

BOARD OF COMMISSIONERS

AGENDA

Monday, May 24, 2021

VIA ZOOM and Streamed LIVE on YouTube

Pledge of Allegiance

Oath of Office – Catherine H. Agnew – 3rd Ward Commissioner

Recognition of Mike Simmons, Public Works Director, for his years of service to Radnor Township.

1. Public Participation

2. Consent Agenda

- a) Disbursement Review & Approval
- b) Approval of minutes of the Board of Commissioners Meetings, April 28, 2021, May 6, 2021, May 10, 2021, and May 12, 2021.
- c) Chief's Monthly Report – May 2021
- d) Staff Traffic Committee Meeting Minutes – April 2021
- e) Resolution 2021-61 - Award of the Contract for Line Striping of Township Roads to D. E. Gemmill, Inc. in the amount of \$14,298.49
- f) Resolution 2021-59 - Authorizing Kramer and Associates to perform HVAC work at the Radnor Memorial Library in the amount of \$7,962.00.
- g) Resolution 2021-56 - Emergency Repairs to the Iven Avenue Culvert, in the amount of \$74,700, funded by the Stormwater Fund pending an insurance claim.

3. Committee Reports

- A. Appointment to Memorial Library of Radnor
 - Geeta Kapadia Palshikar – 3-Year Term
- B. 2 Paul Road- Waiver of the Stormwater Management Ordinance
- C. 235 Pembroke Avenue- Waiver of the Stormwater Management Ordinance
- D. Resolution 2021-57 - Awarding Contract #B-21-001, North Wayne Avenue Pedestrian Improvement Project; Sidewalk Installation - from Eagle Road to Woodsworth Court - to Premier Concrete, Inc. in the Amount of \$298,829.25.
- E. Resolution 2021-58 - Authorizing the Engineering Department to Receive Sealed Bids for the Willows Park Preserve Domestic Water and Fire Service Project at an estimated cost of \$300,000, to be funded by the Willows Enterprise Fund.
- F. Resolution 2021-53 - Authorizing the Award of the Engineering Design Contract for the Strathmore Road Storm Sewer Rehabilitation to Carroll Engineering Corporation, in the amount of \$28,500.00.
- G. Ordinance 2021-04 (Adoption) - Amending the Radnor Township Code of Ordinances Chapter 62, Pensions and Annuities, Article II, Police Plan, Section 18, Retirement Benefits, by Adding Subpart “L” to Section 18, which Subpart Relates to the Deferred Retirement Option Plan Effective as of January 1, 2020, and Changing the Lettering of the Previously Existing Subpart “L” from “L” to “M”
- H. (The Board voted in favor of sending the Solicitor to oppose Appeal #3088 which is substantially the same as Appeal #3097). Motion to send the Solicitor to oppose Appeal

#3097 and any future appeals for the same relief. Appeal #3097 - The Applicants BDN 250 King of Prussia LP, property located at 250 King of Prussia and zoned PLO Planned Laboratory Office. The Applicant seeks variances from Section 280-64.C to permit (i) a setback of 43.39 feet (+/-) opposite King of Prussia Road to and (ii) a setback of 17.16 feet (+/-) opposite Radnor Chester Road. A variance from Section 280-64.B to allow a building/structure area of 42.2% (+/-). A variance from Section 280-64.B to allow a landscaped area of 29.4% and any other relief deemed necessary for the project.

I. Motion to Authorize the Petition Process for the West Wayne Cemetery (Commissioner Abel)

4. Reports of Standing Committees
5. New Business
6. Old Business
7. Public Participation
8. Adjournment

Meeting Notice

There will be a Regular Board of Commissioners meeting held on Monday, May 24, 2021 beginning at 6:30 PM via Zoom and streamed live on the Radnor Township YouTube Channel at <https://www.youtube.com/channel/UCvh6jeMQTvo3ojCTh8wZkbA>.

If you would like to participate in public comment, please register at

https://us02web.zoom.us/webinar/register/WN_b9YHDGAVQfOjYVS05lcLrw

and the meeting link will be sent to you for participation.

Oath of Office –
Catherine H. Agnew
– 3rd Ward
Commissioner

Recognition of
Mike Simmons,
Public Works
Director, for his years
of service to
Radnor Township.

Public Participation

RADNOR TOWNSHIP
DISBURSEMENTS SUMMARY
May 24,2021

The table below summarizes the accounts payable disbursements made since the last public meeting held on May 10, 2021. As approved by the Board, the Administration is typically making bi-weekly accounts payable disbursement batches and publishing those lists on the Township's web site at the following link. Please refer to those files for a detailed listing of the amounts paid by vendor by account code. Also, please visit the [Open Finance](#) program to view the Township's [Checkbook](#), where all vendor payments are available.

Link: <http://radnor.com/728/Disbursements-List>

Fund (Fund Number)	2021-5A May 7, 2021	2021-5B May 14, 2021	Total
General Fund (01)	\$307,790.07	\$324,148.94	\$631,939.01
Sewer Fund (02)	12,018.03	3,286.65	15,304.68
Storm Sewer Management (04)	21,439.77	0.00	21,439.77
Capital Improvement Fund (05)	765.00	685.00	1,450.00
Police Pension Fund (07)	5,194.41	7,228.01	12,422.42
OPEB Fund (08)	0.00	1,236.97	1,236.97
Escrow Fund (10)	24,137.82	0.00	24,137.82
Civilian Pension Fund (11)	3,918.59	6,447.44	10,366.03
Investigation Fund (12)	186.48	0.00	186.48
Comm. Shade Tree Fund (15)	380.00	77,990.20	78,370.20
The Willows Fund (23)	4,434.58	0.00	4,434.58
Library Improvement Fund (500)	130.00	0.00	130.00
GOB19 Project Fund (502)	361,317.75	1,148.75	362,466.50
<i>Total Accounts Payable Disbursements</i>	\$741,712.50	\$422,171.96	\$1,163,884.46
 <i>Grand Total</i>	 \$741,712.50	 422,171.96	 \$1,163,884.46

In addition to the accounts payable checks, the Township also makes various electronic payments including payroll, debt service, credit card purchases and fees from time to time which are not reflected in the attached table.

The Administration has adopted various internal control and processing procedures to ensure that amounts obligated are within the budgetary limits established by the Board of Commissioners. Those procedures are monitored daily by members of the Finance Department and responsible employees of the various departments. The amounts included in the table above have been scrutinized as part of the internal control and processing procedures and have obtained the required approvals prior to disbursement.

If you should have any questions, please contact the Finance Department.

Respectfully Submitted,

Robert V. Tate, Jr.
Acting Finance Director

TOWNSHIP OF RADNOR
Minutes of the Special Board of Commissioners Meeting of April 28, 2021

The Radnor Township Board of Commissioners met via Zoom at approximately 6:35 pm

Commissioners Present

Jack Larkin, President

Moira Mulrone, Vice President

Lisa Borowski

Richard Booker

Jake Abel

Sean Farhy

Also Present: *William White, Township Manager, Colby Grim, Township Solicitor, Kathryn Gartland, Treasurer, Robert Tate, Director of Finance, Peggy Hagan, Executive Assistant to the Township Manager.*

Not Present: *Commissioner Booker*

1. Pledge of Allegiance

President Larkin called the meeting to order and led the assembly in the Pledge of Allegiance.

2. Public Comment

William Jones - He spoke on behalf of the Residents of Chester, to help understand the position of the people of Chester with Covanta. Chester has a long history of being misrepresented. Covanta produces more air pollution than any other business. Asking for allies for the people of Chester.

Annie Rebecca Nesmith - She is a Resident of Chester and shared that they support the Zero Waste Resolution and is asking for help from Delaware County. The Residents cannot open their windows due to the particles in the air. The Children are suffering from asthma and people suffer from eye issues due to chemicals in the air.

Zulene Mayfield – She is the Chair of Chester Residents Concerned for Quality of Living and issued an appeal to take a stand for all of Delaware County, the pollution coming from the stacks goes 17 miles. The air source goes to all communities. She asks the Board to look at the matter seriously, what price do we pay for health? Look at alternatives for trash.

3. Finance Update:

a. 2020 Cash Basis Results

b. 2021 Cash Basis First Quarter Review

c. Finance Calendar going forward

Commissioner Larkin asked for the Financial Review to be done as one item.

Bob Tate, Director of Finance, gave an update on the Audit process and notified the Board that Radnor is receiving the GFOA 2019 Financial Certificate of Excellence in Finance Reporting.

Bill White, gave an overview of 2020 Cash Basis Results, 2020 ended with a -\$2,678,102

Defecit/Actual, thee Budgeted Deficit for 2021 is -\$1,553,457 which brings it to a total defecit of -\$4,231,559. Radnor Township will be receiving a Federal Stimulus Allocatin of \$3,150,000 (\$1,575,000 in spring 2021 and the remainder in spring 2022), this leaves a net general fund impact of -\$1,081,559. Mr .White noted other impact on financials include; Carrying several vacant positions; Mercantile – to-date, number of filings on pace with 2020 (COVID year); Parking – Township is back to full operation, but parking activity is down; Permits – still early, nother major on the horizon.

Bill White and Bob Tate spoke on the 2020 Operating Satement, 2021 Budget Statement, 2021 Operating Statement, Act 511 Revenue and Real Estate Taxes. There was disucssion among Commissioners and Staff including; questions on parking revenue and staffing, not including permitting and parking enforcement as revenue generators for budget forecasting,

Commissinoer Larkin wanted to give the Township credit for tightening their belt during a rough year.

Bill White spoke on the Finance Calendar going forward, monthly meetings have been scheduled, these meetings are meant to blossom into budget conversations which will being in the summer.

4. Public Comment

Baron Gemmer – He had questions on Act 511 reporting for 2020 and 2021.

5. Adjournment

There being no further business, the regular meeting adjourned on a motion duly made and seconded.

Respectfully submitted.

Peggy Hagan

TOWNSHIP OF RADNOR
Minutes of the Regular Board of Commissioners
Community Development Standing Committee Meeting of May 6, 2021

The Radnor Township Board of Commissioners met via Zoom at approximately 6:35 pm

Commissioners Present

Jack Larkin, President

Moira Mulrone, Vice President

Lisa Borowski

Jake Abel

Sean Farhy

Also Present: *John Rice, Township Solicitor, Steve Norcini, PE, Township Engineer, Kevin Kochanski, Director of Community Development, Peggy Hagan, Executive Assistant to the Township Manager.*

Not Present: *Richard Booker*

1. Pledge of Allegiance

President Larkin called the meeting to order and led the assembly in the Pledge of Allegiance.

2. Public Comment

None

3. Discussion - PI Planned Institutional Development throughout Radnor Township

Kevin Kochanski began the discussion with a review of the PI District and uses. He also spoke on situations that would require land development and the application, approval, denial, and waiver processes. There was discussion among Commissioners and Staff which included the Board of Commissioners part in the Zoning Hearing Board process, the need for a Comprehensive Plan Update, Zoning Ordinance Update, SALDO clean up, and a rewrite of the PI District Zoning, all to insure what comes forward in the future is of benefit to the Township.

Kevin Kochanski will prepare a memo for the Board of Commissioners on the PI Special Exception Uses and if they exist in other Zoning Districts and put together a Request for Proposal for an update to PI regulations.

4. Public Comment

Kevin Blackney – He said it would be great to update the Comprehensive Plan, he also asked if granting a PI change to R2 for one application would set a precedent for future applications. John Rice, Township Solicitor responded that would not set a precedent.

Roberta Winters – She feels there is a need for a Comprehensive Plan Update and asked if there is an Industrial Use in the Zoning Code. Her concern is in regard to pipelines and utility substations. John Rice, Township Solicitor, said he could not speculate on those uses and that if the PUC approves of the use the utilities may get a pass. Ms. Winters would like to see stronger, enforceable light and noise controls.

Cheryl Tumola – She is happy to hear discussion on updating the Comprehensive Plan. She agrees that the Comprehensive Plan is a tool to shape not control deveopment and would like to see the changes to Zoning addressed as a whole and suggests a planner be hired to give direction on which way to go with Township Planning.

5. *Adjournment*

There being no further business, the meeting adjourned on a motion duly made and seconded.

Respectfully submitted.

Peggy Hagan

TOWNSHIP OF RADNOR
Minutes of the Regular Board of Commissioners Meeting of May 10, 2021

The Radnor Township Board of Commissioners met via Zoom at approximately 6:30 pm

Commissioners Present

<i>Jack Larkin, President</i>	<i>Moira Mulrone, Vice President</i>	<i>Lisa Borowski</i>
<i>Richard Booker</i>	<i>Jake Abel</i>	<i>Sean Farhy</i>

Also Present: *William White, Township Manager, John Rice, Township Solicitor, Kathryn Gartland, Treasurer, Steve Norcini, PE, Township Engineer, Kevin Kochanski, Director of Community Development, Peggy Hagan, Executive Assistant to the Township Manager.*

Not Present:

President Larkin called the meeting to order and led the assembly in the Pledge of Allegiance.

1. Public Participation

None

Commissioner Larkin asked to move item 3 A. before Consent Agenda.

3. A. Citizens Communication Council Update and Status

Commissioner Borowski has asked the item to be placed on the Agenda, the Council has not met in quite some time and the members are ready to serve and would like to meet. She would like Board direction for the Council.

There was discussion among Commissioners and Staff. Commissioner Booker would like the Council to cover the duties in the Administrative Code. John Rice, Township Solicitor, read the section of the Code that covers the duties of the Council and noted the Ordinance is from 2009 and is need of updating as telecommunication laws have changed. It was also noted that there are blurred lines with the Council and Studio 21 that need to be cleaned up and clarified. A draft revision of the Ordinance will be put together and brought back to the Board of Commissioners for feedback and public comment.

Public Comment

Anne Minicozzi - She is a member of the Citizens Communications Council and noted that the Council has not met since 2018. She expects the Council to evolve as technology evolves.

Peter Murphy - He joined the Citizens Communications Council two years ago to help the Township with cell tower installation, he also spoke on 5G.

Suzette Margolis – She is a member of the Citizens Communications Council, they haven't been asked to convene since 2018. Residents are not aware to go to PUC for help. The Council could explain the process to Residents when they have telecommunication issues. She feels there is conflict with the Council and Studio 21 an that the membership should be varied, technical and other.

Brian Kirby – He is a member of the Citizens Communications Council and joined to use his legal background to help with contract negotiations.

John Riccutti - He is a member of the Citizens Communications Council and would like the Board of Commissioners to look at how PEG money is used at Radnor Studio 21. He would like the Township to take over Radnor Studio 21.

2. Consent Agenda

a) Disbursement Review & Approval

- b) Approval of minutes of the Board of Commissioners Meetings, April 12, 2021, and April 26, 2021.
- c) HARB 2021-04 348 Louella Avenue, Wayne PA - Two story addition w/ covered porch, restoration or replacement of windows, stucco and roof. Removal of chimneys.
- d) HARB 2021-07 309 Conestoga Road, Wayne PA - Add two-story rear addition to upgrade from a 2 Bedroom/1.5 bath to a 4 bedroom/2 bath house w/ larger kitchen and family room. Alternative 1, Alternative 2
- e) HARB 2021-08 310 Midland Ave, Wayne PA - New 2nd floor addition over existing sunroom. Renovation of sunroom
- f) HARB 2021-09 417 Woodland Avenue, Wayne PA - Addition of freestanding garage to property
 - g) HARB 2021-10 100 Pembroke Avenue, Wayne PA - Change façade material
 - h) HARB 2021-11 418 Oak Lane, Wayne PA - Fill in area above basement entrance adjacent to existing porch & Under existing 2nd story overhang at rear of house. Add Bilco Entrance. Relocate rear exterior door & steps.
 - i) Authorizing the Engineering Department to Receive Proposals for:
 - a. Subdivision and Land Development Review Engineering Services
 - b. Traffic & Transportation Land Development Review Engineering Services and Capital Project Design Services
 - c. Construction Inspections and Contract Administration Services
 - d. Streetlight and Traffic Signal Maintenance Contract(s)

Commissioner Larkin asked if any Commissioner(s) wanted to pull an item(s) from the agenda.

Commissioner Farhy asked for item 2 b) be pulled from the consent agenda.

Commissioner Larkin moved to approve the removal of item 2 b) from the Consent Agenda, seconded by Commissioner Borowski.

b) Approval of minutes of the Board of Commissioners Meetings, April 12, 2021, and April 26, 2021.

Commissioner Farhy would like the minutes change to reflect that he voted yes for the resignation of Commissioner Enderle. Commissioner Larkin moved to approve the change to the minutes of the April 12, 2021 Board of Commissioners Meeting, seconded by Commissioner Borowski. The motion passed unanimously.

Commissioner Larkin moved to approve the minutes as amended, seconded by Commissioner Borowski. The motion passed unanimously.

Commissioner Larkin moved to approve the balance of the Consent Agenda, seconded by Commissioner Farhy. The motion passed unanimously.

3. Committee Reports

B. Accessibility Presentation – Leah Monty

Leah Monty, Senior at Radnor High School, spoke on her Accessibility Presentation. Commissioner Larkin asked Miss Monty to send the presentation to the Board of Commissioners and Commissioner Farhy would like the presentation placed on the Township Website.

C. Designated Accessibility Seat – Planning Commission

Commissioner Borowski would like to see one of the seats on the Planning Commission be designated for someone with accessibility experience and an eye for going one step above the mandated regulations. There was discussion among Commissioners and Staff. The Board of Commissioners will look to appoint someone with an Accessibility experience and Commissioner Borowski will work with staff to make changes to the Ordinance regarding the Planning Commission seat.

D. Resolution 2021-48 - Morris Road Streetscape Project, Payment of Change Order #3 for additional paving required at existing driveways and tree removal, in the amount of \$11,390

Commissioner Larkin moved to approve the Resolution, seconded by Commissioner Booker. Steve Norcini spoke on the change order. There was discussion among Commissioners and Staff.

Commissioner Larkin called the vote, the motion passed unanimously.

E. Resolution 2021-54 – Radnor TAP Trail, Payment of Change Order #7, which is required to mitigate unsuitable soils encountered in the project area. The cost of Change Order #7 will be determined as an engineering solution is still being designed; prior to the Board vote on Monday, an amount for Change Order #7 will be presented.

Resolution 2021-54 has been updated to Radnor TAP Trail, Payment of Change Order #7, which is Required to Mitigate Unsuitable Soils Encountered in the Project Area, in an Amount Not to Exceed \$31,000.

Steve Norcini spoke on the change order. There was discussion among Commissioners and Staff.

Commissioner Larkin called the vote, the motion passed unanimously.

F. Ordinance 2021-04 (Adoption) – Amending the Radnor Township Code of Ordinances Chapter 62, Pensions and Annuities, Article II, Police Plan, Section 18, Retirement Benefits, by Adding Subpart “L” to Section 18, which Subpart Relates to the Deferred Retirement Option Plan Effective as of January 1, 2020, and Changing the Lettering of the Previously Existing Subpart “L” from “L” to “M”

The Ordinance 2021-04 was advertised for May 24, 2021 and will be placed on that agenda.

4. *Reports of Standing Committees*

None

5. *New Business*

A. *Volunteer Tax Credit (Commissioner Borowski)*

Commissioner Borowski spoke on a volunteer tax credit for first responders. She asked if there was an appetited on the Board for the item. Commissioner Larkin is in favor, Commissioner Farhy would like to give a stipend to those who live at home with their parents and do not pay real estate tax and could not receive at tax credit, Commissioner Booker feels that a stipend is an easier way to go, and Commissioner Mulroneu would like to see a comparison of tax credit and stipend. Commissioner Borowski asked what a realistic timeline would be to bring this back to the Board of Commissioners, John Rice said that it could be done by September 1st.

Commissioner Borowski noted that it is Police Week and thanked Radnor Police for their service, and she also thanked the Radnor Police Officers who assisted a family member during a recent emergency.

Commissioner Booker asked if the February 11 Executive Session item regarding litigation/Zoning Hearing Board Appeal could be discussed at this meeting. John Rice, Township Solicitor, said they could make a motion at this meeting.

Commissioner Booker moved to send the Township Solicitor to the Zoning Hearing Board to oppose Appeal #3095, seconded by Commissioner Larkin. The motion passed unanimously.

6. *Old Business*

A. *Deputy Treasurer Position*

Commissioner Mulroneu is concerned the Deputy Treasurer was appointed without being in compliance with the law. There was discussion among Commissioners about the appointment of the Deputy Treasre and the requirements of the Treasurer to submit proof of training, background check, and monthly reports to the Township.

Commissioner Larkin asked John Rice to draft a resolution to approve Linda Dowd as Deputy Treasurer to be voted on at a future meeting.

Linda Dowd spoke on her qualifications for Deputy Treasurer.

Commissioner Farhy asked for the Ward 3 Vacancy Applicants information be placed on the website.

7. *Public Participation*

Roberta Winters – League of Women Voters – She spoke on redrawing ward lines in response to the 2020 Census.

8. *Adjournment of Regular Meeting*

There being no further business, the regular meeting adjourned on a motion duly made and seconded.

Respectfully submitted.

Peggy Hagan

TOWNSHIP OF RADNOR
Minutes of the Special Board of Commissioners Meeting of May 12, 2021

The Radnor Township Board of Commissioners met via Zoom at approximately 6:34 pm

Commissioners Present

Jack Larkin, President

Moira Mulroney, Vice President

Lisa Borowski

Richard Booker

Jake Abel

Sean Farhy

Also Present: *William Oetinger, Township Solicitor, Peggy Hagan, Executive Assistant to the Township Manager.*

Not Present:

1. *Pledge of Allegiance*

President Larkin called the meeting to order and led the assembly in the Pledge of Allegiance.

2. *Public Comment*

Annie Webb - She is a Ward 3 Resident and spoke in favor of Cathy Agnew for Interim Commissioner.

3. *Discuss and Appoint a Candidate for the Ward 3 Commissioner Vacancy*

Commissioner Larkin nominated Baron Gemmer, Catherine H. Agnew, and Charles E. Madden, III for Interim Ward 3 Commissioner. Commissioner Booker seconded the nomination for Baron Gemmer and Charles E. Madden, III. Commissioner Mulroney seconded the nomination for Catherine H. Agnew.

• *Baron Gemmer*

Commissioner Larkin invited Baron Gemmer to speak on his qualifications for Ward 3 Interim Commissioner.

There was a questions and answer session with the Commissioners and Mr. Gemmer.

• *Catherine H. Agnew*

Commissioner Larkin invited Catherine Agnew to speak on her qualifications for the Ward 3 Interim Commissioner.

There was a questions and answer session with the Commissioners and Ms. Agnew.

• *Charles E. Madden, III*

Commissioner Larkin invited Charles E. Madden, III to speak on his qualifications for the Ward 3 Interim Commissioner.

There was a questions and answer session with the Commissioners and Mr. Madden.

Commissioner Larkin motioned to nominate Baron Gemmer, Catherine Agnew, and Charles Madden for Ward 3 Interim Commissioner; Commissioner Farhy seconded all the Nominees. After Commissioners Comments, Commissioner Larkin asked for Public Comment.

4. Public Comment

Sara Pilling – She spoke in favor of Baron Gemmer

Commissioner Larkin called the vote for Baron Gemmer, the motion failed for lack of majority.

Commissioner Larkin called the vote for Catherine Agnew, the motion failed for lack of majority.

Commissioner Larkin called the vote for Charles Madden, the motion failed for lack of majority.

There will be a Special Board of Commissioners meeting on May 13, 2021 to Appoint a Candidate for the Ward 3 Commissioner Vacancy.

5. Adjournment

There being no further business, the regular meeting adjourned on a motion duly made and seconded.

Respectfully submitted.

Peggy Hagan

RADNOR TOWNSHIP POLICE DEPARTMENT

Monthly Report



May 2021

**Christopher B. Flanagan
Police Superintendent**



Radnor Twp PD DAILY INCIDENT COUNTS

4/1/2021 to 4/30/2021



Day of Month Responses	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
911 HANG UP	0	1	1	0	1	2	1	0	1	0	0	0	0	0	0	0	0	0	3	0	0	2	0	0	0	0	0	1	1	0	0	13
MV ACCIDENT (BRIDGE STRIKE)	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4
MV ACCIDENT (REPORTABLE)	0	0	0	0	0	1	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	6	
ADDED PATROL BUSINESS	7	4	4	4	5	2	1	1	4	1	3	2	2	3	3	3	3	3	3	5	1	5	8	3	4	2	2	2	1	0	95	
ADDED PATROL	6	9	9	5	9	4	4	15	11	12	9	3	10	7	3	5	3	9	6	9	6	10	8	22	12	11	6	19	18	12	270	
ADDED PATROL REQUEST	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	1	0	6	
ADDED PATROL SCHOOL	0	3	3	1	0	4	1	8	5	1	0	5	2	2	2	2	0	2	3	0	4	7	3	0	0	6	7	1	3	3	78	
ALARM (ALL TYPES)	8	10	10	10	5	6	1	4	1	5	2	3	3	5	7	6	5	2	1	5	2	4	3	4	2	5	4	8	5	15	143	
ANIMALS - BITES	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
ANIMAL COMPLAINTS	5	1	1	2	1	0	2	2	1	2	0	3	1	1	1	0	0	0	1	0	1	1	0	2	2	3	1	3	2	2	40	
ANIMALS - DEER	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
ASSAULT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3	
ASSIST ANOTHER PD	0	0	0	1	1	0	1	0	0	0	0	2	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	10	
ASSIST AGENCY NON LAW	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4	
ASSIST PUBLIC	1	0	0	0	1	1	1	0	0	0	1	2	1	1	0	0	0	0	1	0	0	0	0	0	1	0	1	2	2	0	16	
ASSIST VUPD	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	
CIVIL DISPUTE	0	0	0	0	0	0	0	2	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	6	
COMMUNITY EVENT WITH PD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	
CRIMINAL MISCHIEF TO AUTO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
CRIMINAL MISCHIEF / VANDALISM	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	1	0	0	0	2	1	0	1	0	0	0	1	0	0	0	10	
DISORDERLY CONDUCT	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
DELCOM INFO ONLY	2	3	3	1	2	7	5	1	4	2	3	3	7	6	4	5	4	1	2	5	0	7	3	4	2	3	3	3	1	9	108	
NEIGHBOR DISPUTE	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	4	
DISTURBANCE NO CITATION	2	0	0	1	1	1	0	0	0	2	1	0	1	2	1	3	5	0	0	0	0	1	0	0	1	0	0	2	3	2	29	
DEATH DOA	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
DOMESTIC (NO ARREST)	0	0	0	0	1	1	0	1	1	1	0	0	2	0	0	0	0	0	0	0	1	0	0	0	2	1	2	0	0	0	13	



APRIL

Description Primary Count

Parking Tickets

Month of April 2021 450

January - April 2021 1,197

Residential and Commercial False Alarm Violations

Month of April 2021 78

January - April 2021 239

Moving Violations

Month of April 2021 202

January - April 2021 816

Radnor Police Training - April 2021

Taser Instructor Recertification training – Ofc Nick Laffredo

SWAT Leadership School – Ofc. Steve Ryan

SWAT Basic Sniper Training – Ofc. Mike Cook

Crime Alerts

April 2021

On Thursday, 3/31/2021, at approximately 8:50 PM, multiple gift cards totaling \$1,400.00 were purchased at the Rite Aid, located at 237 E. Lancaster Av., using counterfeit \$50.00 bills. The actor, who was recorded on video surveillance, is described as a black male in his 20's to 30's, wearing a black face mask, a black hooded jacket, a gray hooded sweatshirt, light gray sweat pants and white sneakers.

Sometime over night between 4/3/2021 and 4/3/2021 a resident of the 200 block of Windermere Av. had their car egged. The vehicle, a Volkswagen, was parked in front of the residence overnight.

On Wednesday, 4/7/2021, the victim believes their purse was stolen while shopping at the Home Goods, located at 550 E. Lancaster Av. The victim is unsure if the purse was stolen when she was in the parking lot unloading her shopping cart or while she was shopping in the store.

Sometime between Sunday, 4/4/2021 at 8:00PM and Wednesday, 4/7/2021 at 8:00 PM the victim had their catalytic converter stolen from their vehicle. The vehicle, a 2008 silver Toyota Prius was parked in the lot of the apartment complex when the theft occurred.

On Tuesday, 4/13/2021, St. Katherine's Church called to report discovering vandalism on their property. The Church reports that graffiti was discovered spray painted, with red paint, on the stream's tunnel underpass adjacent to their outdoor basketball courts. The graffiti consisted of stick figure drawings and vulgar language.

On Wednesday, 4/14/2021, while working on the rooves of the stores at 311 E. Lancaster Av., workers discovered several acts of vandalism. While working on the HVAC units located on the rooves of the stores, workers observed several locations where vulgar language and pictures were painted on the equipment. It is believed that the vandalism occurred sometime in the prior two weeks.

On two separate occasions, Monday, 4/12/2021 and Tuesday, 4/13/2021, the resident of the unit block of Oakford Rd. had deliveries to their home stolen. On Monday, 4/12/2021 an order of checks from Citizens bank was stolen from their mailbox. On Tuesday, 4/13/2021, a ten foot umbrella, that was delivered to the front of the residence, was stolen.

On Wednesday, 4/21/2021, between 7 PM and 10 PM the resident of the 400 block of N. Bellevue Av. had a baby stroller taken from out front of their home. The stroller, a red "Baby Jogger City-Mini, was valued at over \$450.00.

The Radnor Police respects citizens' privacy, civil rights, and civil liberties by emphasizing behavior, rather than appearance, in identifying suspicious activity. Factors such as race, ethnicity, and/or religious affiliation are not suspicious. The public should only report suspicious behavior and situations (e.g., an unattended backpack or package, or someone breaking into a vehicle or restricted area). Moreover, any physical descriptions are based on victim and witness statements provided to the Radnor Police at the time the incident was reported or developed through investigation.

RADNOR TOWNSHIP POLICE DEPARTMENT

THANK YOU LETTERS

Good afternoon Ofc. McHale,

Thank you and Superintendent Flanagan for inviting PSP. We are grateful for the invitation and look forward to continue working together as well.

I will be sending an email that includes questions we have received in other community forums/presentations in hopes that it will help with any other future community dialogue.

Thank you.

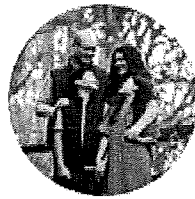
Respectfully,

Tpr. Concha

Trooper Amanda Concha
Heritage Affairs Liaison Officer Area III
Pennsylvania State Police | Office of Community Engagement

8:36

◀ Facebook



Helen Hong

8:29 AM

Thank you so much for the support you've put out on social media for AAPI. We've been quietly huddling together worried about how the community views us without saying anything. We appreciate that the support is coming from above and from our fantastic police department. We are very thankful for an entity standing up for us and condemning the horrific violence that we've been seeing in the news. You guys are awesome - I always say a little prayer for you all when I drop my son off for baseball

Dear Mr. Flanagan,

I saw the RTPD post on social media in support of AAPI members of the Radnor community and that denounced hate, bigotry, and violence. As an Asian American living in Radnor the past 6 years, it has often felt like the issues and racism faced by AAPIs are invisible and unrepresented in our community. Thank you for making the AAPI community feel valued and seen, and for your strong denunciation of racism and violence in our community. Statements from our leaders -- such as yours -- set the tone and culture for our community...what we value and what we will (and will not) tolerate, which then reinforces and helps to build the kind of community we wish to see. I have heard from other AAPI folks that you had reached out to local AAPI organizations/groups to see how they are doing. I am deeply impressed and touched by your work.

With gratitude,
Shu-wen (Wang) Wong

Dear Chief Flanagan and Sergeant Stiansen,

Thank you for all your assistance this morning in helping us make such a beautiful parade.
The children had such a great time!!
Please pass on our gratitude to the other officers who helped out.
May we continue to partner for positive, happy occasions!

Rabbi Mendy Levin

Principal, Cheder Chabad of Philadelphia

Dear Lieutenant Pinto,

On behalf of RHS, the autism community, and those who care for individuals with special needs I wanted to thank you again for time and commitment to the residents of Radnor Township. Your interactions with the students of RHS were respectful and relevant. Many thanks for joining us for our program yesterday on engaging with law enforcement.

Attached are the resources used for the presentation. I'd be honored to continue our collaboration regarding building awareness of the intricacies of the special needs community within Radnor Township with your staff.

Respectfully,

Maureen R. Leo

Teacher, Special Education Department

Transition Coordinator, RTSD

Thank you for all you do for the community and everything you can do to help Radnor residents. It is appreciated.

Lynn Ellis

April 26, 2021

Radnor Police Department
301 Iven Avenue
Wayne, PA 19087

Attn: Christopher B Flanagan
Superintendent of Police

Dear Superintendent Flanagan,

Given all the horrible press the Police are receiving these days, I felt compelled to mention an Officer under your command, who went above and beyond to help me. His name is Mike Grimm. I was parked at the Bryn Mawr Hospital parking garage on the top level. My husband was undergoing surgery, and I had to remain in our car as no one is allowed in the hospital waiting room, even a spouse. It was approaching time for my husband's surgery to be over, when I decided to turn the air on in my car. My car would not start. I was in a panic, when I saw a man (your officer) walking to his truck, a few spaces away from me. I asked if he could possibly help me. He said yes, sure, and proceeded to tell me my battery was dead. He had a new truck and had not equipped it yet with jumper cables. There I was, knowing any time the hospital would call telling me to come and pick up my husband.

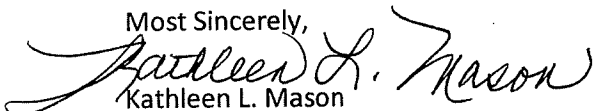
Instead of simply leaving the parking garage to get on his way, your Officer drove all over the two-tier top level of the garage trying to find someone in their car, who had jumper cables. He found someone and that gentleman was happy to assist your Officer in helping me. This was followed by a third man coming back to the garage and he assisted also, as his car just happened to be parked right next to mine.

Your Officer never revealed who he was, until I saw his name on my pad, when I asked the three men to write down their names and addresses, so I could properly thank them. It was then that I noticed your Officer put "Radnor PD" after his name. Mike was amazing, I doubt many people would take the time to drive around a parking garage in search of someone with jumper cables and who was willing to help. It was a very emotional day for me, to put it mildly.

Given the state of the Country right now, and the horror the Police face each day, I felt compelled to tell you how one of your Officers really took that extra step to help me, during one of my most difficult days. I am reasonably sure that is just one of the hundreds of things Police Officers do each day that people never hear about or much more importantly, appreciate.

Just wanted you to know you have a terrific Officer in Mike Grimm!

Most Sincerely,



Kathleen L. Mason

Reading Circle

Phoenixville, PA 19460

Hello Officer Bates, Officer Racht, and Officer Vogel,

Last Saturday afternoon, you all assisted my nephew Zach [REDACTED] after he had a seizure at Encke Field. He was with his friends playing baseball and when he went down, they ran to the police station and you all responded. While I was not there, by all accounts you all were amazing.

I know this is not unusual and it is not the first time RPD has assisted my family. I know this is all in a day's work for you all. Please know how grateful I am to know this is the case for all Radnor residents, but particularly grateful that was the case last Saturday when my own family needed you.

You truly are Radnor's finest.

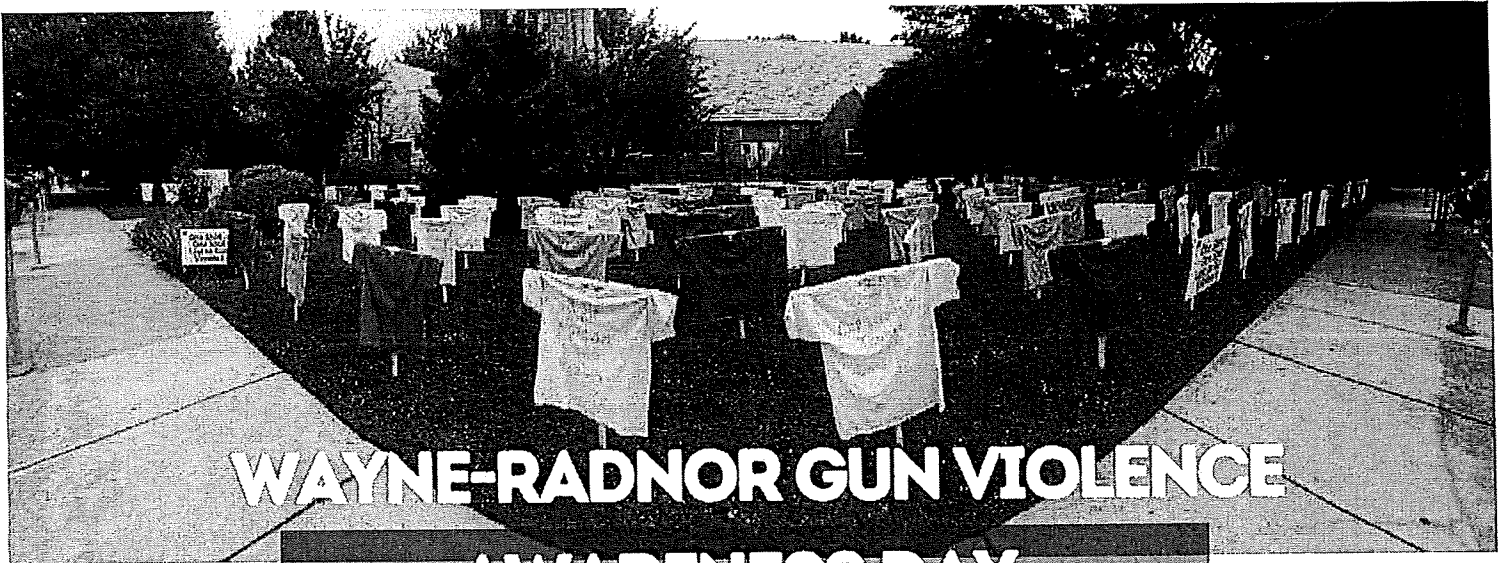
Gratefully,
Lisa

RADNOR TOWNSHIP POLICE DEPARTMENT
COMMUNITY EVENTS

Officially BBQ Weather!

Radnor Police joined members of [Villanova University](#) Office of Community Engagement and Student Government for the annual 'Community First' BBQ at The Villas of Bryn Mawr. Superintendent Flanagan and Commissioner Moira Mulroney joined students for an afternoon barbecue on





WAYNE-RADNOR GUN VIOLENCE AWARENESS DAY

SUNDAY, APRIL 11TH, 2021 AT 3:30 P.M

Event starts and ends at Wayne United Methodist Church on South Wayne Avenue



LEARN



PRAY



ACT

We come together as one community of faith to honor those lost to gun murders and to demand stronger and effective gun laws and regulations.

The Day's Events include:

- **Memorial** to the Lost T-Shirt Display
- Remembrance moments at participating faith institutions
- Vigil along Lancaster Pike, Route 30 - Bring a sign
- Advocacy Opportunity
- **Physical Distancing and mask-wearing required**

For individual Memorials to the lost, Contact Heeding God's Call Bryan Miller at 215-238-8550 or contactheeding@gmail.com

This Gun Violence Awareness Day is working to end gun violence, support sensible gun laws, and eliminate illegal handguns from our community

Join local congregations including: Central Baptist Church, Wayne Presbyterian Church, Wayne United Methodist, St. Mary's Episcopal and others.

Questions about the event? Contact Bryan Miller at 251-238-8550 or contactheeding@gmail.com

Hello Chris and bill.

Thank you on behalf of the Wayne Food Pantry for all you did to make our food drive a success!
Really appreciate your support and all those on your staffs!

Bob King



BOY SCOUTS OF AMERICA

1

Paoli Troop 1

1

Food Collection

Saturday, April 24th 9AM – Noon

Benefitting

Wayne Food Pantry



Non-Contact Car Drop-off

“Pull-up and pop trunk”

Location:

S. Wayne Ave (across from Radnor Fire Co.)

Non-Perishables Needed (accepted but not limited to):

- canned tuna/chicken/meats
- canned soup
- canned beans & canned vegetables
- canned fruit
- jams/jellies/peanut butter
- spaghetti sauce / pasta
- mac & cheese
- boxed rice & mashed potatoes
- cereal
- toiletries (i.e. toilet paper, toothpaste, shampoo, soap, etc.)

1

1

RADNOR TOWNSHIP POLICE DEPARTMENT

301 Iven Avenue

Wayne, Pennsylvania 19087-5297

(610) 688-0503 □ Fax (610) 688-1238

Christopher B. Flanagan

Police Superintendent

TO: Radnor Township Commissioners; William M. White, Township Manager; Robert Tate, Director of Finance; Stephen F. Norcini, Township Engineer; Michael Simmons, Acting Public Works Director; Tammy Cohen, Director of Recreation and Community Programming; Kevin W. Kochanski, Director of Community Development; Bill Cassidy, Field Leader; Lt. Shawn Dietrich; Lt. Joseph Pinto; Sgt. Mark Stiansen, Officer Alex Janoski; Officer Pat Lacey, Officer Ken Piree, Highway Patrol Unit; William Gallagher, Supervisor of Parking; Damon Drummond, Senior Transportation Engineer for Gilmore and Associates; Vera DiMaio, Executive Assistant

FR: Christopher B. Flanagan

RE: STAFF TRAFFIC COMMITTEE MEETING HELD IN THE POLICE ROLL CALL ROOM, WEDNESDAY, APRIL 21, 2021 AT 10:00 AM.

NEW BUSINESS

1. David VanDyke requests to hold the annual "Hill Top Preparatory School 5K".

Mr. VanDyke was not present at this meeting. Highway Patrol Officer Alex Janoski stated that all paperwork for the event has been submitted for the Annual Hill Top Preparatory School 5K to be held on May 22, 2021.

2. James Sullivan request handicap parking in front of 166 Meredith Avenue.

Mr. Sullivan was not present at this meeting. Staff Traffic Committee stated that the handicap parking spot will be marked out for the handicap parking spot at this location. If approved by the Board of Commissioners, a new Ordinance will be introduced at the next Board of Commissioners Meeting for final approval.

3. Reducing the speed of the 1000 block of Conestoga from 35 MPH to 25 MPH.
(Work in conjunction with Mr. Norcini)

Staff Traffic Committee stated that a letter needs to be sent to PennDOT for a speed study to be conducted as Conestoga Road is a State road.

4. Move the **No Parking Here to Corner** sign on the west side of Montrose Avenue @ County Line Road further towards Conestoga Road. (Work in conjunction with Mr. Norcini)

Staff Traffic Committee stated that if the traffic light is installed on Montrose Avenue moving the sign closer to Conestoga Road will be considered.

5. Andrew Babson requests a speed hump study be conducted in the 100 block of South Lowrys Lane.

Mr. Babson was not present at this meeting. Sgt. Mark Stiansen stated that a petition needs to be returned to the police department with the appropriate number of signatures prior to a speed hump study being conducted. Sgt. Stiansen stated that he had a conversation with Mr. Babson that if he still wanted to pursue the matter of a speed hump, he will be given a petition to begin the process.

6. Speed humps on Montrose Avenue.

Sgt. Mark Stiansen stated that there will be a discussion of traffic calming after the traffic light is installed on County Line Road and Montrose Avenue.

7. Discussion on Upper Gulph Road detour route.

Staff Traffic Committee stated that the Highway Patrol Unit placed the traffic counter up on Upper Gulph Road for seven consecutive days.

Speed Study Results

85% = 27mph

Average speed = 22mph

49,846 total vehicles combined

ADT = 7,192

OLD BUSINESS

1. Berwood Lane Speed Study

Speed Study Results

85% = 26mph

1,243 total vehicles combined

ADT = 177

2. Parkes Run Lane Speed Study

Speed Study Results

85% = 29mph

770 total vehicles combined

ADT = 110

See attached spreadsheet for pending issues and updates



RADNOR TOWNSHIP POLICE DEPARTMENT

301 Iven Ave., Wayne, PA 19087

April 2021 Staff Traffic Status Report

Project Name	Project Information	Status Update
<p>County Line Corridor Study (from Lancaster Avenue to Conestoga Road)</p>	<p>Radnor Township along with Lower Merion funded the County Line Corridor Study (posted on the Township's website). Both Townships agreed that the first project to be constructed from the study would be a traffic signal at County Line Road and Montrose Avenue.</p> <p>Pennoni Engineering Associates was awarded the design contractor for traffic signal.</p>	<p>The signal design has been designed and submitted to Penn DOT. Penn DOT comments have been received and reviewed with both Townships. A meeting is to be scheduled with Penn DOT, Radnor and Lower Merion Townships to discuss the review comments. A timetable for project bidding will be determined upon final Penn DOT approval.</p> <ul style="list-style-type: none"> On January 28, 2021, Pennoni reports they have not yet received approval from PennDot They are still evaluating where the traffic light should be placed either Montrose Avenue or Roberts Road Pennoni inquires whether anything be done on Conestoga Road
<p>King of Prussia Rd & Eagle Rd intersection improvements</p>	<p>Radnor Township, in partnership with Cabrini and Eastern Universities, received a DCED MTF grant to construct intersection improvements including turning lanes, storm sewer, and signal improvements. The project is in the design phase. Rd</p>	<p>The design engineer is revising the plans based on the second round of Penn DOT comments. The Township is still trying to acquire easements needed for the project. Upon easement acquisition and final approval from Penn DOT, a bidding schedule will be put forth.</p>

RESOLUTION NO. 2021-61

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY,
PENNSYLVANIA, AWARDING THE CONTRACT FOR LINE STRIPING OF
TOWNSHIP ROADS**

WHEREAS, the Public Works Department received a valid quotation for the striping of Township roadways

WHEREAS, the firm, D.E. Gemmill, Inc., submitted a proposal in the amount of \$14,298.49

NOW, THEREFORE, be it *RESOLVED* the Board of Commissioners of Radnor Township does hereby approve the award of the proposal, for street line striping, to D.E. Gemmill, Inc. in the amount of \$14,298.49

SO RESOLVED this 24th day of May, A.D., 2021

RADNOR TOWNSHIP

By: _____
Name: Jack Larkin
Title: President

ATTEST: _____
William M. White
Township Manager/Secretary

Radnor Township
PROPOSED LEGISLATION

DATE: May 24, 2021

TO: Radnor Township Board of Commissioners

CC: William M. White, Township Manager

FROM: Mike Simmons, Director of Public Works

LEGISLATION: Resolution 2021-61: Award of the Contract for Line Striping of Township Roads

LEGISLATIVE HISTORY: The Public Works Department annually obtains quotations for line striping (long lines) on Township streets.

PURPOSE AND EXPLANATION: The Public Works Department received a valid price proposal from D.E. Gemmill, Inc. in the amount of \$14,298.49, to paint approximately 83,697 linear feet of double yellow pavement markings on Township streets, as well as 700 LF white lane lines. This work will be done in accordance with the Pennsylvania Department of Transportation requirements.

IMPLEMENTATION SCHEDULE: the work is to be completed by the end of the year, weather permitting.

FISCAL IMPACT: Funding for this project is provided in the Liquid Fuels account: #03-439-4880.

RECOMMENDED ACTION: We respectfully request the Board of Commissioners approve Resolution 2021-61: Awarding the Contract for Line Striping of Township Roads in the amount of \$14,298.49 to D.E. Gemmill, Inc.

MOVEMENT OF LEGISLATION: It is being requested that the Board of Commissioners approve the legislation for this project.



10174 Chapel Church Road
 Red Lion, PA 17356
 Phone: 717-755-9794
 Fax 717-927-8144
 www.degemmill.com



Pavement Marking Proposal

Proposal Submitted To: Radnor Township
 301 Ivan Ave
 Wayne PA 17087

Contact: Mike Simmons
 Phone: 610-688-5600
 Fax:

E-mail: msimmons@radnor.org

Project: Radnor Township– HOP Pavement Markings - 2021
Location: Radnor Township, Delaware County Pa

Costars Vendor Number - 204653

Long Line

Penn Dot Line Painting - Restriping Proposal

Properly prepare and repaint the following items with traffic zone paint and beads to meet Penn DOT specifications. This proposal is based on one coat of paint unless otherwise specified, we will bill for actual quantities

- A) 83697 Lineal feet of 4-inch **Double** line painted with waterborne pavement markings paint and beads
 @ \$0.17/L.F. = \$14,228.49
- B) 700 Lineal feet of 6-inch line painted white with waterborne pavement markings paint and beads
 @ \$0.10/L.F. = \$70.00

Total Estimated Cost for Line Painting\$14,298.49

****** D. E. Gemmill Inc. excludes the sweeping of the roadways prior to painting the lines**

Note: Roadway being painted need to be able to accommodate the paint truck, without causing damage to the trucks or property. The driver will have the final determination as to the ability to paint the roadway while still operating safely. The driver's determination shall be bidding

Note: All painting in this proposal is long line painting and excludes transverse markings

Note: This price excludes any retro reflectivity testing.

Note: This proposal **excludes** any specific completion dates for line painting will be scheduled in the order of receipt of signed proposals returned to our office

Note: This section of the proposal is based on 2 mobilization, with a minimum mobilization charge of \$1050.00. (If the dollar total of the items applied does not exceed \$1050.00). Any additional mobilizations will incur an additional mobilization fee of \$1050.00 per mobilization.

Initial _____

HOP Pavement Marking Information

The information below is pertinent to the proper installation of the pavement markings.

- A) Paint manufactures specify a surface temperature of 45 degrees and rising for proper paint adhesion and wear.
- B) Painting of concrete curbing is not recommended by the traffic paint manufacturers. The sand in the surface of the curbing will cause flaking and peeling over time.
- C) Painting over water from rollers, milled surface and other deficient surface may cause paint to wear prematurely or not adhere properly. D. E. Gemmill Inc. will not warranty such items when directed to paint over these types of surfaces.
- D) Safety – D. E. Gemmill Inc. requires a safe environment for our personnel to operate within. It is the responsibility of the paving contractor or contracting party to supply adequate flaggers, and temporary traffic control for D. E. Gemmill Inc. Personnel to operate within during pavement marking operations. This applies to all long line layout operations. The contracting party shall provide temporary traffic control or choose to have D. E. Gemmill Inc. provide traffic control for short line and intersection marking operations and testing, however D.E. Gemmill Inc. will invoice for this temporary traffic control if asked to provide this service. If no option is provided for D. E. Gemmill Inc. to provide the temporary traffic control, it is the responsibility of the contracting agency to provide this service or procure a quote from D. E. Gemmill Inc. for this service.
- E) Any concrete surface which is painted should cure a minimum time according to paint manufacturer's recommendations prior to painting. Curing compounds may need to be removed prior to painting so that paint will adhere properly. D. E. Gemmill Inc. always excludes the cost and process of removing concrete curing compounds for the concrete surfaces unless specifically stated within this proposal.
- F) Thermoplastics applied to concrete surfaces should either have an adhesive primer applied to the surface prior to the application of the thermoplastic or the concrete surface may need to have any curing compounds or agents removed prior to thermoplastic application. D. E. Gemmill Inc. always excludes the cost and process of removing concrete curing compounds for the concrete surfaces unless specifically stated within this proposal.
- G) If calcium or agents are added to concrete to reduce freezing, these items can have adverse effects on painting the concrete surface.
- H) Removal of temporary pavement marking tape – D. E. Gemmill Inc. is not responsible for removing temporary pavement marking tape. If D. E. Gemmill Inc. is required to remove temporary tape they shall be compensated for the removal time at an hourly rate to be negotiated between D. E. Gemmill Inc. and the contracting party.

Initial _____

This proposal is based on E-mailed Bid Items

Date of proposed agreement: May 19, 2021

This proposed agreement may be withdrawn if it is not accepted within 60 days

Initial _____

Workmanship, Terms and Conditions:

Work Schedule

This proposal is not based on weekend rates. All prices listed in this proposal are for normal weekday rates. This price is not valid for holiday weekends or special time frames which shall be at the discretion of D. E. Gemmill Inc. Work can be performed on holidays, weekends or special occasions based on the availability of D. E. Gemmill Inc. and for additional or premium costs associated with holiday, weekend, special occasions or overtimes rates.

Prevailing or Scale Wage Rates

This Proposal is **not** based on scale or prevailing wage rates.

Contracting Agency's Responsibilities

The contracting party, agency or their representatives are responsible for notification of inspectors, government agencies, emergency services, other contractors, or anyone else which may need notification of the work schedule and to clear and remove items, vehicles, and anything else from the work area, prior to the arrival of D. E. Gemmill Inc. This is so D. E. Gemmill Inc.'s work may progress unimpeded.

Mobilizations and Delays

This proposal is based on the number of mobilizations as noted within this proposal. Additional mobilization charges will be the responsibility of the contracting party or agency. Should the additional mobilizations be the result of the contracting party or agency's scheduling, unavailability to provide sufficient work for D. E. Gemmill Inc., which is at the determination of D. E. Gemmill Inc., project phasing different for the plans or information provided at time of bidding or in any other manner detrimental to D. E. Gemmill Inc. The number of mobilizations listed within this proposal, are the amount of mobilization D. E. Gemmill Inc. has determined will be needed to perform the work contained in each section of this proposal.

D. E. Gemmill Inc. is entitled to compensation should our crew be delayed longer than a two hour from our scheduled start time on the project due to delays caused by the contracting party, their agents, employees, subcontractors or the area in which the work is to be performed not be available for work. Delay pricing will be determined by the crew size and equipment committed to the project. In the unlikely event of such delays D. E. Gemmill Inc. will attempt to contact the owner, contracting agency or party, or contacting agency's representative in order to try and rectify the situation. Should work not be able to progress in a productive manner, which is at the determination of D.E. Gemmill Inc., within two hours of the beginning of the delay, compensation will be due to D. E. Gemmill Inc.

Permits, Zoning and Ordinances

Any required permits, inspections or notifications shall be the sole responsibility of the buyer or contracting party. Any zoning, laws or noise ordinances which restrict hours of activity, specific work or any other restrictions for the work listed within this agreement must be presented in writing to D. E. Gemmill Inc. at least ten days prior to the scheduled start of work. Should those restrictions, ordinances or inspections in anyway alter, delay or change the schedule and or the way in which the work was bid to be performed, D. E. Gemmill Inc. reserves the right to revise the price of such work to reflect any additional cost associated with the restrictions, ordinances or inspections. Any penalties or fines arising from a violation of permits, inspections or zoning, ordinance or laws become the sole responsibility of the buyer or contracting agency, which in return agree to hold D. E. Gemmill Inc. harmless.

Drawings, Designs, Sketches

The authorizing party of this order agrees and acknowledges that any and all drawings, designs, photographs, images, stencils or specialty items supplied to D. E. Gemmill Inc. in association with this project are the property of the contracting party. Should the contracting party not retain ownership they hereby acknowledge that they have been granted permission to use, and reproduce drawings, photographs or images, and shall assume any and all responsibility for unauthorized use of such items, holding D. E. Gemmill Inc. harmless. This obligation on the part of the contacting party shall extend to payment of any costs arising from out-of-pocket expenses incurred by the D. E. Gemmill Inc. as a result of the reproduction or use of said items.

Any fees associated with, but not limited to any and all drawings, designs, photographs, images, stencils, specialty items or any other work associated with development of non-supplied items, do not in any way constitute a purchase or ownership of such items by the buyer, owner or contracting agency. Any and all drawings, designs, photographs, images, stencils, specialty items or any other work associated with this project, which were designed, photographed on in any other way developed by D. E. Gemmill Inc. shall become the property of D. E. Gemmill Inc. which shall retain ownership of such work. Any use, reproduction, or duplication of this work in any way, shall be considered a violation of our agreement, and may at the discretion of D. E. Gemmill Inc. result in additional action. The buyer, owner or contracting party agrees that in order to use any of the afore mentioned or non-mentioned items associated with this project, they shall obtain written approval or purchase said items from D. E. Gemmill Inc.

Initial _____

Deviation from the Scope of Work

Any deviation or alteration from the scope of work listed within this agreement shall become an extra charge over and beyond the original scope of work. Should any local, state or federal laws, ordinances or requirements deviate from the specifications provided within this proposal, on the drawings provided for bidding purposes or information provided for bidding purposes, it is the sole and complete responsibility of the contracting agency or party to provide any and all such information to D. E. Gemmill Inc. The contracting agency or party agrees to hold D. E. Gemmill Inc. harmless and assumes complete responsibility in the event that the work does not meet local, state or federal codes, laws or ordinances, due to the lack of, or incorrect information and or specifications supplied for the project. Any and all changes or deviation from the scope of work listed within this agreement shall be made in writing to D. E. Gemmill Inc. at least ten days prior to commencement of scheduled work. Should any changes or correction need to be made in order to meet said requirements, all cost associated with said changes shall be at the expense of the contracting agency or party.

Payment

Terms of this agreement are net 30 days with a 1.8% per month finance charge on all amounts over 30 days. Should any legal action need to be initiated to collect any or all unpaid amounts arising from this agreement, any and all claims must be filed within the jurisdiction of York County Pennsylvania. The contracting party or agency understands and acknowledges that they will be responsible for all costs arising from such action including but not limited to court costs, attorney's fees and administrative costs of both parties. The contracting agency or party also agrees that should they request a change of venue, whether denied or obtained, they shall reimburse D. E. Gemmill Inc. any and all travel, including lodging, meals, fuel and any incurred costs associated with such a change. The contracting party or agency agrees by signing this agreement that they shall not nor shall they seek any compromise of associated cost, for a change of venue. All cost shall become the responsibility of said party, agency or representative thereof.

Entire Agreement

This instrument constitutes the entire agreement between contracting party and D. E. Gemmill Inc. and shall not be altered, amended or changed except by written agreement signed by both parties. Should this agreement not be returned or signed prior to the contracting party by the contracting agency, any signed agreement or written, faxed or electronic correspondence requesting or acknowledging a request to perform or proceed with a portion or all of the work contained within this proposal/contract, etc. shall constitute acceptance of all terms, and conditions listed within this proposal and or contract, since it serves a dual purpose. It is also assumed and implied that since this document serves as a proposal as well as a contract, that the contracting party, or their representative has reviewed the terms and conditions listed within this agreement or proposal. Also that requesting the work to be completed by verbal, any signed agreement or written, faxed or electronic correspondence requesting or acknowledging such a request, etc. shall constitute acceptance of all terms, and conditions listed within this proposal and or contract, and the requesting party waives any claim to the contrary.

