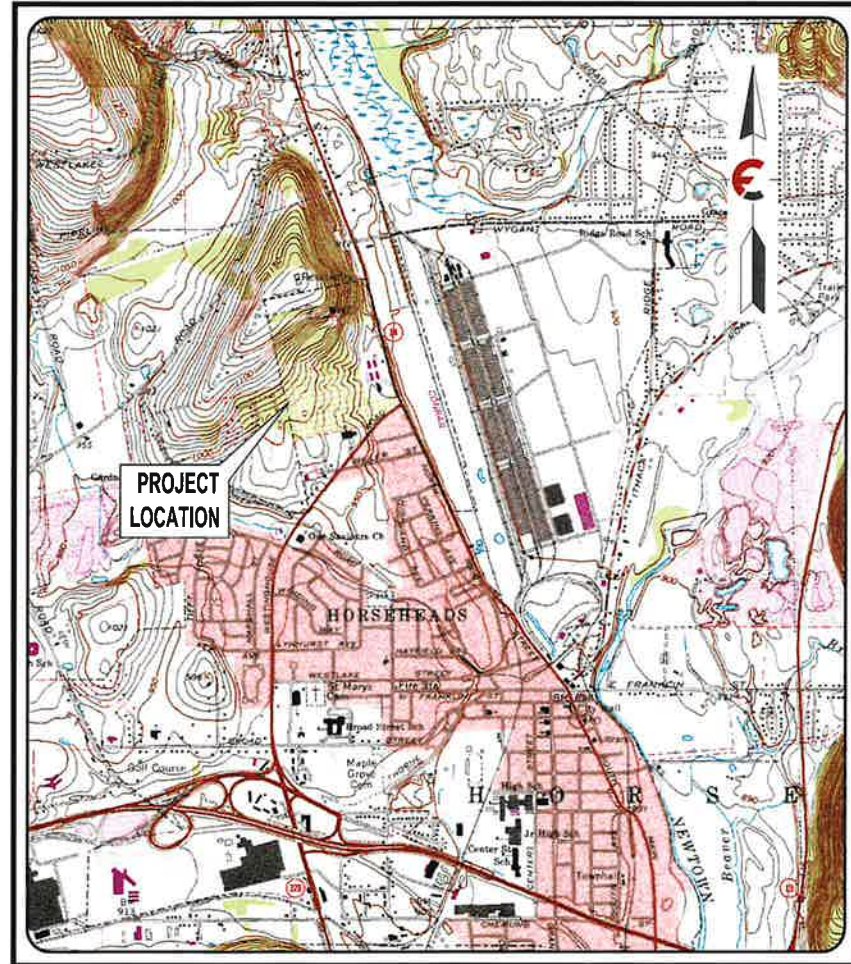


Site Plan Drawings For
PHASE 2 ORCHARD HOMES
DEVELOPMENT LLC
VILLAGE OF HORSEHEADS, CHEMUNG COUNTY, NEW YORK

March 14, 2024

PREPARED FOR:

Bethany Village
3005 Watkins Rd
Horseheads, NY 14845



LOCATION MAP

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NO.	TITLE
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C2	EXISTING CONDITIONS & BOUNDARY SURVEY
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C9	E & S PLAN
C10	E & S DETAILS

Rev.	Date	Revision Description

It is a Violation of The New York Education Law, Article 145 Section 7209, For Any Person, Unless He is Acting Under The Direction of A Licensed Professional Engineer or Land Surveyor To Alter An Item in Any Way, If An Item Bearing The Seal of An Engineer or Land Surveyor is Altered. The Altering Engineer or Land Surveyor Shall Affix To The Item His Seal And The Notation Altered By, Followed by His Signature And The Date Of Such Alteration, And A Specific Description Of The Alteration.

**PHASE 2 ORCHARD
HOMES DEVELOPMENT LLC**
VILLAGE OF HORSEHEADS, CHEMUNG COUNTY,
NEW YORK


FAGAN
ENGINEERS
LAND SURVEYORS INC.

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Scale:	As Noted
	11x17 Prints are 1/2 Size
Date:	March 14, 2024
Design By:	RSN
Drawn By:	RSN
Checked By:	KMS
Project No.:	15015-006
Drawing Name:	15015-006 phase2.dwg

TITLE
CO

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I. GENERAL

- BASE MAPPING PREPARED BY FAGAN ENGINEERS & LAND SURVEYORS, P.C.
- THE PROJECT SITE DOES NOT CONTAIN FEMA DELINEATED FLOODWAYS OR FLOODPLAINS.
- THE PROJECT SITE DOES NOT CONTAIN FEDERALLY REGULATED WETLANDS ON-SITE, NOR ANY NWI MAPPED WETLANDS.
- MUNICIPAL WATER SERVICE PROVIDED BY VILLAGE OF HORSEHEADS.
- PUBLIC SEWER SERVICE PROVIDED BY CHEMUNG COUNTY SEWER DISTRICT.
- THE CONTRACTOR'S SURVEYOR SHALL CHECK ALL HORIZONTAL AND VERTICAL CONTROL PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL PROMPTLY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- THE CONTRACTOR SHALL KEEP HIS OPERATIONS WITHIN THE PROJECT LIMITS OF DISTURBANCE.
- ALL DAMAGE TO PRIVATE PROPERTY OR UTILITIES (UNDER OR ABOVE GROUND) SHALL BE REPORTED TO THE OWNER OF RECORD AT ONCE.
- CONSTRUCTION ALONG CITY, TOWN, AND STATE ROADS SHALL CONFORM TO SPECIFICATIONS LISTED ON PERMITS ISSUED BY THE APPROPRIATE AGENCIES.
- SAFE AND CONTINUOUS THROUGH TRAFFIC, INGRESS AND EGRESS FOR ADJACENT OWNER DRIVEWAYS, SERVICE ROADS, PUBLIC STREETS, AND SIDEWALKS SHALL BE MAINTAINED THROUGHOUT THE PERIOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE LOCAL MUNICIPALITY AND NEW YORK STATE D.O.T. AN ACCEPTABLE MAINTENANCE AND PROTECTION OF TRAFFIC PLAN FOR CONSTRUCTION IN/ALONG/NEAR TOWN AND STATE ROADWAYS.
- HIGHWAY DRAINAGE, SIDE STREET DRAINAGE, SWALES, DITCHES, AND OTHER EXISTING DRAINAGE FACILITIES SHALL BE PROTECTED AND MAINTAINED IN ADEQUATE WORKING CONDITION DURING CONSTRUCTION. THE CONTRACTOR SHALL RESTORE ANY OF SUCH FACILITIES THAT ARE DAMAGED DURING CONSTRUCTION TO THE SATISFACTION OF THE OWNER OF THE INFRASTRUCTURE.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS NOT TO DISTURB AND/OR DAMAGE PROPERTY CORNERS (IRON PINS, HUBS, ECT.), ANY DISTURBED OR DAMAGED PROPERTY CORNERS SHALL BE REPLACED BY THE CONTRACTOR'S LICENSED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
- ALL EXISTING UTILITIES SUCH AS ELECTRIC, GAS MAINS, AND TELEPHONE SHALL BE STAKED OUT BY THE UTILITY COMPANY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CALL NEW YORK STATE DIG SAFELY (1-800-962-7962) PRIOR TO CONSTRUCTION AND NOTIFY UTILITY COMPANIES FOR STAKEOUT.
- THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES. IF UTILITIES ARE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL REPAIR THESE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
- EXISTING WATERMAIN LOCATIONS AND DEPTHS SHOWN ARE APPROXIMATE. EXISTING INDIVIDUAL WATER SERVICES ARE NOT SHOWN ON DRAWINGS.
- THE CONTRACTOR SHALL NOTIFY OWNER OF ALL IMPACTED MUNICIPAL WATER SYSTEMS, THE RESIDENT ENGINEER AND THE FIRE DEPARTMENT 48 HOURS IN ADVANCE PRIOR TO CONSTRUCTION ON AND INTERRUPTION OF SERVICE OF ANY WATERMAINS. THE CONTRACTOR SHALL PROTECT ALL WATER SERVICE LINES AND PRIVATE WELLS. THE CONTRACTOR SHALL HAVE AMPLE SUPPLY OF REPAIR CLAMPS, COUPLINGS, AND PIPING FOR EMERGENCY REPAIRS.
- IN AREAS WHERE THE CONTRACTOR IS EXCAVATING NEAR ANY UTILITY POLES, THE CONTRACTOR SHALL BRACE AND/OR HOLD IN PLACE UNTIL EXCAVATED AREA IS BACKFILLED AND COMPACTED.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL REMOVED VEGETATION, SOIL AND OTHER DISTURBED DEBRIS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING APPROPRIATE EROSION CONTROL MEASURES TO PREVENT SEDIMENT FROM MIGRATING OFF SITE, TO STORM SEWERS, OR ADJACENT ROADWAYS IN ACCORDANCE WITH THE APPROVED SWPPP.
- ALL EXCAVATIONS SHALL PROVIDE PROTECTION TO THE WORK FORCE AS PER THE CURRENT O.S.H.A. REQUIREMENTS, AS WELL AS ANY STATE AGENCY REQUIREMENTS.
- THE CONTRACTOR SHALL OBSERVE O.S.H.A. AND OTHER APPLICABLE SAFETY REQUIREMENTS. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR CONSTRUCTION SAFETY AT ALL TIMES.
- CONTRACTOR SHALL REVIEW SOIL BORING AND TESTING REPORTS TO DETERMINE SPECIAL CONDITIONS REQUIRED FOR CONSTRUCTION AND SUITABILITY OF ON-SITE SOILS FOR FILL MATERIAL AND FOR INFORMATION ON GROUNDWATER DEPTHS.
- ALL DISTURBED AREAS SHALL BE SEEDING ACCORDING TO THE REQUIREMENTS SPECIFIED ON SHEET C4.7 AND THE EROSION AND SEDIMENTATION CONTROL PLANS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THE EROSION AND SEDIMENT CONTROL FEATURES PRIOR TO BULK EARTHMOVING ACTIVITIES.
- ALL LIGHT POLES, LIGHT FIXTURES AND ASSOCIATED CONDUIT SHALL BE PROVIDED AND INSTALLED UNDER A SEPARATE CONTRACT. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE CONTRACTOR RESPONSIBLE FOR THIS WORK AND PROVIDE THE NECESSARY EXCAVATION AND BACKFILL FOR INSTALLATION OF THE TRENCHING. THE SITE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR SUPPLYING AND INSTALLING THE POLE BASES FOR ALL EXTERIOR LIGHTING FIXTURES.

II. SANITARY SEWERS

- SANITARY SEWERS, MANHOLES, CLEANOUTS, AND OTHER APPURTENANCES SHALL BE CONSTRUCTED, AND TESTED IN ACCORDANCE WITH LOCAL MUNICIPAL SPECIFICATIONS.
- SANITARY SEWERS SHALL BE 50R-35 PVC PIPE CONFORMING TO ASTM D-3034, WITH RUBBER GASKETED JOINTS CONFORMING TO ASTM D-3212 AND ASTM F-477.
- TESTED SANITARY SEWERS SHALL HAVE AN INFILTRATION RATE OF LESS THAN 100 GALLONS PER MILE PER INCH DIAMETER OF PIPE PER DAY.
- SANITARY SEWERS SHALL BE LAID WITH A STRAIGHT ALIGNMENT BETWEEN MANHOLES. AS PER THE RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES, 2014 EDITION, SECTION 33.85 DEFLECTION TEST. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE 30 DAYS. A RIGID BALL OR MANDREL USED FOR THE DEFLECTION TEST SHALL HAVE A DIAMETER NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE DEPENDING ON WHICH IS SPECIFIED IN THE ASTM SPECIFICATION, INCLUDING THE APPENDIX, TO WHICH THE PIPE IS MANUFACTURED.
- THE CONTRACTOR SHALL CONCRETE ENCASE THE SANITARY SEWER LINE OR FORCEMAIN AT ALL POINTS WHERE VERTICAL SEPARATION IS LESS THAN 18" AT CROSSINGS WITH STORM SEWER LINES.
- ANY POLYETHYLENE FORCEMAIN SHALL BE TYPE DR-11 WITH A PRESSURE RATING OF 128 PSI.

