POST-CONSTRUCTION STORMWATER MANAGEMENT (PSCM) PLAN OPERATION. OWNERSHIP AND

MAINTENANCE PROGRAM

PRELIMINARY / FINAL SUBDIVISION AND LAND DEVELOPMENT PLAN

ARBORVIEW

UPPER ALLEN TOWNSHIP

The storm water volume and quality control Best Management Practices (BMPs) constructed for the Arborview Subdivision Plan will be maintained to function as designed, and shall implement

the procedures described below; this shall be in the deed of the lot whenever the lot is sold to another. The developer (1849 Development LLC) shall own and maintain the stormwater facilities until the responsibility is transferred to the homeowners association for the development. However, Upper Allen Township will own and maintain the stormwater facilities located within dedicated

The approved facilities are to be permanent, and can only be removed or altered after approval by one or more of the following entities which may have jurisdiction: Upper Allen Township; and/or PA D.E.P. The responsible entity shall maintain stormwater management facilities, and permanent erosion and sediment pollution control system(s) as set forth herein.

The following physical facilities shall be maintained to the original design and dimensions shown on the design plans approved by Upper Allen Township, until such time as an amended plan is

--stormwater inlets, pipes and riprap aprons --rain gardens #A, B, C, and D;

--seepage beds #1, 2, 3 and 4; --stormwater detention/infiltration basin #1; and --drainage easements associated with the above

The designated maintainer / lessee shall complete a visual inspection of BMPs as specified below for each BMP, using a registered profession to conduct the inspections and prepare reports.

Rain Gardens #A, B, C and D and Seepage Beds #1, 2, 3 and 4:

--Inspect one time per year for sediment build-up, any erosion, and adequate vegetative cover condition. --Remove any accumulation of debris at least once per year (such debris may include, but shall not be limited to aggregate material, leaves, grass clippings, and soil material). Removal of sediment/debris shall take place when the area has dried, if possible. Dispose of sediment, trash or other waste material at suitable disposal / recycling sites and in compliance with local, state and federal waste regulations.

--Maintain groundcover vegetation, and re-vegetate repaired areas in accordance with the specifications contained in the applicable erosion and sediment pollution control plan; and immediately repair any erosion damage by replacing topsoil on all areas that experience minor erosion, and seeding, mulching and matting such areas immediately in accordance with the specifications contained in the applicable erosion and sediment pollution control plan -- Trees and shrubs should be inspected once per year to evaluate health

Failure (BMP no longer provides the benefit or performance anticipated) for this BMP is the following:

--Inability to support vegetation due to standing water and/or compaction of soil; and --Standing water for greater than 72 hours.

--Examine the soil structure to see if it is compacted. If so, aerate the area. If this does not work, then in a short-term continuous operation when the area is dry, till surface soil and re-vegetate immediately with sod. Or, replace the top 18" with new loam soil and immediately re-vegetate --Install an underdrain pipe connected to the storm sewer system or discharge to daylight.

--Inspect one time per year for the first five years, and once every three years thereafter, and during or immediately after the cessation of a one hundred year or greater storm event. --Inspect the outlet structure, basin bottom, inlet, containment berm and riprap areas. Inspect for sediment build-up, any erosion, damage to outlet structure, berm stability, sinkholes, depressions, clogging of outlet, pools of standing water, and for adequate (min. 95%) vegetative cover condition. --Remove any accumulation of debris (such debris may include, but shall not be limited to aggregate material, leaves, grass clippings, and soil material). Removal of sediment/debris shall take place when the area has dried, if possible. Dispose of sediment, trash or other waste material at suitable disposal / recycling sites and in compliance with local, state and federal waste

--Maintain groundcover vegetation. Mow and trim vegetation to ensure safety, aesthetics, and to suppress weeds and invasive / exotic vegetation. Mow only when dry, to avoid rutting. Vehicular access is prohibited within basins except for maintenance; and care should be taken to avoid excessive compaction by mowers. Since the interior of the basin shall be maintained as meadow, mowing can occur only several times per year

--For any erosion, rills and gullies, correct as needed. Re-vegetate and repair areas in accordance with the specifications contained in the applicable erosion and sediment pollution control plan; and immediately repair any erosion damage by replacing topsoil on all areas that experience minor erosion, and seeding, mulching and matting such areas immediately in accordance with the specifications contained in the applicable erosion and sediment pollution control plan. --Apply fertilizer and pesticides only when absolutely necessary to salvage desirable vegetation, and to eliminate exotic / invasive species.

Corrective measure options should failure of this BMP occur:

--Aerate soil areas if they become compacted.

-- Examine the soil structure to see if it is compacted. If so, aerate the area. If this does not work, then in a short-term continuous operation when the area is dry, till surface soil and re-vegetate immediately with sod. Or, replace the top 18" with new loam soil and immediately re-vegetate. --Install an underdrain pipe connected to the storm sewer system or discharge to daylight.

-All inlets, storm piping, and drainage structures shall be kept free of any obstructions and foreign material that would cause disruption of water flow in a manner not anticipated for the facility. --Dislodged rock in any riprap apron at a pipe outlet should be reset in place or replaced.

-Inspect two times per year, with one time being in late autumn after leaves have dropped, and the other in early spring when there may be grit and plow deposits.

--For swales within building lots, the lot owner shall be responsible for the day to day maintenance of the swale, such as mowing. Lot owners may install ornamental plantings beside the swale and within the drainage easement provided such do not block the flow of runoff.

--Complete a visual inspection at least once per year, and immediately after the cessation of a one hundred year or greater storm event. -Inspect the bottom and side slopes for sediment / debris build-up, any erosion, pools of standing water, and adequate vegetative cover condition. Inspect the swale uniformity in cross-section shape and longitudinal slope. Check for any obstructions and foreign material that would cause disruption of water flow in a manner not anticipated for the facility, including intrusions placed by

--Remove any accumulation of debris at least once per year (such debris may include, but shall not be limited to aggregate material, leaves, grass clippings, and soil material). Removal of sediment/debris shall take place when the area has dried, if possible. Dispose of sediment, trash or other waste material at suitable disposal / recycling sites and in compliance with local, state --For any erosion, rills and gullies, correct as needed. Re-vegetate and repair areas in accordance with the specifications contained in the applicable erosion and sediment pollution control plan;

and immediately repair any erosion damage by replacing topsoil on all areas that experience minor erosion, and seeding, mulching and matting such areas immediately in accordance with the specifications contained in the applicable erosion and sediment pollution control plan. --Apply fertilizer and pesticides only when absolutely necessary to salvage desirable vegetation

--A written report documenting each inspection shall be retained by the designee, including dates of inspection, dates of repair, list of items inspected, list of items repaired, list of items repaired, list of items repaired. costs of replaced items, list of maintenance tasks performed, name and organization of the person conducting the inspection, and the contractor(s) information. A copy of the inspection report should be submitted to the Township within one month following completion of the inspection. --For any structural facility (pipe, inlet, manhole), it must be repaired or replaced if damaged more than superficially, in a way that is a safety hazard, if structurally unsound, or if not substantially

performing as it is intended per the original design. --The owner shall immediately notify Upper Allen Township prior to initiating any "major" repair activities (such repairs that may be required as a result of settlement, sinkholes, seeps, structural cracking, foundation movement). All "major" repairs shall be conducted under the direction and supervision of a qualified engineer, geologist, and/or hydrogeologist.

--Vehicular access and parking is prohibited within basins and rain gardens except for maintenance; and care should be taken to avoid excessive compaction by mowers --All impervious surfaces shall be maintained clean of oil, fuel or other toxic spills, in accordance with State. Federal or local regulations. --The PCSM plan, inspection reports, and monitoring records must be available for review and inspection by the PA Department of Environmental Protection and/or the County Conservation

Upper Allen Township shall have the right to:

- Enter the site and inspect the facilities at any time: Require the facility maintainer to take corrective measures, and assign reasonable time periods for any necessary action; and
- Authorize maintenance to be done by the Township or an agent or contractor of the Township, and the liening of the cost of the work against the entity responsible for maintenance.

A licensed professional or their designee shall be present on the site for the following: --installation and then final configuration / stabilization of storm basin #1; and

--installation of rain gardens #A, B, C and D. --installation of seepage beds #1, 2, 3 and 4.

HEREBY DEDICATED TO THE PUBLIC USE.

SIGNATURE OF THE INDIVIDUAL

SIGNATURE AND SEAL OF THE NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ACKNOWLEDGE DEED!

COMMONWEALTH OF PENNSYLVANIA

LABELED "NOT FOR DEDICATION").

EQUITABLE OWNER:

COUNTY OF _____

COMMONWEALTH OF PENNSYLVANIA COUNTY OF ____

ON THIS, THE ____ DAY OF _____, 20_, BEFORE ME, THE UNDERSIGNED, PERSONALLY APPEARED L. NELSON AND ESTHER B. WINGERT ,BEING OWNERS OF EXISTING LOTS #1 AND 3 WHO BEING DULY SWORN ACCORDING TO LAW, DISPOSES AND SAYS THAT THEY ARE THE OWNERS OF PROPERTY SHOWN ON THIS PLAN. THAT THE PLAN THEREOF WAS MADE AT THEIR DIRECTION, THAT IT ACKNOWLEDGES THE SAME TO BE THEIR ACT AND PLAN AND DESIRES THE SAME TO BE RECORDED, AND THAT ALL STREETS AND OTHER PROPERTY IDENTIFIED AS PROPOSED PUBLIC PROPERTY (EXCEPTING THOSE AREAS LABELED "NOT FOR DEDICATION") ARE

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ON THIS THE___DAY OF_____, 20_, BEFORE ME, THE UNDERSIGNED

COMPANY, EQUITABLE OWNER OF THE PROPERTY SHOWN ON THIS PLAN.

BEHALF OF THE COMPANY, FURTHER ACKNOWLEDGES THAT ALL STREETS

AND OTHER PROPERTY IDENTIFIED AS PROPOSED PUBLIC PROPERTY ARE

THAT HE IS AUTHORIZED TO EXECUTE SAID PLAN ON BEHALF OF THE

COMPANY, THAT THE PLAN IS THE ACT AND DEED OF THE COMPANY,

THAT THE COMPANY DESIRES THE SAME TO BE RECORDED, AND ON

HEREBY DEDICATED TO THE PUBLIC USE, (EXCEPT THOSE AREAS

SIGNATURE AND SEAL OF NOTARY PUBLIC

MY COMMISSION EXPIRES_______20____

OFFICER PERSONALLY APPEARED, DONALD FARINELLI, BEING,

OF 1849 DEVELOPMENT, LLC, A PENNSYLVANIA LIMITED LIABILITY

MY COMMISSION EXPIRES _____

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APPROVED BY THE BOARD OF COMMISSIONERS OF UPPER ALLEN TOWNSHIP

THIS PLAN RECOMMENDED FOR APPROVAL BY THE UPPER ALLEN TOWNSHIP

PLANNING COMMISSION

THIS 30th DAY OF APRIL, 2018.

SIGNATURE OF THE INDIVIDUAL MY COMMISSION EXPIRES _____

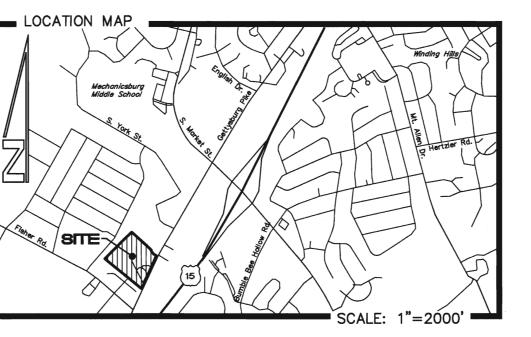
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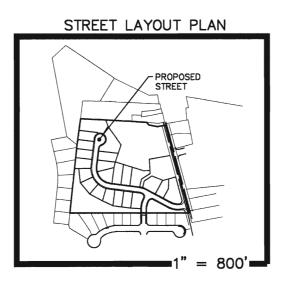
ON THIS, THE ___ DAY OF _____ 20_, BEFORE ME, THE UNDERSIGNED, PERSONALLY APPEARED LYNN N. AND PATRICIA L. WINGERT , BEING OWNERS OF EXISTING LOT #2, WHO BEING DULY SWORN ACCORDING TO LAW, DISPOSES AND SAYS THAT THEY ARE OWNERS OF PROPERTY SHOWN ON THIS PLAN, THAT THE PLAN THEREOF WAS MADE AT THEIR DIRECTION, THAT IT ACKNOWLEDGES THE SAME TO BE THEIR ACT AND PLAN AND DESIRES THE SAME TO BE RECORDED. AND THAT ALL STREETS AND OTHER PROPERTY IDENTIFIED AS PROPOSED PUBLIC PROPERTY (EXCEPTING THOSE AREAS LABELED "NOT FOR DEDICATION") ARE HEREBY DEDICATED

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SIGNATURE AND SEAL OF THE NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ACKNOWLEDGE DEEDS

CUMBERLAND COUNTY, PENNSYLVANIA





ZONING REQUIREMENTS:

The site is zoned R-2 Medium Density Residential District

(for single family detached dwellings with public water and sewer) Minimum lot size: 10,000 square feet Minimum street frontage: 75 feet Minimum front yard: 25 feet Minimum side vard: 10 feet Minimum rear vard: 15 feet

Maximum principal building height: 35 feet Minimum off-street parking: 2 parking spaces per dwelling unit (for single family detached dwellings with public sewer but no public water)

Minimum lot size: 20,000 square feet Minimum street frontage: 75 feet Minimum front yard: 25 feet Minimum side yard: 10 feet Minimum rear yard: 15 feet Maximum building coverage: 30%

Maximum impervious coverage: 45% Maximum principal building height: 35 feet

GENERAL NOTES

Proposed development is installation of two public streets, to serve 22 new single family detached dwelling building lots. One existing dwelling will be removed. Two existing developed lots will be reconfigured with the subdivision

- and the single family dwellings and outbuildings on them will remain. As-Built plans, mylar copies, and digital .dwg copies shall be provided 2. Nothing shall be placed, planted, set or put within the area of an easement that would adversely affect the function of the easement or conflict with the easement agreement.
- Direct vehicular access for lot #3 shall be restricted to Arborview Drive.
- 4. Arborview Drive and Coventry Drive are proposed for dedication to public use. Proposed sanitary sewer mains shall be offered to Upper Allen Township. No other lands or facilities shall be offered for dedication to public use. All proposed drainage facilities within dedicated and accepted street rights-of-way shall be owned and maintained by Upper Allen Township.

5. Stormwater facilities outside of dedicated and accepted street rights-of-way shall be owned by the owner of the lot on which they are located, but maintained by the homeowners association established for this development; see

also the detailed operation and maintenance program on this sheet.

This project shall be completed in one phase.

- No protective covenants are proposed other than what is shown on this plan, and provided in the planned community documents.
- Lots #1 through 24 shall have minimum of two off-street parking spaces on the lot, either in a garage and/or driveway.

9. Stormwater management plans approved by the Township shall be on the site throughout the duration of the regulated construction activity. A copy of the approved erosion and sedimentation control plan and any required permits shall be available at the project site at all times during construction.

- 10. Any proposed signs must be in accordance with the Upper Allen Township Zoning Ordinance Section 245 of Article XVIII.
- 11. On-site boundary, topographic information and above ground physical features is based upon a field survey by Alpha Consulting Engineers, Inc. completed in December, 2017. Basis of vertical datum is U.S.G.S.

12. Upper Allen Township is hereby granted use of the drainage easements for observation, and emergency maintenance. Upper Allen Township representatives shall have the right to access via drainage easements any stormwater management BMPs proposed on this plan, at reasonable times and upon presentation of proper credentials.

- 13. All sanitary sewer construction shall conform to the Standard Construction and Material Specifications for Upper Allen Township, latest edition
- 14. All existing buildings within the site indicated to be removed shall be removed prior to proposed construction

15. There are no wetlands, streams, rock outcrops, soil subsidences, floodplains, or contaminated soils known to exist on this site. There are steep slopes present, some of which are man-made, which are shown based upon a topographic survey. Trees over 30" diameter are shown on the plan. There are no registered historic resources on the site.

- 17. The existing dwelling and shed on lot #2 is existing non-conforming for front setback, and shall remain
- 18. Within clear sight triangles shown hereon, no fence, sign or other above grade structure shall be erected, and no hedge, tree, shrub or other growth shall be maintained or permitted which may cause danger to traffic by obscuring the view between three feet and nine feet above the grade of the street or driveway
- 19. The site contractor shall schedule a pre-construction site meeting with the Upper Allen Township Engineer and the Cumberland County Conservation District at least 48 hours prior to starting site construction activities. 20. Construction of all work within the public street right-of-way and work related to storm drainage and sanitary sewer facilities requires inspection by the Township. The contractor must provide minimum 48 hours of notice to the
- 21. As-built plans and shall be provided to the Township. All drawings must be signed and sealed by a professional engineer or land surveyor attesting to the correctness of the facility information shown, in accordance with Section
- 22. Concrete monuments will be set where shown. All other unmarked lot corners shall be marked with iron pins. Monuments and markers shall be set after recording of this plan, after public improvements have been installed, and
- The proposed water system shown herein is schematic only, and the final water design shall be prepared by Suez. Water system construction shall comply with the rules and regulations of the water company.
- 24. Upper Allen Township personnel have the right to deposit snow from the adjacent street within the designated snow dump easement on lot #13; the easement must be kept free of trees and large shrubs. All common open space lots (OS lots) are designated as snow dump areas, on which Upper Allen Township personnel can pile excess snow from street plowing within this development. The Township is not responsible for damage to the open space lots or the snow
- This site is partially underlain with carbonate rock (limestone or dolomites). There is potential for sinkhole development, therefore, special construction procedures may apply. A professional geotechnical engineer / hydro-geologist should be retained to oversee sinkhole repairs in the event that a sinkhole materializes. Prospective home buyers should investigate the purchase of sinkhole insurance.
- All existing utility locations shown should be considered approximate, and horizontal locations and vertical depths shall be verified by the contractor prior to construction
- Lots #OS-1 and OS-2 shall be prohibited from any further development or subdivision except as permitted by Upper Allen Township. Public utilities shall be permitted to cross the lots as necessary. The lots shall be maintained by the developer until maintenance is transferred to an operational homeowners association established for the Arborview development. The owner of the open space lots (developer or homeowners association) shall be responsible for establishment and subsequent enforcement of rules and regulations established in the planned community documents. The developer or the homeowners association shall have the right to plant trees, shrubs, grasses and groundcovers provided they comply with Upper Allen Township ordinances, and comply with the planned community documents.
- 28. The purpose of the sign easement on lot #3 is for the possible erection and maintenance of a development / neighborhood identification sign. The developer or the Homeowners Association shall be responsible for maintenance of
- The Developer grants to Upper Allen Township temporary easements in connection with any sanitary sewer mains, manholes and appurtenances constructed within public streets, until such time that construction of said streets are

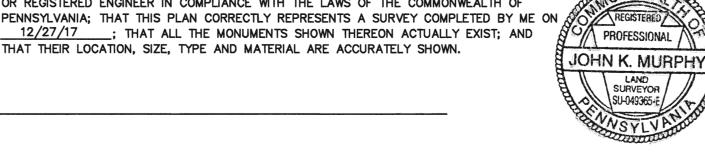
The Developer shall inform his contractors that Coventry Drive shall not be used as the primary construction vehicle entrance, or for primary construction materials delivery entrance, and the developer shall instruct his contractors to

30. The Upper Allen Township Sewage Enforcement Officer must be notified prior to abandoning the existing on-lot sewage disposal system

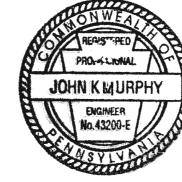
only use the Gettysburg Pike entrance, and that construction employees should not park on Arborfield development streets.

- 31. All intersection controls (STOP and YIELD signs) shall be determined prior to street dedication based on a Traffic & Engineering Study by a Traffic Engineer. Signs shall be installed per PennDOT standards and specifications.
- Lots #1 and 2 fall within the Shepherdstown Municipal Historic District, and as such are subject to additional regulations in Chapter 155. Lot #1 falls within the Steep Slope Protection Overlay District.

