ET - BRADDOCK WELL PAD SITE RESTORATION / POST CONSTRUCTION STORWATER MANAGEMENT PLAN PERMIT NO. PAD-0200114

EAST PITTSBURGH BOROUGH, NORTH BRADDOCK BOROUGH, NORTH VERSAILLES TOWNSHIP, ALLEGHENY COUNTY, PENNSYLVANIA

MAY 2018 OCTOBER 2018

LIST OF SHEETS

SHEET NO.	DESCRIPTION
WS-1A	PRE-DEVELOPMENT WATERSHED AND SOILS MAP - VOLUME
WS-1B	PRE-DEVELOPMENT WATERSHED AND SOILS MAP - RATE
WS-2A	POST-DEVELOPMENT WATERSHED AND SOILS MAP - VOLUME
WS-2B	POST-DEVELOPMENT WATERSHED AND SOILS MAP - RATE
WS-3A	SITE RESTORATION WATERSHED AND SOILS MAP - VOLUME
WS-3B	SITE RESTORATION WATERSHED AND SOILS MAP - RATE
CH-1	CHANNEL WATERSHED MAP
SR-1	SITE RESTORATION PLAN
SR-2	SITE RESTORATION PLAN
N-1	PCSM NOTES
C601	CONNSTRUCTION DETAILS

C701 EXISTING CONDITIONS OVERLAY MAP

Base map from the following USGS 7½ minute quadrangles: Braddock dated 1960 and photorevised 1979.

LOCATION MAP



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THIS DRAWING SET WAS ORIGINALLY PRODUCED IN COLOR. NON-COLOR REPRODUCTIONS

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PERMITTEE:

MERRION OIL & GAS

CONTACT: RYAN DAVIS

- THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HA DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES T BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- 2. CONTRACTOR SHALL NOTIFY THE PA ONE CALL SYSTEM NOT LESS THAN THREE (3) DAYS PRIOR CONSTRUCTION. THE CONTRACTOR SHALL PLACE THE CALL AND REFERENCE. THE SERIAL NUMBER GIVEN, AND PROVIDE AN APPROXIMATE DATE AND TIME THAT DIGGING WILL OCCUR. THE ONE CALL SYSTEM WILL AGAIN NOTIFY THE PUBLIC UTILITIES IN THE AREA. PUBLIC UTILITIES WILL THEN COORDINATE DIRECTLY WITH THE CONTRACTOR FOR ACTUAL FIELD LOCATIONS.

ELECTRIC:

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ALLEGHENY COUNTY SANITARY AUTHORITY 3300 PREBLE AVE. PITTSBURGH. PA 15233 ATTN: KEN BABIN

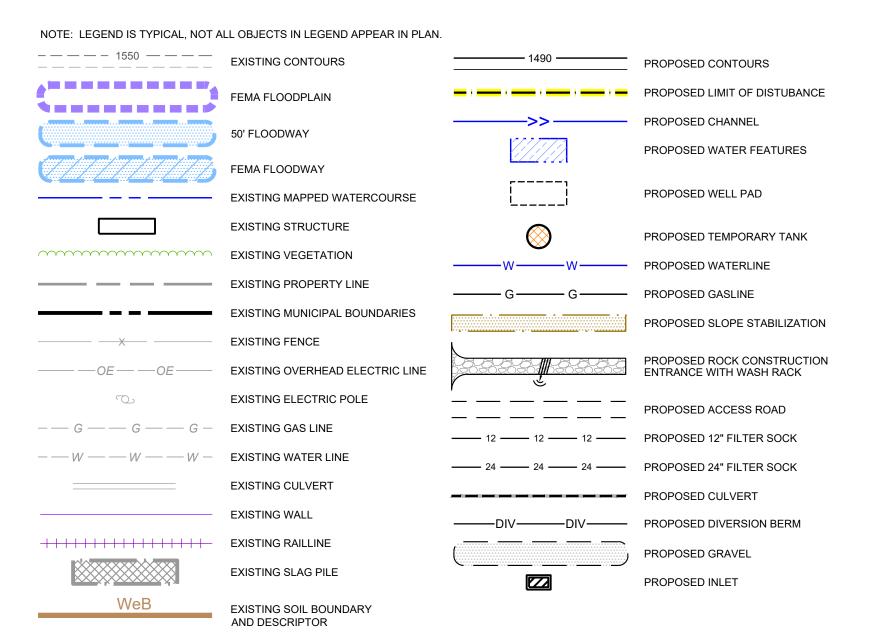
PEOPLES NATURAL GAS 261 CENTER ST. MCKEESPORT, PA 15132 ATTN: DON ZOMBEK EMAIL: DON.ZOMBEK@PEOPLES-GAS.COM

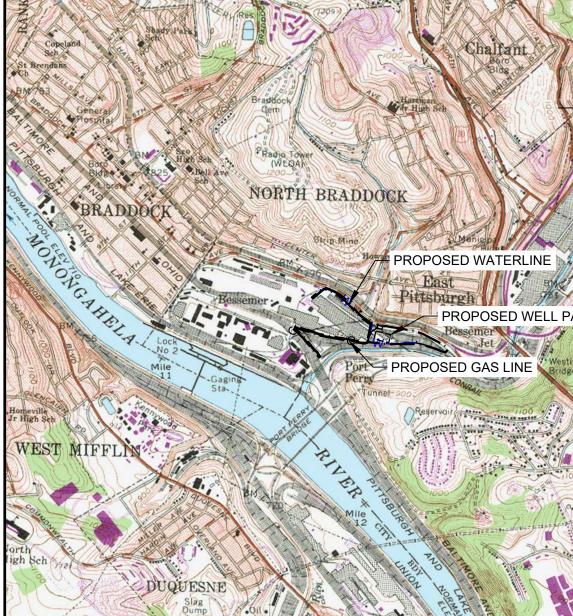
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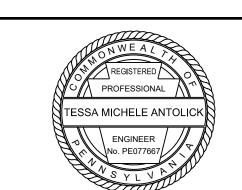
LEGEND





SCALE: 1" = 2000'

