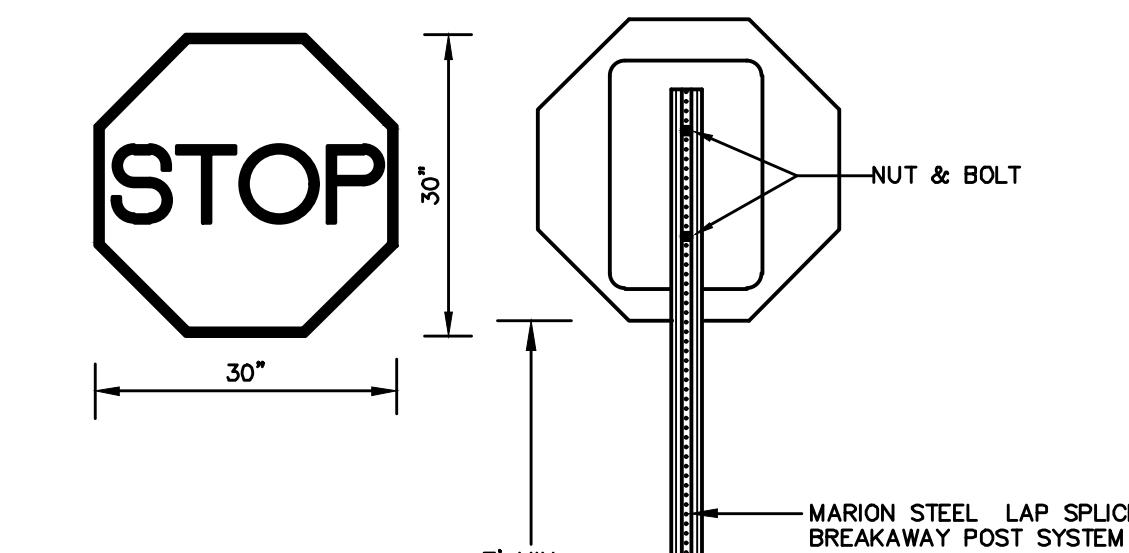
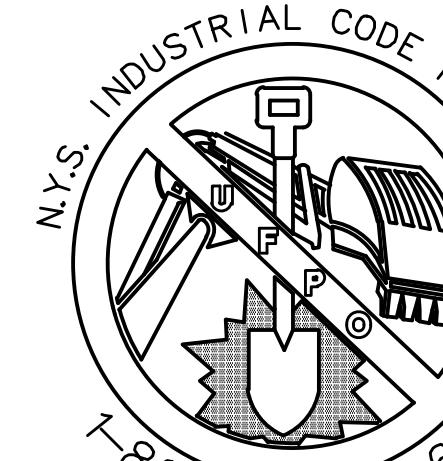


TYPICAL GRASSPAVE2 DETAIL

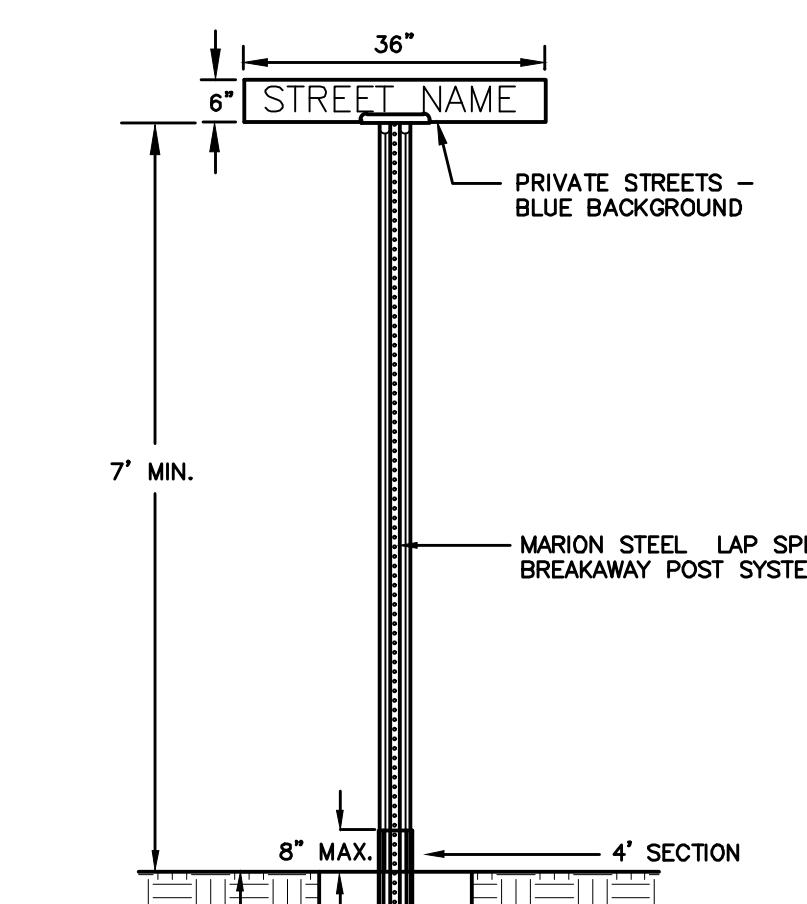


GUIDE RAIL

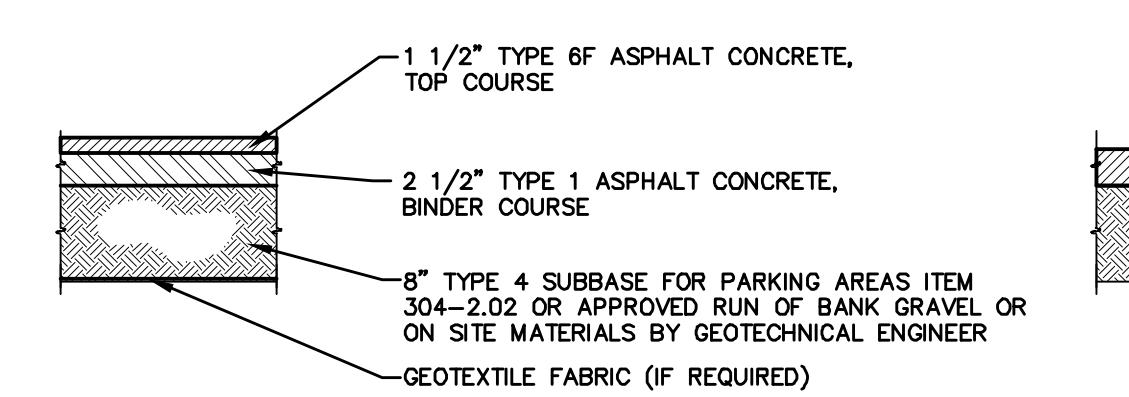
CALL BEFORE YOU DIG, DRILL OR BLAST
NO LESS THAN TWO WORKING DAYS NOTICE
IT'S THE LAW!