Safety

Safety is of the utmost importance to D. E. Gemmill Inc. and their staff, employees, subcontractors etc. of D. E. Gemmill Inc. The contracting party is responsible for providing sufficient short-term traffic control including but not limited to flaggers, channelizing devices, lighting and any other items to protect our personnel while on site during layout and testing of pavement markings, during all short line and intersection pavement marking application, and for any temporary long line pavement marking applications. D. E. Gemmill Inc. will provide follow up trucks and coning of all final permanent and second coat applications of pavement markings. D. E. Gemmill Inc. can provide short term traffic control however any request for D. E. Gemmill Inc. to do so, must be made in writing and at least ten days in advance of the scheduled work. If D. E. Gemmill Inc. is requested to provide short term traffic control, D. E. Gemmill Inc. will be provided compensation for such traffic control at the rates provided by D. E. Gemmill Inc. in written form and then accepted by the contracting party. D. E. Gemmill Inc. reserves the right to stop work and wait for appropriate safety and temporary traffic control to be provided should D. E. Gemmill Inc.'s on site lead person determine that the conditions are unsafe for our personnel to continue working.

Workmanship

All work will be completed in a manner according to standard practices and specifications contained within this agreement. All agreements are contingent upon weather conditions and delays beyond our control. The scope of work will be discussed with the contracting party's or agency's representative prior to the start of work, if they are available on site. Any changes associated with the scope shall be forwarded to D. E. Gemmill Inc. at least ten days in advance of commencement of work.

D. E. Gemmill Inc. shall not be held responsible for any penalties, liquid damages or fees if they are not provided sufficient and reasonable time to properly complete their scope of work contained within this agreement, which shall be at the final determination of D. E. Gemmill Inc. this includes daily and overall project work. Adequate notification is required to schedule work, which may be contingent upon D. E. Gemmill Inc.'s workload, weather conditions and other contributing circumstances.

D. E. Gemmill Inc. guarantees that the pavement marking materials will adhere to the surfaces to which it is applied. D. E. Gemmill Inc. is not responsible for premature wear of pavement marking materials due to winter weather, asphalt maintenance conditions, removal of barricades, nor excessive traffic conditions. Smooth polished asphalt surfaces may cause premature wear which is not guaranteed under this agreement. D. E. Gemmill Inc. is not responsible for flaking or popping of paint on porous pavement surfaces, moisture from this type of paving can cause early paint deterioration. Painting of concrete is not recommended unless the concrete has been allowed to cure for at least 30 days. Any concrete expected to be painted shall have the curing compound removed, prior to the application of paint. Removal of the curing compound is the responsibility of contracting party. D. E. Gemmill Inc. can provide a price for removal of curing compound, however unless specifically called out in the quote, removal of the compound is not included in the price of the work.

D. E. Gemmill Inc. is not responsible for the durability of pavement markings placed on milled surfaces, due to the dirt, and conditions of milled surfaces. This includes but is not limited to dirt, stone, wet surfaces from sweeping etc.

The Contracting party is responsible for stacking out, providing drawings and information about the location of any pavement markings which are to be replaced in existing locations after paving. D. E. Gemmill Inc. will not be responsible for incorrectly located pavement marking locations unless accurate documentation has been provided to D. E. Gemmill Inc. prior to layout. Any removal of incorrectly placed pavement markings shall be at the cost of the contracting party or agency responsible for the stack out or documentation of the pavement markings.

Engineering of any and all items are the responsibility of the contracting agency or party and or their engineering representative. This includes providing starting, finishing and spot points as needed to perform accurate layout. Any drawings details or information supplied on drawings provided for bidding, building or installation purposes are automatically assumed to have been reviewed or engineered by a professional engineering firm whether or not the drawings have been stamped or noted as such. D. E. Gemmill Inc. and or it's manufacturers or suppliers are not responsible to engineer any aspect of the project without written request by the owner, contracting party or agency to do so, and then only if compensation is provided for such engineering to D. E. Gemmill Inc. and completed by written agreement.

D. E. Gemmill Inc. is not responsible for cleanup or removal of excessive dirt and debris, construction or winter dirt, which is at the determination of D. E. Gemmill Inc. The owner or contracting party also agrees to indemnify D. E. Gemmill Inc., its agents or principles from any claims relating to slipping or falling on painted surfaces, when applied to meet the manufacturer's applications or recommendations. If the contracting party, agency or contracting party's representative direct, request or specify items to be painted the contracting agency accepts all responsibility for slips and falls and will indemnify D. E. Gemmill Inc.

D. E. Gemmill Inc. is not responsible for damage, destruction or defects occurring from natural or man-made occurrences, excluding negligence or intentional acts on the part of D. E. Gemmill Inc., including but not limited to wind, water, fire, earthquakes, floods etc. which shall be at the sole discretion of D. E. Gemmill Inc. It is recommended that the contracting party provide insurance for such items and circumstances.

In the event of a breach by the seller, claims for defects, damages or shortages not related to transportation, must be made in writing by the buyer within ten days, of delivery or completion of the work. Failure to make such a timely claim constitutes complete and irrevocable acceptance of the shipment or work. The buyer shall have no right to cover procuring substitute goods or services. In no event shall the seller be liable for special or consequential damages, including profits lost, whether or not caused by or resulting from the seller's negligence.

This contract authorizes D. E. Gemmill Inc. to photograph, document and in any other way use any and all aspects of the work and services performed, while working on and off site relating to this contract. Authorization is granted by the contracting party to use all images and documentation for the purpose of advertising etc., as determined by D. E. Gemmill Inc. without the occurrence of any fees, payments or written authorization due the contracting agency or the property owner. D. E. Gemmill Inc. shall not intentionally disclose any industry or trade secrets through this documentation. Any persons, company logos or information captured in the images or documentation, shall be deemed to and covered under this agreement and shall not be due any compensation, nor need for written approval to be used by D. E. Gemmill Inc., as their being on the site is construed as granted permission by the owner, contracting party or agency to be on site and covered under this agreement. This contract authorizes D. E. Gemmill Inc. to place a site sign not to exceed two feet by two feet double side on the site, where the work has been performed.

Initial _____

D. E. Gemmill Inc. Authorized Signature: David E. Gemmill

Acceptance of This Agreement

I acknowledge that I have read and understand the terms, and conditions of this agreement. I would like to proceed with the scope of work within this agreement and acknowledge that I am authorized to do so as a representative of the agency, party or individual with whom this agreement has been made. By initialing the sections I wish to have completed (any section not initialed will be assumed to not be part of the agreement. If no sections are initialed and the acceptance area is the only area signed, then it is agreed that all work within the agreement is to be performed and is accepted) and or signing this agreement I am authorizing the work to proceed and agree to pay for the work specified in this agreement. This agreement must be included as part of any sub - contract and the terms and conditions supersede any other agreement in place.

Acceptance Signature: _____

Acceptance Date: _____

Note: This proposal must be included as part of any subcontract and must be initialed and signed before any work can commence. No subcontract or purchase order will be valid unless this proposal is part of any said contract.

RESOLUTION NO. 2021-59

**A RESOLUTION OF RADNOR TOWNSHIP,
DELAWARE COUNTY, PENNSYLVANIA, AUTHORIZING KRAMER AND ASSOCIATES TO
PERFORM HVAC WORK AT THE RADNOR MEMORIAL LIBRARY IN THE AMOUNT OF \$7,962**

WHEREAS, repair work is required on the HVAC system as the Radnor Memorial Library

WHEREAS, the major parts for the repair work are covered under warranty, labor, supplies, refrigeration, etc. are not covered under the warranty

WHEREAS, W. Kramer Associates has provided a cost proposal to obtain the warranty parts, and provide the labor, supplies, and refrigerant

NOW, THEREFORE, be it *RESOLVED* by the Board of Commissioners of Radnor Township does hereby Authorize W. Kramer and Associates to perform HVAC work at the Radnor Memorial Library in the amount of \$7,962

SO RESOLVED this 24th day of May, A.D., 2021.

RADNOR TOWNSHIP

By: _____
Name: Jack Larkin
Title: President

ATTEST:

William M. White
Manager/Secretary

Radnor Township
PROPOSED LEGISLATION

DATE: April 20, 2021
TO: Radnor Township Board of Commissioners
FROM: William M. White, Township Manager
CC: Joyce Platfoot, Executive Director, Radnor Memorial Library

LEGISLATION: Resolution 2021-59: Authorizing Kramer and Associates to perform HVAC work at the Radnor Memorial Library in the amount of \$7,962

LEGISLATIVE HISTORY: This item has not been before the Commissioners previously.

PURPOSE AND EXPLANATION: Repairs are required to be performed on the HVAC system at the Library. Although the major parts are under warranty, the labor, supplies, refrigerant, and other items are not covered. W. Kramer and Associates has provided a cost proposal to obtain the warranty parts and provide the installation.

IMPLEMENTATION SCHEDULE: Upon approval by the Board of Commissioners, a reacquisition will be processed, and Kramer will be authorized to perform the work.

FISCAL IMPACT: The Township's agreement with the Radnor Memorial Library states the Library will pay the first \$500 of these types of expenses; the Township's exposure will be \$7, 462.

RECOMMENDED ACTION: *Staff requests the Board of Commissioners of Radnor Township Authorize Kramer and Associates to perform HVAC work at the Radnor Memorial Library in the amount of \$7,962*

RESOLUTION NO. 2021-56

**A RESOLUTION OF RADNOR TOWNSHIP,
DELAWARE COUNTY, PENNSYLVANIA, EMERGENCY REPAIRS TO THE IVEN
AVENUE CULVERT, IN THE AMOUNT OF \$74,700, FUNDED BY THE
STORMWATER FUND PENDING AN INSURANCE CLAIM.**

WHEREAS, the parapet wall on the culvert at 301 Iven Avenue was struck by a motorist

WHEREAS, the wall is damaged is in close proximity to a high pressure gas main

WHEREAS, the repair is deemed an emergency due to the aforementioned.

WHEREAS, there is additional damage, not caused by the automobile accident, that requires immediate attention for the stability of the upstream wall

NOW, THEREFORE, be it *RESOLVED* by the Board of Commissioners of Radnor Township does hereby authorize the Emergency Repairs to the Iven Avenue Culvert, in the amount of \$74,700, funded by the Stormwater Fund pending an insurance claim.

SO RESOLVED this 24th day of May, A.D., 2021.

RADNOR TOWNSHIP

By: _____
Name: Jack Larkin
Title: President

ATTEST: _____
William M. White
Manager/Secretary

Radnor Township

PROPOSED LEGISLATION

DATE: May 18, 2021
TO: Radnor Township Board of Commissioners
FROM: Stephen F. Norcini, P.E., Township Engineer
CC: William M. White, Township Manager

LEGISLATION: Resolution No. 2021-56 - Emergency Repairs to the Iven Avenue Culvert, in the amount of \$74,700, funded by the Stormwater Fund pending an insurance claim

LEGISLATIVE HISTORY: This specific item has not been before the Board of Commissioners previously.

PURPOSE AND EXPLANATION: The parapet wall on the culvert was truck by a motorist on Thursday, May 13th, at approximately 4:00 PM. A cursory inspection found the culvert to be undamaged, but the parapet wall was moved back and has extensive cracking. Due to the wall's proximity to an above ground high pressure gas main, the road was closed. A structural engineer was contacted to assess the damage and arrived early morning on the 14th. He determined that the culvert was not damaged, but the wall will have to be demolished for approximately 4 feet in height, and the length of the wall. In accordance with Township Code, I informed the Township Manager and Finance Director of the situation and received authorization to proceed on an Emergency Basis.

IMPLEMENTATION SCHEDULE: Pending Commissioners approval, a requisition will be processed. The contractor will be onsite within four weeks. There are barricades up to guide traffic away from the wall, and Narrow Bridge signs have been posted.

FISCAL IMPACT: Upon inspection of the structure on the 13th, I noticed deterioration of the upstream headwall, not related to the accident. The cost breaks down as follows:

- | | |
|---|-----------------|
| 1. Rebuild the wall struck by motorist: | \$59,337 |
| a. Lead paint remediation, if required: | <u>\$7,078</u> |
| TOTAL NTE: | \$66,415 |

Note: an insurance claim has been filed. Pending settlement of the claim, if costs for the repair exceed the insurance reimbursement, the balance will be funded by the Stormwater Fund.

- | | |
|--|----------------|
| 2. Repair upstream wall (not damaged by motorist). | \$8,285 |
|--|----------------|

Note: This portion of the work will not be covered by insurance due to the fact that it was not caused by the accident. The cost is above the Manager's authorization limit; hence it is appearing before the Board.

RECOMMENDED ACTION: Staff respectfully requests the Board of Commissioners of Radnor Township to authorize Emergency Repairs to the Iven Avenue Culvert, in the amount of \$74,700.

3 A. Appointment
to Memorial Library
of Radnor

- Geeta Kapadia
Palshikar – 3-Year
Term

RADNOR TOWNSHIP

ENGINEERING DEPARTMENT



Memorandum

To: Radnor Township Board of Commissioners

From: Stephen F. Norcini, PE, Township Engineer *Stephen F. Norcini*

CC: William M. White, Township Manager

Date: May 18, 2021

Re: 2 Paul Road - Waiver of the Stormwater Management Ordinance

The applicant for 2 Paul Road was before the Commissioners at a prior meeting. The Waiver request was not approved. The applicant is back before the Board after amending his plan. The project entails:

- 998 SF detached accessory buildings.
- 603 SF walks
- 571 SF walls/curbs
- 2,279 SF patio.

The attached plans were revised by the applicant in hope of addressing the Board's concern. Some of the existing inlets are now proposed to be connected to the proposed underground detention basin in order to capture an additional 2,506 SF of existing impervious area. The disturbance within the existing parking court is no longer proposed, and extra separation has been provided between the proposed underground detention basin and the proposed patio.

Attached are the Gannett Fleming review letters and plans, as well as letters of support form neighbors.

Christopher Wetzel
412 Oak Lane
Wayne, PA 19087
571.308.5806
kipwetzel@gmail.com

May 18, 2021

Radnor Township
Attn: Mr. Stephen Norcini, Twp. Engineer
301 Iven Ave
Wayne, PA 19087

Mr. Norcini-

I hope that this letter finds you well. This correspondence is to share my support and endorsement of a proposed construction project by William Marino and Elizabeth Reynolds, our neighbors at 2 Paul Road in Wayne. The plan for a pool and pool house has been shared with me and I believe it to be a compliment to the handsome, existing property. From our discussions around the experience that it will provide them, I have no objections to this proposed project; I see it as an addition to the value of their property and, in turn, the value of our greater neighborhood in North Wayne.

Additionally, I think it worth noting that since their arrival to our community four years ago, the entire Marino family have been incredible additions to Radnor Township and the greater region. Their support of community organizations, creation of local businesses, involvement in our schools, and participation in local events, Bill, Elizabeth, and their two daughters have completely immersed themselves into the fabric of our community. While Radnor is always in a state of change, I believe households like the Marino/Reynolds remain the pillars that hold up the character, culture, and strength of our town. These facets of their personal character further amplify my support of this project that they are pursuing.

Thank you for your consideration and please contact me if you would like to discuss further.

Sincerely,



Christopher M. Wetzel

Ron Wallach
8 Paul Road
Wayne, PA 19087
302.383.6233
ron.wallach@gmail.com

May 18, 2021

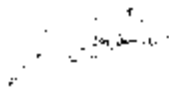
Mr. Stephen Norcini, P.E.
Township Engineer, Radnor Township
302 Iven Avenue
Wayne, PA 19087

Dear Mr. Norcini,

I am writing to indicate my full support for the plans that Bill and Elizabeth Marino recently submitted to the township for the construction of a pool and poolhouse at their residence located at 2 Paul Road.

The Marinos have shared the plans with me, and I have no objections whatsoever. Please let me know if you have any questions, and I thank you for your consideration.

Regards,



Ron Wallach

**Diane Exline van de Beek
4 Paul Road
St. Davids, Pennsylvania 19087**

Steve Norcini, P.E.
Township Engineer
Radnor Township

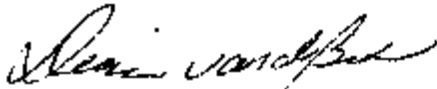
May 17, 2021

Dear Mr. Norcini,

I am writing in full support of the building proposal of a pool and adjacent pool house building on the property of 2 Paul Road, the Bill and Elizabeth Marino residence. My property is directly adjacent to their property and I would be the neighbor most impacted. I have reviewed the plans and have absolutely no objections to their proposal.

Thank you in advance for your consideration.

Regards,



Diane van de Beek

Matthew Schuh
332 Walnut Ave
Wayne, PA 19087
(215) 990-7475
schuh@post.harvard.edu

May 17, 2021

Mr. Stephen Norcini, P.E.
Township Engineer
Radnor Township
301 Iven Avenue
Wayne, PA 19087

Dear Mr. Norcini:

I am writing this letter to record my support of the plans for the construction of a pool and poolhouse at 2 Paul Road Wayne, PA 19087, that Bill and Elizabeth Marino have shared with the township. We have had the chance to review the plans with The Marinos, and, as neighbors, have absolutely no objections. Thank you for your consideration.

Best,

A handwritten signature in black ink, appearing to be 'MS' with a long horizontal line extending to the right.

Matt Schuh

May 18, 2021

Mr. Stephen Norcini, P.E.

Township Engineer

Radnor Township

30 Iven Avenue

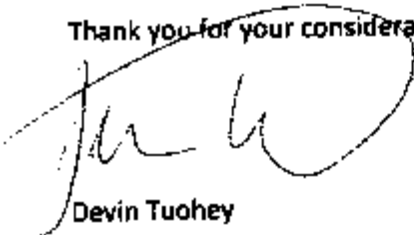
Wayne, PA 19087

Dear Mr. Norcini,

I am writing in support for the construction of a pool and pool house by Bill and Elizabeth Marino at their home at 2 Paul Road, Wayne, PA 19087. My company, CG Wayne, LLC, is the equitable owner of the 19.5 acres of land ("CG Wayne Property") located directly adjacent to the Marino's property.

The CG Wayne Property is currently going through the re-zoning and land development process in Radnor Township for the development of 20 single family houses. This process has highlighted how critical of an issue stormwater management has become in Radnor Township. I have had an opportunity to review the Marino's plans for their pool and pool house and believe the stormwater mitigation improvements the Marino's are making to their property will be a significant benefit not only to the future homeowners of the CG Wayne Property, but to the entire neighborhood. In addition, the landscaping included in the Marino's development plan will create an enhanced visual experience to an already beautiful property.

Thank you for your consideration, and please feel to reach out with any questions.



Devin Tuohey

CG Wayne, LLC

20 Lovella Court, Suite 200

Wayne, PA 19087

Rudy and Virginia Roth
6 Paul Road
St. Davids, PA 19087
May 18, 2021

Mr. Stephen Norcini, P. E.
Township Engineer
Radnor Township
301 Iven Avenue
Wayne, PA 19087

Dear Mr. Norcini,

We are writing in support of the plans for the construction of a pool and a poolhouse at 2 Paul Road, Saint Davids, PA 19087, that Bill and Elizabeth Marino have planned to build and have shared with the township. We have had a chance to review the plans and have no objections.

Thank you,
Rudy and Virginia Roth

Stephanie Schuetz
Jonathan Bayless
10 Paul Road
Wayne, PA 19087
610.306.8953
stephanie.schuetz@gmail.com

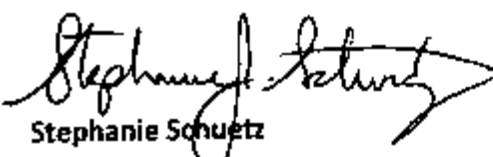
May 18, 2021

Mr. Stephen Norcini, P.E.
Township Engineer
Radnor Township
301 Iven Avenue
Wayne, PA 19087

Dear Mr. Norcini,

We are writing this letter to record our support of the plans for the construction of a pool and poolhouse at 2 Paul Road, Wayne, PA, that Bill and Elizabeth Marino have shared with the township. We have had the chance to review the plans with the Marinos and, as neighbors, have absolutely no objections.

Sincerely,


Stephanie Schuetz


Jonathan Bayless



*Excellence Delivered **As Promised***

Date: May 18, 2021

To: Stephen Norcini, P.E. – Township Engineer

From: Roger Phillips, PE

RE: 2 Paul Road – Stormwater Waiver Request
Grading Permit Application – GP App #202764

The applicant has submitted a grading permit for the construction of 998 SF detached accessory buildings, 603 SF walks, 571 SF walls/curbs, and a 2,279 SF patio. The applicant is requesting a waiver from §245-22 Groundwater Recharge in accordance with §245-22.A(2)(c)[2] of the Township's Stormwater Management Ordinance. The minimum infiltration requirement of 0.50 inches cannot be achieved.

The applicant conducted four test pits on the site. Permeability testing was conducted for test pit 1 at 12", 24", 42", 48", 54", and 66" and all failed with a permeability rate of 0. Test pit 2 contained some water seeps starting at 60". Permeability testing was conducted for test pit 2 at 42", 54", and 66" and all failed with a permeability rate of 0. Test pit 3 encountered groundwater at 60". Permeability testing was conducted for test pit 3 at 12", 24", and 36" and all failed with a permeability rate of 0. Test pit 4 encountered groundwater at 48". Permeability testing was conducted for test pit 4 at 24", and 36" and both failed with a permeability rate of 0. The applicant is proposing an underground detention basin to provide rate control benefits. The applicant is also proposing water quality inserts in all inlets for water quality benefits.

The applicant has requested to appear before the Board of Commissioners to request a waiver from the above-mentioned sections of the Ordinance and the implementation of the above-mentioned stormwater system.

Since the previous waiver request, the plans have been revised to address the concerns of the Board of Commissioners. Some of the existing inlets are now proposed to be connected to the proposed underground detention basin in order to capture an additional 2,506 SF of existing impervious area. The disturbance within the existing parking court is no longer proposed, and extra separation has been provided between the proposed underground detention basin and the proposed patio.

The applicant has addressed all other grading permit review comments.

Gannett Fleming, Inc.

Valley Forge Corporate Center • 1010 Adams Avenue • Audubon, PA 19403-2402

t: 610.650.8101 • f: 610.650.8190

www.gannettfleming.com

If you have any questions or require any additional information, please contact me.

Very truly yours,

GANNETT FLEMING, INC.

A handwritten signature in blue ink, appearing to be 'R. Phillips', with a large, stylized initial 'R' and a horizontal line extending to the right.

Roger A. Phillips, P.E.
Senior Project Manager



May 14, 2021

Mr. Andrew Zerby
Radnor Township Review Engineer
Gannett Fleming, Inc.
1010 Adams Avenue
Audubon, PA 19403

**RE: Comment Response Letter – Marino Residence
2 Paul Road, Wayne, PA 19087
Radnor Township, Delaware County, PA**

File No. 20-209

Dear Mr. Zerby,

Our office is in receipt of your review letter, dated May 13, 2021 for the above-mentioned project. For your consideration, enclosed with this response letter are updated plans titled “Grading Permit Plans, 2 Paul Road” last revised May 13, 2021, an updated report titled “Post-Construction Management Report for 2 Paul Road” last revised May 13, 2021, and a Construction Cost Estimate last revised May 13, 2021. Below are our responses to the comment letter.

STORMWATER COMMENTS:

1. We note that a waiver was requested from the §245-22 Groundwater Recharge section of the ordinance. Once the waiver request letter has been processed, you will be contacted to advise you as to when the request will be placed on an agenda for a Board of Commissioners meeting. Ultimately, they would be deciding as to whether a waiver would be approved or not.
 - ***Per Steve Norcini, we have been placed on the May 25th Board of Commissioners meeting. The changes made to the plan since the first appearance before the Board on April 12, 2021 have been summarized below our comment responses.***
2. Page 7 of the stormwater report indicates an area of 4,125 sf and CN of 0.75 for the Post-Undeveloped Collected drainage area, but the hydrograph reports indicate an area of 3,918 sf and a CN of 0.78 for the Post-Undeveloped Collected drainage area. Please revise these inconsistencies.
 - ***The hydrograph for Post-Developed Collected has been updated to match Page 7. The remainder of the report has been updated accordingly.***

3. The Stormtank System detail on sheet 7 of the plan set indicates a minimum finished grade of 355.00 but the table on sheet 3 of the plan set appears to indicate a minimum finished grade of 354.50. Please revise this inconsistency.
 - ***The minimum top of grade for the Stormtank system has been updated to be 354.75. We have revised the plans as required. To expedite the resubmission process, we have swapped out the project specific details provided by Brentwood with standard Brentwood details.***
4. The table on sheet 3 of the plan set lists an invert for the flared end section as 450.00 but the other elevations on site are in the 300's. Please revise accordingly.
 - ***The table on Sheet 3 has been updated to list the invert for the proposed flared-end-section to be 350.00.***

The following are the major changes made to the plan since the Board of Commissioners meeting held on April 12, 2021:

1. We are showing the existing inlet in the driveway being connected to the proposed stormwater management conveyance system. Currently, this inlet drains to the existing drainage headwall located just off the property. In addition, a yard drain located in the immediate vicinity drains to this existing inlet; some walkways and roof areas drain to this inlet. These stormwater flows are now proposed to be conveyed to the proposed stormwater management system. This will collect 2,506 SF of existing impervious surfaces and direct stormwater generated by these surfaces to the proposed stormwater management system.
2. We shifted the location of the stormwater management system slightly away from the proposed patio.
3. There is no longer any LOD proposed within the existing parking court. The client had originally planned on installing geothermal wells in this area in the future, but the cost was prohibitive.

Should you have any questions or require any additional information, please feel free to contact me.

Best regards,
MOMENEE, INC. a Karins Company



Patrick J. Hanlon, PE

PJH:dcb
Enclosures
20209 L03.doc

GRADING PERMIT REQUIREMENTS

A Grading Permit or Stormwater Management Permit is required:

1. If you wish to install a shed – Shed Permit
2. Increase impervious Surface (regardless of removed impervious surface)
 - a. <500SF Impervious – Minor Grading Permit
 - b. >500SF impervious and <1500SF – Grading Permit (Ordinance 2005-11, Stormwater Management Ordinance)
 - c. >1500SF impervious – Stormwater Management Permit (*Ordinance 2005-11, Stormwater Management Ordinance*)
3. If you are grading, excavating or filling (*Ordinance Chapter 175 Grading, Execution, Fills*)
4. A pre-construction meeting is required. To schedule your meeting, please call Trish Sherwin at 610-688-5600 ext. 133.
5. An Approved Grading Permit is required before submitting a building permit to the Community Development Department.

Fees

Fees and Professional Services Agreements (for further detail see attached fee schedule)

A Professional Services Agreement (PSA) is required for most grading permits. Depending on the specific permit, the applicant must sign a deposit slip and provide the appropriate amount of funds noted for the Permit's PSA. A permit cannot be reviewed unless the required check and signed deposit slip are present. The PSA is used to reimburse the Township for plan reviews, Legal/Stormwater Management Agreement, and inspections. An applicant is required to make additional deposits in the PSA, if required.

Shed Permit	\$120 (see page 9 of the 2019 Fee Schedule)
Minor Grading Permit	\$510 (includes \$50 application fee and \$460 for one plan and one site inspection. Additional plan reviews or site inspections will be billed to the applicant per the approved rates referenced on the 2019 Fee schedule)
Grading Permit	\$1,500 (includes \$50 Application fee, and \$1,450 PSA, see page 10 of the 2019 fee schedule)
Stormwater Management Permit	\$3,050 (includes \$50 application fee and \$3,000 PSA, see page 10 of the 2019 fee schedule)

GRADING PERMIT REQUIREMENTS

Important Ordinance links

Stormwater Ordinance: <https://www.radnor.com/DocumentCenter/View/1920/Stormwater-Management-Ordinance-PDF?bidId=>

Stormwater Ordinance Appendices:

<https://www.radnor.com/DocumentCenter/View/1930/Stormwater-Management-Ordinance---Appendices-PDF?bidId=>

Stormwater Districts: <https://www.radnor.com/DocumentCenter/View/1220/Stormwater-Management-Area-Map-PDF?bidId=>

Ordinance Chapter 175 Grading, Excavation, Fills: <https://ecode360.com/10972571>

Permit Application Check List

	Shed	Minor Grading	Grading	Stormwater
Application Fee	<input type="checkbox"/>			
Application Fee & PSA		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Signed Deposit Slip		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Impervious Surface Table		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Completed application/Owner informaton	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5 sets of Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Additional 2 Sets of Plans for Shade Tree			<input type="checkbox"/>	<input checked="" type="checkbox"/>
2 Flash Drives			<input type="checkbox"/>	<input checked="" type="checkbox"/>

RADNOR TOWNSHIP

ENGINEERING DEPARTMENT

PERMIT APPLICATION FOR:

MINOR GRADING, GRADING, AND STORMWATER MANAGEMENT

As of January 1, 2019, the Engineering Permit Applications have changed. Permits are issued based on impervious surface:

Permit Fees

1. **Shed Permit** – The cost for this permit is \$120
2. **Minor Grading Permit** – The cost for this permit is \$510, and includes:
 - a. One plan review
 - b. One site inspection
 - c. Additional plan reviews or site inspections will be billed to the applicant at the rates on the attached fee schedule.
3. **Grading Permit** – The application fee for this permit is \$1,500 (\$50 for the Application fee, \$1,450 for a Professional Services Agreement). This permit requires a Professional Services Account (PSA), from which all reviews and inspections and Application fee will be paid from. The initial balance provided by the applicant for the PSA is \$1,500. Should the balance of this PSA be reduced to \$500 from payments for review and inspection, the applicant is required to provide additional funds to keep the balance at \$1,500. All unused funds will be returned to the applicant upon completion of the project, in accordance with Township requirements.
4. **Stormwater Management Permit** - The application fee for this permit is \$3,050. (\$50 for the Application fee, \$3,000 for a Professional Services Agreement). This permit requires a Professional Services Account (PSA), from which all reviews and inspections and application fee will be paid from. The initial balance provided by the applicant for the PSA is \$3,050. Should the balance of this PSA be reduced to \$1,000 from payments for review and inspection, the applicant is required to provide additional funds to keep the balance at \$3,000. All unused funds will be returned to the applicant upon completion of the project, in accordance with Township requirements.

Impervious Surface

Complete the impervious surface table (required).

Location: 2 Paul Road, Wayne, PA 19087

Project Description: New pool house, pool, patio, etc.

Gross Lot Area 110,657 **Sq. Ft.**

To be Completed by Radnor Township	
Permit Number:	_____
Submission Date:	_____
Shade Tree Approval Date:	_____
Final Approval Date:	_____
Zoning Approval:	_____
	Zoning Officer
Grading Permit Approval:	_____
	Township Engineer

Complete All Yellow Fields						
Cover Type	Existing Area (square feet)	Percentage of existing impervious surface area of your lot	Area of Impervious Removed (square feet)	Area of Added Impervious Cover (square feet)	Total Area (square feet)	Percentage of total impervious surface of your lot, as proposed
Building	5,631		0	998	6,629	
Walkway/sidewalk	840		196	603	1,247	
Patios, decks	1,945		0	2,279	4,224	
Driveway	5,665		0	0	5,665	
Other	689		0	571	1,260	
Total	14,770	13.35 %	196	4,451	19,025	17.19 %

Estimated Cubic Yards of Dirt Involved 643 Will this fill be taken off site Yes No

Number of trees to be removed (over 6" in diameter) 7 Is Property in Historical District Yes No

Place a check in the box of the Zoning District applicable to your lot. (required)

Zoning Table							
Zoning District	Maximum Impervious Cover (%)		Zoning District	Maximum Impervious Cover (%)		Zoning District	Maximum Impervious Cover (%)
R-1	22	<input checked="" type="checkbox"/>	CO 2,3 stories	50	<input type="checkbox"/>	GH_CR	95
R-2	30	<input type="checkbox"/>	C1	60	<input type="checkbox"/>	GH-BC	50
R-3	35	<input type="checkbox"/>	C-2	70	<input type="checkbox"/>	GH-OS	15
R-4	40	<input type="checkbox"/>	C-3	65	<input type="checkbox"/>	WBOD	NA
R-5 Semi/2 family detached	40	<input type="checkbox"/>	PI	45	<input type="checkbox"/>	PB	55
R-5 Multi Dwelling	36	<input type="checkbox"/>	PA	50	<input type="checkbox"/>	PLO	55
R-6	70	<input type="checkbox"/>	GH-N	60	<input type="checkbox"/>	FC	NA
R-IA	30	<input type="checkbox"/>	GH-GA	80	<input type="checkbox"/>	PLU	45

TO BE COMPLETED BY APPLICANT

Property Owner(s) Marino-Reynolds Family Trust
William ("Bill") Marino, Trustee

Address of Property 2 Paul Rd Wayne, PA 19087

Phone Number 202.486.4631 Email bmarino@pragmatus.com

Engineer/Surveyor Patrick J. Hanlon, PE, Momenee, Inc.

Phone Number 610-527-3030 Ext. 1211 Email phanlon@karinsengineering.com

The undersigned hereby makes application for a Permit under Chapter 175 and any amendments there of:

Signature of Applicant William A. Marino, Trustee

Please note the following requirements:

1. Submit five (5) copies of the plan set with your application
2. Plans are to be no larger than 24" x 36", and shall be folded
3. Shade Tree Commission: If your project meets any of the following requirements, you will be required to attend the Shade Tree Commission Meeting, as well as submit an additional 2 (two) sets of plans and 1(one) flashdrive:
 - a. Any clearing activity which proposes the removal of six (6) or more trees with a Diameter at Breast Height (DBH) of 6" or greater
 - b. Grading in excess of 200 cubic yards, excavation in excess of 60 cubic yards
 - c. Grading for parking lots of 5 or more cars
 - d. Removal of a Heritage Tree (30" DBH or greater) in a non-emergency situation.
 - e. Forestry management and practices
 - f. Swimming pool permits
 - g. The Shade Tree Commission shall review, if directed by the Township Engineer, applications submitted to the Township for the following: Demolition permits on any building lot whereby the proposed work may impact or cause the removal of trees; and Commercial tree removal.
4. Stormwater Calculations:
 - a. Replacement of impervious surface is considered "new" impervious
 - b. There is no credit for the removal of impervious surface
 - c. Stormwater calculations are to be based on the total of all added impervious (not the net impervious surface)

PREPARATION OF AREAS TO BE TOPSOILED

GRADE THE AREAS TO BE COVERED BY TOPSOIL, USING ACCEPTABLE METHODS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE PLACING THE TOPSOIL. REMOVE STONES AND OTHER FOREIGN MATERIAL 2 INCHES OR LARGER IN DIMENSION. REMOVE AND SATISFACTORILY DISPOSE OF UNSUITABLE AND SURPLUS MATERIAL.

PLACING AND SPREADING TOPSOIL

PLACE TOPSOIL ON THE PREPARED AREAS AND, UNLESS OTHERWISE INDICATED, SPREAD AND COMPACT TO A 4-INCH UNIFORM DEPTH ± 1/2 INCHES. COMPACT WITH A ROLLER WEIGHING NOT OVER 120 POUNDS PER FOOT WIDTH OF ROLLER OR BY OTHER ACCEPTABLE METHODS, AS DIRECTED. REMOVE OVERDEPTH TOPSOIL, UNLESS OTHERWISE AGREED UPON IN WRITING. DO NOT PLACE TOPSOIL IN A WET OR FROZEN CONDITION.

HYDROSEEDING SPECIFICATIONS

DEFINITION: STABILIZING SEDIMENT PRODUCING AND SEVERELY ERODED AREAS BY ESTABLISHING PERMANENT GRASS COVER.

PURPOSE: TO PROVIDE PERMANENT VEGETATIVE COVER TO CONTROL RAPID RUN-OFF AND EROSION.

PROCEDURE: SURFACE TO BE HYDRO-SEEDED SHALL BE CLEANED OF ALL DEBRIS AND OTHER MATTER HARMFUL TO UNIFORM GERMINATION. A WATER-SLURRY MIXTURE COMPOSED OF THE BELOW MENTIONED "MATERIALS" SHALL BE SPRAYED UNIFORMLY OVER THE AREAS TO BE HYDRO-SEEDED.

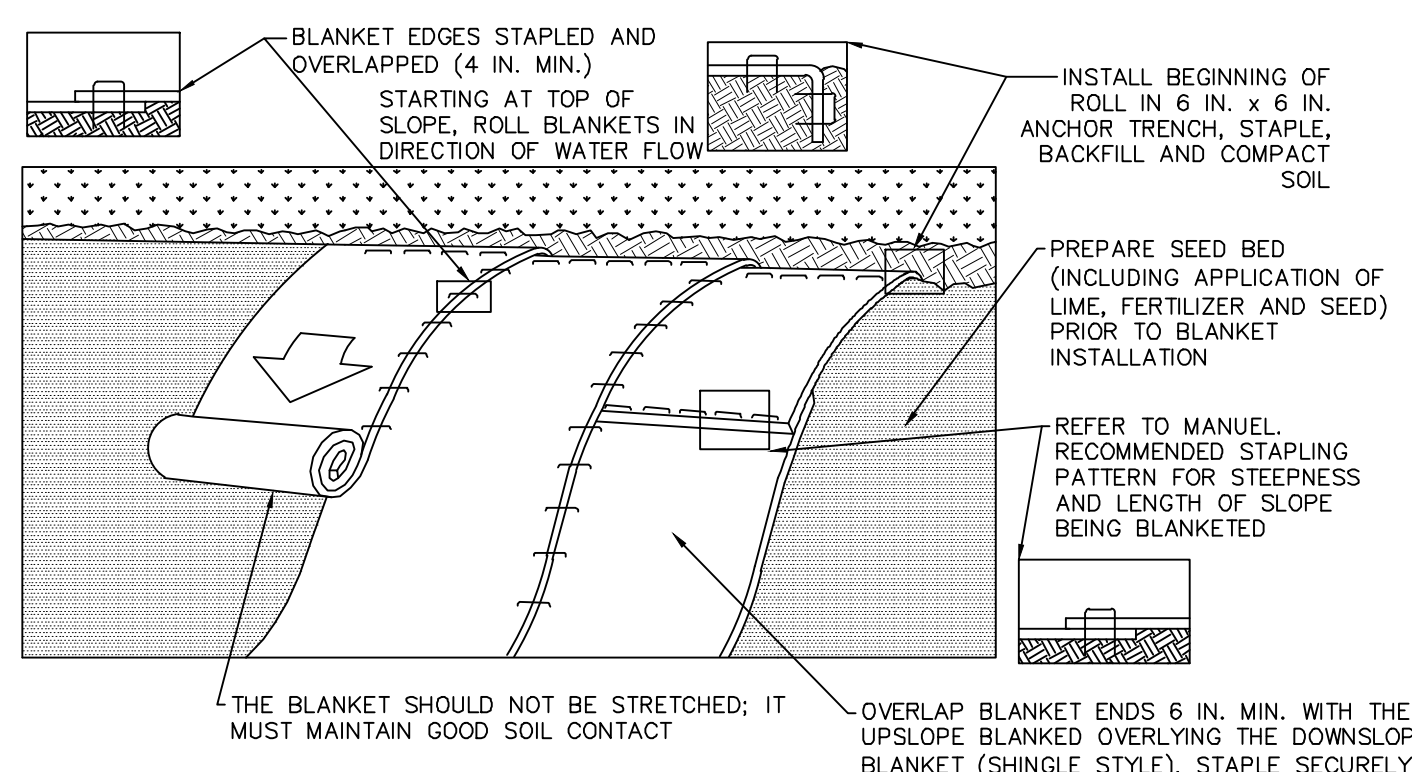
MATERIALS:

PERMANENT SEEDING

NAME	DESCRIPTION	APPLICATION RATE (PER ACRE)
1)	60% PENNSTAR KENTUCKY BLUEGRASS 30% PENNLAWN RED RESCUE 10% PENNFINE PERENNIAL RYEGRASS	260 LBS.
2)	COMMERCIAL FERTILIZER	1,000 LBS.
3)	GROUND AGRICULTURAL LIMESTONE (MAY BE APPLIED SEPARATELY)	2 TONS
4)	MULCH HAY OR STRAW	3 TONS
5)	TERRA TACK OR EQUIVALENT	20 LBS.

TEMPORARY

1)	ANNUAL RYEGRASS (95% PURE)	40 LBS.
2)	COMMERCIAL FERTILIZER	1,000 LBS.
3)	GROUND AGRICULTURAL LIMESTONE (MAY BE APPLIED SEPARATELY)	1 TON
4)	MULCH HAY OR STRAW	3 TONS

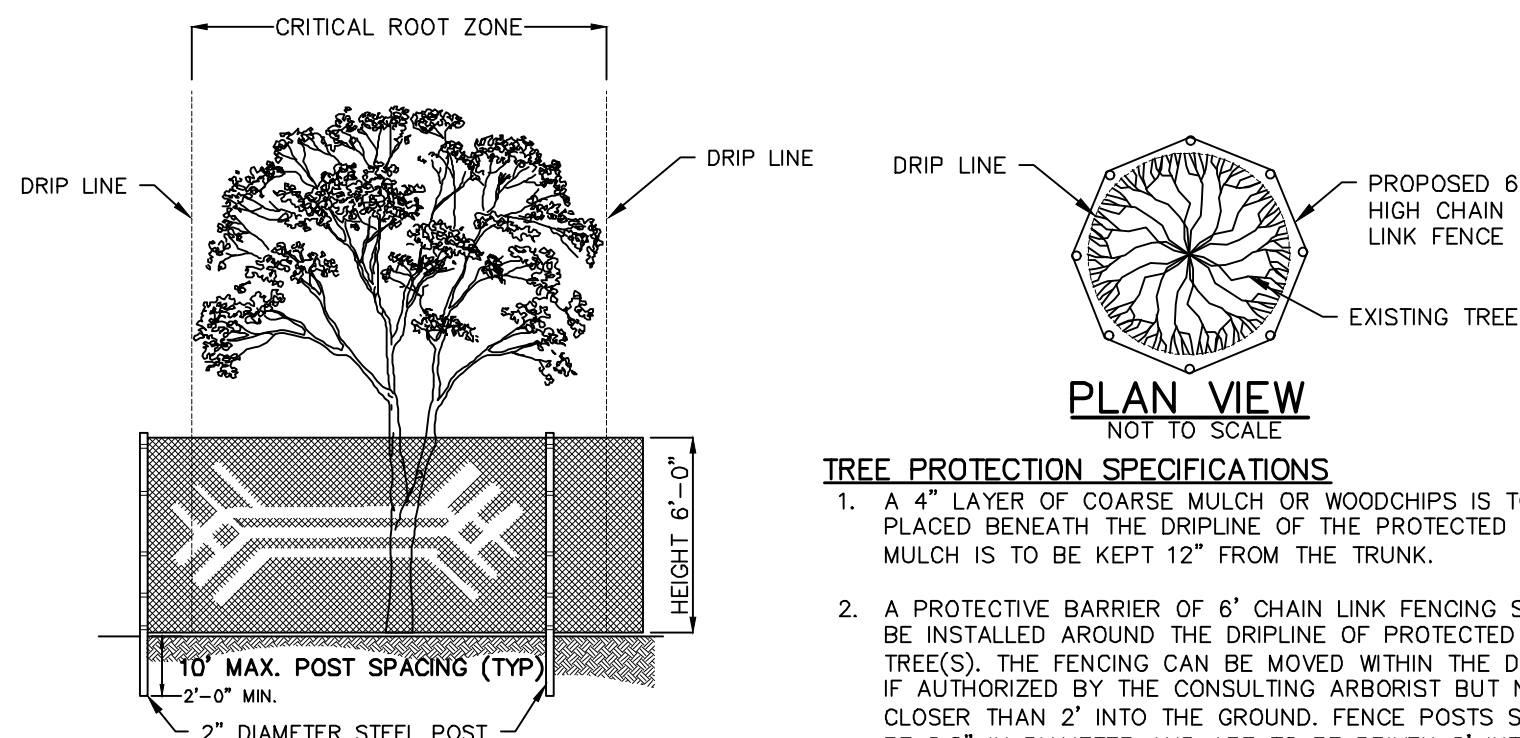


NOTES:

- SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.
- 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 STAPLE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.
- 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**

NOT TO SCALE



TREE PROTECTION SPECIFICATIONS

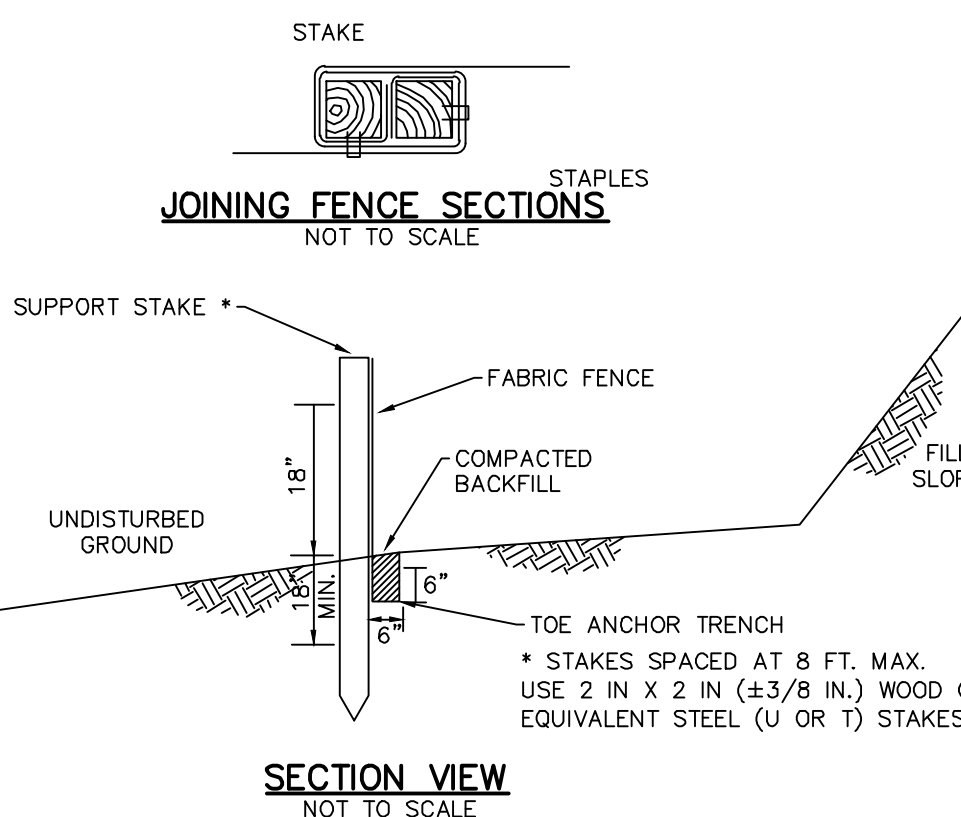
- A 4" LAYER OF COARSE MULCH OR WOODCHIPS IS TO BE PLACED BENEATH THE DRIPLINE OF THE PROTECTED TREES. MULCH IS TO BE KEPT 12" FROM THE TRUNK.
- A PROTECTIVE BARRIER OF 6" CHAIN LINK FENCING SHALL BE INSTALLED AROUND THE DRIPLINE OF PROTECTED TREE(S). THE FENCING CAN BE MOVED WITHIN THE DRIPLINE IF AUTHORIZED BY THE CONSULTING ARBORIST BUT NOT CLOSER THAN 2" INTO THE GROUND. FENCE POSTS SHALL BE 2.0" IN DIAMETER AND ARE TO BE DRIVEN 2" INTO THE GROUND. THE DISTANCE BETWEEN POSTS SHALL NOT BE MORE THAN 10'. THIS ENCLOSED AREA IS THE TREE PROTECTION ZONE (TPZ).
- MOVABLE BARRIERS OF CHAIN LINK FENCING SECURED TO CEMENT BLOCKS CAN BE SUBSTITUTED FOR "FIXED" FENCING IF THE CONSULTING ARBORIST AGREES THAT THE FENCING WILL HAVE TO BE MOVED TO ACCOMMODATE CERTAIN PHASES OF CONSTRUCTION. THE BUILDER MAY NOT MOVE THE FENCE WITHOUT AUTHORIZATION FROM THE CONSULTING ARBORIST.
- WHERE THE CONSULTING ARBORIST HAS DETERMINED THAT TREE PROTECTION FENCING WILL INTERFERE WITH THE SAFETY OF WORK CREWS, TREE WRAP MAY BE USED AS AN ALTERNATIVE FORM OF TREE PROTECTION. WOODEN SLATS AT LEAST ONE INCH THICK ARE TO BE BOUND SECURELY, EDGE TO EDGE, AROUND THE TRUNK. A SINGLE LAYER OR MORE OF ORANGE PLASTIC CONSTRUCTION FENCING IS TO BE WRAPPED AND SECURED AROUND THE OUTSIDE OF THE WOODEN SLATS. MAJOR SCAFFOLD LIMBS MAY REQUIRE PROTECTION AS DETERMINED BY THE CONSULTING ARBORIST. STRAW WADDLE MAY ALSO BE USED AS A TRUNK WRAP BY COILING THE WADDLE AROUND THE TRUNK UP TO A MINIMUM HEIGHT OF SIX FEET FROM GRADE. A SINGLE LAYER OR MORE OF ORANGE PLASTIC CONSTRUCTION FENCING IS TO BE WRAPPED AND SECURED AROUND THE STRAW WADDLE.

DO NOT:

- ALLOW RUNOFF OF SPILLAGE DAMAGING MATERIALS INTO THE AREA BELOW ANY TREE CANOPY.
- STORE MATERIALS, STOCKPILE SOIL, OR PARK OR DRIVE VEHICLES WITHIN THE TREE PROTECTION ZONE.
- CUT, BREAK SKIN, OR BRUISE ROOTS, BRANCHES, OR TRUNKS WITHOUT FIRST OBTAINING AUTHORIZATION FROM THE CONSULTING ARBORIST.
- ALLOW FIRES UNDER AND ADJACENT TO TREES.
- DISCHARGE EXHAUST INTO FOLIAGE.
- SECURE CABLE, CHAIN, OR ROPE TO TREES OR SHRUBS.
- TRENCH, DIG, OR OTHERWISE EXCAVATE WITHIN THE DRIPLINE OR PROTECTION ZONE OF THE TREE(S) WITHOUT FIRST OBTAINING AUTHORIZATION FROM THE CONSULTING ARBORIST.
- APPLY SOIL STERILANTS UNDER PAVEMENT NEAR EXISTING TREES.

TREE PROTECTION DETAIL

NOT TO SCALE



JOINING FENCE SECTIONS

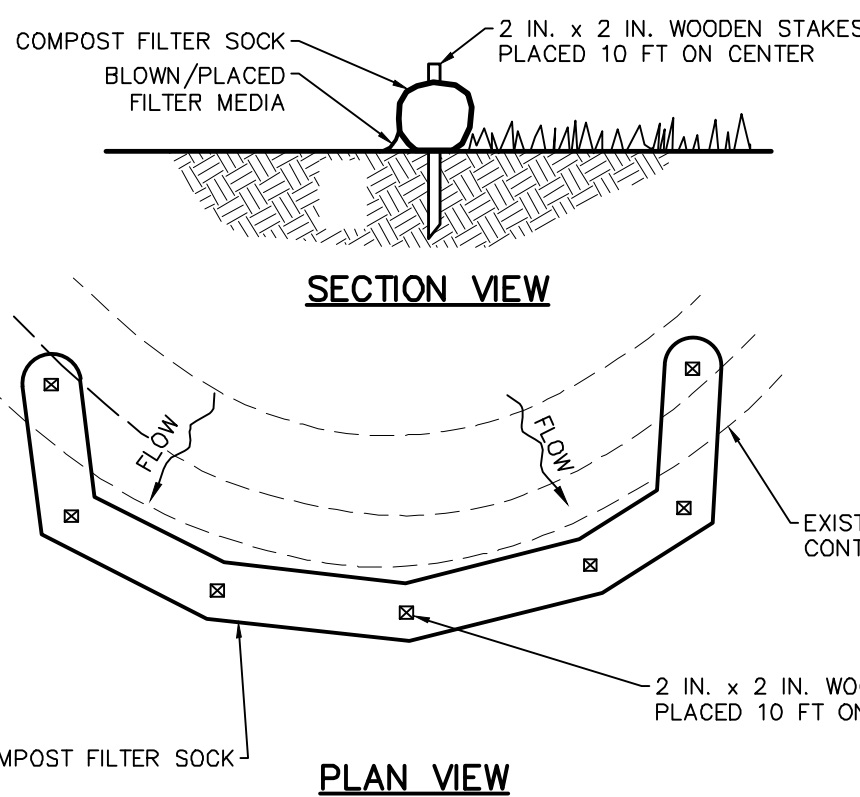
NOT TO SCALE

NOTES:

- FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL.
- FABRIC WIDTH SHALL BE 30 IN. MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES.
- SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.
- SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.
- ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL # 4-6).
- FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

**STANDARD CONSTRUCTION DETAIL #4-7
STANDARD SILT FENCE (18" HIGH)**

NOT TO SCALE



TYPICAL SOIL STOCKPILE CROSS SECTION

NOT TO SCALE

- NOTES:**
- SILT FENCE MUST COMPLETELY ENCLOSE STOCKPILES.
 - TOPSOIL SHALL NOT BE REMOVED FROM THE DEVELOPMENT SITE OR USED AS FILL.
 - TOPSOIL SHALL BE REMOVED FROM THE AREAS OF CONSTRUCTION AND STORED SEPARATELY. THE TOPSOIL SHALL BE STABILIZED TO MINIMIZE EROSION DURING STORAGE.
 - UPON COMPLETION OF CONSTRUCTION, THE TOPSOIL SHALL BE UNIFORMLY REDISTRIBUTED ON THE SITE.

NOTES:

- 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 CONTROL MANUAL.
- 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 THAT 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. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR 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.

**STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK**

COMPOST STANDARDS

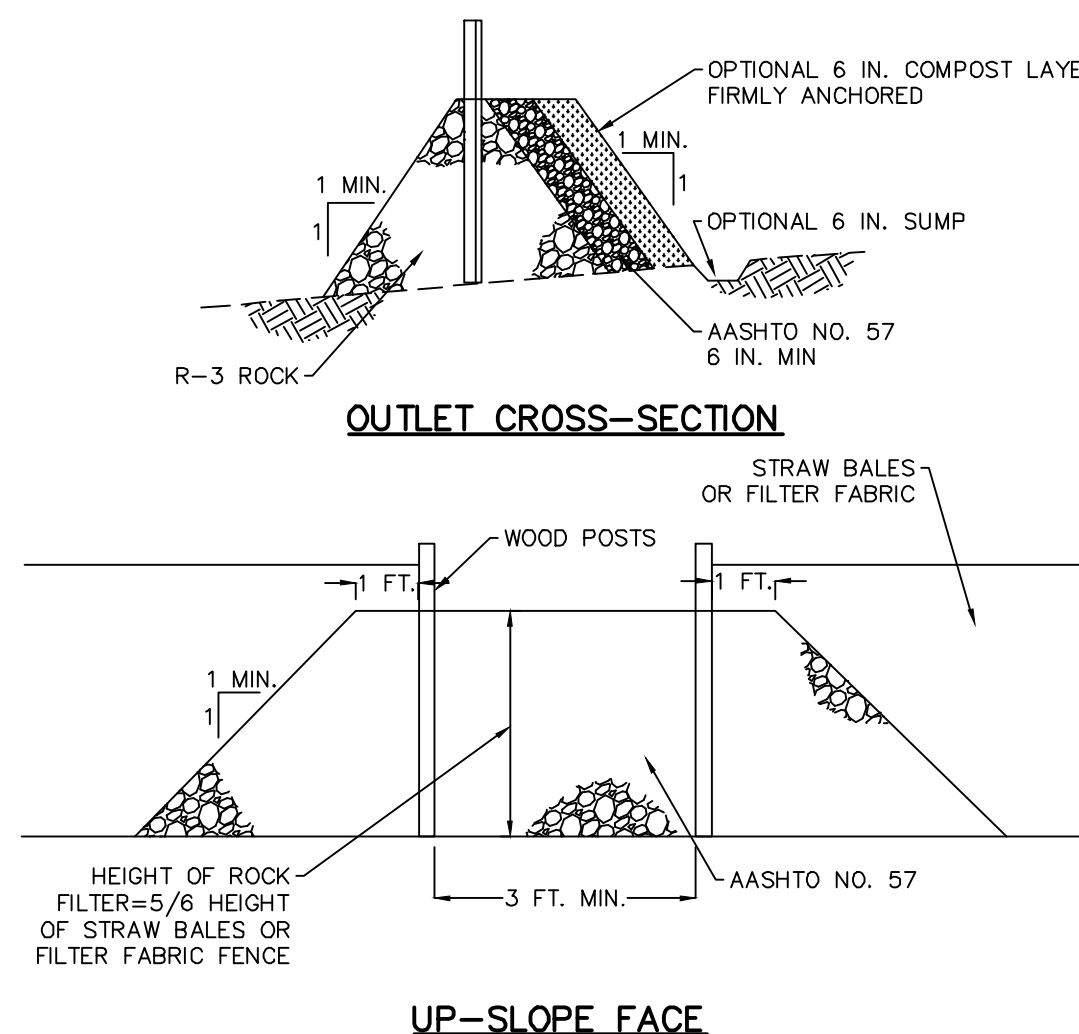
ORGANIC MATTER CONTENT	80% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 - 8.0
MOISTURE CONTENT	35% - 55%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 ds/m (mmhos/cm) MAXIMUM

COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

MATERIAL TYPE	3 MIL HDPE	5 MIL HDPE	5 MIL HDPE	MULTI-FILAMENT POLYPROPYLENE (MFFP)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (HDMFFP)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	BIO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12" 18"	12" 18" 24"	12" 18" 24"	12" 18" 24"	12" 18" 24"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH		28 PSI	26 PSI	44 PSI	202 PSI
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	23% AT 1000 HR.	23% AT 1000 HR.		100% AT 1000 HR.	100% AT 1000 HR.
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS

TWO-PLY SYSTEMS

INNER CONTAINMENT NETTING	HDPE BIAXIAL NET
	CONTINUOUSLY WOUND
	FUSION-WELDING JUNCTURES
OUTER FILTRATION MESH	COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER AND NONWOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH)
	3/16" MAX. APERTURE SIZE
	SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS.