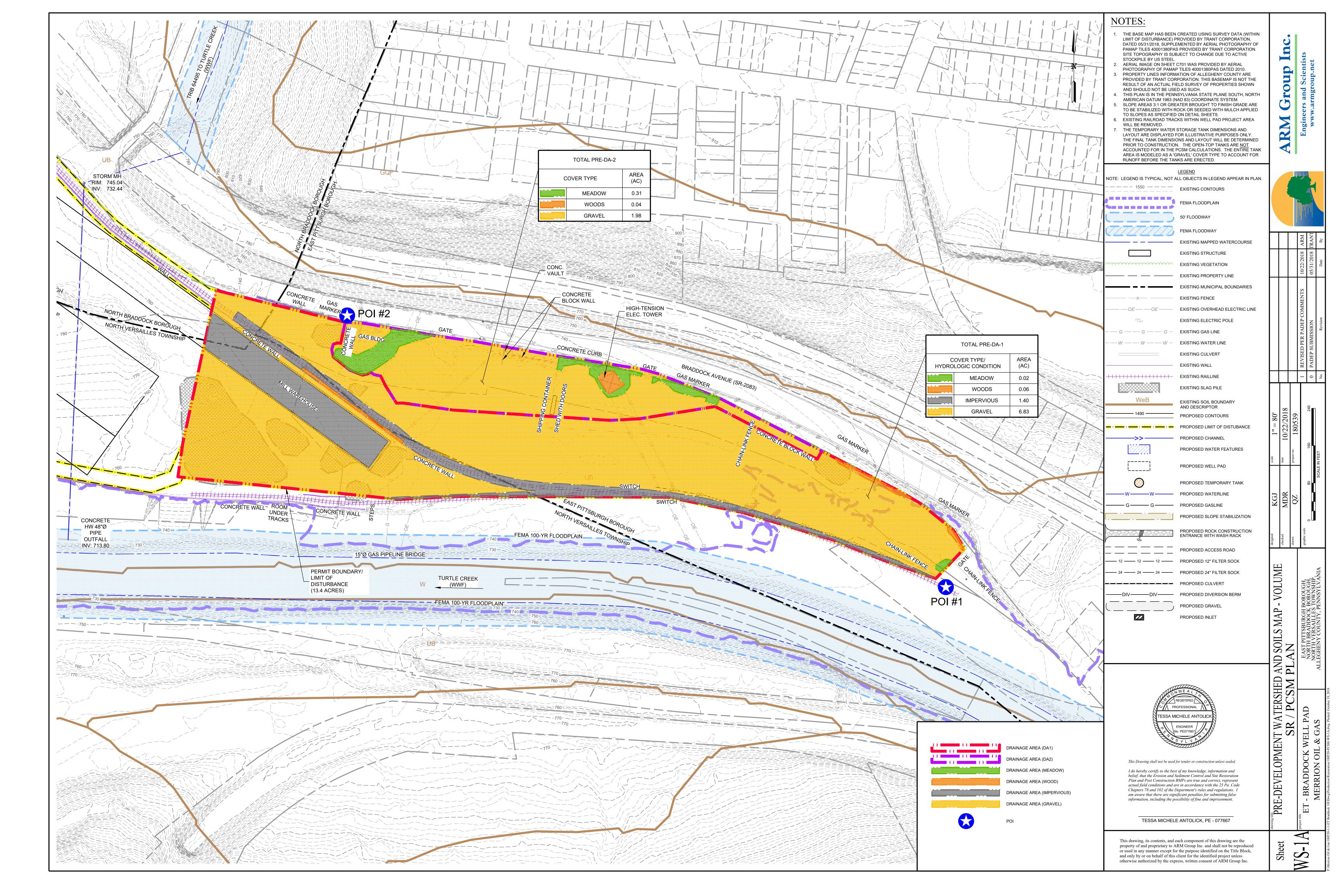
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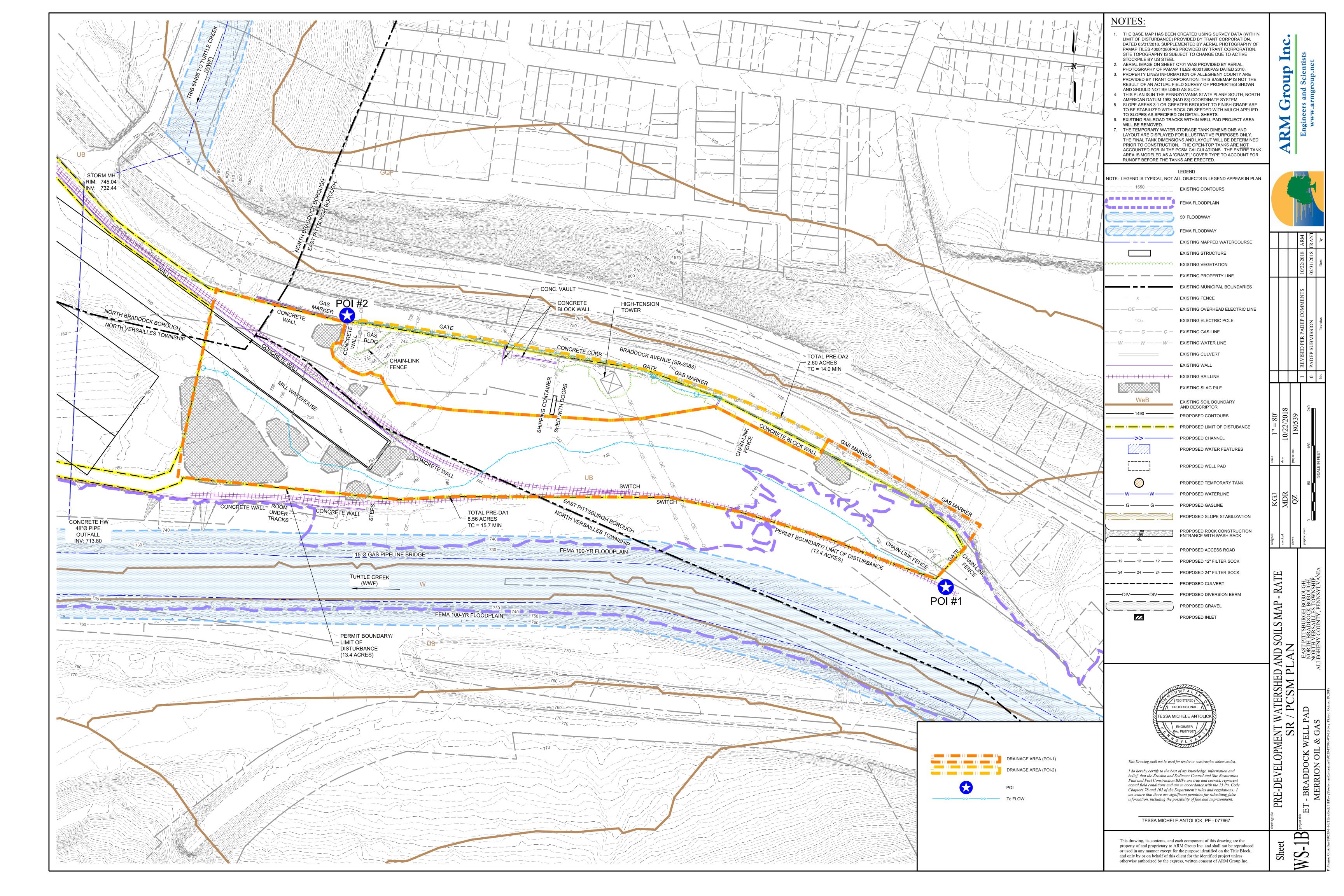