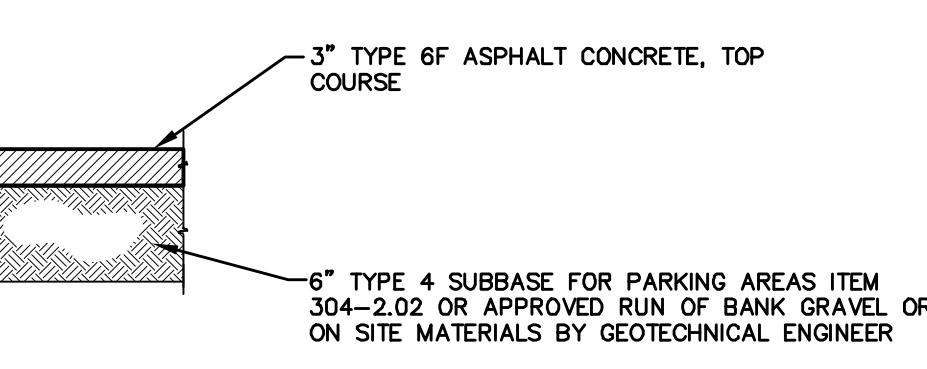
STREET SIGN INSTALLATION DETAIL



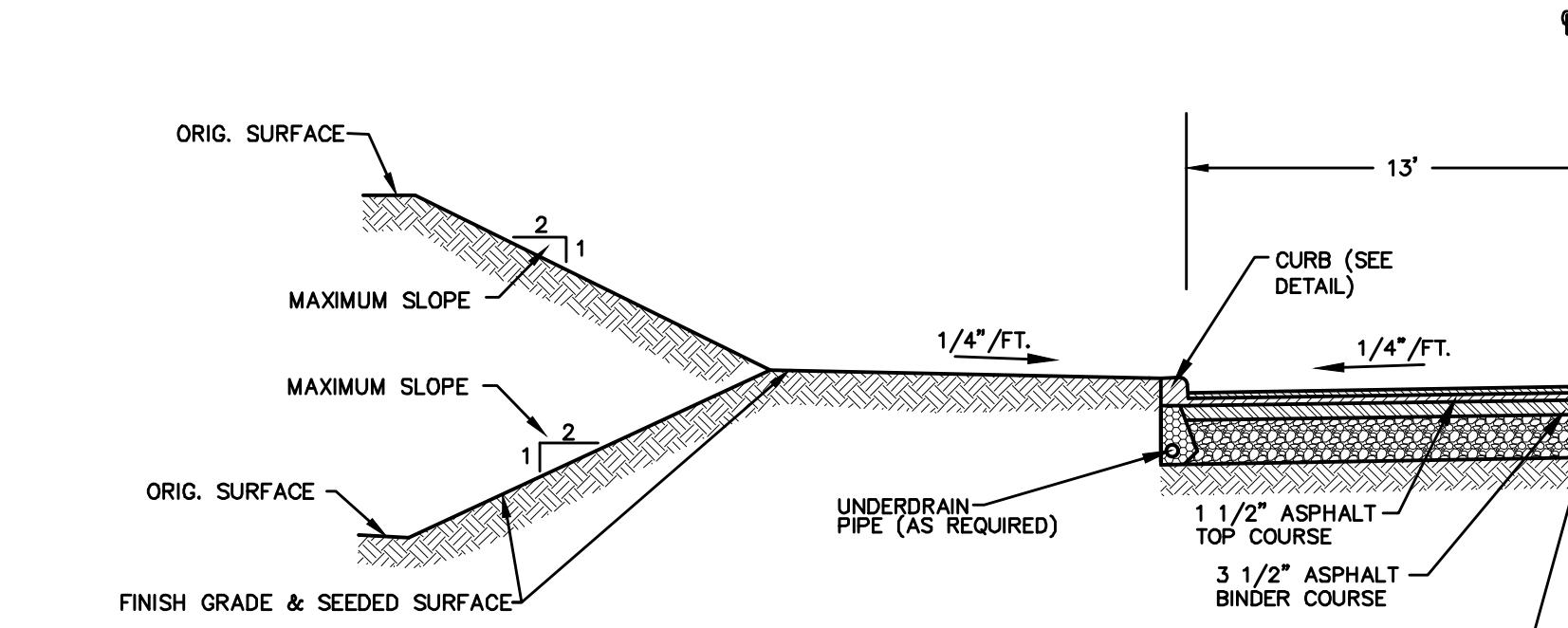
STREET SIGN INSTALLATION DETAIL



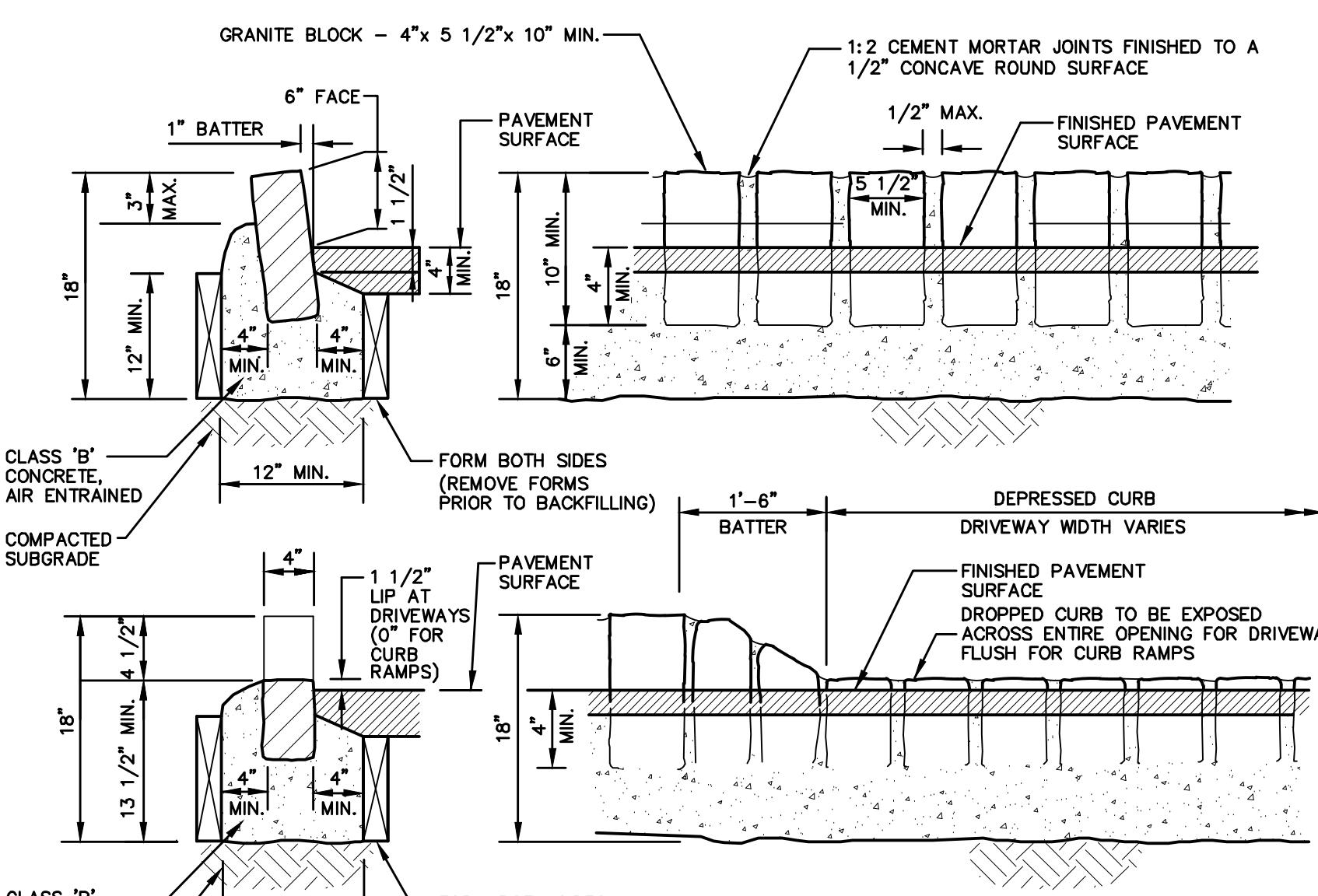
LIGHT DUTY PAVEMENT



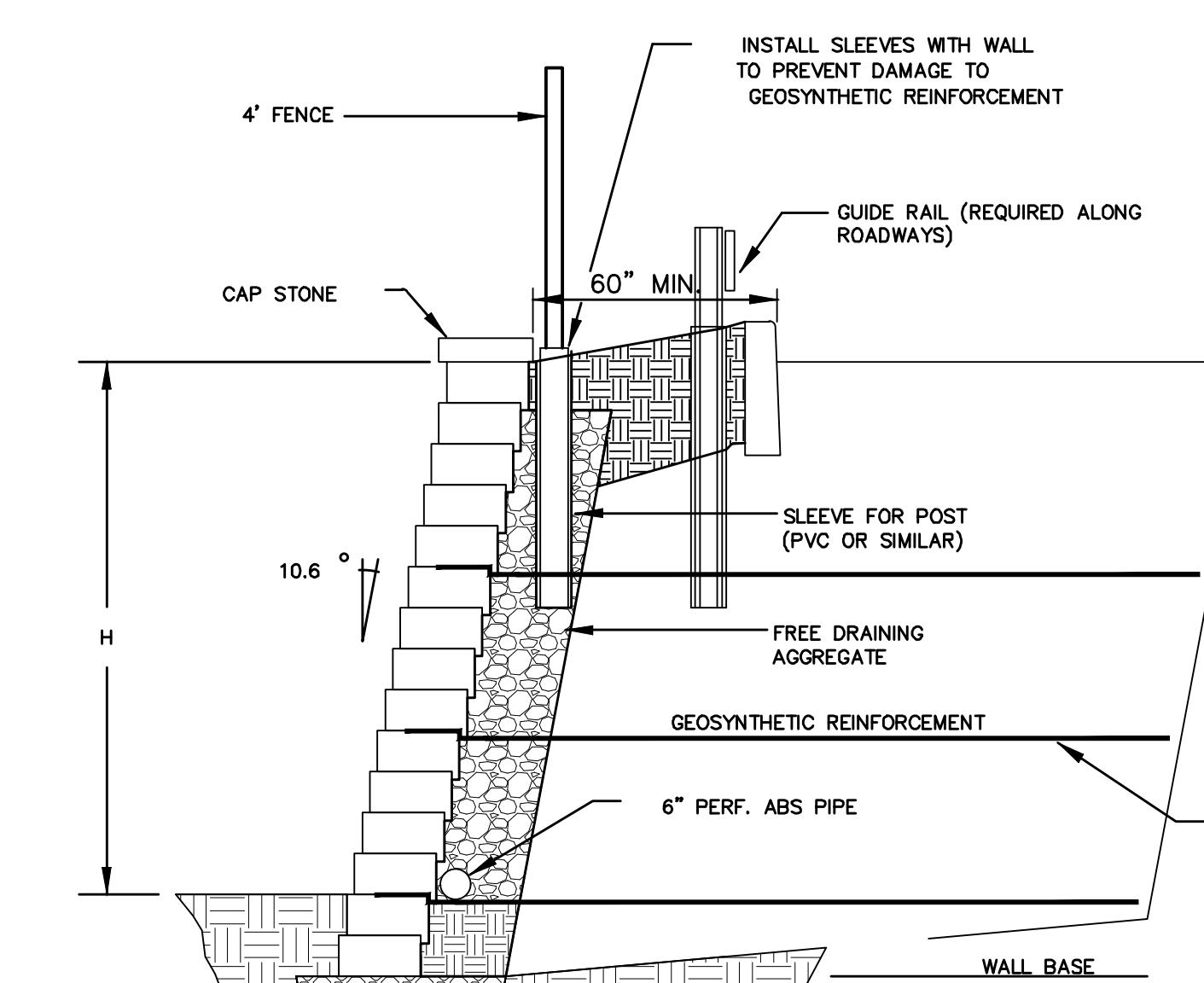
DRIVEWAY PAVEMENT



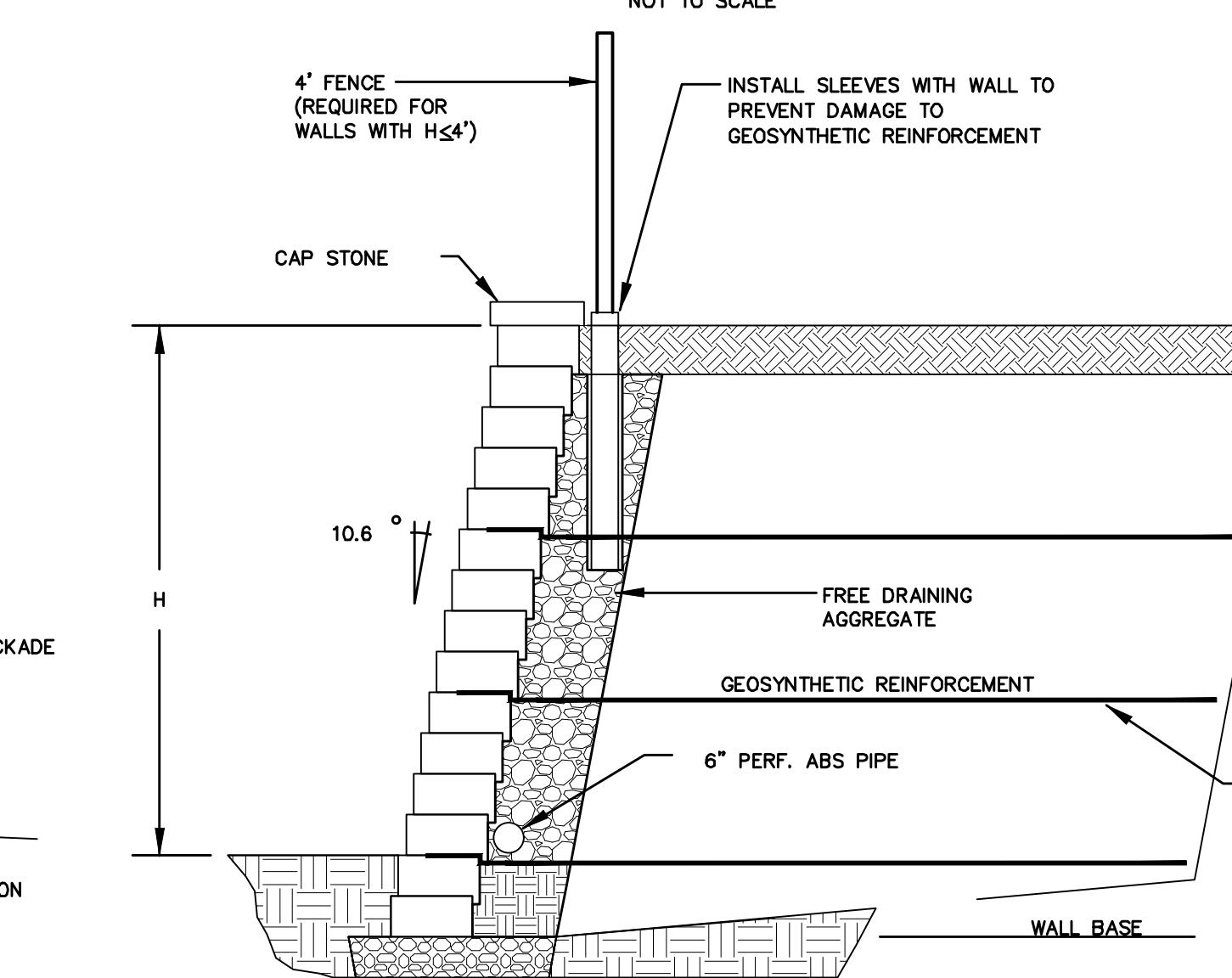
TYPICAL ROAD CROSS SECTION



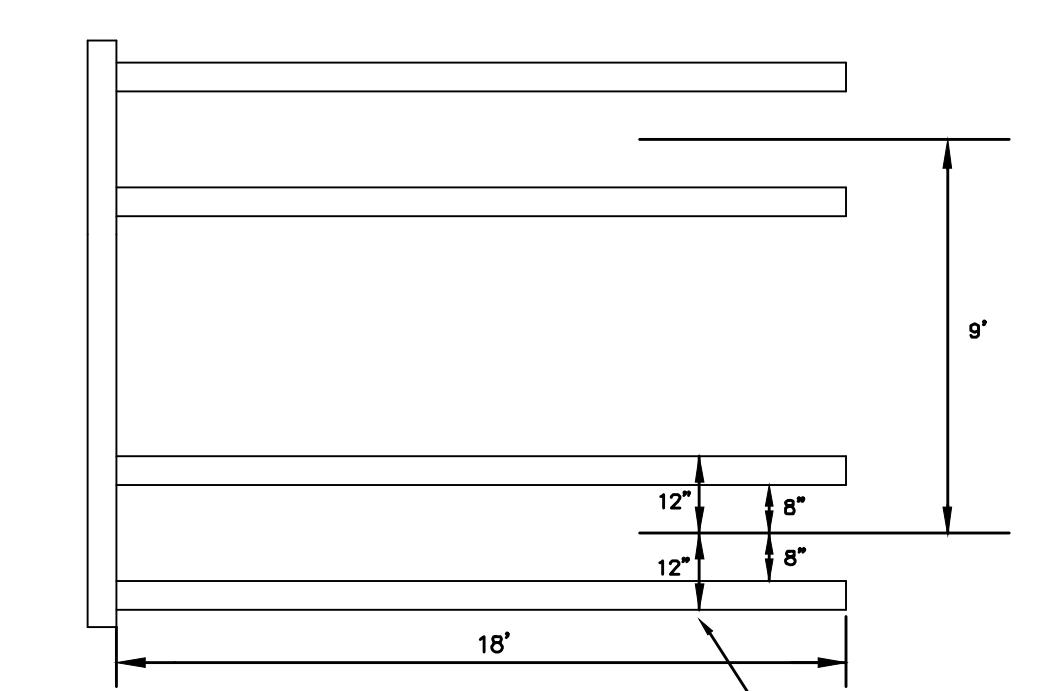
BELGIUM BLOCK CURB



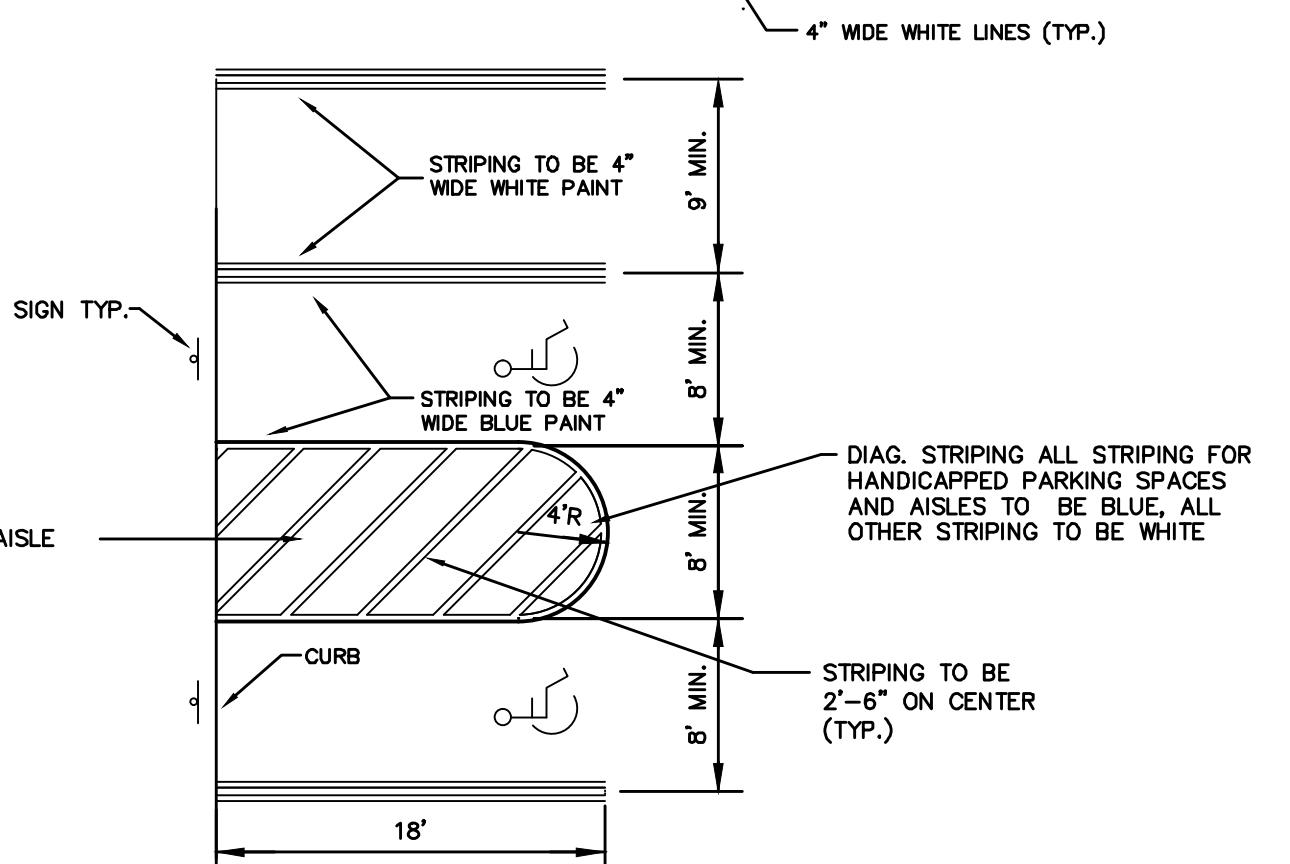
SEGMENTAL RETAINING WALL WITH GUIDE RAIL & FENCE



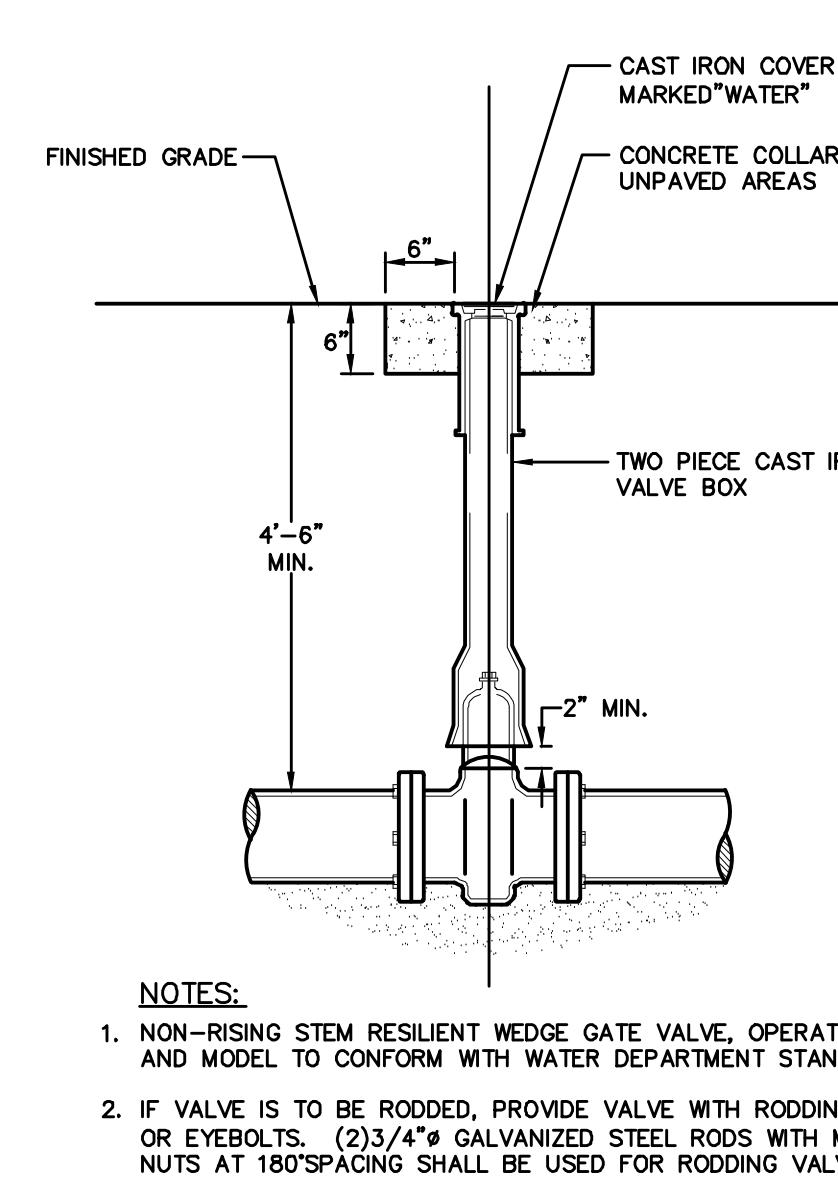
SEGMENTAL RETAINING WALL



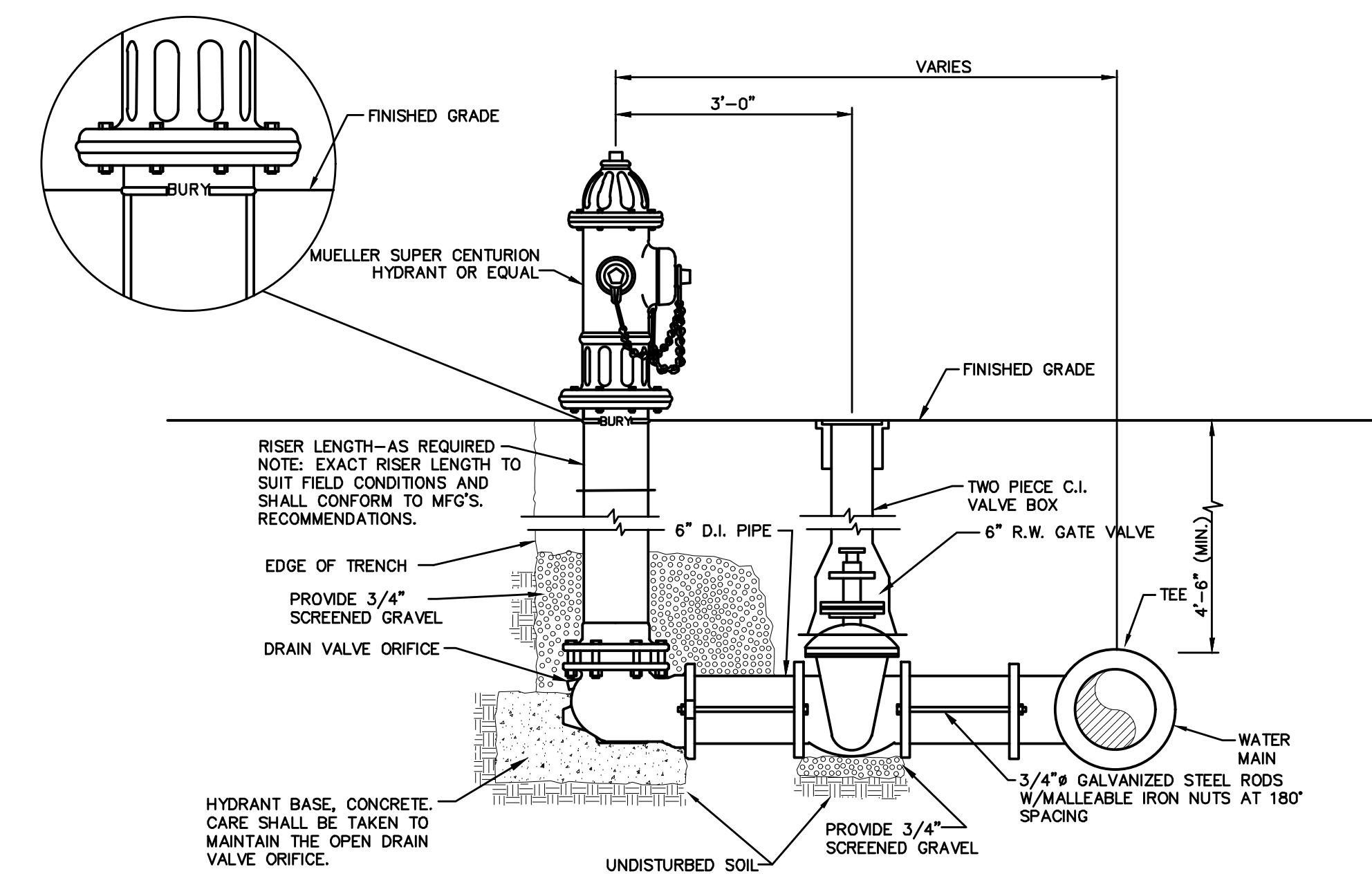
PARKING SPACE MARKING DETAIL



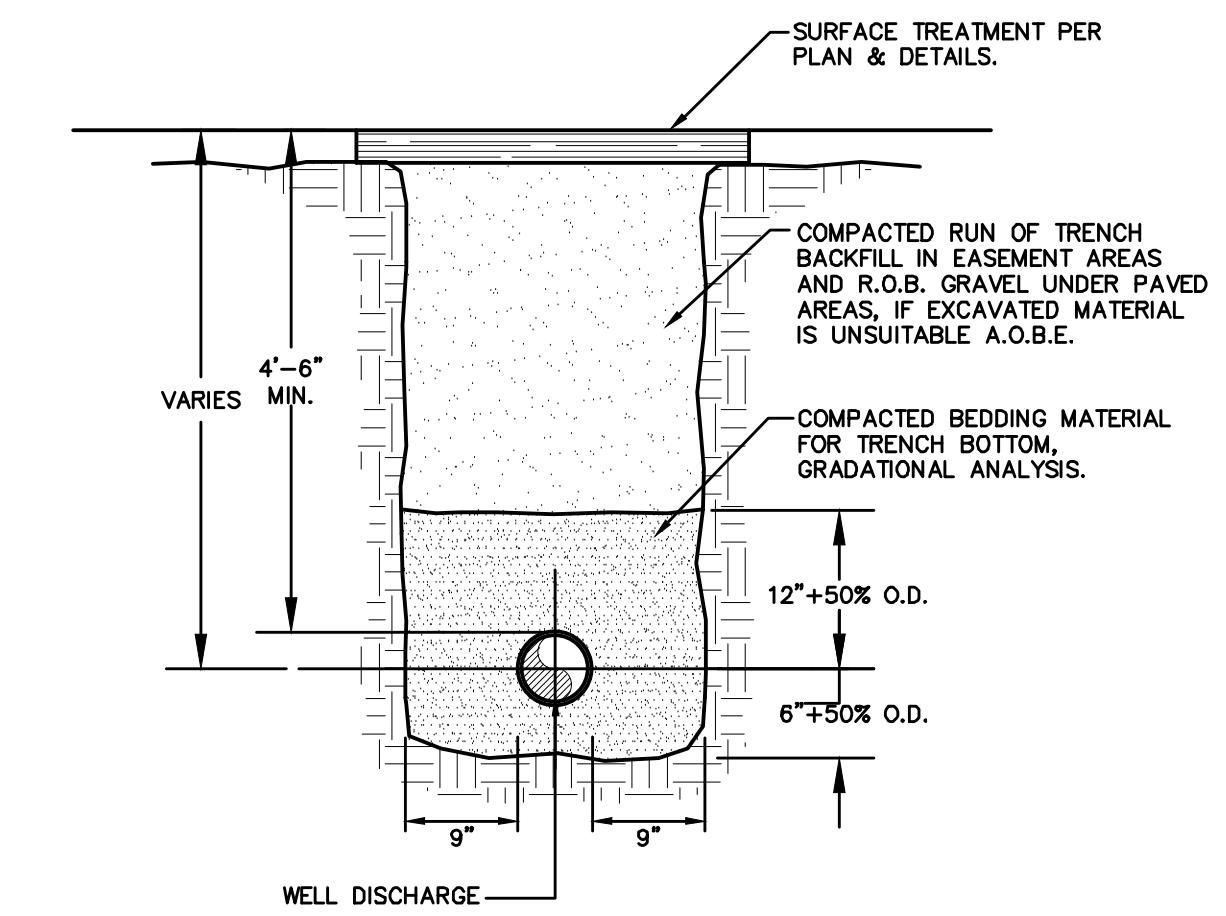
ITEM	DESCRIPTION
1	ADDED SIGN DETAILS
2	CONSULTANT COMMENTS
3	COATINGS AND PAINTS
4	CONTENTS
5	COATINGS AND PAINTS
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GATE VALVE DETAIL
NOT TO SCALE

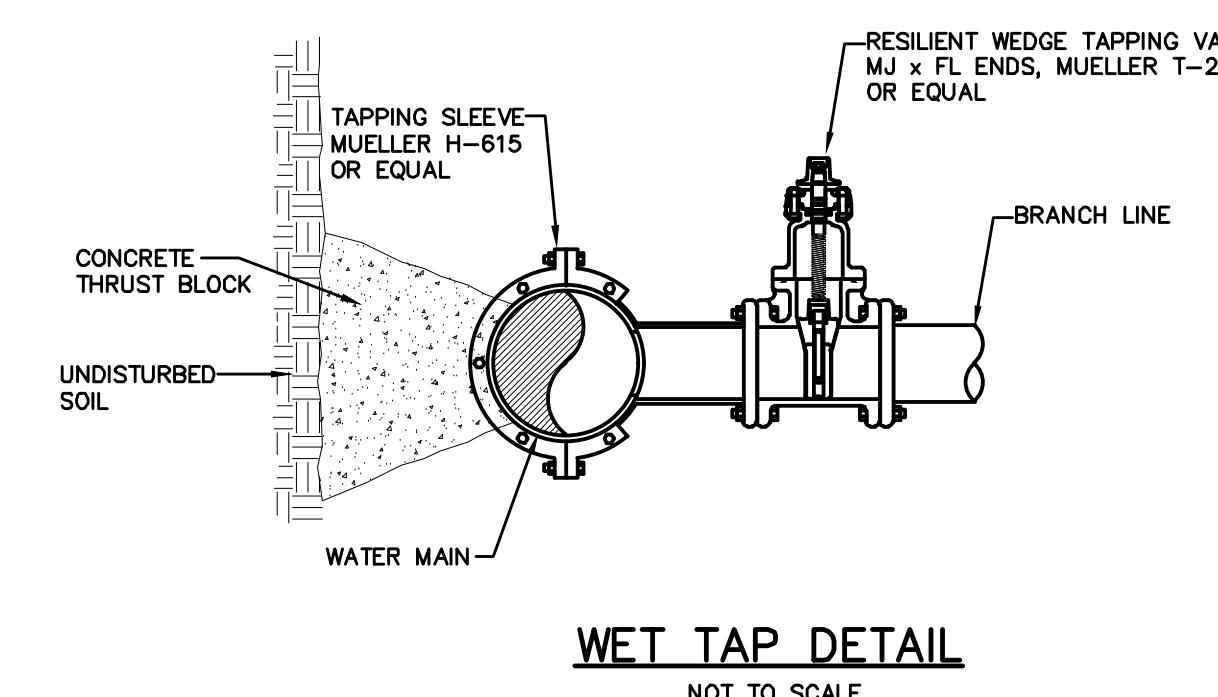


HYDRANT DETAIL
NOT TO SCALE

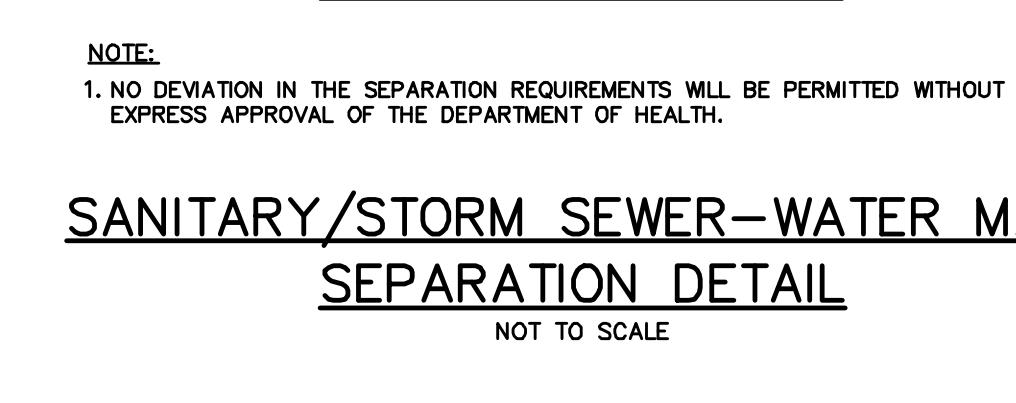
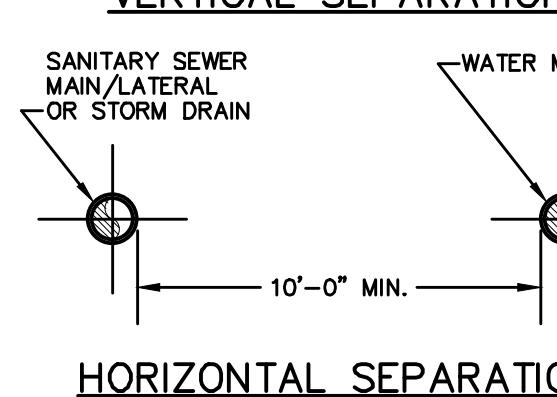
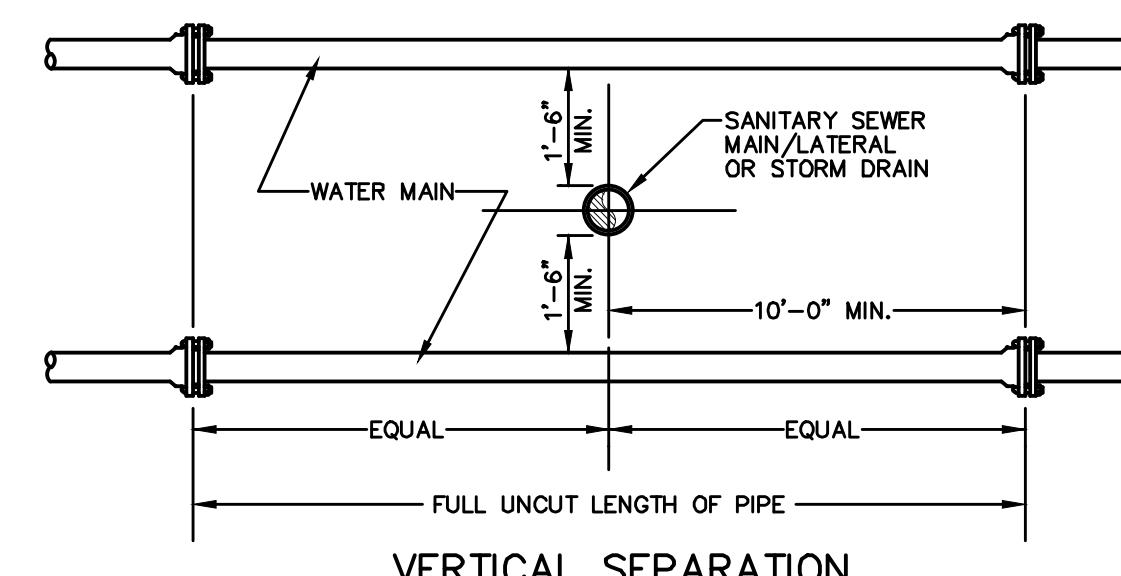


NOTES:
 1. PIPE BEDDING SHALL BE A NATURAL RUN-OF-BANK (R.O.B.) SAND GRADED FROM FINE TO COARSE PARTICLES, OR A GRADED MIXTURE OF CRUSHED STONE OR CONCRETE DEBRIS, DIRT MATERIAL OR STONE GRADATIONS USED SHALL BE APPROVED BY THE ENGINEER.