, JOHN K. MURPHY, P.E., P.L.S., HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR, OR REGISTERED ENGINEER IN COMPLIANCE WITH THE LAWS OF THE COMMONWEALTH OF PENNSYLVANIA; THAT THIS PLAN CORRECTLY REPRESENTS A SURVEY COMPLETED BY ME ON & 12/27/17 : THAT ALL THE MONUMENTS SHOWN THEREON ACTUALLY EXIST; AND



JOHN K. MURPHY, P.E., P.L.S., ON _____ HAVE REVIEWED AND HEREBY CERTIFY THAT THE STORMWATER MANAGEMENT SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE UPPER ALLEN TOWNSHIP STORMWATER MANAGEMENT ORDINANCE, AND THAT ACCORDING TO GEOLOGIC MAPPING, THIS SITE IS PARTIALLY UNDERLAIN BY HEREBY CERTIFY THIS PLAN TO BE CORRECT AS SHOWN, AND THAT ALL ELEMENTS OF THE PLAN ARE IN CONFORMITY WITH TOWNSHIP CODE AND ANY APPLICABLE STATE



STORMWATER MANAGEMENT PLAN CERTIFICATE:

APPLICANT/OWNER

IT IS HEREBY CERTIFIED THAT THE STORMWATER MANAGEMENT FACILITIES AND

BMP'S ARE PERMANENT FIXTURES AND CANNOT BE ALTERED OR REMOVED

THIS PLAN REVIEWED BY THE TOWNSHIP ENGINEER OF UPPER ALLEN

UNLESS A REVISED PLAN IS APPROVED BY UPPER ALLEN TOWNSHIP.

CUMBERLAND COUNTY PLANNING DEPARTMENT REVIEW STATEMENT:

REVIEWED ON MARCH 16, 2018 BY THE CUMBERLAND COUNTY PLANNING

THIS PLAN RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS IN AND

PA ONE-CALL FOR THIS PROJECT: SERIAL NUMBER: 20173491036

Minimum off-street parking: 2 parking spaces per dwelling unit

Maximum building coverage: 30% Maximum impervious coverage: 45%

- COVER SHEET
- EXISTING FEATURES PLAN
- SUBDIVISION PLAN
- GRADING/UTILITIES PLAN

INDEX OF DRAWINGS:

- LANDSCAPE PLAN
- STORMWATER BMP CONCEPT PLAN
- EROSION CONTROL PLAN
- STREET PROFILES MISCELLANEOUS PROFILES
- SANITARY SEWER DETAILS
- MISCELLANEOUS DETAILS
- STORMWATER DETAILS
- EROSION CONTROL DETAILS DEFERRED IMPROVEMENTS PLAN

DATE:

MARCH 1, 2018

REVISED:

APRIL 5, 2018 MAY 10, 2018

HE FOLLOWING WAIVERS/MODIFICATIONS/DEFERRALS ARE REQUESTED FROM THE UPPER ALLEN TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE;

WAIVER SECTION	DESCRIPTION	DATE OF WAIVER/ DEFERRAL REQUEST	DATE OF WAIVER/ MODIFICATION/DEFERRAL APPROVAL
220-15.B.(11)	PERTAINING TO IMPROVEMENT OF AN ABUTTING EXISTING STREET	3/1/18	6/6/18
220-16.A(2)	PERTAINING TO THE INSTALLATION OF CURBING ALONG EXISTING ROAD	3/1/18	6/6/18
220-16.B.(3)	PERTAINING TO INSTALLATION OF SIDEWALK ALONG EXISTING ROAD	3/1/18	6/6/18
220-15.E(5)	PERTAINING TO INTERSECTION SEPARATION ALONG COLLECTOR STREETS	4/9/18	6/6/18
220-15.D(2)(c)	PERTAINING TO MINIMUM VERTICAL CURVE LENGTH OF 100 FEET	4/9/18	6/6/18
220-16.B(2)	PERTAINING TO 4' GRASS STRIP BETWEEN CURB AND SIDEWALK	4/30/18	6/6/18

SITE DATA:

611 Gettysburg Pike, Suite 101

Mechanicsburg, PA 17055

Nelson & Esther B. Wingert

Mechanicsburg, PA 17055

Lvnn N. & Patricia L. Wingert

Mechanicsburg, PA 17055

Phone: (717) 729-5440

Record owner of existing lot #2:

1849 Development LLC

Phone: (717) 766-5459

418 Gettysburg Pike

422 Gettysburg Pike

42-29-2456-001A.

Proposed uses:

Existing number of lots: 3

stormwater management areas.

50-foot wide right-of-way.

Proposed number of lots: 26

--one single detached dwelling on lots #1 to 24.

13. Proposed maximum building height: 35 feet

--Average slope of proposed lot #2: 14.8%

16. Proposed lot #1 building coverage: 2.1%

Proposed lot #2 building coverage: 8.8%

Phone: (717) 766-9812

Applicant/ Developer-

2. Record owner of existing lots #1 and 3:

Total Site area (includes existing lots #1, 2 and 3):

Gross (includes Gettysburg Pike street right-of-way): 645,202 square feet, or 14.812 acres.

This site is identified by the Cumberland County Tax Assessment Office as parcels 42-29-2456-001 and

--common private open space in lots OS-1 and OS-2, to be owned and maintained in common by lots #1 to 24 as

12. Proposed sewage disposal for all lots: public (Upper Allen Township). Lot #1 is already connected.

14. Centerline length of new streets proposed: 1,334. Proposed streets are 34 feet wide pavement within

--Average slope of proposed lot #1: 17.0%. Consequently, minimum required lot size is 3 acres; 3.30 acres is provided. Consequently, the maximum impervious coverage permitted is 20%; 6.9% impervious coverage is

Proposed lot #2 impervious coverage in proposed conditions with driveway relocation: 30.9%

proposed. Consequently, the maximum building coverage permitted is 10%; 2.1% building coverage is proposed.

Net (excludes Gettysburg Pike street right-of-way): 622,651 square feet, or 14.294 acres.

4. The site is zoned R-2: Residential Medium-Density Residential District.

Minimum lot size proposed: 10,043 square feet (lot #22).

Proposed water supply for lots #2 through 24: public (Suez)

15. For currently developed lots in the steep slope area of the tract:

Proposed lot #1 impervious coverage in proposed conditions: 6.9%

Existing and proposed water supply for lot #1: existing on-site well

Proposed density: 0.6 dwelling units per net acre for the entire tract.

** DEFERRAL ONLY; NOTE THAT DEFERRALS ARE GRANTED UNTIL SUCH TIME AS THE BOARD OF COMMISSIONERS DEEM THE IMPROVEMENT NECESSARY.

UTILITY LISTING FOR UPPER ALLEN TOWNSHIP:



COMCAST CABLE COMMUNICATIONS INC.

• SANITARY SEWER TOWNSHIP OF UPPER ALLEN 4601 SMITH ST. HARRISBURG, PA 17109 TELEPHONE: 717-651-1915

1301 AIP DR.

DIRECTOR OF PLANNING

 ELECTRIC PPL ELECTRIC UTILITIES 642 S 20TH ST. HARRISBURG, PA 17104-2222 TELEPHONE: 1-570-348-1509

> UGI UTILITIES INC. MIDDLETOWN, PA 17057-5987 TELEPHONE: 717-930-0223

100 GETTYSBURG PIKE MECHANICSBURG, PA 17055 TELEPHONE: 717-766-0756

 WATER SERVICE SUEZ WATER PENNSYLVANIA INC. 4211 E. PARK CIRCLE

VERIZON PENNSYLVANIA LLC

15 E MONTGOMERY AVE

PITTSBURGH, PA 15212

HARRISBURG, PA 17111

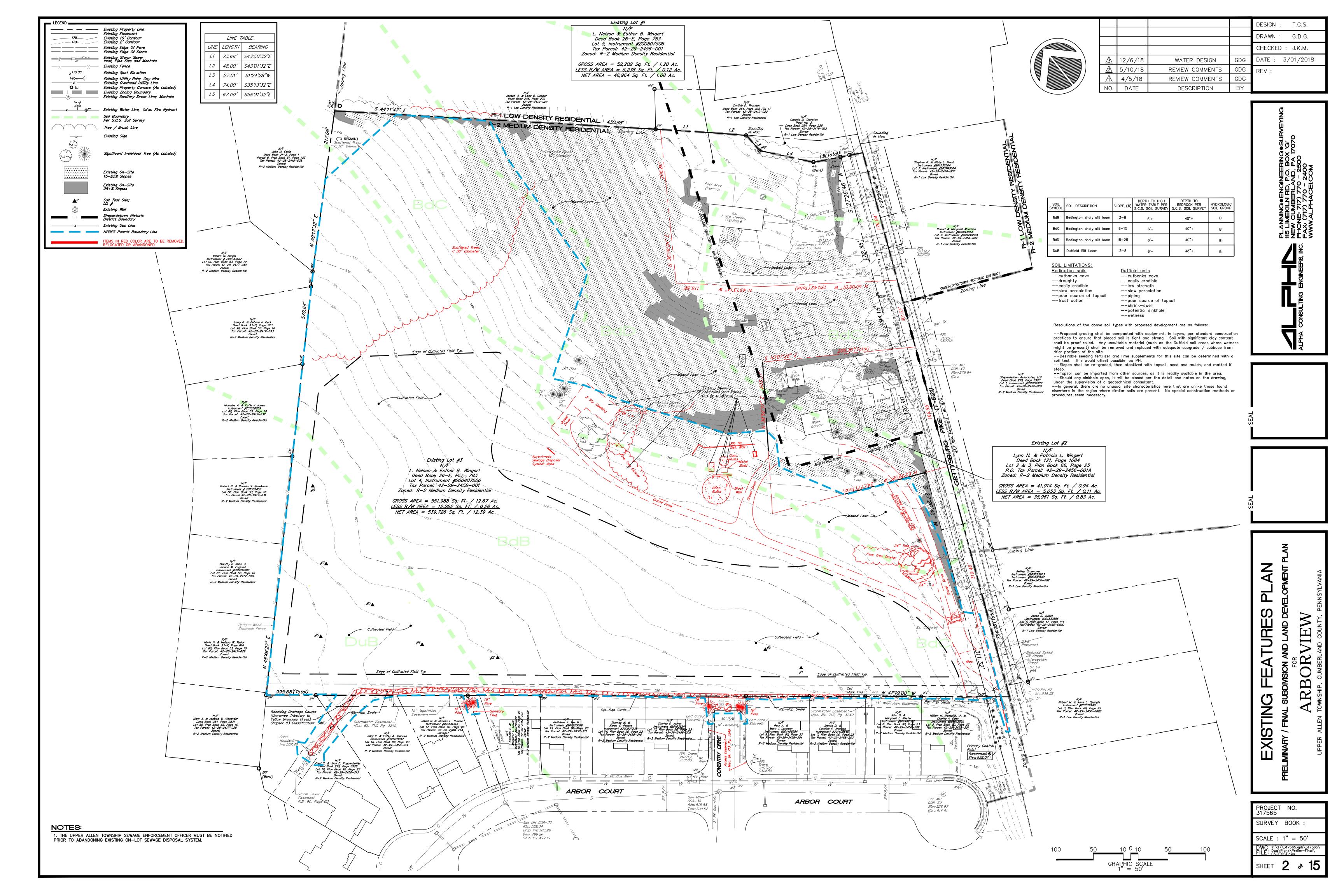
TEL: (717) 564-3664

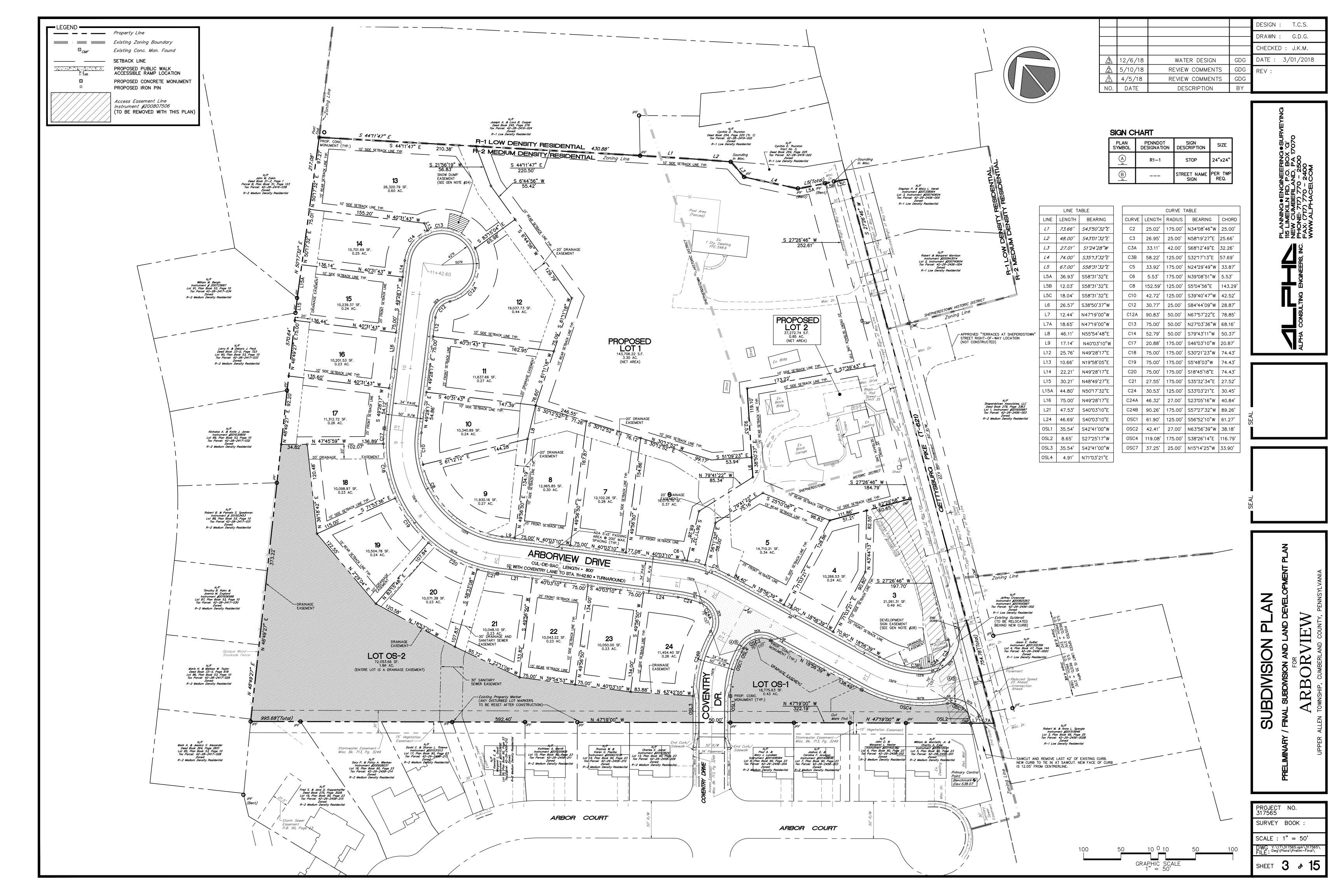
APPLICANT/DEVELOPER

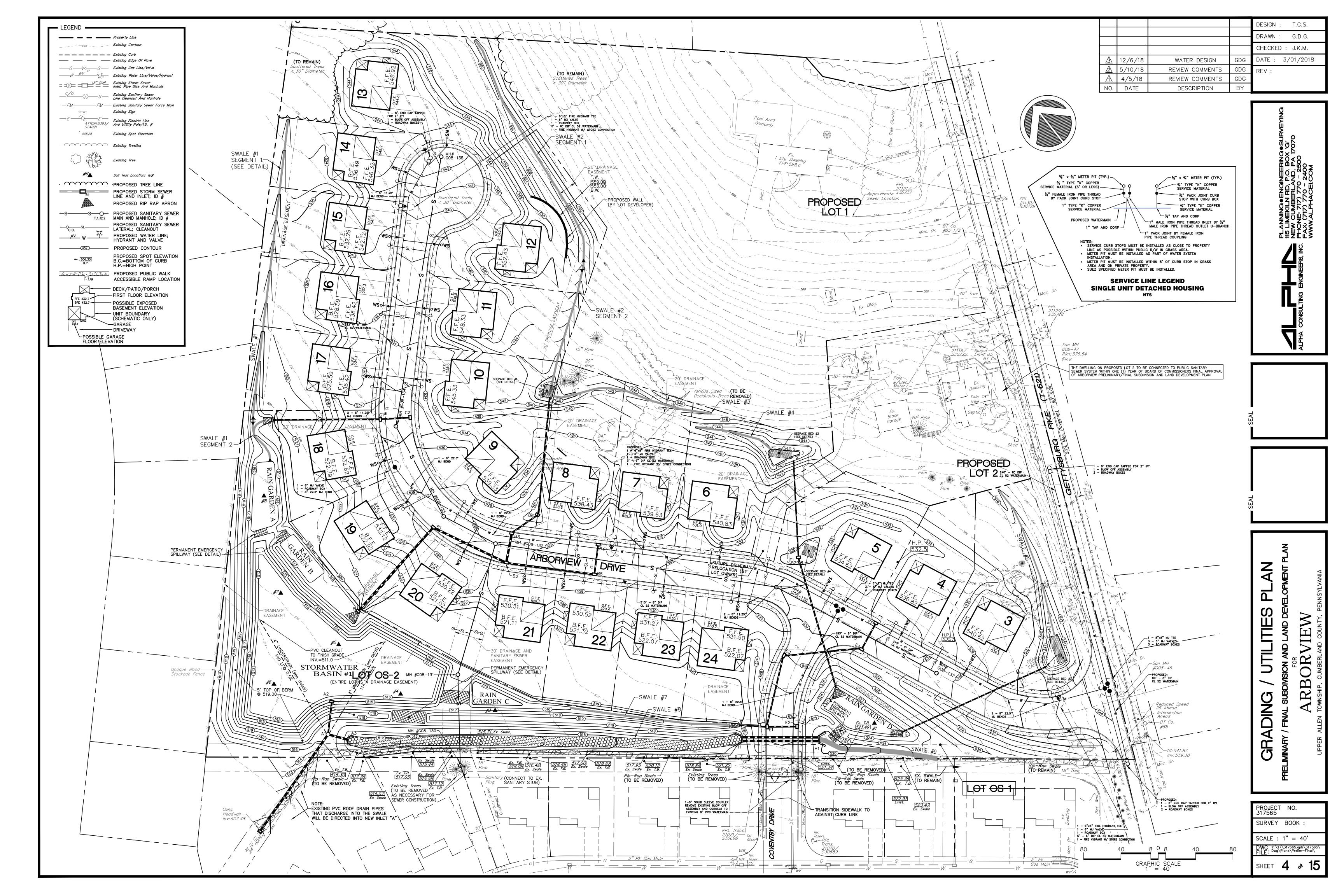
1849 DEVELOPMENT, LLC 611 GETTYSBURG PIKE, SUITE 101 MECHANICSBURG, PA 17055 (717) 766-5459