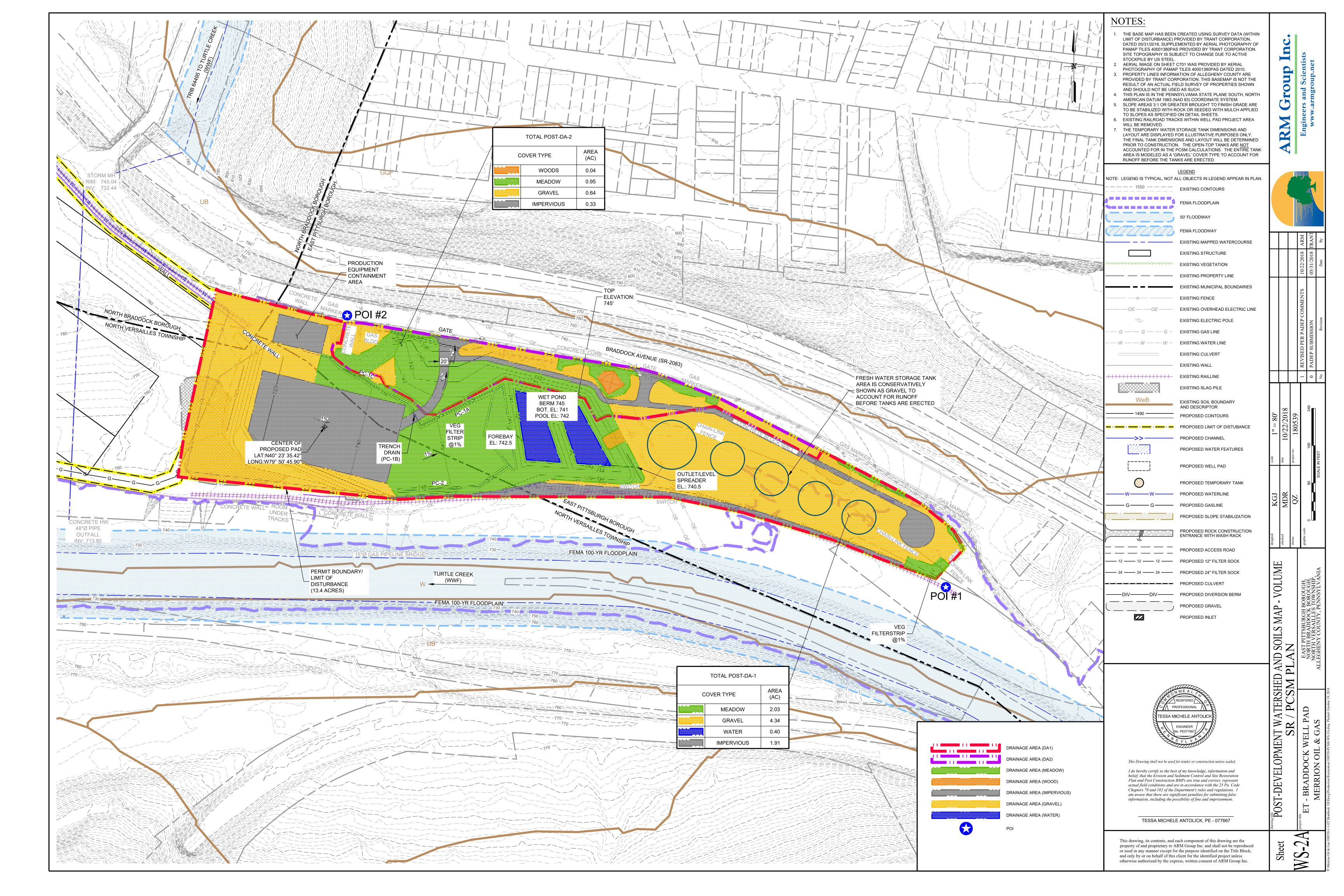
This Drawing shall not be used for tender or construction unless sealed do hereby certify to the best of my knowledge, information and belief, that the Erosion and Sediment Control and Site Restoration Plan and Post Construction BMPs are true and correct, represen actual field conditions and are in accordance with the 25 Pa. Code hapters 78 and 102 of the Department's rules and regulations. am aware that there are significant penalties for submitting false

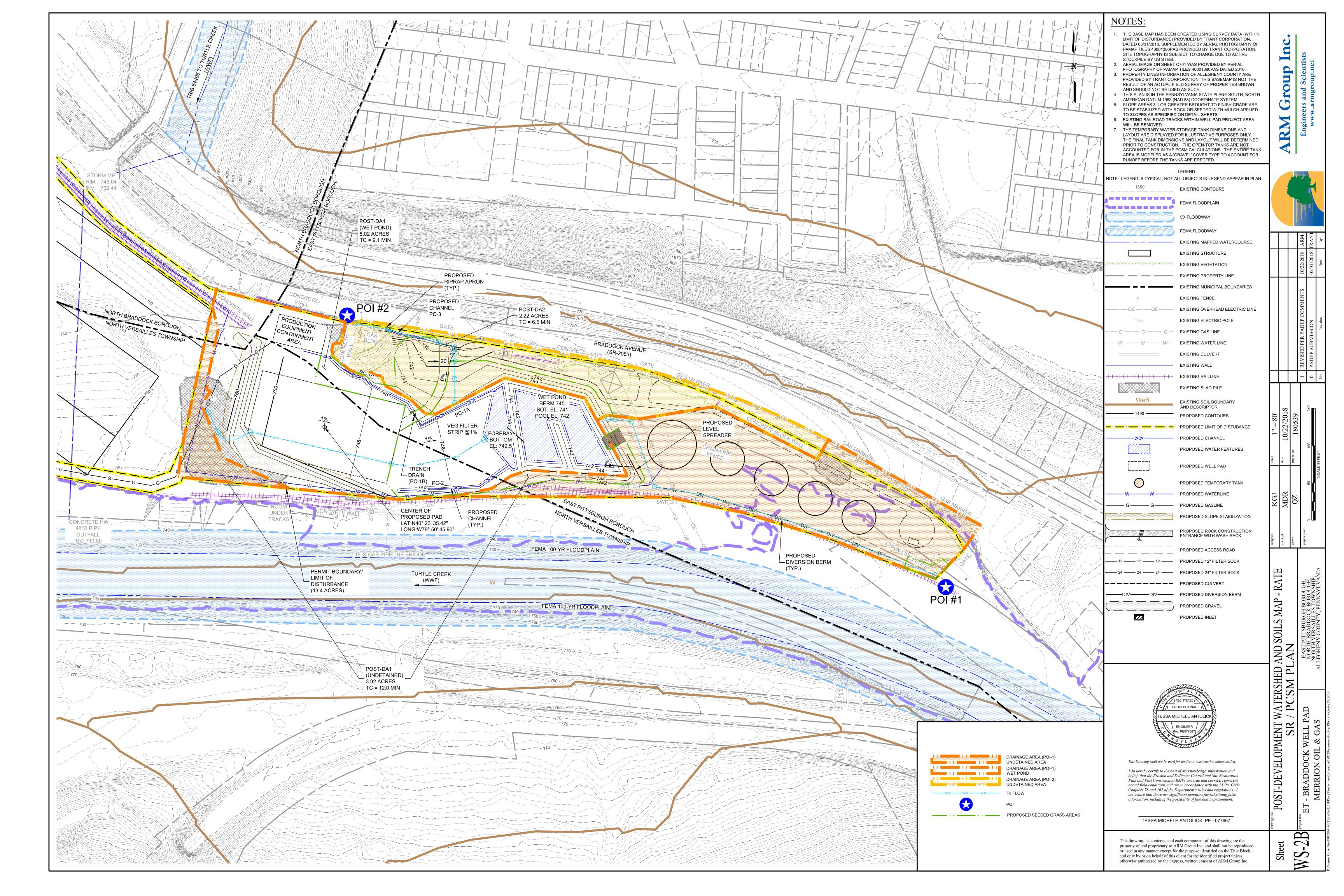
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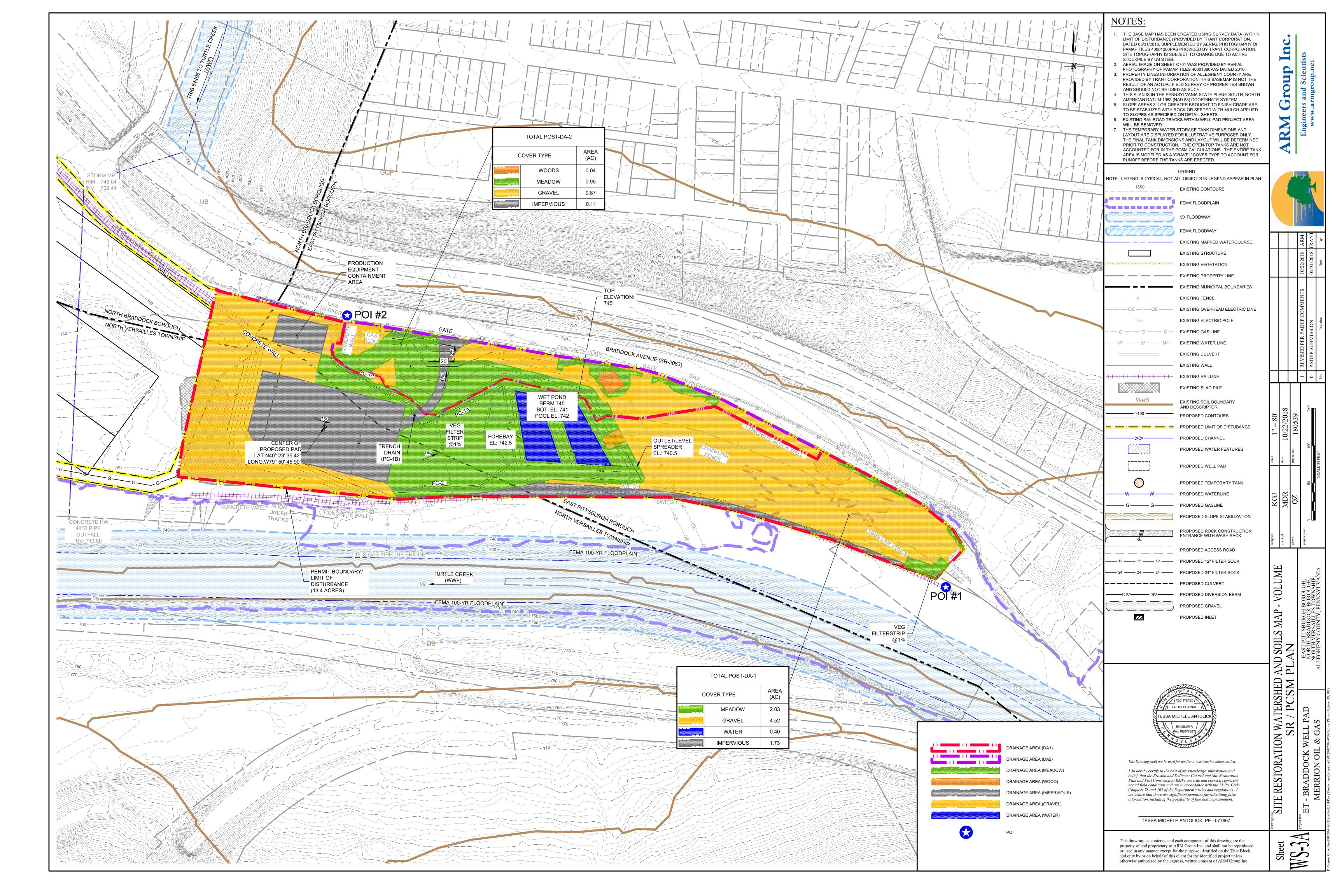
formation, including the possibility of fine and imprisonment.