 2. INSTALL CONTINUOUS DETECTABLE MARKING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND WATER SERVICE PIPING. LOCATE TAPE 12' BELOW FINISHED GRADE DIRECTLY OVER PIPING.
 3. THE PROPOSED WATERMANS SHALL BE INSTALLED WITH A MINIMUM COVER OF 4.5 FEET AND SHALL BE CEMENT LINED DUCTILE IRON CLASS 52.
 4. SHEETING SHALL BE IMPLEMENTED IN ACCORDANCE WITH O.S.H.A. STANDARDS.

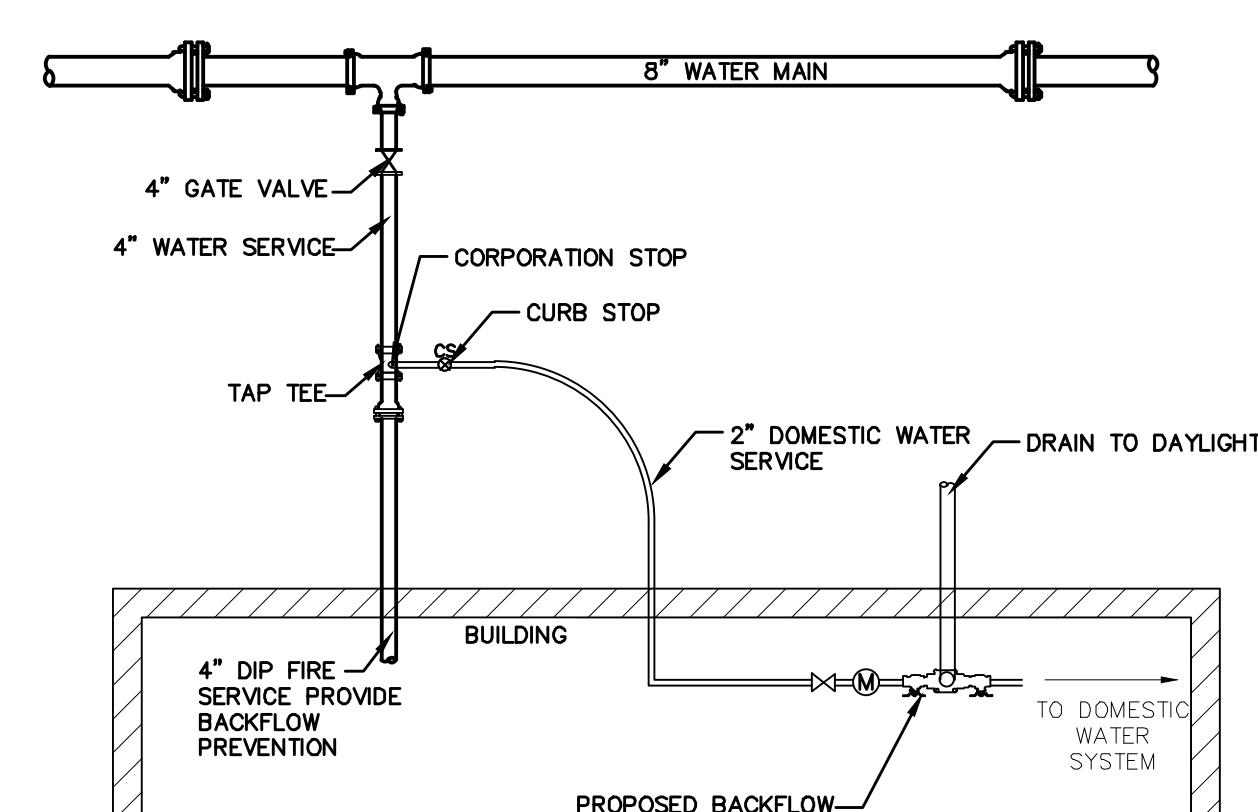
WATER PIPE TRENCH DETAIL
NOT TO SCALE



WET TAP DETAIL
NOT TO SCALE



**SANITARY/STORM SEWER-WATER MAIN
SEPARATION DETAIL**
NOT TO SCALE



WATER SERVICE CONNECTION DETAIL
NOT TO SCALE

SCHEDULE OF JOINT RESTRAINT					
DUCTILE IRON PIPE (DIP) (NO. OF PIPE LENGTHS - 18' LENGTH)					
PIPE SIZE (INCHES)	FITTING				
12"	2	1	1	4	4
10"	2	1	1	4	4
8"	2	1	1	3	3
6"	1	1	1	2	2

NOTE:
 1. LENGTH OF PIPE TO BE RESTRAINED IS LENGTH FOR EACH SIDE OF THE FITTING, i.e., FOR A 8" PIPE A 90° BEND SIDE SHALL BE RESTRAINED 2 LENGTHS ON EACH SIDE OF THE BEND.
 2. JOINTS ARE TO BE RESTRAINED TYPE USING RESTRIINED GLANDS OR TIE RODS, IN ACCORDANCE WITH THE LENGTHS SHOWN IN THE TABLE ABOVE.
 3. DEAD ENDS MUST BE FULLY BACKFILLED BEFORE PRESSURE TESTING AND MUST HAVE BLOCKING (CONCRETE BLOCK) TO UNDISTURBED TRENCH WALL.
 4. THIS TABLE IS FOR COMPACTED R.O.B. GRAVEL PIPE BEDDING BEING THE PIPE ONE FOOT ABOVE THE PIPE (AWWA TYPE 4 OR 5 LAYING CONDITIONS).