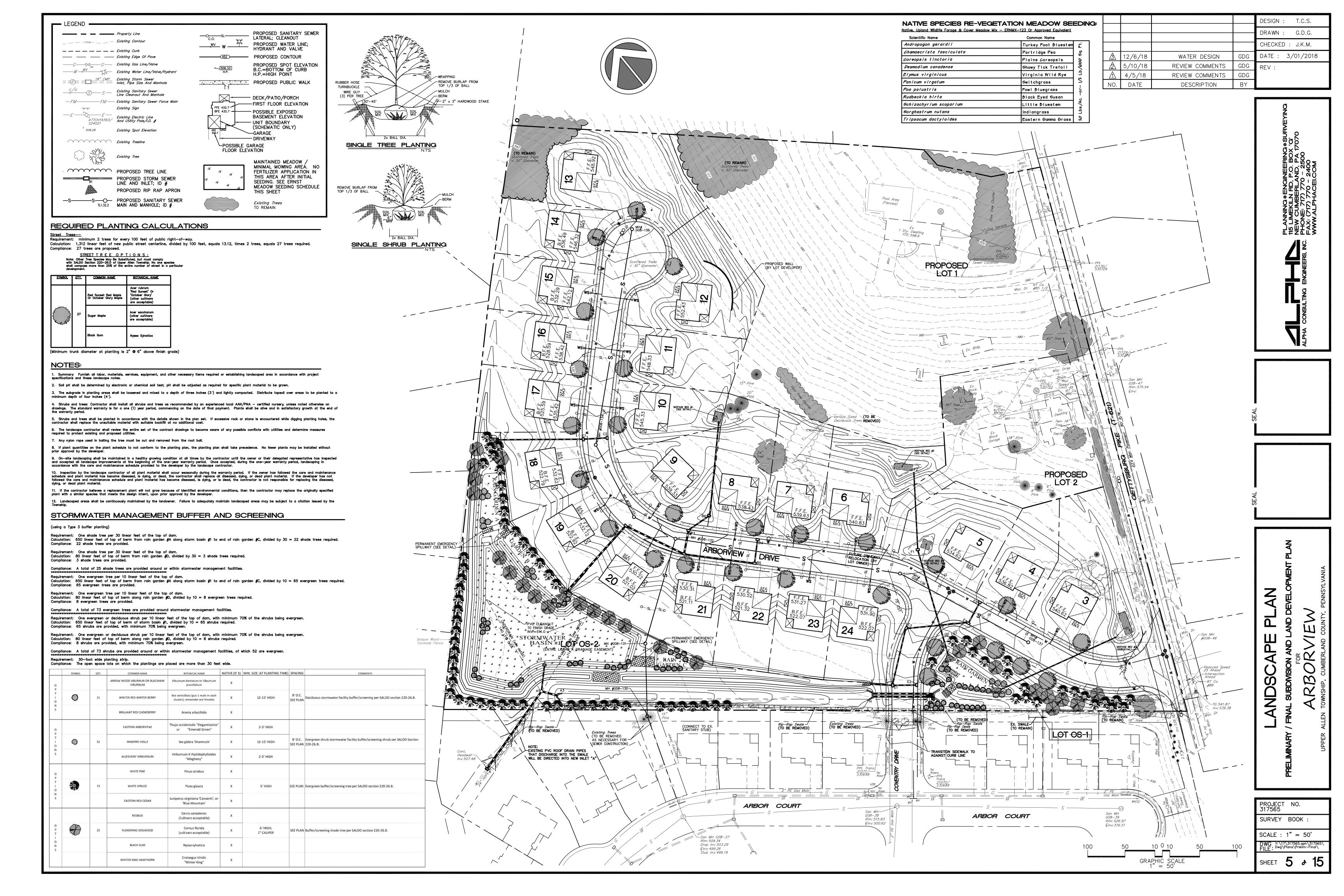


ALPHA CONSULTING ENGINEERS, INC PLANNING • ENGINEERING • SURVEYING 115 LIMEKILN RD, P.O. BOX 'G' NEW CUMBERLAND, PA 17070 PHONE: (717) 770 - 2500 FAX: (717) 770 - 2400 WWW.ALPHACEI.COM