OUTLET CROSS-SECTION

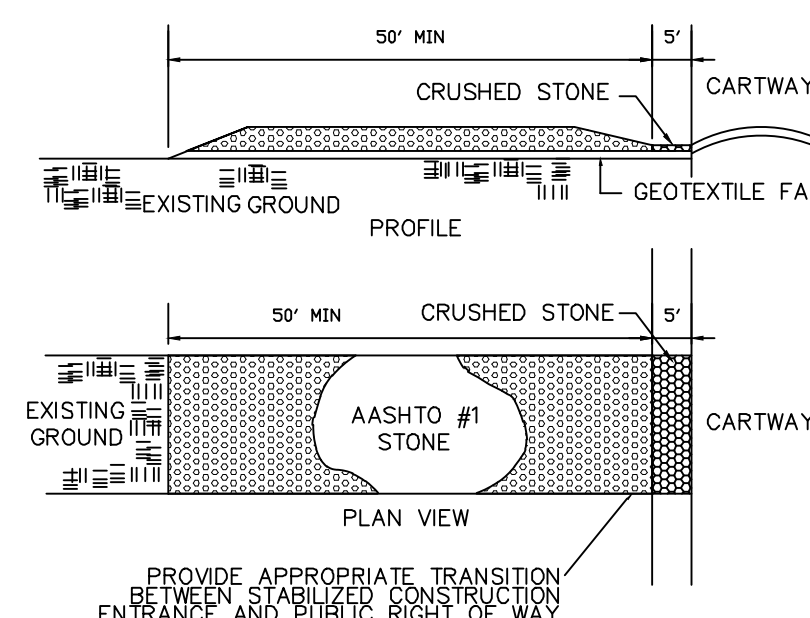
UP-SLOPE FACE

NOTES:

- A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HD AND EV WATERSHEDS.
- SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

**STANDARD CONSTRUCTION DETAIL #4-6
ROCK FILTER OUTLET**

NOT TO SCALE



STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

NOTES:

- THICKNESS - NOT LESS THAN EIGHT (8) INCHES.
- WIDTH - NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
- WASHING - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVED SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS, OR OTHER APPROVED METHODS.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

STORMWATER MANAGEMENT FACILITY MAINTENANCE PLAN

THE PROPOSED STORMWATER MANAGEMENT SYSTEM ON THIS LOT CONSISTS OF A BRENTWOOD STORMTANK SYSTEM. EXCESS FLOWS ARE DISCHARGED THROUGH THE PROPOSED FLARED-END-SECTION RIP RAP OUTLET. WATER RUNOFF IS DIRECTED TO THE STORMWATER SYSTEM VIA ROOF RAINWATER CONVEYANCE PIPING, A LARGE PARK INLET, 2'X2' SUMP BOXES, 1'X1' INLETS, AND CONVEYANCE PIPING. THE SUMP BOXES ARE PROVIDED WITH A ONE FOOT MINIMUM SUMP BELOW THE INLET AND OUTLET PIPES SO THAT DEBRIS CAN BE COLLECTED PRIOR TO FLOWING INTO THE RAIN GARDEN.

THE INLETS WILL BE FITTED WITH WATER QUALITY INSERTS TO PROVIDE WATER QUALITY TREATMENT. DISTURBANCE WITHIN THE RIPARIAN BUFFER WILL BE LIMITED TO THE MAXIMUM EXTENT PRACTICAL. RUNOFF IN EXCESS CAPACITY OF THE STORMWATER SYSTEM IS DISCHARGED VIA THE PROPOSED FLARED-END-SECTION RIP RAP OUTLET.

THE EXISTING BURIED STORMWATER MANAGEMENT SYSTEM LIES TO THE NORTH AND EAST OF THE PROPOSED BRENTWOOD STORMTANK SYSTEM. BOTH SYSTEMS ARE LOCATED IN THE WESTERLY SIDE OF THE FRONT YARD.

THE RESPONSIBILITY FOR THE CONTINUED OPERATION AND MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITIES ON THIS LOT IS THAT OF THE PROPERTY OWNER.

MAINTENANCE OF THE FACILITIES SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

- THE OWNER, OCCUPANT, TENANT OR OTHER USER OF THE PROPERTY SHALL NOT IMPEDE THE FLOW OF WATER DRAINING TO EITHER SYSTEM.
- ALL ROOF DOWNSPOUTS, INLETS, CURB OPENINGS AND OTHER WATERWAYS SHALL BE KEPT OPEN AND OPERATION TO PASS THE FLOW OF WATER TO THE BASIN AS INTENDED.
- GRASS AND LANDSCAPING IN THE VICINITY OF ALL INLETS SHALL BE KEPT TRIM AND FREE FROM DEBRIS ACCUMULATION, AND DOWNSPOUTS AND INLETS SHALL BE KEPT FREE OF OBSTRUCTIONS THAT COULD BLOCK THE FREE FLOW OF WATER TO AND WITHIN THEM.
- INLET SUMPS SHALL BE CLEANED OF ACCUMULATED DEBRIS BEFORE ANY DEBRIS CAN BE DISCHARGED INTO THE SYSTEMS. INLET STRUCTURES SHALL BE INSPECTED AT LEAST MONTHLY TO INSURE THAT THEY ARE CLEAN AND REMAIN OPERATIONAL.
- SUBSURFACE PIPES SHALL BE INSPECTED ON AN ANNUAL BASIS TO INSURE THAT THEY ARE CLEAN AND OPERATIONAL. ANY ACCUMULATED DEBRIS AND SILT SHALL BE REMOVED IN A TIMELY MANNER. THE SUBSURFACE PIPES SHALL BE KEPT FREE OF OBSTRUCTIONS THAT COULD BLOCK THE FREE FLOW OF WATER WITHIN THEM.
- PROMPT REMEDIAL MEASURES ARE TO BE TAKEN IN THE EVENT OF ANY BLOCKAGE OR MALFUNCTION OF THE SYSTEM.

THE OWNER, OCCUPANT, TENANT OR OTHER USER OF THE PROPERTY SHALL NOT TAKE ANY MEASURES TO DISRUPT OR IN ANY WAY IMPAIR THE EFFECTIVENESS OF THE BED OR ITS CONTROLS. THIS INCLUDES ALTERATION OF GRADES IN ANY MANNER THAT WOULD DIVERT RUNOFF AWAY FROM INLET COLLECTION POINTS.

STORMWATER MANAGEMENT SYSTEM CONSTRUCTION NOTES:

- INFILTRATION/WATER QUALITY BMP FILTER FABRIC AND STONE SHOULD BE KEPT CLEAN OF SOIL/SEDIMENT DURING THE INSTALLATION PROCESS. IF INSPECTION INDICATES THAT SOIL SEDIMENT HAS ENTERED THE INFILTRATION SEEPAGE BED, APPROPRIATE MEASURES (I.E. CLEANING THE SOIL/SEDIMENT FROM FABRIC, STONE, BED ETC.) AND/OR REPLACEMENT OF THE FABRIC AND STONE) SHOULD BE ADDRESSED.
- ALL STONE FOR THE CONSTRUCTION OF THE WATER QUALITY BMP SHOULD BE UNIFORMLY GRADED AND CLEAN WASHED AGGREGATE.
- THE BOTTOM OF THE WATER QUALITY BMP SHALL BE UNDISTURBED OR UNCOMPACTED SUBGRADE.
- INFLOW AND OUTFLOW POINTS INTO THE EXISTING AND PROPOSED SYSTEMS SHOULD BE KEPT CLEAR OF LEAVES AND OTHER DEBRIS. ANY LEAVES AND DEBRIS WILL NEGATIVELY IMPACT THE PERFORMANCE OF THE SYSTEM. ALL DOWNSPOUTS AND OVERFLOW PIPES SHOULD BE KEPT IN GOOD WORKING ORDER.
- THE WATER QUALITY BMP SHALL BE LOCATED A MINIMUM OF 10' FROM A BASEMENT WALL.
- AFTER THE STORMWATER MANAGEMENT SYSTEM IS COMPLETELY INSTALLED, ALL HEAVY CONSTRUCTION EQUIPMENT SHALL BE RESTRICTED FROM THE INFILTRATION BEDS TO ELIMINATE IMPACTS WHICH MAY COMPROMISE IT. IN THE EVENT ANY IMPACTS COMPROMISE THE FUNCTIONALITY OF THE INFILTRATION BEDS, IT MUST BE IMMEDIATELY REPAIRED OR REPLACED TO DESIGN SPECIFICATIONS.

CONSTRUCTION SPECIFICATIONS STORMWATER DETENTION SYSTEMS:

- ALTER AND REFINE THE GRADES AS NECESSARY TO BRING SUBGRADE TO REQUIRED GRADES AND SECTIONS AS SHOWN IN THE DRAWINGS.
- THE TYPE OF EQUIPMENT USED IN SUBGRADE PREPARATION CONSTRUCTION SHALL NOT CAUSE UNDUE SUBGRADE COMPACTION. TRAFFIC OVER SUBGRADE SHALL BE KEPT AT A MINIMUM.
- INSTALL POLYPROPYLENE GEOTEXTILE FABRIC (I.E., DUPONT TYPAR #3401, AMCO PROPEX #4545, OR APPROVED EQUAL) ON BOTTOM OF BED AREAS AND TACK UP SIDES OF EXCAVATION. WHERE EDGES OF ROLLS OVERLAP, THEY SHALL DO SO BY AT LEAST TWO FEET. ADEQUATE FABRIC SHALL BE LEFT ON THE ROLLS (NOT CUT FROM SIDE INSTALLATION) TO FACILITATE OVERTOPPING THE STONE AT COMPLETION OF BED AREA.
- ALL STONE USED SHALL BE CLEAN, WASHED, CRUSHED STONE AGGREGATE MEETING PENNDOT/AASHTO #57 SPECIFICATIONS.
- STONE BASE COURSE SHALL BE LAID OVER A DRY SUBGRADE, TO A DEPTH SHOWN IN DRAWINGS, IN LIFTS TO LAY NATURALLY CORRECTED. DO NOT ROLL OR COMPACT THE STONE BASE COURSE. KEEP THE BASE COURSE CLEAN FROM DEBRIS, CLAY AND ERODING SOIL.
- COVER STONE BED WITH REMAINING FABRIC.
- STONE BED TO BE TOTALLY ENCLOSED IN THE GEOTEXTILE FABRIC.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

CALL BEFORE YOU DIG!
3 WORKING DAYS NOTICE FOR ALL UTILITIES
CONSTRUCTION PHASE AND TO WORKING DAYS IN DESIGN STOP-STOP CALL
1-800-486-1776
Pennsylvania One Call System, Inc.

Serial Number:
CALL BEFORE YOU DIG!
3 WORKING DAYS NOTICE FOR ALL UTILITIES
CONSTRUCTION PHASE AND TO WORKING DAYS IN DESIGN STOP-STOP CALL
1-800-486-1776
Pennsylvania One Call System, Inc.

MIMOMENEE, INC.
a Kairns Company
ENGINEERING | PLANNING | SURVEYING

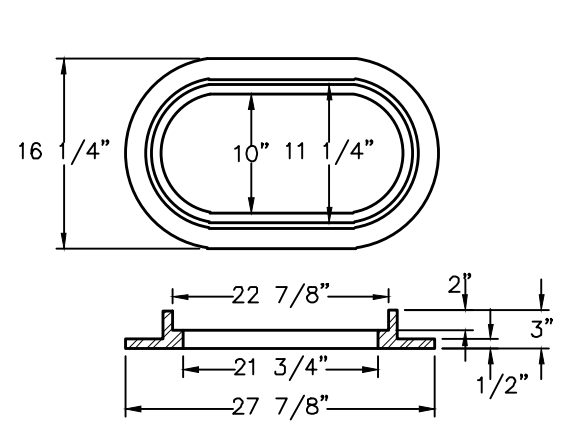
CONSTRUCTION NOTES & DETAILS-1

GRADING PERMIT PLANS
2 PAUL ROAD
RADNOR TOWNSHIP - DELAWARE COUNTY - PENNSYLVANIA

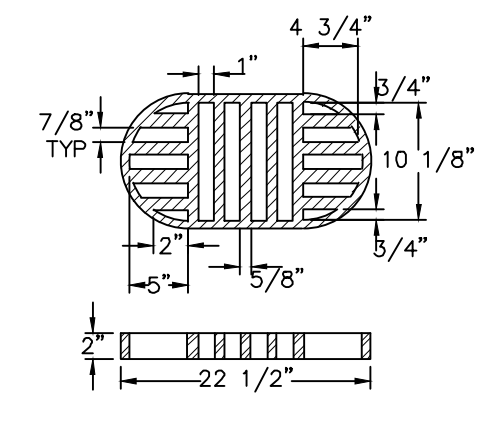
OWNER/APPLICANT
WILLIAM MARINO
2 PAUL ROAD
WAYNE, PA. 19087

ONE-CALL: 20182823716
DRAWN BY: PJH
CHECKED BY: WUN

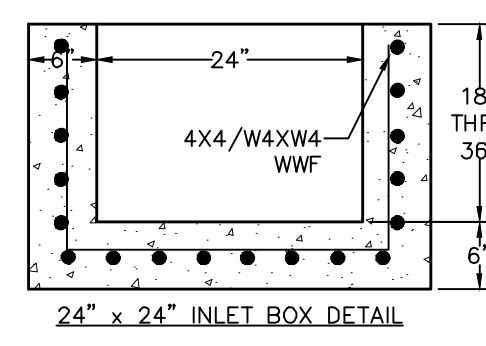
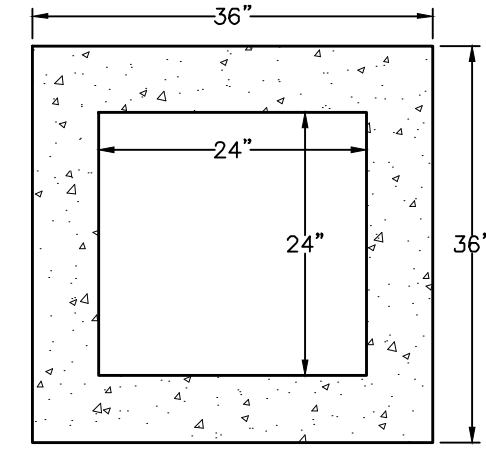
REV.	DATE	BY	COMMENTS
3	5/14/2021	PER TWP ENGINEER	
2	4/30/2021	FOR BOC MEETING	
1	4/7/2021	PER TWP ENGINEER & CLIENT	



LARGE PARK FRAME DETAIL



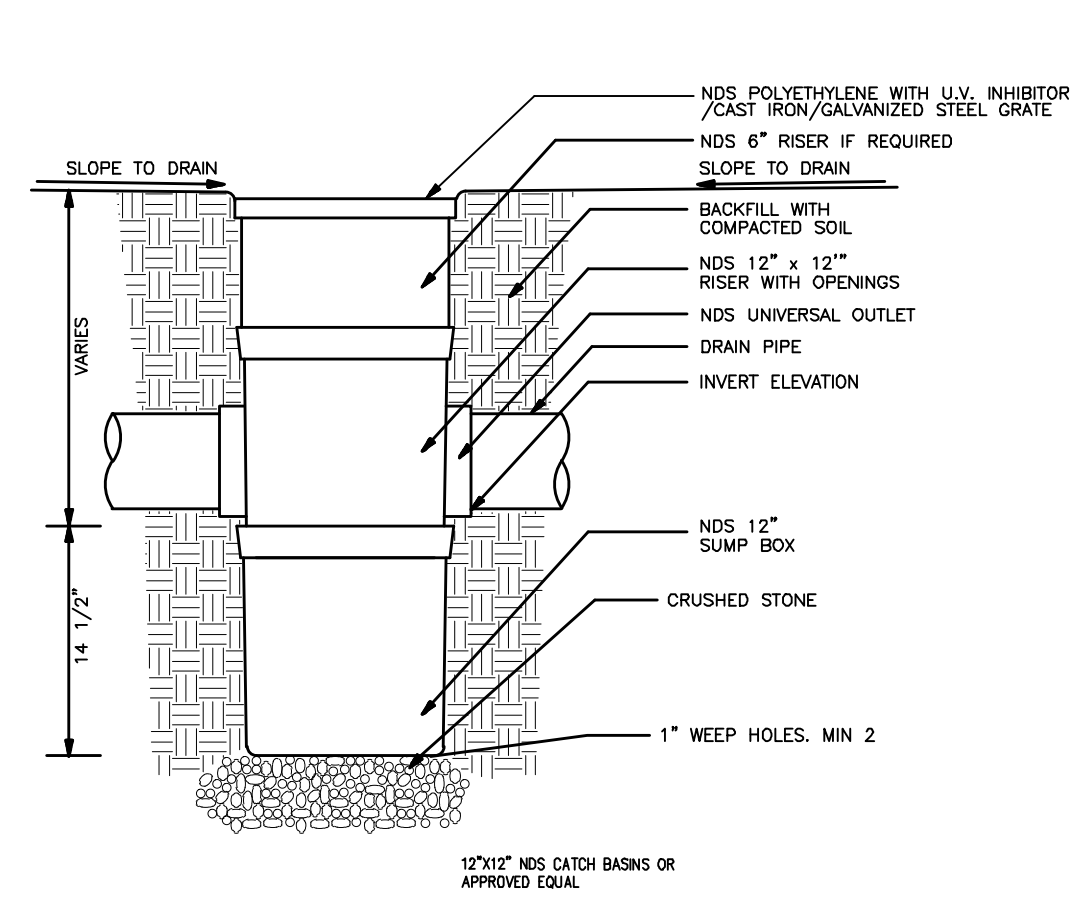
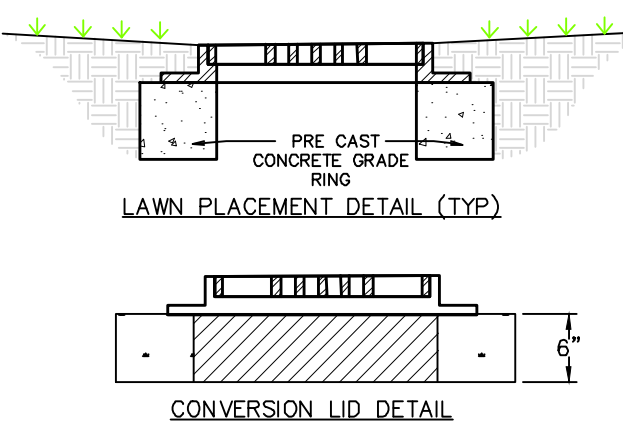
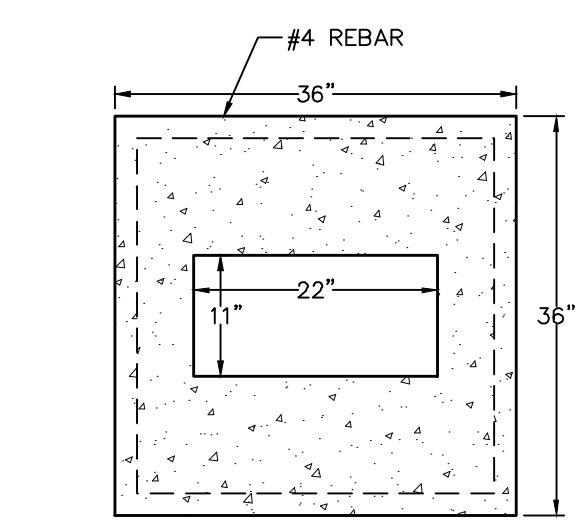
LARGE PARK GRATE DETAIL



SPECIFICATIONS
 -GRAY IRON MEETS OR EXCEEDS ASTM A48 CLASS 30 B
 -MINIMUM CONCRETE STRENGTH 2750 PSI @28 DAYS (PENNDOT CLASS AA)
 -1 1/2" MINIMUM CONCRETE COVER (ALL REINFORCEMENT)
 -STEEL REINFORCEMENT MEETS ASTM A615 (0.12 IN²/FT EACH WAY)
 -MATERIAL AND WORKMANSHIP IN ACCORDANCE WITH PENNDOT PUB. 40B
 -LOCATION OF PIPE OPENINGS AS REQUIRED

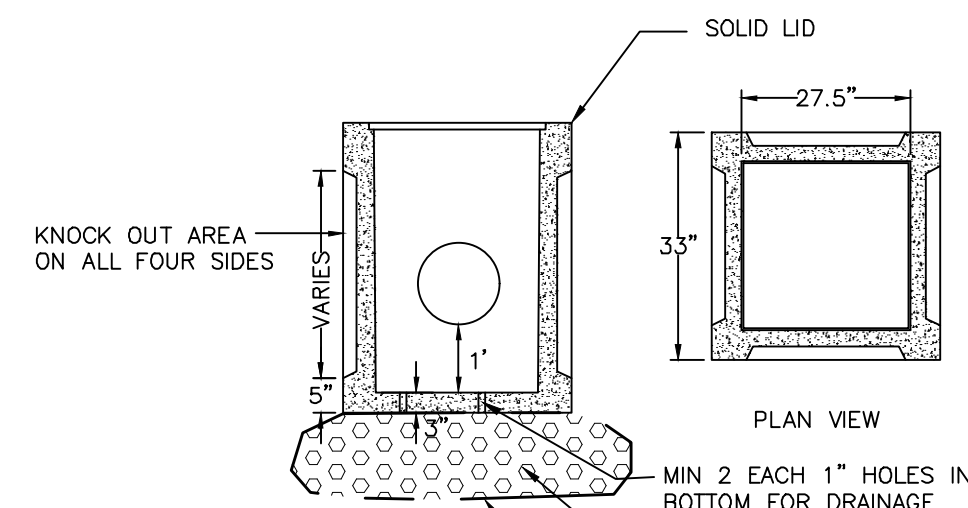
LARGE PARK INLET DETAIL

N.T.S.



1' x 1' SUMP BOX DETAIL

NOT TO SCALE
 FOR 1'x1' NDS #1 & 2 AND
 FOR 1'x1' NDS SUMP #1 & 2

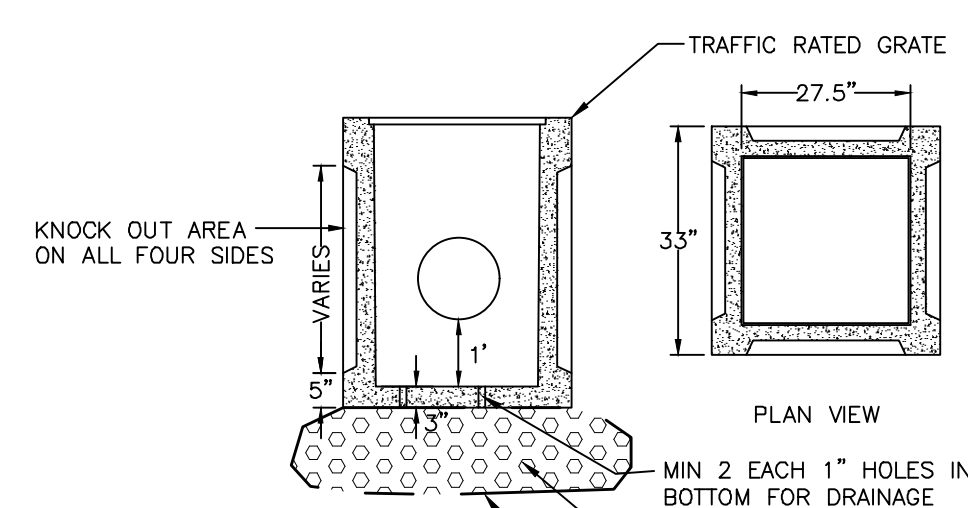


NOTE: PROVIDE MIN. 1" SUMP IN ALL INLETS

2' x 2' SUMP BOX

(NON-TRAFFIC BEARING)
 (FOR 2'x2' SUMPS #2 & 3)

Manufactured by
 MODERN CONCRETE SEPTIC TANK CO.
 or other NPCA certified plant

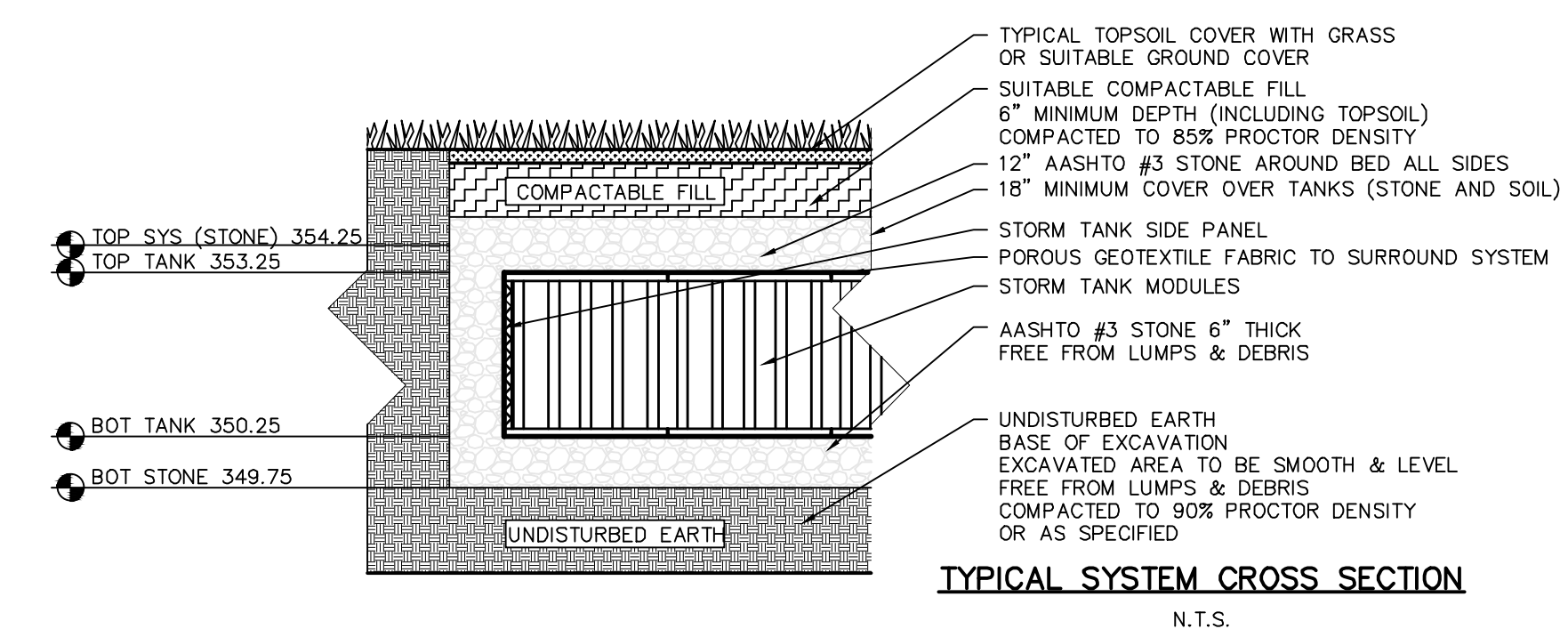


NOTE: PROVIDE MIN. 1" SUMP IN ALL INLETS

2' x 2' SUMP BOX

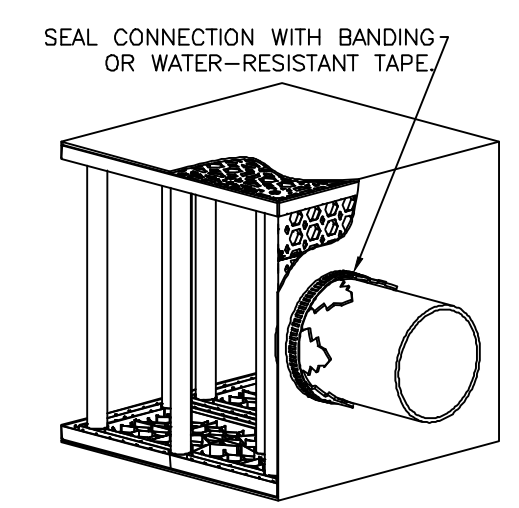
(TRAFFIC BEARING)
 (FOR 2'x2' INLET #2)

Manufactured by
 MODERN CONCRETE SEPTIC TANK CO.
 or other NPCA certified plant



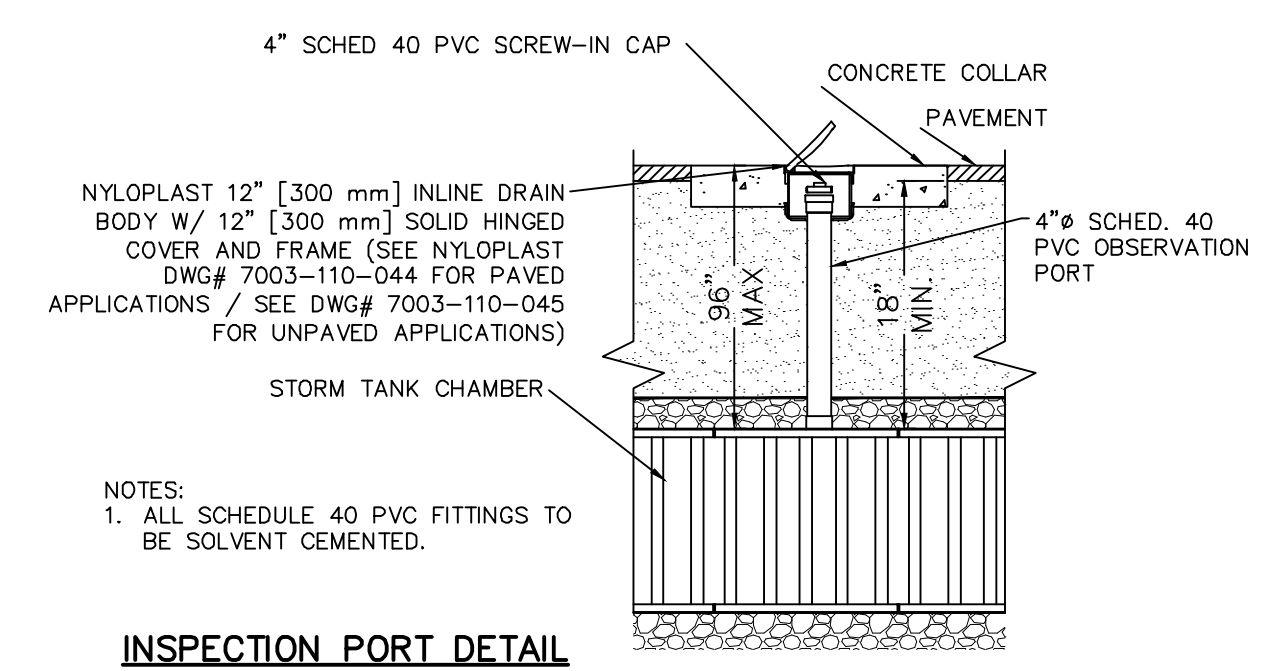
TYPICAL SYSTEM CROSS SECTION

N.T.S.



PIPE CONNECTION DETAIL

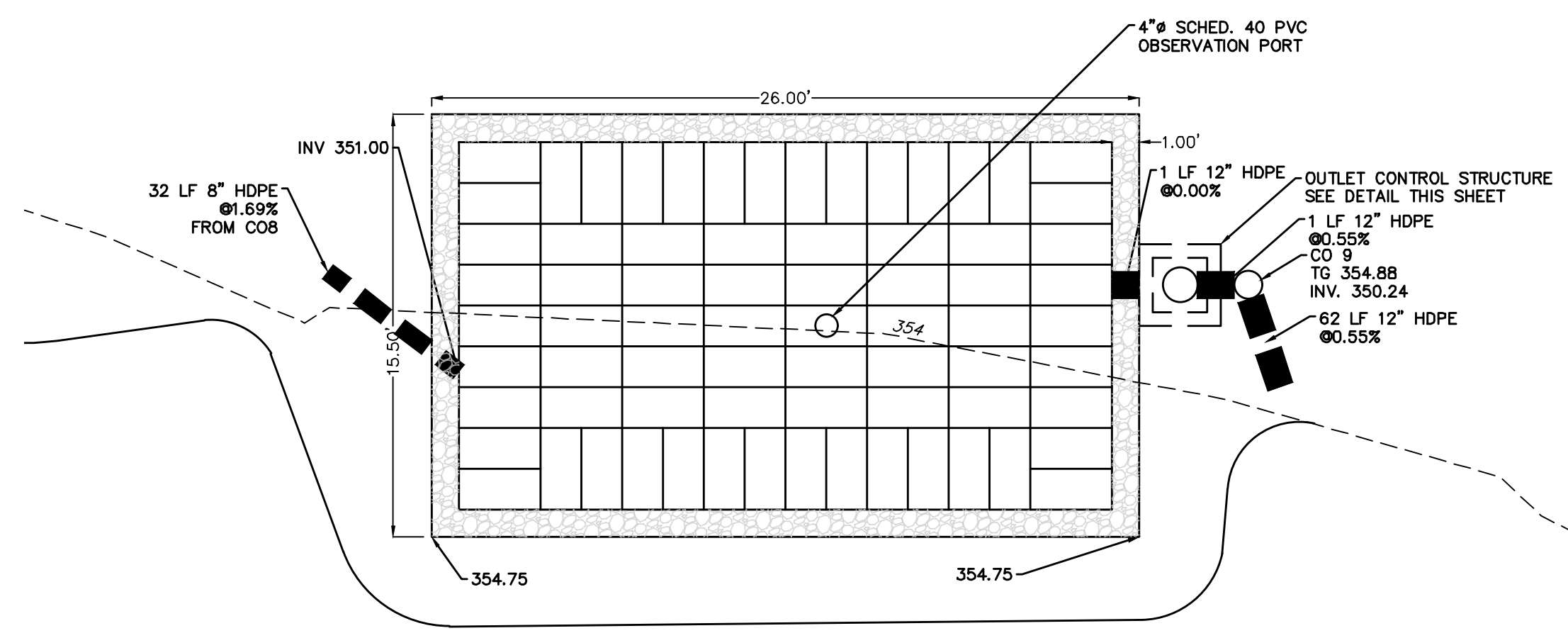
N.T.S.



INSPECTION PORT DETAIL

N.T.S.

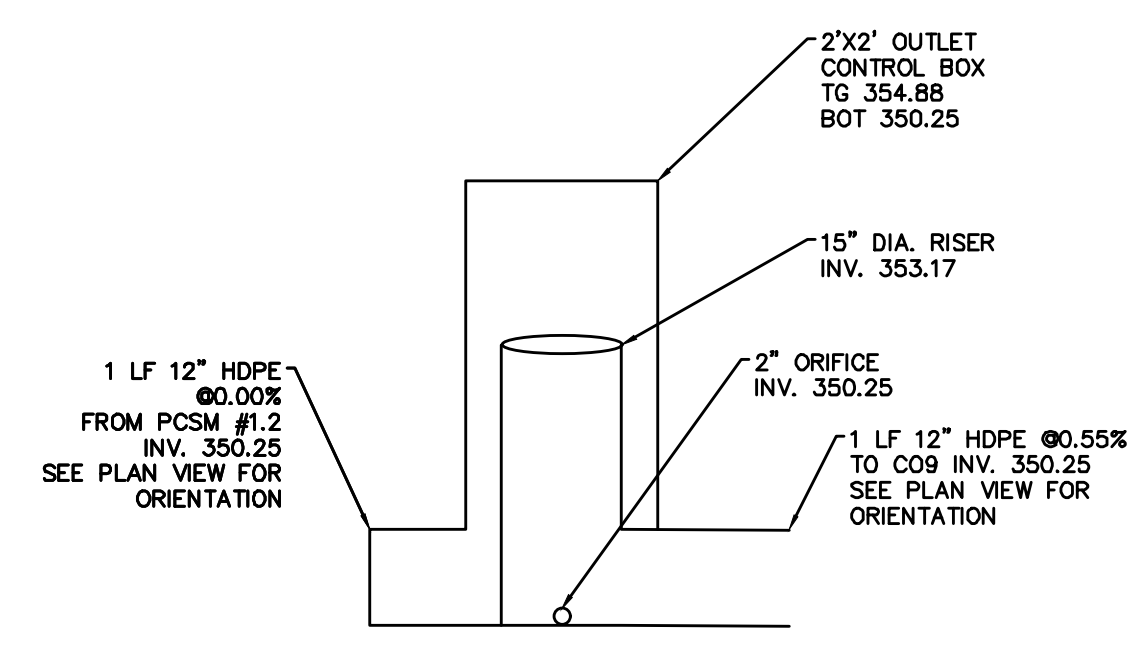
NOTES:
 1. ALL SCHEDULE 40 PVC FITTINGS TO BE SOLVENT CEMENTED.



PCSM #1.2 PLAN VIEW

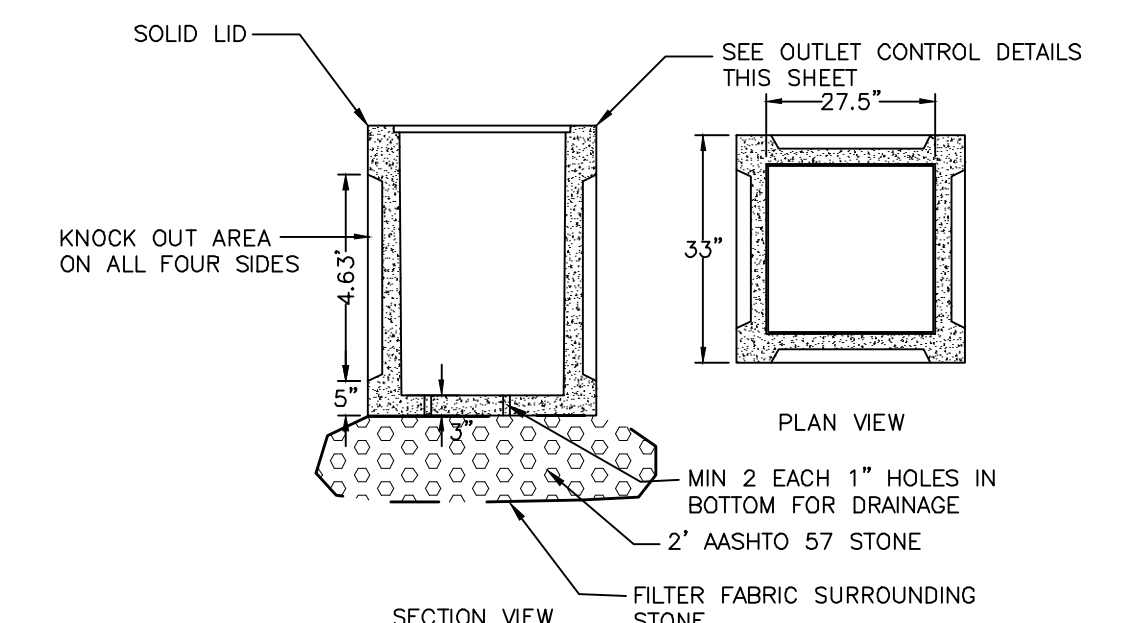
TOP STONE: 354.25
 TOP TANK: 353.25
 BOT TANK: 350.25
 BOT STONE: 349.75

1"=5'



OUTLET CONTROL STRUCTURE

1"=2'



2' x 2' OUTLET CONTROL BOX

(NON-TRAFFIC BEARING)
 (FOR OUTLET CONTROL STRUCTURE)

Manufactured by
 MODERN CONCRETE SEPTIC TANK CO.
 or other NPCA certified plant

NOTE: PROVIDE MIN. 1" SUMP IN ALL INLETS

CONTRACTOR: MIMOMENEE, INC. CONSULTING ENGINEER: PATRICK JOSEPH HANON, P.E. REGISTERED PROFESSIONAL ENGINEER IN PENNSYLVANIA. PROJECT: 2 PAUL ROAD, WAYNE, PA. 19087. SHEET: 20-209 OF 7. DATE: FEBRUARY 8, 2021. SCALE: AS NOTED.

Serial Number: CALL BEFORE YOU DIG! 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE STOP CALL. Pennsylvania One Call System, Inc. 1-800-242-1776

MIMOMENEE, INC.
 a Kairns Company
 ENGINEERING | PLANNING | SURVEYING

CONSTRUCTION NOTES & DETAILS-3
 GRADING PERMIT PLANS
2 PAUL ROAD
 RADNOR TOWNSHIP - DELAWARE COUNTY - PENNSYLVANIA
 OWNER/APPLICANT: WILLIAM MARINO
 2 PAUL ROAD
 WAYNE, PA. 19087
 ONE-CALL: 20182823716
 DRAWN BY: P.J.H.
 CHECKED BY: M.W.N.

REV.	DATE	DESCRIPTION
3	5/14/2021	PER TWP ENGINEER FOR BOC MEETING
2	4/29/2021	PER TWP ENGINEER & CLIENT
1	4/7/2021	REV. DATE

FILE NO.: 20-209
 SHEET 7 OF 7
 DATE: FEBRUARY 8, 2021
 SCALE: AS NOTED

RADNOR TOWNSHIP

ENGINEERING DEPARTMENT



Memorandum

To: Radnor Township Board of Commissioners

From: Stephen F. Norcini, PE, Township Engineer *Stephen F. Norcini*

CC: William M. White, Township Manager

Date: May 18, 2021

Re: 235 Pembroke Avenue - Stormwater Management Waiver Request

The infiltration requirements could not be met due to existing soil conditions. The applicant for 235 Pembroke avenue was before the Commissioners previously, and his waiver request was not granted.

The applicant is proposing to construct the following:

- 2,186 SF dwelling
- 618 SF driveway expansion
- 268 SF walks
- 323 SF patio

The plans have been revised to note the basin has been redesigned to control more impervious area.

Attached are the plans and Gannett Fleming review letters.



*Excellence Delivered **As Promised***

Date: May 18, 2021

To: Stephen Norcini, P.E. – Township Engineer

From: Roger Phillips, PE

RE: 235 Pembroke Ave – Stormwater Waiver Request
Grading Permit Application – GP App #202548

The applicant has submitted a grading permit for the construction of a 2,186 SF dwelling, 618 SF driveway expansion, 268 SF walks and a 323 SF patio. The applicant is requesting a waiver from §245-22 Groundwater Recharge in accordance with §245-22.A(2)(c)[2] of the Township's Stormwater Management Ordinance. The minimum infiltration requirement of 0.50 inches cannot be achieved. The applicant is also requesting a waiver from §245-23 Water Quality.

The applicant conducted one test pit on the site. Permeability testing was conducted at 12", 24", 36", and 48" and all failed with a permeability of 0. The applicant is proposing an underground detention basin to manage peak rates.

The applicant has requested to appear before the Board of Commissioners to request a waiver from the above-mentioned sections of the Ordinance and the implementation of the above-mentioned stormwater system.

Since the previous waiver request, the plans have been revised to address the concerns of the Board of Commissioners. The basin has been redesigned to control more disturbed area and to compensate for the remaining uncontrolled disturbed area. The proposed level spreader has been relocated further away from the driveway and two large trees to allow for better dispersion of discharge and to minimize disturbance to the root systems.

In addition to the waiver request, the applicant must address the following item(s) prior to the issuance of the Grading Permit:

1. The applicant must address all other outstanding grading permit review comments.

Gannett Fleming, Inc.

Valley Forge Corporate Center • 1010 Adams Avenue • Audubon, PA 19403-2402

t: 610.650.8101 • f: 610.650.8190

www.gannettfleming.com

Gannett Fleming

If you have any questions or require any additional information, please contact me.

Very truly yours,

GANNETT FLEMING, INC.

A handwritten signature in blue ink, consisting of a large, stylized 'R' followed by a horizontal line and a small flourish.

Roger A. Phillips, P.E.
Senior Project Manager



May 18, 2021

Mr. Steve Norcini
Radnor Township
301 Iven Ave.
Wayne, PA 19087

Re: 235 Pembroke Ave.
Stormwater infiltration
Waiver request for revised stormwater design.

Dear Mr. Norcini,

I am writing on behalf of Pembroke Holdings LLC concerning the proposed construction of a new single-family home at 235 Pembroke Ave. Infiltration tests conducted by Delaware Valley Septics, Inc. for the proposed stormwater system revealed soil conditions that are unsuitable for recharge. Tests on the property yielded an infiltration rate of 0 in./hr. Possible locations for the basin are limited. The applicant is requesting waivers from the provisions of Section 245-22(A)(2)(c)[2] requiring a minimum of 0.50 inches of infiltration, and section 245-23(D) requiring treatment of a volume of water for water quality. The applicant proposes the installation of an underground detention basin to meet the requirements for rate control.

The basin has been re-designed from the most recent configuration to control more disturbed area and to compensate for the remaining uncontrolled disturbed area. The spreader has been moved further away from the road and driveway to allow for better dispersion of the discharge. The basin has been moved further away from the two large trees on the west side to minimize the disturbance to the root systems. The post construction discharges have been reduced to levels below the pre-development levels for all storms, but very significantly for the 1-yr. through 25-year storms. The impact on the surrounding area will be much less than the current condition.

Please call or email if you have any questions.

Sincerely,

Robert K. Wager, P.E.

Impervious Surface

Complete the impervious surface table (required).

Location: 235 PEMBROKE AVE

Project Description: NEW HOUSE

Gross Lot Area 18,215 Sq. Ft.

To be Completed by Radnor Township

Permit Number: _____

Submission Date: _____

Shade Tree Approval Date: _____

Final Approval Date: _____

Zoning Approval: _____

Zoning Officer _____

Grading Permit Approval: _____

Township Engineer _____

Complete All Yellow Fields

Cover Type	Existing Area (square feet)	Percentage of existing impervious surface area of your lot	Area of Impervious Removed (square feet)	Area of Added Impervious Cover (square feet)	Total Area (square feet)	Percentage of total impervious surface of your lot, as proposed
Building	743		743	2186	2186	
Walkway/sidewalk	152		152	268	268	
Patios, decks				323	323	
Driveway	2042		1780	618	880	
Other	23		23			
Total	2960	16.25%	2698	3395	3657	20.08 %

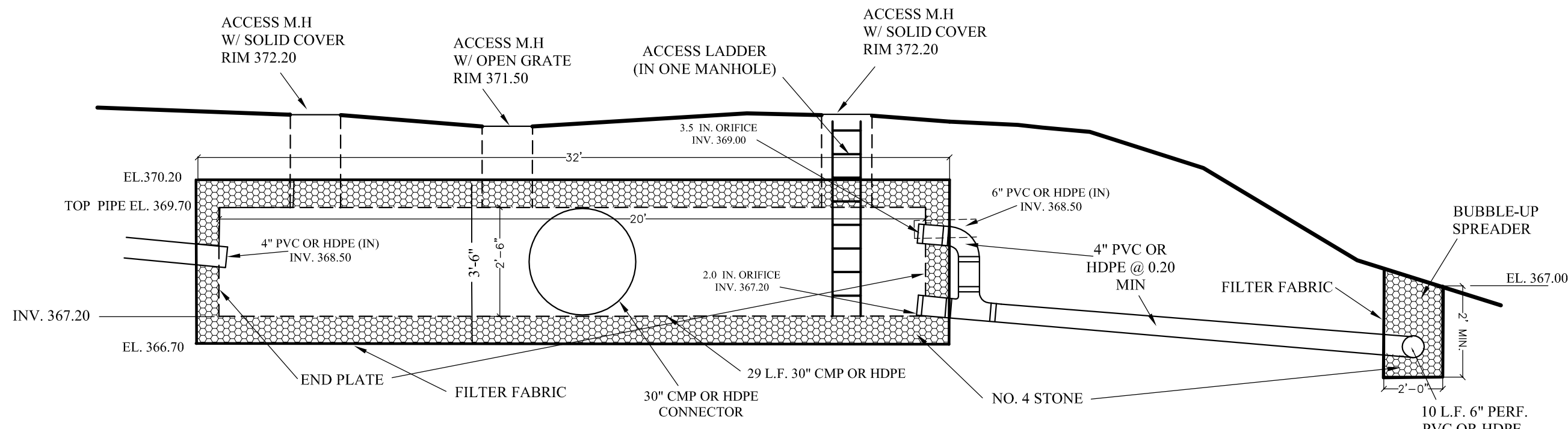
Estimated Cubic Yards of Dirt Involved 900 Will this fill be taken off site Yes No

Number of trees to be removed (over 6" in diameter) 5 Is Property in Historical District Yes No

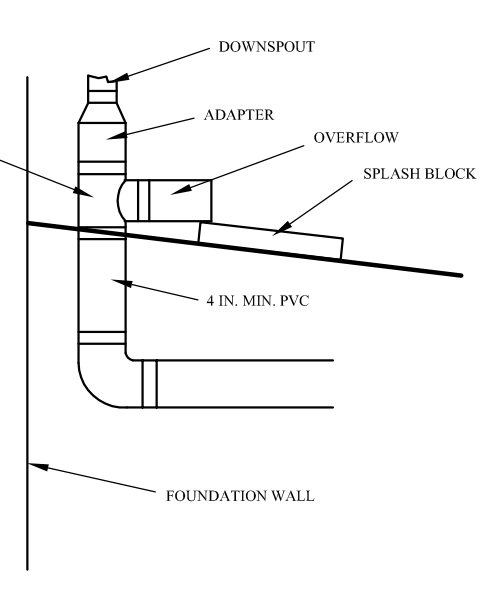
Place a check in the box of the Zoning District applicable to your lot. (required)

Zoning Table

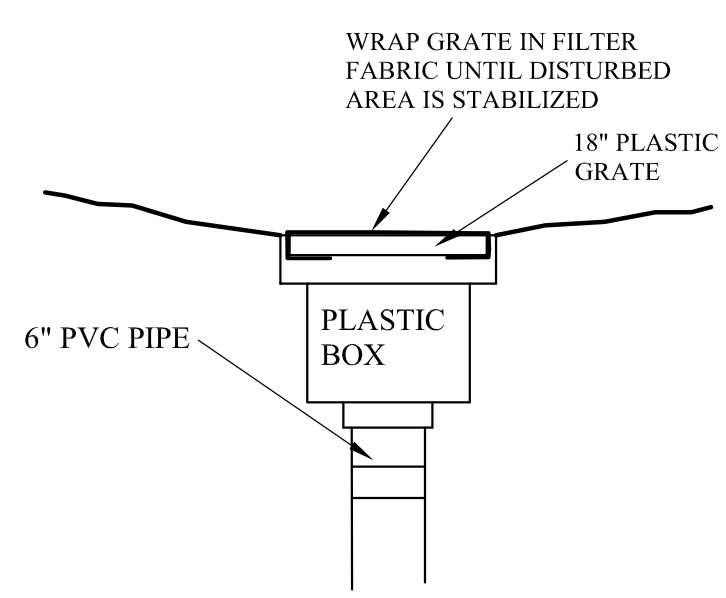
Zoning District	Maximum Impervious Cover (%)		Zoning District	Maximum Impervious Cover (%)		Zoning District	Maximum Impervious Cover (%)
R-1	22		CO 2,3 stories	50		GH_CR	95
R-2	30	<input checked="" type="checkbox"/>	C1	60		GH-BC	50
R-3	35		C-2	70		GH-OS	15
R-4	40		C-3	65		WBOD	NA
R-5 Semi/2 family detached	40		PI	45		PB	55
R-5 Multi Dwelling	36		PA	50		PLO	55
R-6	70		GH-N	60		FC	NA
R-IA	30		GH-GA	80		PLU	45



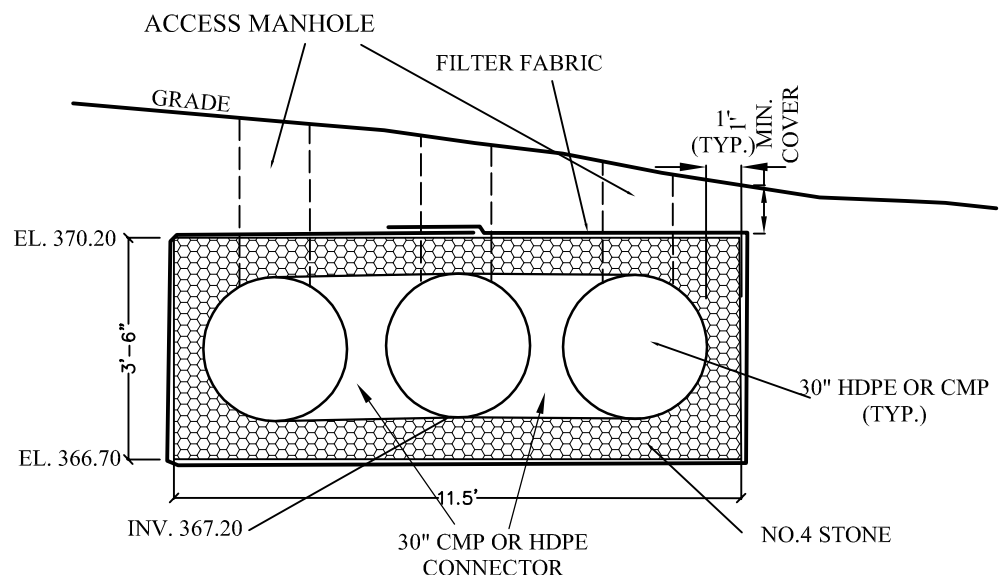
SEEPAGE BED LONGITUDINAL SECTION
N.T.S.



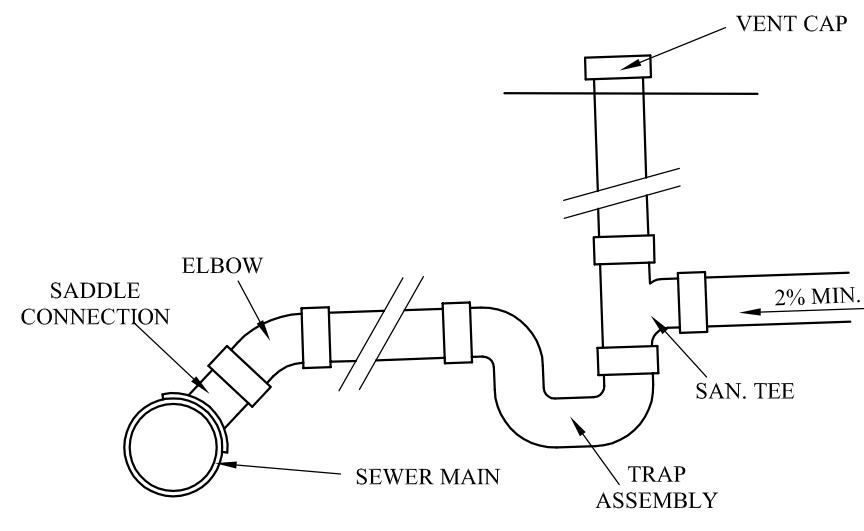
DOWNSPOUT DETAIL
NO SCALE



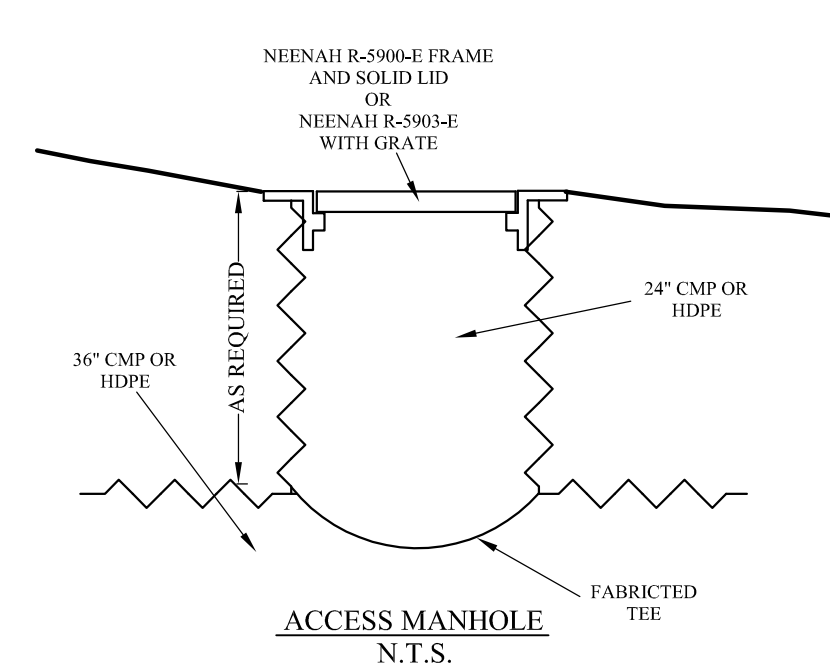
18" YARD DRAIN DETAIL
NO SCALE



SEEPAGE BED X-SECTION
N.T.S.



SAN. LATERAL CONNECTION
NO SCALE



ACCESS MANHOLE
N.T.S.

LEGEND

EXIST. CONTOUR	
PROP. CONTOUR	
EXIST. TREE TO BE REMOVED	
SILT FENCE	
TREE PROTECTION FENCE	
UTILITIES	
PROP. STORM DRAINS	
CONSTRUCTION ENTRANCE TIRE CLEANER	
PROPERTY LINES	
STEEP SLOPES 14% TO 20%	
STEEP SLOPES OVER 20%	
LIMIT OF DISTURBANCE	

CONSTRUCTION STAGING

- EROSION AND SEDIMENT CONTROLS MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE GENERAL SITE DISTURBANCE MAY BEGIN. ONLY LIMITED DISTURBANCE WILL BE PERMITTED FOR THE CONSTRUCTION OF THE SEDIMENT CONTROL FACILITIES. CONSTRUCTION PROCEDURES AND STAGING MUST BE ADHERED TO CAREFULLY TO MINIMIZE THE TIME THAT SOIL IS EXPOSED TO EROSION. CONSTRUCTION IS TO BE STAGED AS FOLLOWS:
1. PLACE SEDIMENT CONTROL BARRIERS IMMEDIATELY DOWNHILL OF EARTHMOVING ACTIVITIES.
 2. CLEAR AND GRUB CONSTRUCTION AREA, REMOVING THE MINIMUM AMOUNT OF VEGETATION NECESSARY FOR CONSTRUCTION.
 3. STRIP AND STOCKPILE TOPSOIL FROM CONSTRUCTION AREA.
 4. THE TOPSOIL STOCKPILE SHALL BE TEMPORARILY SEEDED WITH ANNUAL RYE GRASS AT A RATE OF 4 LBS. PER 1000 SQ. FT.
 5. DE-ACTIVATE EXISTING UTILITIES.
 6. DEMOLISH EXISTING BUILDINGS AND A PORTION OF DRIVE. REMOVE DEBRIS FROM SITE.
 7. EXCAVATE FOR FOUNDATION.
 8. CONSTRUCT BUILDING.
 9. INSTALL PIPING AND UTILITIES. WRAP INLET GRATE IN FILTER FABRIC.
 10. GRADE AND STONE NEW PORTION OF DRIVEWAY.
 11. PAVE NEW DRIVEWAY AND RESURFACE REMAINING PORTION OF EXISTING DRIVE.
 12. CONSTRUCT RAIN GARDEN.
 13. SPREAD TOPSOIL AND FINISH GRADE.
 14. REMOVE EXISTING DRIVEWAY.
 15. SEED AND MULCH DISTURBED AREAS IN ACCORDANCE WITH PADOT FORMULA B.
 16. REMOVE EROSION AND SEDIMENTATION CONTROLS AND STABILIZE ANY REMAINING DISTURBED AREAS.

GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL LEGAL AND SAFETY REQUIREMENTS GOVERNING THE WORK SHOWN.
2. THE CONTRACTOR MUST VERIFY THE LOCATIONS AND DEPTHS OF ALL UNDERGROUND FACILITIES BEFORE THE START OF WORK.
3. GEOTEXTILE FILTER FABRIC SEDIMENT CONTROL BARRIERS SHALL BE PLACED AS DIRECTED BY THE ENGINEER.
4. DISTURBED AREAS THAT WILL REMAIN EXPOSED FOR MORE THAN 20 DAYS SHALL BE MULCHED AND SEEDED.
5. ALL ROOF DRAINS ARE TO BE TIED TO BASIN.
6. ALL TREES WITHIN 10 FEET OF THE PROPERTY LINE HAVE BEEN LOCATED.
7. ALL TREE ROOTS DISTURBED DURING CONSTRUCTION ACTIVITIES SHALL BE CUT CLEANLY.
8. NO TIRE CLEANER IS PROPOSED. THE EXISTING DRIVEWAY WILL BE USED AS THE CONSTRUCTION ENTRANCE. THE TIRES OF CONSTRUCTION VEHICLES WILL BE WASHED BEFORE ENTERING PUBLIC ROADS. IF THE EXISTING DRIVEWAY IS INSUFFICIENT IN PREVENTING SEDIMENT FROM LEAVING THE SITE, THEN IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL A CONSTRUCTION ENTRANCE.

SEEDING SPECIFICATIONS

PERMANENT SEEDING	
60% KENTUCKY BLUEGRASS	
30% RED FESCUE	
10% PERENNIAL RYE GRASS	260 LB./AC.
FERTILIZER	
10-20-20	1000 LB./AC.
LIME	2 TONS/AC.
MULCH	
HAY OR STRAW	3 TONS/AC.
TEMPORARY SEEDING	
ANNUAL RYEGRASS	40 LB./AC.
FERTILIZER	
5-5-5	1000 LB./AC.
MULCH	
HAY OR STRAW	3 TONS/AC.

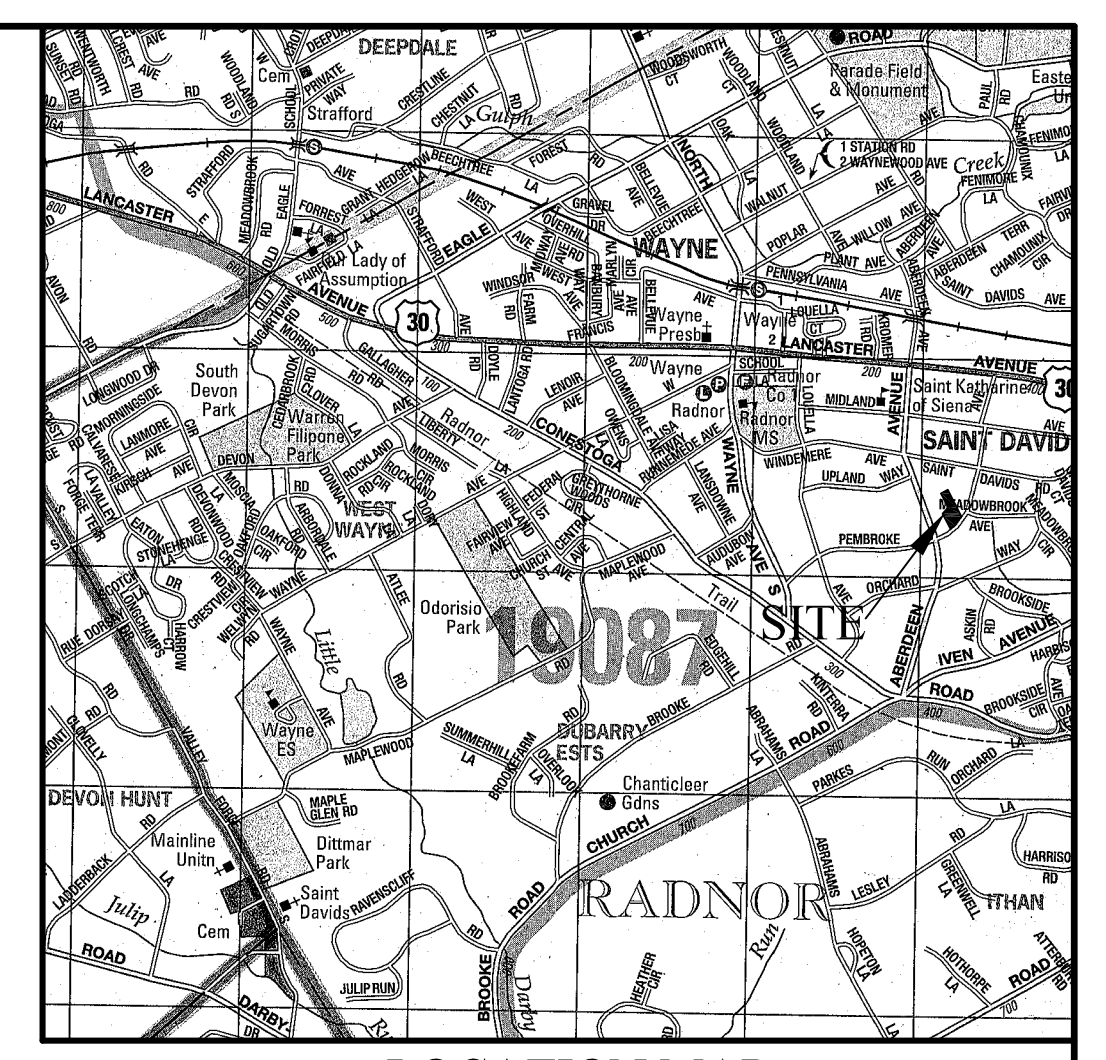
IF THE APPLICANT HAS REQUESTED A WAIVER FROM THE REQUIREMENTS OF CHAPTER 245-22.A.(2), GROUND WATER RE-CHARGE AND CHAPTER 245-23.D, WATER QUALITY REQUIREMENTS.

I, _____, THE APPLICANT, DO HEREBY ACKNOWLEDGE THAT ANY REVISION TO THE APPROVED DRAINAGE PLAN MUST BE APPROVED BY THE RADNOR TOWNSHIP.

DATE _____

I, ROBERT K. WAGER, P.E., ON THIS DATE, HEREBY CERTIFY THAT THE DRAINAGE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE RADNOR TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

DATE 5/03/21



LOCATION MAP
1" = 2000'

LOT AREA: 18,215 S.F.

ZONING REGULATIONS

R-2 ZONING DISTRICT	
LOT AREA	20,000 S.F. MIN.
LOT FRONTAGE	100 FT. MIN.
BLDG. AREA	18% MAX.
FRONT YARD	40 FT. MIN.
SIDE YARD	20 FT. MIN., 45 FT. AGG.
REAR YARD	40 FT. MIN.
IMPERVIOUS COVER	30% MAX.
BLDG. HEIGHT	35 FT. MAX.

IMPERVIOUS COVER

EXISTING	
GARAGE	743 S.F.
DRIVE	2042 S.F.
WALKS	152 S.F.
WALKS	23 S.F.
TOTAL IMPERVIOUS	2960 S.F. (16.25%)
TOTAL BLDG. AREA	743 S.F. (4.08%)

IMPERVIOUS COVER

PROPOSED	
HOUSE	2186 S.F.
DRIVE	880 S.F.
PATIO	323 S.F.
WALK	268 S.F.
TOTAL IMPERVIOUS COVER:	3657 S.F. (20.08%)
TOTAL BLDG. COVERAGE:	2186 S.F. (12.00%)

NOTE: THE RAINGARDEN WAS DESIGNED FOR 800 S.F. OF FUTURE IMPERVIOUS. ALL FUTURE IMPERVIOUS COVER SHALL HAVE RUNOFF PIPED DIRECTLY TO THE RAIN GARDEN AND WILL REQUIRE A GRADING PERMIT.

SOILS:

M4 - MADE LAND, GABBRO AND DIABASE MATERIALS
HYDROLOGIC GROUP C

NOTE:

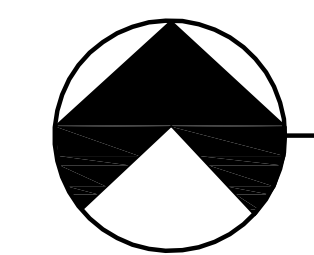
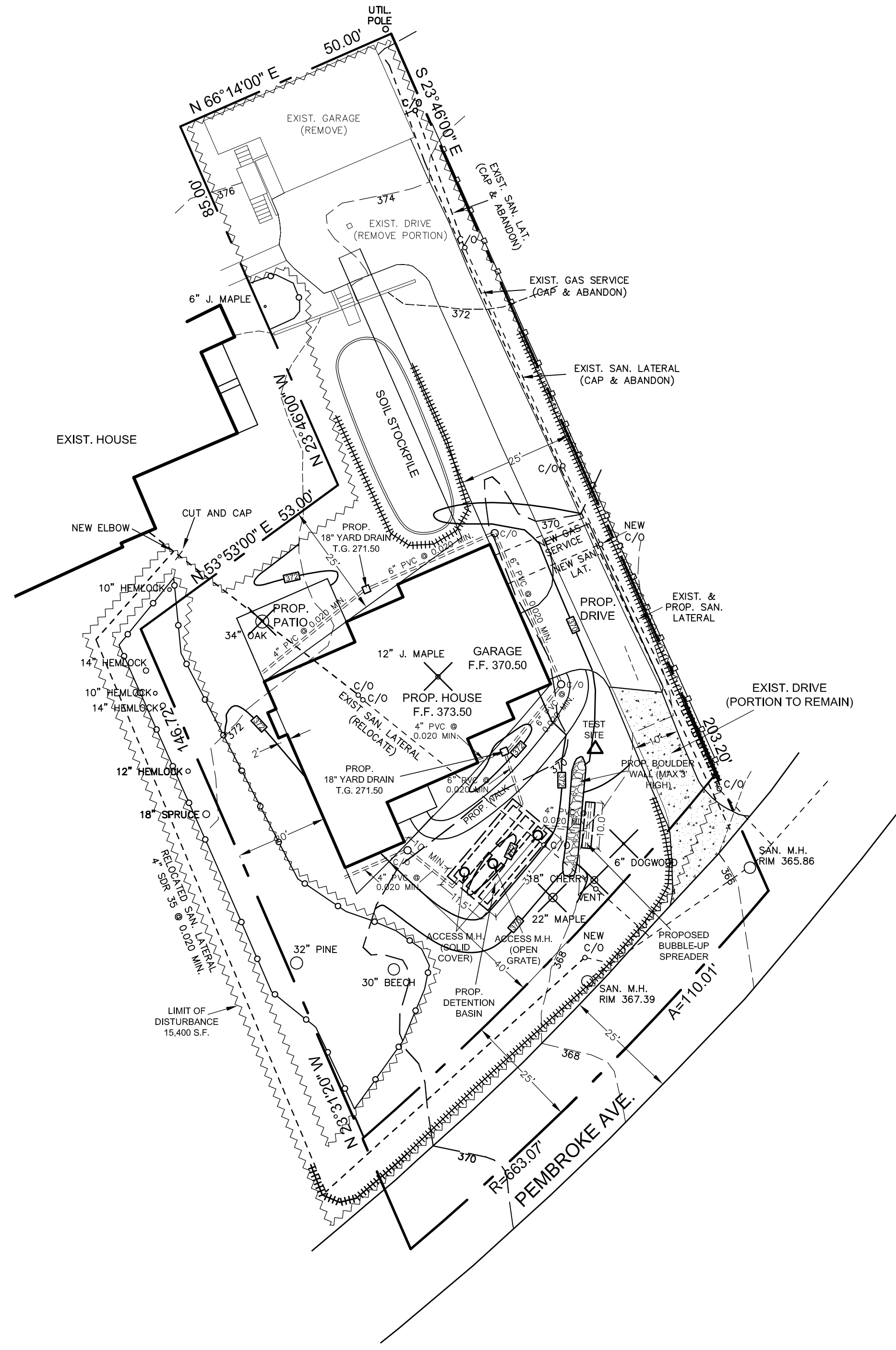
5 TREES ARE TO BE REMOVED

OWNER:

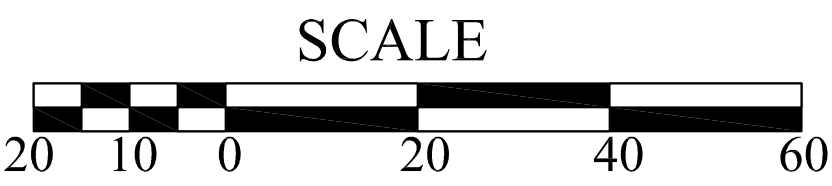
PEMBROKE HOLDINGS LLC
623 CONESTOGA RD.
VILLANOVA, PA 19085

NOTES:

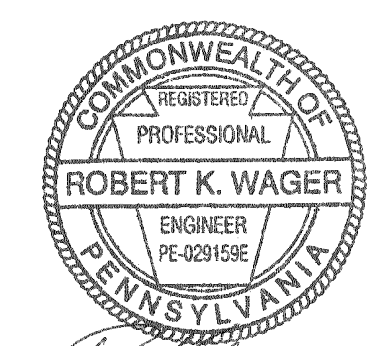
PHYSICAL FEATURES FROM FIELD SURVEY BY RWK ENGINEERING SERVICES, INC., JAN., 2021.

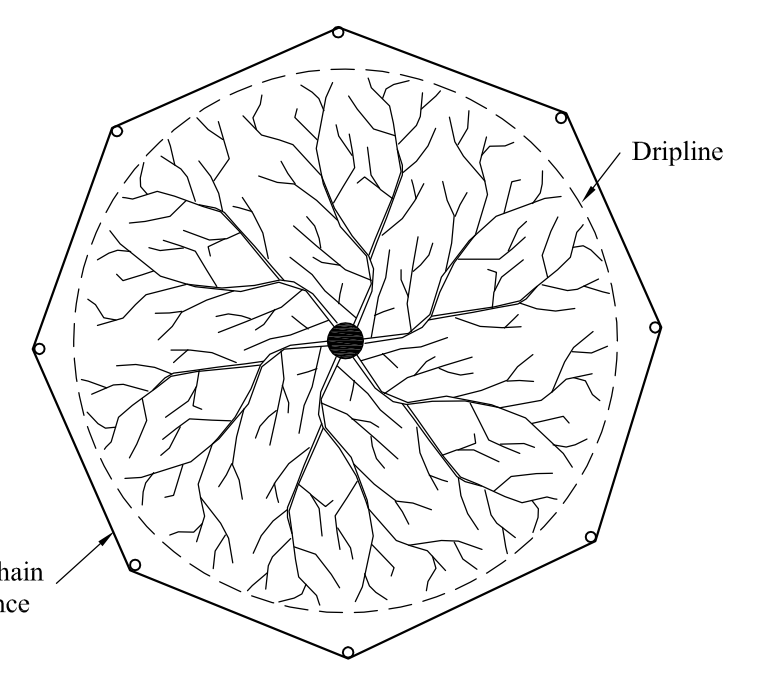
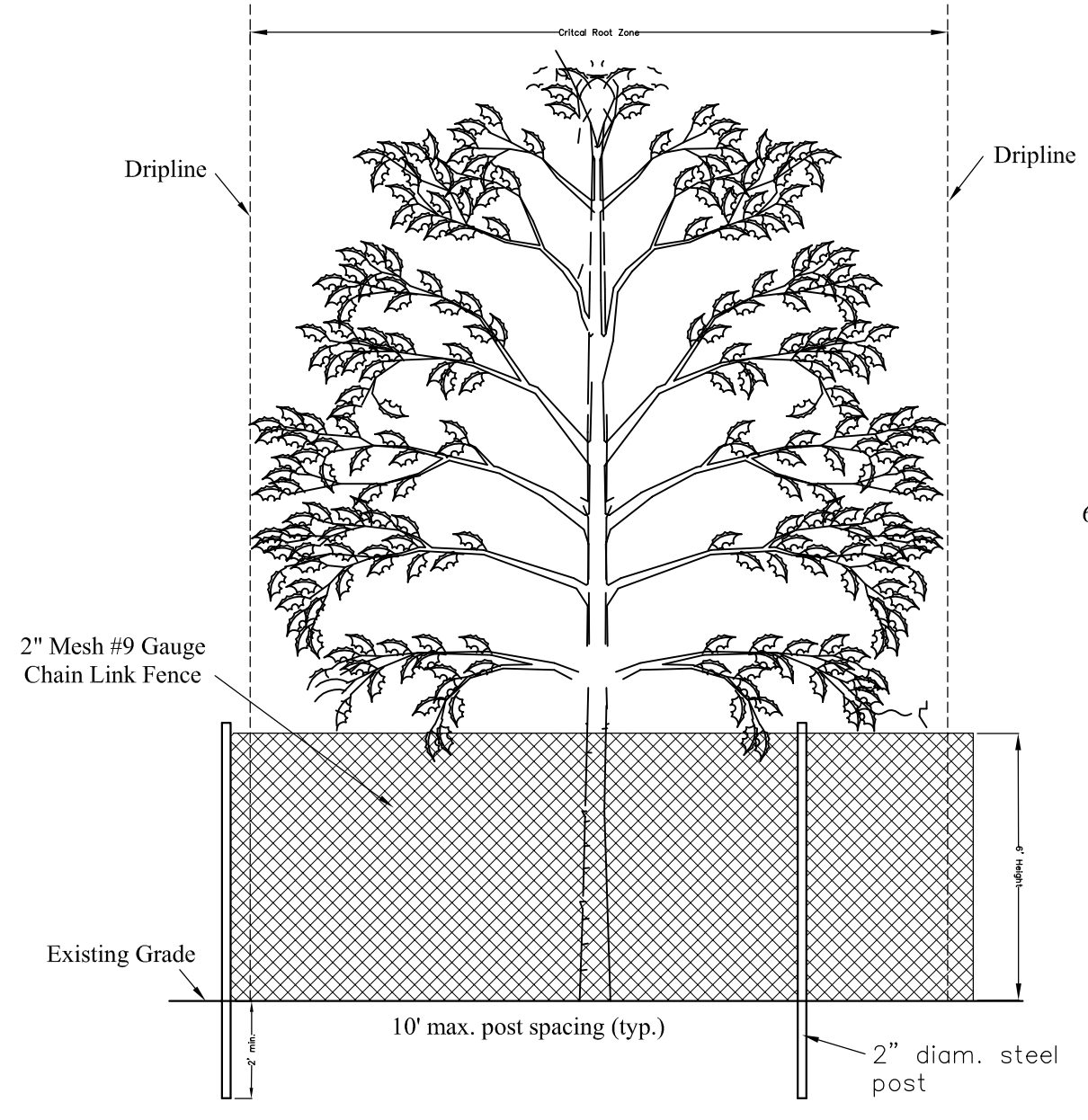


SITE PLAN



REVISED STORMWATER SYSTEM	5-03-21
REVISED STORMWATER SYSTEM	4-07-21
REVISED AS PER REVIEW OF 2-05-21	3-02-21
REVISIONS	
ROBKW	ROBERT K. WAGER, P.E.
ENGINEERING SERVICES	1610 PELHAM AVENUE HAVERTOWN, PA 19083 (610) 642-0961
GRADING PLAN	
235 PEMBROKE AVENUE RADNOR TOWNSHIP	
DELAWARE COUNTY	PENNSYLVANIA
DATE: 1/11/21	SCALE: 1"=20'-0"
DRAWN BY: RWK	PROJ. NO.: 20076





PLAN VIEW

TREE PROTECTION SPECIFICATIONS

- I. A 4" layer of coarse mulch or woodchips is to be placed beneath the dripline of the protected trees. Mulch is to be kept 12" from the trunk.
- II. A protective barrier of 6" chain link fencing shall be installed around the dripline of protected tree(s). The fencing can be moved within the dripline if authorized by the Consulting Arborist, but not closer than 2" from the trunk of any tree. Fence posts shall be 2" in diameter and are to be driven 2' into the ground. The distance between posts shall not be more than 10'. This enclosed area is the Tree Protection Zone (TPZ).
- III. Movable barriers of chain link fencing secured to cement blocks can be substituted for fixed fencing if the Consulting Arborist agrees that the fencing will have to be moved to accommodate certain phases of construction. The builder may not move the fence without authorization from the Consulting Arborist.
- IV. Where the Consulting Arborist has determined that tree protection fencing will interfere with the safety of work crews, tree wrap may be used as an alternative form of tree protection. Wooden slats at least one inch thick are to be bound securely, edge to edge, around the trunk. A single layer or more of orange plastic construction fencing is to be wrapped and secured around the outside of the wooden slats. Major scaffold limbs may require protection as determined by the Consulting Arborist. Straw waddle may also be used as trunk wrap by coiling waddle around the trunk up to a minimum height of six feet from grade. A single layer or more of orange plastic construction fencing is to be wrapped and secured around the straw waddle.

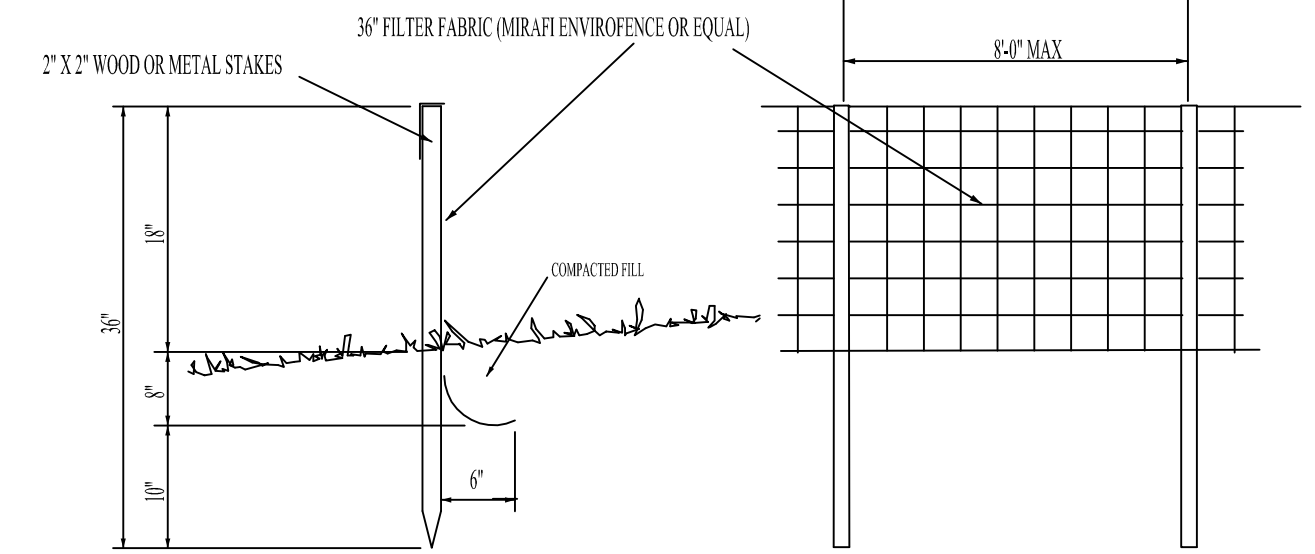
- DO NOT:
- A. Allow runoff of spillage of damaging materials into the area below any tree canopy.
 - B. Store materials, stockpile soil, or park or drive vehicles within the TPZ.
 - C. Cut, break skin or bruise roots, branches or trunks without first obtaining authorization from the Consulting Arborist.
 - D. Allow fires under and adjacent to trees.
 - E. Discharge exhaust into foliage.
 - F. Secure cable, chain or rope to trees or shrubs.
 - G. Trench, dig, or otherwise excavate within the dripline or TPZ of the tree(s) without first obtaining authorization from the Consulting Arborist.
 - H. Apply soil sterilants under pavement near existing trees.

TREE PROTECTION DETAIL
N.T.S.

STANDARD EROSION AND SEDIMENT CONTROL PLAN NOTES

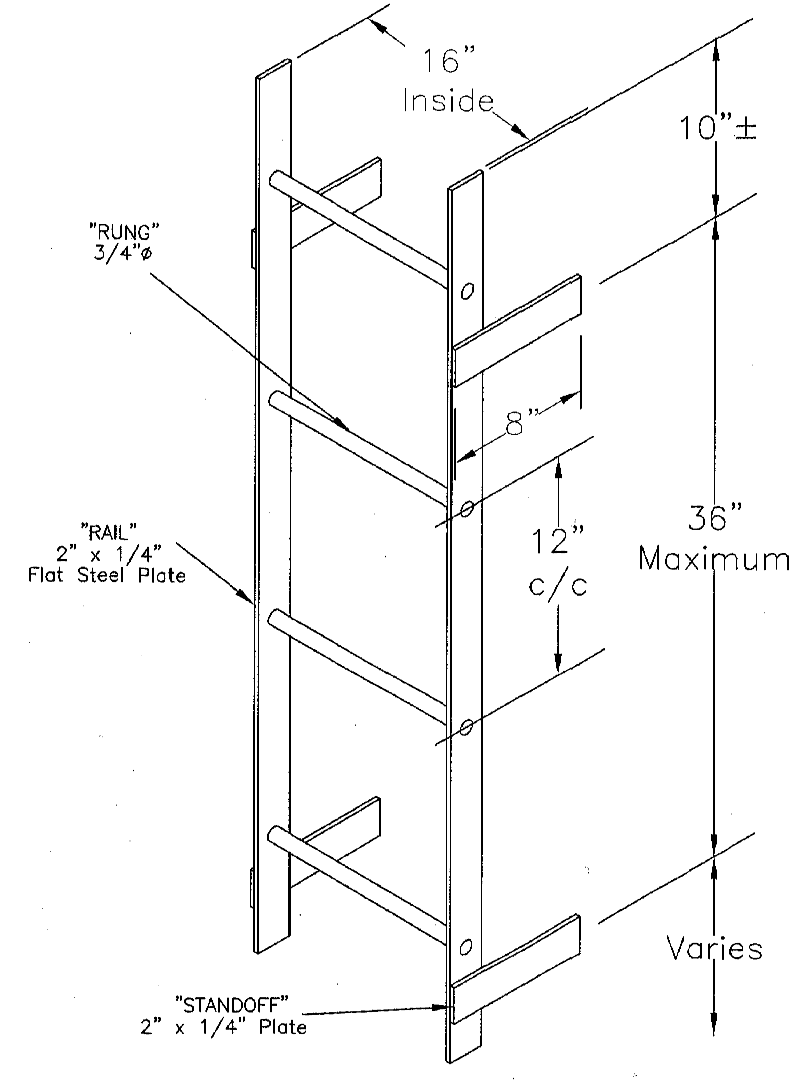
1. Vehicles and equipment may not enter public roads without having the tires cleaned or washed.
2. Stockpile heights must not exceed 35 feet. Stockpile slopes must be 2:1 or flatter.
3. The operator shall assure that the approved erosion and sediment control plan is properly and completely implemented.
4. Until the site achieves final stabilization, the operator shall assure that the best management practices are implemented, operated, and maintained properly and completely. Maintenance shall include inspections of all best management practice facilities. The operator shall maintain and make available to local Conservation District complete, written inspection logs of all those inspections. All maintenance work, including cleaning, repair, replacement, regrading, and restabilization shall be performed immediately.
5. 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 potential for accelerated erosion and/or sediment pollution.
6. Before initiating any revisions to the approved erosion and sediment control plan or revisions to other plans which may affect the effectiveness of the approved E&S control plan, the operator must receive approval of the revisions from the local Conservation District.
7. The operator shall assure that an erosion and sediment control plan has been prepared, approved by the local Conservation District, and is being implemented and maintained for all soil and/or rock spoil and borrow areas, regardless of their locations.
8. All pumping of sediment laden water shall be through a sediment control BMP, such as a pumped water filter bag discharging over non-disturbed areas.
9. The operator is advised to become thoroughly familiar with the provisions of the Appendix 64, Erosion Control Rules and Regulations, Title 25, Part 1, Department of Environmental Protection, Subpart C, Protection of Natural Resources, Article III, Water Resources, Chapter 102, Erosion Control.
10. A copy of the approved erosion and sediment control plan must be available at the project site at all times.
11. The E&S control plan mapping must display a PA ONE CALL SYSTEM INCORPORATED symbol including the site identification number. (This is a numbered symbol not a note.)
12. Erosion and sediment BMP's must be constructed, stabilized, and functional before site disturbance begins within the tributary areas of those BMP's.
13. After final site stabilization has been achieved, temporary erosion and sediment BMP controls must be removed. Areas disturbed during removal of the BMP's must be stabilized immediately.

14. At least 7 days before starting any earth disturbance activities, the operator shall invite all contractors involved in those activities, the landowner, all appropriate municipal officials, the erosion and sediment control plan preparer, and the local Conservation District to an on-site meeting. Also, 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 for buried utilities locations.
15. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE OF CONSTRUCTION. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.
16. Immediately after earth disturbance activities cease, the operator shall stabilize any areas disturbed by the activities. During non-germinating periods, mulch must be applied at the specified rates. Disturbed areas which are not at finished grade and which will be redisturbed within 1 year must be stabilized in accordance with the permanent vegetative stabilization specifications.
17. An area shall be considered to have achieved final stabilization when it has a minimum uniform 70% perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion and subsurface characteristics sufficient to resist sliding and other movements.
18. Hay or straw mulch must be applied at 3.0 tons per acre.
19. Mulch with mulch control netting or erosion control blankets must be installed on all slopes 3:1 and steeper.
20. Straw mulch shall be applied in long strands, not chopped or finely broken.
21. Until the site is stabilized, all erosion and sediment BMP's must be maintained properly. Maintenance must include inspections of all erosion and sediment control BMPs after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair, replacement, regrading, reseeding, remulching, and renetting, must be performed immediately. If erosion and sediment control BMPs fail to perform as expected, replacement BMPs, or modifications of those installed will be required.
22. Sediment removed from BMPs shall be disposed of in landscaped areas outside of steep slopes, wetlands, floodplains or drainage swales and immediately stabilized, or placed in topsoil stockpiles.
23. The operator shall remove from the site, recycle, or dispose of all building materials and waste in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et seq., 271.1 et seq., and 287.1 et seq. The contractor shall not illegally bury, dump, or discharge any building material or waste at the site.



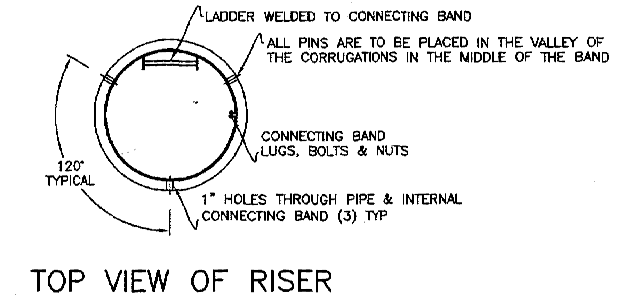
- 1) SILT FENCE MUST BE INSTALLED PARALLEL TO CONTOURS OR CONSTRUCTED LEVEL.
- 2) SEDIMENT MUST BE REMOVED WHERE ACCUMULATIONS REACH 1/2 OF THE ABOVE GROUND HEIGHT OF THE SILT FENCE.
- 3) ANY SILT FENCE THAT HAS BEEN TIPPED OR UNDERMINED MUST BE REPLACED WITH A ROCK FILTER OUTLET IMMEDIATELY.
- 4) ACCUMULATED SEDIMENT WILL BE REMOVED, SPREAD AND STABILIZED ON SITE.

SILT FENCE DETAIL
NO SCALE

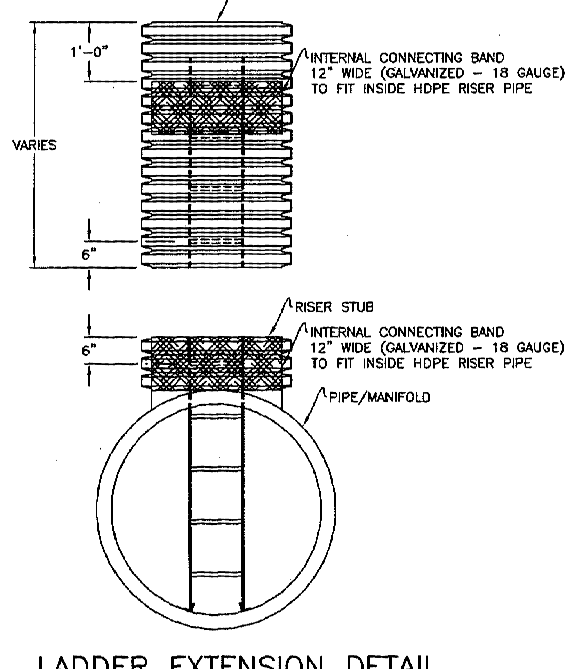


1. 3/4" rungs are to be welded into 7/8" holes in the rails.
2. Standoff to be welded to rails and riser wall to locate rung at 7" spacing from pipe wall.
3. Maximum spacing of standoffs shall not exceed 36".
4. Ladder shall not be installed in riser w/diameter less than 36".
5. Detail at bottom of ladder will vary with type of manhole.
6. Maximum length of ladder rail is 19'-10".
7. Standard finish: Galvanized paint.

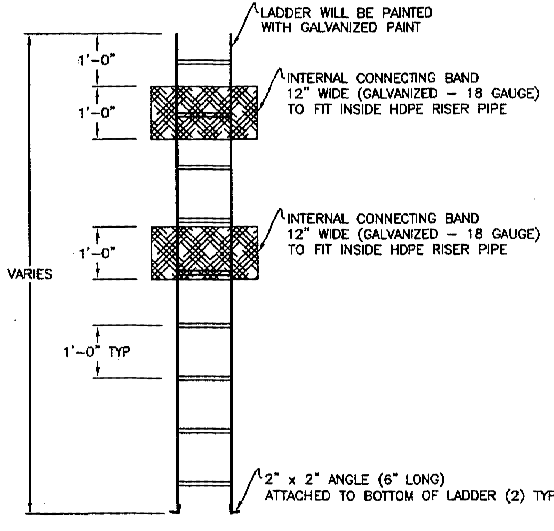
LADDER DETAIL



TOP VIEW OF RISER

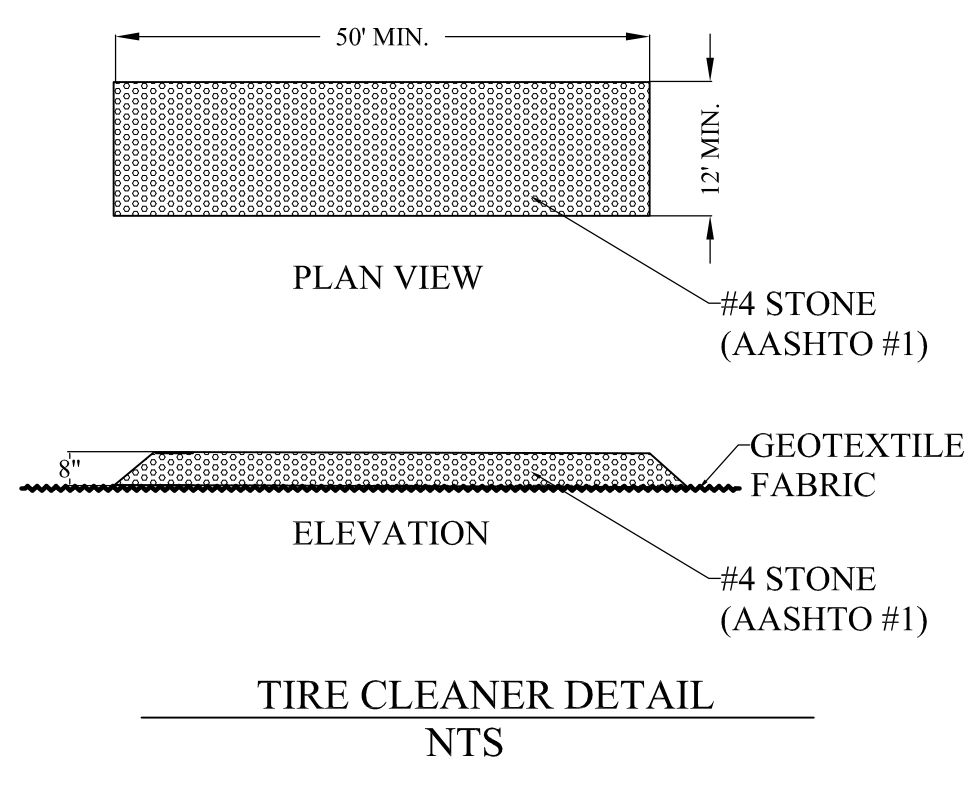


LADDER EXTENSION DETAIL

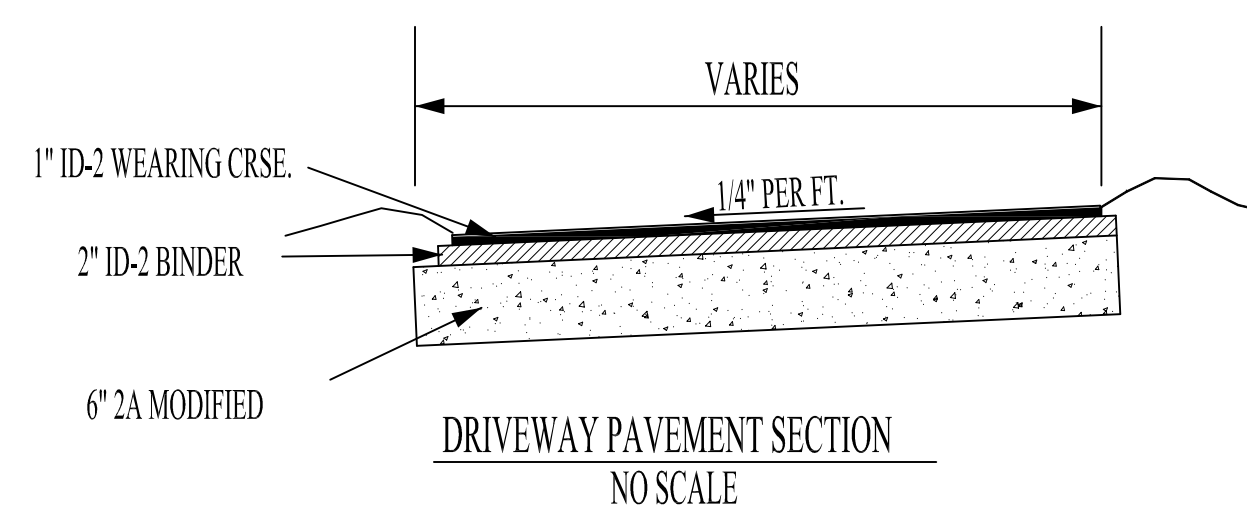


LADDER DETAIL

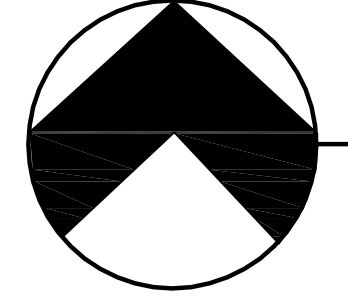
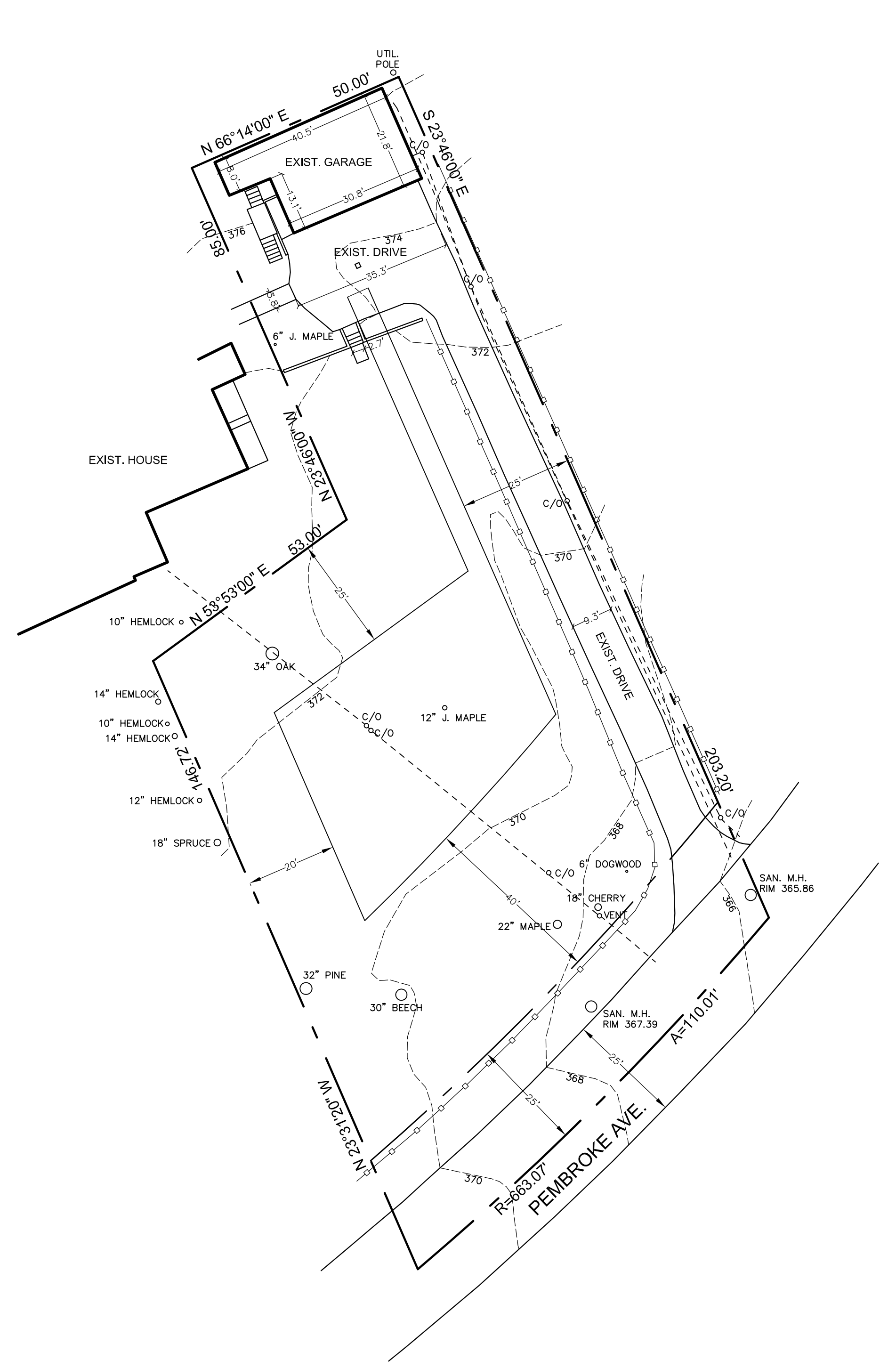
THE ACCESS PORT LADDER DETAIL HAS BEEN PREPARED BASED ON THE PROJECT PLANS AT THE CUSTOMER'S REQUEST. LANE ENTERPRISES, INC. IS NOT RESPONSIBLE FOR INSURING COMPLIANCE WITH APPLICABLE FEDERAL, STATE OR LOCAL REGULATIONS REGARDING ACCESS TO UNDERGROUND STRUCTURES.



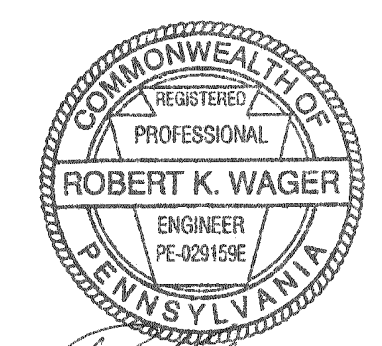
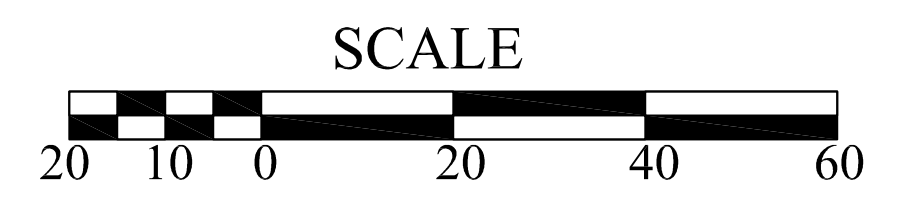
TIRE CLEANER DETAIL
N.T.S.



DRIVEWAY PAVEMENT SECTION
NO SCALE



EXISTING SITE PLAN



REVISED STORMWATER SYSTEM	5-03-21
REVISED STORMWATER SYSTEM	4-07-21
REVISIONS	REVISED AS PER REVIEW OF 2-05-21
REVISIONS	3-02-21
ROBERT K. WAGER, P.E. 1610 PELHAM AVENUE HAVERTOWN, PA 19083 (610) 642-0961	
DETAILS - E&S NOTES 235 PEMBROKE AVENUE RADNOR TOWNSHIP	
DELAWARE COUNTY	PENNSYLVANIA
DATE: 1/11/21	SCALE: 1"=20'-0"
DRAWN BY: RKW	PROJ. NO.: 20076

RESOLUTION NO. 2021-57

**A RESOLUTION OF RADNOR TOWNSHIP,
DELAWARE COUNTY, PENNSYLVANIA,
AUTHORIZING THE AWARD OF CONTRACT #B-21-001
FOR NORTH WAYNE AVENUE
– FROM EAGLE ROAD TO WOODSWORTH COURT –
SIDEWALK IMPROVEMENT PROJECT
TO PREMIER CONCRETE, INC., IN THE AMOUNT OF \$298,829.25**

WHEREAS, the Radnor Township wishes to construct the sidewalk and intersection improvements at North Wayne Avenue between Eagle Road and Woodsworth Court; and

WHEREAS, Premier Concrete, Inc. is the low qualified bidder.

NOW, THEREFORE, be it *RESOLVED* by the Board of Commissioners of Radnor Township does hereby Authorize the Award of the #B-21-001 for North Wayne Avenue – From Eagle Road to Woodsworth Court – Sidewalk Improvement Project to Premier Concrete, Inc., in the Amount of \$298,829.25.

SO RESOLVED this 24th day of May, A.D., 2021.

RADNOR TOWNSHIP

By: _____
Name: Jack Larkin
Title: President

ATTEST:

William M. White
Manager/Secretary

Radnor Township

PROPOSED LEGISLATION

DATE: May 18, 2021

TO: Radnor Township Board of Commissioners

FROM: Dennis P. Capella, Engineering Project Manager

CC: William M. White, Township Manager
Stephen F. Norcini, P.E., Township Engineer

LEGISLATION: Resolution #2021-57 - Awarding Contract #B-21-001 for North Wayne Avenue – From Eagle Road to Woodsworth Court – Sidewalk Improvement Project to Premier Concrete, Inc., in the Amount of \$298,829.25

LEGISLATIVE HISTORY: The Board of Commissioners authorized the advertisement for sealed bids for construction of this project at its April 12, 2021 meeting (Resolution No. 2021-42).

PURPOSE AND EXPLANATION: The eastside of North Wayne Avenue from Woodsworth Court to Eagle Road is often traveled by pedestrians to and from the Wayne business area. There is currently no sidewalk and the slopes result in a precarious condition on this stretch. Also the intersection at North Wayne Avenue and Woodsworth Court requires a crosswalk and the crosswalk at North Wayne Avenue and Eagle Road requires improvements, including those for ADA accessibility and the traffic signal. The proposed project (site plan attached) is intended to resolve these issues. Bids were opened on May 11th. Following are the bid results, and the bid documents of the apparent low bidder, Premier Concrete, are attached.

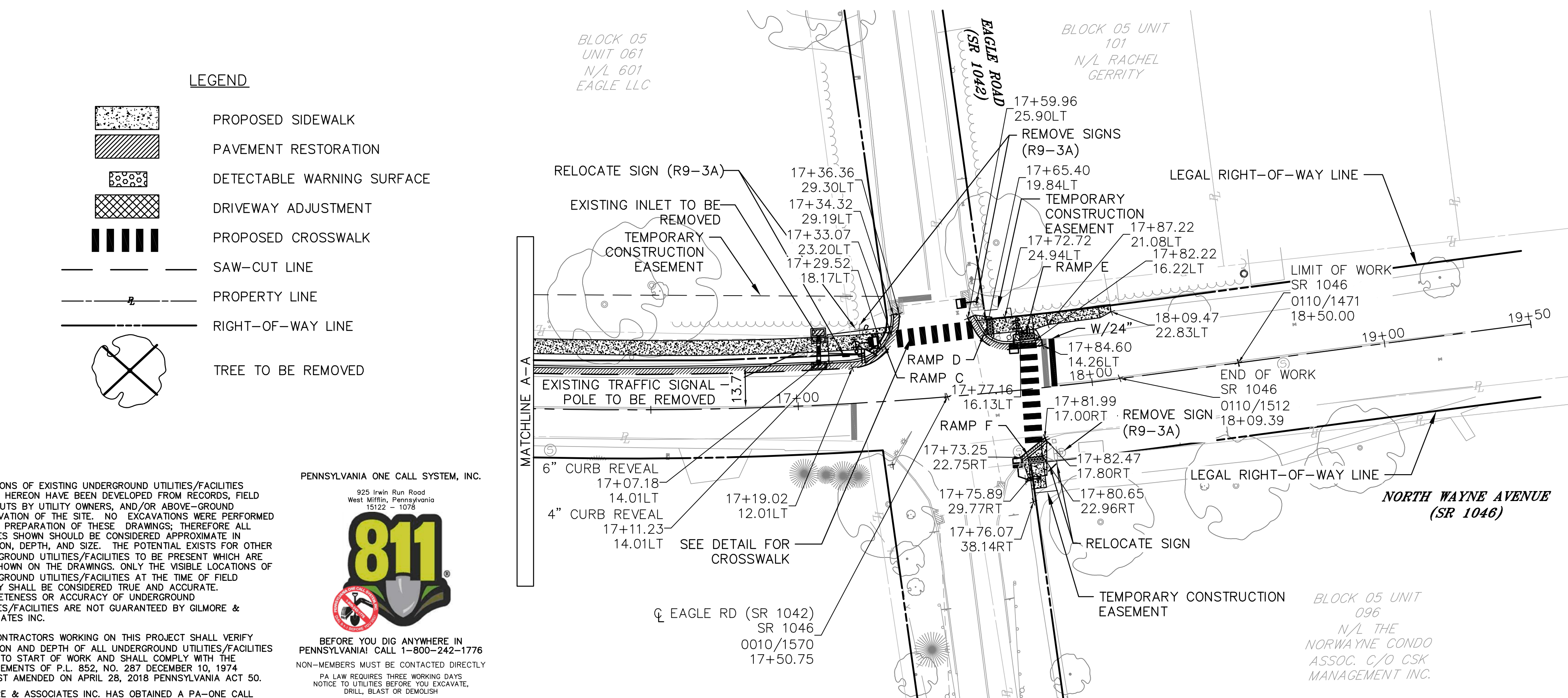
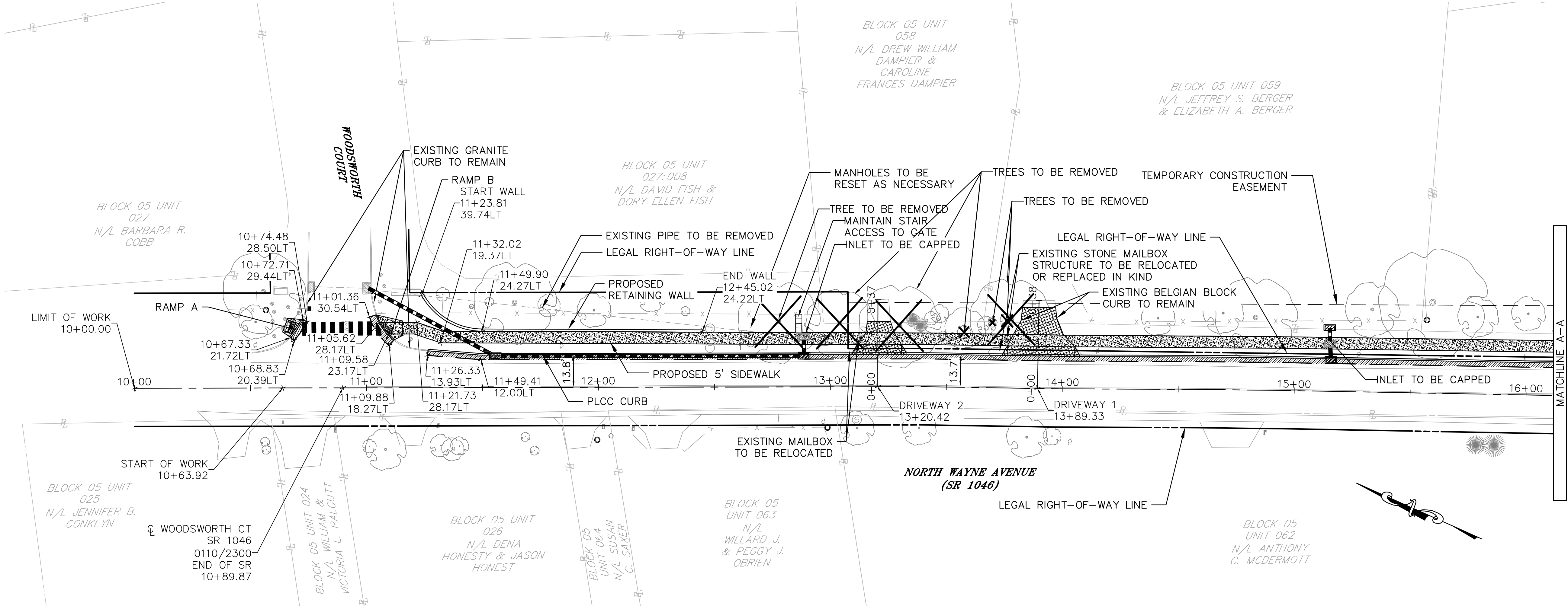
Name	Total Base Price
Premier Concrete	\$298,829.25
G & B Construction	\$327,735.60
Marino Corporation	\$376,744.50
Ply-Mar Construction	\$399,208.00
Albert G. Cipolloni	\$424,163.66
Road-Con	\$568,183.00

Staff has reviewed Premier Concrete's qualifications and references under a previous bid and recommends award of the contract. This contractor recently completed the Morris Road Streetscape project.

IMPLEMENTATION SCHEDULE: Upon approval by the Board of Commissioners, Premier Concrete will be notified of the award of the contract.

FISCAL IMPACT: The project construction costs, originally estimated at \$520,000, are to be funded through the 2019 General Obligation Bond proceeds and a Pennsylvania Department of Community & Economic Development Grant in the amount of \$250,000.

RECOMMENDED ACTION: *Staff requests the Board of Commissioners of Radnor Township to Authorize the Award of the Contract #B-21-001 for North Wayne Avenue – From Eagle Road to Woodsworth Court – Sidewalk Improvement Project to Premier Concrete, Inc., in the Amount of \$298,829.25.*



LEGEND

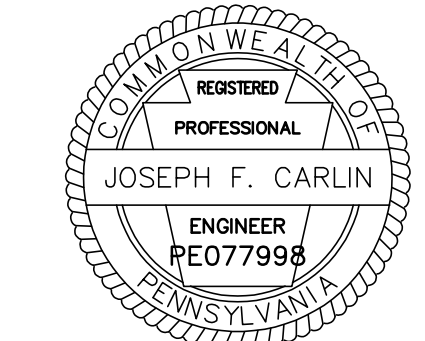
- PROPOSED SIDEWALK
- PAVEMENT RESTORATION
- DETECTABLE WARNING SURFACE
- DRIVEWAY ADJUSTMENT
- PROPOSED CROSSWALK
- SAW-CUT LINE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- TREE TO BE REMOVED

LOCATIONS OF EXISTING UNDERGROUND UTILITIES/FACILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM RECORDS, FIELD MARKOUTS BY UTILITY OWNERS, AND/OR ABOVE-GROUND OBSERVATION OF THE SITE. NO EXCAVATIONS WERE PERFORMED IN THE PREPARATION OF THESE DRAWINGS; THEREFORE ALL UTILITIES SHOWN SHOULD BE CONSIDERED APPROXIMATE IN LOCATION, DEPTH, AND SIZE. THE POTENTIAL EXISTS FOR OTHER UNDERGROUND UTILITIES/FACILITIES TO BE PRESENT WHICH ARE NOT SHOWN ON THE DRAWINGS. ONLY THE VISIBLE LOCATIONS OF UNDERGROUND UTILITIES/FACILITIES AT THE TIME OF FIELD SURVEY SHALL BE CONSIDERED TRUE AND ACCURATE. COMPLETENESS OR ACCURACY OF UNDERGROUND UTILITIES/FACILITIES ARE NOT GUARANTEED BY GILMORE & ASSOCIATES INC.

PENNSYLVANIA ONE CALL SYSTEM, INC.
 925 Irwin Run Road
 West Mifflin, Pennsylvania
 15122 - 1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776
 NON-MEMBERS MUST BE CONTACTED DIRECTLY
 PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH
 SERIAL NO. 20153141035

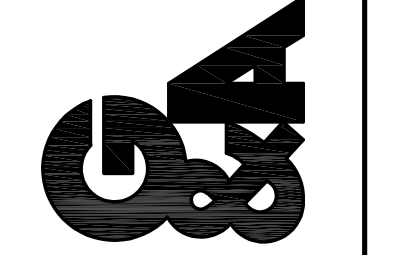
ALL CONTRACTORS WORKING ON THIS PROJECT SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES/FACILITIES PRIOR TO START OF WORK AND SHALL COMPLY WITH THE REQUIREMENTS OF P.L. 852, NO. 287 DECEMBER 10, 1974 AS LAST AMENDED ON APRIL 28, 2018 PENNSYLVANIA ACT 50. GILMORE & ASSOCIATES INC. HAS OBTAINED A PA-ONE CALL SERIAL NUMBER AS NOTED HEREON FOR DESIGN PURPOSES ONLY.