TOWN OF NEWBURGH WATER SYSTEM NOTES

- "CONSTRUCTION OF POTABLE WATER UTILITIES AND CONNECTION TO THE TOWN OF NEWBURGH WATER SYSTEM REQUIRES A PERMIT FROM THE TOWN OF NEWBURGH WATER DEPARTMENT. ALL REQUIREMENTS SHALL CONFORM TO THE REQUIREMENTS OF THE NYSDOH AND THE TOWN OF NEWBURGH".
- ALL WATER SERVICE LINES FOUR (4) INCHES AND LARGER IN DIAMETER SHALL BE CEMENT CLASS 52 DUCTILE IRON PIPE CONFORMING TO ANSI/AWWA C151/A21.51-91 FOR DUCTILE IRON PIPE. JOINTS SHALL BE EITHER PUSH-ON OR MECHANICAL AS REQUIRED.
- THRUST RESTRAINT OF THE PIPE SHALL BE THROUGH THE USE OF JOINT RESTRAINT. THRUST BLOCKS ARE NOT ACCEPTABLE. JOINT RESTRAINT SHALL NOT BE THROUGH THE USE OF MECHANICAL JOINT PIPE WITH RETAINER GLANDS. ALL FITTINGS AND VALVES SHALL BE INSTALLED WITH RETAINER GLANDS OR JOINING WITH MECHANICAL JOINTS. GLANDS SHALL BE FREE IRON, MALLEABLE STEEL, 100% OR APPROVED EQUAL. THE USE OF A MANUFACTURED RESTRAINED JOINT PIPE IS ACCEPTABLE WITH PRIOR APPROVAL OF THE WATER PROVIDER.
- ALL FITTINGS SHALL BE CAST IRON OR DUCTILE IRON, MECHANICAL JOINT, CLASS 250 AND CONFORM TO ANSI/AWWA C110/A21.10-87 FOR DUCTILE AND GRAY IRON FITTINGS OR ANSI/AWWA C153/A21.53-94 FOR DUCTILE IRON COMPACT FITTINGS.
- ALL VALVES 4 TO 12 INCHES SHALL BE RESILIENT WEDGE GATE VALVES CONFORMING TO ANSI/AWWA C509 SUCH AS MUELLER MODEL A-2360-23 OR APPROVED EQUAL. ALL GATE VALVES SHALL OPEN LEFT (COUNTERCLOCKWISE).
- TAPPING SLEEVES SHALL BE MECHANICAL JOINT SUCH AS MUELLER H-615 OR EQUAL. TAPPING VALVES 4 TO 12 INCHES SHALL BE RESILIENT WEDGE GATE VALVES CONFORMING TO ANSI/AWWA C509 SUCH AS MUELLER MODEL T-2360-19 OR APPROVED EQUAL. ALL TAPPING SLEEVES AND VALVES SHALL BE TESTED TO 150 PSI MINIMUM; TESTING OF THE TAPPING SLEEVE AND VALVE MUST BE WITNESSED AND ACCEPTED BY THE TOWN OF NEWBURGH WATER DEPARTMENT PRIOR TO CUTTING PIPE.
- ALL WATER SERVICE LINES TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING. CORROSION STOP SHALL BE MUELLER H-15200 FOR 3/4 AND 1 INCH, MUELLER H-15200 OR B-25200 FOR 1 1/2 AND 2 INCH SIZES. CURB BOXES SHALL BE MUELLER H-15020-2 FOR 3/4 AND 1 INCH AND MUELLER B-25204 FOR 1 1/2 AND 2 INCH SIZES. CURB BOXES SHALL BE MUELLER H-10312 FOR 3/4 AND 1 INCH AND MUELLER H-10310 FOR 1 1/2 AND 2 INCH SIZES.
- HYDRANTS SHALL BE CLOW-EDDY F 2640 MEETING THE FOLLOWING REQUIREMENTS:
 A.) ONE 4-1/2 INCH PUMPER NOZZLES;
 B.) TWO 2-1/2 INCH PUMPER NOZZLES;
 C.) HYDRANT THREWS SHALL BE N/A;
 D.) OPEN LEFT (COUNTER-CLOCKWISE);
 E.) 6 INCH INLET WITH 5-1/4 INCH MAIN VALVE;
 F.) PAINTED EQUIPMENT YELLOW, AND
 G.) 1-1/2 INCH PENTAGON OPERATING NUTS.
- ALL PLUMBING INSTALLATION SHALL BE SUBJECT TO INSPECTION BY THE TOWN OF NEWBURGH WATER DEPARTMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL INSPECTIONS AS REQUIRED WITH THE TOWN OF NEWBURGH WATER DEPARTMENT.
- THE WATER MAIN SHALL BE TESTED, DISINFECTED AND FLUSHED IN ACCORDANCE WITH THE TOWN OF NEWBURGH REQUIREMENTS. ALL TESTING, DISINFECTION AND FLUSHING SHALL BE COORDINATED WITH THE TOWN OF NEWBURGH WATER DEPARTMENT. PRIOR TO PUTTING THE WATER MAIN IN SERVICE SATISFACTORY SANITARY RESULTS FROM A CERTIFIED LAB MUST BE SUBMITTED TO THE TOWN OF NEWBURGH WATER DEPARTMENT. THE TEST SAMPLES MUST BE COLLECTED BY A REPRESENTATIVE OF THE TESTING LABORATORY AND WITNESSED BY THE TOWN OF NEWBURGH WATER DEPARTMENT.
- THE FINAL LAYOUT OF PROPOSED WATER AND SEWER CONNECTIONS, INCLUDING ALL MATERIALS, SIZE AND LOCATION OF CONDUITS, ALL APPURTENANCES, PLACEMENT OF VALVES, AND APPROVALS FOR CONSTRUCTION AND APPROVAL OF THE TOWN OF NEWBURGH WATER AND SEWER DEPARTMENT. NO PERMITS SHALL BE ISSUED FOR A WATER AND/OR SEWER CONNECTION UNTIL A FINAL LAYOUT IS APPROVED BY THE RESPECTIVE DEPARTMENT.

THOMAS B. OLLEY, PE, PLLC.
ENGINEERS AND PLANNERS

10/20/23 CONSULTANT COMMENTS
6/6/23 DRAWING AND DRRAVE REVIEWS
6/6/23 CONTRACT DOCUMENTS
6/6/23 LAYOUT TENSION
6/6/23 ENGINEERS COMMENTS
5/15/17 ENGINEERS COMMENTS
2 5/20/17 ENGINEERS COMMENTS
1 5/15/16 ENGINEERS COMMENTS
REV. DATE

WATER DETAILS
GARDNER RIDGE
GARDNERTOWN ROAD
TOWN OF NEWBURGH, ORANGE COUNTY, NY

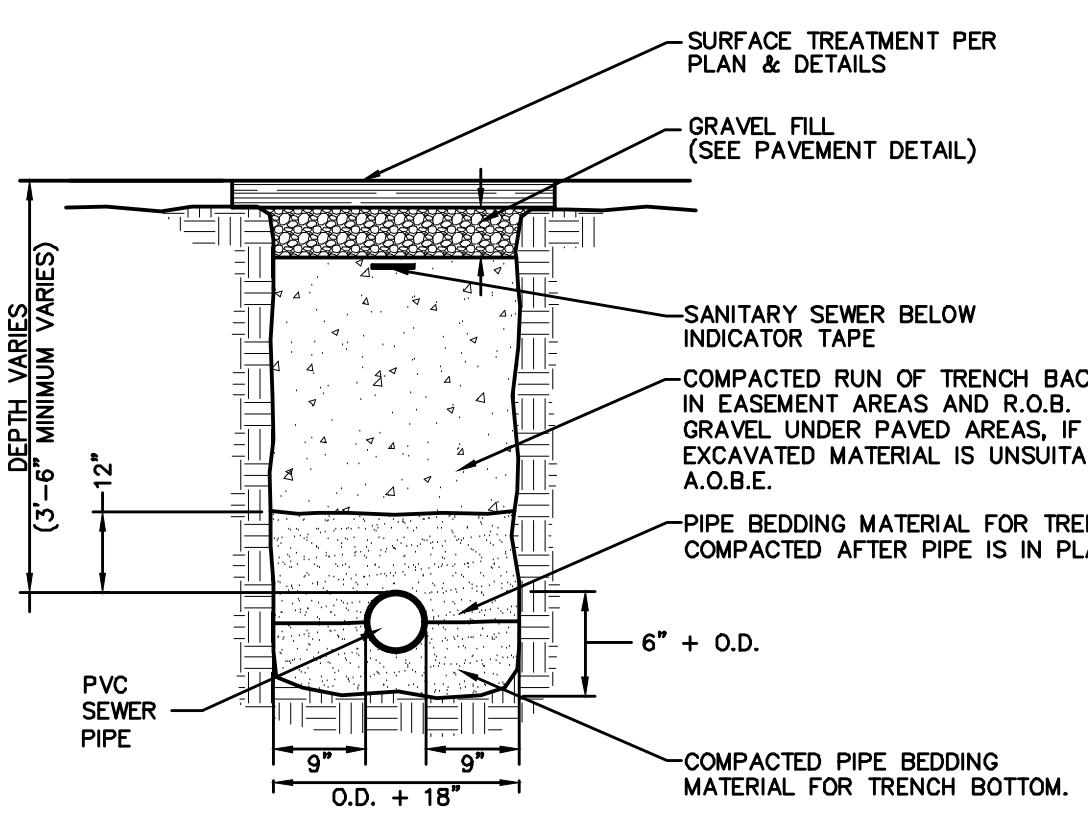
SHEET NO.

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DATE: JANUARY 28, 2016

FILE NO.

10/20/23 CONSULTANT COMMENTS
6/6/23 DRAWING AND DRRAVE REVIEWS
6/6/23 CONTRACT DOCUMENTS
6/6/23 LAYOUT TENSION
6/6/23 ENGINEERS COMMENTS
5/15/17 ENGINEERS COMMENTS
2 5/20/17 ENGINEERS COMMENTS
1 5/15/16 ENGINEERS COMMENTS
REV. DATE



NOTES:

- PIPE BEDDING MATERIAL SHALL BE COMPOSED OF CRUSHED STONE OR GRAVEL FREE OF SOFT NONDURABLE PARTICLES, ORGANIC MATERIALS AND THIN OR ELONGATED PARTICLES WITH THE FOLLOWING GRADATION REQUIREMENTS:

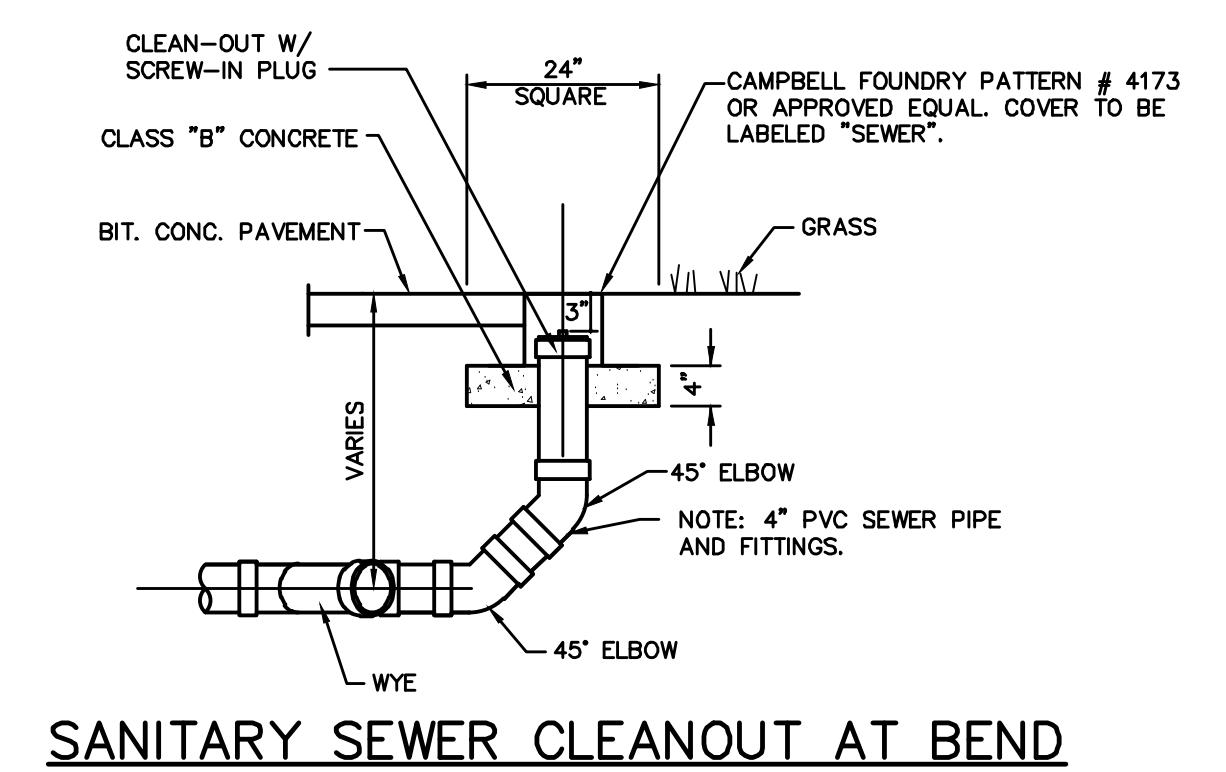
SIEVE DESIGNATION	% PASSING
2"	100
1"	95 - 100
1/4"	0 - 15
No. 40	0 - 5

2. BEDDING MATERIAL SHALL BE STOCKPILED.

3. INSTALL CONTINUOUS PLASTIC UNDERGROUND WARNING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND SANITARY SERVICE PIPING. LOCATE 12 INCHES BELOW FINISHED GRADE, DIRECTLY OVER PIPING. IN PAVEMENT AREAS PLACE TAPE UNDER FOUNDATION COURSE.