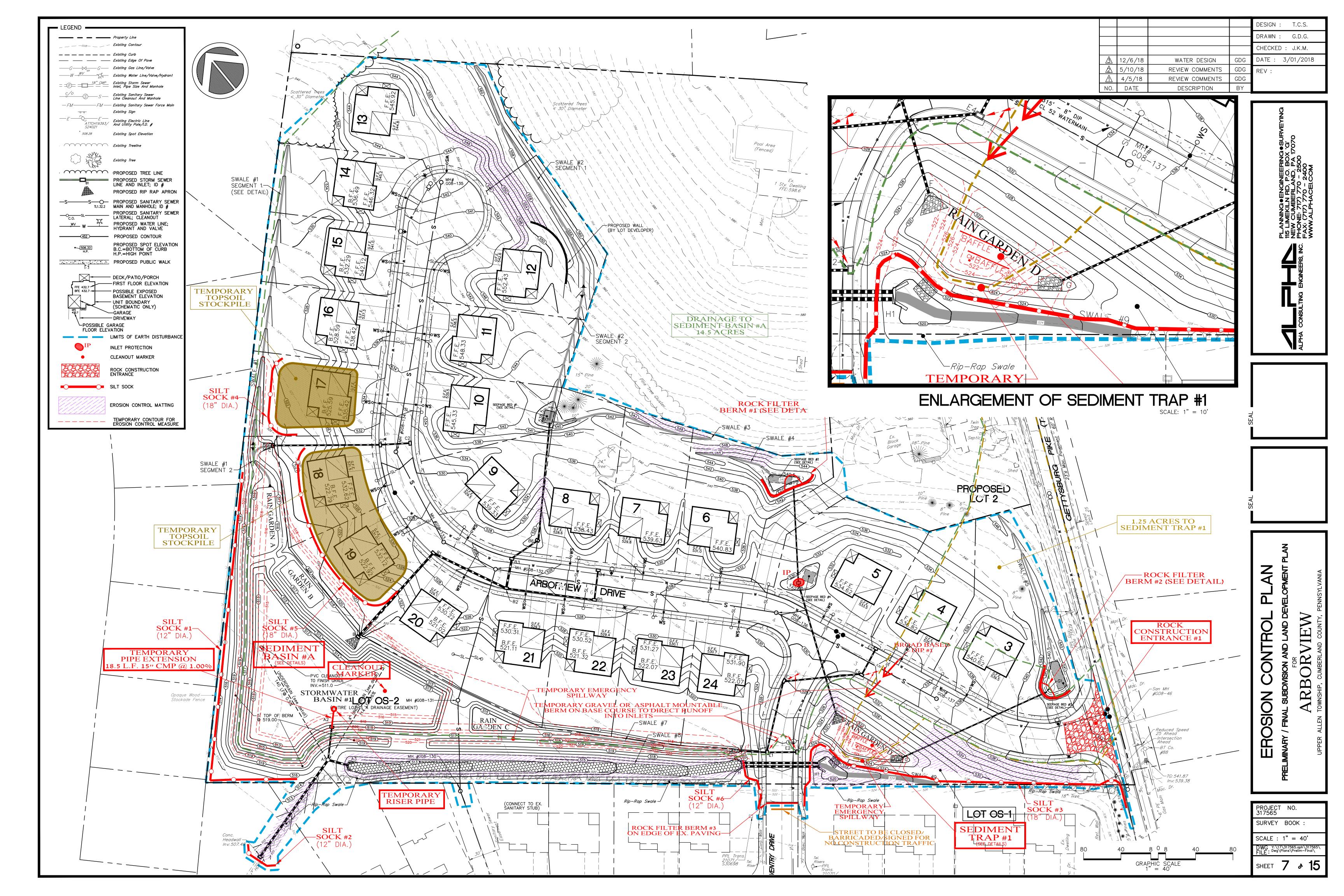


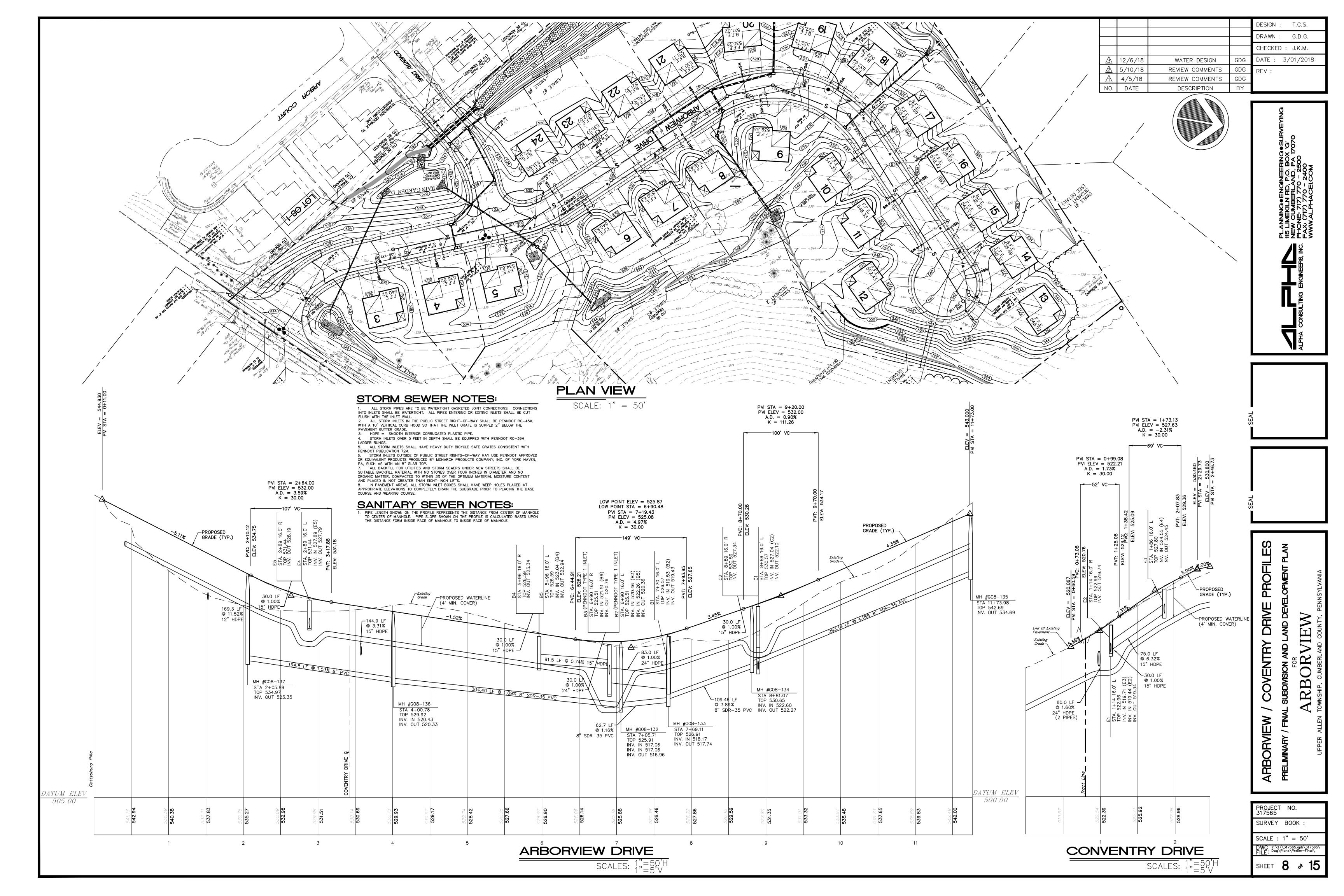


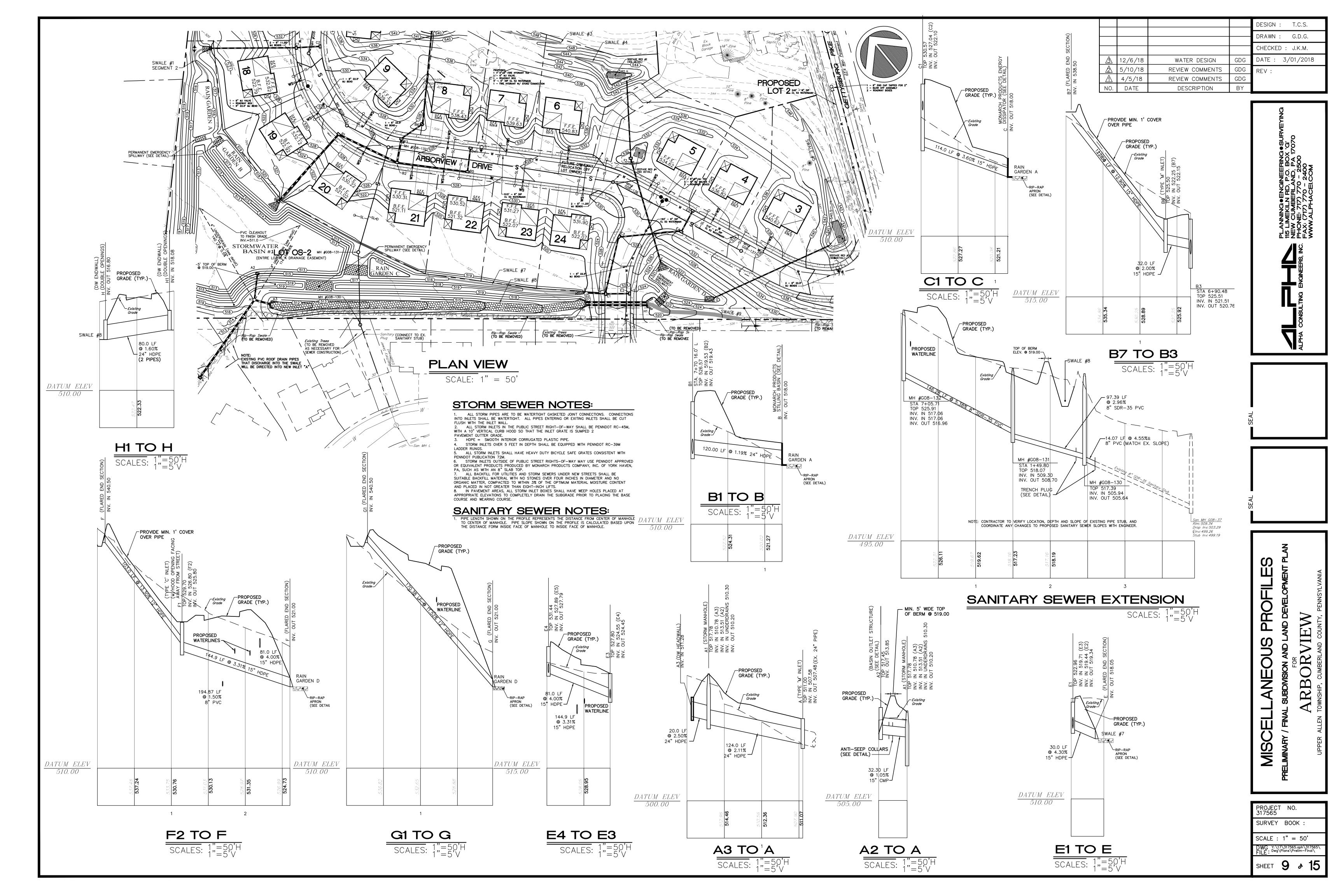


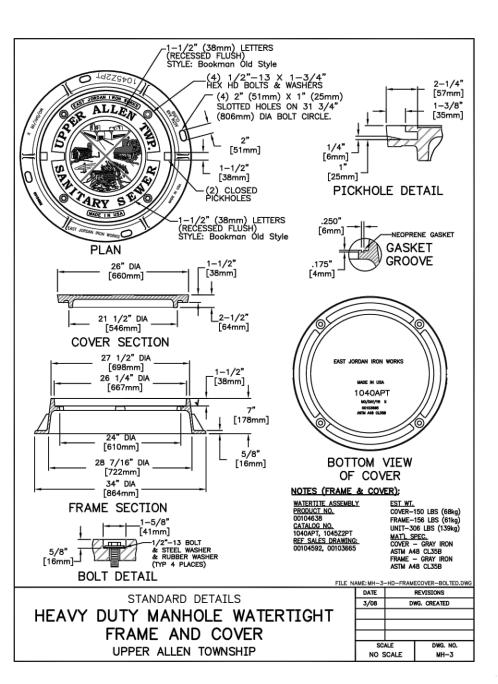


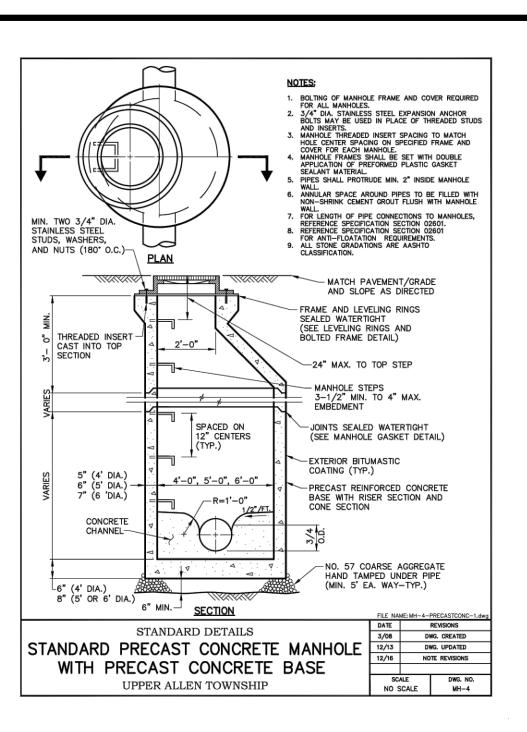


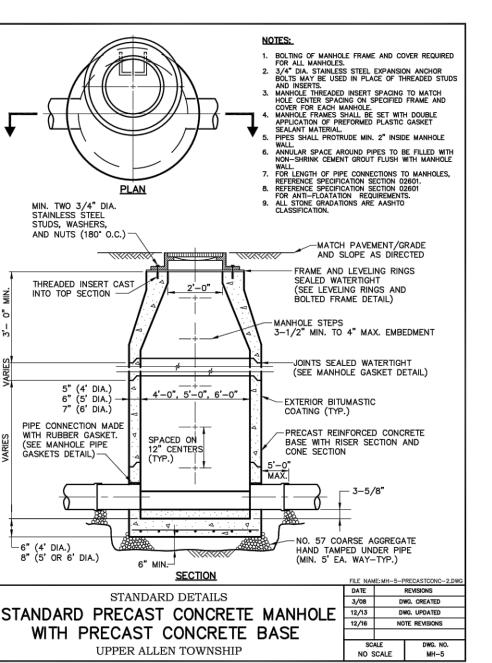


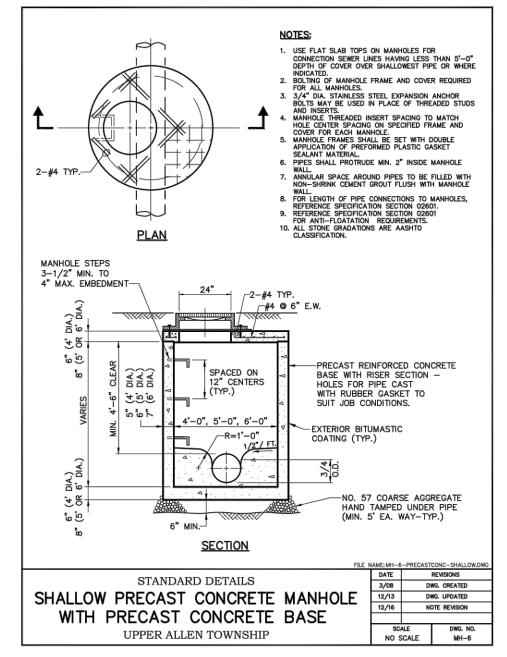


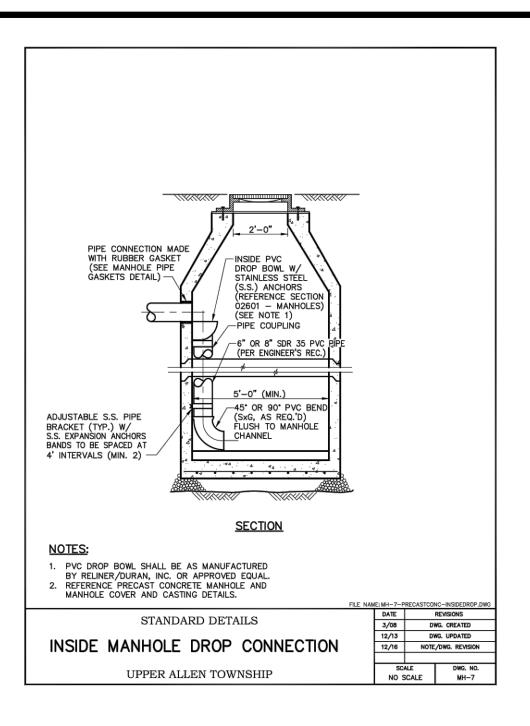


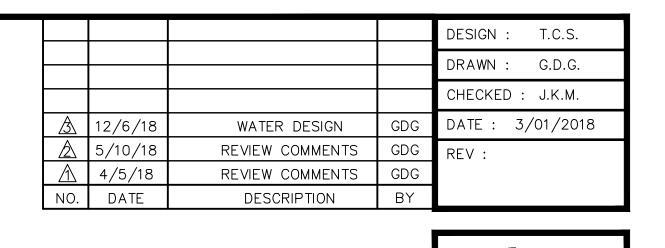


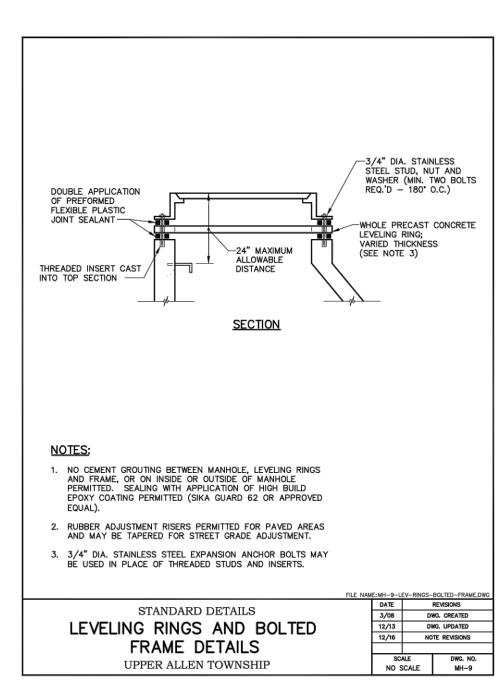


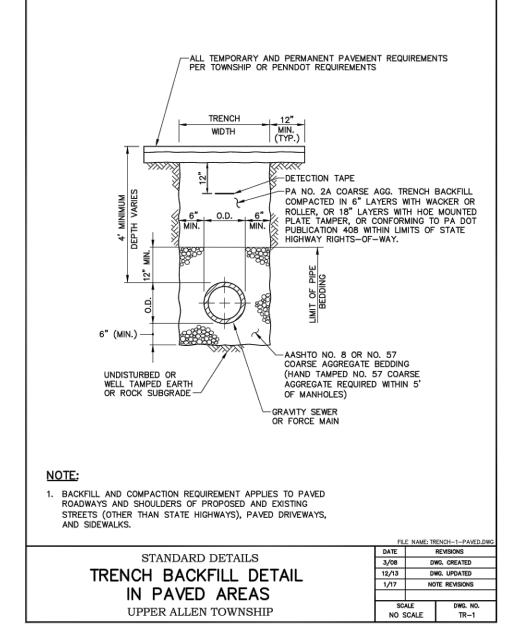


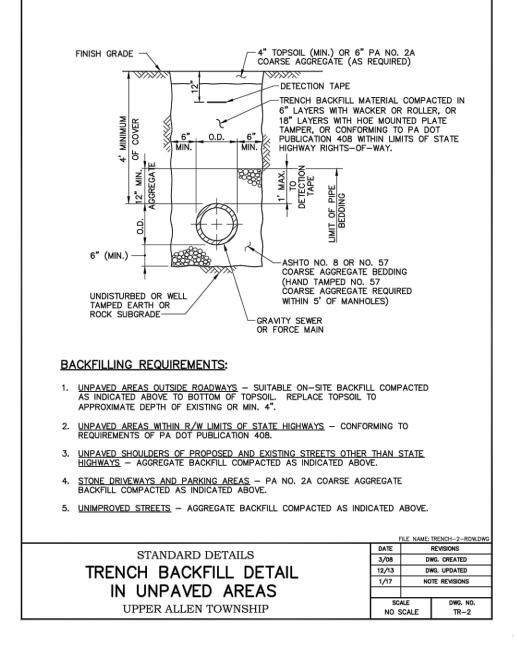


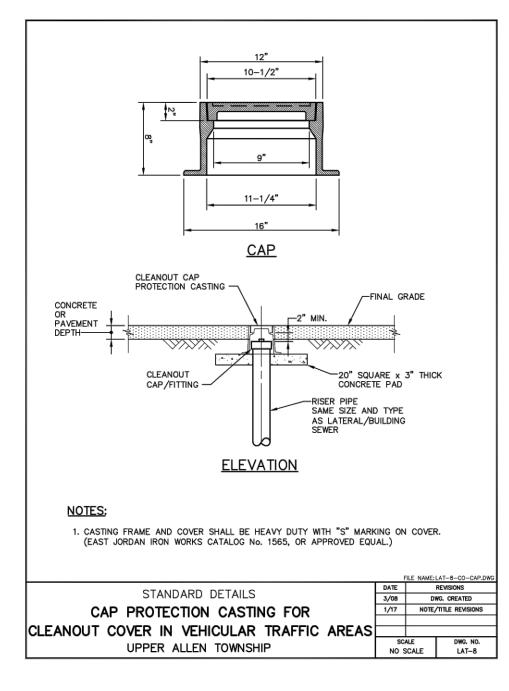


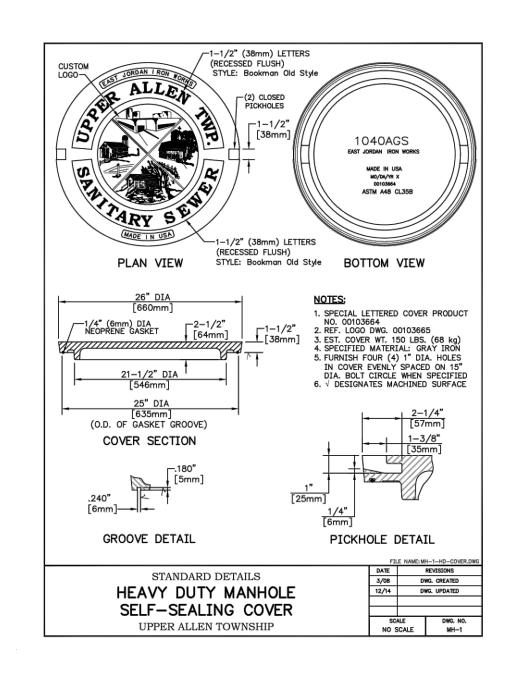


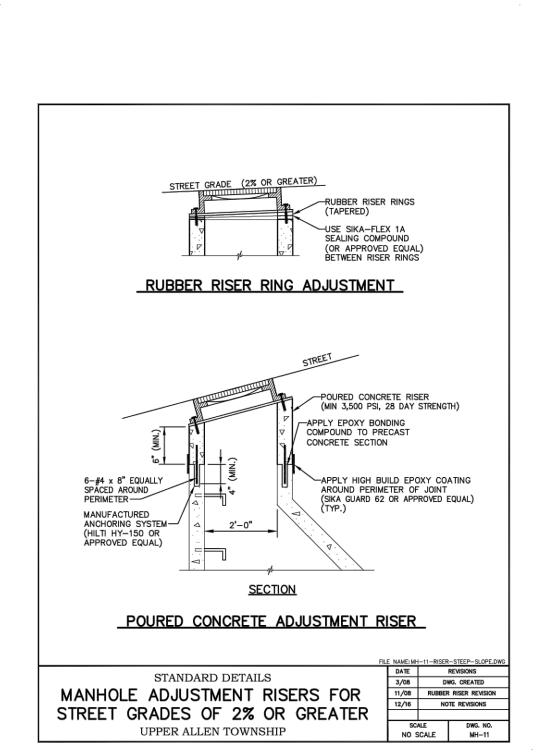


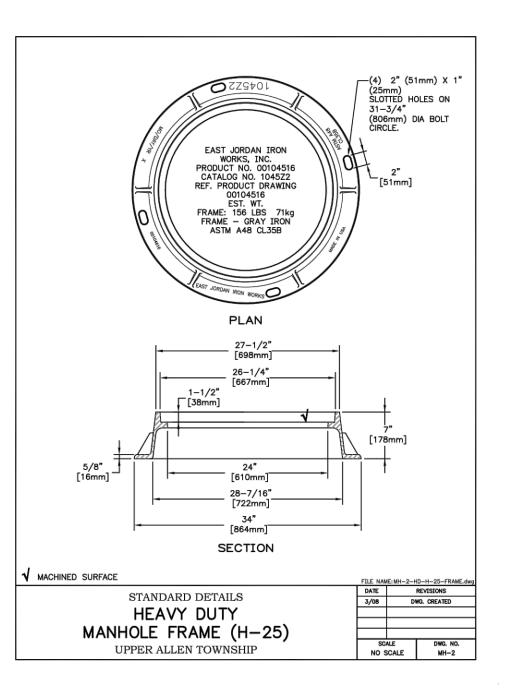


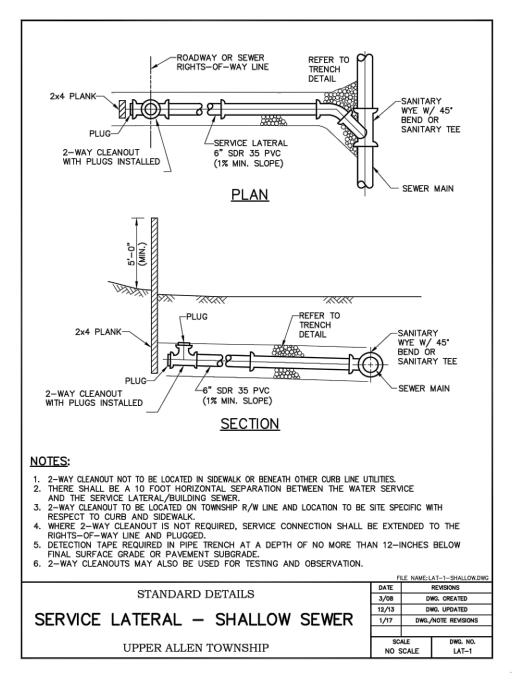


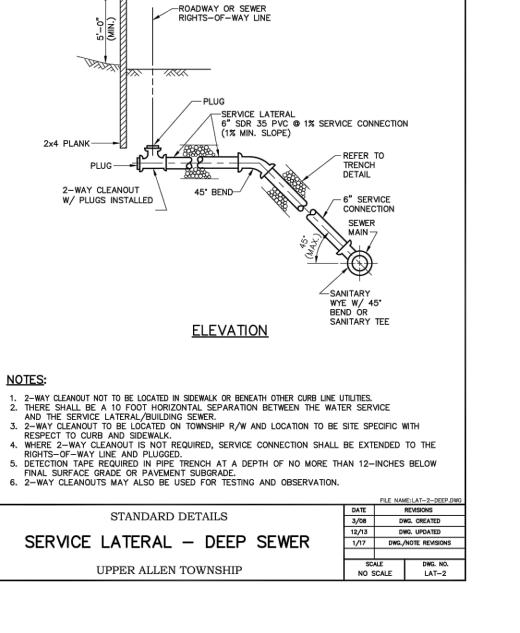


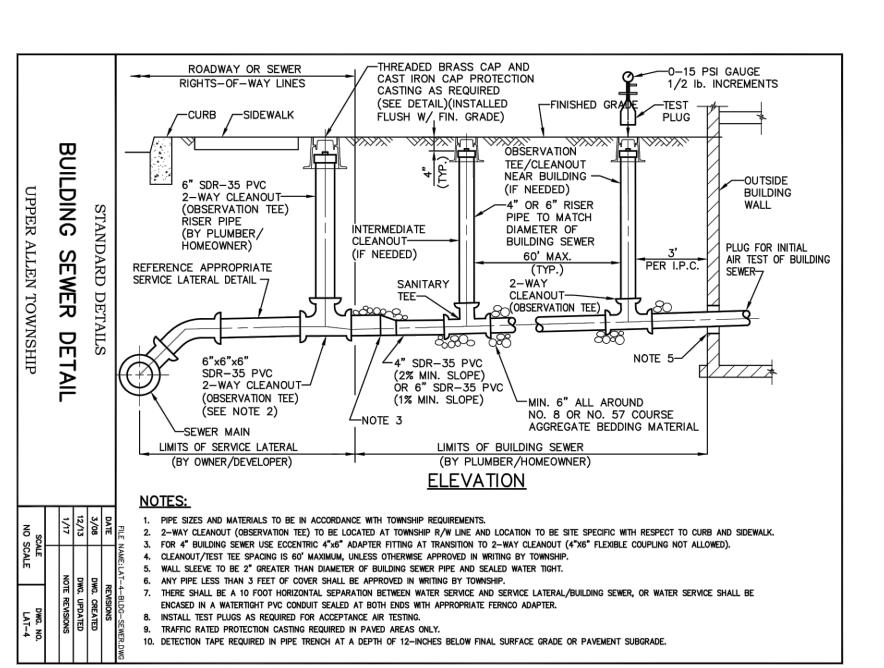












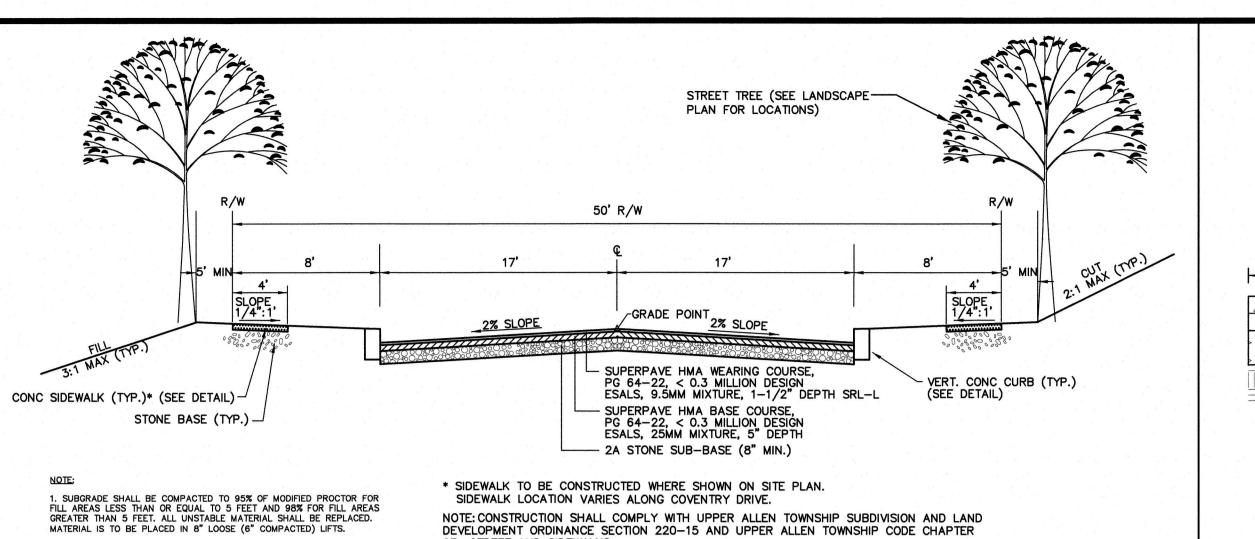


PROJECT NO. 317565
SURVEY BOOK:

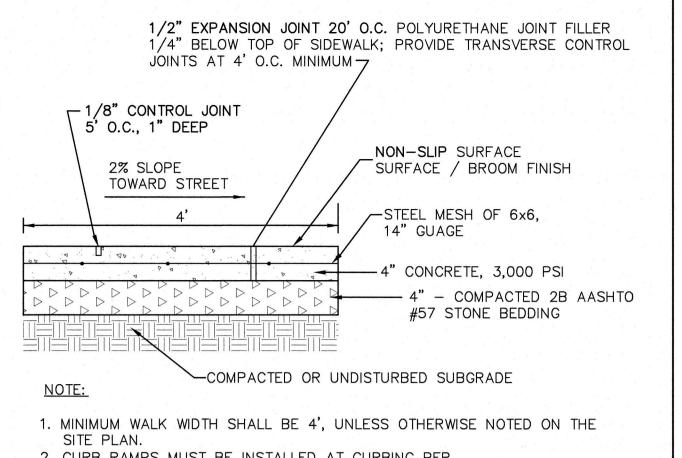
SCALE:

DWG Y: \17\317565.aph\317565\FILE: Dwg\Plans\Prelim-Final\

DWG Y: \17\317565.aph\317565\ FILE: Dwg\Plans\Prelim_Final\ SHEET 10 & 15

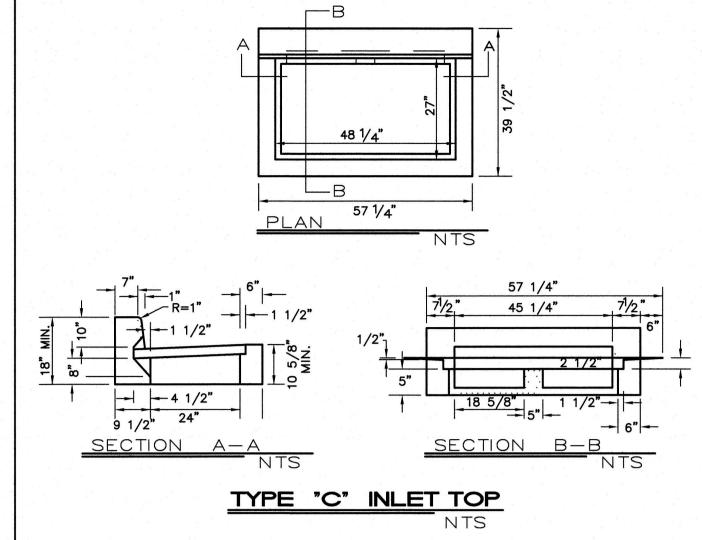


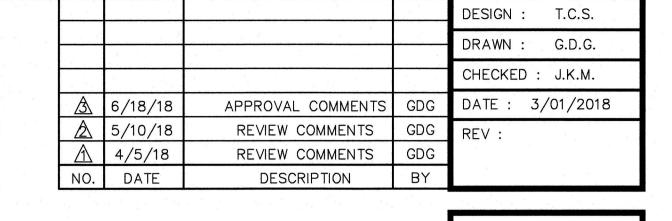
TYPICAL PROPOSED PUBLIC STREET SECTION

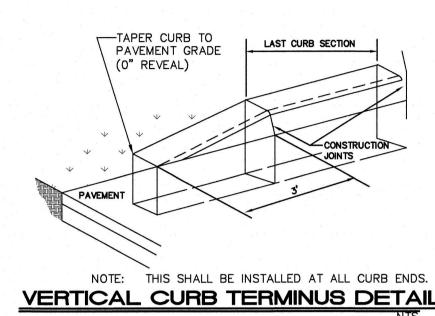


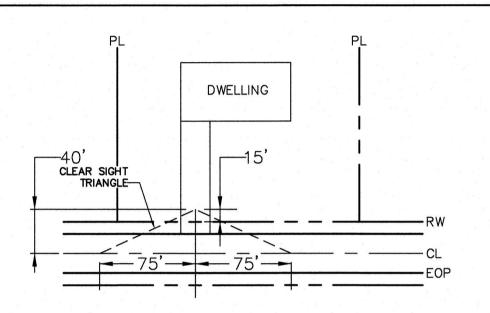
2. CURB RAMPS MUST BE INSTALLED AT CURBING PER ADA REQUIREMENTS.

CONCRETE SIDEWALK DETAIL







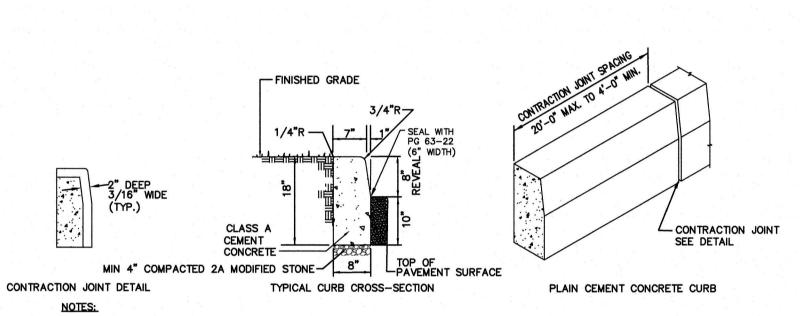


Driveway shall not connect with a public street within 50 feet of the centerlines of any intersecting streets, nor

No permanent obstructions over 36 inches above the street grade or lower than the 9 feet above the street

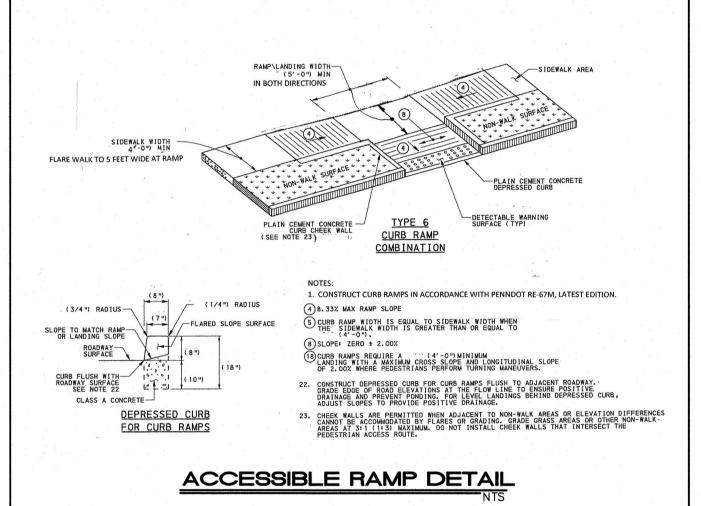
- within 5 feet of a fire hydrant. Driveways shall be set back at least 3 feet from any side lot line.
- grade are permitted in the clear sight triangle. Driveway slope shall not exceed 15% within 50 feet of the street right-of-way.
- Driveway width shall not exceed 24 feet between the street right-of-way and street cartway.
- 6. Driveways shall be paved with bituminous concrete or an equivalent stabilized material from the edge of the street cartway a minimum distance of fifteen (15) feet toward the lot and be provided in a manner consistent with the design, construction, and stormwater drainage.
- Only one driveway connection per 100 feet of lot frontage and no more than two driveway connections per lot
- Driveways shall be laid out to intersect as nearly as possible at right angles; in any event no driveway shall intersect another at less than 75°.
- Where a proposed sidewalk crosses a driveway, a concrete apron shall be provided from the edge of the street cartway to the far edge of the sidewalk. Concrete driveway aprons shall have a minimum depth of six inches
- and be constructed with reinforced wire or fiberglass substitute for strengthening purposes. Driveway pavement materials shall be separated from street pavement with concrete depressed curb constructed in accordance with Pennsylvania Department of Transportation standard drawing RC-64M and Pennsylvania Department of Highway Specifications, 2000, Form 408, as amended.