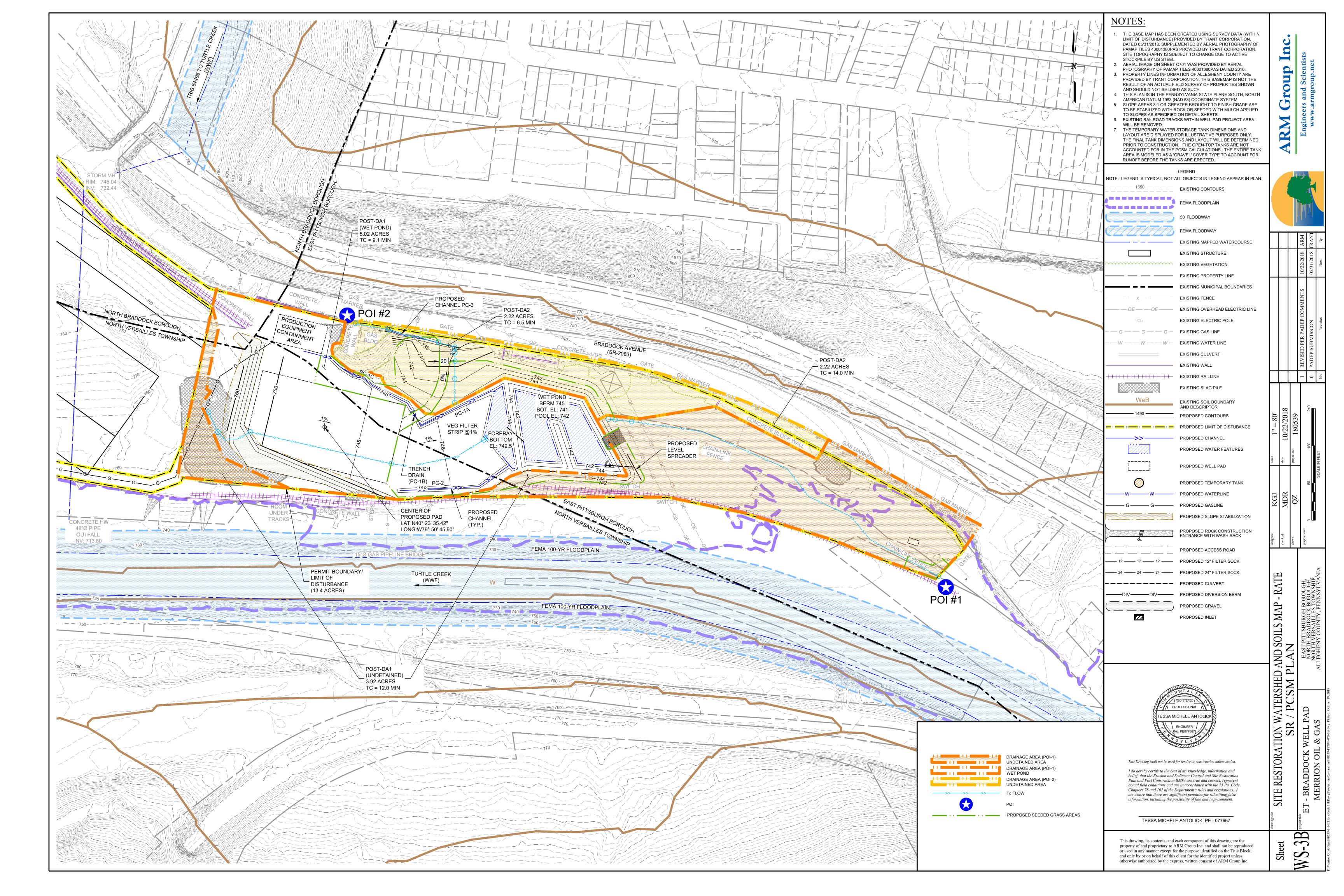


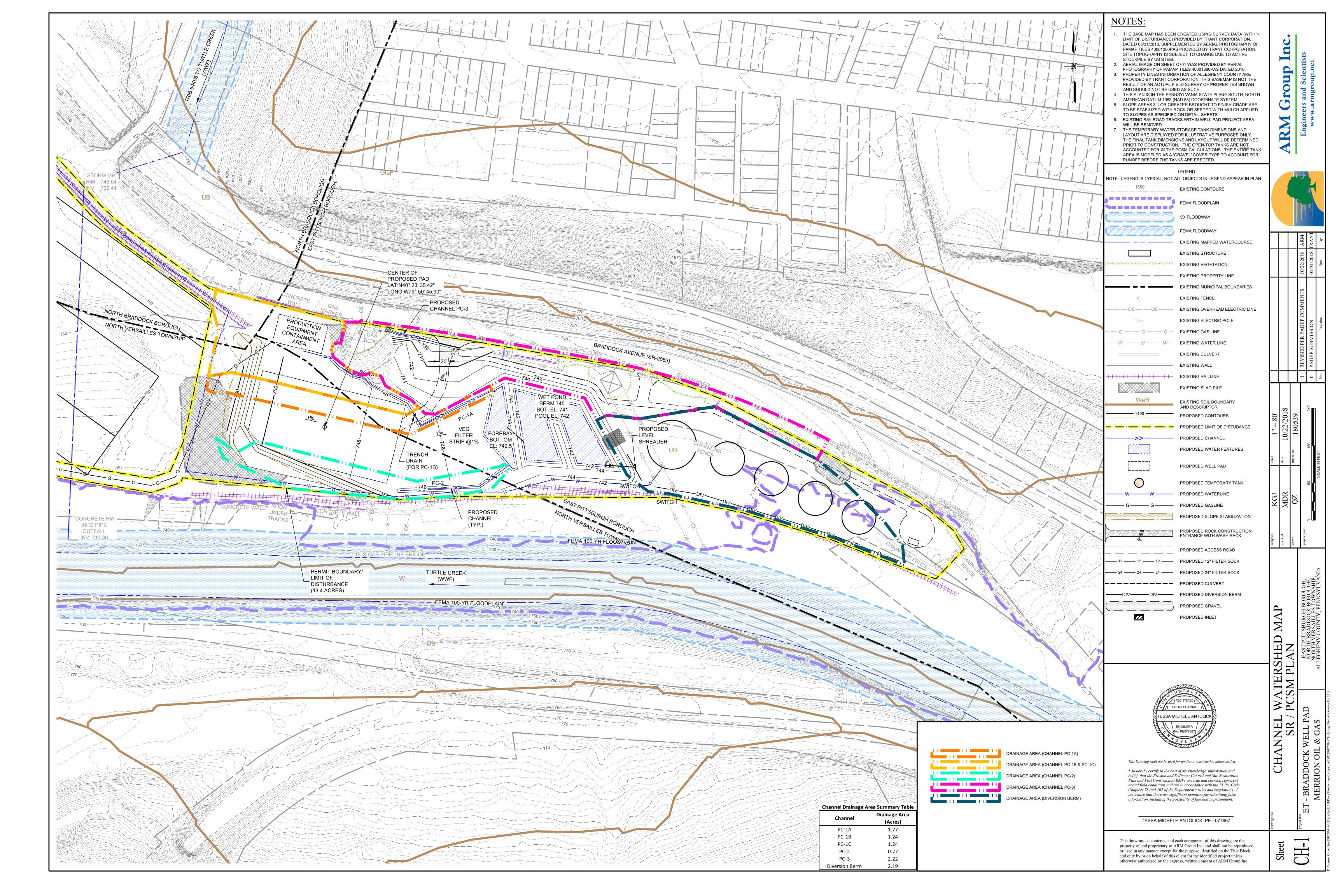




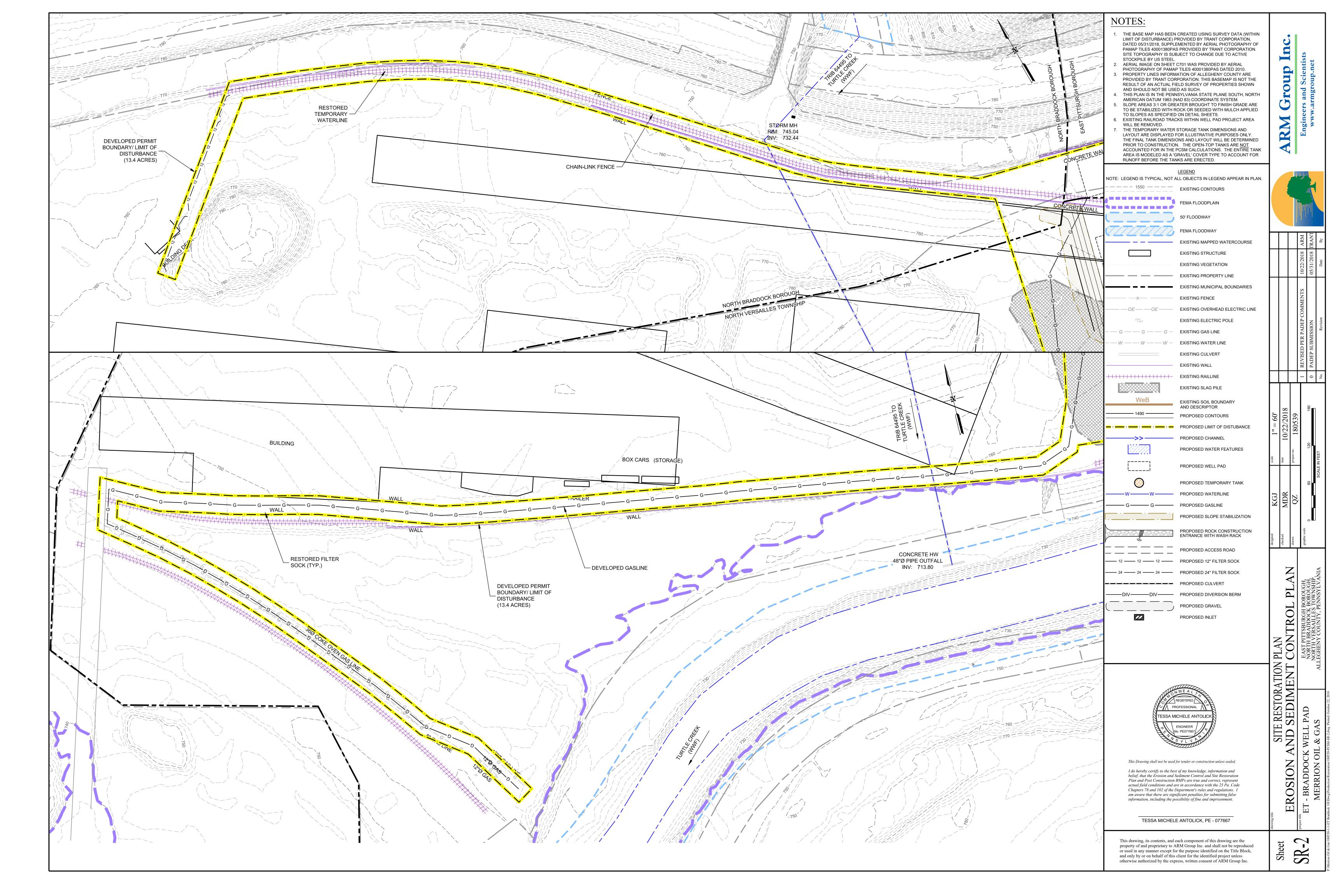












Structural BMP Installation, Maintenance, & Inspection

Wet Pond/ Retention Basin

Construction Sequence

- 1. Separate wet pond from contributing drainage area. a. All channels/pipes conveying flows to the WP should be temporarily routed away from the WP area until it is completed and stabilized.
- b. The area immediately adjacent to the basin must be stabilized in accordance with the PADEP's Erosion and Sediment Pollution Control Program Manual (2000 or latest edition) prior to basin construction. 2. Prepare site for excavation and/or embankment construction.
- a. All existing vegetation should remain if feasible and should only be removed if necessary for b. If excavation is required, clear the area to be excavated of all vegetation. Remove all tree roots, rocks,
- and boulders only in excavation area.
- 3. Excavate bottom of basin to desired elevation (if necessary). 4. Install surrounding embankments and inlet and outlet control structures.
- 5. Grade and prepare subsoil 6. Install impervious liner to prevent surface runoff water to contact/infiltrate to existing soil and substrata.
- 7. Apply and grade planting soil.
- 8. Apply geo-textiles and other erosion-control measures 9. Seed, plant and mulch according to Planting Plan.
- 10. Install any anti-grazing measures, if necessary 11. Follow required maintenance and monitoring guidelines