DATE: 7/1/2020

REV.	DESCRIPTION	DATE	BY
5	CHANGE IN LOCATION, NOT NUMBER, OF TREES TO BE REMOVED PER BID ADDENDUM #2	5/06/2021	LAS
4	NOTE 3 ADDITIONAL TREES TO BE REMOVED ON NORTH WAYNE AVE	3/04/2021	LAS
3	REVISED FOR DRAINAGE IMPACTS	6/15/2020	LAS
2	REVISED PER PENNDOT COMMENTS DATED 2/7/2020	4/15/2020	LAS
1	REVISED PER PENNDOT COMMENTS DATED 9/23/2019	1/10/2020	LAS

GILMORE & ASSOCIATES, INC.
 ENGINEERING & CONSULTING SERVICES
 66 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18901 • (610) 342-4339 • www.gilmoreinc.com



JOB NO.: 2015-10020
 MUNICIPAL FILE NO.: XX
 TAX MAP PARCEL NO.: XX

OWNER:
 RADNOR TOWNSHIP
 301 LYEN AVENUE
 WAYNE, PA 19087
 610-688-5600

TOTAL AREA: XX AC.
 TOTAL LOTS: XX
 SCALE: 1"=25'

DESIGNED BY: LAS
 DRAWN BY: LAS
 CHECKED BY: JFC

DATE: 8/23/19

HIGHWAY OCCUPANCY PERMIT PLAN
 CONSTRUCTION PLAN
WAYNE AVENUE & EAGLE ROAD PEDESTRIAN IMPROVEMENTS
 RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USER. THIS PLAN IS PREPARED SPECIFICALLY FOR THE CLIENT AND PROJECT DESIGNATED HEREON. CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED. © COPYRIGHT 2019 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED.

RESOLUTION NO. 2021-42

**A RESOLUTION OF RADNOR TOWNSHIP,
DELAWARE COUNTY, PENNSYLVANIA,
AUTHORIZING THE ENGINEERING DEPARTMENT
TO RECEIVE SEALED BIDS FOR THE
WILLOWS PARK PRESERVE
DOMESTIC WATER AND FIRE SERVICE PROJECT**

WHEREAS, Radnor Township entered into a Lease Agreement with the Willows Park Preserve to provide domestic water and fire service to the Mansion; and

WHEREAS, The service has been designed and had completed permitting such that it is now ready for bidding.

NOW, THEREFORE, be it *RESOLVED* by the Board of Commissioners of Radnor Township does hereby Authorize the Engineering Department to Receive Sealed Bids for the Willows Park Preserve Domestic Water and Fire Service Project.

SO RESOLVED this 24th day of May, A.D., 2021.

RADNOR TOWNSHIP

By: _____
Name: Jack Larkin
Title: President

ATTEST: _____
William M. White
Manager/Secretary

Radnor Township

PROPOSED LEGISLATION

DATE: May 18, 2021
TO: Radnor Township Board of Commissioners
FROM: Dennis P. Capella, Engineering Project Manager
CC: William M. White, Township Manager
Stephen F. Norcini, P.E., Township Engineer

LEGISLATION: Resolution No. 2021-58: Authorizing the Engineering Department to Receive Sealed Bids for the Willows Park Preserve Domestic Water and Fire Service Project

LEGISLATIVE HISTORY: The Lease Agreement between the Township and the Willows Park Preserve includes a provision that Township provide infrastructure improvements. These improvements include those for improved water service to the Mansion. The Board of Commissioners awarded the design of the Willows Park Preserve Domestic Water and Fire Service at its January 27, 2020 meeting (Resolution No. 2020-10).

PURPOSE AND EXPLANATION: The design, permitting and bidding documents have undergone some modifications and, most recently, were delayed due to discussions with Aqua to finalize the service connection location, which discussions themselves were delayed itself due to the construction of the Darby Paoli Road culvert. The documents are now ready to be published in PennBid to receive sealed bids. Attached are the project plans.

IMPLEMENTATION SCHEDULE: Pending Board of Commissioners' approval, the project will be advertised for sealed bids. A subsequent contract award recommendation will be presented to the Board of Commissioners.

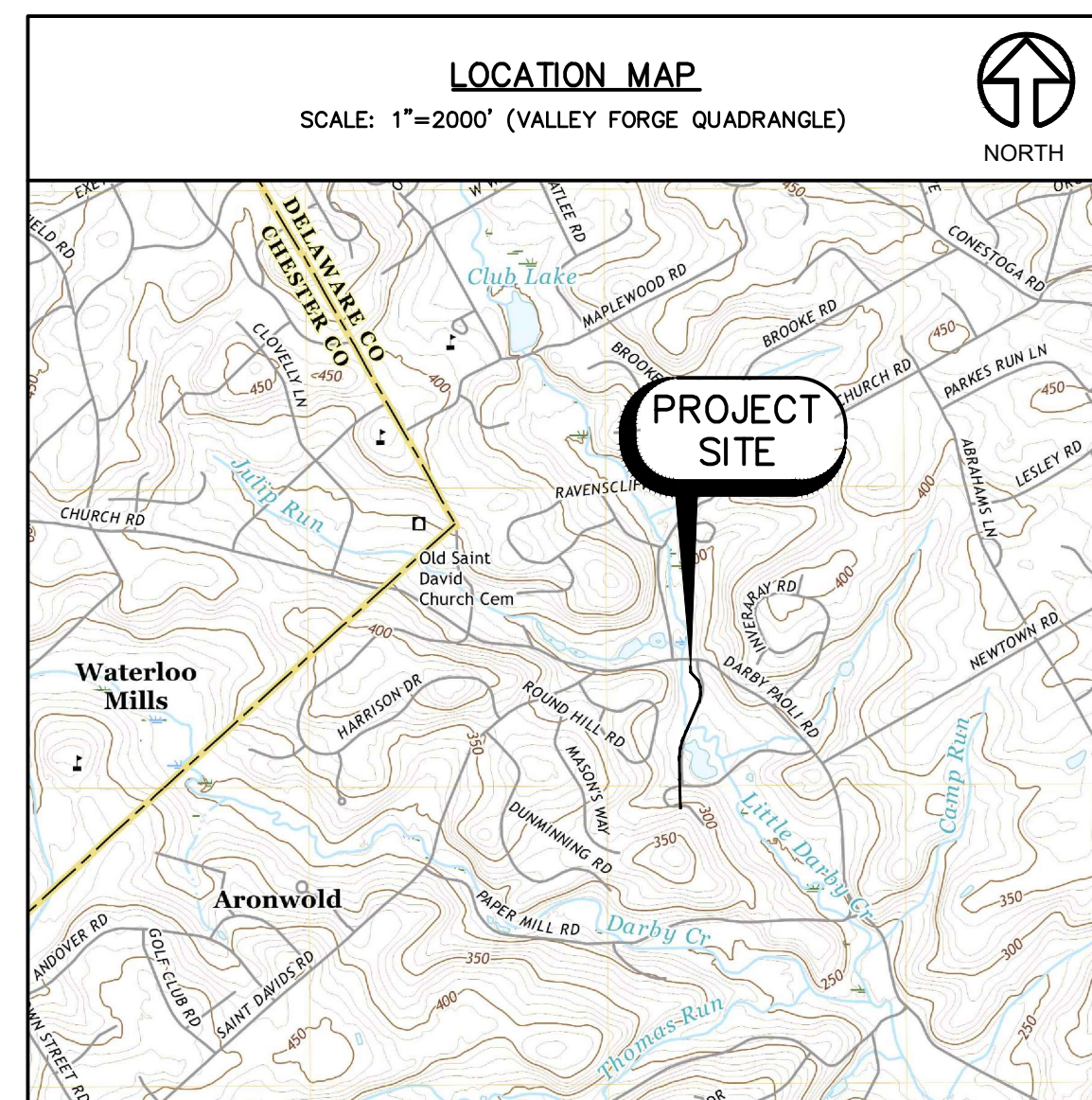
FISCAL IMPACT: The estimated construction cost for this project is \$300,000 to be funded by monies in the general fund allocated to the requirements of the Lease Agreement, the Willows Enterprise Fund.

RECOMMENDED ACTION: *Staff respectfully requests the Board of Commissioners of Radnor Township to Authorize the Engineering Department to Receive Sealed Bids for the Willows Park Preserve Domestic Water and Fire Service Project.*

THE WILLOWS PARK WATER MAIN REPLACEMENT

SITUATED IN:
RADNOR TOWNSHIP
DELAWARE COUNTY, PENNSYLVANIA

PREPARED FOR:
RADNOR TOWNSHIP
301 IVEN AVENUE
WAYNE, PENNSYLVANIA 19087-5297



ACT 287 UNDERGROUND USERS LIST
DESIGN ONE CALL SERIAL NO(s): 20201042113

USER	ADDRESS	TELEPHONE/EMAIL
AQUA PENNSYLVANIA, INC.	762 LANCASTER AVENUE BRYN MAWR, PA 19010	SBPIZZI@AQUAAMERICA.COM
COMCAST	100 SPRINGBROOKE BLVD ASTON, PA 19014	RICHARD_KAIN@CABLE.COMCAST.COM
PECO ENERGY	450 S. HENDERSON ROAD, SUITE B, KING OF PRUSSIA, PA 19406	484-681-5720
VERIZON PA, INC.	15 MONTGOMERY AVENUE, FLOOR 2 PITTSBURGH, PA 15212	412-359-2000
RADNOR TOWNSHIP	301 IVEN AVENUE WAYNE, PA 19087	SMCNELIS@RADNOR.ORG

PA ONE CALL SYSTEM 1-800-242-1776

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM EXISTING RECORDS AND/OR ABOVE-GROUND OBSERVATIONS AT THE SITE. COMPLETENESS OR ACCURACY OF LOCATION CANNOT BE GUARANTEED. ALL CONTRACTORS AND OTHER PERSONS UTILIZING THIS PLAN AND THE INFORMATION CONTAINED HEREON ARE CAUTIONED TO COMPLY WITH THE REQUIREMENTS OF PENNSYLVANIA ACT 287, AS AMENDED, TITLED "EXCAVATION AND DEMOLITION WORK PROTECTION OF UNDERGROUND UTILITIES." EACH INDIVIDUAL USING THIS PLAN MUST VERIFY THE DEPTH AND LOCATION OF ALL UNDERGROUND FACILITIES BEFORE STARTING WORK.

DRAWING INDEX

SHT. NO.	DWG. NO.	DESCRIPTION
-	-	COVER
1	C-101	INDEX PLAN
2	C-102	WATER MAIN PLAN STATION 0+00 TO 4+89
3	C-103	WATER MAIN PLAN AND PROFILE STATION 4+89 TO 10+72
4	C-104	WATER MAIN PLAN STATION 10+72 TO 15+00
5	C-105	WATER MAIN PLAN STATION 15+00 TO 17+12
6	C-501	CONSTRUCTION DETAILS - 1
7	C-502	CONSTRUCTION DETAILS - 2
8	C-503	EROSION AND SEDIMENT CONTROL DETAILS
9	C-504	EROSION AND SEDIMENT CONTROL NOTES
10	C-505	TRAFFIC CONTROL DETAILS

PREPARED BY:
Carroll Engineering Corporation



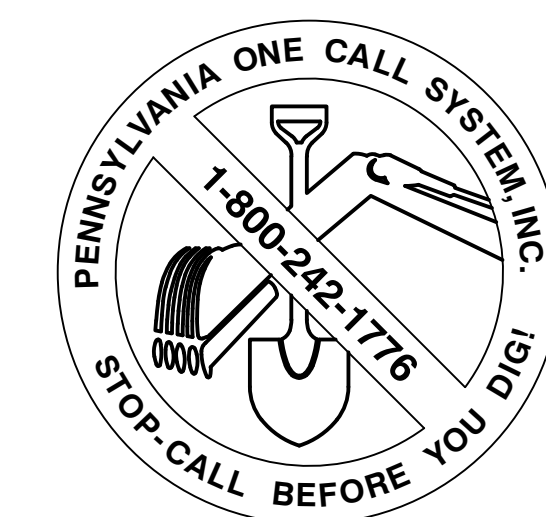
949 Easton Road
Warrington, PA 18976
Phone: 215-343-5700
Fax: 215-343-0875

630 Freedom Business Center, Third Floor
King of Prussia, PA 19406
Phone: 610-489-5100
Fax: 610-489-2674

105 Raider Boulevard, Suite 206
Hillsborough, NJ 08844
Phone: 908-874-7500
Fax: 908-874-5762

101 Lindenwood Drive, Suite 225
Malvern, PA 19355
Phone: 484-875-3075
Fax: 484-875-3178

www.carrollengineering.com



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DRAWER NUMBER

CADD FILE 2016510001



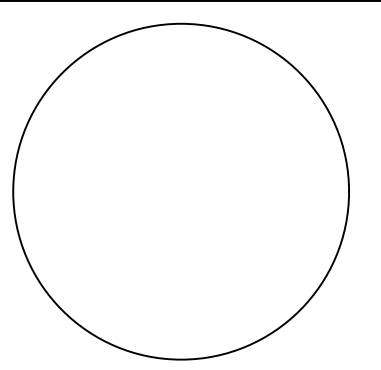
Carroll Engineering Corporation

CORPORATE OFFICE
949 EASTON ROAD
WARRINGTON, PA 18976
PHONE: 215.343.5700
FAX: 215.343.0875

630 Freedom Business Ctr., 3rd Fl. 105 Rader Boulevard, Suite 206
King of Prussia, PA 19386 Hillsborough, NJ 08044
Phone: 610-489-5100 Phone: 908-874-7500
Fax: 908-874-5122

101 Lindenwood Drive, Suite 225
Malvern, PA 19355
Phone: 484-875-3073

www.carrollengineering.com

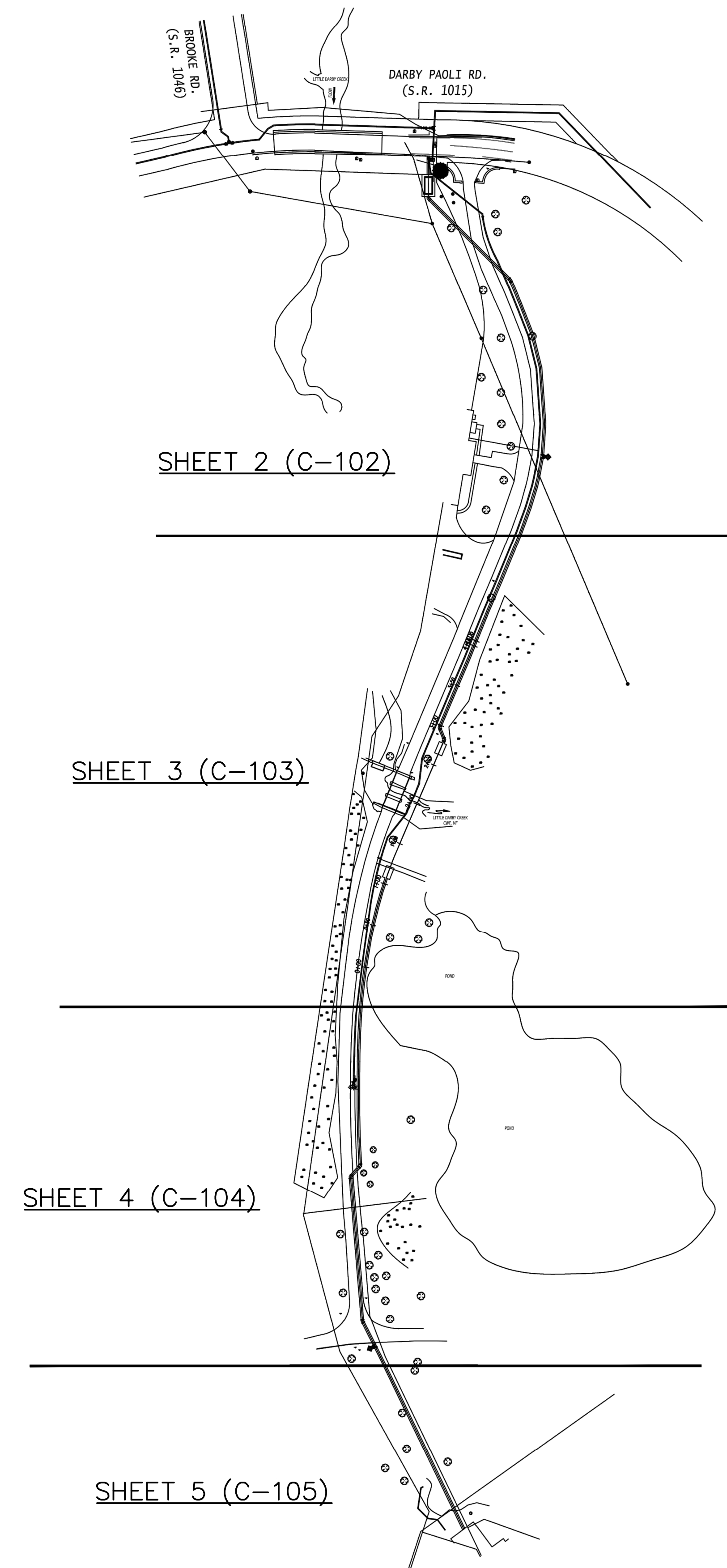


INDEX PLAN

THE WILLOWS PARK
WATER MAIN REPLACEMENT
SITUATED IN
RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA
PREPARED FOR
RADNOR TOWNSHIP
301 IVEN AVENUE
WAYNE, PA 19087-5297

GENERAL NOTES:
1. EXISTING FEATURES AND PROPOSED REPLACEMENT WATER MAIN ALIGNMENT SHOW HEREIN ARE BASED ON PLANS TITLED "WILLOWS WATER MAIN REPLACEMENT", WHICH CONSIST OF SIX (6) SHEETS, PREPARED BY GANNETT FLEMING, DATED DECEMBER 2013, WITH NO REVISION DATE NOTED.
2. IMPROVEMENTS SHOWN WHICH HAVE BEEN INDICATED TO BE INSTALLED "BY OTHERS" HAVE BEEN TAKEN FROM THE PENNDOT DRAWINGS FOR CONSTRUCTION OF STATE ROUTE 1015, SECTION RAD, IN DELAWARE COUNTY, FROM STA. 15+41.73 TO STA. 107+00.00 (ECMS NO. 14891).
3. DETAILS OF THE EXISTING GATE VALVE ADJACENT TO DARBY PAOLI ROAD BASED ON AN AS-BUILT PLAN TITLED "MAIN REPLACEMENT FOR: DARBY PAOLI ROAD (S.R. 1046)", WHICH CONSISTS OF FIVE (5) SHEETS, PREPARED BY AQUA PENNSYLVANIA, INC., DATED NOVEMBER 8, 2005, LAST REVISED NOVEMBER 6, 2006

SITE INFORMATION:
PARCEL NO.: 36030162526
ADDRESS: 490 DARBY PAOLI RD, VILLANOVA, PA 19085
OWNER: RADNOR TOWNSHIP
ACREAGE: 251.97
WATERSHED: DARBY - CRUMB CREEKS
STREAM: LITTLE DARBY CREEK (CWF)



- LEGEND:**
- WATERFLOW DIRECTION
 - WATERS OF THE U.S.
 - WETLAND BOUNDARY; AREA ON SITE APPROX.: 0.5 ACRE
 - CWF, MF COLD WATER FISHES, MIGRATORY FISHES
 - PEM PALUSTRINE EMERGENT WETLAND
 - LIMIT OF TRENCH DISTURBANCE
 - COMPOST FILTER SOCK
 - LIMIT OF EARTH DISTURBANCE & TEMPORARY CONSTRUCTION FENCING
 - ROCK FILTER
 - PROPOSED TEE W/GATE VALVE & FIRE HYDRANT
 - EXISTING TREE
 - EXISTING GAS MAIN
 - RELOCATED OVERHEAD WIRES (BY OTHERS)
 - EXISTING UTILITY POLE & RELOCATED UTILITY POLE (BY OTHERS)
 - SOILS DELINEATOR
 - EXISTING SANITARY SEWER
 - PROPOSED WATER SERVICE
 - PROPOSED SUPER SILT FENCE

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS IN DESIGN STAGE-STOP CALL
PENNSYLVANIA ONE CALL SYSTEM, INC.
 1-800-242-1776

NO.	DATE	DESCRIPTION
3	4-14-21	ISSUED FOR BIDDING
2	1-15-20	DESIGN PER ICDP REVIEW LETTER DATED OCTOBER 15, 2020
1	4-13-20	GENERAL CONTRACTORS
		CAP
		CAP
		INITIALS

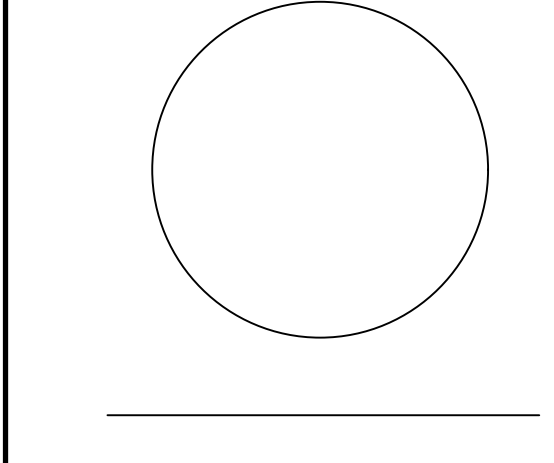
DATE 2-24-2020
CADD FILE 2016510001
JOB NO 20-1651
DSG BY CAP
DWN BY CAP
CKD BY ABM
SCALE 1" = 100'
DRAWER NUMBER -
SHEET 1 OF 10 SHEETS
DRAWING NUMBER
C-101



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**WATER MAIN PLAN
 STATION 0+00 TO 4+89**
**THE WILLOWS PARK
 WATER MAIN REPLACEMENT**
 SITUATED IN
 RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA
 PREPARED FOR
**RADNOR TOWNSHIP
 301 IVEN AVENUE
 WAYNE, PA 19087-5297**

NO.	DATE	DESCRIPTION
1	10-15-2020	ISSUED FOR BIDDING
2	10-15-2020	PERSON PER ICDP REVIEW (ENTER DATE) OCTOBER 15, 2020
3	10-15-2020	GENERAL CONTRACTORS

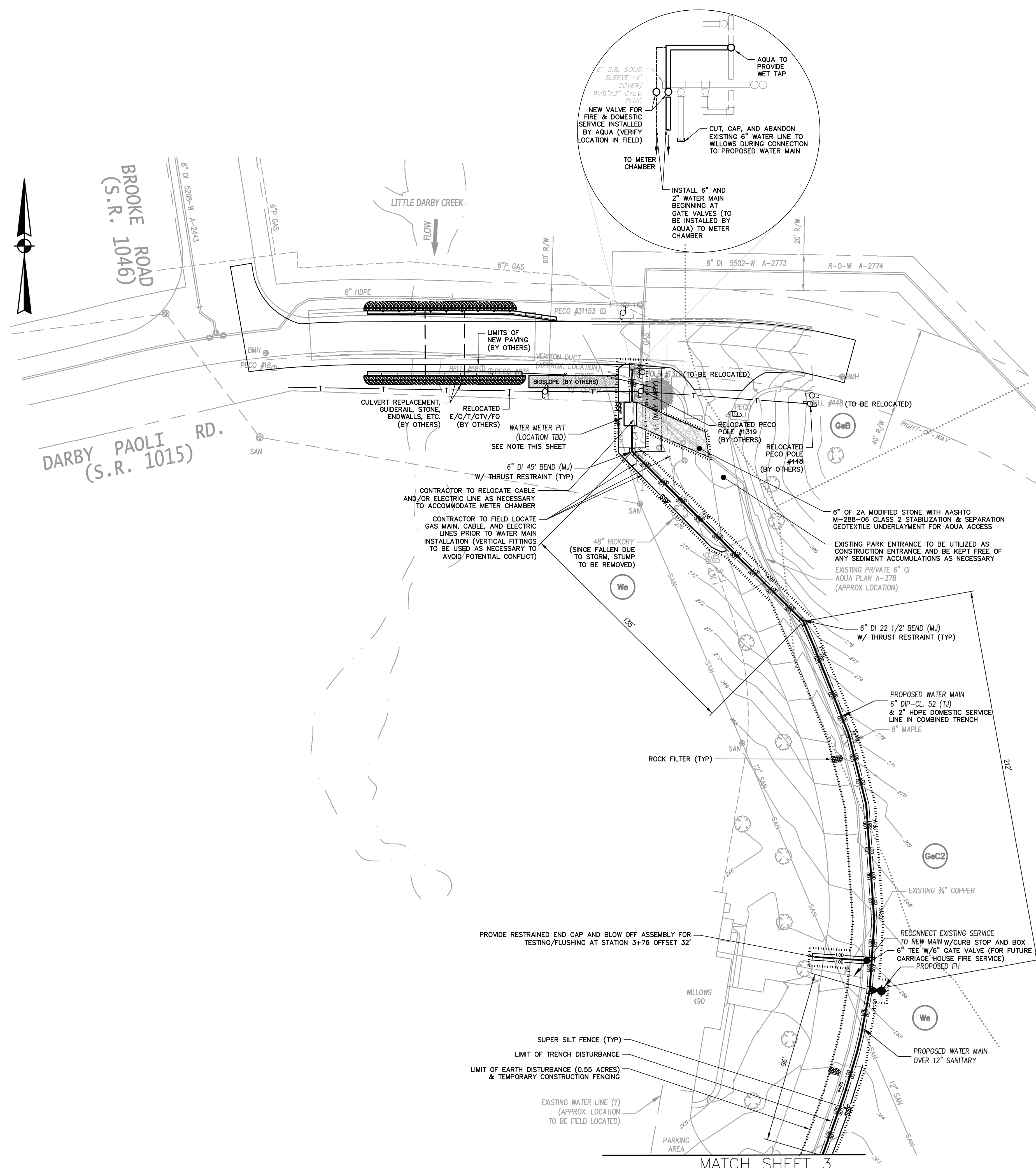
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DSG BY	CAP
DWN BY	ABM
CKD BY	CAP
SCALE	1" = 30'
DRAWER NUMBER	-
SHEET	2 OF 10 SHEETS
DRAWING NUMBER	C-102

GENERAL NOTES

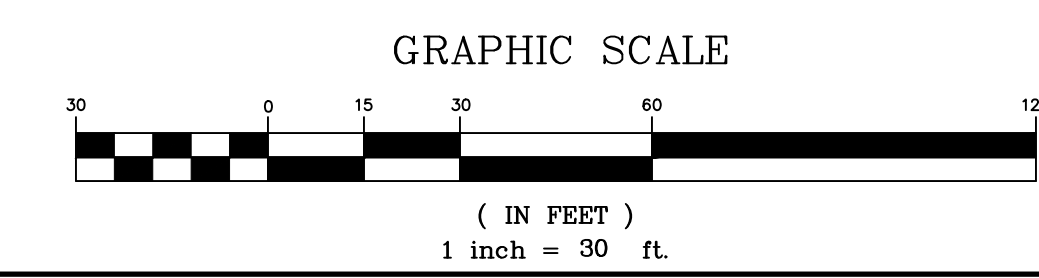
- LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM EXISTING RECORDS AND/OR ABOVE GROUND OBSERVATIONS AT THE SITE. COMPLETENESS OR ACCURACY OF LOCATION CANNOT BE GUARANTEED. ALL CONTRACTORS AND OTHER PERSONS UTILIZING THIS PLAN AND THE INFORMATION CONTAINED HEREON ARE CAUTIONED TO COMPLY WITH THE REQUIREMENTS OF THE PENNSYLVANIA ACT 287, AS AMENDED, TITLED 'EXCAVATION AND DEMOLITION WORK PROTECTION OF UNDERGROUND UTILITIES'. EACH INDIVIDUAL USING THIS PLAN MUST VERIFY THE DEPTH AND LOCATION OF ALL UNDERGROUND FACILITIES BEFORE STARTING WORK. (THIS PLAN DOES NOT DELINEATE ANY UNDERGROUND UTILITIES)
- THIS PLAN WAS DEVELOPED WITHOUT THE BENEFIT OF A TITLE REPORT. ADDITIONAL EASEMENTS AND/OR RIGHT-OF-WAYS MAY EXIST.
- ALL WORK SHALL COMPLY WITH THE CONDITIONS AND RESTRICTIONS SET FORTH IN THE VARIOUS PERMITS, APPROVALS, AND EASEMENT AGREEMENTS APPLICABLE TO THIS PROJECT.
- ALL WATER AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AQUA AMERICA'S STANDARD SPECIFICATIONS AND DETAILS FOR WATER FACILITIES.
- CONTRACTOR SHALL EXCAVATE WITH CARE TO MINIMIZE DAMAGE TO ROOTS. CONTRACTOR SHALL RELOCATE SHRUBS AND LANDSCAPE PLANTINGS AS DIRECTED IN THE FIELD.
- NO EXCAVATED MATERIAL MAY BE STOCKPILED ON ADJACENT PROPERTIES OR WITHIN TOWNSHIP RIGHT-OF-WAY WITHOUT WRITTEN APPROVAL OF THE PROPERTY OWNER AND/OR THE TOWNSHIP.
- SIGNS, MAILBOXES, FENCING, ETC. ARE TO BE REMOVED AND REPLACED AS NECESSARY AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL RESTORE DRIVEWAYS, FENCING, MAILBOXES, LAWN, TRAFFIC SIGNS, STREET SIGNS, AND ALL OTHER ABOVE GROUND FACILITIES TO THEIR PRE-CONSTRUCTION CONDITION AND LOCATION, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL ARRANGE FOR THE TEMPORARY SUPPORT AND/OR TEMPORARY OR PERMANENT RELOCATION OF UTILITY POLES AS NEEDED. MEANS OF TEMPORARY SUPPORT SHALL BE IN ACCORDANCE WITH THE POLE OWNER'S REQUIREMENTS.
- MAINTAIN 18" VERTICAL CLEARANCE BETWEEN ALL WATER AND SANITARY FACILITIES (MANS AND SERVICES) AND ALL OTHER UTILITIES (INCLUDING GAS AND STORM). WHEREVER 18" VERTICAL CLEARANCE CANNOT BE MAINTAINED, PROVIDE 20 L.F. OF CONCRETE ENCASMENT.
- A MINIMUM OF 4' OF COVER SHALL BE PROVIDED OVER WATER MAIN AND SERVICES, AND SHALL BE FREE OF INTERMEDIATE HIGH POINTS.
- WATER MAIN PIPES SHALL BE DUCTILE IRON CLASS 52 WITH DOUBLE CEMENT LINING AND SEALCOAT. THE MAXIMUM PERMISSIBLE JOINT DEFLECTION SHALL BE ONE-HALF OF THE PIPE MANUFACTURER'S RECOMMENDED MAXIMUM ALLOWANCE.
- WATER MAIN FITTINGS SHALL BE STANDARD OR COMPACT SIZE MECHANICAL JOINT DUCTILE IRON WITH DOUBLE CEMENT LINING AND SEALCOAT. THE CONTRACTOR SHALL PROVIDE MEGALUG JOINT RESTRAINT AND THRUST BLOCKS FOR ALL FITTINGS.
- WELDED FITTINGS SHALL BE INSTALLED WHERE DEFLECTION OF THE 2" HDPE SERVICE LINE IS NOT FEASIBLE WITHIN THE ALLOWABLE TOLERANCES OF THE MANUFACTURER. THESE SHALL BE INCIDENTAL TO THE PIPE INSTALLATION.
- IT SHOULD BE ASSUMED THAT THE WILLOWS MANSION AND CARRIAGE HOUSE HAVE SANITARY SEWER, CABLE, AND GAS SERVICE. NO DATA WAS AVAILABLE FOR GAS SERVICE LOCATIONS; THEREFORE, LOCATIONS FOR THE SERVICES WERE NOT SHOWN ON THE PLANS BUT DO EXIST.
- THE FINAL LOCATION OF THE METER CHAMBER SHALL BE COORDINATED WITH AQUA.
- PERFORM ALL EXCAVATION(S) AND/OR BORING(S) TO THE LINES, GRADES, AND ELEVATIONS INDICATED, REGARDLESS OF THE TYPE AND CHARACTER OF THE MATERIALS ENCOUNTERED. PERFORM ALL EXCAVATION ON AN UNCLASSIFIED BASIS; NO EXTRA WILL BE ALLOWED FOR ROCK EXCAVATION, QUICKSAND EXCAVATION, MUCK EXCAVATION, OR FOR ANY OTHER TYPE OF EXCAVATION ENCOUNTERED. ROCK EXCAVATION IS THE REMOVAL AND DISPOSAL OF MATERIALS WHICH REQUIRES DRILLING AND BLASTING, WEDGING, SLEDGING, BORING, OR BREAKING UP WITH POWER OPERATED EQUIPMENT FOR REMOVAL, INCLUDING LEDGE ROCK, CONCRETE OR MASONRY STRUCTURES, BOULDERS, AND OTHER MATERIALS OF RELATED CHARACTER.
- THE WATER MAIN SHALL BE CONSTRUCTED FROM THE PROPOSED METER CHAMBER TO THE WILLOWS MANSION AND TESTED PRIOR TO MAKING THE FINAL CONNECTION TO THE FIRE AND DOMESTIC VALVES INSTALLED IN THE DARBY PAOLI ROAD RIGHT-OF-WAY BY AQUA TO MAINTAIN WATER SERVICE TO THE EXISTING WILLOWS MANSION AND CARRIAGE HOUSE DURING THE MAJORITY OF THE CONSTRUCTION.
- WATER SERVICE OUTAGE SHOULD BE MINIMIZED TO THE WILLOWS MANSION AND CARRIAGE HOUSE AND COORDINATED WITH THE TOWNSHIP.
- THE EXISTING WATER MAIN SHALL BE CUT, CAPPED, AND ABANDONED IN PLACE FOLLOWING THE INSTALLATION OF THE PROPOSED WATER MAIN(S).

AQUA NOTES FOR PLUMBERS AND BUILDERS

- SERVICE LINES, MAINS, AND EQUIPMENT:**
 - AQUA WILL MAKE ALL CONNECTIONS TO ITS MAINS AND FURNISH, INSTALL, AND MAINTAIN THE SERVICE LINES FROM THE WATER MAIN TO AND INCLUDING THE CURB STOP AND BOX, WHICH UNDER NORMAL CIRCUMSTANCES WILL BE PLACED INSIDE THE CURB LINE.
 - AQUA'S SERVICE LINE WILL BE THE PROPERTY OF THE COMPANY AND UNDER ITS CONTROL.
 - AQUA RESERVES THE RIGHT TO DETERMINE THE SIZE, KIND, AND LOCATION OF THE SERVICE LINE FROM THE MAIN TO THE CURB, AND FROM THE CURB TO THE PROPERTY TO BE SERVED.
- CUSTOMER'S INSTALLATION & MAINTENANCE OF SERVICE LINES:**
 - THE SERVICE LINE FROM THE CURB STOP TO THE PROPERTY SHALL BE FURNISHED, INSTALLED, OWNED, AND MAINTAINED BY THE OWNER OF THE PROPERTY.
- LOCATION OF CUSTOMER'S SERVICE LINES:**
 - THE CUSTOMER'S SERVICE LINE SHALL NOT CROSS INTERVENING PROPERTIES UNLESS THERE IS NO OTHER WAY IN WHICH SERVICE CAN BE PROVIDED DUE TO THE PROPERTY BEING LANDLOCKED AND AN APPROPRIATE EASEMENT IS OBTAINED BY THE CUSTOMER FOR THE CUSTOMER.
 - THE CUSTOMER'S SERVICE LINE SHALL BE LAID IN A STRAIGHT LINE AT A RIGHT ANGLE TO THE CURB LINE (WHERE POSSIBLE) WITHIN THE BUILDING LIMITS OF THE STRUCTURE TO BE SERVED AND AT LEAST FOUR FEET (4') BELOW THE SURFACE OF THE GROUND IN PROPERTY OWNED BY THE CUSTOMER, IN FEE SIMPLE ABSOLUTE.
 - NO SERVICE LINE SHALL BE LAID IN THE SAME TRENCH WITH A GAS LINE, ELECTRIC LINE, DRAIN OR SEWER LINE, OR ANY OTHER FACILITY OF ANOTHER PUBLIC SERVICE COMPANY, NOR WITHIN FOUR FEET (4') OF ANY OPEN EXCAVATION, RETAINING WALL OR VAULT.
- TYPE OF PIPING INSTALLED BY CUSTOMER:**
 - TYPE 'K' COPPER SHALL BE USED THROUGHOUT FOR SERVICE LINES UP TO AND INCLUDING TWO INCHES (2") IN DIAMETER. COMPRESSION OR FLARED FITTINGS SHALL BE USED FOR UNDERGROUND CONNECTIONS; SWEAT OR THREADED JOINTS SHALL BE USED IN BUILDINGS AND PITS.
 - SERVICE LINES THREE INCHES (3") IN DIAMETER AND LARGER SHALL BE CEMENT LINED DUCTILE IRON PIPE.
 - THE MINIMUM DIAMETER OF PIPE USED FOR DOMESTIC SERVICES (CURB TO BUILDING) SHALL BE 3/4 OF AN INCH.
- METERS:**
 - ALL METERS WILL BE FURNISHED AND INSTALLED BY AQUA AND WILL REMAIN THE PROPERTY OF THE COMPANY AND BE ACCESSIBLE TO AND UNDER ITS CONTROL.
 - AQUA RESERVES THE RIGHT TO DETERMINE THE SIZE, TYPE AND LOCATION OF THE METER TO BE INSTALLED IN THE CUSTOMER'S PROPERTY, INCLUDING WHETHER SUCH METER WILL BE MANUALLY READ, REMOTELY READ FROM OUTSIDE THE BUILDING, OR READ AUTOMATICALLY USING TV CABLE, TELEPHONE OR SANITARY LINES AND/OR RADIO SIGNAL COMMUNICATIONS. AS A CONDITION OF PROVIDING SERVICE, THE COMPANY SHALL HAVE THE RIGHT TO INSTALL SUCH EQUIPMENT, CONNECTIONS AND WIRING IN THE MANNER AND LOCATION IT DEEMS APPROPRIATE. SAID EQUIPMENT WILL REMAIN THE PROPERTY OF THE COMPANY.
- CONTROL VALVES:**
 - CONTROL VALVES SHALL BE PLACED BY THE CUSTOMER ON THE SERVICE LINE AS SHOWN ON THE PIPING DETAIL PLANS.
 - FULL-PORT BALL VALVES SHALL BE USED FOR SERVICE LINES TWO INCHES (2") IN DIAMETER AND SMALLER.
 - O.S. & Y. GATE VALVES WITH RESILIENT-SEAT SHALL BE USED FOR DOMESTIC AND FIRE SERVICE LINES THREE INCHES (3") IN DIAMETER AND LARGER.
- CONDITIONS REQUIRING METER PIT INSTALLATION BY CUSTOMER:**
 - FOR NEW CONSTRUCTION, THE METER SHALL BE REQUIRED TO BE INSTALLED OUTSIDE THE BUILDING IN A METER BOX/VAULT. THIS PROJECT SHALL BE CONSIDERED "NEW CONSTRUCTION" FOR ALL INTENTS AND PURPOSES.
- PRESSURE REDUCING VALVES:**
 - A PRESSURE REDUCING VALVE (PRV) IS REQUIRED WHERE THE AQUA'S SYSTEM PRESSURE EXCEEDS 80 PSI ON ALL DOMESTIC SERVICES, 100 PSI ON RESIDENTIAL FIRE SERVICES OR 150 PSI ON COMMERCIAL FIRE SERVICES AND AT THE DISCRETION OF AQUA WHERE IT IS BELIEVED THAT THE PRESSURE MAY EXCEED THE ABOVE LIMITATIONS. SAID VALVE SHALL BE INSTALLED BY THE CUSTOMER ON THE INLET SIDE OF THE METER AND FOLLOW ALL PIPING SPECIFICATIONS.
- PIPE JOINTS, FITTINGS, AND FIXTURES:**
 - WHEN SOLDER OR FLUX ARE USED FOR JOINING PIPE AND FITTINGS, COMPLIANCE WITH THE SAFE DRINKING WATER ACT AMENDMENT OF 1986, SECTION 1417, SHALL APPLY.
 - LIKewise, ALL FAUCETS AND FIXTURES MUST BE LEAD-FREE AND IN COMPLIANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND CODES.
- CROSS-CONNECTION CONTROL (BACKFLOW PROTECTION) OR SPECIAL DEVICES:**
 - IF, IN THE AQUA'S OPINION, AN APPROVED BACKFLOW PREVENTION DEVICE OR OTHER SPECIAL DEVICE IS NECESSARY TO PREVENT POSSIBLE CONTAMINATION OF THE WATER SUPPLY, THE COMPANY MAY REQUIRE THE CUSTOMER TO INSTALL AND MAINTAIN SUCH DEVICE(S) AT A LOCATION AND IN A MANNER APPROVED BY THE COMPANY.
- ACTIVATION OF SERVICE:**
 - AQUA WILL INSTALL THE METER AND TURN ON THE SERVICE AFTER THE CUSTOMER HAS THE PLUMBING ARRANGED (INCLUDING ALL REQUIRED FIXTURES) TO RECEIVE THE METER AT A POINT APPROVED BY THE COMPANY, SO AS TO CONTROL THE ENTIRE SUPPLY.
 - PA LAW (CRIMINAL CODE 18 PA. C.S.A., SECTION 3926) PROHIBITS THE ACTIVATION OF A PUBLIC UTILITY WITHOUT A MEASURING DEVICE (WATER METER).



MATCH SHEET 3



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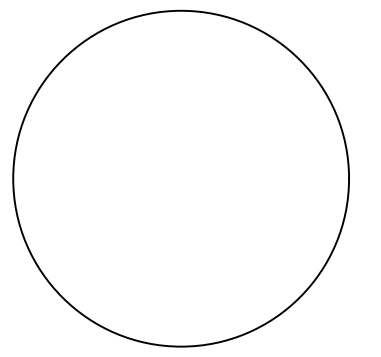
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WATER MAIN PLAN AND PROFILE
STATION 4+89 TO 10+72

THE WILLOWS PARK
WATER MAIN REPLACEMENT
SITUATED IN
RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA
PREPARED FOR
RADNOR TOWNSHIP
301 IVEN AVENUE
WAYNE, PA 19087-5297

NO.	DATE	DESCRIPTION	INITIALS
1	4-14-21	ISSUED FOR BIDDING	CAP
2	4-14-21	ISSUED FOR BIDDING REVIEW (LETTER DATED OCTOBER 15, 2020)	CAP
3	4-14-21	GENERAL CONTRACTORS	CAP

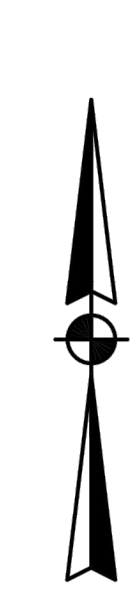
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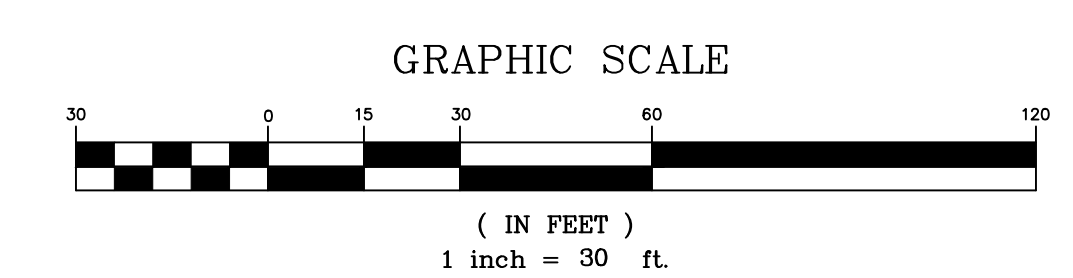
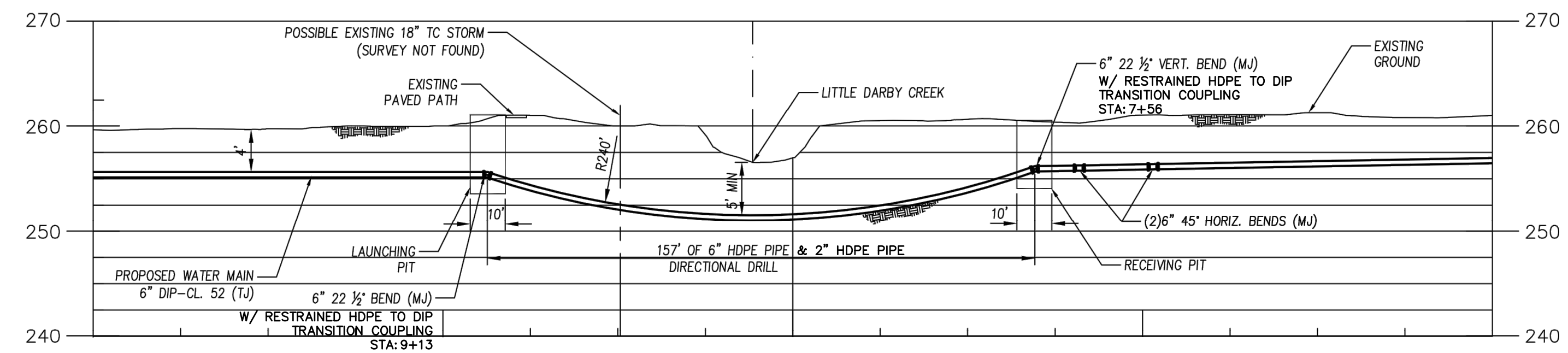
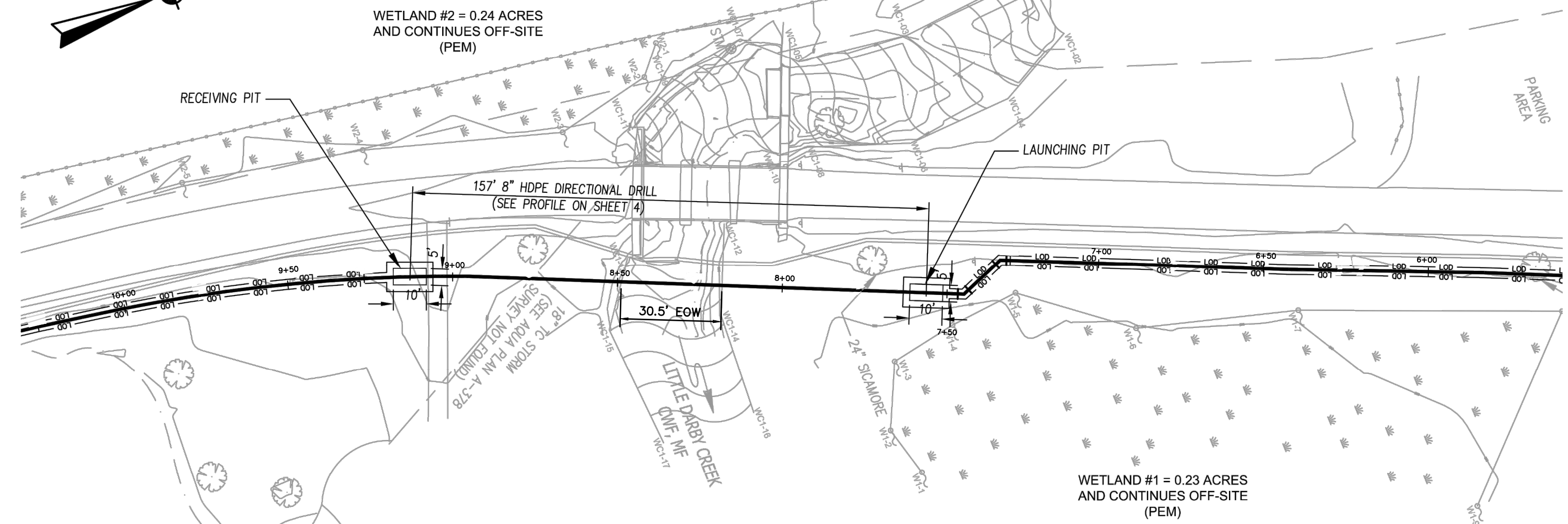
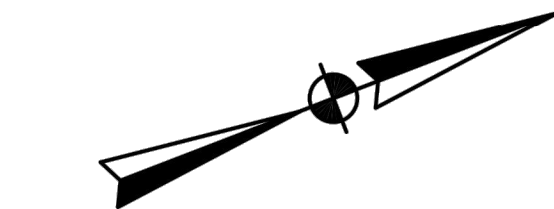
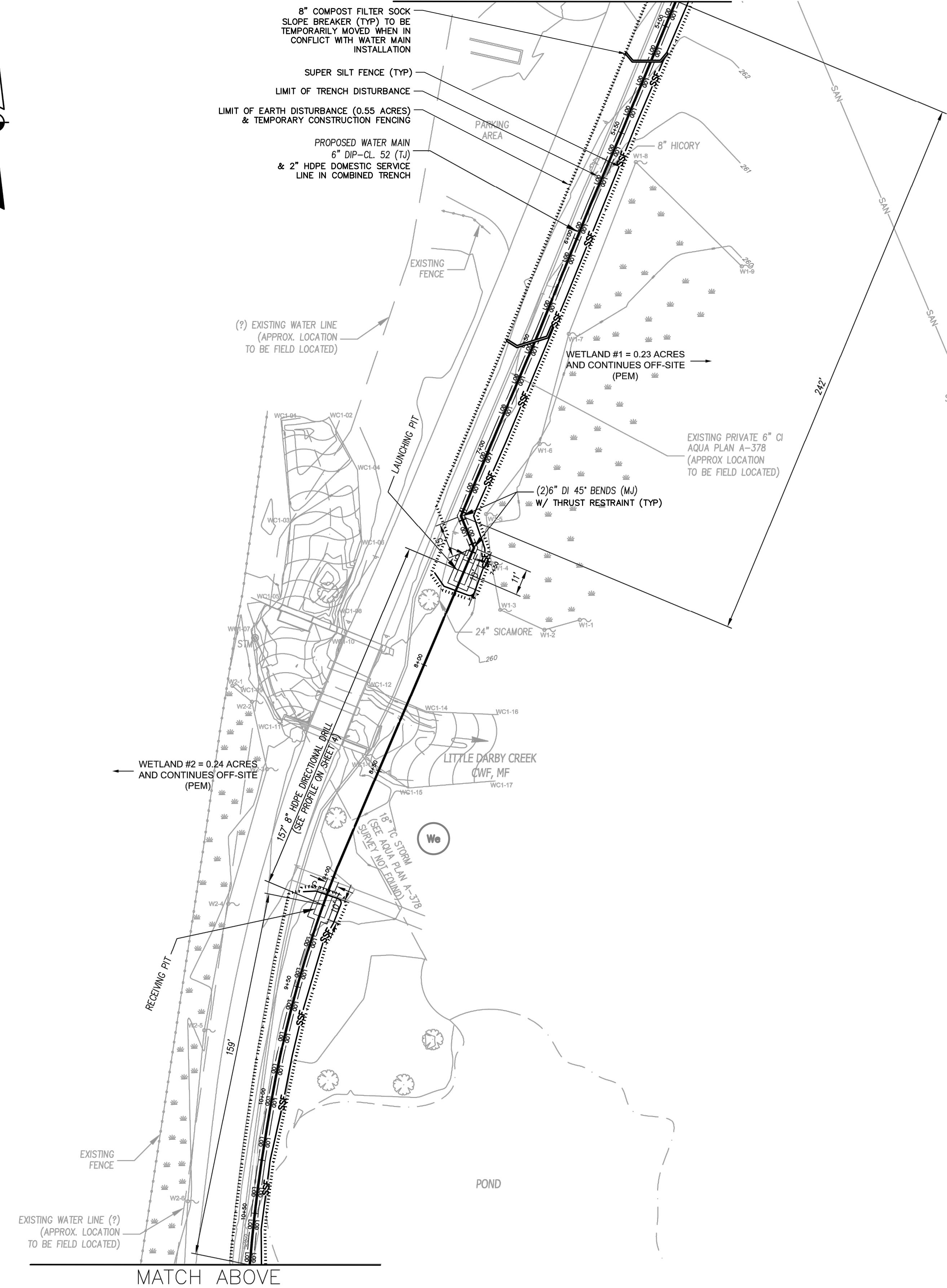
DRAWER NUMBER -
SHEET 3 OF 10 SHEETS

DRAWING NUMBER
C-103

MATCH SHEET 2



- 8" COMPOST FILTER SOCK
SLOPE BREAKER (TYP) TO BE
TEMPORARILY MOVED WHEN IN
CONFLICT WITH WATER MAIN
INSTALLATION
- SUPER SILT FENCE (TYP)
- LIMIT OF TRENCH DISTURBANCE
- LIMIT OF EARTH DISTURBANCE (0.55 ACRES)
& TEMPORARY CONSTRUCTION FENCING
- PROPOSED WATER MAIN
6" DIP-CL. 52 (TU)
& 2" HDPE DOMESTIC SERVICE
LINE IN COMBINED TRENCH



\\carroll\file\New\formal\bid\201651\CADD\2016510001.dwg Apr 13, 2021 4:07pm operation Erel

NOTES FOR BACKFLOW DEVICES:

- ALL BACKFLOW ASSEMBLIES TO BE SUPPLIED, MAINTAINED, OWNED, AND INSTALLED BY THE CUSTOMER.
- BACKFLOW DEVICES SHOULD BE SIZED HYDRAULICALLY, TAKING INTO ACCOUNT BOTH THE VOLUME REQUIREMENTS OF THE SERVICE AND THE PRESSURE DROP THROUGH THE ASSEMBLY. THE PRESSURE LOSS THROUGH THE ASSEMBLY IS NOT NECESSARILY DIRECTLY PROPORTIONAL TO THE FLOW. REFER TO MANUFACTURER HEAD LOSS PRESSURE CURVES.
- WHEN A BACKFLOW DEVICE IS BEING INSTALLED RETROACTIVELY ON AN EXISTING DOMESTIC OR FIRE SYSTEM, A THOROUGH HYDRAULIC ANALYSIS, INCLUDING REVISED HYDRAULIC CALCULATIONS, NEW FIRE FLOW DATA, AND ALL NECESSARY SYSTEM NOTIFICATION TO ACCOMMODATE THE ADDITIONAL FRICTION LOSS SHOULD BE PERFORMED PRIOR TO THE INSTALLATION OF THE DEVICE AND BE APPROVED BY THE CUSTOMER'S INSURANCE UNDERWRITERS.
- NO BY-PASS WILL BE ALLOWED AROUND BACKFLOW PREVENTION DEVICES WHERE CONTINUOUS, UNINTERRUPTED WATER SERVICE IS DESIRED. TWO DEVICES MAY BE INSTALLED IN PARALLEL. PARALLEL INSTALLATION PERMITS TESTING AND MAINTENANCE OF EACH INDIVIDUAL BACKFLOW PREVENTER WITHOUT TOTAL SERVICE INTERRUPTION. WHEN TWO BACKFLOW PREVENTERS ARE USED IN PARALLEL, THE TOTAL RATED CAPACITY OF THE DEVICES MUST EQUAL OR EXCEED THE CAPACITY OF THE MAIN FEED LINE.
- REDUCED PRESSURE ASSEMBLY (RP) AND REDUCED PRESSURE DETECTOR ASSEMBLY (RPDA) BACKFLOW PREVENTERS SHALL NOT BE INSTALLED IN A PIT BELOW GROUND LEVEL.
- IT IS THE RESPONSIBILITY OF THE CUSTOMER TO HAVE ALL BACKFLOW PREVENTION DEVICES TESTED BY A COMPANY APPROVED CERTIFIED "TESTER" AT THE TIME OF INSTALLATION AND ANNUALLY THEREAFTER.
- BACKFLOW DEVICES MUST BE INSTALLED DOWNSTREAM OF THE METER & BEFORE ANY BRANCH OR CONNECTIONS.
- ALL BACKFLOW PREVENTION ASSEMBLIES MUST BE PURCHASED & INSTALLED WITH MANUFACTURER APPROVED RESILIENT SEATED INLET AND OUTLET CONTROL VALVES AND AS A COMPLETE PACKAGE UNIT.
- TYPE 2 BACKFLOW ASSEMBLY DEVICES ARE ACCEPTABLE.
- REQUIRED APPROVALS FOR ALL DEVICES: UL OR C-UL CLASSIFIED, FM APPROVED, ASSE/ANSI.
- EACH PART MUST BE NSF/ANSI 61, ANNEX F & G COMPLIANT.
- ENTIRE UNIT MUST BE NSF/ANSI 372 COMPLIANT.
- ALL BACKFLOW PREVENTION ASSEMBLY VALVES ON THE DOMESTIC AND FIRE LINES MUST BE:
 - FOR SIZES 2" & SMALLER= THREADED, FULL-PORT BALL VALVE.
 - OPTIONAL FOR FIRE ONLY: UL/FM GEAR OPERATED BUTTERFLY VALVES W/TAMPER SWITCH MAY BE USED.
 - ***THE TYPE OF VALVE AND/OR TAMPER SWITCH IS GOVERNED BY THE LOCAL FIRE AUTHORITY ***
 - FOR SIZES 3" & LARGER = FLANGED, OS&Y WITH RESILIENT SEAT.
 - OPTIONAL FOR DOM AND/OR FIRE: GROOVED CONNECTIONS BETWEEN DEVICE & VALVES ARE ALLOWED, OPTIONAL FOR FIRE ONLY: GROOVED OUTLET CONNECTION ON OUTLET VALVE IS ALLOWED.