SINGLE FAMILY DRIVEWAY DETAIL

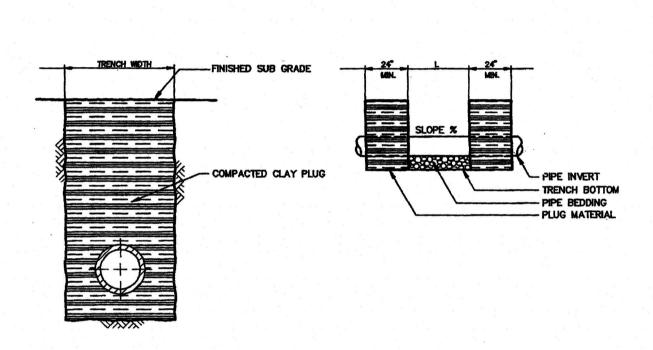


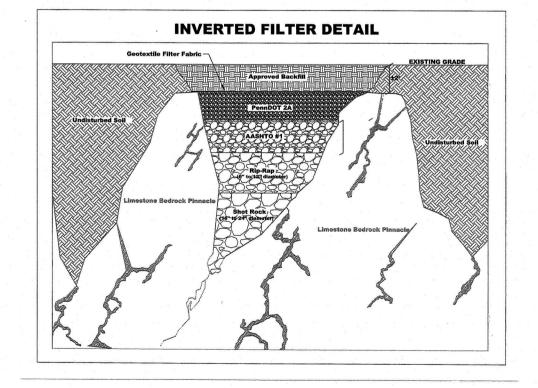
PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS PENNDOT RC-64m, LATEST EDITION.
 SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS.
 PLACE 3/4-INCH PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY.
 CUT MATERIAL TO CONFORM TO AREA ADJACENT TO CURB OR TO CONFORM TO CROSS SECTIONAL AREA OF CURB.
 EXPANSION JOINTS SHALL BE INSTALLED AT 60' INTERVALS, AT STRUCTURES, AND AT THE END OF EACH WORK DAY.

VERTICAL CONCRETE CURB DETAIL



TRENCH PLUG / CLAY DAM DETAIL





SINKHOLE REPAIR: A. EXCAVATE THE AREA OF THE SINKHOLE UNTIL THE "THROAT" IS LOCATED. B. REMOVE ALL LOOSE SOIL OR MATERIAL. C. EVALUATE THE THROAT OF THE SINKHOLE FOR STABILITY AND/OR PRESENCE OF ADDITIONAL FRACTURES. D. LINE THE SINKHOLE USING CLASS 1 TYPE B NON-WOVEN GEOTEXTILE FILTER

FARRIC E. BACKFILL USING R-5 STONE UP TO WITHIN 36 INCHES OF FINISHED GRADE. F. FOLD THE GEOTEXTILE FILTER FABRIC OVER ITSELF TO CREATE "BAG".

G. TOP OFF THE EXCAVATION WITH APPROXIMATELY 24 INCHES OF 2A COARSE AGGREGATE TO APPROXIMATELY 12 INCHES BELOW FINAL GRADE. H. COMPLETE BACKFILLING USING CONSISTENT WITH WHERE THE SINKHOLE IS

DIFFERENT METHODS OF REMEDIATING SINKHOLES MAY BE REQUIRED BASED UPON THE ACTUAL LOCATION, CONDITIONS, AND/OR THE REQUIREMENTS OF OTHER AGENCIES; REMEDIATION TO BE AS DIRECTED BY TOWNSHIP ENGINEER.

METHOD OF REMEDIATING SINK HOLE



EVALUATION OF KARST CONDITIONS & SUSCEPTIBILITY OF SINKHOLE FORMATION The geologic formations which underlie the western half of the project site are comprised of carbonate bedrock which is subject to dissolution and the development of sinkholes and other karst-geologic features. The Owner should recognize the risk associated with development of project sites underlain by carbonate bedrock. The following construction recommendations are provided in an effort to minimize the potential for development of sinkholes at the site both during and following construction.

- Surface water should not be allowed to collect or pool in low lying areas of the site and should be directed to appropriate storm water channels. Expeditious backfilling or grading of low-lying areas will also help minimize the potential development of sinkholes.
- The extent of excavations should be kept to a minimum and the influx of surface water into excavations should be minimized. The potential for sinkhole development generally increases as the bedrock surface is encountered. Therefore, the prolonged exposure of the bedrock surface should also be minimized. Storm sewer conveyance lines should be constructed as "water-tight" joints.
- Positive drainage away from proposed structures should always be maintained. Roof drains should also be directed away from the structures and into designated stormwater channels.
- Unpaved areas, swales or surface basins should be minimized adjacent to building/foundation areas. The above recommendations constitute best management practices for construction and development in karst settings. Contingencies should be made in the construction schedule and budget for the repair of sinkholes and

grading of the project site. All sinkholes and unstable soil conditions should be reviewed by the geotechnical engineer of record. Following review of the specific characteristics and locations of a given sinkhole feature, a detailed repair procedure should be developed and implemented.

As noted above, sinkholes may occur during construction, and specifically during and shortly following mass

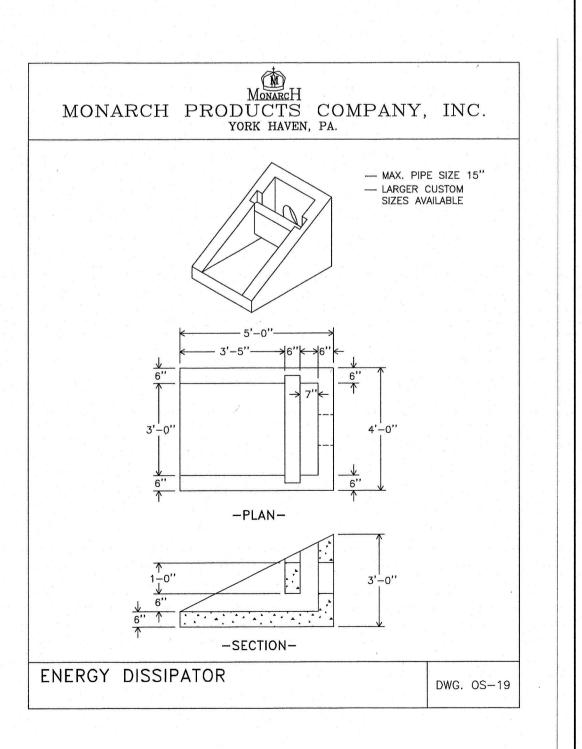
Should sinkholes be identified during or following construction of the project site, the remediation procedures

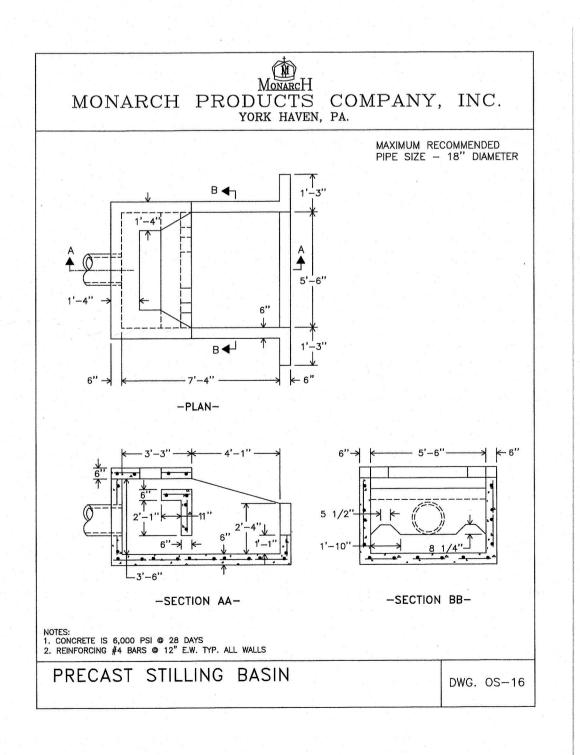
Structural Areas (areas adjacent to/beneath proposed pavement; proposed structures) · Any and all loose and/or excessively moist soils within the sinkhole should be excavated and continue

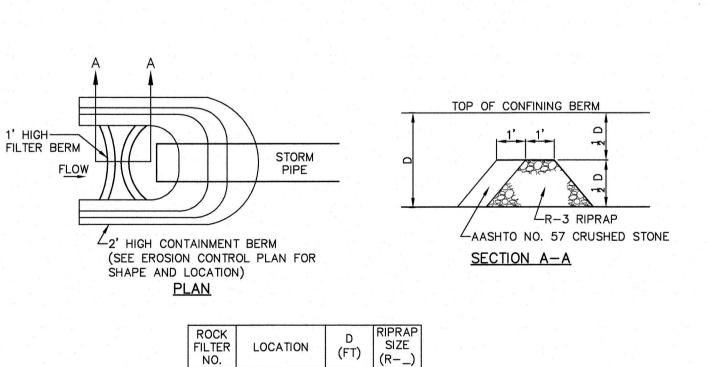
unstable soil conditions encountered during development of the site.

- until stable soils, a "throat" is identified, or until the extent of the excavation equipment is reached. . Upon removal of the unstable solls, the excavation should be backfilled using high mobility, low strength flowable fill (500 pound per square inch) to final subgrade elevation; however, utilities should not be
- Dependent on specific conditions, specialty mitigations may be warranted, such as ground modification. Non-Structural Areas (non-pavement/landscaped areas
- Any and all loose and/or excessively moist soils should be excavated from the sinkhole. Excavation should continue until stable soils, a "throat" is identified, or until the extent of the excavation equipment is
- The excavation should be backfilled with aggregate of decreasing size as depicted on the Inverted Filter

The repairs outlined above are general guidelines and each sinkhole occurrence should be thoroughly reviewed by the Geotechnical Engineer of Record for an appropriate mitigation plan.







2 | PIPE END #F2 | 2 | R-3 1. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE

- 2. IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, INSTALLER SHALL REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.
- 3. A ONE FOOT THICK LAYER OF AASHTO #57 (OR SMALLER) STONE SHOULD BE PLACED ON THE UPSTREAM SIDE OF THE FILTER.
- 4. ROCK FILTERS SHOULD BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

1 | PIPE END #G1 | 2 | R-3

- 5. CLOGGED FILTER STONE (AASHTO #57) SHOULD BE REPLACED.
- 6. NEEDED REPAIRS SHOULD BE INITIATED IMMEDIATELY AFTER THE INSPECTION.

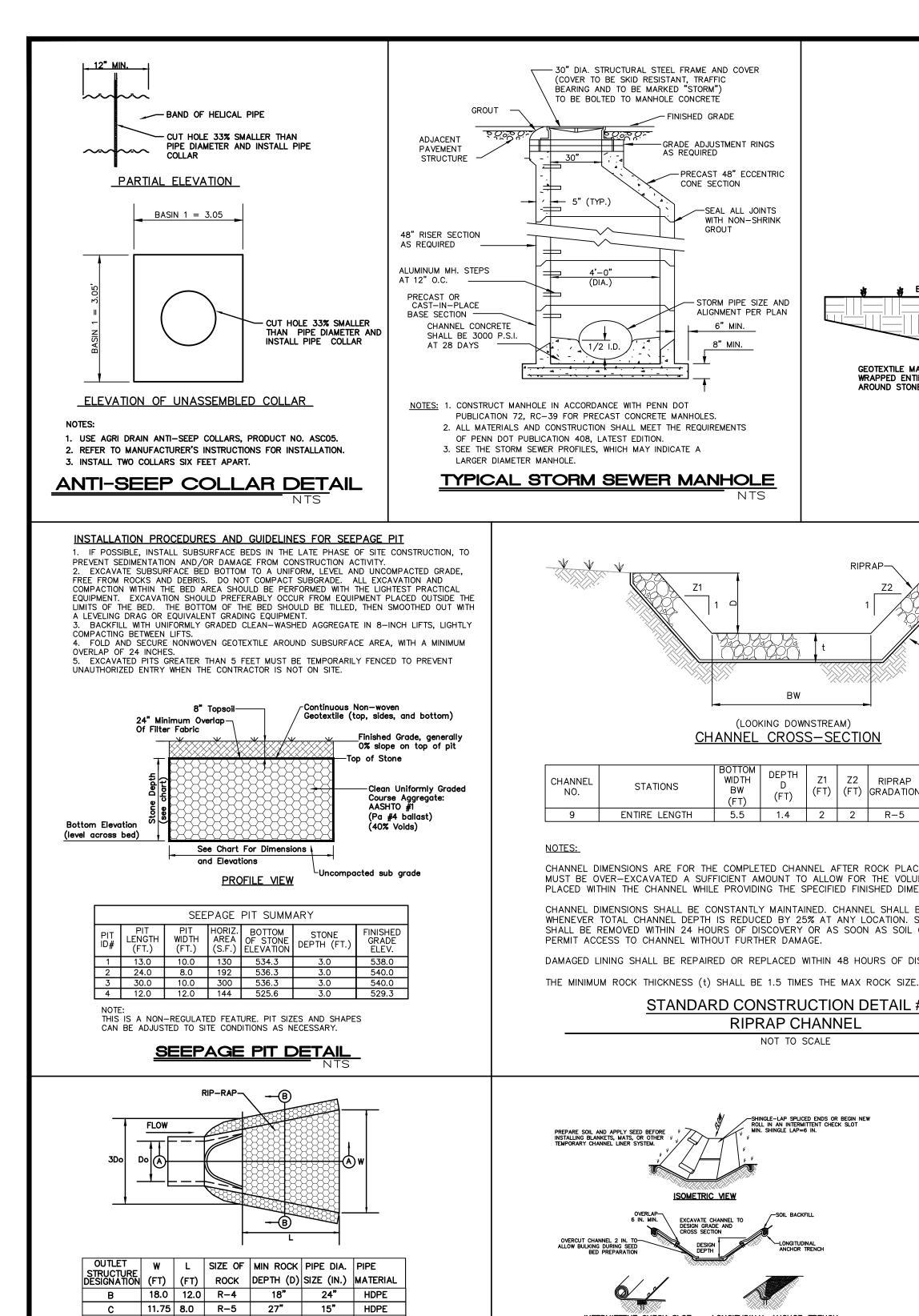
ROCK FILTER BERM



N N

3

PROJECT NO. 317565 SURVEY BOOK:)WG Y: \17\317565.aph\3175 || F: Dwg\Plans\Prelim-Final



7.0 8.0 R-4 18" 15"

*APRON SHAPE SHOULD BE ADJUSTED TO FIT RECEIVING SWALE SHAPE. *IF BEDROCK IS PRESENT IN THE APRON AREA, DO NOT REMOVE IT TO INSTALL RIPRAP; THE BEDROCK WILL BE SUFFICIENT. **SMOOTH BORE CORRUGATED PLASTIC PIPE

G 11.75 8.0 R-4 18" 12" HDPE * H 7.0 14.0 R-5 27" 24" HDPE

BUT NOT LESS THAN 6 INCHES.

Section A-A

0% SLOPE

Section B-B

THICKNESS IN ONE CONTINUOUS OPERATION TO PREVENT SEGREGATION OF MATERIALS.

3. ROCK SHALL BE ANGULAR, CRUSHED AND HAVE A UNIT WEIGHT OF 165 LBS./C.F. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS

DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

ROCK, TO ACHIEVE A UNIFORM ROCK BLANKET.

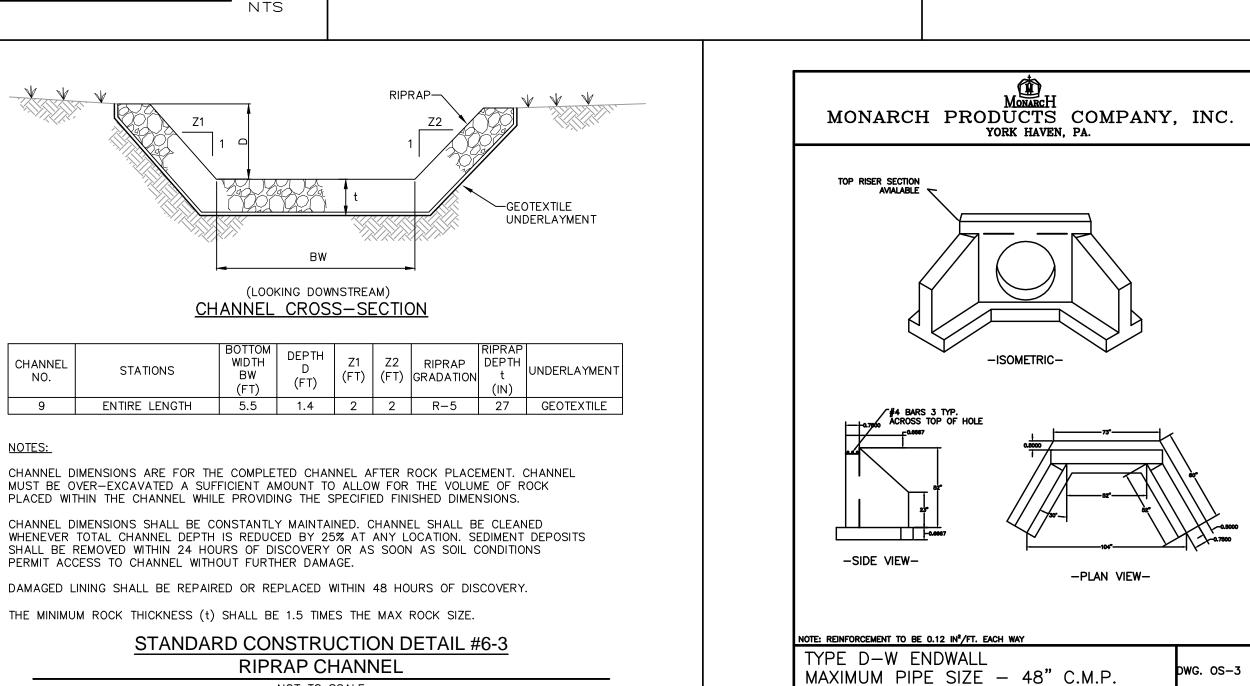
2. NO ROCK PEICES SHALL HAVE A LENGTH EXCEEDING THREE.

INDIVIDUAL ROCKS MAY BE REARRANGED, AND VOIDS FILLED WITH HAND PLACED SMALLER

5. ALL APRONS SHOULD BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT.

RIP-RAP APRON DETAIL

14.75 11.0 R-5 27" 15" HDPE



BASIN BOTTOM

WRAPPED ENTIRELY

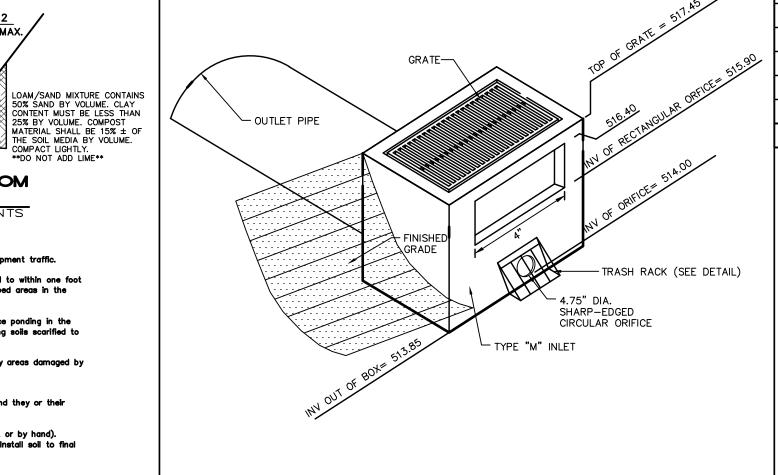
18" AMENDED

NOTES:
1. TERMINATE UNDERDRAIN IN MANHOLE.
2, SEE GRADING PLAN FOR UNDERDRAIN LOCATIONS.