III. STORM SEWERS

- STORM SEWERS, MANHOLES, INLETS, DITCHES, AND OTHER SYSTEM COMPONENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MUNICIPAL SPECIFICATIONS, IF APPLICABLE.
- STORM SEWERS SHALL BE ADVANCED DRAINAGE SYSTEMS ADS N-12 CORRUGATED, SMOOTH INTERIOR, HIGH DENSITY POLYETHYLENE (HDPE) PIPE. ADS N-12 STORM SEWER SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND ASTM D 2321.
- ALL FLARED-END SECTIONS SHALL BE GALVANIZED METAL END SECTIONS UNLESS OTHERWISE SPECIFIED.
- RIPRAP PADS AT STORM SEWER DISCHARGES SHALL CONSIST OF NYSDOT LIGHT STONE FILLING UNLESS OTHERWISE NOTED ON THE CONTRACT DRAWINGS.
- CROWN OF MULTIPLE PROPOSED STORM SEWER PIPES IS AT OR NEAR THE TOP OF THE SUBGRADE. CONTRACTOR SHALL PROTECT INTEGRITY OF ALL INSTALLED STORM SEWERS UNTIL SUFFICIENT COVER IS PLACED ON SAID PIPING.

IV. ACCESS ROADS AND PARKING AREA

- LIMING, FERTILIZING, SEEDING, AND MULCHING OF DISTURBED AREAS SHALL BE CONSISTENT WITH THE APPROVED SWPPP.
- SIGNAGE, PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES SHALL BE IN CONFORMANCE TO THE NYSDOT'S MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- ROADWAY EMBANKMENT: OBTAIN SUBGRADE ELEVATION BY COMPACTING ON-SITE SOILS IN MAXIMUM 8 INCH HORIZONTAL LIFTS. USE ON-SITE SOILS AS EMBANKMENT FILL THAT DO NOT CONTAIN ORGANIC OR DELETERIOUS MATERIALS, ARE NOT EXCESSIVELY WET OR FROZEN, OR THAT HAS COBBLES IN EXCESS OF 6 INCHES ALONG THE LONGEST DIMENSION. IF SUITABLE ON-SITE SOILS ARE NOT AVAILABLE, A WELL GRADED BANK-RUN APPROVED BY THE ENGINEER SHALL BE IMPORTED. THE BANK-RUN GRAVEL SHALL BE SOUND, DURABLE, FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, WITH NO MORE THAN 10 PERCENT BY WEIGHT FINER THAN NO. 200 SIEVE. ADJUST THE MOISTURE CONTENT OF THE EMBANKMENT FILL (WHETHER ON-SITE OR OTHERWISE) TO WITHIN 2% OF OPTIMUM BY EITHER AIR DRYING OR THROUGH THE ADDITION OF WATER PRIOR TO COMPACTION. SPREAD WET FILL IN AN 8 INCH LOOSE LIFT AND DISC TO EXPEDITE AIR DRYING.
- ROADWAY EXCAVATION: EXCAVATE SUBSOIL TO THE DEPTH REQUIRED TO PROVIDE A UNIFORM SURFACE OF SOLID UNDISTURBED GROUND FOR THE PLACEMENT OF AGGREGATE SUBBASE COURSE.
- FILL, SUBGRADE, AND SUBBASE SHALL BE COMPACTED TO OR ABOVE 95 PERCENT 'MODIFIED PROCTOR' DENSITY WITH A SMOOTH DRUM ROLLER, OR OTHER SUFFICIENT COMPACTION EQUIPMENT, WEIGHING AT LEAST 7 TONS. OPERATE COMPACTOR IN THE STATIC MODE FOR COMPACTION OF SILTY SOILS AND IN THE VIBRATORY MODE FOR ALL OTHER MATERIALS.
- SUBBASE MATERIAL SHALL BE PLACED IN MAXIMUM 6 INCH AND MINIMUM 3 INCH HORIZONTAL LIFTS. MAINTAIN OPTIMUM MOISTURE CONTENT FOR COMPACTION.
- WHEREVER GROUNDWATER SEEPAGE IS ENCOUNTERED, INSTALL UNDERDRAINS BELOW THE SUBBASE. LAP UNDERDRAIN FABRIC WITH SUBBASE FABRIC.
- BELOW THE SUBBASE, PROVIDE A SOIL STABILIZATION GEOTEXTILE FABRIC, SUBJECT TO THE ACCEPTANCE OF THE HIGHWAY SUPERINTENDENT, WITH THE FOLLOWING CERTIFIABLE PROPERTY VALUES: MINIMUM PUNCTURE STRENGTH OF 125 LBS., MINIMUM MULLEN BURST STRENGTH OF 430 PSI, MINIMUM GRAB TENSILE STRENGTH OF 220 LBS., AND MAXIMUM APPARENT OPENING SIZE OF 40-80 SIEVE.

V. PUBLIC WATER

- WATERMAINS, WATER SERVICES, FIRE HYDRANTS, AND OTHER APPURTENANCES SHALL BE CONSTRUCTED, TESTED, AND DISINFECTED IN ACCORDANCE WITH THE OWNER'S SPECIFICATIONS FOR WATERMAIN EXTENSIONS. WATERMAIN AND APPURTENANCE MATERIALS AND INSTALLATION SHALL COMPLY WITH NYSDOH STANDARDS AND AWWA STANDARD C600-93.
- DUCTILE IRON PIPE SHALL BE CLASS 52, AND SHALL CONFORM IN ALL ASPECTS TO AWWA C-151. FITTING SHALL CONFORM IN ALL ASPECTS TO AWWA C-11. OR TO COMPACT FITTINGS AWWA C-153. ALL SHALL BE FURNISHED WITH CEMENT MORTAR LINING IN CONFORMANCE WITH AWWA C-104. PIPES SHALL HAVE GASKETED, PUSH-ON, JOINTS CONFORMING TO AWWA C-111.
- THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER AND ANY TYPE OF SEWER UTILITIES (SANITARY OR STORM) SHALL BE 10 FEET, MEASURED FROM OUTSIDE WALL TO OUTSIDE WALL OF THE MAINS. THE MINIMUM VERTICAL SEPARATION DISTANCE AT THE POINT OF CROSSING SHALL BE 18 INCHES, ALSO MEASURED FROM OUTSIDE WALL TO OUTSIDE WALL.
- WATERMAIN SHALL BE INSTALLED AT A CONTINUOUS UPWARD GRADE TO A POINT OF AIR RELEASE. POINTS OF AIR RELEASE INCLUDE WATER SERVICES, FIRE HYDRANTS, AND BLOW-OFF VALVES.
- SAMPLING REQUIREMENTS FOR THE DISINFECTION OF WATERMAINS SHALL BE CONSISTENT WITH AWWA STANDARD C651-92, SECTION 5.2 CONTINUOUS FEED METHOD, DISINFECTING WATERMAINS. AFTER FINAL FLUSHING AND BEFORE THE NEW WATERMAIN IS IN OPERATION, TWO CONSECUTIVE SAMPLES TAKEN 24 HOURS APART, SHALL BE COLLECTED FROM THE NEW WATERMAIN. AT LEAST ONE SET OF SAMPLES SHALL BE COLLECTED FROM EVERY 1200 LINEAR FEET OF WATERMAIN, PLUS ONE SET FROM THE END OF LINES AND EACH BRANCH.
- FITTINGS SHALL BE DUCTILE IRON WITH MECHANICAL JOINTS.
- HYDRANTS SHALL CONFORM TO WATER SYSTEMS SPECIFICATIONS WITH A 5' BURY, OPEN LEFT, TRAFFIC TYPE GROUND FLANGE, 6" INLET, (1) 4-1/2" NST STEAMER NOZZLE, (2) 2-1/2" NST HOSE NOZZLES MECHANICAL JOINT CONNECTION, 5" HYDRANT VALVE SEAT, AND A PENTAGON OPERATING NUT. THE HYDRANTS SHALL CONFORM TO AWWA C-502.
- MAIN VALVES SHALL BE MECHANICAL JOINTS, RESILIENT SEAT, GATE, 2" OPERATING NUT, OPEN LEFT, WITH STAINLESS STEEL BONNET AND PACKING BOLTS AND NUTS. THE VALVES SHALL CONFORM TO AWWA C-509.
- MAIN VALVE BOXES SHALL BE 5-1/4", SCREW TYPE, WITH CAST IRON LIDS MARKED "WATER."
- ALL NEW AND ALTERED EXISTING WATERMAINS SHALL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH THE LATEST REVISION OF AWWA STANDARD C-600-93 (LATEST REVISION).
- THE FOLLOWING MINIMUM SEPARATION DISTANCES BETWEEN GAS LINES AND WATER LINES ARE RECOMMENDED. OTHER MORE STRINGENT SEPARATION DISTANCES MAY APPLY.
HORIZONTAL- 5 FEET
VERTICAL- 2 FEET

LEGEND

- PROPERTY LINE
- - - - - EXISTING EASEMENT
- ===== EXISTING EDGE OF ROADWAY
- ===== EXISTING CURB LINE
- 54" --- EXISTING SANITARY SEWER
- 14"/1/2" --- EXISTING GAS MAIN
- 14"/1/2" --- EXISTING UTILITY LINE
- 8" --- EXISTING FENCE LINE
- 8" --- EXISTING WATER LINE
- 8" --- EXISTING CONTOUR LINE
- 120' --- PROPOSED LIMIT OF DISTURBANCE
- 120' --- PROPOSED CONTOUR LINE
- 120' --- PROPOSED EASEMENT
- 120' --- PROPOSED STORM SEWER
- 120' --- PROPOSED EDGE OF ROADWAY
- 120' --- PROPOSED CURB LINE
- 120' --- PROPOSED SANITARY SEWER
- 120' --- PROPOSED GAS LINE
- 14"/1/2" --- PROPOSED UTILITY LINE
- 120' --- PROPOSED WATER LINE
- 120' --- PROPOSED SILT FENCE
- 120' --- PROPOSED COMPOST SOCK
- EXISTING SANITARY MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING CLEANOUT
- EXISTING SPOT ELEVATION
- PROPOSED SANITARY MANHOLE
- PROPOSED WATER VALVE
- PROPOSED THRUST BLOCK
- PROPOSED FIRE HYDRANT
- PROPOSED CLEANOUT
- PROPOSED LIGHTING FIXTURE
- PROPOSED SPOT ELEVATION
- PROPOSED DRYWELL
- PROPOSED CATCH BASIN
- PROPOSED INLET PROTECTION

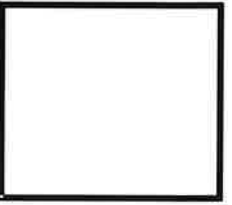
Note:
Utility information has been plotted from available sources and their locations and size should be considered approximate only. The contractor is responsible for determining exact utility locations, sizes, and elevations prior to commencing construction. If uncharted or misplotted utilities are encountered, the contractor is required to notify the owner immediately.