REMINDER:

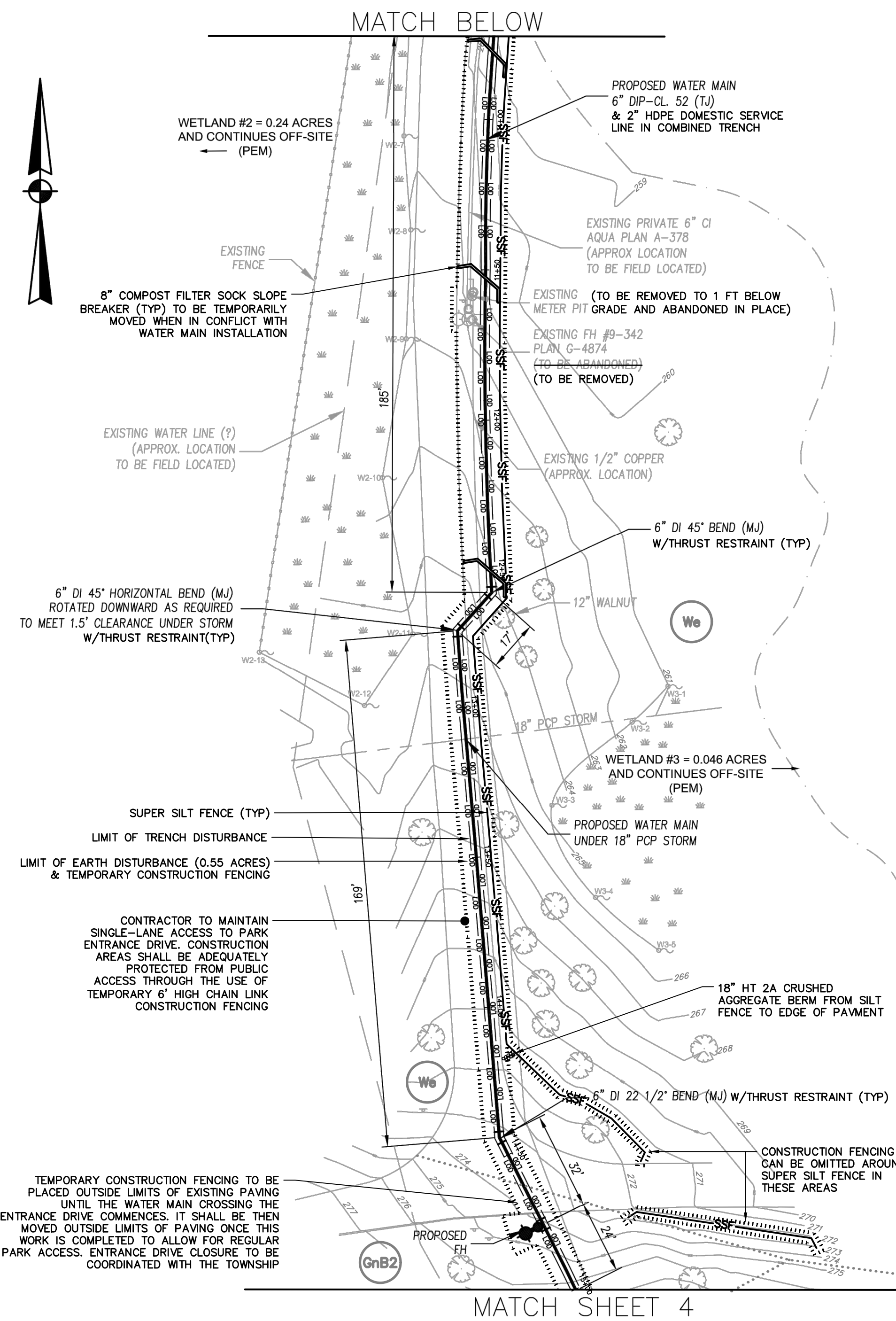
- ALL FITTINGS ARE TO BE PROPERLY SUPPORTED, SO METER CAN BE REMOVED/SERVICED.
- ALL PIPE/FITTINGS (3" & LARGER) MUST HAVE SOLID FLANGES UP TO AND INCLUDING THE BACKFLOW DEVICE; THIS INCLUDES THE INLET FLANGE ENTERING THE BUILDING OR PIT.

DEFINITIONS

OPEN FIRE SYSTEM: ANY FIRE SYSTEM, SUPPLIED DIRECTLY BY AQUA, THAT INCLUDES APPURTENANCES TO THE SYSTEM SUCH AS PRIVATE FIRE HYDRANTS, RESERVOIRS OR HOLDING TANKS THAT REQUIRE OR PERMIT THE FLOW OF WATER FOR STORAGE FOR FUTURE FIREFIGHTING PURPOSES, OR FIREFIGHTING TRAINING, ETC. IN SUCH A VOLUME, THAT AQUA WOULD REQUIRE AND INSTALL A FULL FLOW METER.

CLOSED FIRE SYSTEM: ANY FIRE SYSTEM, SUPPLIED DIRECTLY BY THE AQUA, THAT INCLUDES ONLY AUTOMATIC SPRINKLER, STANDPIPE, OR OTHER AUTOMATIC FIRE SERVICE DEVICES. A CLOSED SYSTEM DOES NOT INCLUDE PRIVATE FIRE HYDRANTS, RESERVOIRS, OR HOLDING TANKS OF ANY SIZE OR CONSTRUCTION.

DOMESTIC SERVICE: ANY SERVICE OTHER THAN FIRE, SUPPLIED DIRECTLY BY AQUA, WHICH INCLUDES RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL CUSTOMERS.



MATCH SHEET 4

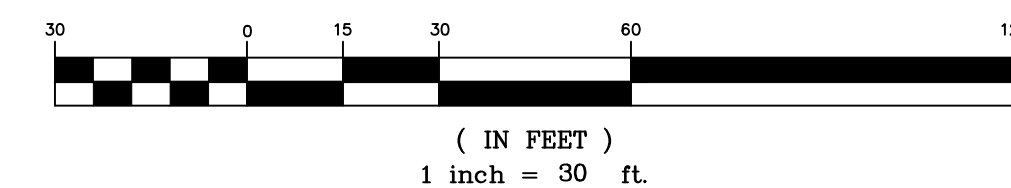
AQUA NOTES FOR METER BOX/VAULTS:

- IN GENERAL, METER BOX/VAULTS ARE TO BE INSTALLED ON THE PROPERTY BEING SERVED AND IN AN OFF-STREET LOCATION WITHIN 35 FT. OF THE PROPERTY LINE. SEE NOTE #5.
- ALL METER VAULTS SHALL BE PRE-CAST AND DESIGNED FOR H-20 LOADING. SEGMENTS SHALL BE KEYS, AND THEIR JOINTS AND ALL PENETRATIONS WATER TIGHT.
 - CONCRETE SHALL CONSIST OF PORTLAND CEMENT THAT CONFORMS TO ASTM C150, AND AGGREGATES THAT CONFORM TO ASTM C33. THE MINIMUM COMPRESSIVE STRENGTH SHALL BE 4000 PSI.
 - REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60 FOR BARS OR ASTM A185 FOR WELDED WIRE FABRIC.
 - SUMP HOLE, 12 IN. X 4 IN. DEEP, TO BE PROVIDED.
 - METER PIT/VAULT LOCATIONS MUST BE APPROVED PRIOR TO INSTALLATION.
 - THE LOCATION OF THE METER BOX /VAULT SHALL BE SUBJECT TO THE EXPRESS APPROVAL OF AQUA; IN MOST CASES, METER BOX/VAULT SHALL BE LOCATED INSIDE THE PROPERTY LINE BY THE CUSTOMER (OUTSIDE THE STREET/ROAD AND/OR COMPANY RIGHT-OF-WAY) OF THE STRUCTURE TO BE SERVED WITH THE INLET SIDE OF PIT ABUTTING THE PROPERTY LINE CLOSEST TO THE TAP LOCATION. THE CUSTOMER'S SERVICE LINE SHOULD BE CONNECTED DIRECTLY TO AQUA'S SERVICE LINE AND CONTINUE DIRECTLY INTO THE METER PIT. 0 BENDS ARE ALLOWED PRIOR TO THE METER PIT EXCEPT FOR ELEVATION DIFFERENCES.
 - METER BOX/VAULT IS TO BE LOCATED IN GRASS OR SIDEWALK AREA, WHICH WILL NOT BE SUBJECT TO VEHICULAR LOADING. BOLLARDS OR CURBING MUST BE INSTALLED AROUND METER BOX/VAULT IF IT IS INSTALLED IN A PAVED OR TRAFFIC AREA.
 - ALL ACCESS DOORS TO BE BILCO ALUMINUM, SINGLE OR DOUBLE LEAF TYPE J-4AL, CHANNEL FRAME W/ STAINLESS STEEL HARDWARE THROUGHOUT, OR EQUAL.
 - ALL DOORS TO BE CENTERED OVER THE METER.
 - METER BOX/VAULT IS TO BE SET BETWEEN 1 IN. AND 4 IN. ABOVE FINISHED GRADE IN GRASS AREA AND GRADE TO BE SLOPED TO DIVERT WATER AWAY FROM BOX/VAULT.
 - ANY ALTERATIONS TO A NEW OR EXISTING BOX/VAULT MUST BE APPROVED PRIOR TO CONSTRUCTION OR CHANGE.
 - WHEN A CONCRETE VAULT IS USED, A 10 FOOT WIDE (MIN.) PAVED SURFACE FROM THE ROAD TO THE VAULT, INCLUDING CURB DEPRESSION, MUST BE PROVIDED, AND MAINTAINED FOR VEHICLE ACCESS.
 - TRUCK ACCESS TO THE VAULT MUST BE MAINTAINED AT ALL TIMES (E.G. RAIN, SNOW, ETC.).
 - REDUCED PRESSURE BACKFLOW DEVICES ARE NOT PERMITTED BELOW GRADE.
 - FOR NEW CONSTRUCTION, THE METER SHALL BE REQUIRED TO BE TO BE INSTALLED OUTSIDE THE BUILDING IN A METER BOX/VAULT. ALL METER BOX/VAULTS MUST MEET AQUA'S SPECIFICATIONS & APPROVAL.

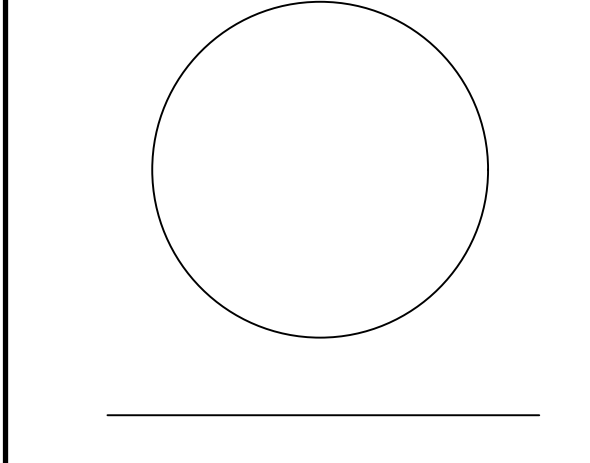
AQUA NOTES FOR PLUMBERS AND BUILDERS

- 1. SERVICE LINES, MAINS, AND EQUIPMENT:**
- AQUA WILL MAKE ALL CONNECTIONS TO ITS MAINS AND FURNISH, INSTALL, AND MAINTAIN THE SERVICE LINES FROM THE WATER MAIN TO AND INCLUDING THE CURB STOP AND BOX, WHICH UNDER NORMAL CIRCUMSTANCES WILL BE PLACED INSIDE THE CURB LINE.
 - AQUA'S SERVICE LINE WILL BE THE PROPERTY OF THE COMPANY AND UNDER ITS CONTROL.
 - AQUA RESERVES THE RIGHT TO DETERMINE THE SIZE, KIND, AND LOCATION OF THE SERVICE LINE FROM THE MAIN TO THE CURB, AND FROM THE CURB TO THE PROPERTY TO BE SERVED.
- 2. CUSTOMER'S INSTALLATION & MAINTENANCE OF SERVICE LINES:**
- THE CUSTOMER'S SERVICE LINE SHALL BE Laid IN A STRAIGHT LINE AT A RIGHT ANGLE TO THE CURB LINE (WHERE POSSIBLE) WITHIN THE BUILDING LIMITS OF THE STRUCTURE TO BE SERVED AND AT LEAST FOUR FEET (4') BELOW THE SURFACE OF THE GROUND IN PROPERTY OWNED BY THE CUSTOMER, IN FEE SIMPLE ABSOLUTE.
 - NO SERVICE LINE SHALL BE LAID IN THE SAME TRENCH WITH A GAS LINE, ELECTRIC LINE, DRAIN OR SEWER LINE, OR ANY OTHER FACILITY OF ANOTHER PUBLIC SERVICE COMPANY, NOR WITHIN FOUR FEET (4') OF ANY OPEN EXCAVATION, RETAINING WALL OR VAULT.
- 3. LOCATION OF CUSTOMER'S SERVICE LINES:**
- THE CUSTOMER'S SERVICE LINE SHALL NOT CROSS INTERVENING PROPERTIES UNLESS THERE IS NO OTHER WAY IN WHICH SERVICE CAN BE PROVIDED DUE TO THE PROPERTY BEING LANDLOCKED AND AN APPROPRIATE EASEMENT IS OBTAINED BY THE CUSTOMER FOR THE CUSTOMER.
 - THE CUSTOMER'S SERVICE LINE SHALL BE LAID IN A STRAIGHT LINE AT A RIGHT ANGLE TO THE CURB LINE (WHERE POSSIBLE) WITHIN THE BUILDING LIMITS OF THE STRUCTURE TO BE SERVED AND AT LEAST FOUR FEET (4') BELOW THE SURFACE OF THE GROUND IN PROPERTY OWNED BY THE CUSTOMER, IN FEE SIMPLE ABSOLUTE.
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- 4. TYPE OF PIPING INSTALLED BY CUSTOMER:**
- TYPE "K" COPPER SHALL BE USED THROUGHOUT FOR SERVICE LINES UP TO AND INCLUDING TWO INCHES (2") IN DIAMETER. COMPRESSION OR FLARED FITTINGS SHALL BE USED FOR UNDERGROUND CONNECTIONS; SWEAT OR THREADED JOINTS SHALL BE USED IN BUILDINGS AND PITS.
 - SERVICE LINES THREE INCHES (3") IN DIAMETER AND LARGER SHALL BE CEMENT LINED DUCTILE IRON PIPE.
 - THE MINIMUM DIAMETER OF PIPE USED FOR DOMESTIC SERVICES (CURB TO BUILDING) SHALL BE 3/4 OF AN INCH.
- 5. METERS:**
- ALL METERS WILL BE FURNISHED AND INSTALLED BY AQUA AND WILL REMAIN THE PROPERTY OF THE COMPANY AND BE SUBJECT TO ITS CONTROL.
 - AQUA RESERVES THE RIGHT TO DETERMINE THE SIZE, TYPE AND LOCATION OF THE METER TO BE INSTALLED IN THE CUSTOMER'S PROPERTY, INCLUDING WHETHER SUCH METER WILL BE MANUALLY READ, REMOTELY READ FROM OUTSIDE THE BUILDING, OR READ AUTOMATICALLY USING TV CABLE TELEPHONE OR SIMILAR LINES AND/OR RADIO SIGNAL COMMUNICATIONS. AS A CONDITION OF PROVIDING SERVICE, THE COMPANY SHALL HAVE THE RIGHT TO INSTALL SUCH EQUIPMENT, CONNECTIONS AND WIRING IN THE MANNER AND LOCATION IT DEEMS APPROPRIATE. SAID EQUIPMENT WILL REMAIN THE PROPERTY OF THE COMPANY.
- 6. CONTROL VALVES:**
- CONTROL VALVES SHALL BE PLACED BY THE CUSTOMER ON THE SERVICE LINE AS SHOWN ON THE PIPING DETAIL PLANS.
 - FULL-PORT BALL VALVES SHALL BE USED FOR SERVICE LINES TWO INCHES (2") IN DIAMETER AND SMALLER.
 - O.S. & Y. GATE VALVES WITH RESILIENT-SEAT SHALL BE USED FOR DOMESTIC AND FIRE SERVICE LINES THREE INCHES (3") IN DIAMETER AND LARGER.
- 7. CONDITIONS REQUIRING METER PIT INSTALLATION BY CUSTOMER:**
- FOR NEW CONSTRUCTION, THE METER SHALL BE REQUIRED TO BE INSTALLED OUTSIDE THE BUILDING IN A METER BOX/VAULT. THIS PROJECT SHALL BE CONSIDERED "NEW CONSTRUCTION" FOR ALL INTENTS AND PURPOSES.
- 8. PRESSURE REDUCING VALVES:**
- A PRESSURE REDUCING VALVE (PRV) IS REQUIRED WHERE THE AQUA'S SYSTEM PRESSURE EXCEEDS 80 PSI ON ALL DOMESTIC SERVICES, 100 PSI ON RESIDENTIAL FIRE SERVICES OR 150 PSI ON COMMERCIAL FIRE SERVICES AND AT THE DISCRETION OF AQUA WHERE IT IS BELIEVED THAT THE PRESSURE MAY EXCEED THE ABOVE LIMITATIONS. SAID VALVE SHALL BE INSTALLED BY THE CUSTOMER ON THE INLET SIDE OF THE METER AND FOLLOW ALL PIPING SPECIFICATIONS.
- 9. PIPE JOINTS, FITTINGS, AND FIXTURES:**
- WHEN SOLDER OR FLUX ARE USED FOR JOINING PIPE AND FITTINGS, COMPLIANCE WITH THE SAFE DRINKING WATER ACT AMENDMENT OF 1986, SECTION 1417, SHALL APPLY.
 - LIKEWISE, ALL FAUCETS AND FIXTURES MUST BE LEAD-FREE AND IN COMPLIANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND CODES.
- 10. CROSS-CONNECTION CONTROL (BACKFLOW PROTECTION) OR SPECIAL DEVICES:**
- IF IN THE AQUA'S OPINION, AN APPROVED BACKFLOW PREVENTION DEVICE OR OTHER SPECIAL DEVICE IS NECESSARY TO PREVENT POSSIBLE CONTAMINATION OF THE WATER SUPPLY, THE COMPANY MAY REQUIRE THE CUSTOMER TO INSTALL AND MAINTAIN SUCH DEVICE(S) AT A LOCATION AND IN A MANNER APPROVED BY THE COMPANY.
- 11. ACTIVATION OF SERVICE:**
- AQUA WILL INSTALL THE METER AND TURN ON THE SERVICE AFTER THE CUSTOMER HAS THE PLUMBING ARRANGED (INCLUDING ALL REQUIRED FIXTURES) TO RECEIVE THE METER AT A POINT APPROVED BY THE COMPANY, SO AS TO CONTROL THE ENTIRE SUPPLY.
 - PA LAW (CRIMINAL CODE 18 PA. C.S.A., SECTION 3926) PROHIBITS THE ACTIVATION OF A PUBLIC UTILITY WITHOUT A MEASURING DEVICE (WATER METER).

GRAPHIC SCALE



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 Phone: 484-875-3073
 www.carrollengineering.com



**WATER MAIN PLAN
 STATION 10+72 TO 15+00**

**THE WILLOWS PARK
 WATER MAIN REPLACEMENT**

SITUATED IN
 RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA
 PREPARED FOR
**RADNOR TOWNSHIP
 301 IVEN AVENUE
 WAVERNE, PA 19087-5297**

NO.	DATE	DESCRIPTION	INITIALS
1	10-15-20	ISSUED FOR BIDDING	CAP
2	10-15-20	PERSON PERIODIC REVIEW LETTER DATED OCTOBER 15, 2020	CAP
3	10-15-20	GENERAL EXCHANGES	CAP

DATE	2-24-2020
CADD FILE	2016510001
JOB NO	20-1651
DSG BY	CAP
DWN BY	CAP
CKD BY	ABM
SCALE	1" = 30'
DRAWER NUMBER	-
SHEET	4 OF 10 SHEETS
DRAWING NUMBER	C-104



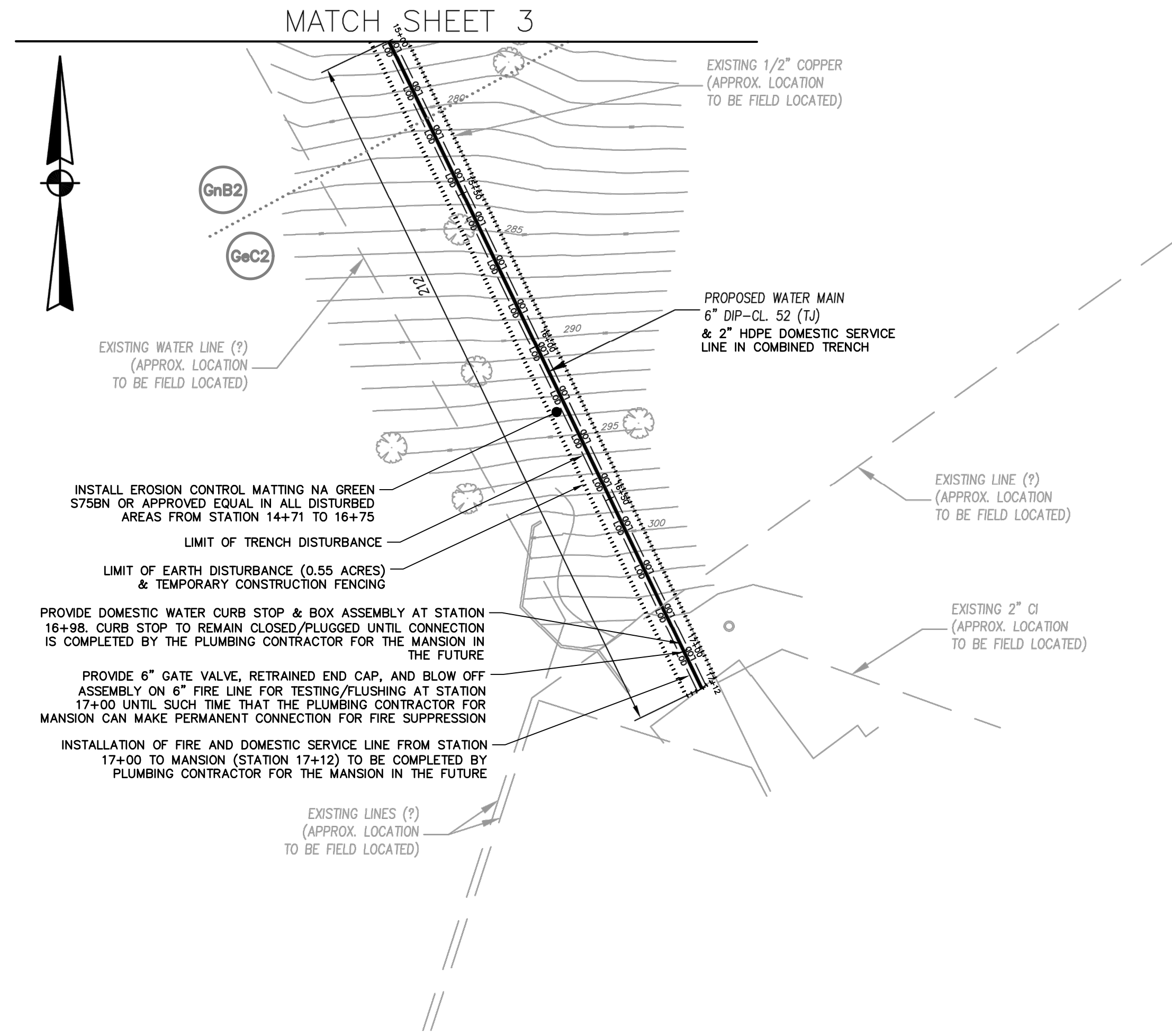
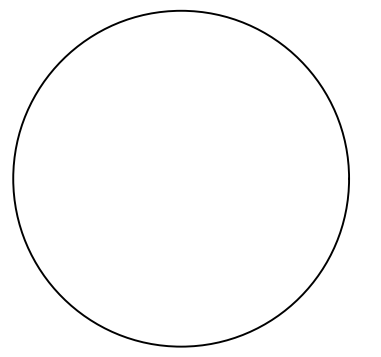
Carroll Engineering Corporation

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FAX: 215.343.0875

630 Freedom Business Ctr., 3rd Fl. 105 Rader Boulevard, Suite 206
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101 Lindenwood Drive, Suite 225
Malvern, PA 19355
Phone: 484-875-3073

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WATER MAIN PLAN
STATION 15+00 TO 17+12

THE WILLOWS PARK
WATER MAIN REPLACEMENT
SITUATED IN
RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA
PREPARED FOR
RADNOR TOWNSHIP
301 IVEN AVENUE
WAYNE, PA 19087-5297

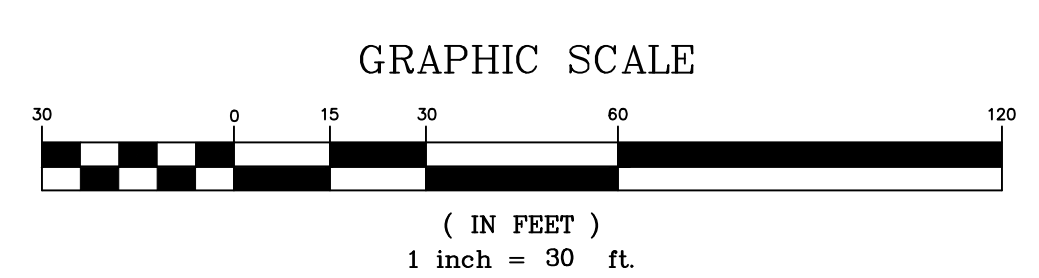
NO.	DATE	DESCRIPTION
3	4-14-21	ISSUED FOR BIDDING
2	1-13-21	ISSUED FOR PERIODIC REVIEW (LETTER DATED OCTOBER 15, 2020)
1	4-13-20	CONCEPTUAL DESIGN

DATE 2-24-2020
CADD FILE 2016510001
JOB NO 20-1651

DSG BY CAP
DWN BY CAP
CKD BY ABM
SCALE 1" = 30'

DRAWER NUMBER -
SHEET 5 OF 10 SHEETS

DRAWING NUMBER
C-105

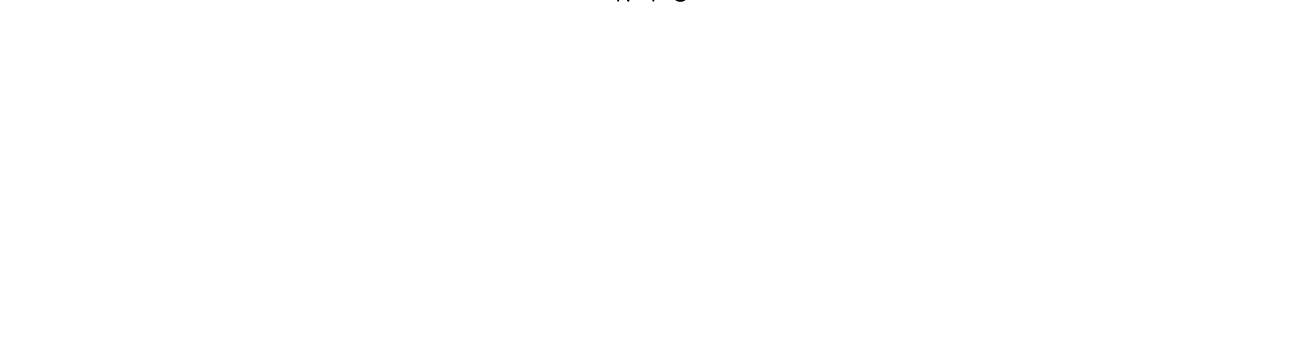


**BEARING SURFACE REQUIRED - Sq Ft
HORIZONTAL THRUST BLOCKING & VERTICAL THRUST DOWNWARD
100 PSI WORKING PRESSURE**

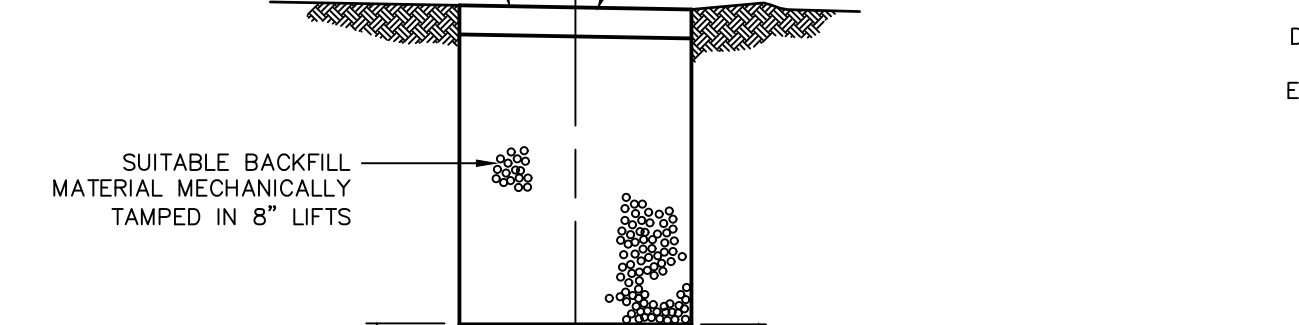
PIPE SIZE	6" & 8"				10" & 12"				16" 18" 20"				24"			
	DEGREE OF BEND		OR DEFLECTION		DEGREE OF BEND		OR DEFLECTION		DEGREE OF BEND		OR DEFLECTION		DEGREE OF BEND		OR DEFLECTION	
TYPE OF BEARING MATERIAL AND ALLOWABLE LOADS	22.5°	45°	90°	D.E.	22.5°	45°	90°	D.E.	22.5°	45°	90°	D.E.	22.5°	45°	90°	D.E.
SAND 0.75 TON/SQ FT	3.4	6.0	11.0	6.4	6.7	12.8	23.4	14.2	14.8	28.8	52.9	34.4	26.1	48.3	89.7	64.0
SOFT CLAY 1 TON/SQ FT	2.6	4.6	8.2	4.8	5.0	9.6	17.5	10.7	11.2	21.7	39.7	28.2	19.6	36.3	67.3	48.0
SAND AND GRAVEL 2 TON/SQ FT	1.3	2.3	4.1	2.4	2.5	4.8	8.8	5.3	5.6	10.8	20.0	14.1	9.8	13.1	33.6	24.0
CLAY 4 TON/SQ FT	1.0	1.2	2.1	1.3	1.3	2.4	4.4	2.7	2.8	5.4	10.0	7.2	4.9	9.1	16.8	12.0
SOFT ROCK 5 TON/SQ FT	1.0	1.0	1.6	1.0	1.0	1.9	3.5	2.2	1.6	4.4	8.0	5.7	3.9	7.3	13.5	9.6
ROCK 15 TON/SQ FT	—	—	1.0	0.4	—	1.0	1.2	0.8	1.0	1.4	2.6	1.9	1.3	2.4	4.5	3.2

PIPE SIZE	30"				36"				42"				48"			
	DEGREE OF BEND		OR DEFLECTION		DEGREE OF BEND		OR DEFLECTION		DEGREE OF BEND		OR DEFLECTION		DEGREE OF BEND		OR DEFLECTION	
TYPE OF BEARING MATERIAL AND ALLOWABLE LOADS	22.5°	45°	90°	D.E.	22.5°	45°	90°	D.E.	22.5°	45°	90°	D.E.	22.5°	45°	90°	D.E.
SAND 0.75 TON/SQ FT	40.3	76.5	139	99.1	55.5	107.5	197.5	140.0	74.3	144.7	266.5	518.7	83.2	182.3	336.2	238.0
SOFT CLAY 1 TON/SQ FT	30.2	57.4	104.3	74.3	41.6	80.6	148.0	105.0	55.7	108.5	200.0	141.6	70.0	136.7	252.1	178.0
SAND AND GRAVEL 2 TON/SQ FT	15.1	28.7	52.1	37.2	20.8	40.3	74.0	52.5	27.9	54.3	100.0	70.8	35.0	68.3	128.1	89.2
CLAY 4 TON/SQ FT	7.6	14.6	26.0	18.6	10.4	20.2	37.0	26.3	14.0	27.0	50.0	35.3	17.5	34.2	63.0	44.6
SOFT ROCK 5 TON/SQ FT	6.0	11.5	20.9	14.9	8.3	16.1	29.6	21.0	11.2	21.7	40.0	28.3	14.0	27.3	50.4	35.7
ROCK 15 TON/SQ FT	2.0	3.8	7.0	5.0	1.4	2.8	5.4	7.0	3.7	7.2	13.3	9.4	4.7	9.1	16.8	12.0

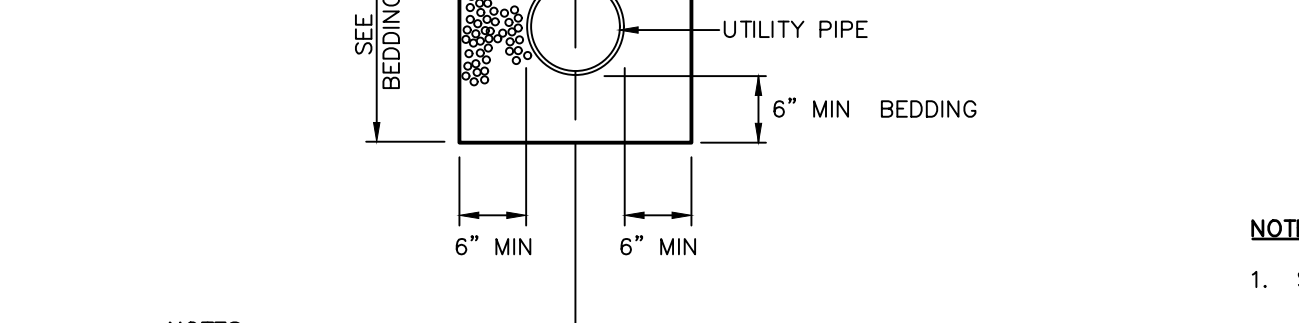
THRUST BLOCK BEARING SURFACE REQUIREMENTS
N T S



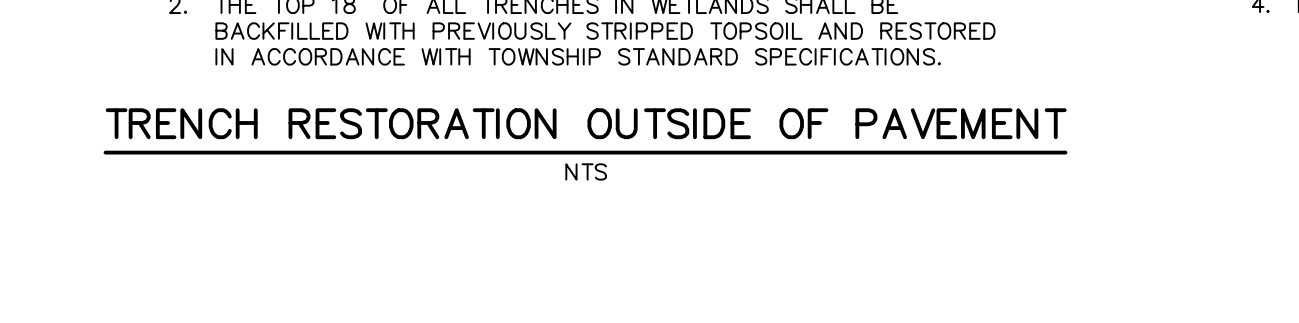
TRENCH RESTORATION OUTSIDE OF PAVEMENT
N T S



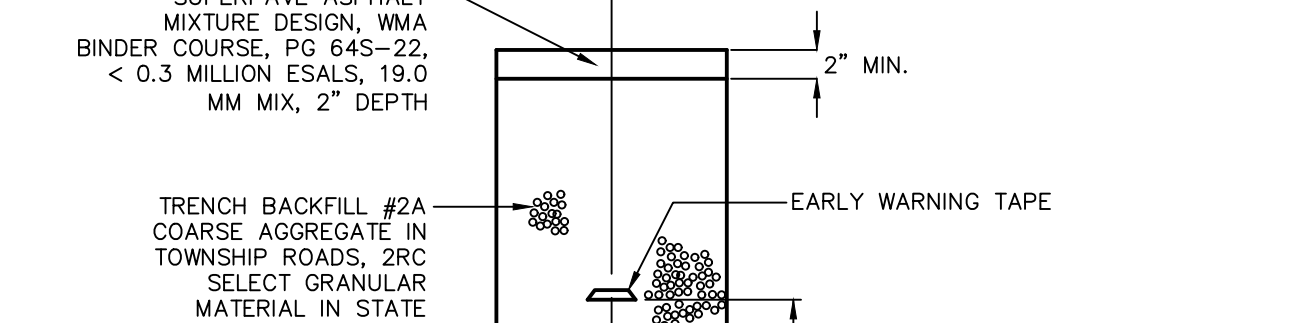
PERMANENT PAVEMENT RESTORATION
N T S



TEMPORARY PAVEMENT RESTORATION
N T S



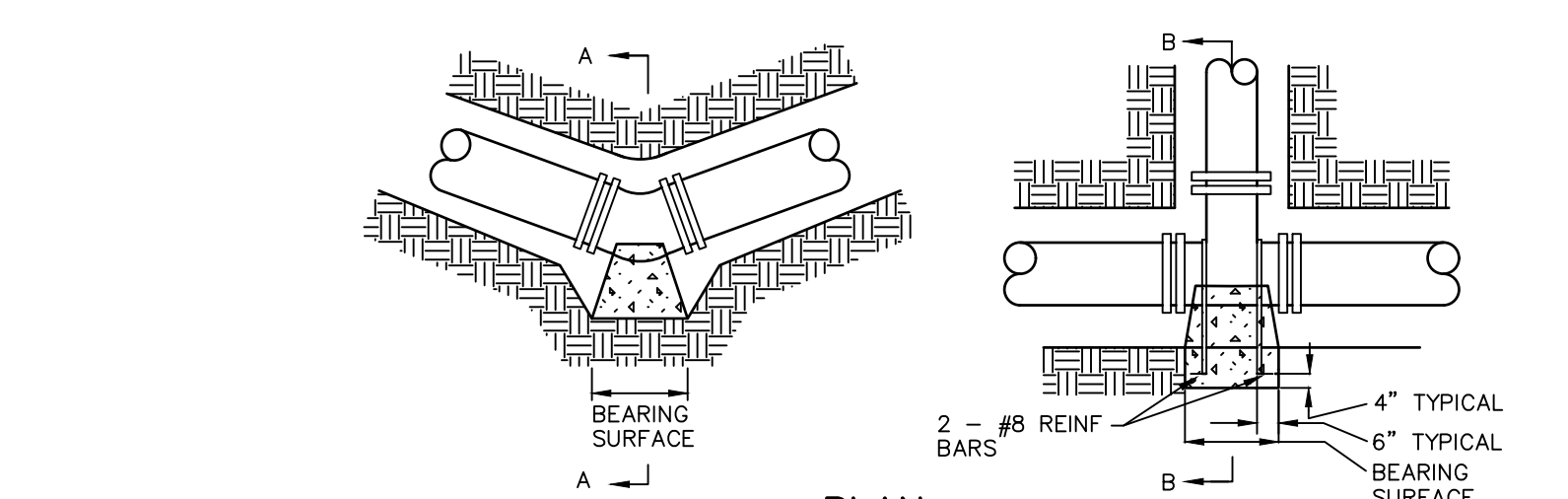
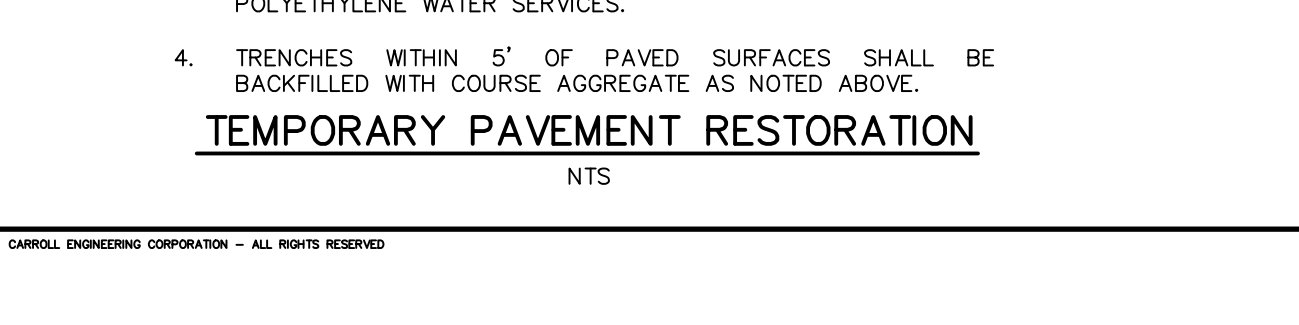
TYPICAL GATE VALVE WITH VALE BOX
N T S



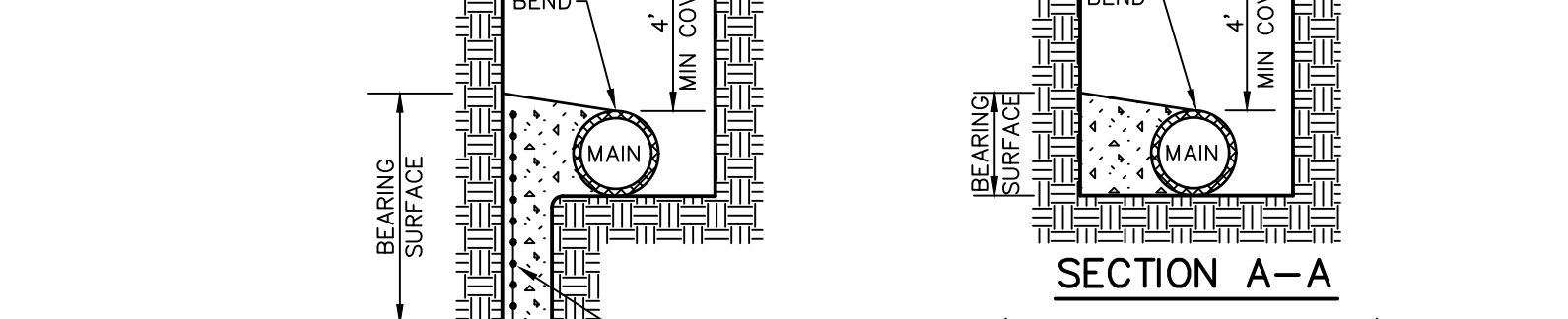
2" BLOW OFF
N T S



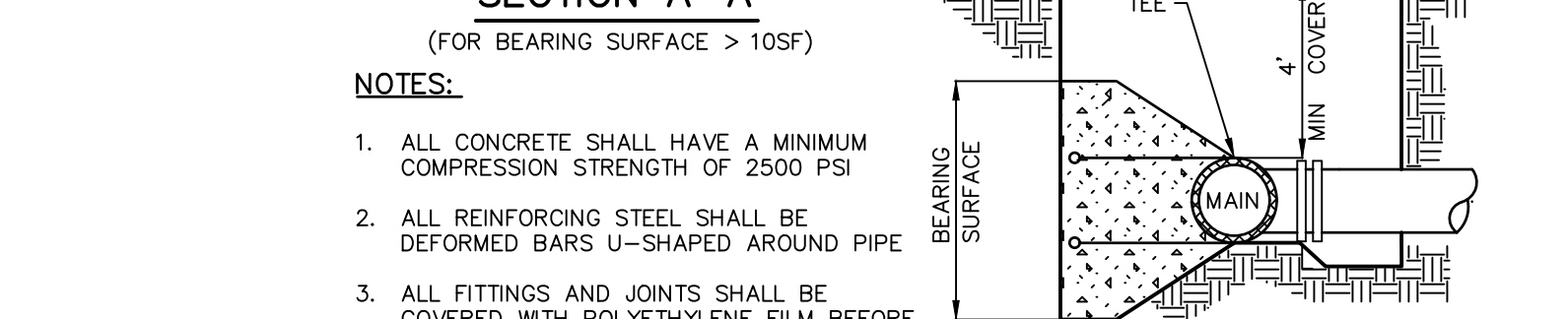
TYPICAL WATER SERVICE CONNECTION
N T S



WATER CROSSINGS
ENCASEMENT SECTION
UTILITY CROSSINGS

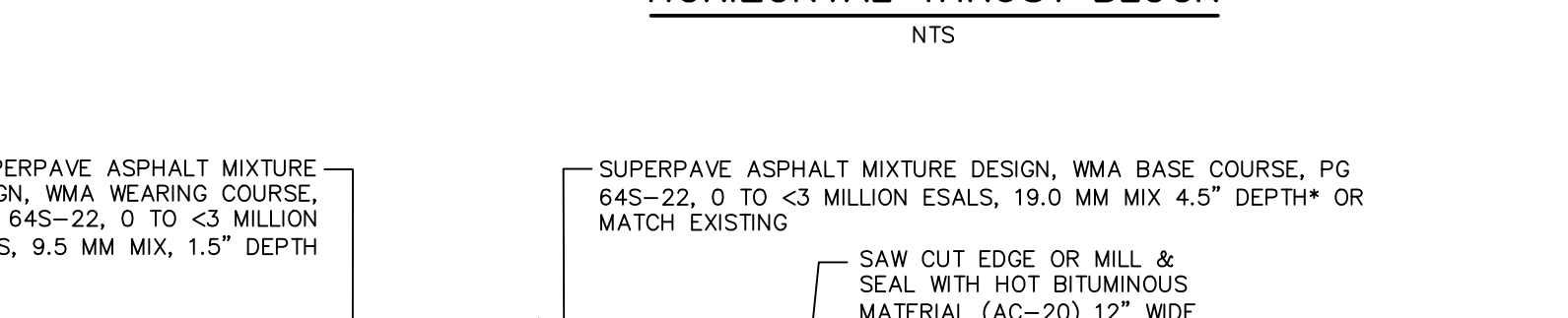


SECTION A-A
(FOR BEARING SURFACE > 10SF)

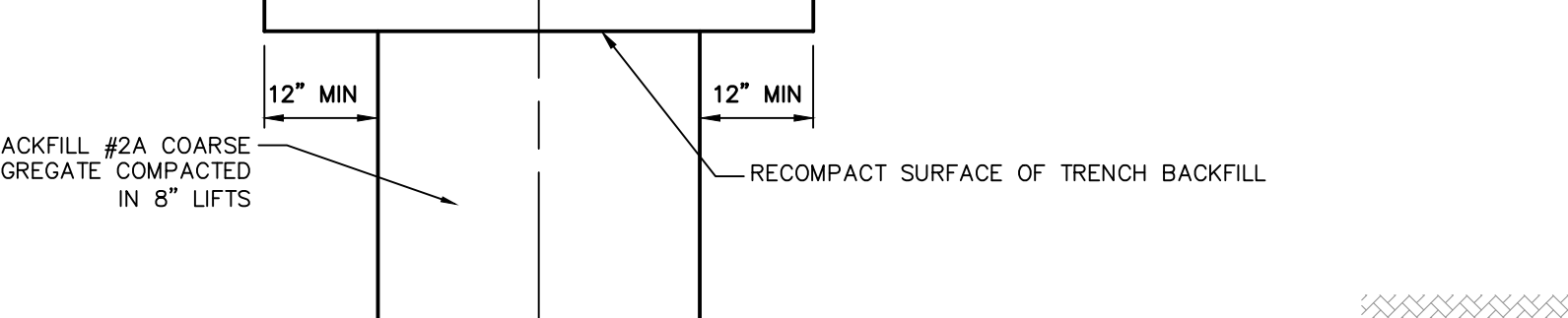


SECTION B-B

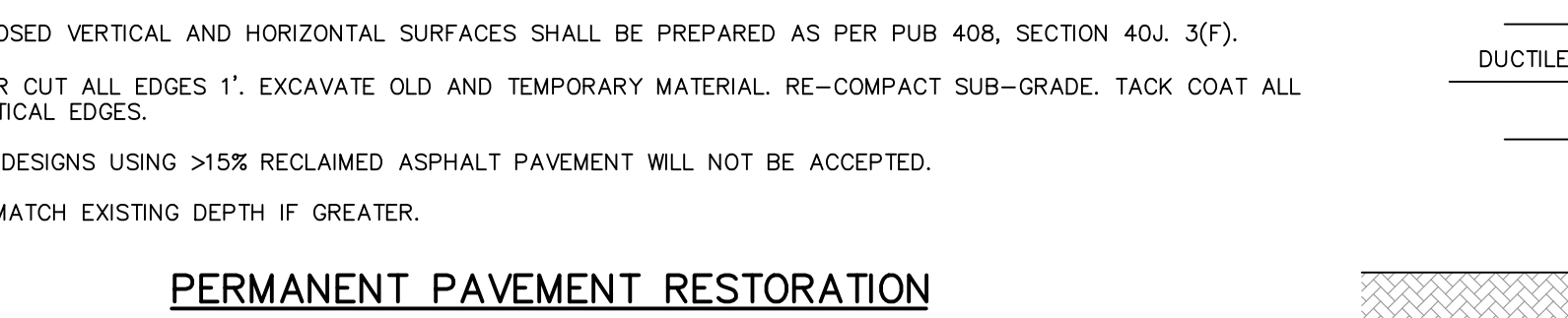
HORIZONTAL THRUST BLOCK
N T S



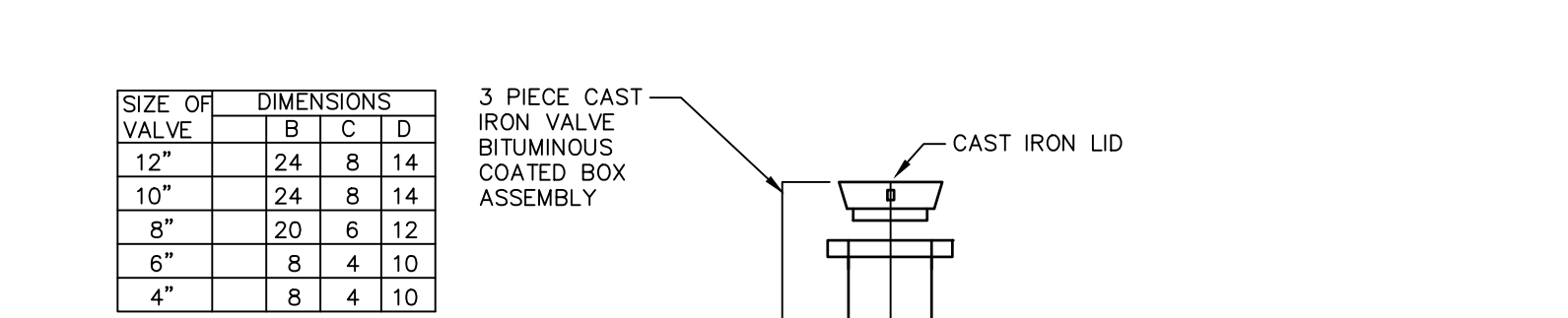
TRENCH RESTORATION FOR UNIMPROVED SHOULDER OF STATE HIGHWAY, OR TOWNSHIP ROAD
N T S



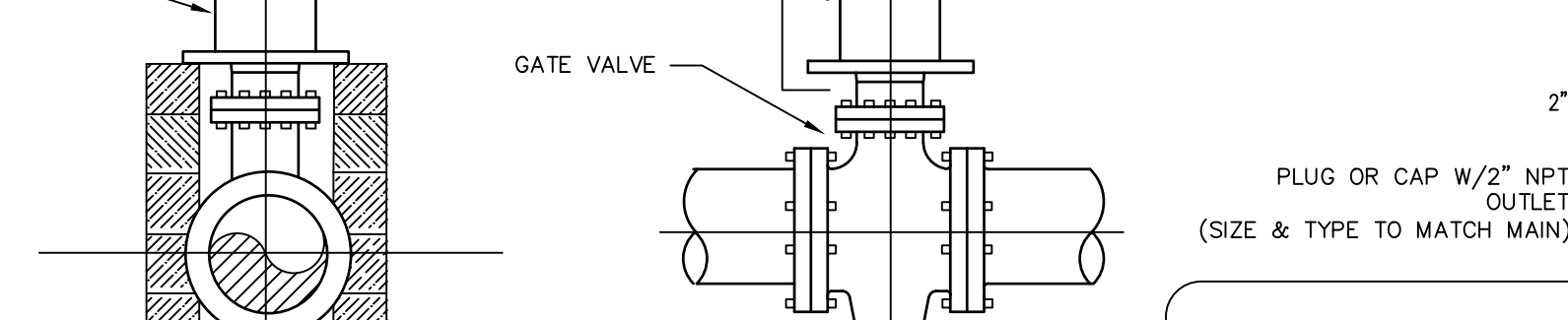
CONCRETE ENCASEMENT
N T S



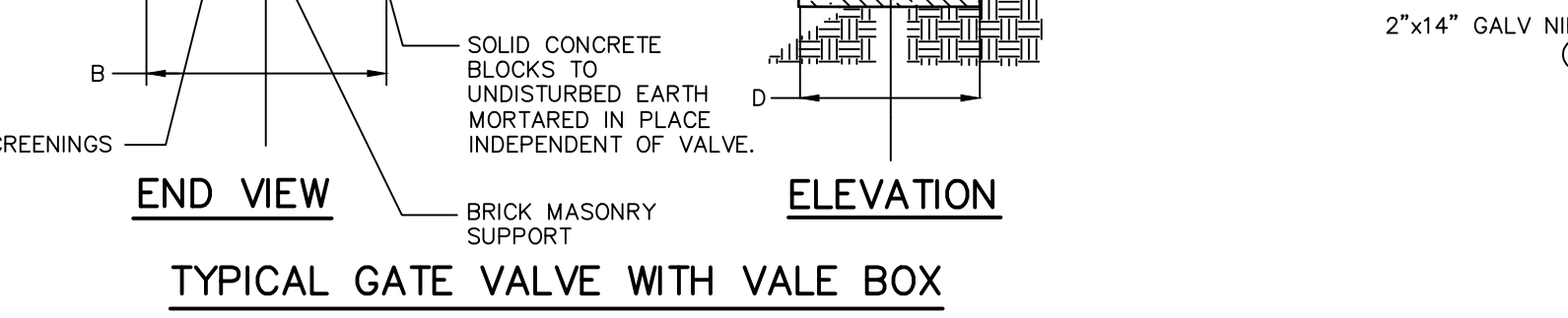
CONCRETE ENCASEMENT
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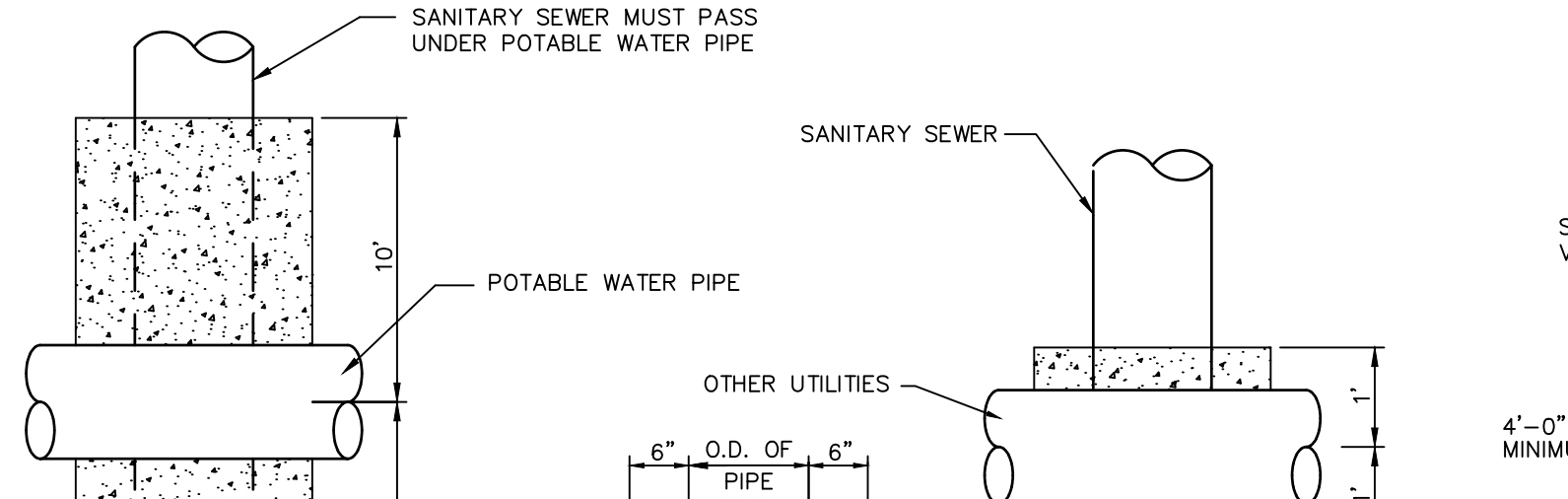
FIRE HYDRANT CONNECTION
N T S