Specifications:

1. Excavation

- a. The area to be used for the WP should be excavated to the required depth below the desired bottom elevation to accommodate any required impermeable liner, organic matter, and/or planting soil.
- b. The compaction of the subgrade and/or the installation of any impermeable liners will follow immediately 2. Subsoil Preparation
- a. Subsoil shall be free from hard clods, stiff clay, hardpan, ashes, slag, construction debris, petroleum hydrocarbons, or other undesirable material. Subsoil must not be delivered in a
- frozen or muddy state.
- b. Scarify the subsoil to a depth of 8 to 10 inches with a disk, rototiller, or similar
- c. Roll the subsoil under optimum moisture conditions to a dense layer with four to six passes of a sheepsfoot roller or equivalent. The compacted layer shall be at least 8 inches

3. Planting Soil (Topsoil)

- a. Use a minimum of 12 inches of topsoil in the emergent vegetation zone (less than 18" deep) of the pond. If natural topsoil from the site is to be used it must have at least 8 percent
- organic carbon content (by weight) in the A-horizon for sandy soils and 12% for other soil
- b. If planting soil is being imported it should be made up of equivalent proportions of organic and mineral materials.
- c. Lime should not be added to planting soil unless absolutely necessary as it may encourage the propagation of invasive species.
- d. The final elevations and hydrology of the vegetative zones should be evaluated prior to planting to determine if grading or planting changes are required.

4. Vegetation

- a. No substitutions of specified plants will be accepted without prior approval of the designer. Planting locations shall be based on the Planting Plan and directed in the field by a qualified
- b. All Wet Pond plant stock shall exhibit live buds or shoots. All plant stock shall be turgid, firm, and resilient. Internodes of rhizomes may be flexible and not necessarily rigid. Soft or mushy stock shall be rejected. The stock shall be free of deleterious insect infestation, disease and defects such as knots, sun-scald, injuries, abrasions, or disfigurement that could adversely
- affect the survival or performance of the plants. c. All stock shall be free from invasive or nuisance plants or seeds.
- d. During all phases of the work, including transport and onsite handling, the plant materials shall be carefully handled and packed to prevent injuries and desiccation. During transit and onsite handling, the plant material shall be kept from freezing and shall be kept
- covered, moist, cool, out of the weather, and out of the wind and sun. Plants shall be watered to maintain moist soil and/or plant conditions until accepted. e. Plants not meeting these specifications or damaged during handling, loading, and
- unloading will be rejected. 5. Outlet Control Structure
- a. Outlet control structures shall be constructed of non-corrodible material. b. Outlets shall be resistant to clogging by debris, sediment, floatables, plant material, or ice. c. Materials shall comply with applicable specifications (PennDOT or AASHTO, latest

- Maintenance & Inspection ice is necessary to ensure proper functionality of the extended detention basin and should take place on a quarterly basis. A basin maintenance plan should be developed which included the following measures:
- All basin structures expected to receive and/or trap debris and sediment should be inspected for clogging and excessive debris and sediment accumulation at least four times per year, as well as after every storm greater O Structures include basin bottoms, trash racks, outlets structures, riprap or gabion structures, and inlets.
- Sediment removal should be conducted when the basin is completely dry. Sediment should be disposed of properly and once sediment is removed, disturbed areas need to be immediately stabilized and revegetated. Mowing and/or trimming of vegetation should be performed as necessary to sustain the system, but all detritus should be removed from the basin.
- Vegetated areas should be inspected annually for erosion.
- Vegetated areas should be inspected annually for unwanted growth of exotic/invasive species. Vegetative cover should be maintained at a minimum of 95 percent. If vegetative cover has been reduced by 10%, vegetation should be reestablished.

Level Spreader

Construction Sequence

uphill development should be stabilized before diverting runoff to any dispersing flow techniques. If the level spreader is used as an erosion and sedimentation control measure, it must be reconfigured (flush perforated pipe, clean out all sediment), to its original state before use as a permanent stormwater feature. 2. All contributing Stormwater elements (Infiltration beds, inlets, outlet control structures, pipes, etc.) should be

1. Level spreaders are considered a permanent part of a site's Stormwater management system. Therefore, the

- 3. Perforated pipe should be installed along a contour, with care taken to construct a level bottom. The pipe can
- be underground in a shallow infiltration trench (see Infiltration Trench for design guidance), or closer to the surface and covered with a 12-inch thick layer of AASHTO #57 stone. If the perforated pipe is in a trench, excavate to the design dimensions. If the pipe is to be at or near the surface, some minor excavation or filling may be necessary to maintain a level bottom
- 4. If necessary, install erosion control matting along the length of the level spreader and to a distance downhill, as specified by the manufacturer/supplier. Cover the pipe with AASHTO #57 stone.
- 5. For construction sequence of earthen berms, see BMP 6.4.10 Infiltration Berm.

- Catch Basins and Inlets draining to a level spreader should be inspected and cleaned on an annual basis.
- The receiving land area should be immediately restored to design conditions after any disturbance. Vegetate areas should be seeded and blanketed.
- It is critical that even **sheet flow conditions** are sustained throughout the life of the level spreader, as their effectiveness can deteriorate due to lack of maintenance, inadequate design/location, and poor vegetative cover.
- O Inspection The area below a level spreader should be inspected for clogging, density of vegetation, damage by foot or vehicular traffic, excessive accumulations, and channelization. Inspections should be made on a quarterly basis for the first two years following installation, and then on a semiannual basis thereafter. Inspections should also be made after every storm event greater than 1-inch.
- O Removal Sediment and debris should be routinely removed (but never less than semiannually), or upon observation, when buildup occurs in the clean outs. Regrading and reseeding may be necessary in the areas below the level spreader. Regrading may also be required when pools of standing water are observed along the slope. (In no case should standing water be allowed for longer than 72 hours.)
- O Vegetation Maintaining a vigorous vegetative cover on the areas below a level spreader is critical for

maximizing pollutant removal efficiency and erosion prevention. If vegetative cover is not fully established within the designated time, it may need to be replaced with an alternative species. Unwanted or invasive growth should be removed on an annual basis. Biweekly inspections are recommended for at least the first growing season, or until the vegetation is permanently established. Once the vegetation is established, nspections of health, diversity, and density should be performed at least twice per year, during both the growing and non-growing season. Vegetative cover should be sustained at 85% and replaced if damage greater than 50% is observed.

Vegetated Swale Construction Sequence

- 1. Begin vegetated swale construction only when the upgradient temporary erosion and sediment control measures are in place. Vegetated swales should be constructed and stabilized early in the construction schedule, preferably before mass earthwork and paving increase the rate and volume of runoff. (Erosion and sediment control methods shall adhere to the Pennsylvania Department of Environmental Protection's Erosion
- 2. Rough grade the vegetated swale. Equipment shall avoid excessive compaction and/or land disturbance. Excavating equipment should operate from the side of the swale and never on the bottom. If excavation leads to substantial compaction of the subgrade (where an infiltration trench is not proposed), 18 inches shall be removed and replaced with a blend of topsoil and sand to promote infiltration and biological growth. At the very least, topsoil shall be thoroughly deep plowed into the subgrade in order to penetrate the compacted zone and promote aeration and the formation of macropores. Following this, the area should be disked prior to final grading of topsoil.

and Sediment Pollution Control Program Manual, March 2000 or latest edition.)