New York State law requires excavators to contact the one-call notification system prior to digging to prevent damage to buried facilities.
IT'S THE LAW!
Call three days before you dig!
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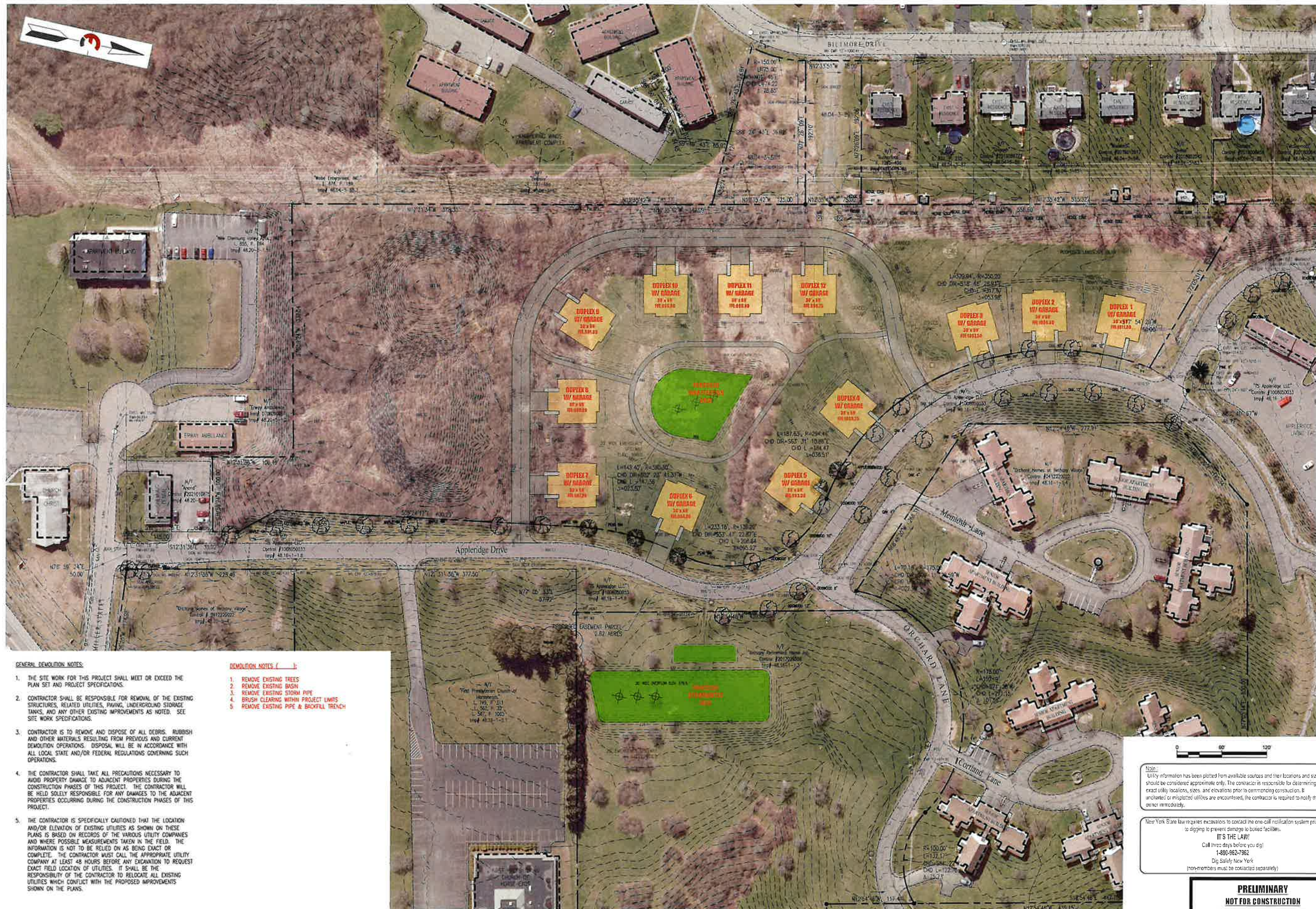


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HOMES DEVELOPMENT LLC
VILLAGE OF HORSEHEADS, CHEMUNG COUNTY,
NEW YORK

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Date: March 14, 2024
Design By: RSN
Drawn By: RSN
Checked By: KMS
Project No.: 15015.006
Drawing Name: 15015-006 phase2.dwg

GENERAL NOTES
C1



GENERAL DEMOLITION NOTES:

1. THE SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE PLAN SET AND PROJECT SPECIFICATIONS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, UNDERGROUND STORAGE TANKS, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. SEE SITE WORK SPECIFICATIONS.
3. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
4. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
5. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

DEMOLITION NOTES (E - J):

1. REMOVE EXISTING TREES
2. REMOVE EXISTING BASIN
3. REMOVE EXISTING STORM PIPE
4. BRUSH CLEARING WITHIN PROJECT LIMITS
5. REMOVE EXISTING PIPE & BACKFILL TRENCH

Note:
Utility information has been plotted from available sources and the locations and size should be considered approximate only. The contractor is responsible for determining exact utility locations, sizes, and elevations prior to commencing construction. If uncharted or misplaced utilities are encountered, the contractor is required to notify the owner immediately.

New York State law requires excavators to contact the one-call notification system prior to digging to prevent damage to buried facilities.

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**PHASE 2 ORCHARD
HOMES DEVELOPMENT LLC**
VILLAGE OF HORSEHEADS, CHERUNG COUNTY,
NEW YORK

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ENGINEERS**
A LAND SURVEYING FIRM

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Scale: 1" = 60'
11x17 Prints are 1/2 Size

Date: March 14, 2024

Design By: RSN

Drawn By: RSN

Checked By: KMS

Project No.: 15015.006

Drawing Name: 15015-006 phase2.dwg

**EXISTING CONDITIONS &
BOUNDARY
SURVEY**

C2



Rev. Date	Revision Description

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PHASE 2 ORCHARD HOMES DEVELOPMENT LLC
 VILLAGE OF HORSEHEADS, CHERKONG COUNTY, NEW YORK



Scale: 1" = 50'
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 Date: March 14, 2024
 Design By: RSN
 Drawn By: RSN
 Checked By: KMS
 Project No.: 15015.006
 Drawing Name: 15015-006 phase2.dwg

PHASE 2 CONCEPT 4
C3

Note:
 Utility information has been plotted from available sources and their locations and size should be considered approximate only. The contractor is responsible for determining exact utility locations, sizes and elevations prior to commencing construction. If uncharted or misplotted utilities are encountered, the contractor is required to notify the owner immediately.

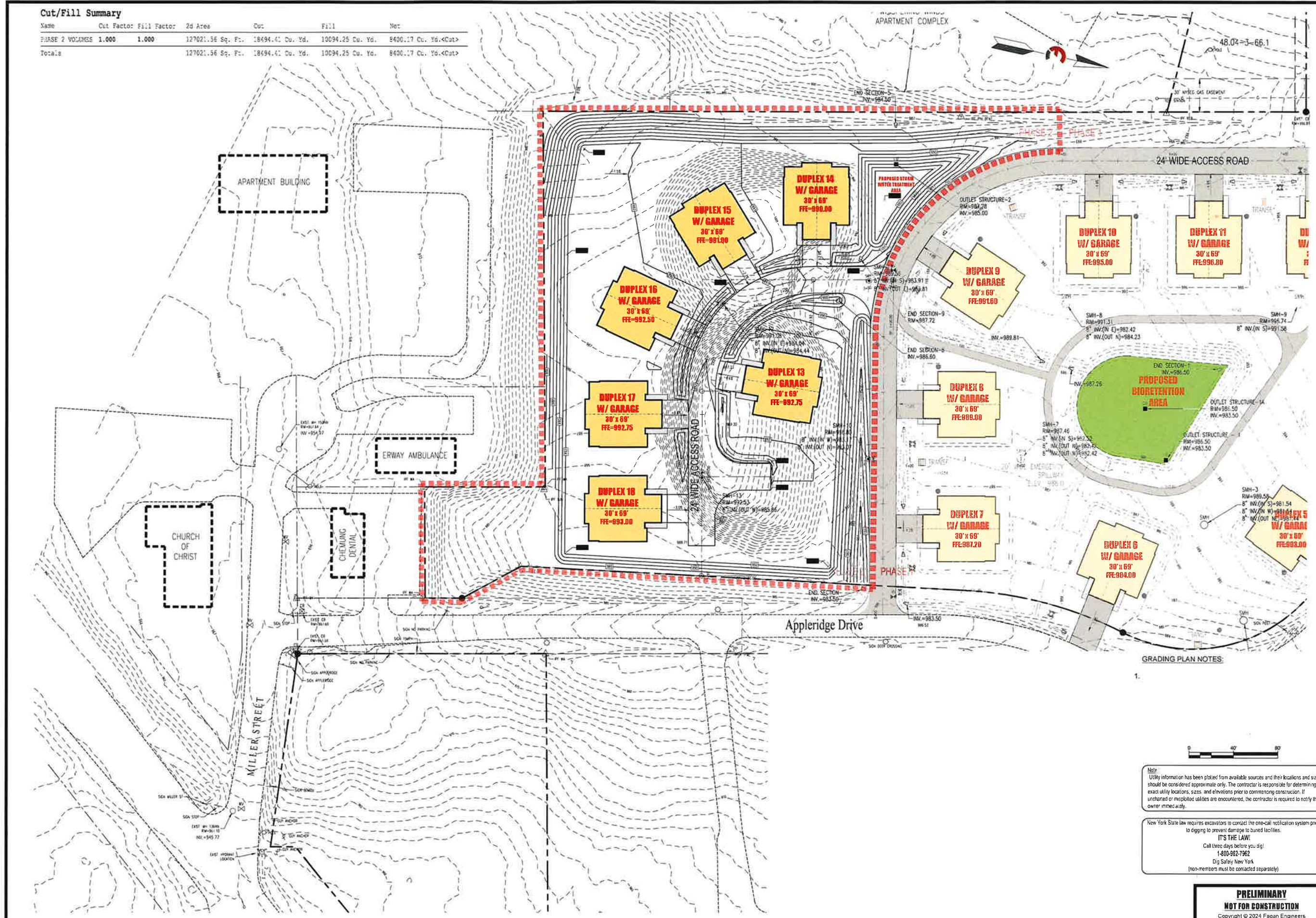
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Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
PHASE 2 VOLUMES	1.000	1.000	127021.56 Sq. Ft.	18694.41 Cu. Yd.	10094.25 Cu. Yd.	8400.17 Cu. Yd.<Cut>
Totals			127021.56 Sq. Ft.	18694.41 Cu. Yd.	10094.25 Cu. Yd.	8400.17 Cu. Yd.<Cut>



GRADING PLAN NOTES:

Note:
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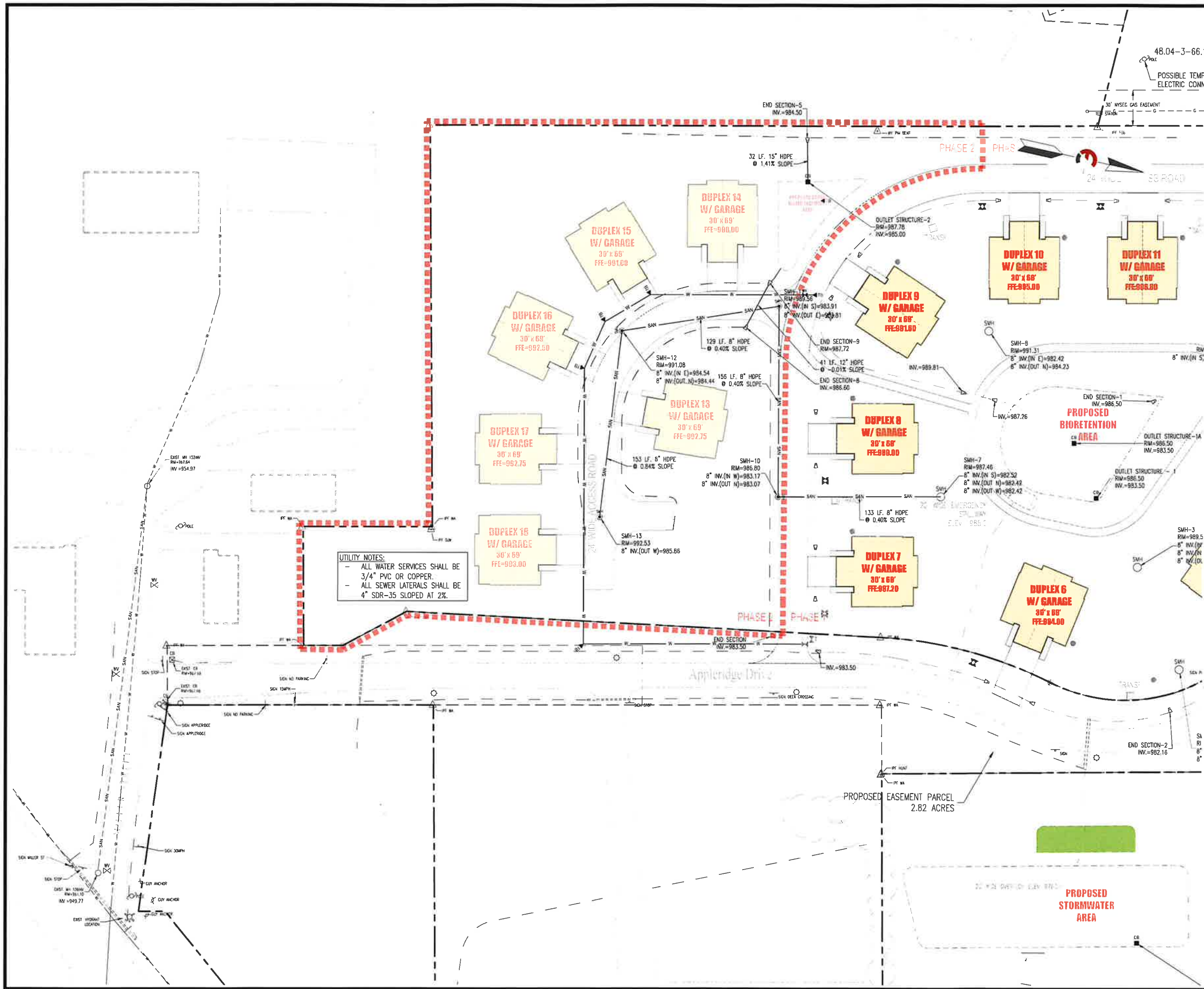
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GRADING PLAN
C4



UTILITY NOTES:
 - ALL WATER SERVICES SHALL BE 3/4" PVC OR COPPER.
 - ALL SEWER LATERALS SHALL BE 4" SDR-35 SLOPED AT 2%.

LEGEND

---	PROPERTY LINE
- - - -	EXISTING EASEMENT
- - - - -	EXISTING EDGE OF ROADWAY
- - - - -	EXISTING CURB LINE
- - - - -	EXISTING SANITARY SEWER
- - - - -	EXISTING GAS MAIN
- - - - -	EXISTING UTILITY LINE
- - - - -	EXISTING WATER LINE
- - - - -	EXISTING FENCE LINE
- - - - -	EXISTING CONTOUR LINE
- - - - -	PROPOSED LIMIT OF DISTURBANCE
- - - - -	PROPOSED CONTOUR LINE
- - - - -	PROPOSED EASEMENT
- - - - -	PROPOSED STORM SEWER
- - - - -	PROPOSED EDGE OF ROADWAY
- - - - -	PROPOSED CURB LINE
- - - - -	PROPOSED SANITARY SEWER
- - - - -	PROPOSED GAS LINE
- - - - -	PROPOSED UTILITY LINE
- - - - -	PROPOSED WATER LINE
- - - - -	PROPOSED SILT FENCE
- - - - -	PROPOSED COMPOST SOCK
○	EXISTING SANITARY MANHOLE
○	EXISTING FIRE HYDRANT
○	EXISTING CLEANOUT
○	EXISTING SPOT ELEVATION
○	PROPOSED SANITARY MANHOLE
○	PROPOSED WATER VALVE
○	PROPOSED THRUST BLOCK
○	PROPOSED FIRE HYDRANT
○	PROPOSED CLEANOUT
○	PROPOSED LIGHTING FIXTURE
○	PROPOSED SPOT ELEVATION
○	PROPOSED DRYWELL
○	PROPOSED CATCH BASIN
○	PROPOSED INLET PROTECTION

- UTILITY PLAN NOTES:**
- SEE UTILITY PROFILES ON SHEET C6, SEE UTILITY DETAILS ON SHEET C8.
 - DUPLEX 4 & 5 ROOF LEADERS SHALL BE DIVERTED TO THE BIORETENTION AREA.

Note:
 Utility information has been plotted from available sources and their locations and size should be considered approximate only. The contractor is responsible for determining exact utility locations, sizes, and elevations prior to commencing construction. If uncharted or misplotted utilities are encountered, the contractor is responsible to notify the owner immediately.

New York State law requires excavators to contact the one-call notification system prior to digging to prevent damage to buried facilities:
IT'S THE LAW!
 Call three days before you dig!
 1-800-862-7962
 Dig Safely New York
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Rev.	Date	Revision Description

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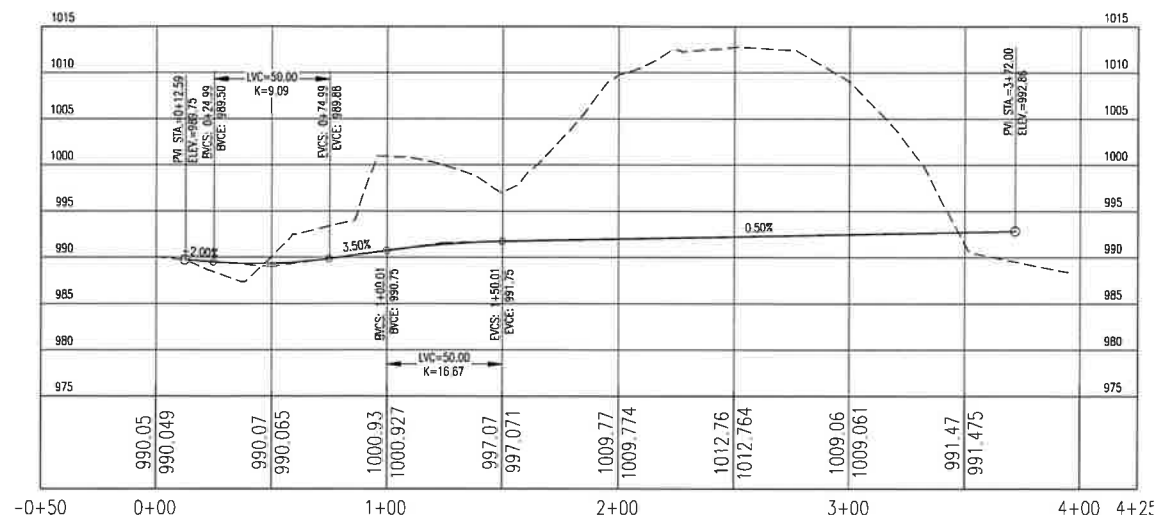
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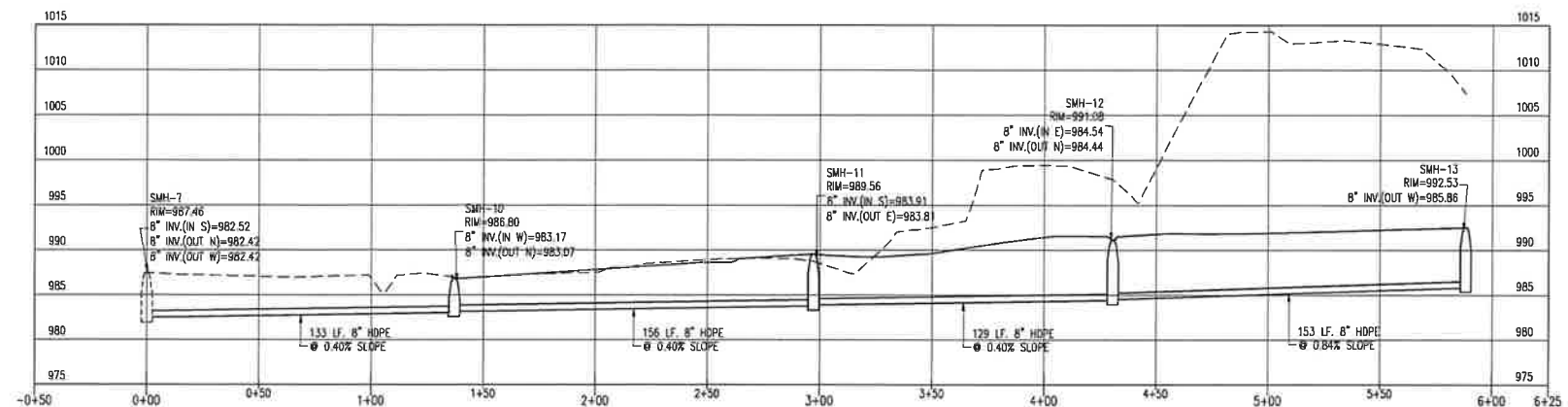
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Scale: 1" = 40'
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 Drawn By: RSN
 Checked By: KMS
 Project No.: 15015.006
 Drawing Name: 15015-006 phase2.dwg

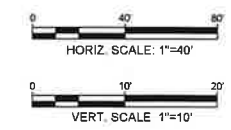
UTILITY PLAN
C5



ROADWAY PROFILE (STA. 0+00 THRU 10+60)



SANITARY SEWER PROFILE (EXIST. THRU SMH-6)



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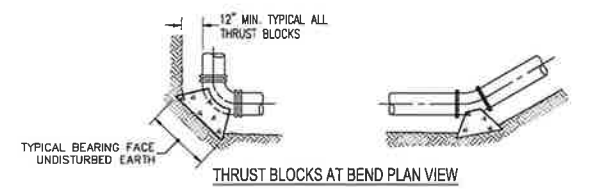
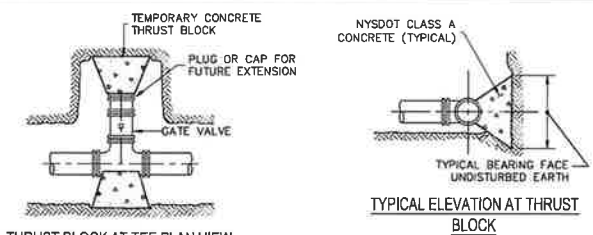
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PROFILES
C6



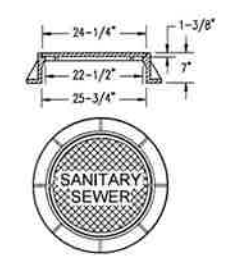
TYPICAL THRUST BLOCK DETAILS

MINIMUM AREA OF BEARING FACE OF CONCRETE THRUST BLOCK IN SQ. FT. BLOCKS TO BE POURED AGAINST UNDISTURBED EARTH.