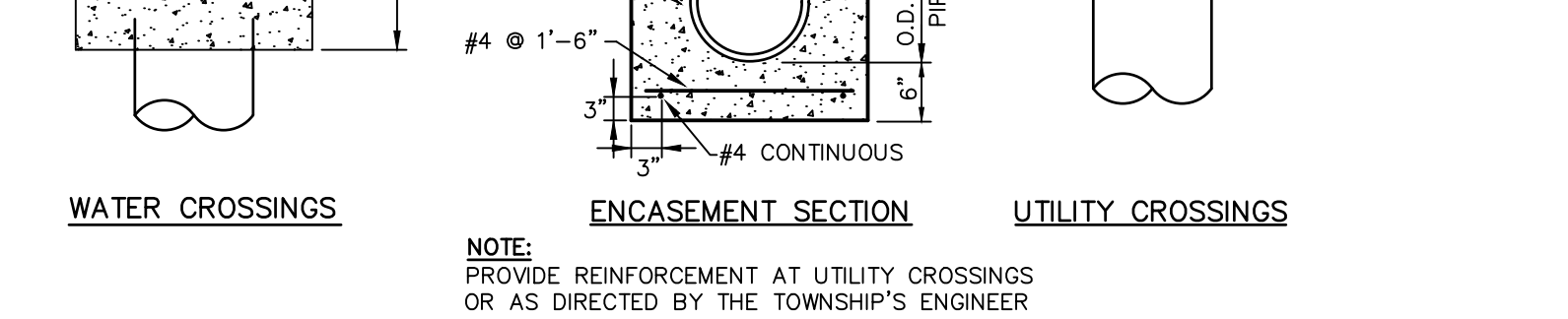
PIPE BEDDING (COMBINED TRENCH)
N T S



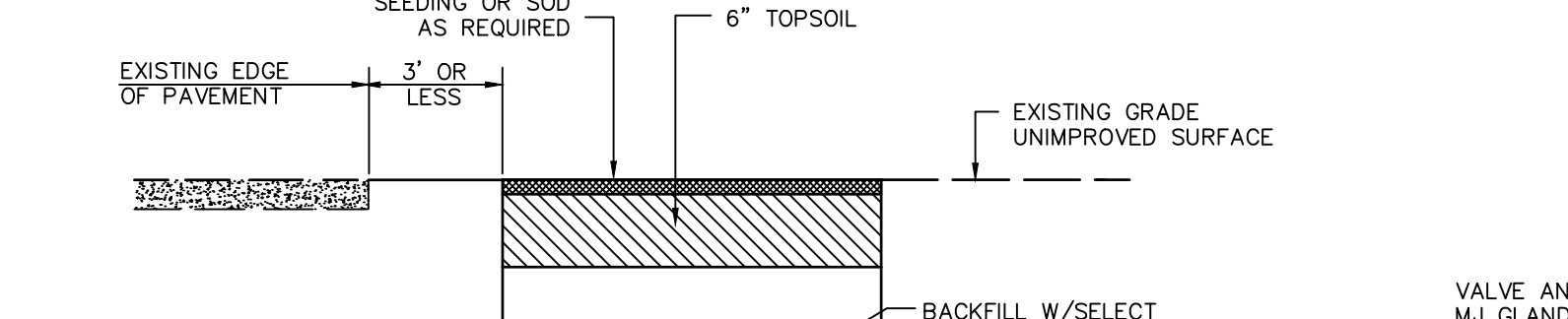
2" BLOW OFF
N T S



WATER CROSSINGS
ENCASEMENT SECTION
UTILITY CROSSINGS

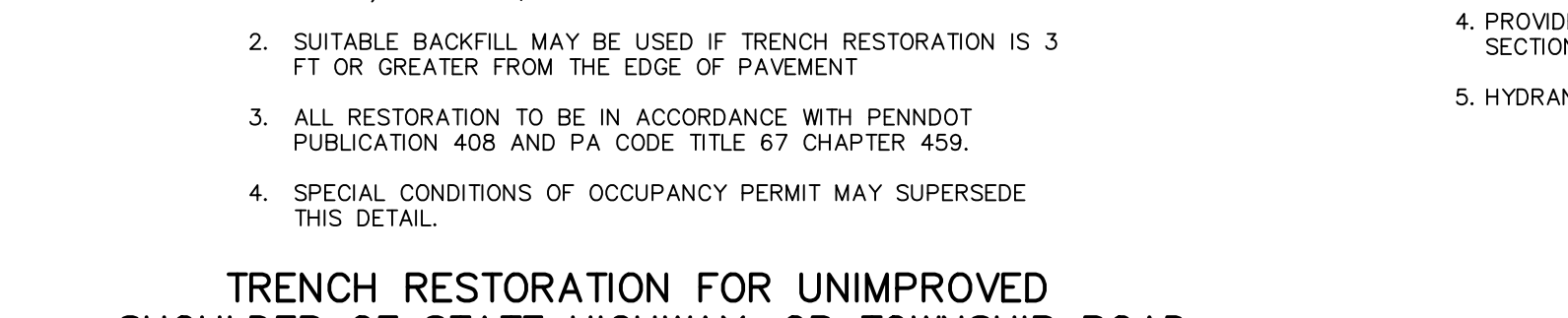


SECTION A-A
(FOR BEARING SURFACE > 10SF)

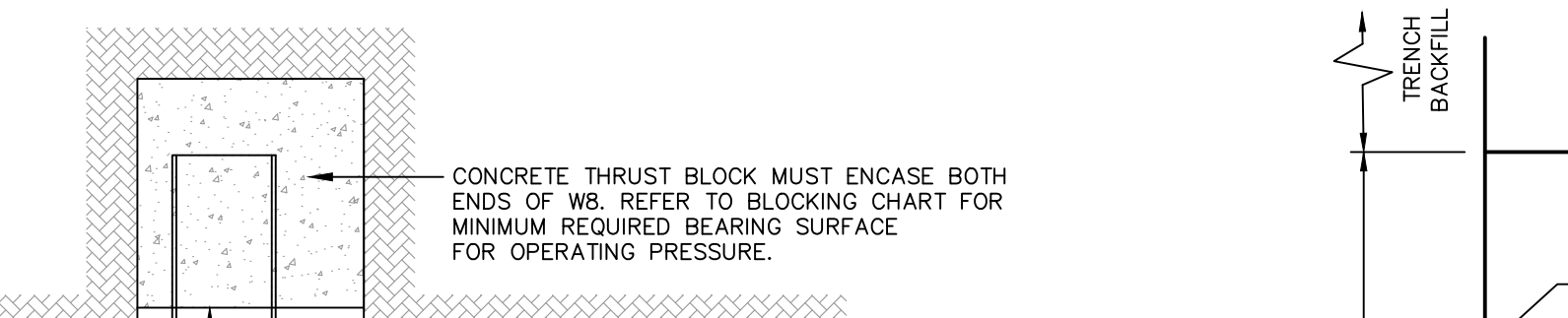


SECTION B-B

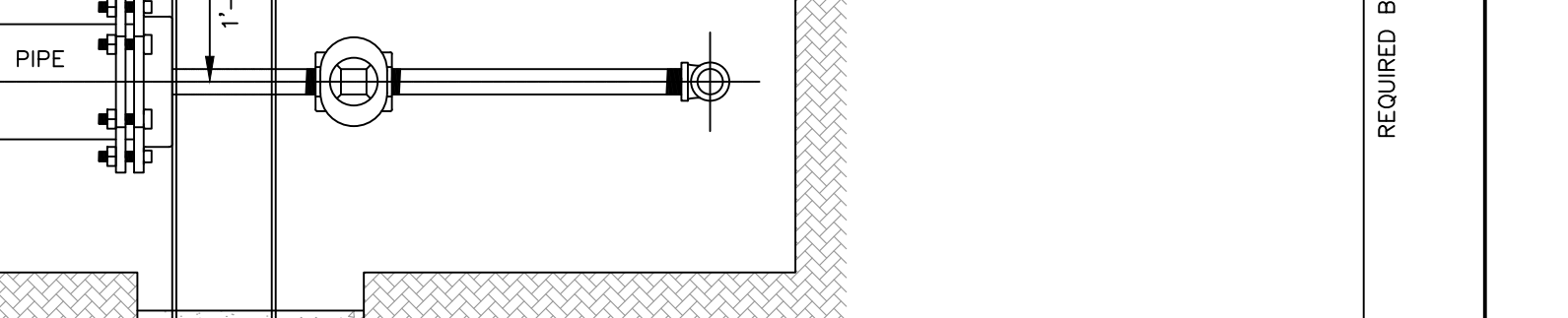
HORIZONTAL THRUST BLOCK
N T S



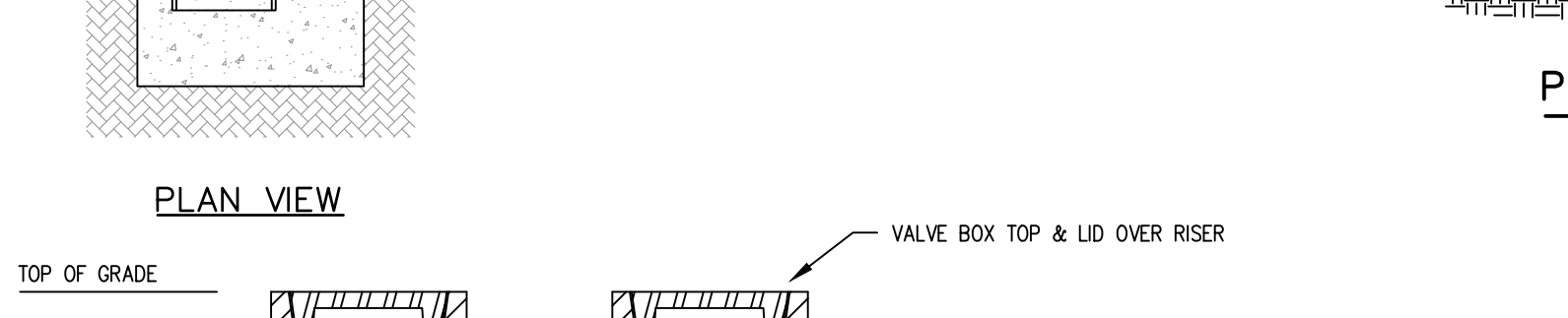
TRENCH RESTORATION FOR UNIMPROVED SHOULDER OF STATE HIGHWAY, OR TOWNSHIP ROAD
N T S



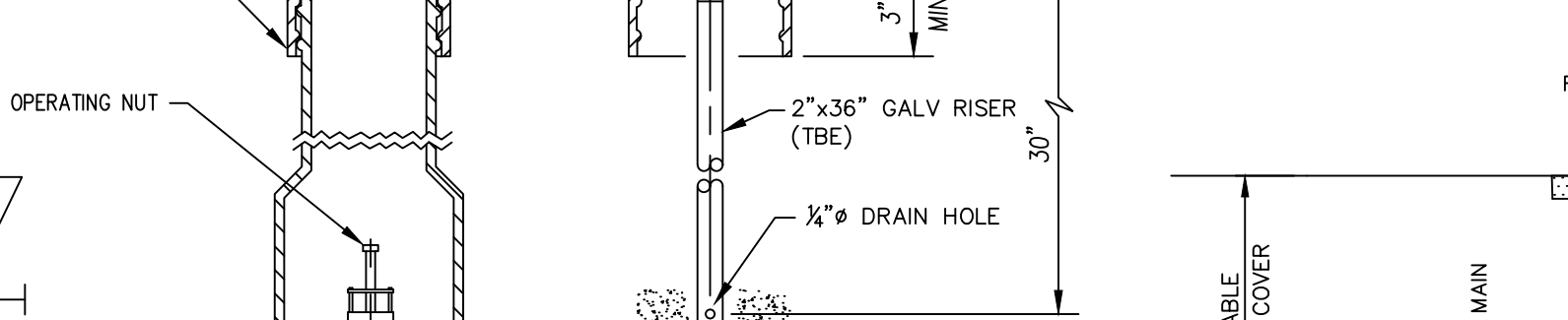
CONCRETE ENCASEMENT
N T S



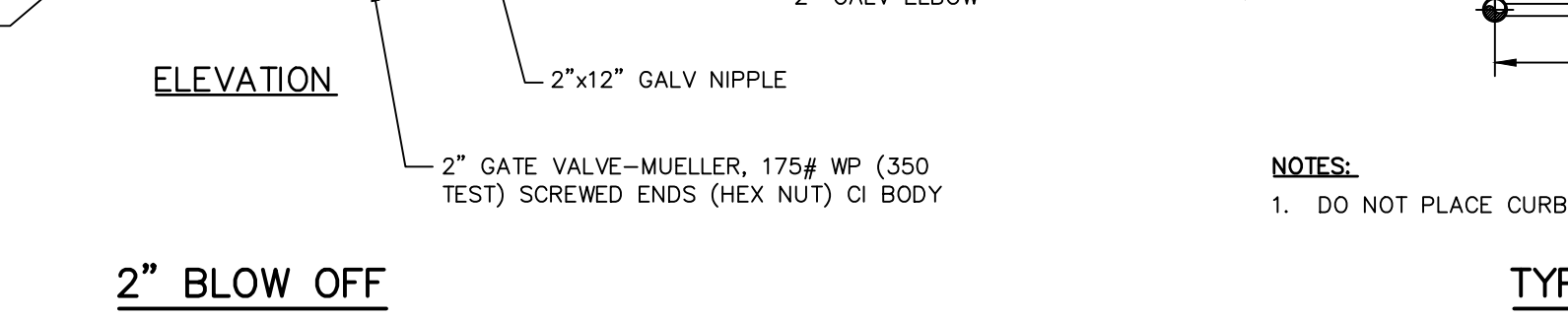
CONCRETE ENCASEMENT
N T S



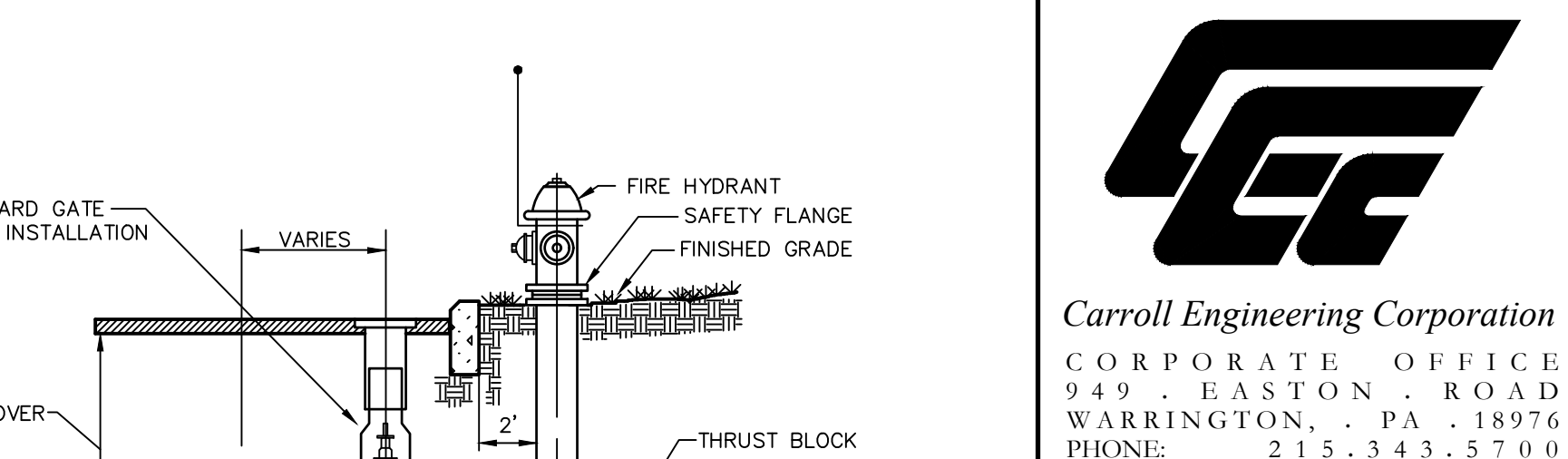
FIRE HYDRANT CONNECTION
N T S



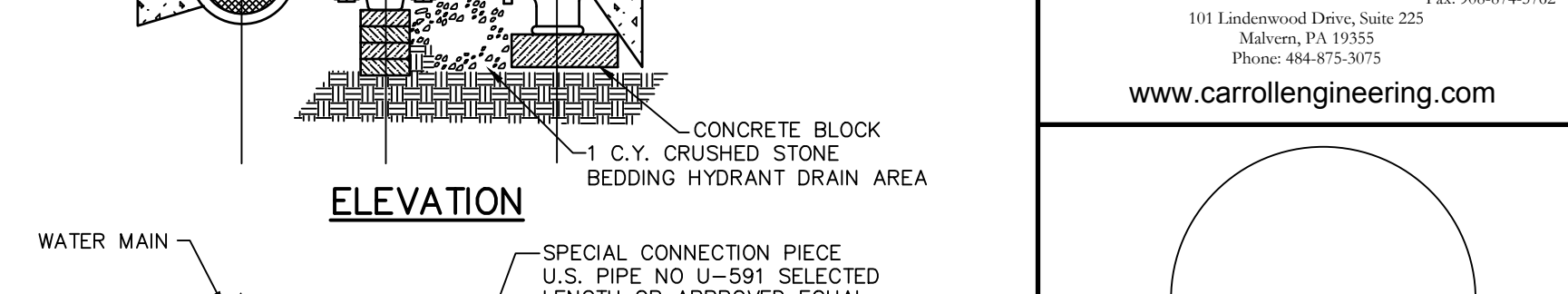
PIPE BEDDING (COMBINED TRENCH)
N T S



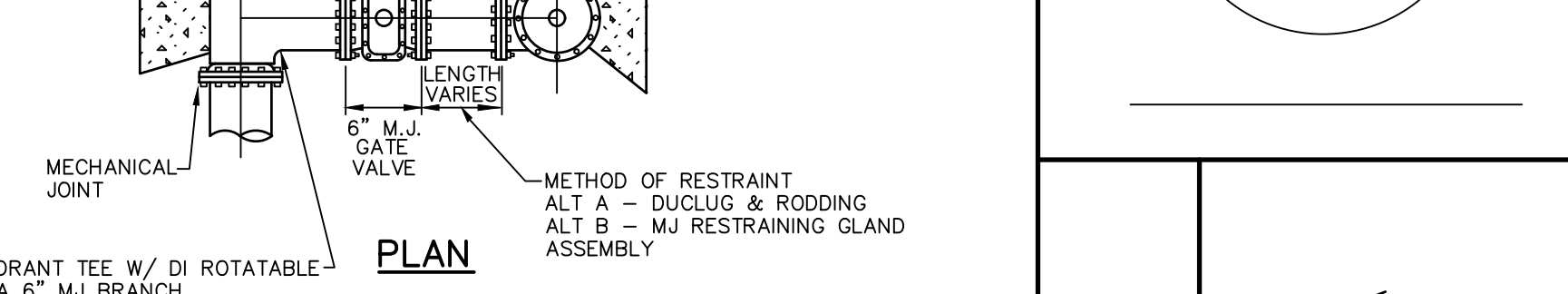
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N T S



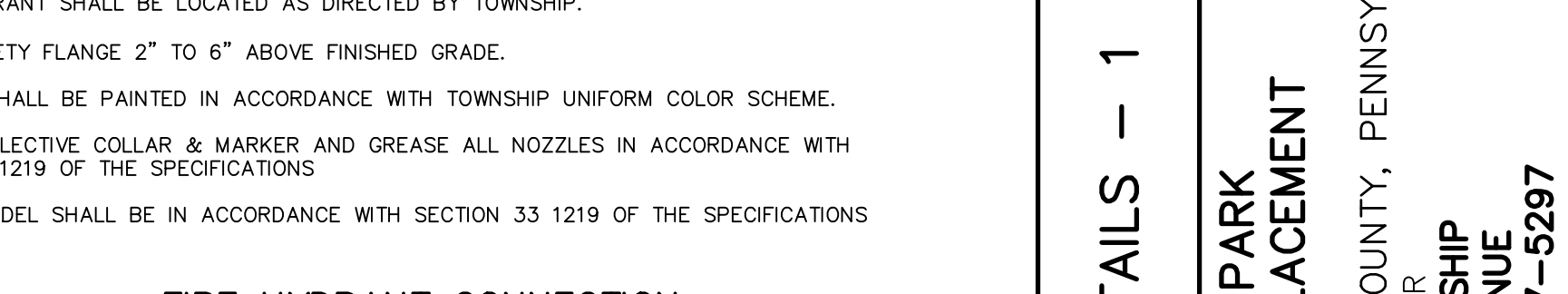
FIRE HYDRANT CONNECTION
N T S



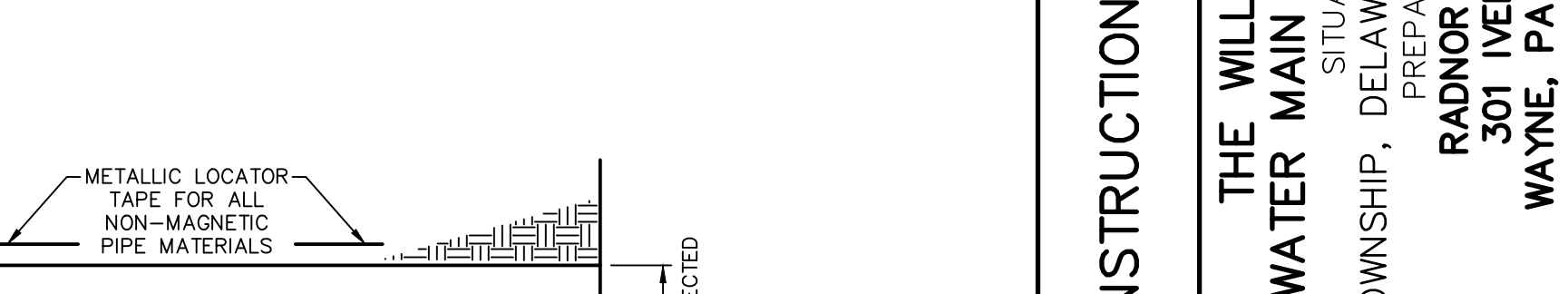
PIPE BEDDING (COMBINED TRENCH)
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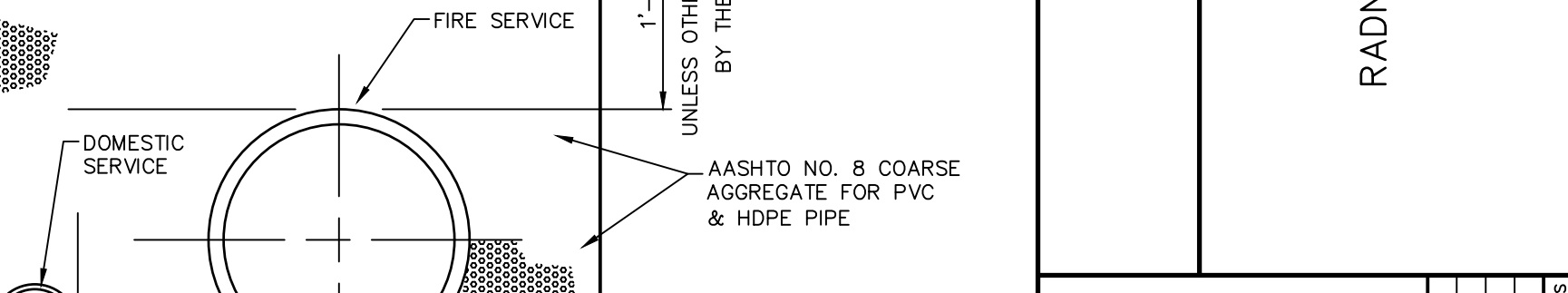
2" BLOW OFF
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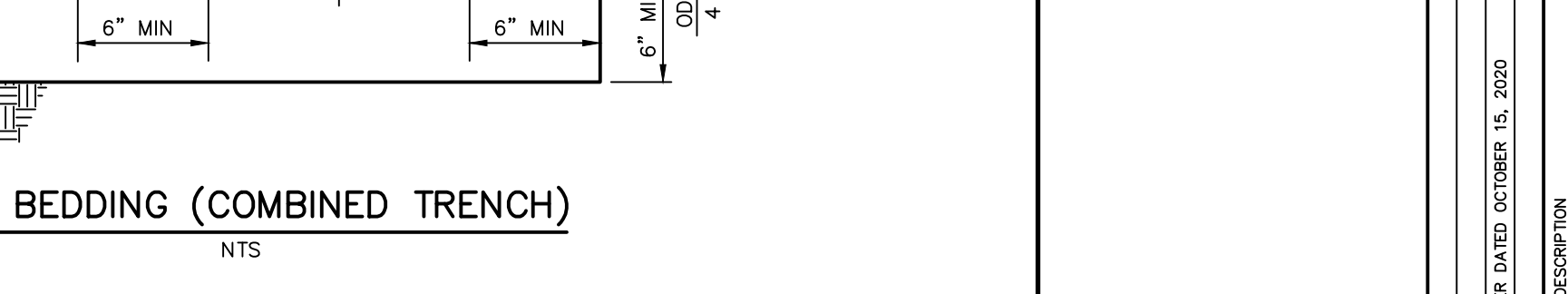
TYPICAL WATER SERVICE CONNECTION
N T S



2" BLOW OFF
N T S



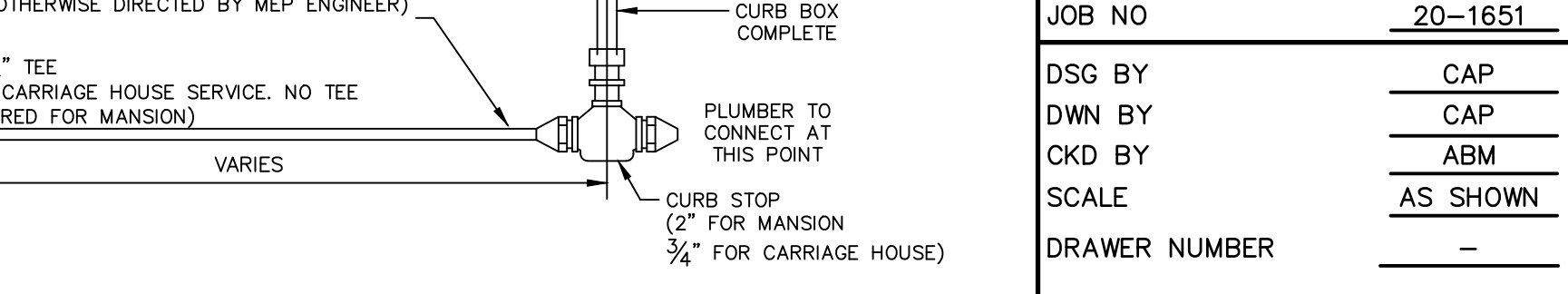
TYPICAL WATER SERVICE CONNECTION
N T S



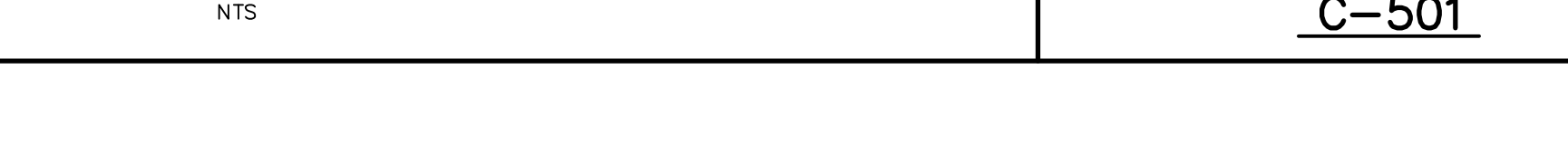
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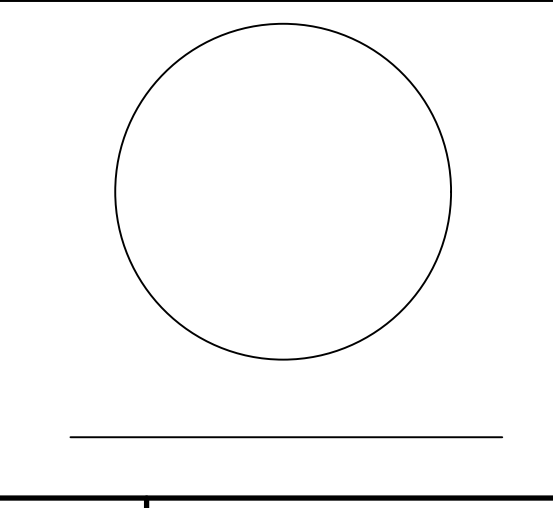
TYPICAL WATER SERVICE CONNECTION
N T S



2" BLOW OFF
N T S



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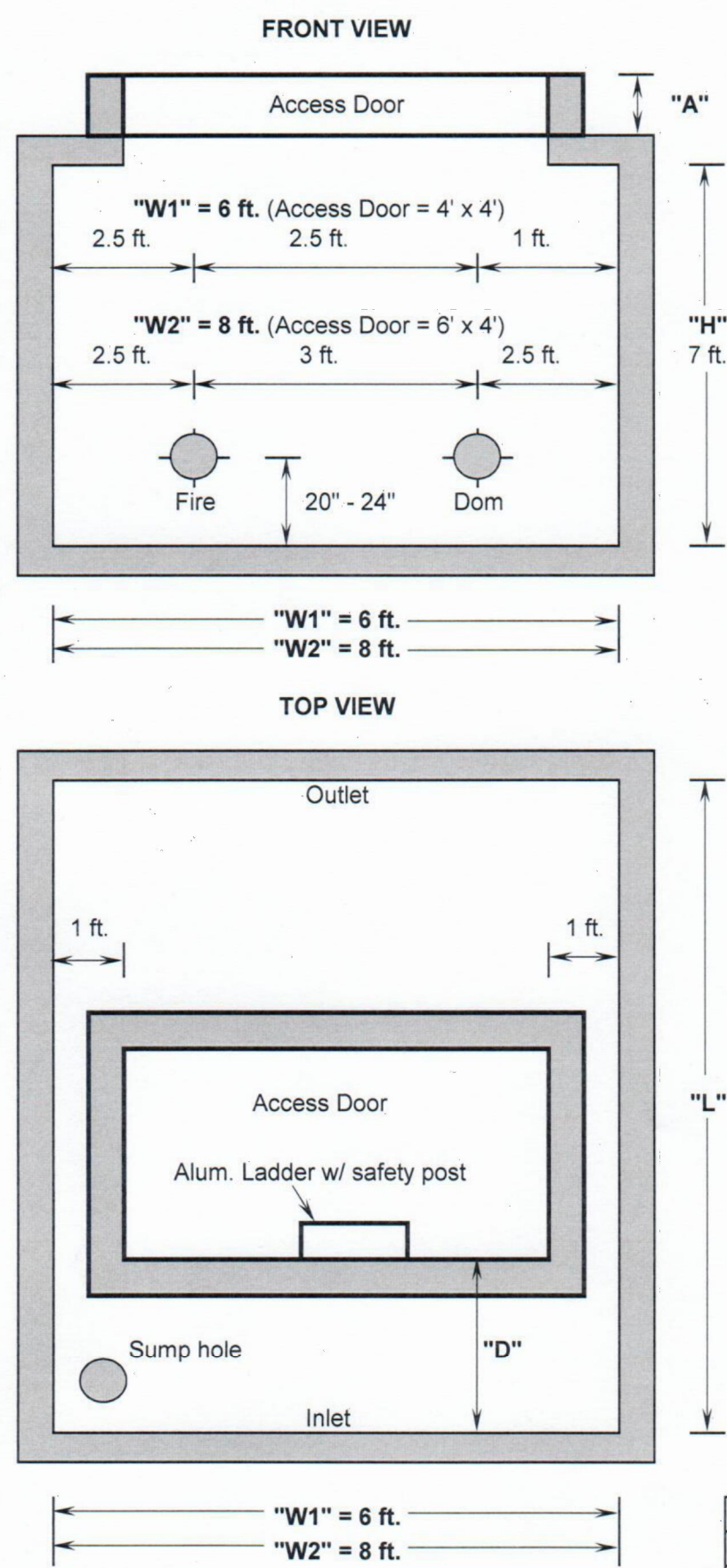


CONSTRUCTION DETAILS - 1
THE WILLOWS PARK WATER MAIN REPLACEMENT
SITUATED IN
RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA
PREPARED FOR
RADNOR TOWNSHIP
301 IVEN AVENUE
WAYNE, PA 19087-5297

NO.	DATE	DESCRIPTION	ISSUED FOR	BY	DATE
1	10-15-2020	ISSUED FOR BIDDING	ABM	CAP	10-15-2020
2	10-15-2020	ISSUED FOR BIDDING	ABM	CAP	10-15-2020
3	10-15-2020	ISSUED FOR BIDDING	ABM	CAP	10-15-2020

DATE	2-24-2020
CADD FILE	2016510001
JOB NO	20-1651
DSG BY	CAP
DWN BY	ABM
CKD BY	CAP
SCALE	AS SHOWN
DRAWER NUMBER	-
SHEET	6 OF 10 SHEETS
DRAWING NUMBER	C-501

DUAL SERVICE PIT DIMENSIONS



For: Domestic lines up to 6"
Fire lines up to 10"

"A" (Riser Height) = 6 in. min.
= 12 in. max.

"H" (Height) = 7 ft.

"L" (Length) obtained using these steps:
1.) Determine the length of the pit needed for the Domestic service. Refer to Plan No. D-4.
2.) Determine the length of the pit needed for the Fire service. Refer to Plan No. F-4.
3.) Select the longer dimension from #1 & 2 above. This is the Length of the Dual Service Pit.

"W1" (Width) = 6 ft.
for Domestic services 2" & smaller
Access Door = 4 ft. x 4 ft.

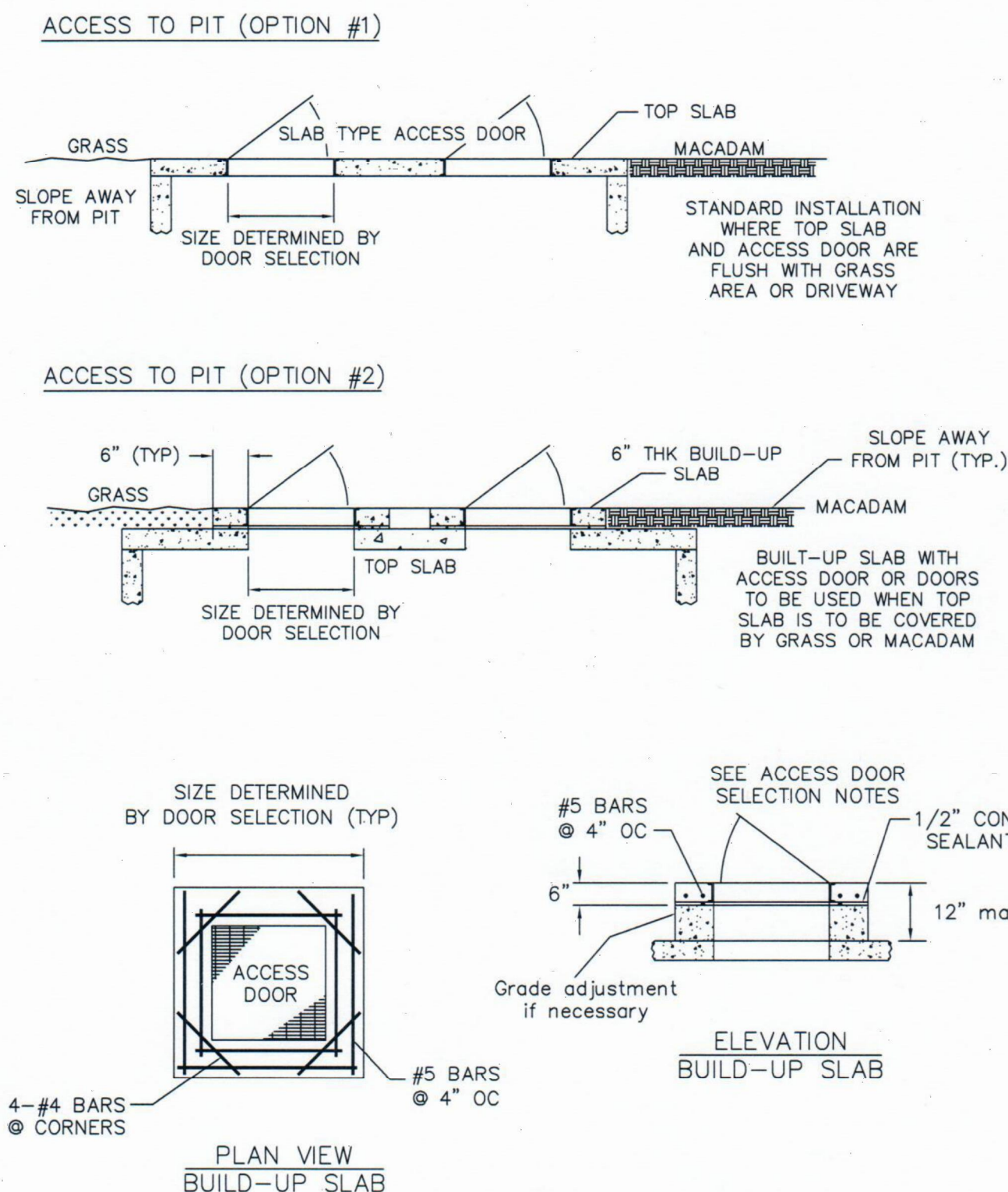
"W2" (Width) = 8 ft.
for Domestic services 3" & larger
Access Door = 6 ft. x 4 ft.

"D" (Inside wall to door opening)
Use Single Service dimensions of Fire line. See Plan F-4. (Assumes inlet flange is 9" from wall)

- * Aluminum ladder w/ safety post to be centered between Fire & Dom lines on the inlet side of the pit.
- * Doors must be centered directly over the FIRE meter.
- * Doors may be recessed in the top of the pit or mounted on top of the pit.
- * Grade must be sloped away from pit in all directions.
- * Pipe restrained with Omni Sleeve in each end of pit wall.

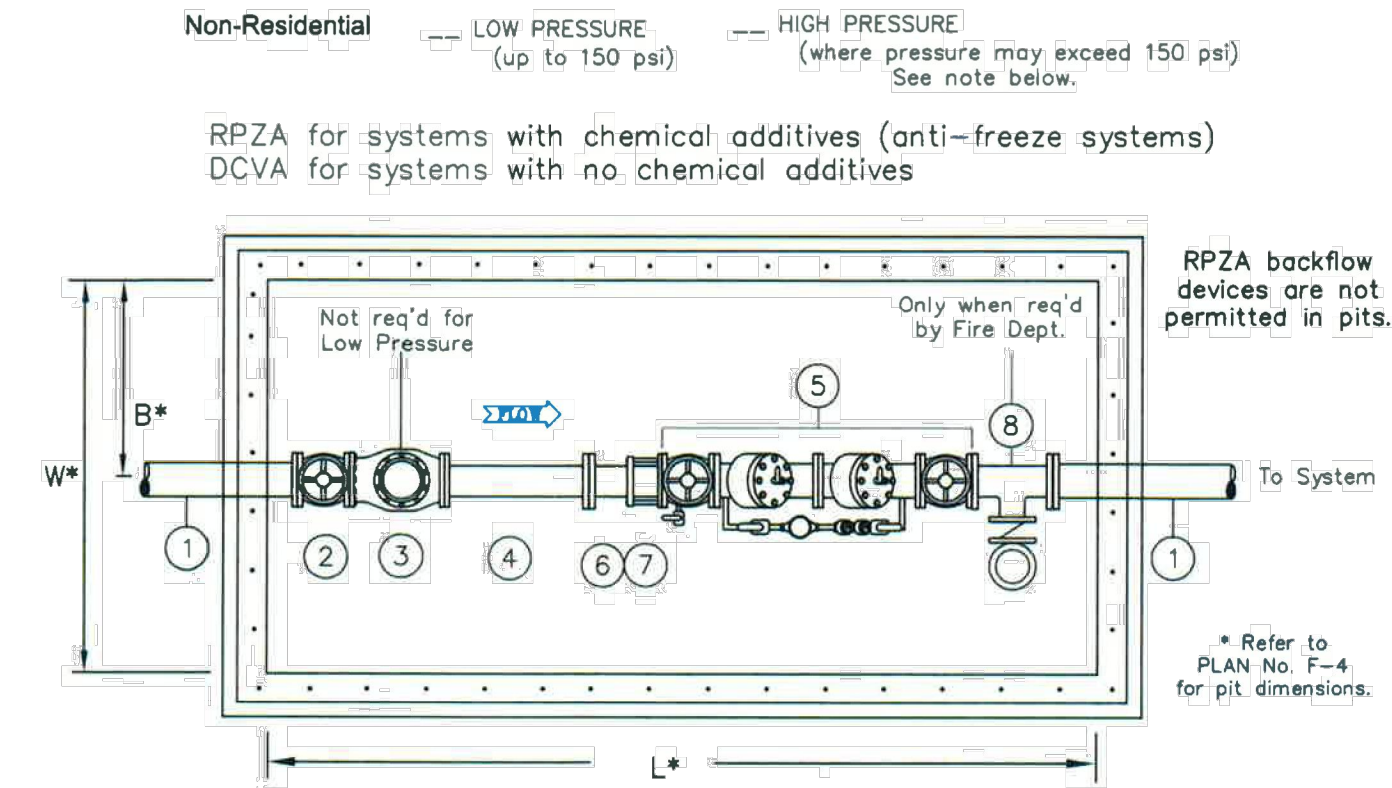
AQUA	
DUAL SERVICE PIT DIMENSIONS	
Ck'd by MJF	3/6/2014 Plan No. DS-1

METER PIT DOOR DETAILS



AQUA	
Access Door Detail	
Ck'd by MJF	Plan No. P-1

FIRE SERVICE LINES - 6", 8", and 10"
"Open System" has fire hydrants, meter pit is req'd



ITEM	6"	8"	10"
1 Line Size (Cement-lined D.I.P.) as approved by Aqua	6"	8"	10"
2 R.S. Gate Valve, O.S.&Y., Flanged	6"	8"	10"
3 Pressure Reducing Valve (PRV)	SIZED BY CUSTOMER		
4 Meter (by Aqua)	45"	53"	68"
5 Backflow Device Assembly - DCDA or RPDA	6"	8"	10"
6 Spool Piece, Flg x Flg - Length = 12 in. (min.)	6"	8"	10"
7 Flanged Coupling Adapter	Ford Style FFCA or Smith-Blair Style 913		
8 Tee for FDC, only if req'd by local Fire Dept.	6"	8"	10"
Branchline sized by local Fire Department if required. SIZED BY LOCAL FIRE DEPARTMENT			

Notes:

A. It is the CUSTOMER's responsibility to address THERMAL EXPANSION before the installation of a PRV or backflow device. All Fire systems should have a Pressure Relief Valve.

B. Water Company Rules & Regulations require that all of the specifications are met and a meter is set before water service is turned on.

C. It is the CUSTOMER's responsibility to size the pressure reducing valve(s) to fit their flow needs. Two-stage reduction may be needed where there is a wide variation between the initial pressure and the reduced pressure. Parallel installation may be needed where there is a wide variation of reduced pressure requirements, where it is vital to maintain a continuous water supply, or other reasons for improved performance.

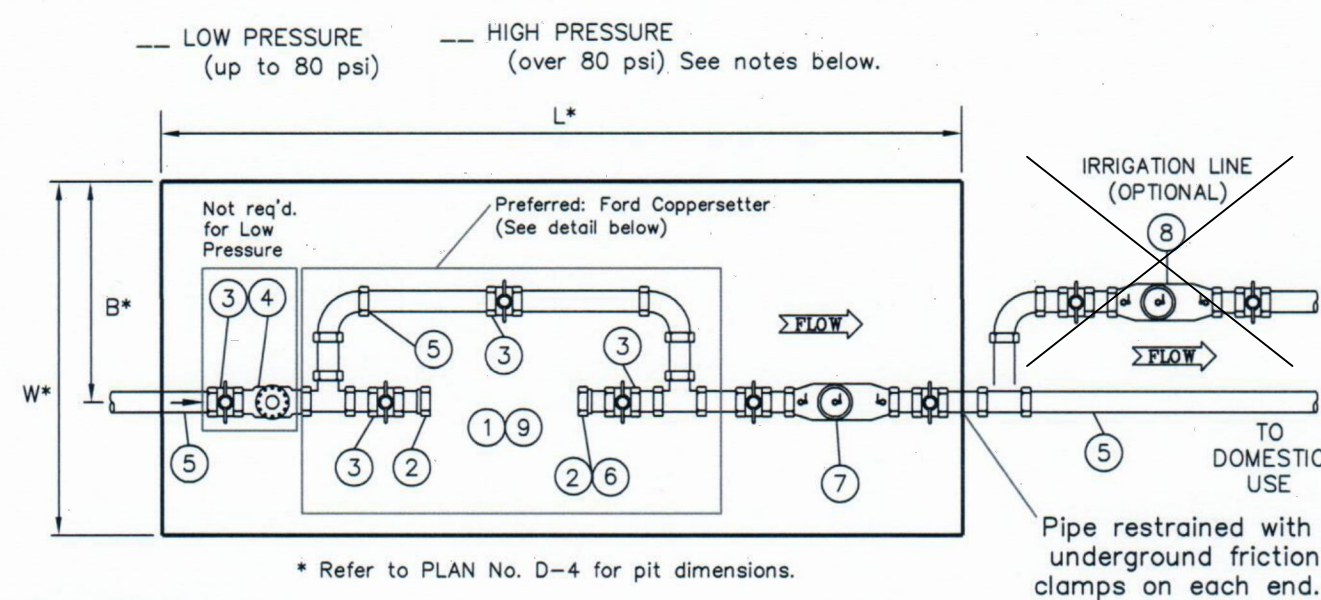
D. Each part must be NSF/ANSI 61 (Annex F & G) compliant. Entire unit must be NSF/ANSI 372 compliant.

E. DCDA & RPDA Assemblies must be UL & FM approved.

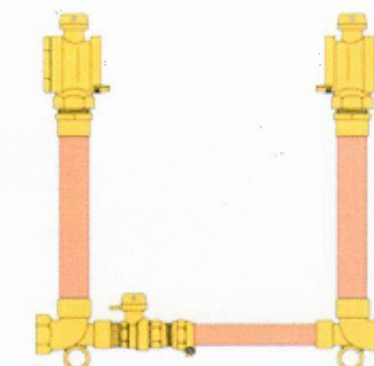
F. CONTRACTOR TO PROVIDE ALL REQUIRED EQUIPMENT AS NOTED IN THE AQUA SERVICE CONNECTION DOCUMENT PROVIDED IN SECTION 01 4100 OF THE TECHNICAL SPECIFICATIONS WHICH SHALL BE SUBJECT TO APPROVAL BY OWNER AND AQUA.

AQUA	
'Open' Fire Lines 6" to 10"	
Ck'd by MJF	Plan No. F-3

DOMESTIC SERVICE - 1.5" and 2" METERS



FORD COPPERSETTER
Non-Residential (pictured below)
1.5" - VBB76-12B-11-66-NL
2" - VBB77-12B-11-77-NL
Residential
1.5" - VBHH76-12BHC-11-66-NL
2" - VBHH77-12BHC-11-77-NL



ITEM	1.5"	2"
1 Meter (by Water Co.)	1.5"	2"
2 Meter Flange - Bronze, 2-bolt pattern	1.5"	2"
Ford Meter Box Part No.	CF31-66	CF31-77
3 Full-port Ball Valve (Mainline)	1.5"	2"
Full-port Ball LOCKING Valve (by-pass)	1.5"	2"
4 Pressure Reducing Valve (PRV)	SIZED BY CUSTOMER	
5 Line Size ("K" copper)	1.5"	2"
6 Loc-Pac Meter Coupling (PIT ONLY)	1.5"	2"
Ford Meter Box Part No. (for Copper)	CF34-66	CF34-77
Ford Meter Box Part No. (for Brass)	CF35-66	CF35-77
7 * Backflow device - DCVA or RPZA	1.5"	2"
8 * Backflow device - DCVA or RPZA (Irrigation)	SIZED BY CUSTOMER	

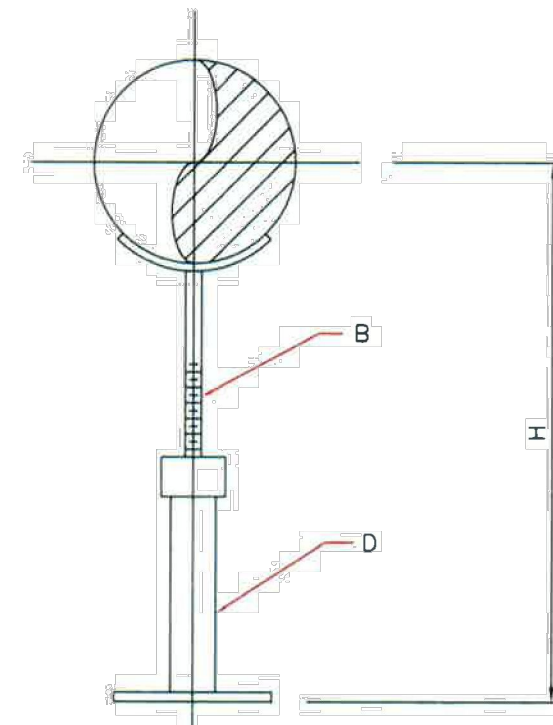
* type determined by the Water Company

Notes:

- A. It is the CONTRACTOR's responsibility to address THERMAL EXPANSION before the installation of a PRV or backflow device.
- B. A pressure vacuum breaker must be installed on all hose-bib connections.
- C. Water Company Rules & Regulations require that all of the specifications are met and a meter is set before water service is turned on.
- D. It is the CONTRACTOR's responsibility to size the pressure reducing valve(s) to fit their flow needs. Two-stage reduction may be needed where there is a wide variation between the initial pressure and the reduced pressure. Parallel installation may be needed where there is a wide variation of reduced pressure requirements, where it is vital to maintain a continuous water supply, or other reasons for improved performance.
- E. Each part must be NSF/ANSI 61 (Annex F & G) compliant. Entire unit must be NSF/ANSI 372 compliant.
- F. CONTRACTOR TO PROVIDE ALL REQUIRED EQUIPMENT AS NOTED IN THE AQUA SERVICE CONNECTION DOCUMENT PROVIDED IN SECTION 01 4100 OF THE TECHNICAL SPECIFICATIONS WHICH SHALL BE SUBJECT TO APPROVAL BY OWNER AND AQUA.

AQUA	
1.5" & 2" Domestic Services	
Ck'd by MJF	Plan No. D-2

PIPE SUPPORT



These pipe supports are made up of the following materials: The saddle is cut to size from heavy plate steel and forged to shape; The supporting column is steel pipe - see tables below and ANSI 125 pound companion flange forms the base.

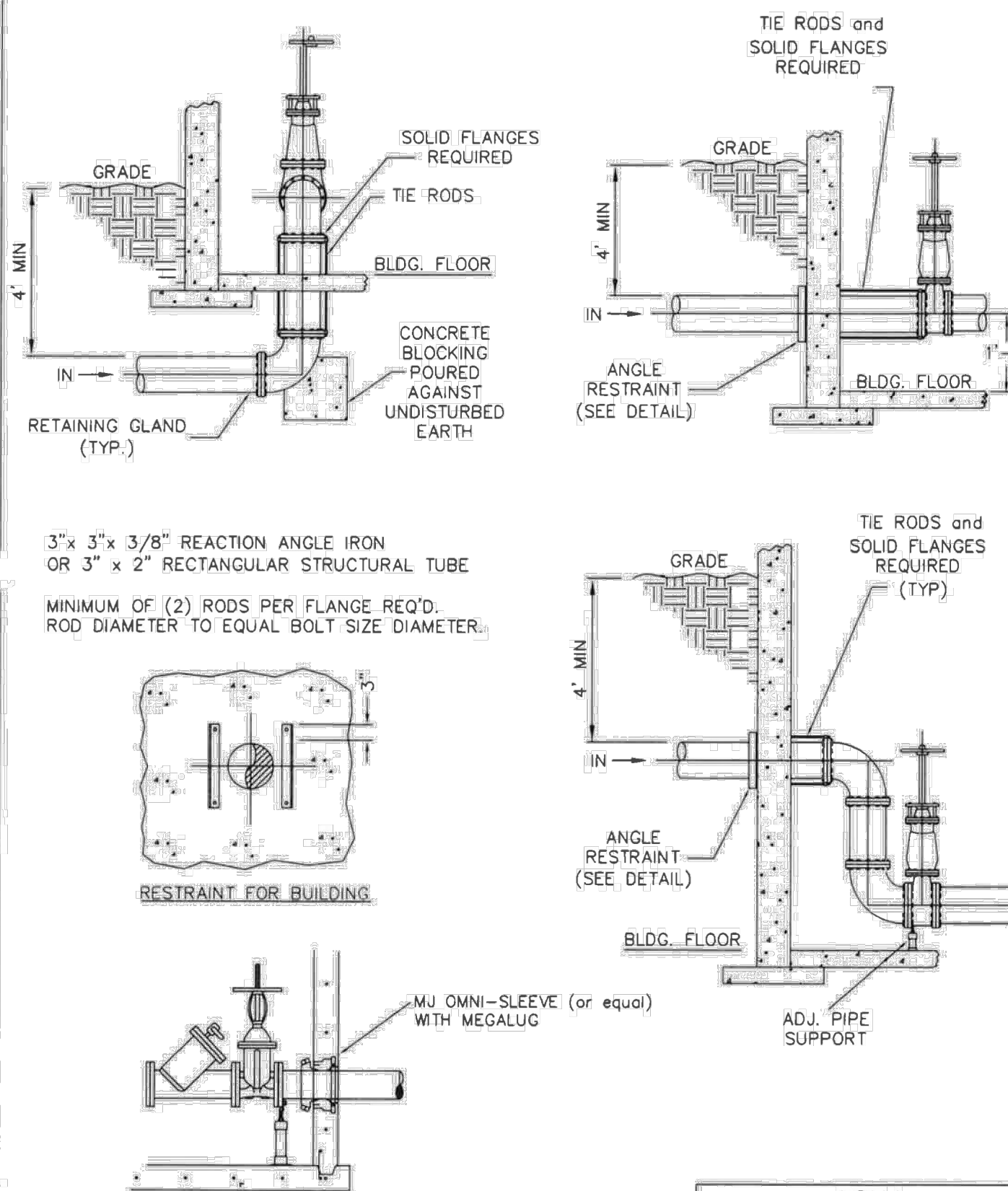
For the adjustable support, the shank is solid steel rod, threaded. The pipe support is adjustable by means of a heavy steel nut mounted on a reinforced malleable iron cap covering the top of the support column.

NOTE: Flanged pipe supports are acceptable;

ADJUSTABLE PIPE SUPPORT						
Length of threaded shanks will allow up to 6 inches for adjustment						
Size of Pipe to be Supported - Inches	Dimensions of Materials Used			Size of Supporting Pipe	Height	H
	OD	Saddle	Shank B			
3	3.96	3/8 X 2	3/4 ROD	8	7 1/2	2 Std
4	4.80	3/8 X 2	3/4 ROD	8	9	2 Std
6	6.90	3/8 X 2	3/4 ROD	8	11	2 Std
8	9.05	1/2 X 2	3/4 ROD	8	13 1/2	2 Std
10	11.10	1/2 X 2	3/4 ROD	8	16	2 Std

AQUA	
Pipe Support Detail	
Ck'd by MJF	Plan No. P-2

ANCHOR & BLOCKING DETAILS



AQUA	
Anchor & Blocking Details	
Ck'd by MJF	Plan No. P-3

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CONSTRUCTION DETAILS - 2

THE WILLOWS PARK WATER MAIN REPLACEMENT

SITUATED IN
RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA
PREPARED FOR
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301 IVEN AVENUE
WAYNE, PA 19087-5297

NO.	DATE	DESCRIPTION
1	10-15-20	ISSUED FOR BIDDING
2	10-15-20	REVISION PER BIDDING REVIEW LETTER DATED OCTOBER 15, 2020
3	10-15-20	GENERAL CONTRACTOR
4	10-15-20	GENERAL CONTRACTOR
5	10-15-20	GENERAL CONTRACTOR

DATE	2-24-2020
CADD FILE	2016510001
JOB NO	20-1651
DSG BY	CAP
DWN BY	CAP
CKD BY	ABM
SCALE	AS SHOWN
DRAWER NUMBER	-
SHEET	7 OF 10 SHEETS
DRAWING NUMBER	C-502

GRASS SEED MIX (SEE TABLE)

ALL AREAS WHICH ARE UNPAVED AND UNPLANTED SHALL BE CONSIDERED GRASS AREAS AND BE SEEDED WITH SPECIFIED MIXTURE, UNLESS SPECIFIED FOR SOIL PLACEMENT.

THE PERMANENT AND TEMPORARY SEEDING REQUIREMENTS BELOW ARE THE MINIMUM TO WHICH THE CONTRACTOR SHALL CONFORM AND ARE IN ADDITION TO ANY ADDITIONAL REQUIREMENTS SET FORTH IN THESE SPECIFICATIONS, THE EROSION AND SEDIMENT CONTROL MANUAL (LATEST VERSION INCLUDING CORRECTIONS), AND PENNDOT PUBLICATION 408, SECTION 804.

PERMANENT SEEDING TABLE:

Table with columns: CONDITION, TOPSOIL (5), LIME (1), FERTILIZER (2), SEED MIX & SOWING RATE (4) (% BY WEIGHT). Rows include Roadside Non-Mowed, Roadside Mowed, Bank Areas Non-Mowed, Lawns, Fields and Pasture Non-Cultivated, Fields Cultivated, Woods Sparse, Woods Dense, Material.

TEMPORARY SEEDING TABLE:

Table with columns: CONDITION, TOPSOIL (5), LIME (1), FERTILIZER (2), SEED MIX & SOWING RATE (4) (% BY WEIGHT). Rows include Temporary Cover Mar Thru June, Temporary Cover Mowed, Temporary Cover Non-Mowed.

NOTES:

- (1) UNLESS LESSER RATE INDICATED BY SOILS TESTS.
(2) FERTILIZER SHALL BE MIN 50% ORGANIC NITROGEN, APPLY AT A RATE OF 25 POUNDS PER 1000 SQUARE FEET FOR PERMANENT RESTORATION AND 12.5 POUNDS FOR TEMPORARY RESTORATION.
(3) TURF TYPE FESCUE SHALL BE SUPPLIED IN TWO EQUAL PARTS OF DIFFERENT SEEDS.
(4) SOWING RATES IN ACCORDANCE WITH SEEDING TABLE, UNLESS OTHERWISE RECOMMENDED BY SEED MANUFACTURER.
(5) TOPSOIL REQUIRED:

MIN DEPTH - 6"
PH 6-8
ORGANIC - 2.5-4.0%
NITRATE NITROGEN - 100 LB. ACRE/MIN
PHOSPHOROUS - 200 LB. ACRE/MIN
POTASSIUM - 200 LB. ACRE/MIN

MULCHING MATERIALS

- A. MULCHES FOR TEMPORARY AND PERMANENT SEEDED AREAS SHALL BE ONE, OR A COMBINATION, OF THE FOLLOWING:
1. STRAW: CURED TO LESS THAN 20% MOISTURE CONTENT BY WEIGHT. EITHER WHEAT OR OAT STRAW, FREE OF WEEDS SHOULD BE PROVIDED CONTAINING NO STEMS OF TOBACCO, SOYBEANS, OR OTHER COARSE OR WOODY MATERIAL.
2. WOOD CELLULOSE (HYDROMULCH): CONTAINING NO GROWTH OR GERMINATION-INHIBITING SUBSTANCES. GREEN-DYED AND AIR-DRIED. PACKAGES NOT EXCEEDING 100 POUNDS.
MOISTURE CONTENT: 12% ± 3%
ORGANIC MATTER (DRY OVEN BASIS): 98.6% ± 0.2%
ASH CONTENT: 1.4% ± 0.2%
MINIMUM WATER-HOLDING CAPACITY: 1,000%
B. MULCHING SHALL BE PERFORMED IN CONJUNCTION WITH SEEDING AT THE CONCLUSION OF FINISH GRADING OPERATIONS. STRAW SHALL BE PLACED UNIFORMLY IN A CONTINUOUS BLANKET AT A MINIMUM RATE OF THREE TONS PER ACRE (140 POUNDS PER 1000 SQ FT). A MECHANICAL BLOWER MAY BE USED TO APPLY MULCH MATERIAL, PROVIDED THE MACHINE HAS BEEN SPECIFICALLY DESIGNED AND APPROVED FOR THIS PURPOSE. MACHINES WHICH CUT MULCH INTO SHORT PIECES WILL NOT BE PERMITTED.
C. STRAW SHALL BE ANCHORED BY THE USE OF TWINE STAKES, WIRE STAPLES, PAPER OR PLASTIC NETS, EMULSIFIED ASPHALT PROVIDED IT IS APPLIED UNIFORMLY TO THE MULCH AT A RATE OF NOT LESS THAN 31 GALLONS PER 1000 SQUARE YARDS), OR BY OTHER APPROVED METHODS. MULCH OVER TOP SOILED AREAS SHALL BE INCORPORATED INTO THE SOIL BY APPROVED EQUIPMENT.
D. WHEN MULCHING BY THE ASPHALT MIX METHOD, APPLY THE MULCH BY BLOWING. SPRAY THE ASPHALT BINDER MATERIAL INTO THE MULCH AS IT LEAVES THE BLOWER. APPLY THE BINDER TO THE MULCH IN THE PROPORTION OF 1.5 TO 2.0 GALLONS PER 45 POUNDS OF MULCH. PROTECT STRUCTURES, PAVEMENTS, CURBS, AND WALLS TO PREVENT ASPHALT STAINING. ERECT WARNING SIGNS AND BARRICADES AT INTERVALS OF 50 FEET OR LESS ALONG THE PERIMETER OF THE MULCHED AREA. DO NOT SPRAY ASPHALT AND CHEMICAL MULCH BINDERS ONTO ANY AREA WITHIN 100 FEET OF A STREAM OR OTHER BODY OF WATER.
E. APPLY WOOD CELLULOSE FIBER HYDRAULICALLY AT A RATE OF 47 POUNDS PER 1000 SQUARE FEET. INCORPORATE AS AN INTEGRAL PART OF THE HYDROSEED SLURRY AFTER SEED AND SOIL SUPPLEMENTS HAVE BEEN THOROUGHLY MIXED.
F. POLYMERIC TACKIFIER SHOULD BE USED WITH MULCH ON SLOPES GREATER THAN 5%.
G. MULCH ON SLOPES OF 8% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING. NETTING SHOULD BE STAPLED OVER MULCH IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
H. THOROUGHLY WATER MULCH AND SEED BED IMMEDIATELY AFTER COMPLETION OF MULCHING. SOIL SHALL BE MOISTENED TO A DEPTH OF NOT LESS THAN 4".