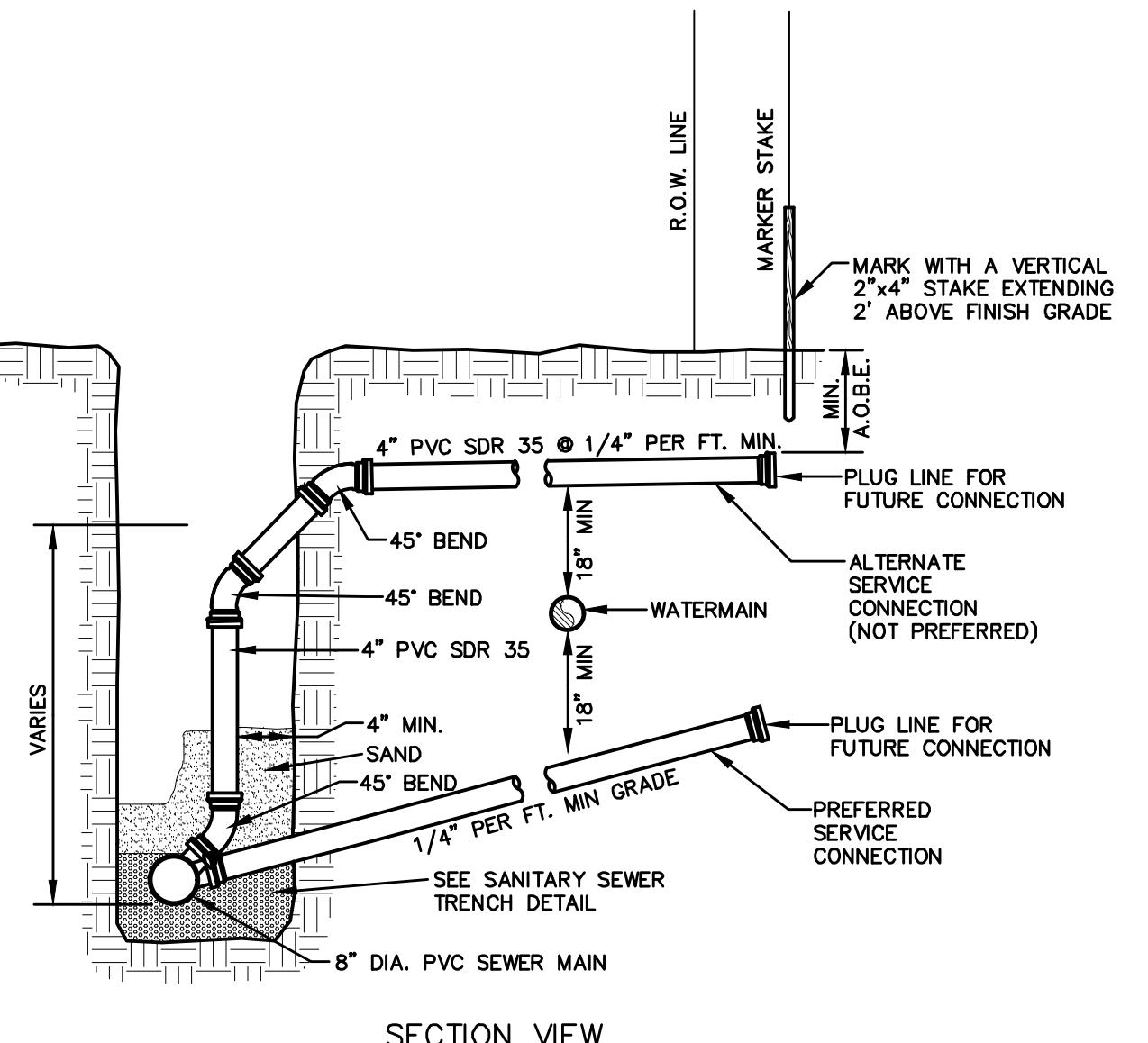
SEWER PIPE TRENCH DETAIL

NOT TO SCALE



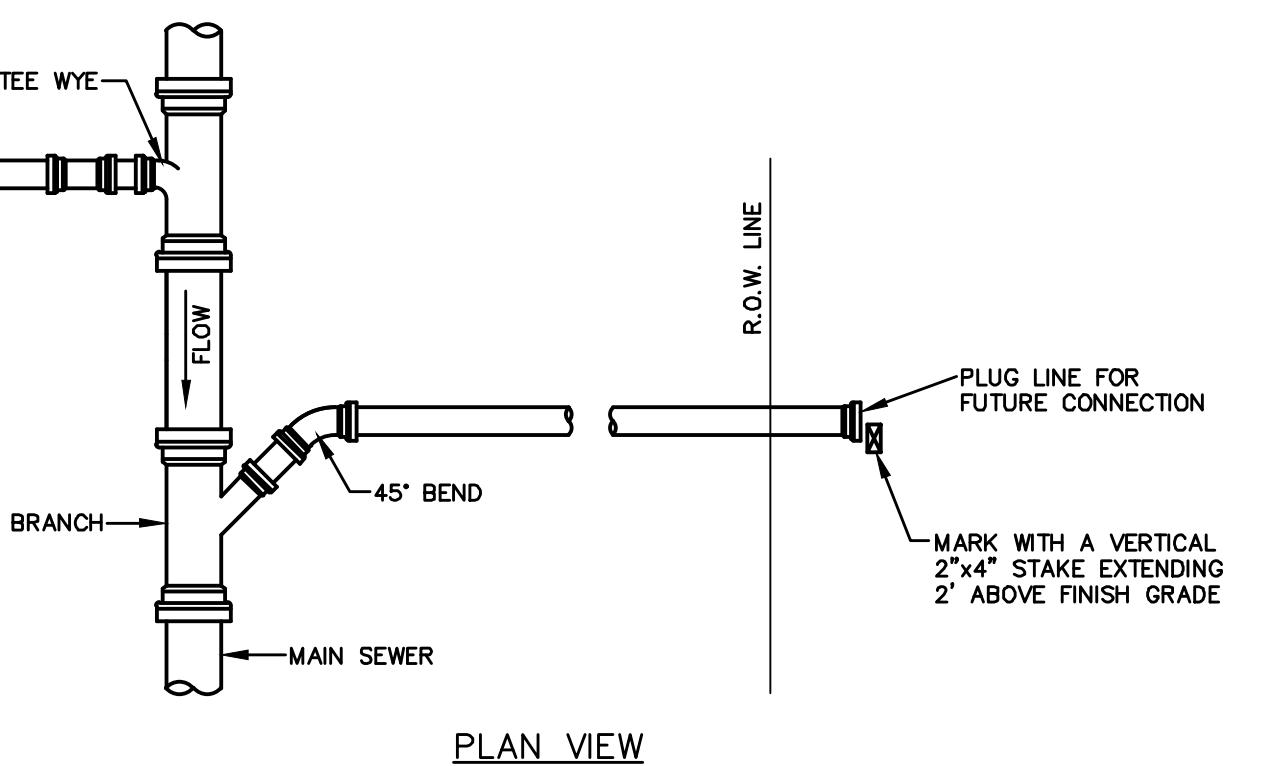
SANITARY SEWER CLEANOUT AT BEND

NOT TO SCALE



SANITARY SEWER NOTES:

- ALL SANITARY GRAVITY PIPE SHALL BE SDR 35 PVC UNLESS OTHERWISE NOTED. ALL SANITARY SEWER MAINS AND SERVICE LATERALS SHALL BE SEPARATED FROM THE WATER MAINS BY A MINIMUM DISTANCE OF AT LEAST 10 FEET VERTICALLY OR 18 INCHES HORIZONTALLY IF HORIZONTAL SEPARATION IS NOT POSSIBLE.
- ALL NEW SANITARY SEWER LINES SHALL PASS A LOW PRESSURE AIR TEST AND ALL NEW SANITARY SEWER MANHOLES SHALL PASS HYDROSTATIC TESTS OR VACUUM TESTING.
- ALL NEW SANITARY SEWER MANHOLE COVERS SHALL BE 24" DIAMETER CAST IRON AND SHALL READ "SANITARY SEWER".
- ALL SANITARY SEWER CONSTRUCTION SHALL BE SUBJECT TO INSPECTION BY THE MUNICIPAL SEWER SUPERINTENDENT PRIOR TO EXCULFATION.
- THE DESIGN, CONSTRUCTION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THIS PLAN, AND GENERALLY ACCEPTED STANDARDS IN EFFECT AT THE TIME OF CONSTRUCTION WHICH INCLUDE:
 - "NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL QUALIFICATION AND ULSTER COUNTY DEPARTMENT OF HEALTH STANDARDS FOR BUILDINGS AND STANDARDS"
 - "ORANGE COUNTY DEPARTMENT OF HEALTH SANITARY CODE"
 - "RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES, 2014", GLURB
 - "DESIGN STANDARDS FOR WASTEWATER TREATMENT WORKS, 2014", NYSDC
- ALL WELLS AND SUBSURFACE SEWAGE DISPOSAL SYSTEMS EXISTING OR APPROVED WITHIN 200' OF THE PROPOSED WATER MAIN SHALL BE COORDINATED WITH THE WATERMAIN ALONG WITH ANY OTHER KNOWN ENVIRONMENTAL HAZARDS IN THE AREA THAT MAY AFFECT THE DESIGN AND FUNCTIONAL ABILITY OF THE WATER AND SEWAGE UTILITIES.
- NO CELLAR, ROOF OR FOOTING DRAINS SHALL BE DISCHARGED INTO THE SEWAGE SYSTEM.