<u>BASIN UNDERDRAIN DETAIL</u>

WITHIN BASIN. 4" SOLID PIPE

-AASHTO #57 STONE (CLEAN)



STORM BASIN #1 OUTLET STRUCTURE

TOP OF BERM WIDTH

FLOW

1. A MINIMUM OF 6 INCHES OF TOPSOIL SHALL BE PLACED ON BASIN

└─ANTI-SEEP COLLAR

AND NUMBER)

(SEE DETAIL FOR SIZE

SIDE SLOPES, TOP OF BERM, AND THE LIKE TO ALLOW FOR THE ESTABLISHMENT OF VEGETATION.

3. BACKFILL TRENCH AROUND DISCHARGE PIPE WITH RELATIVELY IMPERVIOUS SOIL (NO STONE BACKFILL).

5. ALL BASIN EMBANKMENTS SHOULD BE COMPACTED BY. THE LOOSE LIFT THICKNESS SHOULD BE 9 INCHES

(MIN. 5')

TOP OF BERM-

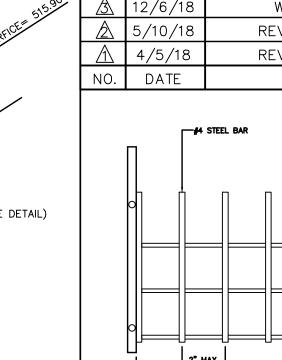
PERMANENT SEEDING

SUBGRADE

STANDARD PROCTOR TEST.

(UNIFIED SOILS CLASSIFICATION).

NON-MOVEMENT IS ALSO REQUIRED.



-BASIN OUTLET STRUCTURE

(SEE DETAIL)

ORIFICE TRASH RACK DETAIL

- 1' SUMP IN BOTTOM OF

BASIN @ ELEV. 513.00

-18" AMENDED SOIL

BASIN BOTTOM IS 0% SLOPE

G.D.G.

DRAWN :

REV :

SWALE #8 LINER

WATER DESIGN

REVIEW COMMENTS

REVIEW COMMENTS

DESCRIPTION

CHECKED : J.K.M.

DATE: 3/01/2018

STORM BASIN #1 BERM CONSTRUCTION

MEADOW SEEDING IN BASIN BOWL

-PERMANENT EMERGENCY

SPILLWAY (SEE DETAIL)

-OUTLET PIPE WITH

WATERTIGHT JOINTS

(SEE STORM PROFILES)

L MAX.

SUBGRADE

2. ALL FILL MATERIAL TO BE UTILIZED IN EMBANKMENT AREAS SHALL BE SELECTED FROM THE MORE IMPERVIOUS MATERIALS AVAILABLE

AT THE SITE AND SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MATERIAL MAXIMUM DRY DENSITY AS DETERMINED BY A

4. SOILS ACCEPTABLE FOR EMBANKMENT CONSTRUCTION SHOULD BE LIMITED TO GC, GM, SM, CL, OR ML AS DESCRIBED IN ASTMD-2487

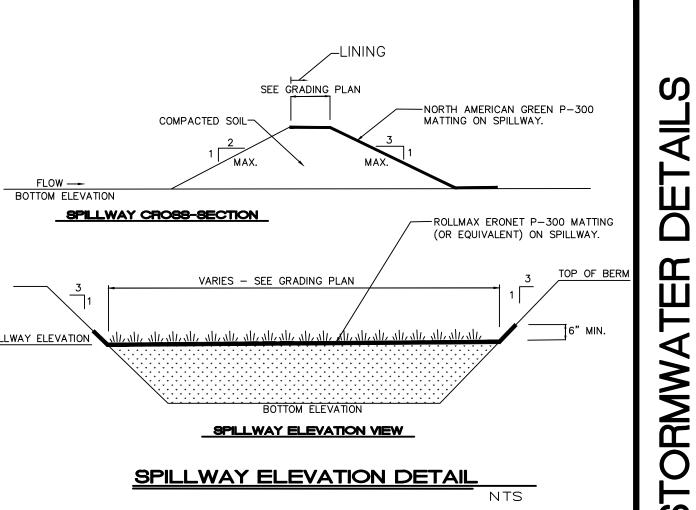
OR LESS, DEPENDING ON ROLLER SIZE, AND THE MAXIMUM PARTICLE SIZE IS 6 INCHES OR LESS - 2/3 LIFT THICKNESS. FIVE PASSES OF THE COMPACTION EQUIPMENT OVER THE ENTIRE SURFACE OF EACH LIFT IS REQUIRED. EMBANKMENT COMPACTION TO VISIBLE

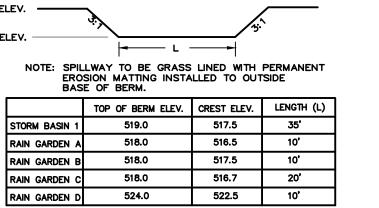
GSE BentoLiner NSL Geosynthetic Clay Liner

GSE BentoLiner "NSL" is a needle-punched reinforced composite geosynthetic clay liner (GCL) comprised of a uniform layer of granular sodium bentonite encapsulated between a woven and a nonwoven geotextile. The product is intended for moderate to steep slopes and moderate to high load applications where increased internal shear strength is

Tested Property	Test Method	Frequency	Value
Geotextile Property			
Cap Nonwoven, Mass/Unit Area	ASTM D 5261	1/200,000 ft ²	6.0 oz/yd² MARV ^(t)
Carrier Woven, Mass/Unit Area	ASTM D 5261	1/200,000 ft ²	3.1 oz/yd² MARV
Bentonite Property			
Swell Index	ASTM D 5890	1/100,000 lb	24 ml/2 g min
Moisture Content	ASTM D 4643	1/100,000 lb	12% max
Fluid Loss	ASTM D 5891	1/100,000 lb	18 ml max
Finished GCL Property			
Bentonite, Mass/Unit Area ⁽²⁾	ASTM D 5993	1/40,000 ft ²	0.75 lb/ft² MARV
Tensile Strength ⁽³⁾	ASTM D 6768	1/40,000 ft²	30 lb/in MARV
Peel Strength	ASTM D 6496 ASTM D 4632 ⁽⁴⁾	1/40,000 ft ²	3.5 lb/in MARV 21 lb MARV
Hydraulic Conductivity ⁽⁵⁾	ASTM D 5887	1/Week	5 x 10 ⁻⁹ cm/sec max
Index Flux(5)	ASTM D 5887	1/Week	1 x 10 ⁻⁸ m ³ /m ² /sec max
Internal Shear Strength ⁽⁶⁾	ASTM D 6243	Periodically	500 psf Typical
	TYPICAL ROLL	. DIMENSIONS	
Width x Length ⁽⁷⁾	Typical	Every Roll	15.5 ft × 150 ft
Area per Roll	Typical	Every Roll	2,325 ft²
Packaged Weight	Typical	Every Roll	2,600 lb

• (7) Roll widths and lengths have a tolerance of ±1%. CHANNEL #8 LINING NOT TO SCALE





STORMWATER MANAGEMENT AREA PERMANENT EMERGENCY SPILLWAY DETAIL

SURVEY BOOK: SCALE: DWG Y: \17\317565.aph\31756 FILE: Dwg\Plans\Prelim-Final\

Product	Specifications	

ested Property	Test Method	Frequency	Value	
Seotextile Property				
ap Nonwoven, Mass/Unit Area	ASTM D 5261	1/200,000 ft ²	6.0 oz/yd² MARV ⁽¹⁾	
arrier Woven, Mass/Unit Area	ASTM D 5261	1/200,000 ft²	3.1 oz/yd² MARV	
Sentonite Property				
well Index	ASTM D 5890	1/100,000 lb	24 ml/2 g min	
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ndex Flux ⁽⁶⁾	ASTM D 5887	1/Week	1 x 10 ⁻⁸ m ³ /m ² /sec ma	
nternal Shear Strength ⁽⁶⁾	ASTM D 6243	Periodically	500 psf Typical	
	TYPICAL ROLL	DIMENSIONS		
Vidth x Length ⁽⁷⁾	Typical	Every Roll	15.5 ft x 150 ft	
rea per Roll	Typical	Every Roll	2,325 ft²	
ackaged Weight	Typical	Every Roll	2,600 lb	

• (3)Tested in machine direction.

• @Modified ASTM D 4632 to use a 4 in wide grip. The maximum peak of five specimens averaged in machine direction. • (5) Deaired, deionized water @ 5 psi maximum effective confining stress and 2 psi head pressure. • (6) Typical peak value for specimen hydrated for 24 hours and sheared under a 200 psf normal stress.

PERMANENT-SEEDING COMPACTED FILL WITH -COMPACTED FILL WITH MIN. 4" DEPTH OF MIN. 4" DEPTH OF SURFACE TOPSOIL SURFACE TOPSOIL (GSE BENTOLINER 'NSL' OR APPROVED EQUIVALENT) ** SEE SPECIFICATIONS SHEET

CHANNEL DIMENSIONS ARE FOR THE COMPLETED CHANNEL AFTER ROCK PLACEMENT. CHANNEL

WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS

STANDARD CONSTRUCTION DETAIL #6-3

PERMANENT SEEDING RIPRAP CHANNEL

NOT TO SCALE

MUST BE OVER-EXCAVATED A SUFFICIENT AMOUNT TO ALLOW FOR THE VOLUME OF ROCK PLACED WITHIN THE CHANNEL WHILE PROVIDING THE SPECIFIED FINISHED DIMENSIONS.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED

SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS

DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

THE MINIMUM ROCK THICKNESS (t) SHALL BE 1.5 TIMES THE MAX ROCK SIZE.

FINISHED ELEV.

erosion, ponding or traffic compaction.

STORM BASIN/RAIN GARDEN BOTTOM

SOIL MIXTURE DETAIL

<u>Subgrade Preparation.</u>

Existing subgrade should not be compacted or subject to excessive construction equipment traffic.

Initial excavation can be performed during rough site grading but shall not be carried to within one foot of the final bottom elevation. Final excavation should not take place until all disturbed areas in the drainage area have been stabilized.

Where erosion of sub-grade has caused accumulation of fine materials and/or surface ponding in the graded bottom, this material shall be removed with light equipment and the underlying soils scarified to

Bring sub-grade to line, grade and elevations indicated. Fill and lightly re-grade any areas damaged by

Amended Soil Installation
Upon completion of sub-grade work, the Site Engineer and Owner shall be notified and they or their

Install soil in 12—inch maximum lifts, and lightly compact (tamp with backhoe bucket or by hand). Keep equipment movement over planting soil to a minimum; do not over compact. Install soil to final

representative shall inspect before proceeding with rain garden installation.

RAIN GARDEN A: 516.2

RAIN GARDEN B: 517.5 RAIN GARDEN C: 516.0 RAIN GARDEN D: 522.0

STORM BASIN #1: 514.00

. VEGETATIVE STABILIZATION			_			_	7		
, VEGETATIVE STABILIZATION	(LOOKING DOWNSTREAM)								
	CHANNEL CROSS—SECTION								
LINING									
ISAR P300 MAT	OHANNE		BOTTOM WIDTH	DEPTH	71	Z2		RIPRAP DEPTH	
NSAR S75 MAT	CHANNEL NO.	STATIONS	BW	D (ET)	(FT)		RIPRAP GRADATION		UNDERLAYMENT
NSAR S75 MAT NSAR P300 MAT			(FT)	(FT)				(IN)	
NSAR S75 MAT	8	ENTIRE LENGTH	5.0	1.7	3	3	R-4	18	30 MIL PVC LINER

PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE.

1. All Channels Must Be Kept Free Of Obstruction Such As Fill Ground, Fallen Leaves And Woody Debris, Accumulated Sediment, And Construction Materials / Wastes. Channels Should Be Kept Mowed And/or Free Of All Weedy, Brushy Or Woody Growth (unless Part Of The Landscape Plan). Any Underground Utilities Running Across / Through The Channel(s) Shall Be Immediately Backfilled And The Channel(s) Repaired And Stabilized Per The Channel Cross-section Detail. $2.\ \ Vegetated\ Channels\ Shall\ Be\ Constructed\ Free\ Of\ Rocks,\ Tree\ Roots,\ Stumps\ Or\ Other\ Projections\ That\ Will\ Impede\ Normal$ Channel Flow And/or Prevent Good Lining To Soil Contact. The Channel Shall Be Initially Over-excavated Minimum Of 6" To Allow For Placement Of Topsoil.

* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION

SLOPE

3. Channels Must Be Stabilized With Indicated Lining Immediately Upon Construction. $4. \ Channel\ Maintenance:\ Channels\ Must\ Be\ Maintained\ To\ Ensure\ That\ The\ Specified\ Design\ Dimensions\ And\ Stabilization\ Are$ 5. Anchor Trenches Shall Be Installed At Beginning And End Of Channel In The Same Manner As Longitudinal Anchor Trenches. 6. Channel Dimensions Shall Be Constantly Maintained. Channel Shall Be Cleaned Whenever Total Channel Depth Is Reduced By 25%

of Channel Differentisons and the Constanting Maintained. Channel State of the Channel Whenever Depth is Newton to At Any Location. Sediment Depth is Newton to Channel Without Further Damage. Damaged Lining Shall Be Repaired Or Replaced Within 48 Hours Of Discovery. 7. No More Than One Third Of The Shoot (grass Leaf) Shall Be Removed In Any Mowing, Grass Height Shall Be Maintained Between 2 And 3 Inches Unless Otherwise Specified. Excess Vegetation Shall Be Removed From Permanent Channels To Ensure Sufficient

STANDARD CONSTRUCTION DETAIL #6-1 VEGETATED CHANNEL

NOTES: LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER

FOLLOWING STANDARDS:		
PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE

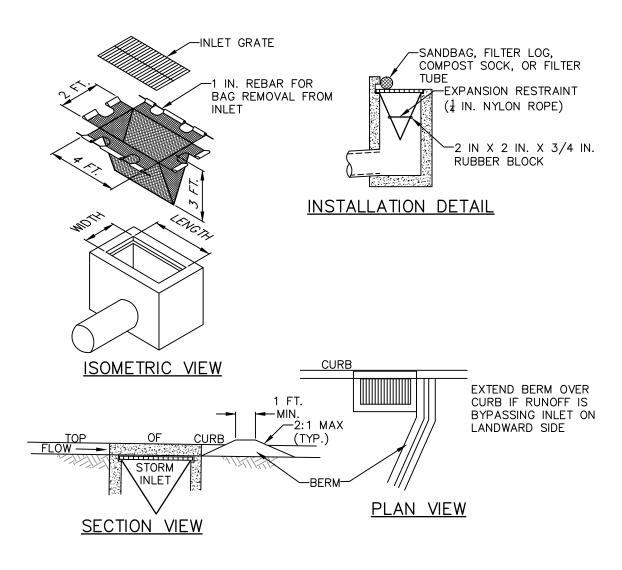
BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEÓTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY

PUMPED WATER FILTER BAG

AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.



MAXIMUM DRAINAGE AREA = 1/2 ACRE.

ACCORDING TO THE PLAN NOTES.

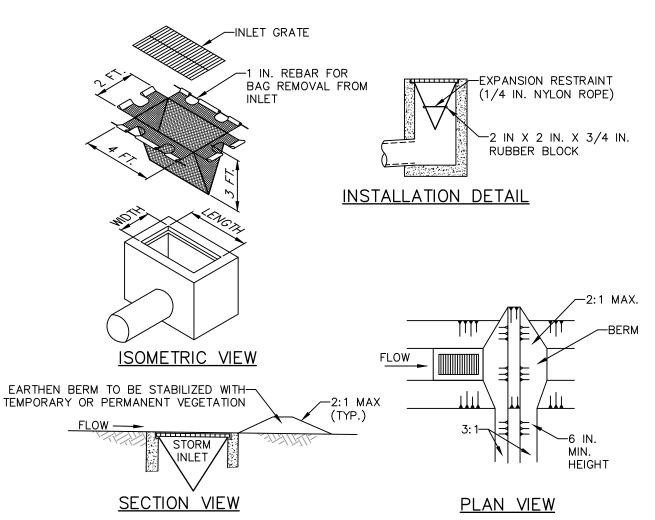
INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

FILTER BAG INLET PROTECTION (CURBED ROADWAY)



NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

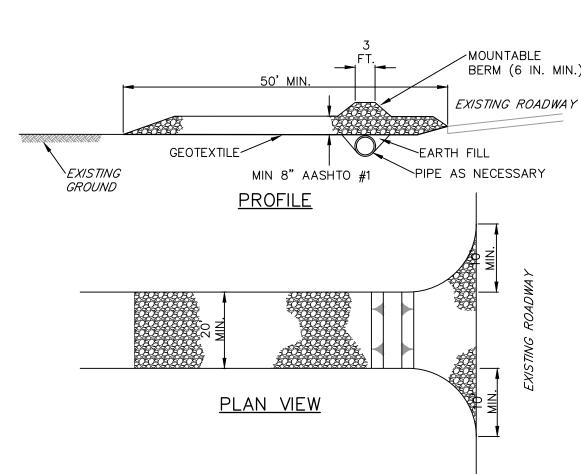
ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.

AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

FILTER BAG INLET PROTECTION (CHANNEL OR ROADSIDE SWALE)



* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

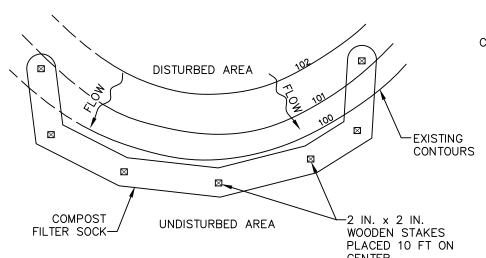
REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

STABILIZED ROCK CONSTRUCTION ENTRANCE



SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THA' SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA. TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN. COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. REPLACED WITHIN 24 HOURS OF INSPECTION.

BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT. WHERE SOCK CROSSES PAVEMENT, ANCHOR SOCK IN PLACE WITH A FILLED SANDBAG BUTTED ON EACH SIDE OF THE SOCK, EVERY 30 FEET OF SOCK. THE PHYSICAL PARAMETERS OF THE COMPOST SHOULD COMPLY WITH THE STANDARDS IN TABLE 4.2. THE STANDARDS CONTAINED IN THE PENNDOT PUBLICATION 408 ARE AN ACCEPTABLE ALTERNATIVE.

VERTICAL SPACING

SLATS

30 TO 55 GALLON BARREL WITH 1 IN DIA.

PERFORATIONS AT 6 IN. HORIZONTAL AND 6 IN.

PLACE 2 IN. x 2 IN. VERTICAL WOOD SLATS @ 6 IN. HORIZONTAL SPACING AROUND THE BARREL

WRAP FILTER FABRIC AROUND THE BARREL AND

⁾ 2 FT.

BASIN BOTTOM

DEWATERING FACILITY SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF BASIN/TRAP.

PRIOR TO INITIATING OPERATION OF DEWATERING FACILITY, ALL ACCUMULATED SEDIMENT SHALL

DEWATERING FACILITY SHALL BE CONTINUOUSLY MONITORED DURING OPERATION. IF FOR ANY REASON THE DEWATERING FACILITY CEASES TO FUNCTION PROPERLY, IT SHALL BE IMMEDIATELY

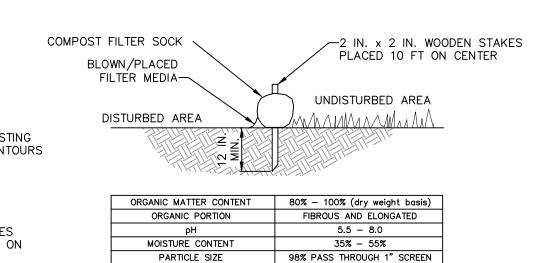
STANDARD CONSTRUCTION DETAIL #7-18 SEDIMENT BASIN OR SEDIMENT TRAP SEDIMENT STORAGE DEWATERING FACILITY NOT TO SCALE

SHUT DOWN AND NOT RESTARTED UNTIL THE PROBLEM HAS BEEN CORRECTED.