PIPE SIZE	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND	TEE OR DEAD END
4"	1.3	1.0 MIN.	1.0 MIN.	1.0 MIN.	1.0 MIN.
6"	2.6	1.4	1.0 MIN.	1.0 MIN.	1.9
8"	4.6	2.5	1.3	1.0 MIN.	3.2
10"	6.8	3.7	1.9	1.0 MIN.	4.8
12"	9.7	5.2	2.7	1.3	6.8

- AREAS BASED ON AN INTERNAL PRESSURE OF 150 P.S.I.G. AND A SOIL BEARING PRESSURE OF 3000 P.S.F.
- NOTES:**
- Thrust blocks shall be placed at all bends, tees, and dead ends.
 - The thrust restraint bearing areas listed above are based on the internal pressures and soil bearing capacities as noted. If adverse soil conditions warrant these areas will require adjustment as directed by the engineer.
 - Form thrust blocks such that all mechanical joint fitting's nuts & bolts are not covered over with concrete.
 - Thrust restraint gaskets (in push-on tyton joints): "Field lok gaskets" shall be utilized in deflected pipe joints.
 - Mechanical joint fitting thrust restraint: - ebo iron sales, inc.; megalog series 1100, or approved equal to be utilized on all vertical bend fittings, oil reducers and horizontal fittings (tees, bends, etc.) where concrete thrust blocks are not practical, reliable or subject to future disturbance.
 - Gravily thrust blocks for vertical bends shall be used in conjunction with the previously noted U.J. thrust restraints. The gravity blocks located under the vertical fittings shall be anchored to the fittings with a minimum of two no.6 rebar loops around the fitting and anchored into the poured in place gravity thrust block.

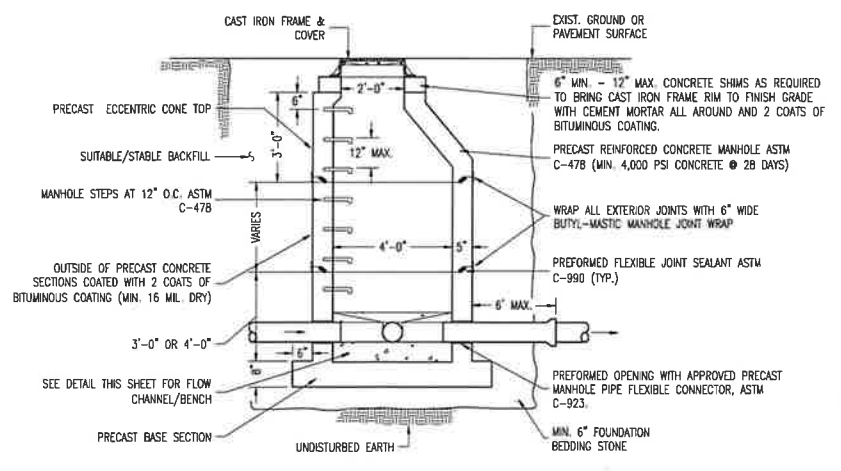
N.T.S.



CAST IRON MANHOLE FRAME AND COVER

- NOTES:**
- UNLESS OTHERWISE NOTED MANHOLE FRAMES AND COVERS SHALL BE NEEDHAM FOUNDRY COMPANY NO. 1554 OR APPROVED EQUAL.
 - FRAMES AND COVERS SHALL BE HEAVY DUTY DESIGNED FOR MS10 H-20 HIGHWAY WHEEL LOADS.
 - SANITARY SEWER MANHOLE COVERS SHALL HAVE NON-PENETRATING PICK HOLES AND BE SELF-SEALING WITH A NEOPRENE GASKET CEMENTED INTO A MACHINED GROOVE, OR APPROVED EQUAL.
 - COVERS SHALL HAVE THE WORDS "SANITARY SEWER" CAST IN 1 1/2" WIDE RAISED LETTERS.

N.T.S.

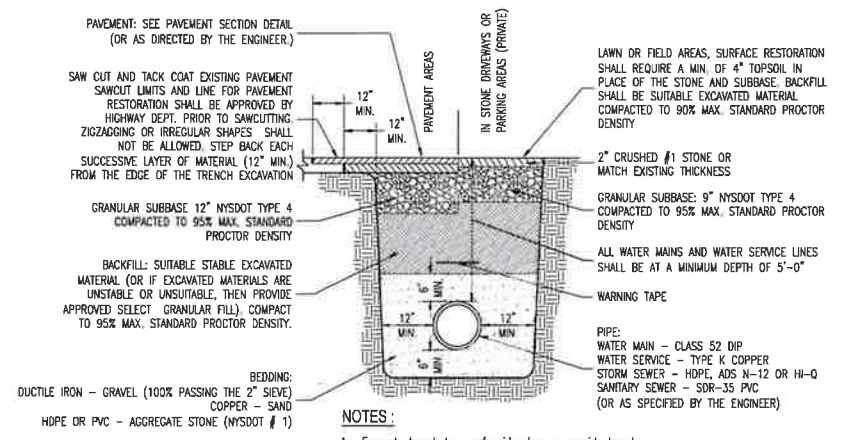


MANHOLE NOTES

- Typical manhole interior dimension shall be 4'-0" diameter in size unless otherwise noted on the plans or in a manhole schedule in the specifications. The minimum manhole wall and slab dimensions are as follows:
5"
8"
- Manhole steps shall be polypropylene plastic coated steel by m.A. Industries, or approved equal.
- For a new connection to an existing manhole core drill for new pipe and link seal (water-tight) the annular space between the manhole wall and the pipe, or utilize a kor-n-seal boot sleeve, or approved equal. Reconstruct bench and invert to allow for the new pipe inlet flow.
- Pipe stubs shall be provided for all future sewer connections into new manholes as shown on the plan and profile sheets. The stubs shall extend 24" from the face of the precast manholes, unless noted otherwise on the plan and profile sheets. The stubs shall be in-stalled with a water tight plug inside the pipe stub gasketed bell joint.

MANHOLE DETAILS

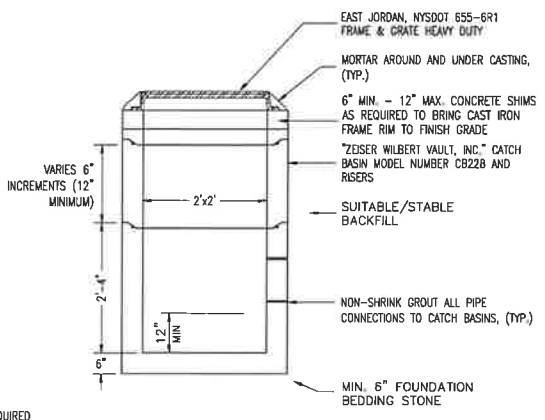
N.T.S.



- NOTES:**
- Excavate trench to a safe side slope or provide trench bracing per OSHA standards.
 - Contractor shall keep all excavations free of water and provide a firm stable base for the pipe bedding.

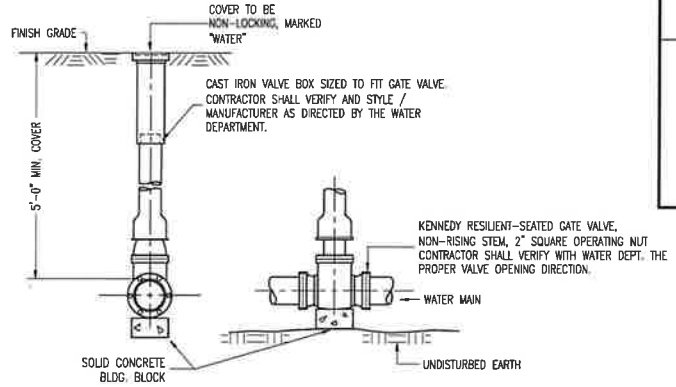
TYPICAL PIPE TRENCH DETAIL

N.T.S.



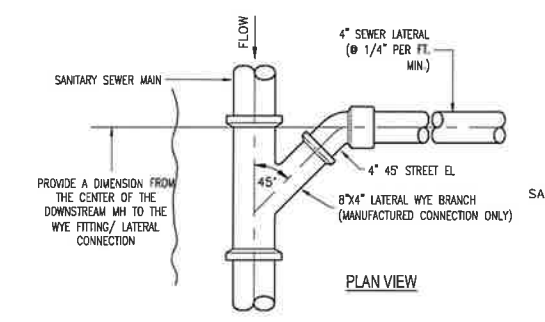
2'x2' CATCH BASIN DETAIL

N.T.S.



GATE VALVE DETAIL

N.T.S.



CROSS SECTION

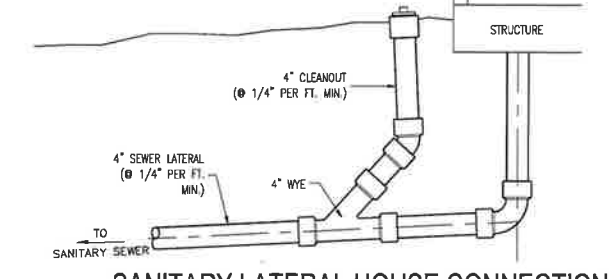
NOTE: SEE PLANS FOR PROPOSED LATERAL LOCATIONS AND LENGTHS. CONTRACTOR SHALL COORDINATE LATERAL LOCATIONS WITH PROPERTY OWNERS REFER TO SPECIFICATIONS FOR COORDINATION REQUIREMENTS.

SANITARY SEWER MAIN / LATERAL CONNECTION

N.T.S.

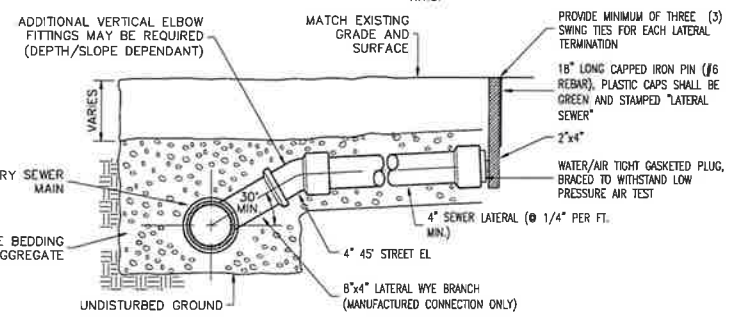
WATERMAIN / SEWER CROSSING DETAIL

CONDITION	SCHEMATIC	REQUIREMENTS
I WATER LINE ABOVE SEWER LINE		A) WATER LINE AND SEWER LINE PIPE LENGTHS TO BE CENTERED AT CROSSING. EACH LENGTH OF PIPE TO BE 10 FT. MIN.
II WATER LINE ABOVE SEWER LINE		A) WATER LINE AND SEWER LINE PIPE LENGTHS TO BE CENTERED AT CROSSING. EACH LENGTH OF PIPE TO BE 10 FT. MIN. B) WHEN BOTH WATER LINE AND SEWER LINE ARE NEW, SLEEVE SEWER LINE WITH STEEL CASING FOR 10 FT. EACH SIDE OF CROSSING. --OR-- WHEN ONE LINE IS EXISTING, SLEEVE PIPE BEING INSTALLED WITH STEEL CASING FOR 10 FT. EACH SIDE OF CROSSING.
III SEWER LINE ABOVE WATER LINE		A) WATER LINE AND SEWER LINE PIPE LENGTHS TO BE CENTERED AT CROSSING. EACH LENGTH OF PIPE TO BE 10 FT. MIN. B) SLEEVE SEWER LINE WITH "STEEL CASING FOR 10 FT. EACH SIDE OF CROSSING." C) PROVIDE CRADLE OF CONCRETE OR CRUSHER CRUSHER RUN STONE (SEE TRENCH SECTION DETAIL BELOW) FOR WATER LINE AND SEWER LINE FOR 10 FT. EACH SIDE OF CROSSING.
<p>NOTES</p> <p>WL WATER LINE SL SEWER LINE D OUTSIDE DIAMETER OF PIPE</p> <p>IN NO CASE SHALL PIPES BE CLOSER THAN 12 INCHES APART. DISTANCES ARE MEASURED BETWEEN OUTSIDES OF PIPE.</p>		



SANITARY LATERAL HOUSE CONNECTION

N.T.S.