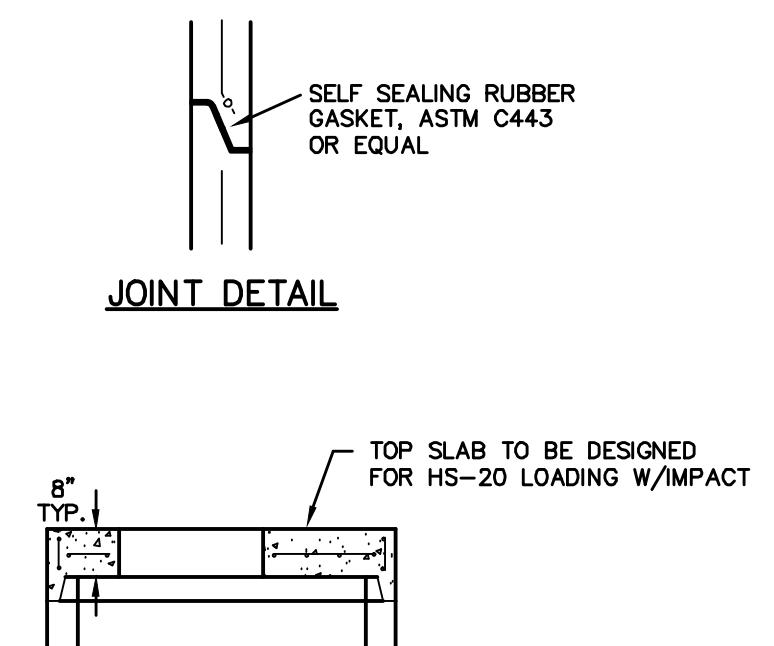


SANITARY SEWER CLEANOUT INLINE

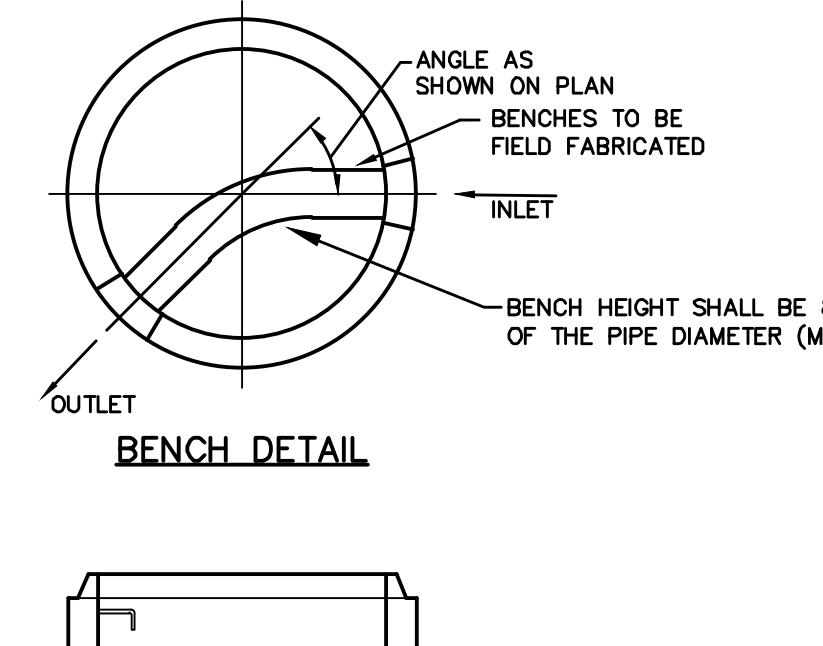
NOT TO SCALE

SEWER LATERAL CONNECTION DETAIL

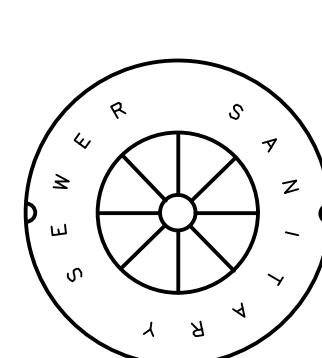
NOT TO SCALE



JOINT DETAIL



BENCH DETAIL



SANITARY MANHOLE LID DETAIL

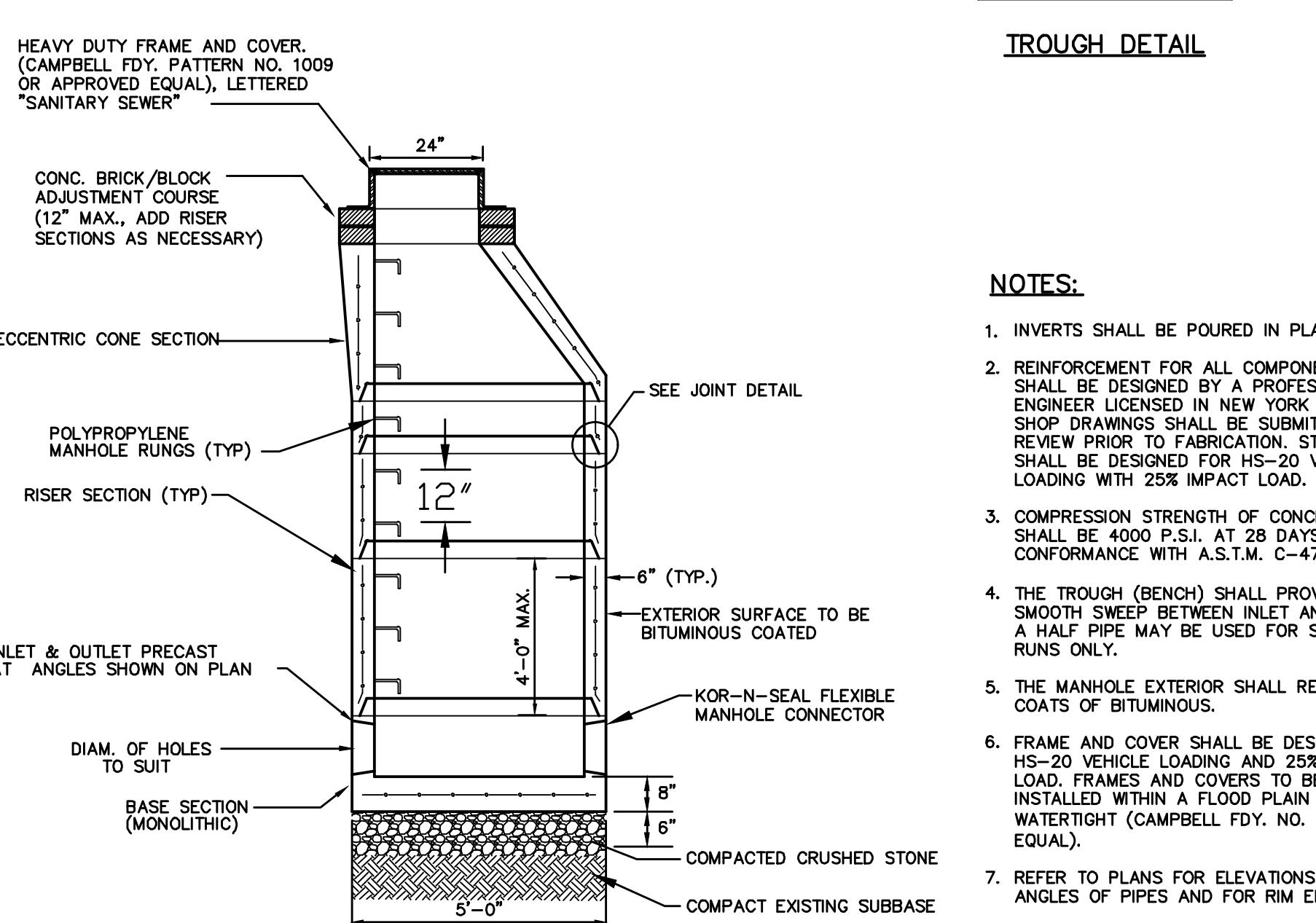
NOT TO SCALE

MANHOLE SLAB TOP



TRough DETAIL

NOT TO SCALE



Precast manhole

Precast manhole details

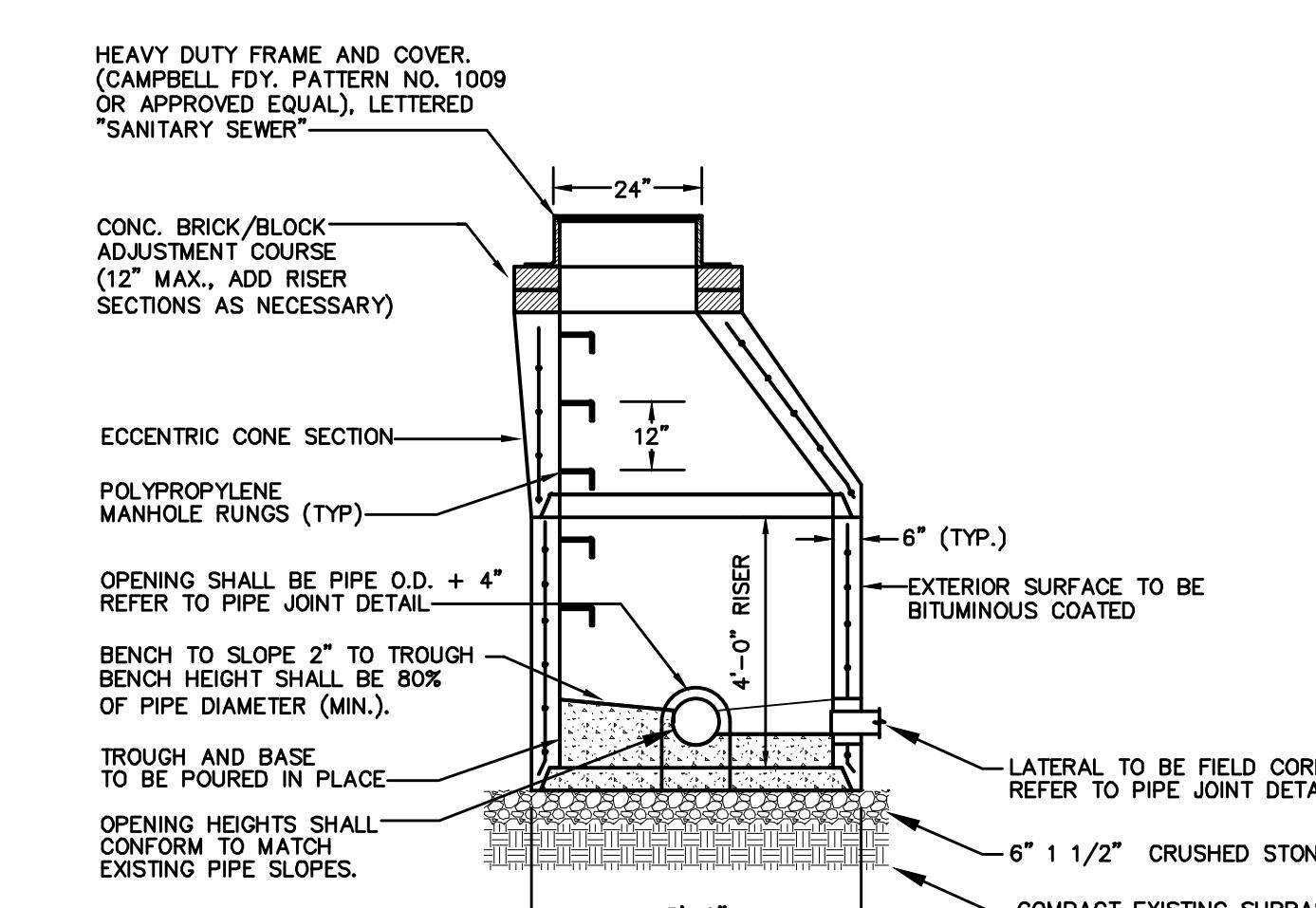
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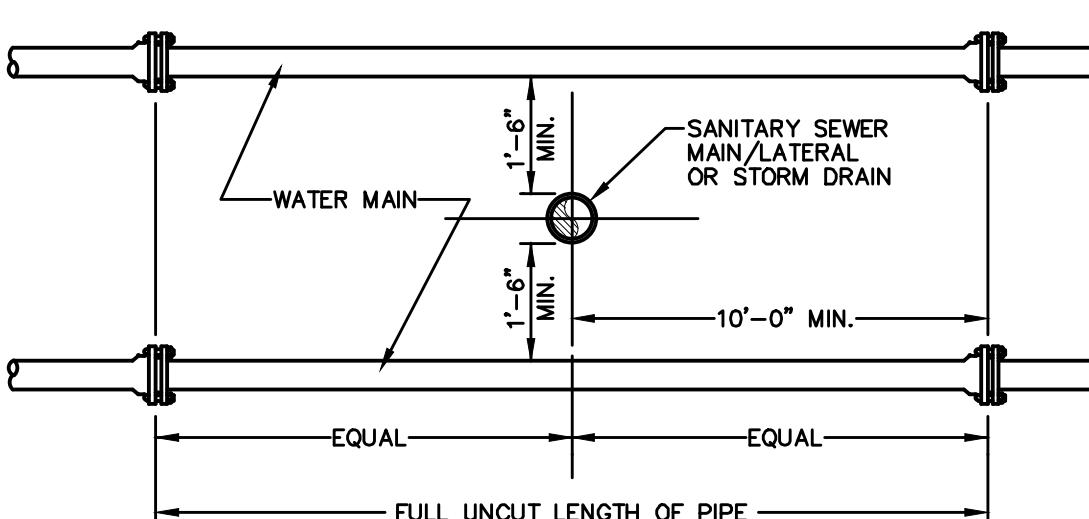
- INVERTS SHALL BE POURED IN PLACE.
- REINFORCEMENT FOR ALL COMPONENTS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER. ALL NEW CONCRETE, PRECAST, AND SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION. STRUCTURE SHALL BE DESIGNED FOR HS-20 VEHICLE LOADING WITH 25% IMPACT LOAD.
- COMPRESSION STRENGTH OF CONCRETE SHALL BE 4000 P.S.I. AT 28 DAYS IN CONFORMANCE WITH A.S.T.M. C-478-68.
- THE TROUGH (BENCH) SHALL PROVIDE A SMOOTH SWEEP BETWEEN INLET AND OUTLET. A HOLLOW TROUGH MAY BE USED FOR STRAIGHT RUNS ONLY.
- THE MANHOLE EXTERIOR SHALL RECEIVE TWO COATS OF BITUMINOUS.
- FRAME AND COVER SHALL BE DESIGNED FOR HS-20 VEHICLE LOADING AND 25% IMPACT LOAD. FRAMES AND COVERS TO BE INSTALLED WITHIN A FLOOR PLATE SHALL BE WATERPROOF (CAMPBELL FPD NO. 1502 OR EQUAL).
- REFER TO PLANS FOR ELEVATIONS AND ANGLES OF PIPES AND FOR RIM ELEVATIONS.
- MANHOLE FRAMES ARE TO BE SET AT THE SAME GRADE AS THE ADJOINING PAVEMENT OR GROUND SURFACE.

Doghouse manhole detail

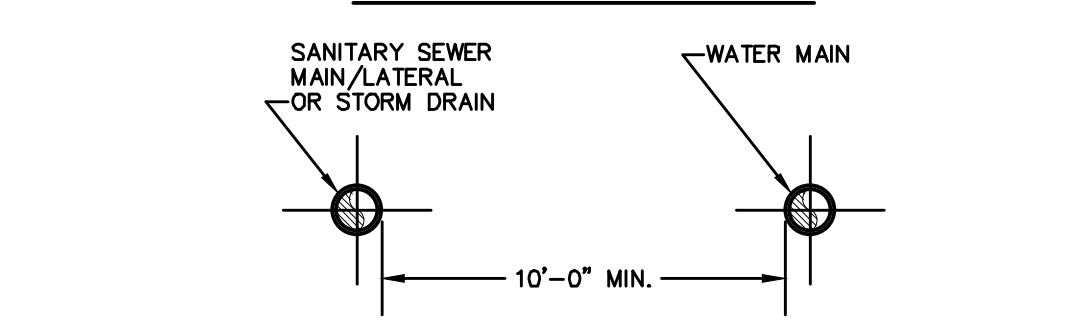
NOT TO SCALE



NOT TO SCALE



VERTICAL SEPARATION



HORIZONTAL SEPARATION

NOTE:
1. NO DEVIATION IN THE SEPARATION REQUIREMENTS WILL BE PERMITTED WITHOUT THE EXPRESS APPROVAL OF THE DEPARTMENT OF HEALTH.

Sanitary/storm sewer-water main separation detail

NOT TO SCALE

THOMAS B. OLLIE, PE, PLLC.

ENGINEERS AND PLANNERS

20 ORANGE AVENUE
WATKINSVILLE, GA 30677

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**GARDNER RIDGE
GARDNERTOWN ROAD**

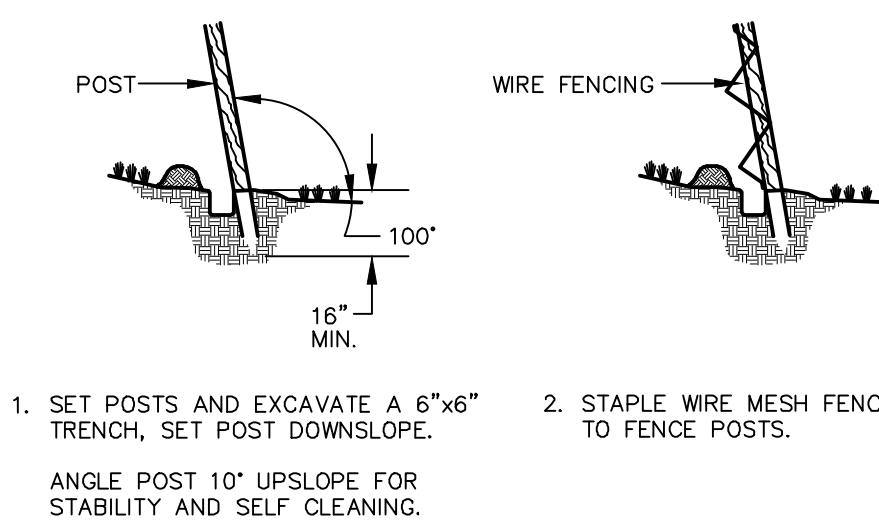
TOWN OF NEWBURGH, ORANGE COUNTY, NY

SHEET NO.

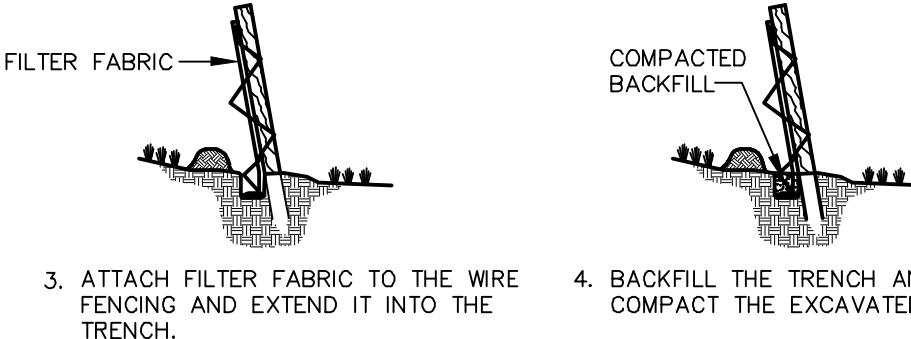
DATE: JANUARY 28, 2016

FILE NO.

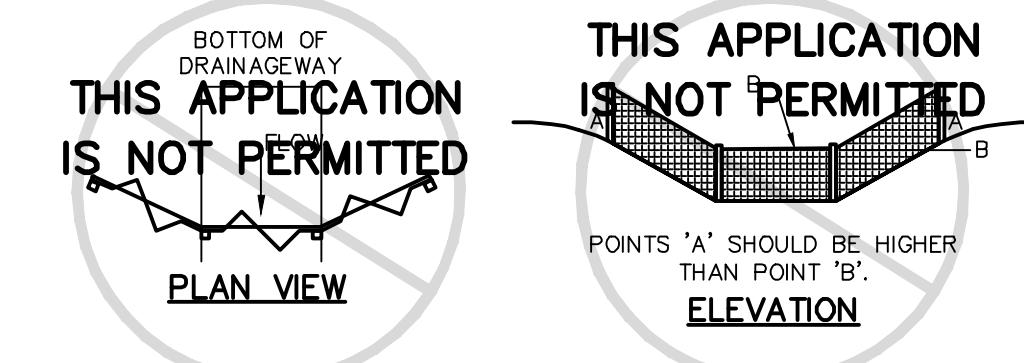
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- SET POSTS AND EXCAVATE A 6"x6"
- TRENCH, SET POST DOWNSLOPE.
- ANGLE POST 10° UPSLOPE FOR STABILITY AND SELF CLEANING.

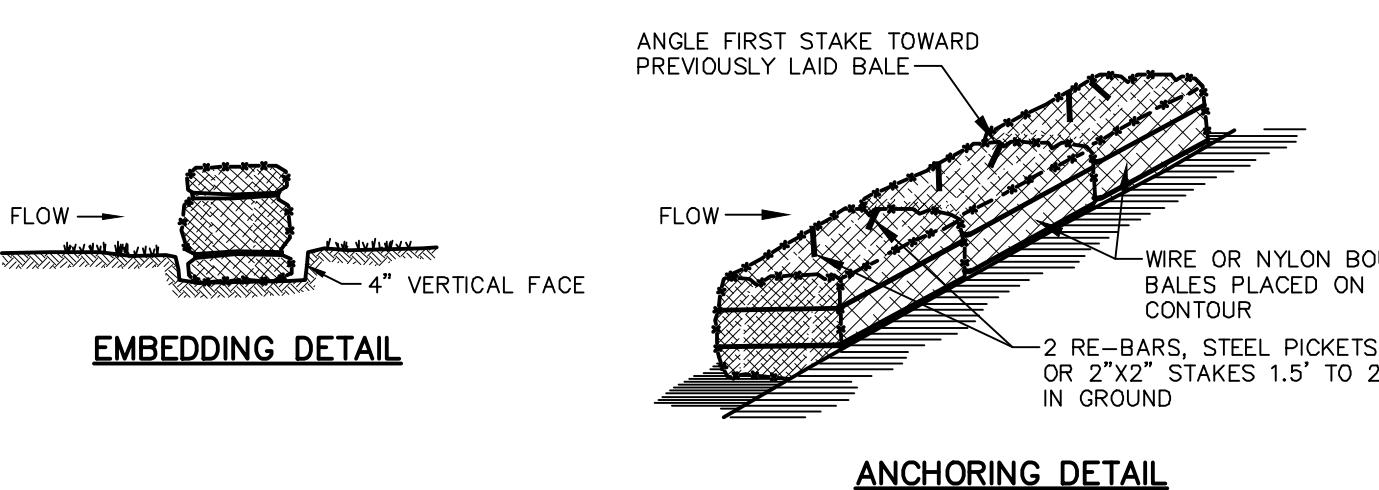


- ATTACH FILTER FABRIC TO THE WIRE FENCING AND EXTEND IT INTO THE TRENCH.
- BACKFILL THE TRENCH AND COMPACT THE EXCAVATED SOIL.