- 3. Construct check dams, if required.
- 4. Fine grade the vegetated swale. Accurate grading is crucial for swales. Even the smallest non-conformities may compromise flow conditions.
- 5. Seed, vegetate and install protective lining as per approved plans and according to final planting list. Plant the swale at a time of the year when successful establishment without irrigation is most likely. However, temporary irrigation may be needed in periods of little rain or drought. Vegetation should be established as soon as possible to prevent erosion and scour.
- 6. Once all tributary areas are sufficiently stabilized, remove temporary erosion and sediment controls. It is very important that the swale be stabilized before receiving upland stormwater flow.
- 7. Follow maintenance guidelines, as discussed below
- Note: If a vegetated swale is used for runoff conveyance during construction, it should be regraded and reseeded immediately after construction and stabilization has occurred. Any damaged areas should be fully restored to ensure future functionality of the swale.

Maintenance activities to be done annually and within 48 hours after every major storm event (>1 inch rainfall depth):

- · Inspect and correct erosion problems, damage to vegetation, and sediment and debris accumulation (address when > 3 inches at any spot or covering vegetation)
- Inspect vegetation on side slopes for erosion and formation of rills or gullies, correct as needed
- Inspect for pools of standing water; dewater and discharge to an approved location and restore to design grade Mow and trim vegetation to ensure safety, aesthetics, proper swale operation, or to suppress weeds and invasive vegetation; dispose of cuttings in a local composting facility; mow only when swale is
- Inspect for litter; remove prior to mowing-

dry to avoid rutting

- Inspect for uniformity in cross-section and longitudinal slope, correct as needed
- · Inspect swale inlet (curb cuts, pipes, etc.) and outlet for signs of erosion or blockage, correct as

Maintenance activities to be done as needed:

- Plant alternative grass species in the event of unsuccessful establishment.
- Reseed bare areas; install appropriate erosion control measures when native soil is exposed or erosion channels are forming
- · Rototill and replant swale if draw down time is more than 48 hours
- Water during dry periods, fertilize, and apply pesticide only when absolutely necessary.

• Inspect and correct check dams when signs of altered water flow (channelization, obstructions,

- Inspect swale immediately after the spring melt, remove residuals (e.g. sand) and replace damaged
- vegetation without disturbing remaining vegetation. If roadside or parking lot runoff is directed to the swale, mulching and/or soil aeration/manipulation may be required in the spring to restore soil structure and moisture capacity and to reduce the
- Use nontoxic, organic deicing agents, applied either as blended, magnesium chloride-based liquid
- Use salt-tolerant vegetation in swales

impacts of deicing agents.

Vegetated Filter Strip Construction Sequence

- 1. Begin filter strip construction only when the upgradient site has been sufficiently stabilized and temporary erosion and sediment control measures are in place. (Erosion and sediment control methods shall adhere to the Pennsylvania Department of Environmental Protection's Erosion and Sediment Pollution Control Program Manual, March 2000 or latest edition.) The strip should be installed at a time of the year when successful establishment without irrigation is most likely. However, temporary irrigation may be needed in periods of little rain or drought.
- 2. For planted (not indigenous Filter Strips) clear and grub site as needed. Care should be taken to disturb as little existing vegetation as possible, whether in the designated filter strip area or in adjacent areas, and to avoid soil compaction. Grading a level slope may require removal of existing vegetation.
- 3. Rough grade the filter strip area, including the berm at the toe of the slope, if proposed. Use the lightest, least
- 4. Construct level spreader device at the upgradient edge of the strip. For gravel trenches, do not compact subgrade (Follow construction sequence for Infiltration Trench).
- 5. Fine grade the filter strip area. Accurate grading is crucial for filter strips. Even the smallest irregularities may compromise sheet flow conditions
- 6. Seed or sod, as desired. Plant more substantial vegetation, such as trees and shrubs, if proposed. If sod is proposed, place tiles tightly enough to avoid gaps and stagger the ends to prevent channelization along the strip. Use a roller on sod to prevent air pockets between the sod and soil from forming.
- 7. Concurrent with #6 stabilize seed filter strips with appropriate permanent soil stabilization methods, such as erosion control matting or blankets. Erosion control for seeded filter strips should be maintained for at least the first 75 days following the first storm event of the season. 8. Once the filter strip is sufficiently stabilized, remove temporary erosion and sediment controls. It is very
- important that filter strip vegetation be fully established before receiving upland Stormwater flow. One full growing season is the recommended minimum time for establishment. Some seed mixtures may require a onger time period to become established.
- 9. Follow maintenance guidelines, as discussed below.

Note: When and if a filter strip is used for temporary sediment control, it might need to be regraded and reseeded immediately after construction and stabilization has occurred.

Filter strips should be properly maintained to ensure their effectiveness

• It is critical that sheet flow conditions and infiltration are sustained throughout the life of the filter strip.

• Vegetated filter strip components that receive or trap sediment and debris should be inspected for clogging,

- density of vegetation, damage by foot or vehicular traffic, excessive accumulations, and channelization. Inspections should be made on a quarterly basis for the first two years following installation, and then on a
- Inspections should also be made after every storm event greater than 1 inch during the establishment period.
- Sediment and debris should be routinely removed (but never less than biannually), or upon observation, when buildup exceeds 2 inches in depth in either the strip itself or the level spreader. • If erosion is observed, measures should be taken to improve the level spreader or other dispersion method to address the source of erosion. Rills and gullies observed along the strip may be filled with topsoil, stabilized
- with erosion control matting, and either seeded or sodded, as desired. For channels less than 12 inches wide, filling with crushed gravel, which allows grass to creep in over time, is acceptable. For wider channels, i.e. greater than 12 inches, regrading and reseeding may be necessary. (Small bare areas may only require overseeding.) Regrading may also be required when pools of standing water are observed along the slope. (In no case should standing water be tolerated for longer than 48-72 hours.)
- Sediment should be removed when the filter strip is thoroughly dry. Trash and debris removed from the site should be deposited only at suitable disposal/recycling sites and must comply with applicable local, state, and federal waste regulations. In the case where a filter strip is used for sediment control, it should be regraded and reseeded immediately after construction has concluded
- Grass cover should be mowed, with low ground pressure equipment, as needed to maintain a height of 4-6 inches. Mowing should be done only when the soil is dry, in order to prevent tracking damage to vegetation, soil compaction, and flow concentrations. Generally speaking, grasses should be allowed to grow as high as possible, but mowed frequently enough to avoid troublesome insects or noxious weeds. Fall mowing should be controlled to a grass height of 6 inches, to provide adequate wildlife winter habitat. When and where cutting is desired for aesthetic reasons, a high blade setting should be used.
- If vegetative cover is not fully established within the designated time, it should be replaced with an alternative species. Unwanted or invasive growth should be removed on an annual basis. Biweekly inspections are recommended for at least the first growing season, or until the vegetation is permanently established. Once the vegetation is established, inspections of health, diversity, and density should be performed at least twice per year, during both the growing and non-growing season. Vegetative cover should be sustained at 85% and reestablished if damage greater than 50% is observed. Whenever possible, deficiencies in vegetation are to be mollified without the use of fertilizers or pesticides.
- If a filter strip exhibits signs of poor drainage and/or vegetative cover, periodic soil aeration may be needed. In addition, depending on soil characteristics, the strip may need periodic liming. If the 72 hour draw-down maximum time is exceeded, strip characteristics such as soils, vegetation, and groundwater levels should be reevaluated. Measures should be taken to establish, or reestablish as the case may be, the specified drain down time of the system.