CROSS SECTION

NOTE: SEE PLANS FOR PROPOSED LATERAL LOCATIONS AND LENGTHS. CONTRACTOR SHALL COORDINATE LATERAL LOCATIONS WITH PROPERTY OWNERS REFER TO SPECIFICATIONS FOR COORDINATION REQUIREMENTS.

SANITARY SEWER MAIN / STUB CONNECTION

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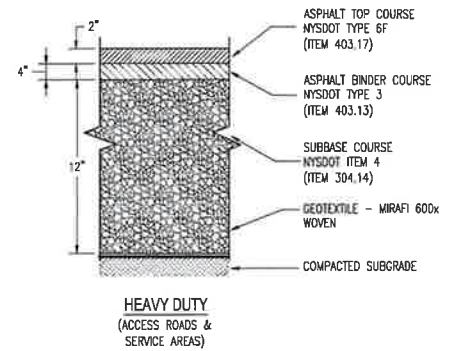


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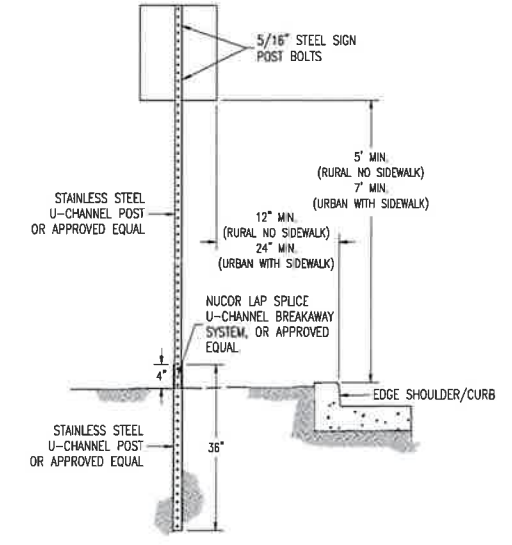
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CIVIL DETAILS
C8

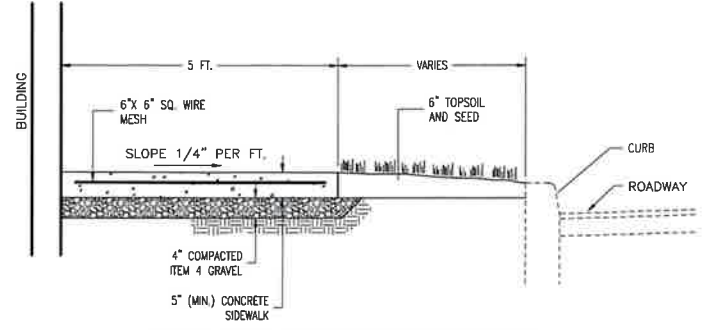


- HEAVY DUTY**
(ACCESS ROADS & SERVICE AREAS)
- NOTES:
1. ALL PAVEMENT AND BASE MATERIAL SHALL CONFORM TO NEW YORK STATE DEPT. OF TRANSPORTATION "STANDARD SPECIFICATIONS, CONSTRUCTION AND MATERIALS".
 2. SUBGRADE AND SUBBASE SHALL BE COMPACTED TO 95% MAX. STANDARD PROCTOR DENSITY.
 3. IF SUBGRADE IS UNSUITABLE OR UNSTABLE, UNDERCUT AND REPLACE WITH APPROVED SELECT GRANULAR FILL COMPACTED TO 95% MAX. STANDARD PROCTOR DENSITY.

ACCESS ROAD / DRIVEWAY SECTION
N.T.S.

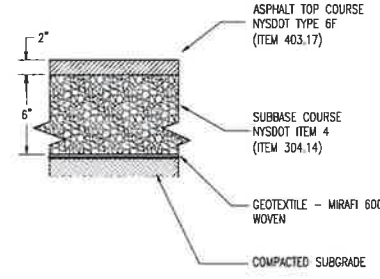


TYPICAL SIGN INSTALLATION
N.T.S.



CONCRETE SIDEWALK SECTION
N.T.S.

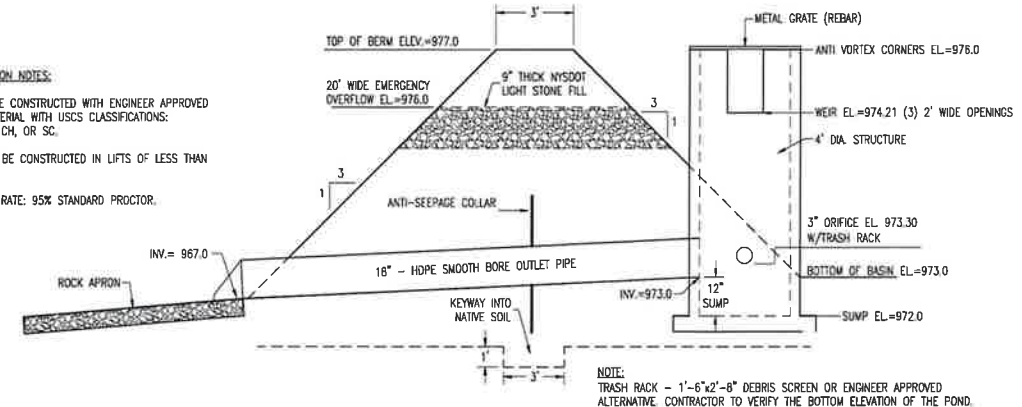
- CONCRETE SIDEWALK NOTES**
1. The Local Code Enforcement Officer shall be notified prior to repair of existing sidewalk or construction of new sidewalk within a public right-of-way.
 2. Appropriate barricades shall be required for the entire construction period.
 3. Provide 3500 psi (28 day compressive strength) concrete, utilizing Type II Portland cement and 6" x 6" sq wire mesh reinforcement.
 4. Provide 5/8" wide asphalt impregnated fiber board expansion joints in sidewalk construction as follows:
 - Adjacent to all concrete curbing and gutters.
 - Adjacent to all building foundations or walls.
 - Abutting yard walks, driveways or existing sidewalks.
 - Approximately every 20 ft. in long sidewalk runs.
 5. Sidewalk shall have a light broom finish across the walk. Edges and joints shall be rounded by an edging tool.
 6. Side walk shall be coated with a curing compound after finishes are complete.



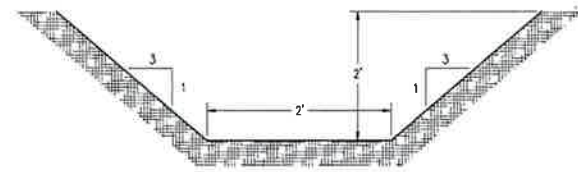
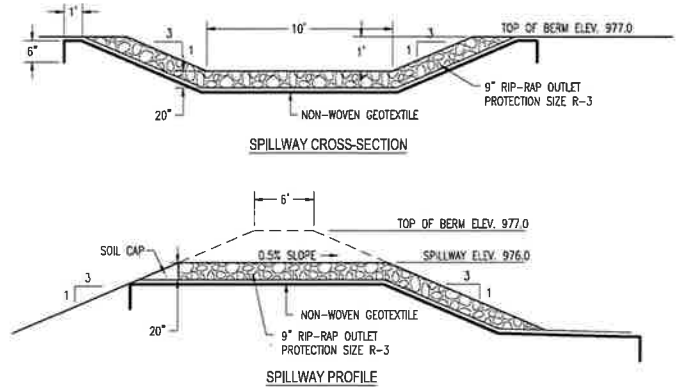
- LIGHT DUTY**
(PAVED WALKWAYS)
- NOTES:
1. SUBGRADE AND SUBBASE SHALL BE COMPACTED TO 95% MAX. STANDARD PROCTOR DENSITY.
 2. IF SUBGRADE IS UNSUITABLE OR UNSTABLE, UNDERCUT AND REPLACE WITH APPROVED SELECT GRANULAR FILL COMPACTED TO 95% MAX. STANDARD PROCTOR DENSITY.

WALKWAY PAVEMENT SECTION
N.T.S.

- BERM CONSTRUCTION NOTES:**
1. BERM MAY BE CONSTRUCTED WITH ENGINEER APPROVED ON-SITE MATERIAL WITH USCS CLASSIFICATIONS: ML, CL, MH, CH, OR SC.
 2. BERM SHALL BE CONSTRUCTED IN LIFTS OF LESS THAN 12 INCHES.
 3. COMPACTION RATE: 95% STANDARD PROCTOR.



OUTLET STRUCTURE DETAIL
N.T.S.



TYPICAL SWALE
N.T.S.

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CIVIL DETAILS (2)