SOIL RESOLUTIONS:

TOPSOIL SHALL BE FERTILIZED PRIOR TO SEEDING.
ACIDIC SOILS - TOPSOIL SHALL BE TESTED FOR PH AND LIMED TO OBTAIN A PH OF 7.0 TO 7.5.
WET SOILS - TRENCHES SHALL BE PUMPED TO KEEP THEM DRY. PUMPED WATER SHALL BE FILTERED THROUGH A SEDIMENT FILTER BAG.
WINTER GRADING - WINTER GRADING SHALL BE DONE IN A CAREFUL MANNER. EXTRA STABILIZATION METHODS MAY BE NEEDED TO STABILIZE DISTURBED EARTH UNTIL THE GROWING SEASON.

EROSION AND SEDIMENT CONTROL NARRATIVE - 102.4(b)(4)

THE PURPOSE OF THIS NARRATIVE AND THE EROSION CONTROL ASPECTS OF THE PLANS ARE TO PREVENT THE ACCELERATED EROSION OF EXPOSED SITE SOILS DURING CONSTRUCTION AND TO RETAIN ON SITE ALL SEDIMENT PRODUCED BY CONSTRUCTION ACTIVITIES. THIS WILL BE ACCOMPLISHED BY STRICT ADHERENCE TO THE FOLLOWING NOTES, SEQUENCE OF CONSTRUCTION, AND EROSION AND SEDIMENT CONTROL DETAILS SHOWN ON THE PLAN. THIS PLAN SHALL FURTHER PROVIDE THE FOLLOWING:

- MINIMIZE EXTENT AND DURATION OF EARTH DISTURBANCE BY LIMITING THE ADVANCE CLEARING AND GRUBBING OPERATIONS TO THE DISTANCE EQUAL TO TWO TIMES THE LENGTH OF THE PIPE INSTALLATION THAT CAN BE COMPLETED IN THE SAME DAY
• MAXIMIZE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION BY LIMITING DISTURBANCE TO THAT WHICH IS REQUIRED FOR THE INSTALLATION OF THE WATER MAIN.
• MINIMIZE SOIL COMPACTION BY LIMITING THE EARTH DISTURBANCE TO ONLY WHAT IS REQUIRED TO COMPLETE PROPOSED IMPROVEMENTS.
• UTILIZE OTHER MEASURES OR CONTROLS THAT PREVENT OR MINIMIZE GENERATION OF INCREASED STORMWATER RUNOFF. ALL COVERAGE SHALL BE RETURNED TO ITS PRE-CONSTRUCTION CONDITION.

RECEIVING SURFACE WATERS - 102.4(b)(5)(V)

THE PENNSYLVANIA TILE 25, CHAPTER 93 CLASSIFICATION FOR THE RECEIVING WATERS OF THE COMMONWEALTH
STORM RUNOFF FROM THE PROJECT SITE IS ULTIMATELY TRIBUTARY TO THE LITTLE DARBY CREEK DESIGNATED AS CWF.

MAINTENANCE PROGRAM - 102.4(b)(5)(x)

THE OPERATOR/RESPONSIBLE PARTY WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION, AND MAINTENANCE OF BOTH THE TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMPs INCLUDED IN THESE PLANS, INCLUDING DISPOSAL OF MATERIALS REMOVED FROM THE BMPs OR PROJECT AREA. BMPs SHALL BE INSPECTED AFTER EACH RUNOFF EVENT, AND ON A WEEKLY BASIS UNTIL THE SITE HAS BEEN STABILIZED. A RECORD OF EACH SITE INSPECTION SHALL BE LOGGED ON DEP FORM (3150-B-EMW0083), AND KEPT ON-SITE AT ALL TIMES. FAILURE TO CONDUCT THE REQUIRED INSPECTIONS MAY RESULT IN PERMIT SUSPENSION OR THE IMPOSITION OF CIVIL PENALTIES.

- 1. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING, SHALL BE PERFORMED IMMEDIATELY.
2. DISTURBED AREAS ON WHICH ACTIVITIES HAVE CEASED MUST BE SEEDED AND MULCHED IMMEDIATELY.
3. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEEDING MIXTURE AND MULCH.
4. THE INDIVIDUAL DETAILS FOR EACH BMP AS NOTED ON THESE PLANS SHALL SERVE AS THE REFERENCE FOR THE APPROPRIATE MAINTENANCE REQUIRED. THE AFOREMENTIONED MAINTENANCE NOTES ARE IN ACCORDANCE WITH THE LATEST REVISION OF THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL.

RECYCLING OR DISPOSAL OF MATERIALS - 102.4(b)(5)(xi)

ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 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 THE SITE.
• ANTICIPATED CONSTRUCTION WASTES INCLUDE BORROW FROM PROPOSED UTILITY LINE TRENCHES.

GEOLOGIC FORMATIONS/SOIL CONDITIONS THAT MAY HAVE A POTENTIAL TO CAUSE POLLUTION - 102.4(b)(5)(xii)

THERE ARE NO KNOWN GEOLOGIC/SOIL CONDITIONS WHERE THE POTENTIAL FOR POLLUTION MAY BE INCREASED AS A RESULT. AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES HAVE NOT BEEN PROPOSED AS PART OF THIS PROJECT.

POTENTIAL THERMAL IMPACTS TO SURFACE WATERS - 102.4(b)(5)(xiii)

THERMAL IMPACTS ARE NOT EXPECTED AS PART OF THIS PROJECT AS THE EXISTING COVERAGE CONDITIONS ARE NOT BEING ALTERED AS PART OF THE UTILITY INSTALLATION AND THERE ARE NO MAJOR PERMANENT STORMWATER MANAGEMENT FACILITIES PROPOSED. AS A RESULT, AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES FOR THERMAL IMPACTS HAVE NOT BEEN PROPOSED AS PART OF THIS PROJECT.

EXISTING/PROPOSED RIPARIAN FOREST BUFFERS - 102.4(b)(5)(xiv)

THERE ARE NO EXISTING OR PROPOSED RIPARIAN FOREST BUFFERS AS PART OF THIS PROJECT.

TOPSOIL REQUIRED SOIL AMENDMENTS FOR TEMPORARY SEEDING

MIN DEPTH - 6"
PH 6-8
ORGANIC - 2.5-4.0%
NITRATE NITROGEN - 100 LB. ACRE/MIN
PHOSPHOROUS - 200 LB. ACRE/MIN
POTASSIUM - 200 LB. ACRE/MIN
APPLY AGRICULTURAL-GRADE LIMESTONE AT THE RATE OF 800 POUNDS PER 1,000 S.Y. PLUS FERTILIZER AT THE RATE OF 140 POUNDS PER 1,000 S.Y. AND WORK IN WHERE POSSIBLE. AFTER SEEDING, MULCH WITH HAY OR STRAW.

UTILITY LINE TRENCH EXCAVATION:

- A. GENERAL - EXPOSED TRENCH EXCAVATIONS HAVE HIGH POTENTIAL FOR ACCELERATED EROSION AND SEDIMENT POLLUTION SINCE THESE EXCAVATIONS ARE USUALLY LOCATED AT LOWER ELEVATIONS ALONG OR ACROSS EARTH DISTURBANCE SITES. OPEN TRENCHES SERVE TO CONCENTRATE SEDIMENT LADEN RUNOFF AND CONVEY IT TO SITE BOUNDARIES OR WATERWAYS. THE MOST IMPORTANT EROSION AND SEDIMENT POLLUTION CONTROL CONSIDERATION FOR TRENCH CONSTRUCTION IS THE LIMITING AND SPECIFIC SCHEDULING OF WORK ACTIVITIES.
B. CONSTRUCTION REQUIREMENTS -
1. LIMIT ADVANCE CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
2. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUG INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY.
3. WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING BEFORE PIPE PLACEMENT AND/OR BACKFILL BEGINS. ALL WATER MUST BE PUMPED THROUGH A SEDIMENTATION BASIN/SILT BAG.
4. ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO ORIGINAL CONTOURS AND APPROPRIATE TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL MEASURES/FACILITIES WILL BE INSTALLED. SEEDING AND MULCHING OF ALL DISTURBED AREAS WILL BE DONE AT THE END OF EACH WEEK.
5. WETLAND AREAS SHALL BE MARKED SO AS NOT TO BE DISTURBED. EQUIPMENT AND MATERIALS MAY NOT BE STORED WITHIN WETLAND AREAS.
6. ALL EXCAVATED TRENCH MATERIAL SHOULD BE LOCATED ON THE UPHILL SIDE OF THE TRENCH WHEREVER APPLICABLE.
C. EXCEPTIONS - IN CERTAIN CASES TRENCHES CANNOT BE BACKFILLED UNTIL THE PIPE IS HYDROSTATICALLY TESTED, OR ANCHORS AND OTHER PERMANENT FEATURE ARE INSTALLED. IN THESE CASES, ALL OF THE REQUIREMENTS LISTED UNDER ITEM 2 WILL REMAIN IN EFFECT WITH THE FOLLOWING EXCEPTIONS:
1. IF DAILY BACKFILLING IS DELAYED, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS, APPROPRIATE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES/FACILITIES WILL BE INSTALLED, AND THE AREAS SEEDED AND MULCHED WITHIN THE NEXT TWO CALENDAR DAYS.

SOIL AMENDMENTS FOR PERMANENT SEEDING

SAMPLES OF EXISTING OR FURNISHED TOPSOIL SHALL BE PROVIDED BY THE CONTRACTOR FOR LABORATORY ANALYSIS. THE CONTRACTOR SHALL OBTAIN A SOIL TESTING KIT FROM THE COUNTY COOPERATIVE EXTENSION SERVICE AND FOLLOW THE INSTRUCTIONS CONTAINED THEREIN. SOIL TESTS SHALL BE MADE, SEPARATELY, FOR EACH SOURCE OF TOPSOIL. SOIL SAMPLES SHALL BE TESTED BY THE PENNSYLVANIA STATE UNIVERSITY TESTING LABORATORY OR OTHER QUALIFIED TESTING LABORATORY. SOIL TEST REPORTS SHALL BE SUBMITTED TO BUREAU OF SOIL AND WATER CONSERVATION. (COUNTY CONSERVATION INSTITUTION).

THE CONTRACTOR SHALL CONDITION THE SOIL AS RECOMMENDED BY THE TESTING LABORATORY PRIOR TO SEEDING OR SODDING.
GROUND LIMESTONE AND FERTILIZER MIX MAY BE MODIFIED AND APPLIED AT THE RATE RECOMMENDED BY THE TEST ANALYSIS PERFORMED ABOVE.

MINIMUM STANDARD FOR LIMESTONE AND FERTILIZER (IF A SOIL TEST IS NOT PERFORMED) LIMESTONE SHALL BE APPLIED AT THE RATE OF 6 TONS PER ACRE. FERTILIZER SHALL BE APPLIED AT THE RATE OF 1000 POUNDS OF 10-20-20 TO THE ACRE.

STANDARD E&S PLAN NOTES:

- 1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
2. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THIS PROJECT AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
3. AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
5. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
6. 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 BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
7. 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 OPERATIONS BEGIN.
8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
9. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
10. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
11. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON 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.
12. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
13. VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY FROM THE RIGHT-OF-WAY AND/OR AT AREAS DESIGNATED ON THE PLANS FOR A TEMPORARY CONSTRUCTION ENTRANCE.
14. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
15. 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.
16. 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 SWEEPED INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
17. ALL SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
18. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES, 6 TO 12 INCHES ON COMPACTED SOILS - PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL PLACED PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
19. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
20. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
21. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOIL, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
22. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
23. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
24. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
25. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
26. 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.
27. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.

CLEAN FILL AND ENVIRONMENTAL DUE DILIGENCE NOTES:

CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL - (EARTH, ROCK, STONE, TREATED ASPHALT, AND SOLID BLOCK OR CONCRETE FROM CONSTRUCTION RELATED 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 PROCESSED FOR RE-USE).
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".
ANY PERSON PLACING 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 TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE 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 NOT 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 POLICY "MANAGEMENT OF FILL".
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.

- 28. E&S BMPs SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
29. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPs.
30. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED OR CONSTRUCTION STORMWATER MANAGEMENT BMPs, AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPs SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
31. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.
32. 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 DEPARTMENT 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 \$100,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.

MONITORING, INSPECTION, AND REPORTING REQUIREMENTS:

VISUAL INSPECTIONS:

- THE PERMITTEE MUST ENSURE THAT VISUAL SITE INSPECTIONS ARE CONDUCTED WEEKLY, AND WITHIN 24 HOURS AFTER EACH MEASURABLE RAINFALL EVENT THROUGHOUT THE DURATION OF CONSTRUCTION AND UNTIL THE RECEIPT AND ACKNOWLEDGMENT OF THE NOT BY THE DISTRICT. VISUAL INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL MEASURES AND REPORTS SHALL BE COMPLETED IN A FORMAT PROVIDED BY THE DEPARTMENT, AND CONDUCTED BY QUALIFIED PERSONNEL, TRAINED AND EXPERIENCED IN EROSION AND SEDIMENT CONTROL, TO ASCERTAIN THAT E&S BMPs ARE PROPERLY INSTALLED AND MAINTAINED AND EFFECTIVELY MINIMIZE POLLUTION TO THE WATERS OF THIS COMMONWEALTH. A WRITTEN REPORT OF EACH INSPECTION SHALL BE KEPT AND INCLUDE AT A MINIMUM:
(1) A SUMMARY OF SITE CONDITIONS, E&S BMP AND PCSM BMP, IMPLEMENTATION AND MAINTENANCE AND COMPLIANCE ACTIONS; AND
(2) THE DATE, TIME, NAME AND SIGNATURE OF THE PERSON CONDUCTING THE INSPECTION.

NONCOMPLIANCE REPORTING

- WHERE E&S, PCSM OR PPC BMPs ARE FOUND TO BE INOPERATIVE OR INEFFECTIVE DURING AN INSPECTION, OR ANY OTHER TIME, THE PERMITTEE SHALL, WITHIN 24 HOURS, CONTACT THE DISTRICT OR AUTHORIZED CONSERVATION DISTRICT FOR PERSONAL CONTACT, FOLLOWED BY THE SUBMISSION OF A WRITTEN REPORT WITHIN 5 DAYS OF THE INITIAL CONTACT. NONCOMPLIANCE REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:
(1) ANY CONDITION ON THE PROJECT SITE WHICH MAY ENDANGER PUBLIC HEALTH, SAFETY, OR THE ENVIRONMENT, OR INVOLVE INCIDENTS WHICH CAUSE OR THREATEN POLLUTION;
(2) THE PERIOD OF NONCOMPLIANCE, INCLUDING EXACT DATES AND TIMES AND/OR ANTICIPATED TIME WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE;
(3) STEPS BEING TAKEN TO REDUCE, ELIMINATE, AND PREVENT RECURRENCE OF THE NONCOMPLIANCE; AND
(4) THE DATE OR SCHEDULE OF DATES, AND IDENTIFYING REMEDIES FOR CORRECTING NONCOMPLIANCE CONDITIONS.

REDUCTION, LOSS, OR FAILURE OF THE BMPs

UPON REDUCTION, LOSS, OR FAILURE OF THE BMPs, THE PERMITTEE SHALL TAKE IMMEDIATE ACTION TO RESTORE THE BMPs OR PROVIDE AN ALTERNATIVE METHOD OF TREATMENT. SUCH RESTORED BMPs OR ALTERNATIVE TREATMENT SHALL BE AT LEAST AS EFFECTIVE AS THE ORIGINAL BMPs.

CONSTRUCTION SEQUENCE:

- 1. AT LEAST 7 DAYS PRIOR TO ANY EARTH DISTURBANCE ACTIVITIES (INCLUDING CLEARING AND GRUBBING), THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, E&SPC PLAN PREPARER, PCSM PLAN PREPARER, AND A REPRESENTATIVE FROM THE AUTHORIZED COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
2. UPON INSTALLATION OR STABILIZATION OF ALL THE PERIMETER SEDIMENT CONTROL BMP(S) AND AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHOULD PROVIDE NOTIFICATION TO THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OR AUTHORIZED COUNTY CONSERVATION DISTRICT.
3. AT LEAST 3 DAYS PRIOR TO STARTING EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY MARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE CONTACTED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THIS CONSTRUCTION SEQUENCE. DEVIATION FROM THIS MUST BE APPROVED BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OR AUTHORIZED COUNTY CONSERVATION DISTRICT PRIOR TO IMPLEMENTATION. EACH STEP OF THE SEQUENCE SHALL BE COMPLETED BEFORE PROCEEDING TO THE NEXT STEP, EXCEPT WHERE NOTED.
5. NO MORE THAN 15,000 SQUARE FEET OF DISTURBED AREA SHOULD BE BROUGHT TO FINAL GRADE BEFORE INITIATING SEEDING AND MULCHING OPERATIONS.
6. UPON TEMPORARY CESSATION OF WORK (4 DAYS OR MORE, OR AS SOON AS FINAL GRADING HAS BEEN COMPLETED), IMMEDIATE STABILIZATION SHOULD COMMENCE.
7. FIELD-MARK LIMITS OF EARTH DISTURBANCE.
8. INSTALL THE SUPER SILT FENCE/TURTLE EXCLUSION FENCE UNDER THE SUPERVISION OF THE QUALIFIED BOG TURTLE SURVEYOR WHERE INDICATED ON THE PLANS.
9. DESIGNATE AREAS WITHIN EXISTING DRIVEWAYS WHICH SHALL BE UTILIZED BY CONSTRUCTION VEHICLES. THESE AREAS ARE TO BE KEPT FREE OF SEDIMENT AND SHALL BE SWEEP DAILY AS NECESSARY. IN THE EVENT THESE AREAS CANNOT BE KEPT FREE OF SEDIMENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF A STABILIZED CONSTRUCTION ENTRANCE(S) AS DETAILED ON THE PLANS AS NECESSARY TO COMPLETE CONSTRUCTION.
10. INSTALL ALL OTHER PROPOSED BMP(S) AS INDICATED ON THE PLANS WHILE LIMITING CLEARING TO THAT WHICH IS NECESSARY TO INSTALL THE AFOREMENTIONED BMP(S).
11. CLEAR AND GRUB THE PROJECT SITE AS NECESSARY WITHIN THE LIMITS OF THE EARTH DISTURBANCE AS INDICATED ON THE PLANS.
12. COMMENCE INSTALLATION OF THE PROPOSED WATER MAIN AND APPURTENANCES.
13. ONLY EXCAVATE AN AMOUNT OF TRENCH EACH DAY THAT CAN BE BACKFILLED BY THE END OF SAME DAY. DIRECTIONAL DRILLING OPERATIONS MAY BE DONE CONCURRENTLY. SEE THE NOTES BELOW FOR THE DRILLING FLUIDS SEQUENCE:
A. DRILLING FLUIDS: DRILLING FLUID USED IN THE DRILLING OPERATIONS SHALL BE MIXTURES OF BENTONITE AND WATER OR SUCH OTHER FLUIDS OF THE CONTRACTOR'S CHOICE.
B. DISPOSAL OF SUCH DRILLING FLUIDS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE CONDUCTED IN COMPLIANCE WITH ALL RELATIVE ENVIRONMENTAL REGULATIONS, RIGHT-OF-WAY AND WORKSPACE AGREEMENTS AND PERMIT REQUIREMENTS.
C. MINIMIZE TO EVERY EXTENT POSSIBLE, THE OCCASIONS OF INADVERTENT RETURNS OF DRILLING FLUIDS AT LOCATIONS OTHER THAN THE PLANNED ENTRY AND EXIT POINTS.
D. PERFORM DISPOSAL OF DRILLING FLUIDS IN COMPLIANCE WITH ALL RELATIVE ENVIRONMENTAL REGULATIONS.
E. PERFORM IMMEDIATE CLEAN-UP OF INADVERTENT DRILLING FLUID RETURNS AT ALL LOCATIONS WHERE THEY OCCUR.
F. A VACUUM TRUCK WILL BE ON-SITE TO GATHER AND REMOVE ALL DRILLING FLUIDS.
G. IMMEDIATELY SUSPEND DRILLING OPERATIONS ONCE AN INADVERTENT RETURN IS DISCOVERED.
H. DEVELOP A POLLUTION PREVENTION AND CONTINGENCY (PPC) PLAN AND IMPLEMENT STRATEGY TO CONTROL THE AREA WHERE THE INADVERTENT RETURN IS OCCURRING. THE PPC PLAN MUST BE ON SITE.
I. IF AN INADVERTENT RETURN OCCURS WITHIN THE WATERWAY OR HAS RESULTED IN POLLUTION IN THE WATERWAY OR WETLAND, CONTACT DEP, THE PA FISH AND BOAT COMMISSION, AND THE DELAWARE COUNTY FISH COMMISSION.

- 14. EXCAVATED MATERIAL NOT SUITABLE FOR BACKFILL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH THE STANDARD EROSION & SEDIMENTATION CONTROL PLAN NOTES.
15. PLACE EROSION CONTROL BLANKET IN ALL DISTURBED GRASSSED AREAS AND APPLY PERMANENT SEEDING.
16. REMOVE TEMPORARY BMP(S) UPON PERMANENT STABILIZATION OF THE DISTURBED AREA TRIBUTARY TO EACH BMP. PERMANENT STABILIZATION IN GRASSSED AREAS IS CONSIDERED UNIFORM 70% PERENNIAL VEGETATIVE COVER OVER THE ENTIRE DISTURBED AREA, AND TEMPORARY PAVING OR SUBBASE ARE ACCEPTABLE FOR PAVED AREAS.



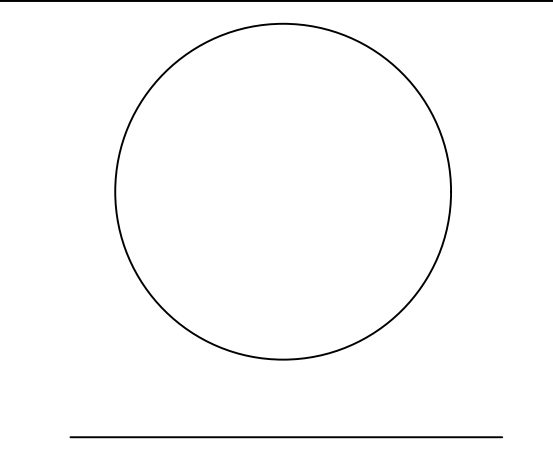
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www.carrollengineering.com



WATER MAIN PLAN AND PROFILE
THE WILLOWS PARK WATER MAIN REPLACEMENT
SITUATED IN RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA
PREPARED FOR RADNOR TOWNSHIP
301 IVEN AVENUE
WAYNE, PA 19087-5297

Table with columns: NO., DATE, DESCRIPTION, CAP, DATE. Rows 1-5 detailing revision history.

DATE 2-24-2020
CADD FILE 2016510001
JOB NO 20-1651
DSG BY CAP
DWN BY CAP
CKD BY ABM
SCALE AS NOTED
DRAWER NUMBER
SHEET 9 OF 10 SHEETS

DRAWING NUMBER C-5004



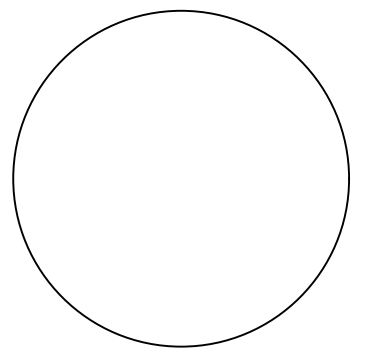
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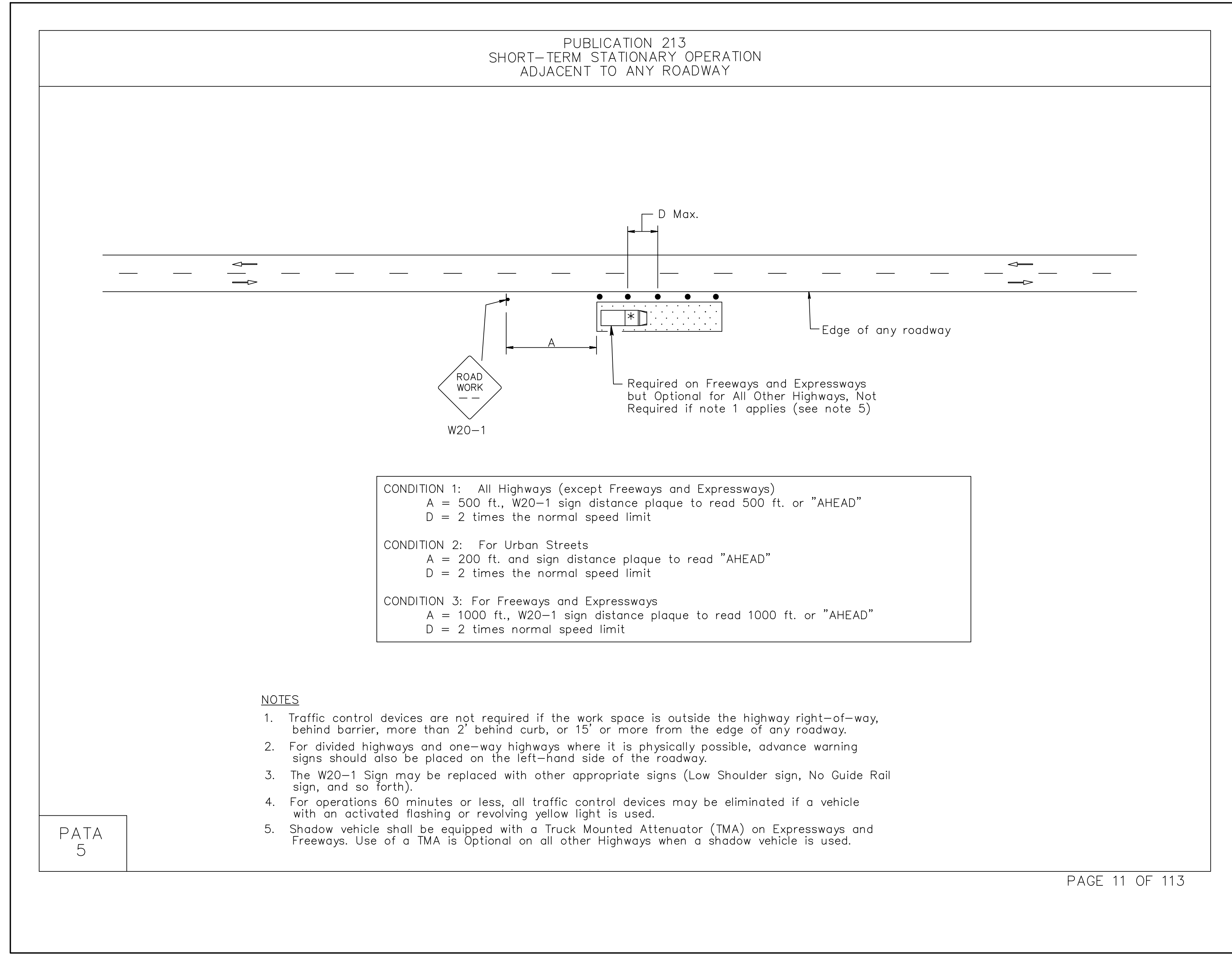


TRAFFIC CONTROL DETAILS

THE WILLOWS PARK
 WATER MAIN REPLACEMENT
 SITUATED IN
 RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA
 PREPARED FOR
 RADNOR TOWNSHIP
 301 IVEN AVENUE
 WAYNE, PA 19087-5297

NO.	DATE	DESCRIPTION
3	4-14-21	ISSUED FOR BIDDING
2	4-14-21	ISSUED FOR BIDDING REVIEW (LETER DATED OCTOBER 15, 2020)
1	4-14-20	ORIGINAL DRAWING

DATE 2-24-2020
 CADD FILE 2016510001
 JOB NO 20-1651
 DSG BY CAP
 DWN BY CAP
 CKD BY ABM
 SCALE AS NOTED
 DRAWER NUMBER -
 SHEET 10 OF 10 SHEETS
 DRAWING NUMBER
C-505



RESOLUTION NO. 2021-53

**A RESOLUTION OF RADNOR TOWNSHIP,
DELAWARE COUNTY, PENNSYLVANIA,
AUTHORIZING THE AWARD OF THE CONTRACT FOR
DESIGN, ENGINEERING AND PERMITTING FOR
THE STRATHMORE ROAD STORM SEWER REHABILITATION PROJECT,
TO CARROLL ENGINEERING CORPORATION, IN THE AMOUNT OF \$28,500.00**

WHEREAS, the existing inlet at the curb at 321 Strathmore Road surcharges during storm events;

WHEREAS, the storm sewer, which outfalls to Valley Run, is of unknown size and material;

WHEREAS, an additional nearby inlet and hidden manhole further complicate the storm sewer system; and

WHEREAS, Carroll Engineering Corporation has provided an acceptable proposal for professional engineering services to conduct the design, engineering and permitting for the replacement of this system.

NOW, THEREFORE, be it *RESOLVED* by the Board of Commissioners of Radnor Township does hereby Authorize the Award of the Contract for Design, Engineering and Permitting for the Strathmore Road Storm Sewer Rehabilitation Project, to Carroll Engineering Corporation, in the Amount of \$28,500.00

SO RESOLVED this 24th day of May, A.D., 2021.

RADNOR TOWNSHIP

By: _____

Name: Jack Larkin

Title: President

ATTEST:

William M. White
Manager/Secretary

Radnor Township
PROPOSED LEGISLATION

DATE: May 18, 2021
TO: Radnor Township Board of Commissioners
FROM: Dennis P. Capella, Engineering Project Manager
CC: William M. White, Township Manager
Stephen F. Norcini, P.E., Township Engineer

LEGISLATION: Resolution #2021-53: Authorizing the Award of the Contract for Design, Engineering and Permitting for the Strathmore Road Storm Sewer Rehabilitation Project, to Carroll Engineering Corporation, in the Amount of \$28,500.00

LEGISLATIVE HISTORY: This item has not been before the Commissioners previously.

PURPOSE AND EXPLANATION: The existing inlet at the curb at 321 Strathmore Road surcharges during storm events. The associated storm sewer along the property line with 327 Strathmore outfalls beyond the rear of the property to Valley Run adjoining Clem Macrone Park and is of unknown size and material. The condition of the existing storm sewer is further complicated by the uncertain status of a small inlet next to the garage and of a manhole presumed to be located in a shed at the rear of the property. Carroll Engineering has submitted a proposal (copy attached) for the preparation of the design drawings and specification, permitting, easement documents and bidding services to rehabilitate the storm sewer to provide general relief of the surcharging.

IMPLEMENTATION SCHEDULE: Upon approval by the Board of Commissioners, Carroll Engineering will be notified of the award and the cost will be entered into the finance system.

FISCAL IMPACT: The project cost is to be funded by the Stormwater Fund.

RECOMMENDED ACTION: *Staff requests the Board of Commissioners of Radnor Township to authorize the Award of the Contract for Design, Engineering and Permitting for the Strathmore Road Storm Sewer Rehabilitation Project, to Carroll Engineering Corporation, in the Amount of \$28,500.00.*

**DELAWARE COUNTY, PENNSYLVANIA
RADNOR TOWNSHIP**

ORDINANCE NO. 2021-04

**AN ORDINANCE OF RADNOR TOWNSHIP
AMENDING THE RADNOR TOWNSHIP CODE OF
ORDINANCES CHAPTER 62, PENSIONS AND
ANNUITIES, ARTICLE II, POLICE PLAN, SECTION
18, RETIREMENT BENEFITS, BY ADDING
SUBPART “L” TO SECTION 18, WHICH SUBPART
RELATES TO THE DEFERRED RETIREMENT
OPTION PLAN EFFECTIVE AS OF JANUARY 1,
2020, AND CHANGING THE LETTERING OF THE
PREVIOUSLY EXISTING SUBPART “L” FROM “L”
TO “M”**

WHEREAS, Radnor Township, Delaware County, Pennsylvania (the “Township”) is governed by the Township’s Home Rule Charter as authorized by the Home Rule Charter and Optional Plans Law found at 53 Pa.C.S.A §2901 *et. seq*;

WHEREAS, the Municipal Police Pension Law, Act of May 29, 1956 (P.L. 1804, No. 600) provides that the Township shall maintain a police pension fund or annuity; and

WHEREAS, on January 27, 2020, the Township and the Fraternal Order of Police Delaware County Lodge #27 (FOP), acting on behalf of the Police Officers of the Township of Radnor, agreed that Chapter 62-18 of the Radnor Township Code of Ordinances would be amended to include a Deferred Retirement Option Plan (“DROP”).

NOW, THEREFORE, BE IT ENACTED AND ORDAINED by the Board of Commissioners of Radnor Township, Delaware County, Pennsylvania, and the same is hereby ordained and enacted as follows to wit:

SECTION I. Chapter 62, Article II, Section 18, is amended by adding the following subpart:

“L. Deferred Retirement Option Plan (“DROP”) – Effective January 1, 2020, a DROP benefit will be available to Officers who have completed the age and service requirements of Paragraph A of this Section with the following provisions:

- (1) The DROP participation period will be four (4) years.

- (2) Except as provided for in Article 14 of the CBA, there will be no inclusion of the payout for accrued leave time in DROP pension calculations. An Officer participating in DROP will receive a payout for accrued leave time at the time he/she separates from employment.
- (3) Once an Officer enters DROP, his/her pension benefit will not be recalculated.
- (4) As to an Officer who enters DROP, upon separation from employment, the Officer shall receive the retiree medical and life insurance benefits as provided by the CBA at the time the Officer entered DROP.
- (5) Investment returns on an Officer's DROP benefits will be based on the cap of 4.5% and floor of 0.0% as required by Act 44.
- (6) An Officer's election to enter DROP is irrevocable and becomes effective on the later of the date the Officer submits completed documentation as required by the Township or the date to enter DROP selected by the Officer.

SECTION II. Chapter 62, Article II, Section 18, is amended by changing the letter of the existing subpart "L" from "L" to "M" and adjusting the sequence of the sub-parts accordingly.

SECTION III. SEVERABILITY.

In the event any provision, section, sentence, clause or part of this Ordinance shall be held to be invalid, such invalidity shall not affect or impair any remaining provisions, section, sentence, clause or part of this Ordinance, it being the intent of the Board of Commissioners that the remainder of the Ordinance shall remain in full force and effect.

SECTION IV. REPEALER.

Any ordinance, resolution and/or other regulation of the Township, or any parts of ordinances, resolutions and/or other regulations of the Township, in conflict herewith are hereby repealed. All other provisions of the ordinances, resolutions and/or other regulations of the Township shall remain in full force and effect.

SECTION V. This Ordinance shall become effective five (5) days after it is adopted.

**ENACTED AND ORDAINED BY THE TOWNSHIP OF RADNOR, DELAWARE COUNTY,
PENNSYLVANIA, THIS _____ DAY OF _____, 2021.**

**RADNOR TOWNSHIP
BOARD OF COMISSIONERS**

By: _____

Name: Jack Larkin

Title: President

Attest:

William M. White, Township Secretary

MARY C. EBERLE
JOHN B. RICE
DIANNE C. MAGEE *
DALE EDWARD CAYA
DAVID P. CARO †
DANIEL J. PACI †
JONATHAN J. REISS ◊
GREGORY E. GRIM †
PETER NELSON *
PATRICK M. ARMSTRONG
SEAN M. GRESH
KELLY L. EBERLE *
JOEL STEINMAN
MATTHEW E. HOOVER
COLBY S. GRIM
MICHAEL K. MARTIN
MITCHELL H. BAYLARIAN
WILLIAM D. OETINGER
FRANK N. D'AMORE, III

* ALSO ADMITTED IN NEW JERSEY
◊ ALSO ADMITTED IN NEW YORK
† MASTERS IN TAXATION
‡ ALSO A CERTIFIED PUBLIC ACCOUNTANT

LAW OFFICES
GRIM, BIEHN & THATCHER

A PROFESSIONAL CORPORATION
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GRIM & GRIM AND BIEHN & THATCHER
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RESPECTIVELY
126TH ANNIVERSARY 1895-2021

www.grimlaw.com

John B. Rice
e-mail: jrice@grimlaw.com

J. LAWRENCE GRIM, JR., OF COUNSEL
JOHN FREDERIC GRIM, OF COUNSEL

104 S. SIXTH STREET
P.O. BOX 215
PERKASIE, PA. 18944-0215
(215) 257-6811
FAX (215) 257-5374
(215) 536-1200
FAX (215) 538-9588
(215) 348-2199
FAX (215) 348-2520

April 28, 2021

SENT VIA ELECTRONIC CORRESPONDENCE

Delaware County Daily Times
Attn: Legal Department
390 Eagleview Road
Exton, PA 19341

Re: Radnor Township –Pension Ordinance
Advertising date: 5/10/21

Dear Legal Department:

Enclosed please find for advertisement in the May 10th editions of your newspaper, a Legal Notice for the possible enactment of the above ordinance by the Board of Commissioners of Radnor Township at their meeting on May 24, 2021. Kindly provide proof of publication and your invoice for the advertisement directly to Radnor Township, c/o William White, 301 Iven Avenue, Wayne, PA 19087. A full copy of the text of the ordinance is enclosed for public inspection. If you have any questions regarding the enclosed, please do not hesitate to contact my office.

Sincerely,

GRIM, BIEHN & THATCHER

By: _____

John B. Rice

JBR/hlp
Enclosure

cc: Bill White, Township Manager (w/encl.) – via email
Peggy Hagan (w/encl.) – via email

LEGAL NOTICE

Notice is hereby given that the Board of Commissioners of the Township of Radnor, Delaware County, Pennsylvania, will consider for possible enactment an ordinance, amending the Radnor Township Code of Ordinances Chapter 62, Pensions and Annuities, Article II, Police Plan, Section 18, Retirement benefits by adding the Deferred Retirement Option Plan benefit (DROP) effective as of January 1, 2020.

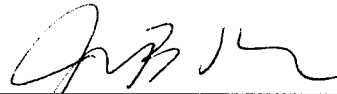
The Board of Commissioners will hold a public hearing on May 24, 2021, at 6:30 p.m., at the Radnor Township Municipal Building, 301 Iven Avenue, Wayne, PA 19087 to consider the ordinance. Copies of the full text of the proposed ordinance are available at the Township offices, the Delaware County Law Library, and the offices of this newspaper during normal business hours.

As a result of the COVID-19 global pandemic, the hearing will be held virtually. Any person who would like to view or participate in the hearing may obtain a link from the Township's website or by sending an email to phagan@radnor.org.

RADNOR TOWNSHIP
BOARD OF COMMISSIONERS
301 Iven Avenue
Wayne, PA 19087-5297

ATTEST:

I do hereby certify that this is a true and correct copy of the proposed Ordinance of Radnor Township, being advertised for possible adoption by the Radnor Township Board of Commissioners on May 24, 2021.



John B. Rice, Esquire
Grim, Bieln & Thatcher
Township Solicitor

LEGAL NOTICE

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RADNOR TOWNSHIP
BOARD OF COMMISSIONERS
301 Iven Avenue
Wayne, PA 19087-5297

March 26, 2021

VIA HAND DELIVERY

Radnor Township
Zoning Hearing Board
301 Ivan Avenue
Wayne, PA 19087
Attn: Kevin Kochanski, Zoning Officer

**Re: Zoning Hearing Board Application – Sign Variance
Trustees of the University of Pennsylvania (“Penn Medicine”)
145 King of Prussia Road (“Property”)**

Dear Mr. Kochanski:

On behalf of the my client, Penn Medicine, I am submitting the enclosed Zoning Hearing Board Application (the “Application”) for the proposed signage on Location 5 Building/Blue Route situate on the Property.

In support of Penn Medicine’s Application, also enclosed are the following materials:

- 1) One (1) original and nine (9) copies of the Application with Narrative;
- 2) Ten (10) copies of the Exterior Schematic Plan and Sign Detail Rendering;
- 3) Ten (10) copies of Parking Garage Rendering;
- 4) One (1) CD containing the above-referenced materials; and
- 5) Application fee check in the amount of \$900.00, payable to Radnor Township.

At your earliest convenience, please advise me of the date of Penn Medicine’s hearing before the Radnor Township Zoning Hearing Board in connection with this Application.

March 26, 2021
Page 2

Thank you for your assistance. Please do not hesitate to contact me with any questions or concerns.

Sincerely,



David J. Falcone
Attorney for Applicant

DJF/pad
Enclosures

ZONING HEARING BOARD APPLICATION

TOWNSHIP OF RADNOR

301 IVEN AVENUE

WAYNE, PA 19087

610-688-5600

FAX: 610-971-0450

www.radnor.com

www.radnor.com

TOWNSHIP USE ONLY
APPEAL # _____
FEE: _____
DATE RECEIVED: _____

GENERAL INFORMATION: Applicants are strongly encouraged to review the "Requirements and Information for Appeals to the Zoning Hearing Board" that are attached to the application. Ten (10) copies of this application and required attachments along with an electronic submittal in pdf format (CD or thumb drive) must be filed with the Community Development Department not less than thirty (30) calendar days prior to the hearing. *Incomplete applications will not be accepted for processing.*

REQUIRED FEE DUE AT FILING: Please refer to the Consolidated Fee Schedule, as amended on our website at www.radnor.com for a copy of our current fees.

TYPE OR PRINT

Property Address: 145 King of Prussia Road

Name and address of Applicant: Trustees of the University of Pennsylvania
145 King of Prussia Road

Telephone Number: _____ Email: _____

Property Owner (if different than above): Same as Applicant

Owner address: _____

Telephone number: _____ Email: _____

Attorney's name: David J. Falcone - Saul Ewing Arnstein & Lehr

Address: 1200 Liberty Ridge Drive, Ste 200, Wayne, PA 19087

Telephone number: 610-251-5752 Email: david.falcone@saul.com

Relief requested and/or basis for appearing before the Zoning Hearing Board including *specific citation to any and all sections of the Zoning Code relevant to the appeal. (attach additional pages if necessary)*

Applicant is requesting a variance from the height restriction of 15 feet above the existing grade and such other relief as deemed necessary by the Board.

The proposed wall sign on the Location 5 Building/Blue Route is to be mounted at approximately 51' 5" above the immediately adjacent grade and which is approximately 26' 8" above elevation of the Blue Route.

The applicable section of the Township Zoning Code is Section 280-123(B).

Description of previous decisions by the Zoning Hearing Board pertinent to the property, or attach copies of decisions: *(attach additional pages if necessary)*

Brief narrative of improvements: (attach additional pages if necessary)

See attached Narrative.

ATTACHMENTS: Ten (10) copies of each and one (1) electronic copy in pdf format (CD or thumb drive) of the following must be provided:

1. Engineered plan or survey of the property drawn to scale, prepared by a registered architect, engineer or surveyor licensed in Pennsylvania, containing the following information:
 - a) lot lines and lot dimensions described in metes and bounds (in feet);
 - b) total lot area;
 - c) location of easements and rights of way, including ultimate rights of way;
 - d) location of all setback lines for existing and proposed structures;
 - e) location of steep slopes, floodplains, riparian buffers, wetlands, and other pertinent features;
 - f) location of existing and proposed improvements;
 - g) table of zoning data including zoning district, required setbacks, existing and proposed building coverage, impervious coverage, height, and other pertinent zoning restrictions, and any degree of compliance or noncompliance; and
 - h) all other features or matters pertinent to the application.

PLANS SHALL NOT EXCEED 24" X 36" , AND MUST BE NEATLY FOLDED TO NO GREATER DIMENSION THAN 8 ½" X 11" AT FILING

2. List of witnesses and summary of their testimony attached.
3. Photographs of the property at issue and all adjoining properties.
4. Copies of any written professional reports, including traffic studies, land planning studies,

appraisals, floodplain analyses, economic forecasts or other written reports, which the applicant wishes to present at the hearing (*note: the author of the study or a qualified representative of the entity who prepared the study must appear at the meeting and be available for cross-examination*).

5. Copy of deed, lease, agreement of sale, or other authorization to file the appeal. (*note: leases or agreements of sale either must expressly permit the tenant or buyer to file an appeal, or must be accompanied by a by a letter from the owner clearly authorizing tenant or buyer to file the appeal*).

ADDITIONAL REQUIREMENTS

1. Will this application involve the subdivision of land? Applications that involve the subdivision of land are referred to the Planning Commission for review and recommendation. *Applicants will be notified of the date and time of the Planning Commission meeting*
2. Will briefs or memoranda of law be filed in accordance with requirements of the Zoning Hearing Board? (*note – 10 copies of any brief or memorandum of law to be submitted by the applicant must be received by the Community Development Department no later than 14 days before the hearing*).
3. Will the applicant (or duly authorized officer of the applicant, if applicant is not a natural person) be present at the hearing. If not, then power of attorney, notarized and in recordable form, authorizing the person who will testify on behalf of the applicant, and to bind the applicant in any proceedings of the Board must be presented at or before commencement of the hearing. Attorneys, agents, or other representatives of the applicant may not appear and testify on behalf of the applicant without power of attorney. Forms of power of attorney are available in the Community Development Department. (*note: failure to provide power of attorney will result either in the appeal being continued, or being dismissed, at the discretion of the Board*)



SIGNATURE OF APPLICANT

AN ADDITIONAL FEE OF \$200 SHALL BE CHARGED FOR ANY CONTINUANCE REQUESTED BY THE APPLICANT. THIS FEE SHALL BE PAID PRIOR TO THE RESCHEDULING OF THE HEARING.

Penn Medicine Radnor
145 King of Prussia Road
Building Exterior Signage

NARRATIVE TO ZONING HEARING BOARD APPLICATION

The subject property is located at 145 King of Prussia Road in Radnor Township. The property is zoned PLO, and is being developed in a mixed use fashion with an ambulatory care facility, a hotel and an office, as well as with two accessory parking structures.

Pursuant to the Radnor Township Zoning Ordinance, Penn Medicine is entitled to a sign along Route 476 (Blue Route), however due to the grade changes immediately adjacent to this highway, a building sign mounted 15' above grade would not be visible from the highway. Penn Medicine would like to install an internally illuminated stainless steel Building Identification sign on the face of the top level of its garage at the corner closest to the Blue Route where a Penn Medicine banner is currently hung.

The proposed design of this signage is brushed stainless steel, internally illuminated channel lettering with white acrylic faces. The area of the sign has been revised to comply with the 40 square foot limit provided in the Zoning Ordinance. As such, no relief is being sought for sign size. Relief is, however, being sought for height. For visibility reasons, the bottom of the sign is proposed to be mounted at approximately 51' 5" above the immediately adjacent grade, and it is approximately 26' 8" above the elevation of the Blue Route. The ordinance permits signage no higher than 15' above grade.

The design team noticed several places in Radnor Township where, for visibility reasons, signs appear to be mounted higher than 15' above grade. As noted in their letter of February 12, 2020, the Radnor Township Design Review Board felt that a proposed sign mounted by the Applicant at 51'5" above was appropriate for this location. The Design Review Board recommended approval of this variance request.

In light of the foregoing, the Applicant seeks variance relief from the Board to allow for the placement of the proposed wall sign above the permitted 15'. Applicant desires to pursue the sign at approximately 51' 5" above grade. Applicant also seeks such other relief as deemed necessary or appropriate by this Board.



Client: Ballinger / Penn Medicine
 Project: Penn Medicine Radnor
 Page:
 Project # 4046625

Notes:

Revisions:	No.	Description	Date
	1	Revisions	11/6/19
	2	Revisions	12/20/19
	3	Revisions (Blue Route)	2/12/20
	4	Revisions (Blue Route)	7/5/20
	5	Revisions (Blue Route)	10/29/20

Client Approvals:
 Approved
 Not Approved
 Approved as Noted

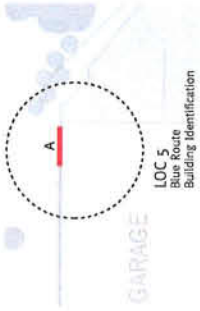
Date: 10/09/19
 Drawn: RO
 Scale: As Noted
 File:

DRAWING CHECKED BY:

AGS
 302 Commerce Drive
 Exton PA 19341
 USA
 www.agsinfo.com
 610.363.8150 Telephone
 610.363.7029 Facsimile
 info@agsinfo.com E-mail



Client: Ballinger / Penn Medicine
 Project: Penn Medicine Radnor
 Page: Design Development
 Project # 4046625



Zoning Restrictions

Wall Signs
 Any building devoted solely to office use shall be restricted to wall signs that are no more than 12 feet in height above the existing grade or project above any cornice, roofline, parapet wall or building facade. When a building has frontage on more than one street, the sign area of all wall signs along each street shall be limited by the amount of building frontage along that street.

Total Sq Ft of Design Shown is: 40' Sq Ft

Fabrication/Materials

Channel Letters
 6" deep fabricated channel letters; returns to be horizontal brush stainless steel; faces to be white acrylic (Shield colors to match Penn Medicine Standard Colors) and illuminated. Mounted to wall with raceway painted to match building skin.

Sign is internally illuminated

No.	Description	Date
1	Revisions	11/6/09
2	Revisions (Blue Route)	11/10/09
3	Revisions (Blue Route)	2/12/10
4	Revisions (Blue Route)	2/15/10
5	Revisions (Blue Route)	10/26/10

Client Approvals:

- Approved
- Not Approved
- Approved as Noted

Date: 10/09/19

Drawn: RO

Scale: As Noted

File:

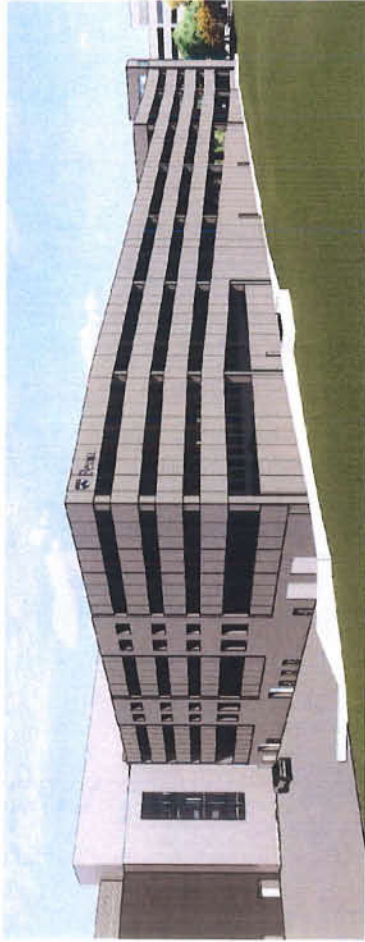
DRAWING CHECKED BY:

AGS
 302 Commerce Drive
 Exton PA, 19341
 USA
 www.agsinfo.com

610.363.8150 Telephone

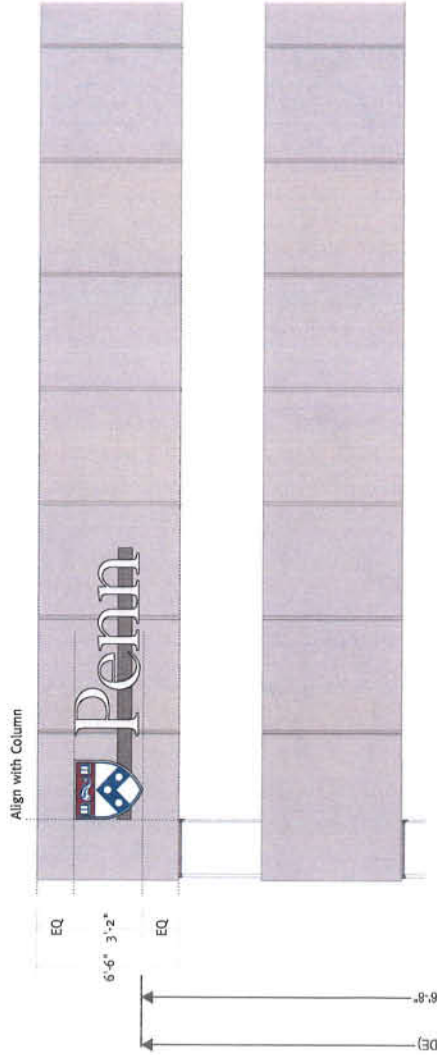
610.363.7029 Facsimile

info@agsinfo.com E-mail



1 Loc 5 Building ID Placement (Channel Letters)

Scale= NTS



2 Loc 5 Building ID Elevation (Channel Letters)

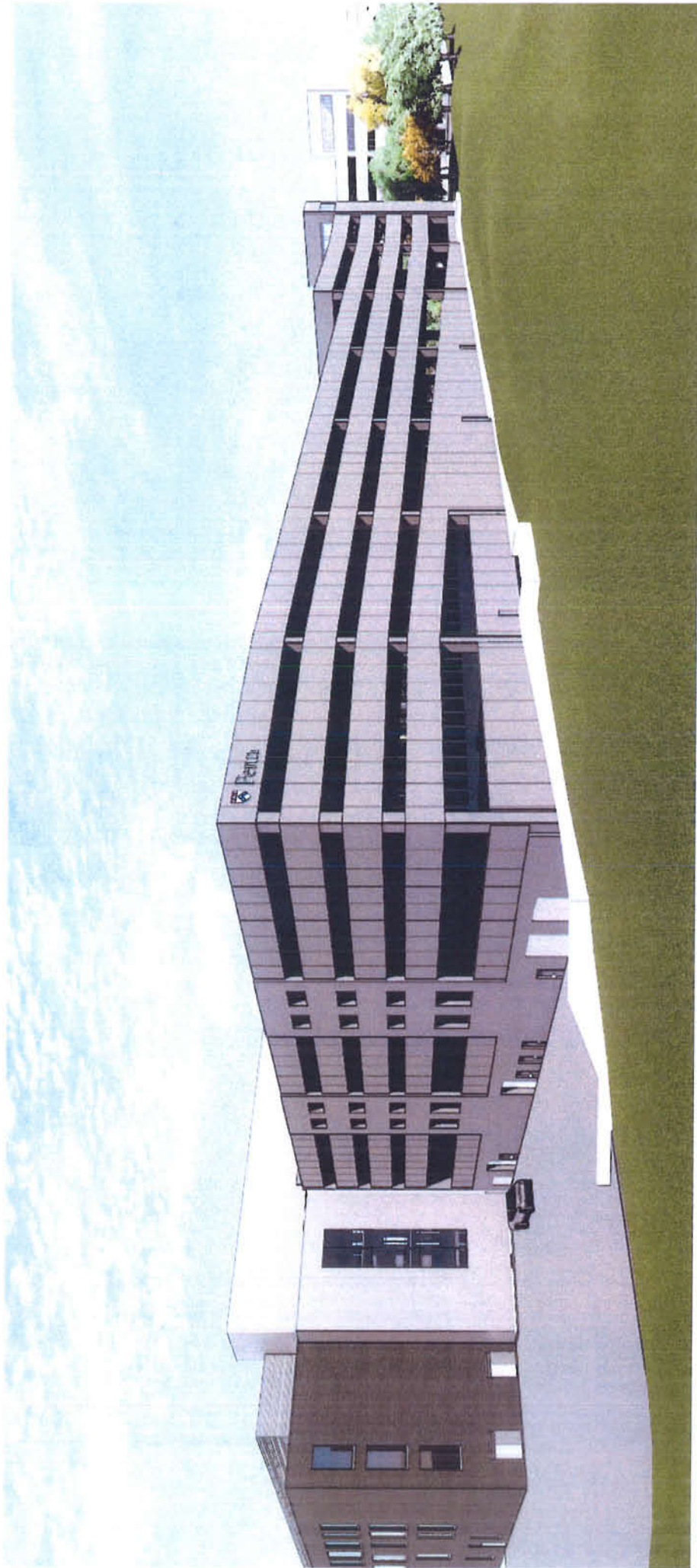
Scale= 1/4" = 1'-0"



Scale= 1/2" = 1'-0"

| Garage Sign |

BALLINGER



3 I. Motion to
Authorize the
Petition Process for
the West Wayne
Cemetery
(Commissioner
Abel)

Reports of Standing Committees

New Business

Old Business

Public Participation

Adjournment