Landscape Restoration Construction Sequence

Meadow installation should proceed as follows:

- O Site conditions lend themselves mostly towards meadow as a landscape restoration option
- 2. PLANT SELECTION
- O Native species of grasses will be selected as groundcover. See E&S planting sheet for planting and seeding guidelines.

3. PREPARE SITE

- O Perennial weeds may require year long smothering, repeated sprayings with herbicides, or repeated tillage with equipment that can uproot and kill perennial weeds.
- 4. PLANTING

All weeds or existing vegetation must be eliminated prior to seeding.

- O Planting can take place from spring thaw through June 30 or from September 1 through
- soil freeze-up ("dormant seeding") O Planting in July and August is generally not recommend due to the frequency of drought
- during this time. O Seeding can be accomplished by a variety of methods: no-till seeder for multi-acre planting; broadcast seeder; hand broadcast for small areas of one acre or less. O Seed quality is critical and a seed mix should be used with a minimum percentage of
- 5. SITE MAINTENANCE (additional information below) O Responsibilities for watering, weeding, mowing, and maintenance fall on the
- permittee. Upon termination of NPDES permit maintenance will revert to Monitor site regularly for growth and potential problems.

A seasonal mowing or burning may be required, although care must be taken to make sure that any management is coordinated with essential reseeding and other important aspects of meadow reestablishment. In the first year weeds must be carefully controlled and consistently mowed back to 4-6 inches tall when they reach 12 inches in height. In the second year, weeds should continue to monitored and mowed and rhizomatous weeds should be hand treated with herbicide. Weeds should not be sprayed with herbicide as the drift from the spray may kill large patches of desirable plants, allowing weeds to move in to these new open areas. In the beginning of the third season the meadow should be mowed very closely to the ground. The mowed material should be removed from the site to expose the soil to the sun. This helps encourage rapid soil warming which favors the establishment of "warm season" plants over "cool season" weeds.

ANTICIPATED PROJECT CONSTRUCTION WASTES

- A. Accumulated sediment and rocks.
- B. Portable sanitary facility waste. C. Trash from onsite workers (food bags and wrappers; beverage containers).
- D. Trimmings and cuttings of wood, pipe, and other construction material. E. Brush, trees and other cleared vegetation.
- F. Repaired and removed non-reusable non-biodegradable BMP material.

MEASURES FOR THE RECYCLING OR DISPOSAL OF MATERIALS FOR THE PROJECT SITE. A. Recycling or reuse of wastes materials where feasible is required.

- Silt will be disposed of by being mixed with other soils on the site or spread to dry in an area protected with filter
- sock and then seeded per permanent seeding specifications when dry. Compost from the filter sock can be used as a
- Clean masonry and rocks can be used in fill.
- Metal, plastic, glass and cardboard may be recycled.
- Excess construction material can be donated to nonprofits.

Brush, trees and other cleared vegetation can be chipped and mulched.

- B. If wastes are to be disposed of off-site, the disposal facility must be a DEP permitted site. C. During site construction there is to be a portable sanitary facility to be supplied by the contractor. An experienced contractor is
- to dispose of this waste following appropriate rules and regulations concerning this type of waste. D. Replaced or removed non-reusable non-biodegradable materials from BMPs
- are to be disposed of as per manufacturers recommendations in a DEP permitted site

MEASURES FOR THE REDUCING OTHER POTENTIAL POLLUTION SOURCES FOR THE PROJECT SITE.

- A. Thermal impacts are minimized through reduction of rate and volume and by detaining the 2-yr, 24hr storm to evaporate over a period of greater than 24 hours. Detention pond shaded by deciduous to B. There are no naturally occurring geologic formations or soils on site that will cause excessive erosion. No soils have been
- identified with high erodibility on site. BMP's used to counter erosion are listed in detail below. C. The following Non-discharge alternatives utilized in the PCSM plan include but are not limited to:

2) Limiting extent and duration of the disturbance

1) Limiting Disturbed Areas

Stormwater Facilities Maintenance & Inspection Plan

The Stormwater Management Plan developed for the Project is supplemented by this Maintenance and Inspection Plan to help ensure continuing operation of all stormwater facilities. The following is a list of items that shall be inspected and corrective action taken by the owner

(Owner): Merrion Oil & Gas a. Owner refers to individual ultimately responsible for storm facility condition and function.

- 1. Outlet conditions in Detention/Retention Facility. 2. Storm sewers, swales, concrete gutters and other conveyance devices.
- 3. Catch Basins, Manholes, and other stormwater catchment/transition structures.
- 4. Access for maintenance.

The following actions will be taken by the Owner to help ensure the facilities shown on the plan and

- identified above are in working order: 1. Replace or repair facilities so as to function as intended.
- 2. Remove silt debris, and trash in catch basin/storm sewers.
- 3. Repair outlet structures, trash racks, displaced riprap & low flow channel.
- 4. Remove any silt, debris and trash in Detention/Retention Facility.
- 5. Disposal of collected silt, debris and trash in a manner, which will not adversely affect the environment. 6. Replace eroded material and revegetate eroded areas.
- 7. Vegetation maintenance (i.e. mowing, brush cutting, debris removal, etc.) shall be performed a minimum of four (4) times per year. Additional vegetation maintenance may be required to maintain pond esthetics
- 8. Visual inspection of the facility to identify conditions that may cause concern with the integrity of the facility (i.e. animal burrows, embankment subsidence, cracks, etc.).

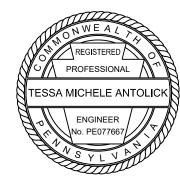
The corrective actions to be taken are not limited to those listed above.

Stormwater Facilities Maintenance & Inspection Plan

The inspection shall be undertaken by a minimum of one person at least two (2) times per year on or before March 1st, and October 1st. Additional inspections will be required if it becomes apparent facilities are not functioning properly. Corrective actions will then be taken as required to help ensure continuing operation of stormwater facilities. Any deficiencies noted in items inspected by the Owner shall be documented and corrective actions taken by the Owner. This recommended Maintenance Plan shall not be considered a guarantee as to the adequacy of the stormwater management facilities in the future.

The Township or governing body (East Pittsburgh Borough) may require other items to be included in the agreement where determined necessary to guarantee the satisfactory maintenance of all facilities. If the Borough does not maintain the Stormwater Facilities, the Owner shall maintain all facilities in accordance with the approved maintenance schedule and shall keep all facilities maintained in a safe and attractive manner. The Owner shall convey to the Borough easements and/or rights_of_way to assure access for periodic inspections by the Borough and maintenance if required. The Owner shall keep on file with the Borough the name, address, and telephone number of the person or company responsible for maintenance activities. In the event of a change, new information will be submitted to the Borough within ten (10) days of the change. The Owner shall establish any special maintenance funds or other financing sources, in accordance with the approved maintenance plan. If the Owner fails to maintain the stormwater control facilities, following due notice by the Borough to correct deficiencies, the Borough shall perform the necessary maintenance or corrective work. The Owner shall reimburse the Borough for all costs associated with the required maintenance of the stormwater control facilities.

CRITICAL STAGES OF BMP IMPLEMENTATION: Installation of retention facility outlet structure, spillway, and berm



This Drawing shall not be used for tender or construction unless sealed.

I do hereby certify to the best of my knowledge, information and belief, that the Erosion and Sediment Control and Site Restoration Plan and Post Construction BMPs are true and correct, represent actual field conditions and are in accordance with the 25 Pa. Code Chapters 78 and 102 of the Department's rules and regulations. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

TESSA MICHELE ANTOLICK, PE - 077667

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