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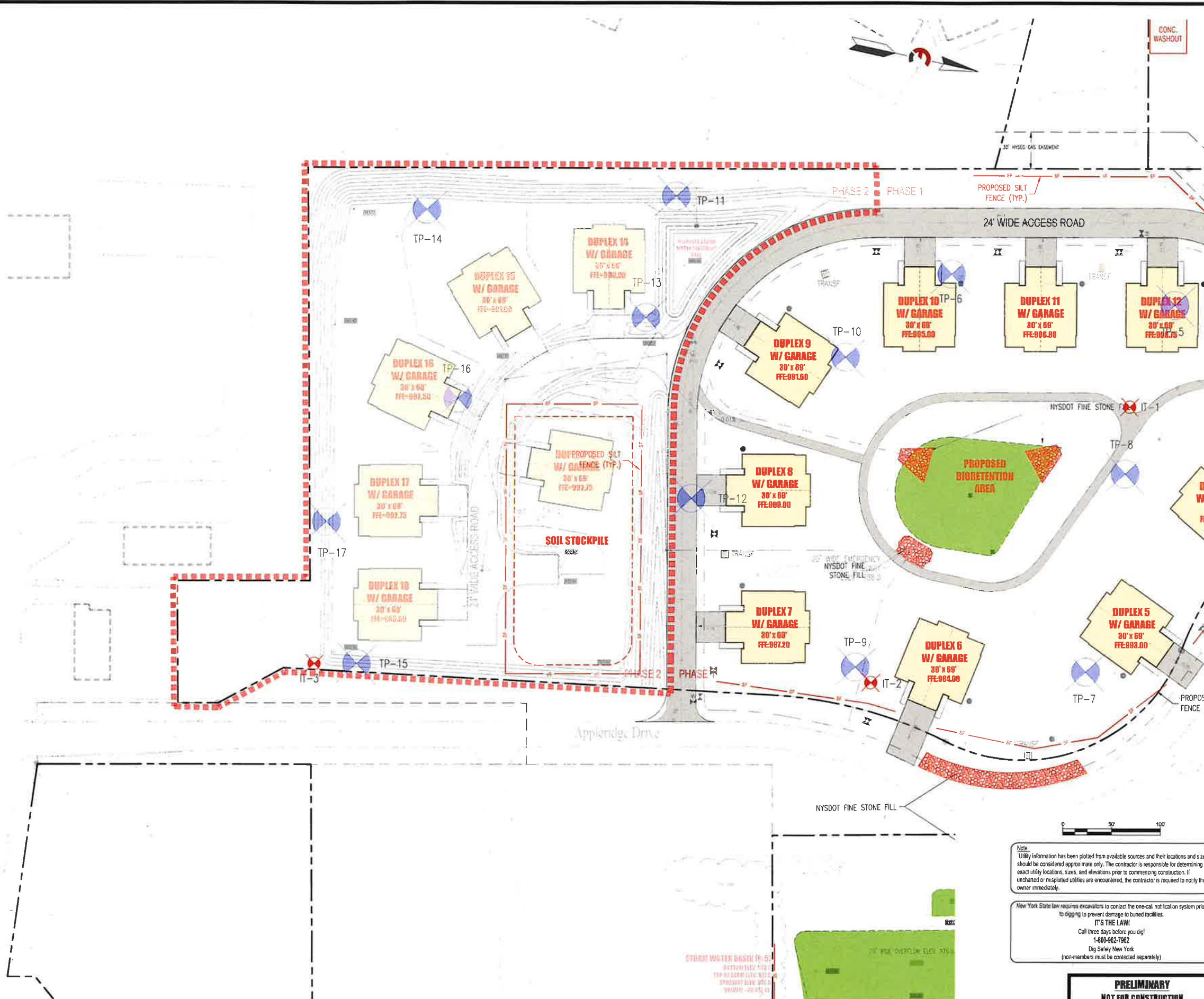
C9

E&S PLAN NOTES:

- ONLY LIMITED DISTURBANCE WILL BE PERMITTED TO PROVIDE ACCESS TO THE SITE FOR GRADING AND ACQUIRING BORROW TO CONSTRUCT THOSE BMPs.
- EROSION AND SEDIMENT BMPs MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPs.
- AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMPs MUST BE STABILIZED IMMEDIATELY.
- STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
- UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- SITE CONTRACTOR TO BECOME CO-PERMITTEE PRIOR TO EARTHWORK ACTIVITIES COMMENCING. SITE CONTRACTOR IS RESPONSIBLE FOR ALL CONDITIONS OF THE E&S PERMITS.

CONSTRUCTION SEQUENCE

- ALL PAGE NUMBERS (P.5**) REFER TO THE NEW YORK STATE GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL.
- CONTROL DUST ON SITE TO PREVENT DUST LEAVING THE SITE AND CREATING OFF-SITE DAMAGE, HEALTH HAZARDS, AND TRAFFIC SAFETY PROBLEMS. TREATMENT INCLUDES BUT IS NOT LIMITED TO SPRAYING DISTURBED SOIL SURFACES WITH WATER (5A.87).
- INSTALL STABILIZED CONSTRUCTION ENTRANCE (5A.75), WIDTH - TWELVE (12) FT. MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. IF ONLY ONE ENTRANCE IS USED THE MINIMUM WIDTH SHALL BE TWENTY-FOUR (24) FEET.
- STANDARD SILT FENCE (P. 5A.19) SHALL THEN BE PLACED AROUND ALL DISTURBED AREAS.
- CONSTRUCTION FENCE SHALL THEN BE PLACED AROUND THE BIOTRETENTION BASIN AREA TO PREVENT ANY STAGING OF CONSTRUCTION EQUIPMENT OR MATERIALS.
- INSTALL FOREBAY AND ROCK OUTLET PROTECTION (P. 5B.21) AT THE STORM SEWER OUTLET. UTILIZE THE FOREBAY AS A SEDIMENT TRAP DURING CONSTRUCTION. KEEP FOREBAY ELEVATION ONE FOOT HIGHER THAN SHOWN ON PLANS. THIS WILL ALLOW FOR THE FOREBAY TO BE MAINTAINED DURING CONSTRUCTION. AT THE END OF CONSTRUCTION ONCE STABILIZATION HAS BEEN ACHIEVED, REMOVE ANY BUILT UP SEDIMENT ALONG WITH THE ADDITIONAL FOOT OF MATERIAL ORIGINALLY LEFT.
- CLEAR AND GRUB THE SITE. STRIP TOPSOIL AND STOCKPILE ON-SITE WITH PERIMETER SILT FENCE AND VEGETATIVE COVER.
- INSTALL ALL VEGETATED SWALES AND SEED/MULCH IMMEDIATELY. ENSURE THAT ALL RUNOFF IS DIRECTED TO THE FOREBAY.
- CONSTRUCT STORM WATER BASIN TO FINAL GRADES. SEED & MULCH BASIN TO ESTABLISH VEGETATIVE COVER.
- INSTALL ALL CATCHBASINS. INLET PROTECTION (P. 5A.27) SHALL BE PLACED AROUND ALL STORM DRAIN INLETS. UTILIZE TYPE II IN AREAS OF EXCAVATION AND TYPE III IN PAVEMENT AREAS. CONVERT ALL FABRIC DROP INLET PROTECTION TO TYPE III IN PAVEMENT PROTECTION UPON PAVING COMPLETION WITHIN PROJECT AREA.
- CONSTRUCT BUILDING FOUNDATION AND ENCLOSE BUILDING.
- FINALIZE CONSTRUCTION OF MAIN PROJECT ELEMENTS INCLUDING INFRASTRUCTURE AND NEW PAVEMENT.
- PERFORM SOIL RESTORATION TO DISTURBED AREAS OF THE SITE THAT WILL NOT BE PAVED. SOIL RESTORATION INCLUDES DEEP RIPPING OF THE SUBSOIL TO A MINIMUM DEPTH OF 12-INCHES, MIXING 3-INCHES OF COMPOST INTO THE SUBSOIL AND SPREADING 6-INCH OF TOPSOIL TO THE SITE. SOIL RESTORATION IS REQUIRED FOR ALL AREAS OF EXISTING GRAVEL IMPERVIOUS AREA THAT WILL BE CONVERTED TO PERVIOUS COVER.
- SPREAD TOPSOIL, FINE GRADE, SEED, MULCH AND ESTABLISH VEGETATIVE COVER.
- ONCE DISTURBED AREAS HAVE REACHED STABILIZATION, CONSTRUCT THE BIOTRETENTION AREA. THE BIOTRETENTION AREA CAN ONLY BE INSTALLED WHEN A DENSE AND VIGOROUS VEGETATIVE COVER HAS BEEN ESTABLISHED OVER THE CONTRIBUTING PERVIOUS DRAINAGE AREAS.
- REMOVE SEDIMENT FROM ANY SEDIMENT TRAPS OR BASINS.
- REMOVE ALL TEMPORARY EROSION CONTROL METHODS WHEN CONTRIBUTING DRAINAGE AREAS HAVE REACHED FINAL STABILIZATION.



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Rev	Date	Revision Description

I & A Violation Of The New York Education Law, Article 145 Section 7209, For Any Person, Unless He Is Acting Under The Direction Of A Licensed Professional Engineer Or Land Surveyor To Alter An Item In Any Way, If An Item Bearing The Seal Of An Engineer Or Land Surveyor Is Altered, The Altering Engineer Or Land Surveyor Shall Affix To The Item His Seal And The Notation "Altered By Followed By His Signature And The Date Of Such Alteration, And A Specific Description Of The Alteration."

PHASE 2 ORCHARD
HOMES DEVELOPMENT LLC
VILLAGE OF HOUSEHEADS, CHERUNG COUNTY, NEW YORK

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Scale: 1" = 40'
11x17 Prints are 1/2 Size
Date: March 14, 2024
Design By: RSN
Drawn By: RSN
Checked By: KMS
Project No.: 15015-006
Drawing Name: 15015-006 phase2.dwg

E & S PLAN
C10

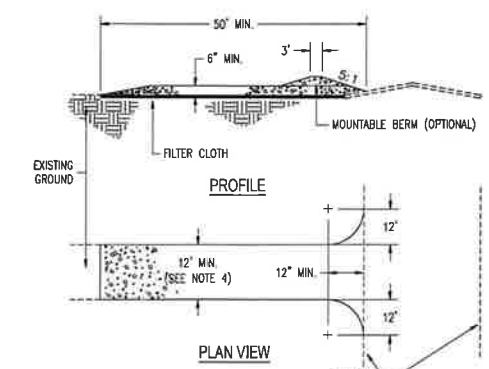
STANDARD AND SPECIFICATIONS FOR LAWN AREA IMPROVEMENT

Establishing Grasses (Turf grasses)

- Time of planting:
 - Fall planting is preferred. Seed after August 15. In the spring plant until May 15.
 - If seeding is done between May 15 and August 15, irrigation may be necessary to insure a successful seeding.
- Site Preparation:
 - Install needed water and erosion control measures and bring area to be seeded to desired grades. A minimum of 4 in topsoil is required.
 - Prepare seedbed by loosening soil to a depth of 1 to 6 inches.
 - Remove all stones over 1 inch in diameter, sticks and foreign matter from the surface.
 - Lime to pH of 6.0 - 7.0.
 - Fertilize as per soil test or apply 800 to 900 pounds of 5-10-10 or equivalent per acre (20 lbs./1,000 sq. ft.).
 - Incorporate lime and fertilizer in top 2 - 4 inches of topsoil.
 - Smooth and firm the seedbed.
- Planting:
 - Use a cultipacker type seeder if possible.
 - If seed is to be drilled, cultipack or roll before and after seeding. Drill the seed to a depth of $\frac{1}{8}$ to $\frac{1}{4}$ inch. If seed is to be broadcast, cultipack or roll after seeding on loose soil.
 - If hydroseeded, lime and fertilizer may be applied through the seeder.
- Mulching:
 - Site preparation:
 - Prior to mulching, install the necessary temporary or permanent erosion control (structural) practices and drainage systems within or adjacent to area to be mulched.
 - Slope, grade and smooth the site if conventional equipment is to be used in applying and anchoring the mulch.
 - Remove all undesirable stone and other debris depending on anticipated land use.
 - Compacted or crusted soil surface should be loosened to at least 2 inches by disking or other suitable methods.
 - Mulching Materials:
 - The best combination is straw (small grain) mulch applied at 2 ton/acre (90 lbs./1,000 sq. ft.) and anchored with wood fiber mulch (hydromulch) at 500 - 700 lbs./acre (11 - 17 lbs./1,000 sq. ft.). The wood fiber mulch must be applied through a hydroseeder immediately after mulching.