PLACEMENT AND CONSTRUCTION OF A SILT FENCE BARRIER

NOT TO SCALE

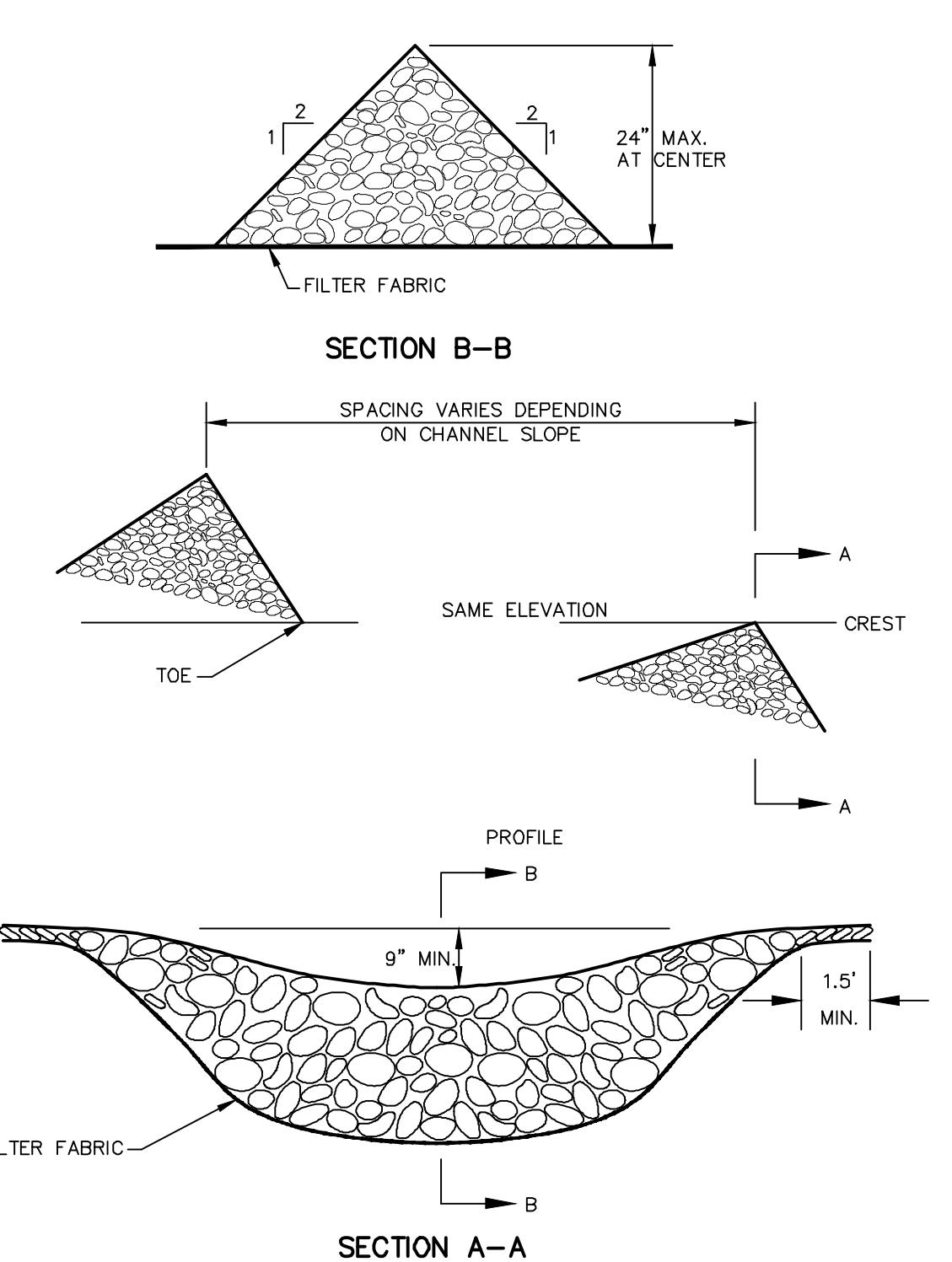


CONSTRUCTION SPECIFICATIONS

- BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4".
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR RE-BARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALES TO FORCE BALES TOGETHER.
- INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
- HAYBALES SHALL BE PLACED IN ACCORDANCE WITH THE NEW YORK STATE GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL.

HAY BALE DETAILS

NOT TO SCALE

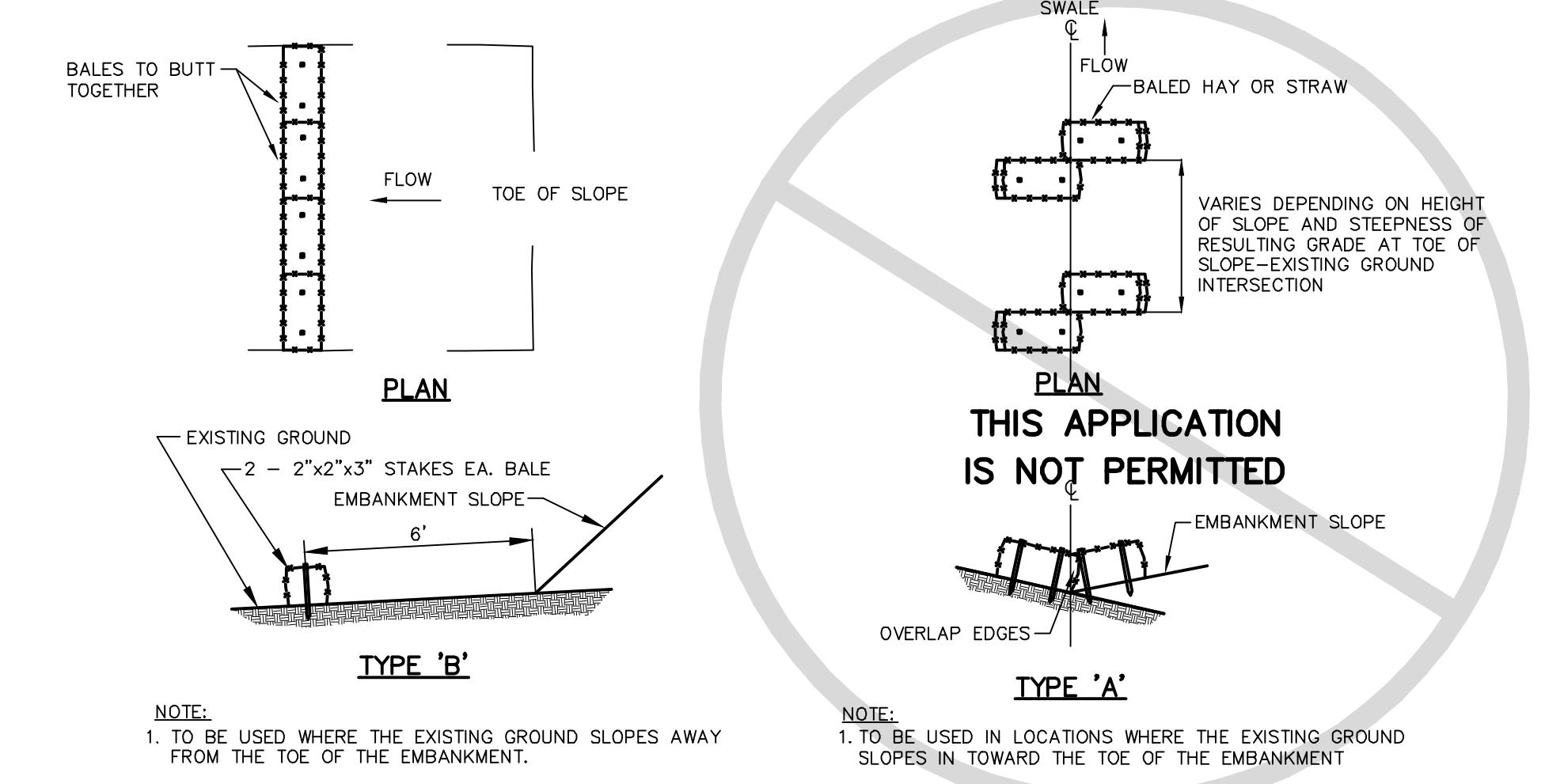


CONSTRUCTION SPECIFICATIONS

- STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
- SET SPACING OF CHECK DAMS TO ESTABLISH THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
- EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
- PLACE APPROPRIATE CHECK DAMS AT THE LOWEST CHECK DAM FROM SOURCE AND EROSION, OR LINEAR AS APPROPRIATE.
- ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.
- USE GRADED STONE 2 TO 15 INCHES IN SIZE (NYS-DOT LIGHT STONE FILL MEET THESE REQUIREMENTS).

CHECK DAM DETAILS

NOT TO SCALE



THIS APPLICATION IS NOT PERMITTED



THIS APPLICATION IS NOT PERMITTED

HAY BALE CHECK DAM

NOT TO SCALE



THIS APPLICATION IS NOT PERMITTED

GENERAL CONSTRUCTION NOTES:

- ALL CONTRACTORS SHALL COMPLY WITH THE STORMWATER POLLUTION PREVENTION PLAN WRITTEN FOR THIS PROJECT.
- CONTRACTOR SHALL CHECK AND VERIFY ALL CONDITIONS AT THE SITE PRIOR TO THE START OF WORK. THE CONTRACTOR SHALL BE FAMILIAR WITH THE INTENT OF THIS PLAN AND ENSURE THAT WORK TO BE PERFORMED IS THE SAME.
- CONTRACTOR SHALL OBTAIN ALL REQUIRED APPROVALS, PERMITS, INSPECTION APPROVALS, ETC. FOR WORK PERFORMED FROM AGENCIES HAVING JURISDICTION THEREOF.
- IF IN THE COURSE OF CONSTRUCTION A CONDITION EXISTS WHICH DISAGREES WITH THAT AS INDICATED ON THESE PLANS, THE CONTRACTOR SHALL STOP WORK AND NOTIFY THE ENGINEER. SHOULD HE FAIL TO FOLLOW THIS PROCEDURE AND CONTINUE WITH THE WORK, HE SHALL ASSUME ALL RESPONSIBILITY AND LIABILITY ARISING THEREON.
- COMPACTATION OF ALL FILL MATERIAL SECTIONS SHALL BE COMPLETED IN 6" LIFTS. EACH LIFT SHALL BE COMPACTED TO 95% OF THE PROCTOR DENSITY.
- Maintain positive erosion control during the operation until the site is stabilized.
- The contractor shall provide additional topsoil for reclamation procedures as needed.
- The entire site is to be stabilized with vegetation when final grades are reached.
- Temporary seed mix shall be perennial ryegrass @ 30 pounds/acre or as recommended by the Sullivan County Soil Conservation District.
- Permanent seed mix shall be the following: common white clover 8 lbs/acre, tall fescue 20 lbs/acre, perennial ryegrass 5 lbs/acre or as recommended by the Sullivan County Soil Conservation District.
- The optimum time for seeding is early spring and late August. However seeding may be performed at other times per year if properly mulched and adequate soil moisture provided. Seeding in areas that fail must be reseeded during the following optimum time for seeding.
- Contractors shall note that some of the soils located on the site are known to contain perchlorate. Upon encountering groundwater the contractor may mitigate erosion and slope stability impacts by any of the applicable methods discussed in the stormwater pollution prevention plan for this project or scheduling construction in these areas so as to avoid them during wet periods of the year.

EROSION & SEDIMENT CONTROL MEASURES

- TEMPORARY DIVERSION SWALES**
Temporary diversion swales will be installed immediately uphill of areas disturbed for the purpose of diverting stormwater. Swales shall be maintained until the regraded site is stabilized with permanent seeding.
- STABILIZED CONSTRUCTION ENTRANCE**
Temporary gravel construction entrance(s) shall be installed immediately prior to entering pavement. During wet weather it may be necessary to wash vehicle tires at this location. The entrance shall be graded off so that runoff will be directed to an existing catch basin and away from the pavement. All sediment shall be prevented from entering catch basins.
- SILT FENCE**
Silt fences shall be installed in the locations specified above, around topsoil stockpile areas, at the base of all disturbed slopes, and at intervals necessary to prevent concentration of flow.
- VEGETATION PROTECTION**
Limit soil placement over existing trees and shrub roots to a maximum of 3 inches. Use soil with loamy textures and good structure. Construct sturdy fences, wood or bamboo, or other protective devices to surround and protect sensitive or valuable vegetation from construction equipment. Place barriers far enough from trees so that tall equipment such as backhoes and dump trucks do not damage tree branches.

Construction limits should be identified and clearly marked to exclude equipment. It is strongly recommended that construction fencing be utilized to protect areas that are not to be disturbed, obstructive and broken branches should be pruned properly. Existing vegetation should be preserved where attainable.

- LAND GRADING**
Finish land surfaces will be graded as indicated on the plans. At a maximum, no more than 5 acres of unprotected soil should be exposed at any one time. Areas to be filled shall be cleared, grubbed, and stripped of topsoil. Remove trees, vegetation, roots, or other unacceptable material. Fill material shall be free of brush, rubbish, logs, stumps, building debris, and other organic material. Frozen material shall not be placed in the fill nor shall the fill material be placed on a frozen foundation.

Unless otherwise noted, provide temporary vegetation by seeding bare soil within 7 days of exposure unless construction will begin within 14 days. If construction is suspended, all areas shall be seeded and mulched immediately.

Finish grading shall be completed so as to prevent water from standing on the surface of lawns for more than 24 hours after the end of a rainfall.

Topsoil required for the establishment of vegetation will be stockpiled in the amount necessary to complete finished grading of all exposed, non-sodded areas. Stockpiles shall be seeded in accordance with these plans.

Areas that are to be topsoiled shall be scarified to a minimum depth of three inches prior to placement of topsoil.

- DUST CONTROL**
15 MPH construction zone speed limit signs shall be erected in all areas where dustless surfaces have not been constructed.

Construction operations shall be scheduled to minimize the amount of area disturbed at one time. Buffer areas of vegetation shall be left where possible. The site, including haul roads and access roads, can be sprinkled with water until the surface is wet. The following spray adhesives can be used on mineral soils:

MATERIAL	WATER DILUTION	TYPE OF NOZZLE
ACRYLIC POLYMER	9:1	COARSE SPRAY
LATEX EMULSION	12.5:1	FINE SPRAY
RESIN IN WATER	4:1	FINE SPRAY

- TEMPORARY AND PERMANENT SEEDING**
Seeding preparation includes removal of debris, rocks, stumps and other materials. Compacted soil shall be scarified prior to placement of topsoil. Adjust rate to 6.0 lbs/1000 square feet for each 600 lbs/1000 square foot equivalent per acre. All disturbed areas shall be temporarily seeded if construction does not resume in 7 days, and before any significant storm event which may have the potential to cause erosion.

All approved stockpiles and other disturbed or graded areas shall be seeded within 14 calendar days provided construction grading activity is not continually ongoing in these locations.

Apply temporary seeding consisting of quick germinating ryegrass (annual or perennial) at 30 lbs. per acre.

Permanent seeding shall be completed within 7 days of completion of final grading. Seed mixture shall be applied in accordance with these plans and/or the recommendations of the local soil & water conservation district.

The optimum time for permanent seeding is in the spring from March 21 through May 20, and in late summer and early fall from August 25 to October 15. Permanent seedings may be made any time of year if properly mulched and adequately moistened. Broadcast seeding, with cultipack type seeder or hydroseeding are acceptable. Cold weather seeding shall be performed using winter germinating seed such as winter rye.

- TOPSOIL ALIQUANTS**
Where vegetation will be established, preserve and apply existing topsoil and rough grade and final grading, allowing for depth of topsoil to be added. Scarify all compact, slow permeable medium and fine textured subsoil areas. Areas that are steeper than 5 percent, scarify to a depth of 12 inches in diameter and other litter.

Topsoil shall have a minimum of 2 percent and a maximum of 6 percent (by weight) of fine and stable organic material. Topsoil shall not have less than 50 percent fine textured material (passing the No. 200 sieve) and not more than 15 percent clay. Topsoil shall be relatively free of stones over 1/2 inches in diameter.

Topsoil shall be placed at a uniform depth of 4 inches for the steep slopes, 6 inches for the low areas. For flat areas, topsoil shall be applied in layers. Topsoil shall not be placed on it if partly frozen, muddy, or on frozen soil, or if ice, snow or standing water. Topsoil placed and graded on slopes steeper than 5 percent shall be promptly fertilized, seeded, mulched and stabilized by "tracking" with suitable equipment.

If soil is compacted or crusted, surface should be loosened to at least two inches by disking or other suitable methods.

- INSPECTION OF EROSION AND SEDIMENT CONTROL MEASURES**
The contractor shall inspect and maintain all erosion and sediment control measures at least once every 7 calendar days at a minimum. These measures include the disturbed areas of the construction site, the areas used for storage of materials that are exposed to structural materials, and all areas where vehicles enter and exit the site. The portions of the construction area have been finally stabilized, inspection of such portions shall be conducted at least once every month until the entire site is finally stabilized.

"Finally stabilized" means that all the disturbed activities at the site have been completed so that permanent vegetation covers with a density of 70% for the area has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed.