AASHTO #57

BE CLEANED FROM THE INSIDE OF THE BARREL.

CLEAN-OUT ELEV.



SOLUBLE SALT CONCENTRATION | 5.0 dS/m (mmhos/cm) MAXIMUM

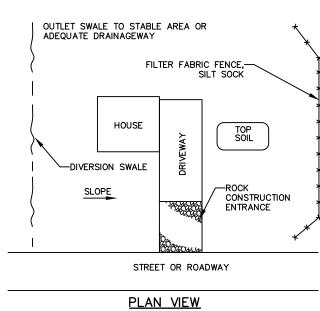
PRESSURE TREATED 4"X4"
-WOOD POST -SEDIMENT CLEANOUT LEVEL PAINT WHITE BOTTOM OF BASIN

SEDIMENT CLEANOUT STAKE DETAIL

TEMPORARY

PFRMANFN^{*}

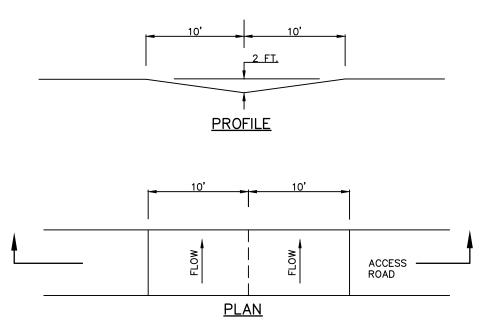
				DESIGN: T.C.S.
				DRAWN: G.D.G.
				CHECKED : J.K.M.
<u>A</u>	12/6/18	WATER DESIGN	GDG	DATE: 3/01/2018
A	5/10/18	REVIEW COMMENTS	GDG	REV:
\triangle	4/5/18	REVIEW COMMENTS	GDG	
NO.	DATE	DESCRIPTION	BY	



THE AREA DOWNSLOPE OF THE FILTER FENCE/COMPOST SOCK BARRIER/SEDIMENT FILTER LOG THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER RUNOFF FROM AREAS ABOVE THE LOT ARE NOT OTHERWISE DIVERTED AWAY FROM THE LOT. THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LINING. THE DESIGNER AND/OR CONTRACTOR MUST EXERCISE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY OWNERS WHEN SELECTING A DISCHARGE POINT FOR THIS CHANNE IN AREAS WHERE SLOPE IS AT AN OBLIQUE ANGLE TO THE ROADWAY, BMPS SHALL BE

DIVERSION CHANNEL MAY OUTLET TO ROADSIDE DITCH OR STORM SEWER SYSTEM, BUT NOT ONTO STREET OR ROADWAY.

TYPICAL ON-LOT CONTROL DIAGRAMS



NOTES:

1. BROAD-BASED DIPS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN AND AT THE LOCATIONS SHOWN ON THE PLAN DRAWINGS. 2. DIPS SHALL BE ORIENTED SO AS TO DISCHARGE TO THE LOW SIDE OF THE ROADWAY. 5. DIPS SHALL BE INSPECTED DAILY. DAMAGED OR NON-FUNCTIONING DIPS SHALL BE REPAIRED BY THE 4. MAXIMUM SPACING OF BROAD-BASED DIPS SHALL BE AS SHOWN IN TABLE 3.2 OF THE PA DEP EROSION CONTROL MANUAL.

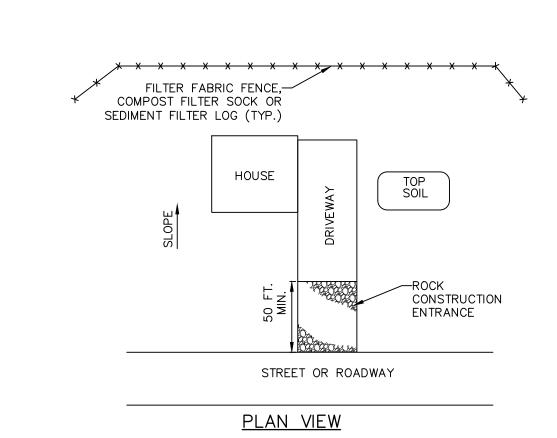
STANDARD CONSTRUCTION DETAIL #3-6 BROAD BASED DIP - LOW GRADIENT (< 5 %) ROADWAYS

OUTLET SWALE TO DIVERSION SWALE-**ADEQUATE** —DRAINAGEWAY HOUSE TOP SOIL -DIRECT RUNOFF FROM DRIVEWAY TO SEDIMENT BARRIER FILTER FABRIC FENCE,-SILT SOCK CONSTRUCTION ENTRANCE STREET OR ROADWAY <u>PLAN VIEW</u>

NOTES:

THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER THE LOT EXTENDS MORE THAN 150 FEET ABOVE THE ROADWAY OR WHERE RUNOFF FORM AREAS ABOVE THE LOT IS NOT OTHERWISE DIVERTED AWAY FROM THE LOT. THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LINING. THE DESIGNER AND/OR CONTRACTOR MUST EXERCISE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY OWNERS WHEN SELECTING A DISCHARGE POINT FOR THIS CHANNEL.

STANDARD CONSTRUCTION DETAIL #10-1 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY



THE AREA DOWNSLOPE OF THE FILTER FENCE/COMPOST SOCK BARRIER/SEDIMENT FILTER LOG MAY NOT BE UNDER DEVELOPMENT OR OTHERWISE DISTURBED.

STANDARD CONSTRUCTION DETAIL #10-2 TYPICAL ON-LOT BMPs FOR LOT BELOW ROADWAY

H M 2

PROJECT NO. 317565 SURVEY BOOK: SCALE: DWG Y: \17\317565.aph\31756 FILF: Dwg\Plans\Prelim-Final\ SHEET 13 * 15

GENERAL NOTES FOR ALL WORK--

SPECIFIC STAGES OF CONSTRUCTION:

A. At least 7 days before starting any earth disturbance activities, including clearing and grubbing, the owner and/or operator shall invite all contractors involved in those activities, the landowner, all appropriate municipal officials, the erosion control plan preparer, the licensed professional responsible for oversight of critical stages of implementation of the PCSM plan, and a representative of the County Conservation

B. At least 3 days before starting any earth disturbance activities, all contractors involved in those activities shall notify the Pennsylvania One Call system Incorporated at 1-800-242-1776 (or 811) for the location of existing underground utilities.

C. All earth disturbance activities shall proceed in accordance with the following specific sequencing. Each stage shall be completed and immediately stabilized before any following stage is initiated. Clearing, grubbing and topsoil stripping shall be limited only to those areas described in each stage. any deviation from the following sequence must be approved in writing by the County Conservation Distr

Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices to eliminate the potential for accelerated erosion and/or sediment pollution, and notify

Immediately after earth disturbance activities cease, the operator shall stabilize the disturbed areas. During non-germinating periods, mulch must be applied at the specified rates. Disturbed areas which are not at finished grade and which will be re-disturbed within 1 year must be stabilized in accordance with the temporary vegetative stabilization specifications. Disturbed areas which are not at final grade or which will not be re-disturbed within 1 year must be stabilized in accordance with the permanent vegetative stabilization specifications. All pumping of sediment laden water shall be through a sediment control BMP, such as a pumped water filter bag or equivalent sediment

removal facility, over undisturbed vegetated areas PRIOR TO CONSTRUCTION:

A. Abandon any existing well at the dwelling to be removed. All well closures and abandonment shall conform to water well abandonment guidelines as published in chapter 7 of the PA DEP publication "Ground Water Monitoring Guidance Manual". Remove the existing sewage disposal system at the dwelling to be removed, per the instruction of the Upper Allen Township Sewage

At least 7 days before starting any earth disturbance activities, the operator shall invite all contractors involved in those activities, the land owner, all appropriate municipal officials, the erosion control plan preparer, and a representative of the Cumberland County Conservation District to an on—site pre—construction meeting. Also, at least 3 days before starting any earth disturbance activities, all contractors involved in those activities shall notify the PA One Call System, Inc. At 1—800—242—1776 for buried utilities location.

Stage 1
Install stabilized construction entrance #1 off the edge of existing driveway paving. Clearly mark the limits of earth disturbance. Install silt socks #1 to 5. Install the rock filter berm on the pavement from curb to curb at the end of Coventry Drive stub.

Raze existing dwelling, only disturbing the minimum amount of ground necessary. Remove existing pavement. All building waste material must be removed from the site and recycled or disposed of in accordance with the department's solid waste management regulations and 25 pa. Code 260.1 et sea., 271.1., and 287.1 et sea. Remove pole lines associated with the razed building, in coordination with the utility company(s).

In one continuous short—term operation when precipitation is not forecasted and the existing channel is dry, remove riprap stone, existing trees and strip topsoil as necessary and install sanitary sewer run the stub in Arborfield to manhole #G08—131. Replace the riprap in the existing swale for now. Permanently seed the disturbed yard area around manhole G08-130.

**Stage 4
In one continuous short—term operation when precipitation is not forecasted and the existing channel is dry, remove riprap stone and strip topsoil as necessary and place to the side of the channel, and install storm pipe system A to A2 and A3. Basin outlet installation is a critical stage of construction, for which a licensed professional or their designee must be present during installation. Install inlet protection on inlet A as soon at it is placed. After the pipe run A to A1 is backfilled, immediately replace topsoil and permanently seed and mat as this area will not be disturbed again. The developer and contractor should coordinate this work with the affected Arborfield property owners.

In one continuous short—term operation, strip topsoil and remove riprap as necessary and then install swales #8 and 9, including the permanent swale linings. Install and backfill over pipes H1 to H and place riprap apron at the outlet of H. Perform the final grading between H1 and the adjacent property, and permanently seed and mat at once. At the same time, install the berm of sediment basin #A, using shale cut material as necessary from the vicinity of lots #5 to 8. Install the sediment basin temporary spillway and stabilize it immediately. Install, stub and temporarily block off the underdrains from A1 to inside the basin berm. Basin installation is a <u>critical stage of construction</u>, for which a licensed professional or their designee must be present during installation. Permanently grade, seed and mat any remaining disturbed soil along the swales and outside of the berm as these swales are clean water bypass routes while the main project area is being constructed. Adjust silt socl #3 location to be along the edge of the completed swale #9, and around and over endwall #H1. The developer and contractor should coordinate the work in this stage with the affected adjacent Arborfield property owners. At the end of this stage, swales #8 and 9 should be fully installed and the berms on each side of them permanently stabilized, or have a silt sock along the edge to protect them since they will be receiving clear

Stage 6
Finish internal grading of sediment basin #A per the temporary contours shown on the drawings, including the temporary riser pipe and cleanout marker. Do not install the basin underdrains at this time. Temporary seed the inside of the basin as soon as it is graded. The outside of the basin berm should be permanently seeded since it will remain for a while.

In one continuous short-term operation, strip topsoil and install swale #1, beginning at the downhill end and working uphill, stabilizing each day

 $\underline{\text{Stage 8}}$ Install sediment trap #1, including the cleanout marker, outlet spillway, and temporary seed the trap.

Stage 9
Strip topsoil and stockpile as necessary to rough grade the streets, except at construction entrance #1, which shall remain. Install broad based dip #1 to drain into sediment trap #1, and continuously maintain it until the street is readied for curbing / paving. While placing fill for the grading Arborview Drive from Gettysburg Pike to lot #4, direct as much runoff as possible to sediment trap #1, such as a berm / swale along the west edge of the fill at the end of a day when precipitation is expected.

Stage 10
Install sanitary sewer system with laterals. During trenching, should any water accumulate in trenches or elsewhere, to a depth that must be pumped, then the contractor shall use a Facility for Sediment Removal From Pumped Water as detailed on the drawings.

**Stage 11
Install storm sewer system, and water system. During trenching, should any water accumulate in trenches or elsewhere, to a depth that must be pumped, then the contractor shall use a Facility for Sediment Removal From Pumped Water as detailed on the drawings. Install riprap apron at pipe outlets as soon as a pipe is placed. Install seepage bed #4 with pipe run F2 to F construction. Inlet protection must be placed on inlet #F1 as soon as the grate is placed. Install electric / cable / gas utilities. As soon as pipe G1 to G is in place, install swale #5, beginning at he downhill end and working uphill, stabilizing each day the portion of swale completed that day, with topsoil, seed and matting. Seepage bed #3 shall be installed with the swale construction. Rock filter berm #2 shall be installed around pipe end #61 immediately after the swale and seepage bed are finished. As soon as pipe F2 to F is in place, install swale #4, beginning at the downhill end and working uphill, stabilizing each day the portion of swale completed that day, with topsoil, seed and matting. "Seepage beds #2 and 4 shall be installed with the swale construction. Rock filter berm #1 shall be installed around pipe end #72 immediately after the swale and seepage bed are finished. As soon as pipe B7 to B is in place, install swales #2 and 3, beginning at the downhill end and working uphill, stabilizing each day the portion of swale completed that day, with topsoil, seed and matting. Seepage bed #1 shall be installed with the swale construction. Installation of any seepage bed shall be considered a critical stage of construction, for which a licensed professional or their designee must be present during construction.

Install curbing and gravel subbase of streets, and pave with base course (eliminating construction entrance #1, broad based dip #1 and rock filter berm #3). Continuously maintain gravel or temporary asphalt water bars in Coventry Lane to divert runoff into inlets #E1, E2 and E3. Block off oventry Lane from construction traffic with barricades / signs as necessary. Seed disturbed soil throughout the site and permanently seed; mai where indicated on the drawing. House construction may begin as lots are sold (see separate staging of earthmoving activities for individual house construction below). Once Arborview Drive is in place, sediment trap #1 can be removed since it will have no watershed. In a short term operation Install swale #7, beginning at the downhill end and working uphill, stabilizing each day the portion of swale completed that day, with topsoil, seed and matting

Temporary control measures can be removed when the watershed draining to the measure is permanently stabilized, meaning a minimum uniform 70% perennial vegetative cover or other permanent non-vegetative cover with a density capable to resist accelerated surface erosion, and subsurface characteristics sufficient to resist sliding and other movements. The location of the control measure must be immediately permanently stabilized upon its removal. All areas to be permanently seeded shall have a minimum depth of 4" of topsoil before seeding; import topsoil if

When the site is permanently stabilized, in one short-term operation during the growing season when precipitation is not anticipated for several days, install rain gardens #Á, B, C and D, and permanently seed and mat disturbed areas immediately. Installation of a rain garden shall be considered a critical stage of construction, for which a licensed professional or their designee must be present during construction.

Upon completion of all earth disturbance activities, removal of all temporary BMPs, installation of all permanent PCSM BMPs, and permanent stabilization of all disturbed areas, the owner and/or operators shall contact the County Conservation District for a final inspection

EROSION CONTROL PLAN GENERAL NOTES:

- 1. The site contractor shall be responsible for implementation of this Erosion Control Plan
- 2. The site contractor shall not disturb more area than is necessary for the task to be done, so that
- 3. Erosion and sedimentation controls must be constructed, stabilized, and functional before site disturbance within the tributary greas to the

4.A copy of the approved Erosion and Sediment Control Plan / Drawings (stamped, signed and dated by the reviewing agency) must be

5 At least 7 days prior to starting any earth disturbance activities, or expanding into an area previously unmarked, the owner and/or operator shall invite all contractors involved in those activities, the landowner, appropriate municipal officials, the erosion control plan preparer, the post construction plan preparer, and a representative of the County Conservation District to an on—site pre—construction meeting. 6. At least 3 days before starting any earth disturbance activities, or expanding into an area previously One Call system incorporated shall be notified at 1-800-242-1776 for the location of existing underground utilities.

7. All earth disturbance activities shall proceed in accordance with the sequence provided on the plan drawings. Each stage shall be completed and immediately stabilized before any following stage is initiated. Clearing, grubbing, and topsoil stripping shall be limited only to those areas described in each stage. Deviation from that sequence must be approved in writing from the County Conservation District prior to

8. Clearing, grubbing, and topsoil stripping shall be limited to those areas described in each stage of the construction sequence. General site clearing, grubbing and topsoil stripping may not commence in any stage or phase of the project until the E & S BMPs specified by the Construction Sequence for that stage or phase have been installed and are functioning as described in this document. 9. At no time shall construction vehicles be allowed to enter areas outside the limit of disturbance boundaries shown on the plan maps. These

areas must be clearly marked and fenced off before clearing and grubbing operation begin. 10. Topsoil stockpile heights shall not exceed 35 feet. Stockpile side slopes must be 2:1 or flatter.

11. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices (BMPs) to minimize the potential for erosion and sediment pollution, and notify the Conservation District and/or the regional office of PA DEP.

12. Solids, trash and other pollutants shall be disposed in accordance with federal and state regulations in order to prevent any pollutant in such materials from adversely affecting the environment. All building materials and wastes must be removed from the site and recycled or

disposed in accordance with the Department of Environmental Protection's Solid Waste Management regulations at 25 Pa. Code 260, 260.1 et seq., 271.1, and 287.1 et seq. No building materials or wastes or unused building materials shall be burned, buried, dumped, or discharged at

13. All off-site waste and borrow areas must have an E & S Plan approved by the Conservation District or DEP, and fully implemented prior 14. The contractor is responsible for ensuring that any material brought onto the site is Clean Fill. Form FP-001 must be retained by the property owner for any fill material affected by a spill or release of a regulated substance but qualifying as Clean Fill due to analytical testing.

15. All pumping of sediment laden water shall be through a sediment control BMP, such as a pumped water filter bag or equivalent sediment

16. Areas which are to be topsoiled shall be scarified to a minimum depth of 4 inches prior to placement of topsoil. Areas to be vegetated 17. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures, conduits, etc. shall be compacted in accordance with local requirements or codes. All fills shall be placed in compacted layers not to exceed 9 inches in thickness. Fill materials shall be free of frozen particles, brush, roots, sod, or other foreign or objectionable materials that would interfere with or prevent construction of satisfactory fills. Frozen materials or soft, mucky, or highly compressible materials shall not be incorporated into fills. Fill shall not be placed on saturated or frozen surfaces.

specification for subsurface drain or other approved method.

19. All graded areas shall be permanently stabilized immediately upon reaching finished grade. Cut slopes in competent bedrock and rock fills

20. Immediately after earth disturbance activities cease in any area or subarea of the project, the operator shall stabilize all disturbed areas. During non-germinating months, mulch or protective blanketing shall be applied as described in the plan. Areas not at finished grade, which will be reactivated within 1 year, may be stabilized in accordance with the temporary stabilization specifications. Those areas which will not be reactivated within 1 year shall be stabilized in accordance with the permanent stabilization specifications.

21. Permanent stabilization is defined as a minimum uniform, perennial 70% vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated erosion. Cut and fill slopes shall be capable of resisting failure due to slumping, sliding, or other movements.

22. All E & S BMPs must remain functional as such until all areas tributary to them are permanently stabilized or until they are replaced by 23. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and / or operator shall contact the Conservation District for an inspection prior to removal / conversion of the E & S BMPs.

24. After final site stabilization has been achieved, temporary E & S BMPs must be removed or converted to permanent post construction stormwater management BMPs. Ares disturbed during removal or conversion of the BMPs must be stabilized immediately. In order to ensure rapid revegetation of disturbed areas, such removal / conversions should be done only during the germinating season. 25. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and / or operator shall

26. Failure to correctly install E & S BMPs, failure to prevent sediment-laden runoff from leaving the construction site, or failure to take immediate corrective action to resolve failure of E & S BMPs may result in administrative, civil, and/or criminal penalties being instituted by the Pennsylvania Department of Environmental Protection as defined in Section 602 of the Pennsylvania Clean Streams law. The Clean Streams law provides for up to \$10,000 per day in civil penalties, up to \$10,000 in summary criminal penalties, and up to \$25,000 in misdemeanor criminal

27. Only limited disturbance will be permitted to initially access and acquire borrow to construct control facilities, before general site alteration

28. If fuel or other dangerous chemicals are stored on site, then a Preparedness, Prevention and Contingency (PPC) Plan must be developed 29. An erosion control blanket must be installed on all disturbed slopes steeper than 3:1, in all areas with concentrated flows as noted on the

30. Underground utilities cutting through any active channel shall be immediately backfilled and the channel restored to its original cross—section and protective lining. Any base flow within the channel shall be conveyed past the work in the manner described in this plan until such restoration is complete.