SITE/USE	SPECIES % BY WEIGHT	Lbs./1,000 sq. ft.	Lbs./Acre	
Lawn Seed Mix	65% Kentucky Bluegrass Blend	2.0 - 2.6	85 - 114	
	Sunny Sites (well moderately well and somewhat poorly drained soils)	20% Perennial Ryegrass	0.6 - 0.8	26 - 35
	15% Fine Fescue	0.4 - 0.6	19 - 26	
		3.0 - 4.0	130 - 175	
Sunny Droughty Sites - General recreation areas and lawns, low maintenance (somewhat excessively to excessively drained soils)	65% Fine Fescue	2.6 - 3.3	114 - 143	
	15% Perennial Ryegrass	0.6 - 0.7	26 - 33	
	20% Kentucky Bluegrass Blend	0.8 - 1.0	35 - 44	
		4.0 - 5.0	174 - 220	
Ungrazed Slope/Drainage Basin Seed Mix (Mx-ERNM-180-1)	38% Little Bluestem	0.13	5.7*	
	25% Virginia Wildrye	0.096	3.75*	
	23% Fox Sedge	0.079	3.45*	
	7.5% Redtop Panicgrass	0.026	1.125*	
	5.4% River Dats	0.019	0.81*	
Required rate with a cover of grain rye at 30 lb/acre	0.5% Blunt Broom Sedge	0.0017	0.075	
	0.3% Soft Rush	0.0010	0.045*	
	0.3% Path Rush, PA Ecotype	0.0010	0.045*	

- First Year
 - Fertilize 3 to 4 weeks after germination by applying 1 lb. nitrogen/1,000 sq. ft. using a complete fertilizer with a 2-1-1 or 4-1-3 ratio or as recommended by soil test results.
 - Restrict use. New seeding's should be protected from use for 1 full year to allow development of a dense sod with good root structure.
- Maintaining Grasses
 - Maintain a pH of 6.0 to 7.0.
 - Fertilize in late May to early June as follows with 10-10-10 analysis fertilizer at the rate of 10 lbs./1,000 sq. ft. and repeat in late August if sod density is not adequate. Top dress weak sod annually in the spring but at least once every 2 to 3 years.
 - Aerate compacted or heavily used areas, like athletic fields, annually as soon as soil moisture conditions permit. Aerate area 6 to 8 times using a spoon or hollow tine type aeration. Do not use solid spike equipment.
 - Reseed bare and thin areas annually with original species.

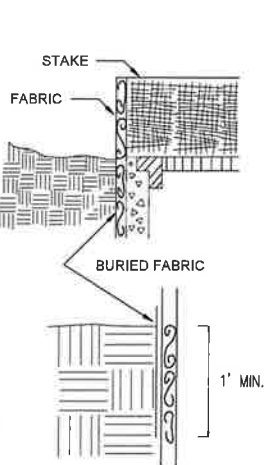
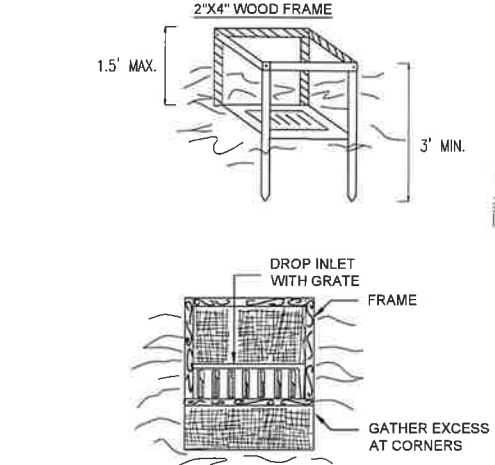


STABILIZED CONSTRUCTION ENTRANCE

N.T.S.

CONSTRUCTION SPECIFICATIONS

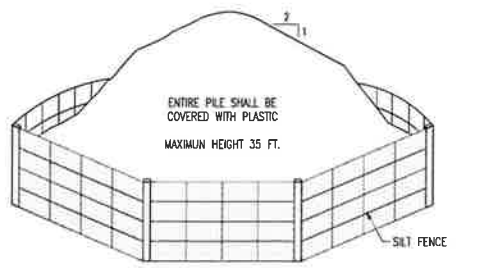
- Stone size: - Use 2" stone, or reclaimed or recycled concrete equivalent.
- Length: - As required, but no less than 50 feet.
- Thickness: - Not less than (6) inches.
- Width: - Twelve (12) ft. Minimum, but not less than the full width at points where ingress or egress occurs. If only one entrance is used the minimum width shall be twenty-four (24) feet.
- Filter cloth: - Will be placed over the entire area prior to placing of stone.
- Surface water: - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes is permitted.
- Maintenance: - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately by Contractor.
- Washing: - Wheels shall be cleaned to remove sediment prior to entrance onto a public rights-of-way. When washing is required it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
- Periodic inspection and needed maintenance shall be provided after each rain.



FILTER FABRIC STORM DRAIN PROTECTION

N.T.S.

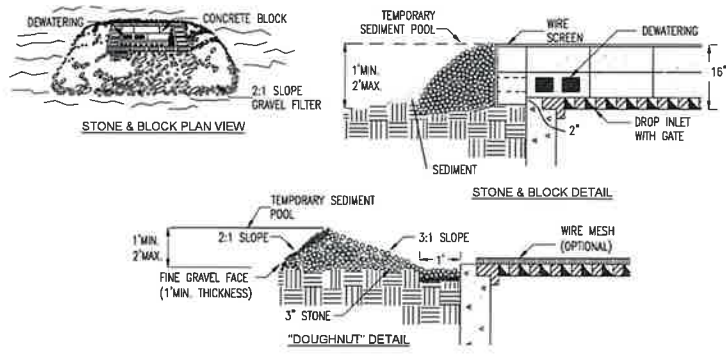
- ### SPECIFICATIONS FOR SILT FENCE PROTECTION
- Filter fabric shall have an EDS of 40-85.
 - Cut fabric from a continuous roll to eliminate joints. If joints are needed they shall be overlapped to the next stake.
 - Stake materials shall be 2"x4" wood or equivalent metal with a minimum length of 3 feet.
 - Space stakes evenly around inlet 3 feet apart and drive a minimum 18 inches deep. Spans greater than 3 feet may be bridged with the use of wire mesh behind fabric for support.
 - Fabric shall be embedded 1 foot minimum below ground and backfilled. It shall be securely fastened to the stakes and frame.
 - A 2"x4" wood frame shall be completed around the crest of the fabric for over flow stability.
 - Maximum drainage area 1 acre.
 - Inspection shall be frequent and repair or replacement shall be made promptly as needed.



- ### SOIL STOCKPILING NOTES:
- AREA FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
 - MAXIMUM SLOPE OF STOCKPILE SIDESLOPES SHALL BE 2:1.
 - UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH SILT FENCING AND THEN STABILIZED WITH SEED OR SECURED IMPERVIOUS COVER.
 - SEE SILT FENCE INSTALLATION DETAIL.
 - PLASTIC SHEETING SHALL BE PLACED BELOW ALL STOCKPILE AREAS.

SOIL STOCKPILE DETAIL

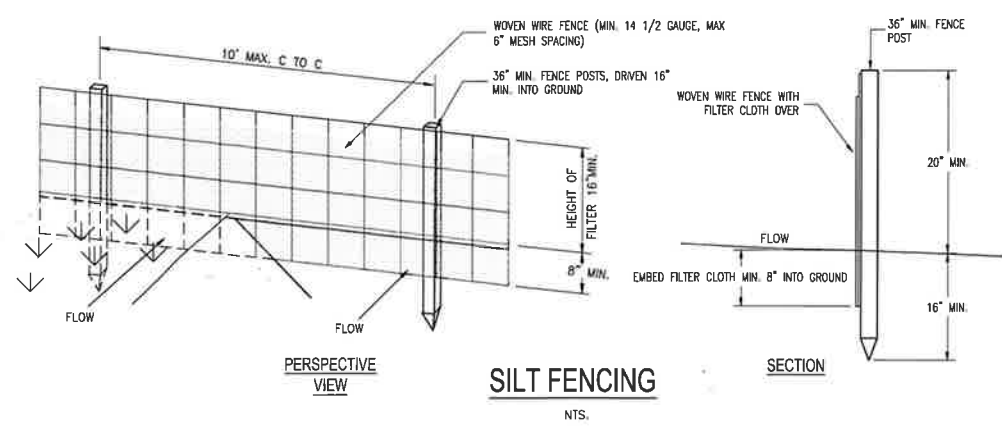
NOT TO SCALE



IN-PAVEMENT INLET PROTECTION

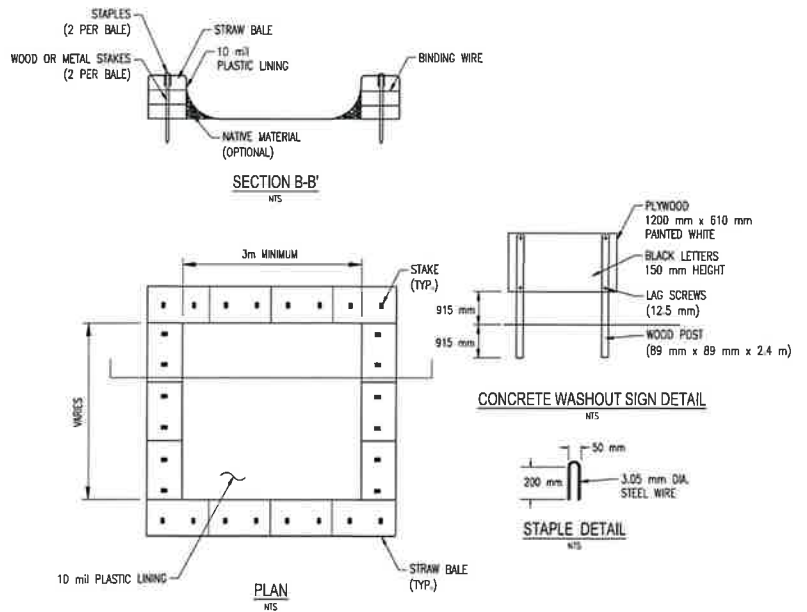
N.T.S.

- LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DOWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.



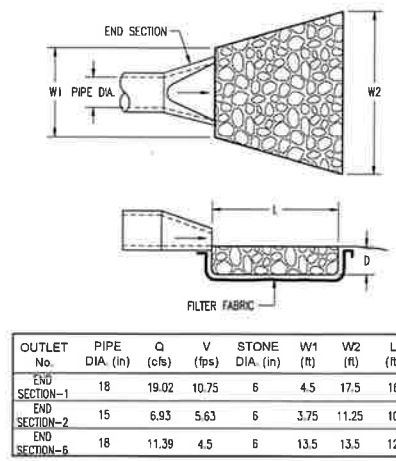
CONSTRUCTION SPECIFICATIONS FOR FABRICATED SILT FENCE

- Woven wire fence to be fastened securely to fence posts with wire ties or staples.
 - Filter cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and mid section.
 - When two sections of filter cloth adjoin each other they shall be overlapped by 6" and folded.
 - Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.
- Posts: Steel either 1" or 1 1/2" type or 2" hardwood.
- Fence: Woven wire, 14 1/2 ga. 6" max. mesh opening filter.
- Cloth: Filter x, mirafil 100x, slabi-filco 1140n or approved equal, prefabricated unit; geotab, envirofence, or approved equal.



CONCRETE WASHOUT DETAIL

N.T.S.



RIP-RAP APRON DETAIL

N.T.S.

OUTLET No.	PIPE DIA. (in)	Q (cfs)	V (fps)	STONE DIA. (in)	W1 (ft)	W2 (ft)	L (ft)	D (ft)
END SECTION-1	18	19.02	10.75	6	4.5	17.5	16	14
END SECTION-2	15	6.93	5.63	6	3.75	11.25	10	14
END SECTION-6	18	11.39	4.5	6	13.5	13.5	12	14

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