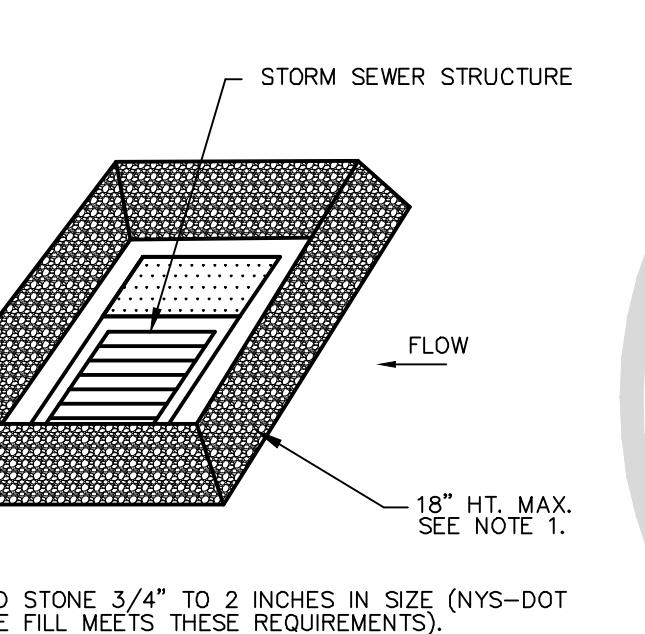
- Maintenance Requirements and Schedules**
Erosion and sediment control measures all erosion and sediment control measures shall be inspected for stability and operation following every runoff producing rainfall but in no case less than once every week. Any needed repairs shall be made immediately to maintain all measures as designed.

sediment shall be removed from behind the silt fence when it becomes approximately 6 inches deep at the fence. Ensure that no concentrated flows are directed towards the fence. Replace the silt fence when "bulges" develop in the fence.

All seeded areas shall be fertilized, re-seeded as necessary and mulched to maintain a vigorous, dense vegetative cover.

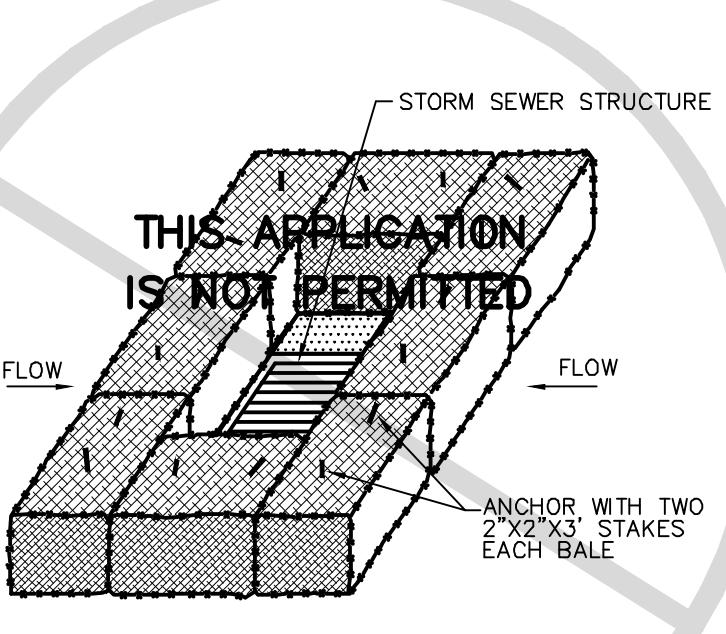
sediment spilled, dropped, or washed onto existing macadam roadsways must be moved immediately. All sediment shall be prevented from entering the storm drains. Additional aggregate shall be added to the stabilized construction entrances as required.

Maintain dust control measures through dry weather periods until all disturbed areas are stabilized.



STONE CHECK INSTALLATION AT CATCH BASINS

NOT TO SCALE



STONE CHECK DAMS

NOT TO SCALE

SEDIMENT CONTROL STRUCTURES

NOT TO SCALE

STONE CHECK DAMS

NOT TO SCALE

WINGS

NOT TO SCALE

SEDIMENT

NOT TO SCALE

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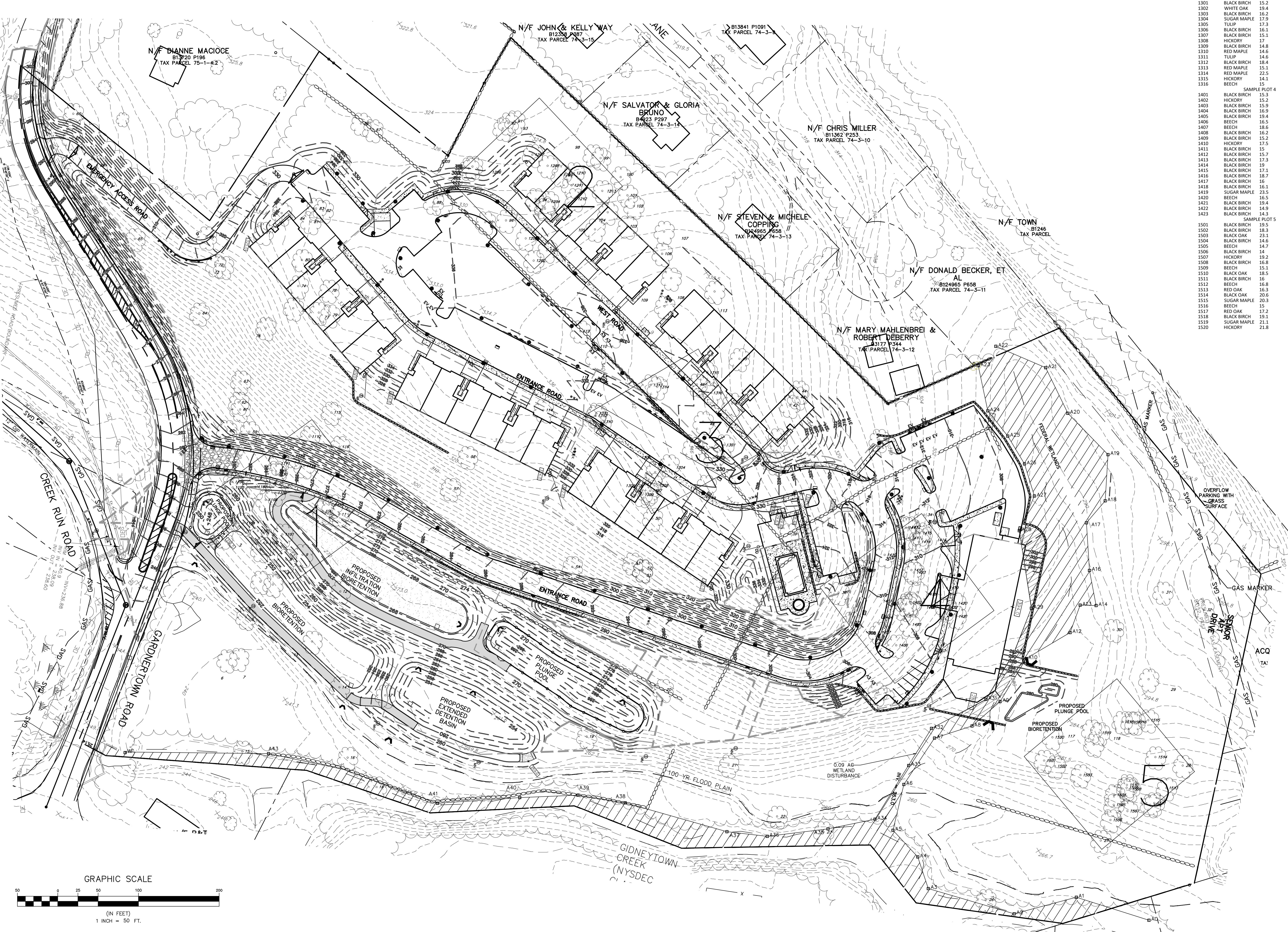
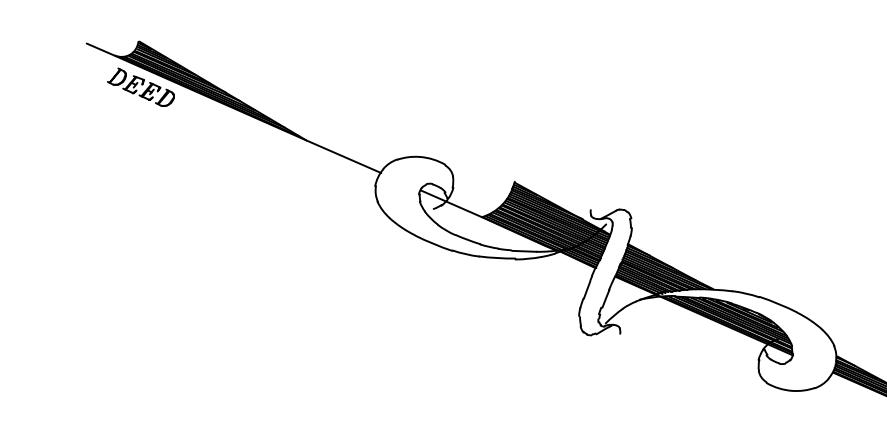
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TREE NUMBER	SPECIES	DIAMETER (INCHES)	TAGGED TREES >24"	TREE NUMBER	DIAMETER (INCHES)	SPECIES	NOTES
1101	TULIP	18.7	58	2	55.9	RED OAK	
1102	BLACK OAK	14.1	11	3	26.4	TULIP	
1103	ASPEN	13.3	10	4	32.1	RED OAK	
1104	BLACK OAK	14.9	9	5	26.5	TULIP	
1105	TULIP	16.7	8	6	37.6	SYCAMORE	
1106	TULIP	15.2		7	32.5	SYCAMORE	
1107	TULIP	16.1		8	25.3	BLACK OAK	
1108	BLACK BIRCH	14		9	25.8	RED OAK	
1109	BLACK OAK	13.3		10	24.1	BLACK OAK	
1110	RED OAK	20		11	26.1	BLACK BIRCH	
1111	RED MAPLE	16.3		12	24.3	BLACK OAK	
1112	BEECH	14.5		13	30.2	BLACK OAK	
1113	BLACK OAK	14.5		14	25.5	BLACK OAK	
1114	TULIP	19		15	41.4	SYCAMORE	
1115	RED OAK	18.5		16	24.3	BLACK OAK	
SAMPLE PLOT 1							
1201	BLACK OAK	18	94	17	29.7	TULIP	
1202	TULIP	17.6	95	18	24.2	SYCAMORE	
1203	RED MAPLE	16.5	96	19	25.8	SYCAMORE	
1204	RED MAPLE	17.7	97	20	24.6	TULIP	ROTTEN
1205	RED MAPLE	14.1		21	25.1	BLACK BIRCH	
1206	BLACK OAK	21.6		22	28.4	SUGAR MAPLE	ROTTEN
1207	HICKORY	15.9		23	25.2	TULIP	
1208	HICKORY	16.1		24	27.1	BEECH	BEECH BARK DISEASE
1209	HICKORY	15.8		25	24.2	BEECH	ROTTEN
1210	RED MAPLE	20.4		26	25.4	TULIP	
1211	SUGAR MAPLE	20.3		27	26.1	HICKORY	
1212	BLACK BIRCH	15.2		28	25.6	HICKORY	
1213	RED MAPLE	15.9		29	25.7	SUGAR MAPLE	
SAMPLE PLOT 2							
1301	BLACK BIRCH	15.2	46	30	27.5	SUGAR MAPLE	HOLLOW
1302	WHITE OAK	19.4	48	31	27.4	BEECH	
1303	BLACK BIRCH	16.2		32	28.2	SUGAR MAPLE	
1304	SUGAR MAPLE	19		33	27.5	TULIP	
1305	TULIP	17.3		34	27.5	SUGAR MAPLE	
1306	BLACK BIRCH	15.1		35	27.5	SUGAR MAPLE	
1307	HICKORY	17		36	27.5	SUGAR MAPLE	
1308	HICKORY	17		37	24.3	BEECH	BEECH BARK DISEASE
1309	BLACK BIRCH	14.8		38	26.5	HICKORY	
1310	RED MAPLE	14.6		39	24	WHITE OAK	
1311	TULIP	14.6		40	25.8	BLACK OAK	
1312	BLACK BIRCH	18.4		41	28	BEECH	
1313	RED BIRCH	15.1		42	29.2	TULIP	
1314	RED MAPLE	22.5		43	28.4	TULIP	
1315	HICKORY	14.1		44	25.5	BLACK OAK	
1316	BEECH	15		45	25.7	RED OAK	
SAMPLE PLOT 3							
1401	BLACK BIRCH	15.5	33	46	32.4	BLACK OAK	ROTTEN/BROKEN TOP
1402	HICKORY	15.2	35	47	24.2	TULIP	
1403	BLACK BIRCH	15.9	37	48	28.3	WHITE OAK	
1404	BLACK BIRCH	16.5		49	34.2	BLACK OAK	
1405	BLACK BIRCH	15.4		50	35.3	BLACK OAK	
1406	BEECH	16.5		51	27.8	BLACK OAK	
1407	BEECH	18.6		52	25.3	BLACK OAK	
1408	BLACK BIRCH	15.2		53	24.6	BLACK BIRCH	ROTTEN
1409	BLACK BIRCH	15.2		54	26.5	HICKORY	
1410	HICKORY	17.5		55	25.2	BLACK OAK	
1411	BLACK BIRCH	15		56	26.3	RED OAK	
1412	BLACK BIRCH	15.7		57	28.5	BLACK OAK	
1413	BLACK BIRCH	17.3		58	28.2	BLACK OAK	
1414	BLACK BIRCH	15.9		59	26.5	TULIP	
1415	BLACK BIRCH	17.1		60	32	WHITE OAK	
1416	BLACK BIRCH	18.7		61	25.2	TULIP	
1417	BLACK BIRCH	15.1		62	26.3	BLACK OAK	
1418	BLACK BIRCH	16.1		63	25.1	BLACK OAK	
1419	SUGAR MAPLE	23.5		64	24.2	BLACK OAK	
1420	BLACK BIRCH	18.5		65	25.5	RED OAK	
1421	BLACK BIRCH	19.4		66	25.1	BLACK OAK	
1422	BLACK BIRCH	14.9		67	25.1	TULIP	
1423	BLACK BIRCH	14.3		68	25.1	SUGAR MAPLE	
SAMPLE PLOT 4							
1501	BLACK BIRCH	19.5	27	69	29.1	BLACK OAK	
1502	BLACK BIRCH	23.1	28	70	31.1	BLACK OAK	
1503	BLACK OAK	23.3	117	71	29.2	TULIP	
1504	BLACK BIRCH	14.6		72	25.2	TULIP	
1505	BEECH	14.7		73	24.2	TULIP	
1506	BLACK BIRCH	14		74	25.1	BLACK OAK	
1507	HICKORY	19.2		75	25.4	BLACK OAK	
1508	BLACK BIRCH	16.4		76	25.4	TULIP	
1509	BEECH	15.1		77	24.8	BLACK OAK	
1510	BLACK OAK	18.5		78	25.2	BLACK OAK	
1511	BLACK BIRCH	16		79	29.2	RED OAK	
1512	BEECH	16.8		80	28.4	BLACK OAK	
1513	RED OAK	16.3		81	26.5	RED OAK	
1514	BLACK BIRCH	20.3		82	28	TULIP	
1515	SUGAR MAPLE	20.3		83	29.3	RED MAPLE	HOLLOW
1516	BEECH	15		84	29.5	RED MAPLE	
1517	RED MAPLE	17.2		85	29.4	RED MAPLE	
1518	BLACK BIRCH	19.1		86	39.2	RED OAK	
1519	SUGAR MAPLE	21.1		87	25.5	BLACK OAK	
1520	HICKORY	21.8		88	26.8	TULIP	
SAMPLE PLOT 5							
1501	BLACK BIRCH	19.5	27	89	26.9	BLACK OAK	
1502	BLACK BIRCH	23.1	28	90	25.1	BLACK OAK	
1503	BLACK OAK	23.3	117	91	28	TULIP	
1504	BLACK BIRCH	14.6		92	26	BLACK OAK	
1505	BEECH	14.7		93	27.2	BLACK OAK	
1506	BLACK BIRCH	14		94	26.5	BLACK OAK	
1507	HICKORY	19.2		95	30.4	TULIP	
1508	BLACK BIRCH	16.4		96	26.2	BLACK OAK	
1509	BEECH	15		97	28.2	TULIP	
1510	BLACK BIRCH	17.5		98	25.5	BLACK OAK	
1511	BLACK BIRCH	17.2		99	28.2	BLACK OAK	
1512	BLACK BIRCH	17.5		100	26	BLACK OAK	
1513	BLACK BIRCH	17.2		101	26	BLACK OAK	
1514	BLACK BIRCH	17.5		102	26	BLACK OAK	
1515	BLACK BIRCH	17.2		103	26	BLACK OAK	
1516	BLACK BIRCH	17.5		104	28.2	TULIP	
1517	BLACK BIRCH	17.2		105	28.5	TULIP	
1518	BLACK BIRCH	19.1		106	28.9	TULIP	
1519	SUGAR MAPLE	21.1		107	25.5	TULIP	
1520	HICKORY	21.8		108	25.5	BLACK OAK	
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109	RED MAPLE	37.6	</td				