TEMPORARY SEEDING SCHEDULE:

The contractor shall immediately temporarily stabilize any rough graded area, topsoil stockpile or unused excavated fill material that will be left idle for less than 1 year. The grass will provide interim protection against the impact of precipitation, running water and wind. Permanently seed any area that will be idle for more than 1 year.

annual rye grass

Temporary seeding schedule is as follows:

removal facility, over undisturbed vegetated areas.

% Live Seed: 10 lbs./I,000 sq. yds. Application rate: general purpose granular, 10-20-20 Fertilizer type: Fertilizer application rate: I1 lbs./l,000 sq. yds. per soil test; minimum of 4 tons per acre. Liming rate: 1,200 lbs/l,000 sq. yds. Strawbale mulch rate no seeding between 1 1/1 and 3/15Seeding dates: Mulch anchoring:

Asphalt, either emulsified or cut—back, containing no solvents or other diluting agents toxic to plan or animal life, uniformly applied at the rate of 31 gallons per 1,000 square yards. Synthetic binders (chemical binders) may be used per manufacturer's recommendation provided they are non-toxic to plant and animal species.

When seeding is not possible due to the time of year or other limitations, disturbed area shall be mulched with strawbales at the rate above. An erosion control blanket must be installed on all disturbed slopes steeper than 3:1, and all areas with concentrated flows. Matting can be North American Green 'S75' or approved equal.

Maintenance procedure: 1) Maintain a minimum 70% soil surface coverage with grass and/or mulch.

2) If a washout, slope failure or similar disturbance occurs, correct drainage problem if necessary, then reapply soil to the proper grade, reapply soil amendments, seed and mulch.

PERMANENT SEEDING SCHEDULE: (NON-MEADOW AREAS)

All disturbed soil not to be covered with impervious surfaces, riprap or landscaping mulch shall be permanently seeded to provide protection against the impact of precipitation, running water and wind. Permanent seeding schedule for the general project area is as follows:

FOR GENERAL LAWN PLANTING--30% Kentucky bluegrass 40% Pennlawn Creeping Red Fescue 20% Norlea Perennial ryegrass

10% annual ryegrass % Pure live seed: Application rate Fertilizer type: Fertilizer application rate:

Strawbale mulching rate:

Liming rate:

Seeding dates:

Mulch anchoring:

6 lbs./1,000 sq. ft. general purpose granular, 10-20-20 11 lbs./1,000 sq. yds. per soil test; minimum of 6 tons per acre between 4/1 and 10/15

3 tons per acre Asphalt, either emulsified or cut-back, containing no solvents or other diluting agents toxic to plan or animal life, uniformly applied at the rate of 31 gallons per 1,000 square yards. Synthetic binders (chemical binders) may be used per manufacturer's recommendation provided they are non-toxic to plant and animal species.

MAINTENANCE PLAN:

Until the site is stabilized, all erosion and sediment control BMPs must be maintained properly. Responsibility for implementing and maintaining erosion and sedimentation control measures shall be designated to a minimum of one individual who will be present at the project site each working day. Maintenance must include inspections of all erosion and sediment control BMPs after each runoff event and on a weekly basis, to ensure that they are in place, stable, and functioning properly. All preventative and remedial maintenance work, including clean out, repair, replacement, re—grading, reseeding, re—mulching, and re—netting must be performed immediately, to restore the control measure to the original design. If erosion and sediment control BMPs fail to perform as expected, replacement BMPs, or modifications of those installed, will be required.

. A log showing dates that E & S BMPs were inspected as well as any deficiencies found and the date they were corrected shall be maintained on the site and be made available to regulatory agency officials at the time of inspection.

. Any sediment removed from BMPs during construction will be returned to upland areas within the project area, and incorporated into the site grading, or in the manner described on the plan drawings.

. See the construction details and seeding specifications for maintenance procedures for the various control measures.

. Mud must be removed from vehicle tires before they exit the site. Sediment tracked onto any public roadway or sidewalk shall be returned to the construction site by the end of each work day and disposed in the manner described in this plan. In no case shall the sediment be washed, shoveled, or swept into any roadside ditch, storm sewer or surface water.

E&S GENERAL NOTES CON'T:

per the channel cross-section detail

31. Fill Materials—
The NPDES Permit covers the "moving, depositing, stockpiling, or storing of soil rock or earth materials." If the site will need to have fill imported from an off site location, the responsibility for performing environmental due diligence and the determination of clean fill will in most cases reside with the Operator. If the site will have excess fill that will need to be exported to an off site location, the responsibility of clean fill determination and the environmental due diligence rests on the applicant. If all cut and fill materials will be used on the site, a clean fill determination is not required by the operator unless there is a belief that a spill or release of a regulated substance occurred on site. The contractor is responsible for ensuring that any material brought onto the site is Clean Fill. Any placement of clean fill that has been affected by a spill or release of a regulated substance must use form FP—001 to certify the origin of the fill material and the results of the analytical testing to qualify the material as clean fill. Form FP—001 must be retained by the owner of the property receiving the fill. FP-001 must be retained by the owner of the property receiving the fill.

qualifies as Clean Fill. Definitions of Clean Fill and Environmental Due Diligence are provided below. All fill material must be used in accordance with the Department's policy 'Management of Fill', document number 258—2182—773. A copy of this policy is available online at www.depweb.state.pa.us. Under the heading Quick Access on the left side of the screen, click on "Forms and Publications." On the left side of the screen click on "Technical Guidance Documents— Final." Then type the document number 258–2182–773 into the search window and conduct the search. Click on "Management of Fill." Clean Fill is defined as: Uncontaminated, non-water soluble, non-decomposable, inert, solid material. The term includes soil, rock,

Applicants and/or operators must use environmental due diligence to ensure that the fill material associated with this project

stone, dredged material, used asphalt, and brick, block or concrete from construction and demolition activities that is separate from other waste and is recognizable as such. The term does not include materials placed in or on the waters of the Commonwealth unless otherwise authorized. (The term "used asphalt" does not include milled asphalt or asphalt that has been Clean Fill affected by a spill or release of a regulated substance: Fill materials affected by a spill or release of a regulated substance still qualifies as clean fill provided the testing reveals that the fill material contains concentrations of regulated

substances that are below the residential limits in Tables FP-1a and FP-1b found in the Department's policy 'Management of Fill.' Environmental due diligence: Investigative techniques, including, but not limited to, visual property inspections, electronic data base searches, review of property ownership, review of property use history, Sanborn maps, environmental questionnaires, transaction screens, analytical testing, environmental assessments or audits. Analytical testing is <u>not</u> a required part of due diligence unless visual inspection and/or review of the past land use of the property indicates that the fill may have been subjected to a spill or release of regulated substance. If the fill may have been affected by a spill or release of a regulated substance, it must be tested to determine if it qualifies as clean fill. Testing should be performed in accordance with Appendix A of the Department's

Fill material that does not qualify as clean fill is regulated fill. Regulated fill is waste and must be managed in accordance with the Department's municipal or residual waste regulations based on 25 Pa. Code Chapters 287 Residual Waste Management or 271 Municipal Waste Management, whichever is applicable.

i2. The erosion and sediment pollution control plan and NPDES permit must be approved by the County Conservation District prior to any earthmoving activities on this site 33. All channels must be kept free of obstructions such as fill ground, fallen leaves and woody debris, accumulated sediment, and construction wastes/materials. Channels should be kept mowed and/or free of all weedy, brushy or woody growth. Any underground utilities running across/through the channel(s) shall be immediately backfilled and the channel(s) repaired and stabilized

34. Vegetated channels shall be constructed free of rocks, tree roots, stumps or other projections that will impede normal channe flow and/or prevent good lining to soil contact. The channel shall be initially over-excavated to allow for the placement of topsoil. 35. The permittee and co-permittee must ensure that visual site inspections are conducted weekly, and after each measurable precipitation event by qualified personnel, trained and experienced in erosion and sediment control, to ascertain that the Erosion and Sediment Control (E&S) BMPs are operational and effective in preventing pollution to the waters of the Commonwealth. A writter) a summary of the site conditions F&S BMPs and compliance and the date, time, and the name of the person conducting the inspection.

36. The contractor shall be responsible for the removal of any excess material and make sure the site(s) receiving the excess has an approved erosion and sediment control plan that meets the conditions of Chapter 102 and/or other State or Federal regulations

∕-4 FT X 8 FT X 3/4 IN.

OR EQUIV. MATERIAL

воттом

EXTERIOR GRAD PLYWOOD, SHEET METAL

ON CENTER

(FT)

OR LENGTH HEIGHT CREST ELEV.

IN POOLS WITH DEPTHS EXCEEDING 7'. THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE

BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS.

SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR

BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.

STANDARD CONSTRUCTION DETAIL #7-14

BAFFLE

4 IN. X 4 IN. PRESSURE TREATED-

THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.

SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION.

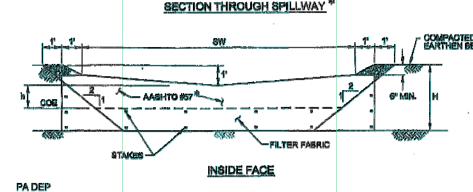
AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION

DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION.

TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION.

WOOD POSTS OR EQUIV. METAL

STANDARD CONSTRUCTION DETAIL # 8-1



Embantment outlet shall be composed entirely of rock above clean out elevation (COE); main body R-3 or larger --- R-4 to be used for drainage areas greater than 3.0 acres, inside face AASHTO # 57 stone or smaller. A 6" thick layer of compost, compost sock, or clean sand shall be installed on top of the AASHTO #57 stone and securely anchored in HQ watersheds. 24" diameter compost sock(s) shall be used in place of filter fabric and AASHTO #57 stone in EV

Fill material for the embankments shall be free of roots, or other woody vegetation, organic material, large stones, and other objectionable materials. The embankment shall be compacted in layered lifts of not more than 9". The maximum rock size shall be no greater than 6".

Upon completion, the embankment shall be seeded and mulched or otherwise stabilized according to the specifications of the E&S plan drawings. All sediment traps shall be inspected at least weekly and after each runoff event.

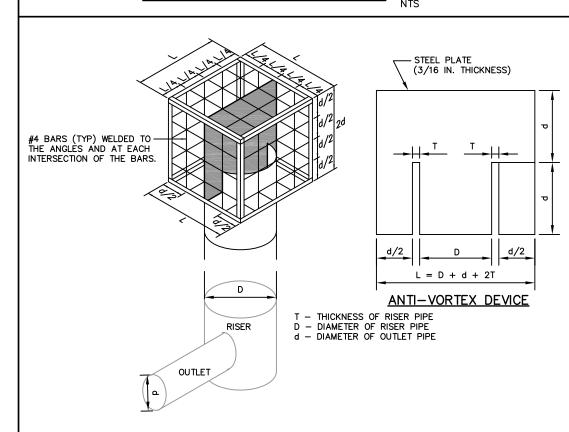
Access for sadiment removal and other required maintenance activities shall be provided. A clean out stake shall be placed near the center of each trap. Accumulated sediment shall be removed when it has reached the clean out elevation on the stake and the trap restored to its original dimensions. Dispose of materials removed from the trap in the manner described in the

Check embankments, spillways, and outlets for erosion, piping and settlement. Clogged or damaged spillways and/or embankments shall be immediately restored to the design

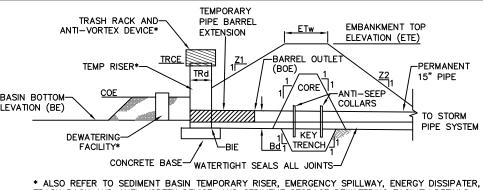
Displaced riprap within the spillway or outlet protection shall be replaced immediately. Accumulated sediment shall be removed and disturbed areas inside the trap shall be stabilized before conversion to a stormwater management facility. To assist in removing sediment, which may be saturated, a device such as is shown in Standard Construction Detail #7-18 may be used to dewater the sediment prior to its removal.

TRAP ST-X	Z1 (FT)	Z2 (FT)	H (FT)	h (FT)	EMBANK. TOP ELEV. ETE (FT)	SPILLWAY TOP ELEV. SCE (FT)	CLEAN OUT ELEV. COE (FT)	BOTTOM ELEV. BE (FT)	SPILLWAY WIDTH SW (FT)
1	2	2	4	3	526.0	525.0	523.1	522.0	2.5

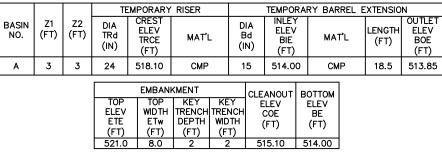
STANDARD CONSTRUCTION DETAIL #8-1 **EMBANKMENT SEDIMENT TRAP**



TANDARD CONSTRUCTION DETAIL #7-5 TRASH RACK AND ANTI-VORTEX DEVICE



TRASH RACK AND ANTI-VORTEX DEVICE, AND SEDIMENT STORAGE DEWATERING FACILITY DETAILS.

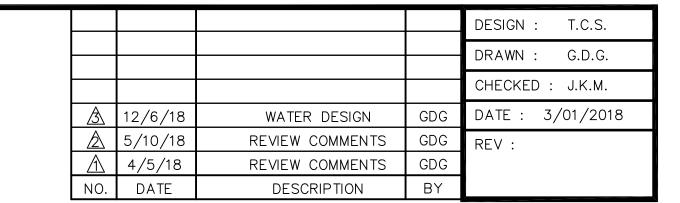


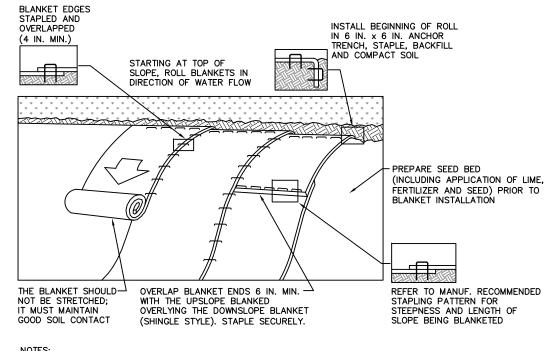
SEDIMENT BASINS, INCLUDING ALL APPURTENANT WORKS, SHALL BE CONSTRUCTED TO THE DETAIL AND AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTION OF EARTHEN FILL. FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER CTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS. UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS. TREES SHALL NOT BE PLANTED ON THE EMBANKMENT. ALL BASIN EMBANKMENTS SHALL BE COMPACTED BY SHEEPSFOOT OR PAD ROLLER. FIVE PASSES OF THE COMPACTION EQUIPMENT OVER THE ENTIRE SURFACE OF EACH LIFT IS REQUIRED. EMBANKMENT COMPACTION TO VISIBLE NON-MOVEMENT IS REQUIRED. SOILS ACCEPTABLE FOR EMBANKMENT CONSTRUCTION SHOULD BE LIMITED TO GC, GM, SC, SM, CL OR ML AS DESCRIBED IN ASTMD-2487 (UNIFIED SOILS CLASSIFICATION). ACCESS SHALL BE PROVIDED FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES. A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH BASIN. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE BASIN IN THE MANNER DESCRIBED

INSPECT ALL SEDIMENT BASINS ON AT LEAST A WEEKLY BASIS <u>AND</u> AFTER EACH RUNOFF EVENT. CHECK BASIN EMBANKMENTS, SPILLWAYS, AND OUTLETS FOR EROSION, PIPING AND SETTLEMENT. NECESSARY REPAIRS SHALL BE MADE IMMEDIATELY. DISPLACED RIPRAP WITHIN THE OUTLET ENERGY DISSIPATER SHALL BE REPLACED IMMEDIATELY. ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS SHALL BE STABILIZED INSIDE THE BASIN BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. THE DEVICE SHOWN IN STANDARD CONSTRUCTION DETAIL #7-16 MAY BE USED TO DEWATER SATURATED SEDIMENT PRIOR TO ITS REMOVAL. ROCK FILTERS SHALL BE ADDED AS NECESSAR'S

> STANDARD CONSTRUCTION DETAIL #7-6 SEDIMENT BASIN EMBANKMENT AND SPILLWAY DETAILS PERFORATED RISER

> > NOT TO SCALE



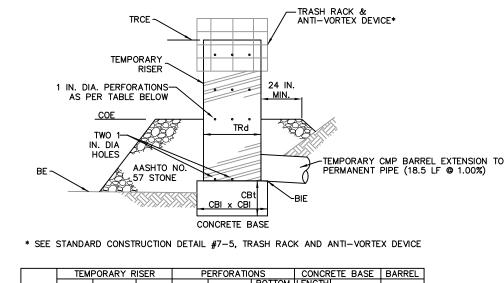


SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO

PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS. BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH

THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

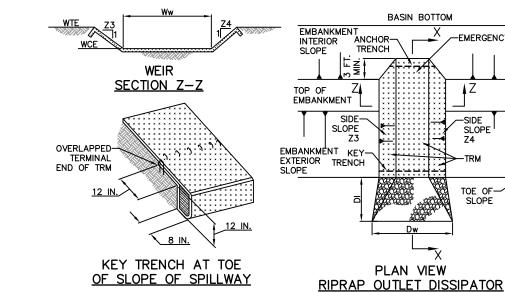
> STANDARD CONSTRUCTION DETAIL #11-1 **EROSION CONTROL BLANKET INSTALLATION**

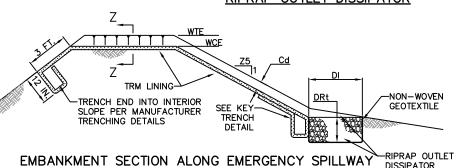


TEMPORARY RISER PERFORATIONS CONCRETE BASE BARREL BASIN NO. TRA (IN) TRAC (FT) DIA TRACE (FT) A 24 518.10 CMP 25 1.0 515.10 48 9 514.00 A MINIMUM OF 2-#8 REBAR SHALL BE PLACED AT RIGHT ANGLES AND PROJECTING THROUGH SIDES OF RISER TO ANCHOR IT TO CONCRETE BASE. REBAR SHALL PROJECT A MINIMUM OF

1/4 RISER DIAMETER BEYOND OUTSIDE OF RISER. CONCRETE BASE SHALL BE POURED IN SUCH A MANNER SO AS TO INSURE THAT CONCRETE FILLS BOTTOM OF RISER TO INVERT OF THE OUTLET PIPE TO PREVENT RISER FROM BREAKING AWAY FROM THE BASE. MINIMUM BASE WIDTH EQUALS 2 TIMES RISER DIAMETER. EMBEDDED SECTION OF ALUMINUM OR ALUMINIZED PIPE SHALL BE PAINTED WITH ZINC CHROMATE OR EQUIVALENT.

CLOGGED OR DAMAGED SPILLWAYS SHALL BE REPAIRED IMMEDIATELY. TRASH AND OTHER DEBRIS SHALL BE REMOVED FROM THE BASIN AND RISER. STANDARD CONSTRUCTION DETAIL #7-11 DRY SEDIMENT BASIN TEMPORARY RISER





SECTION X-X CHANNEL DISSIPATOR TOP CREST WDTH TRM STAPLE Z5 DEPTH LENGTH WDTH RIPRAP THICK.
WTE WCE (FT) TYPE PATTERN (FT) (FT) (FT) (FT) (FT) (R-_) (IN) 3 521.0 518.6 30 N.A.G. P300 PER MANUF. 3 0.7 10 40 R-4 18

HEAVY EQUIPMENT SHALL NOT CROSS OVER SPILLWAY WITHOUT PRECAUTIONS TAKEN TO PROTECT TRM LINING. DISPLACED LINER WITHIN THE SPILLWAY AND/OR OUTLET CHANNEL SHALL BE REPLACED IMMEDIATELY. RIPRAP AT TOE OF EMBANKMENT SHALL BE EXTENDED A SUFFICIENT LENGTH IN BOTH DIRECTIONS TO PREVENT SCOUR. THE USE OF BAFFLES THAT REQUIRE SUPPORT POSTS ARE RESTRICTED FROM USE IN BASINS REQUIRING IMPERVIOUS

> STANDARD CONSTRUCTION DETAIL #7-13 SEDIMENT BASIN EMERGENCY SPILLWAY WITH TRM LINING



EMERGENCY SPILLWAY

PROJECT NO. 317565 SURVEY BOOK: SCALE:

SHEET 14 & 15

VG Y: \17\317565.aph\3175t E: Dwg\Plans\Prelim-Final\

