2026 WATER SYSTEM UPGRADES PROJECT

FOR

DASSA MCKINNEY ELEMENTARY SCHOOL

391 HOOKER RD

WEST SUNBURY, PA 16061

ABBREVIATIONS	
A	Air
AFF	Above Finished Floor
AFG	Above Finished Grade
ASHRAE	American Society of Heating, Refrigration, and Air Conditioning Engineers
ASSY	Assembly
BFF	Below Finished Floor
BFG	Below Finished Grade
B/F	Butt Fused
BRKR	Breaker
Btu	British Thermal Unit
CF	Cubic Foot
CFM	Cubic Feet per Minute
C.I.	Cast Iron
C.I.P.	Cast Iron Pipe
C.J.	Control Joint
CKT	Circuit
COMB	Combination
D	Drain
DB	Directional Bore
D.I.	Ductile Iron
D.I.P.	Ductile Iron Pipe
EA	Exhaust Air
E/F	Electrofused
E.J.	Expansion Joint
EP	Entry Point
E.W.	Each Way
EX	Existing
°F	Degrees Fahrenheit
FFE	Finished Floor Elevation
FFL	Finished Floor Level
FGE	Finished Grade Elevation
FO	Fail Open
FC	Fail Closed
GAL	Gallon
GPM	Gallon per Minute
H	Height
H/F	High Flow
H.P.	High Point
HWL	High Water Level
H.W.	Hot Water
ID	Inside Diameter
IPLV	Integrated Part Load Value
I/P	Input
IS	Inside
LF	Lineal Feet
LWL	Low Water Level
L.P.	Low Point
MBH	Thousand Btu per Hour
MFR	Manufacturer
N/A	Non-Applicable
N.C.	Normally Closed
N.O.	Normally Open
N.T.S.	Not to Scale
OA	Outside Air
OC	Open-Cut
O.C.	On Center
OD	Outside Diamter
O/P	Output
PRESS.	Pressure
PWL	Pumping Water Level
PWS	Public Water Supply
RA	Return Air
SA	Supply Air
SEER	Seasonal Energy Efficiency Ratio (Btu output/W-hr input)
SF	Square Foot
SNL	Signal
S.T.	Steam Tracing
SWL	Static Water Level
TD	Total Depth
T.O.B.	Top of Block
TYP.	Typical
UG	Underground
VTR	Vent Through Roof
W	Width
WTP	Water Treatment Plant

PROTECT YOURSELF
A PHONE CALL
CAN BE YOUR INSURANCE POLICY

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 STOP - CALL BEFORE YOU DIG!

WHAT YOU DON'T KNOW CAN HURT YOU.
THE STATE OF PENNSYLVANIA REQUIRES NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.

PRELIMINARY DESIGN TICKET #: ----
FINAL DESIGN TICKET #: 20261662802-000

DESIGN CONTACT INFORMATION:

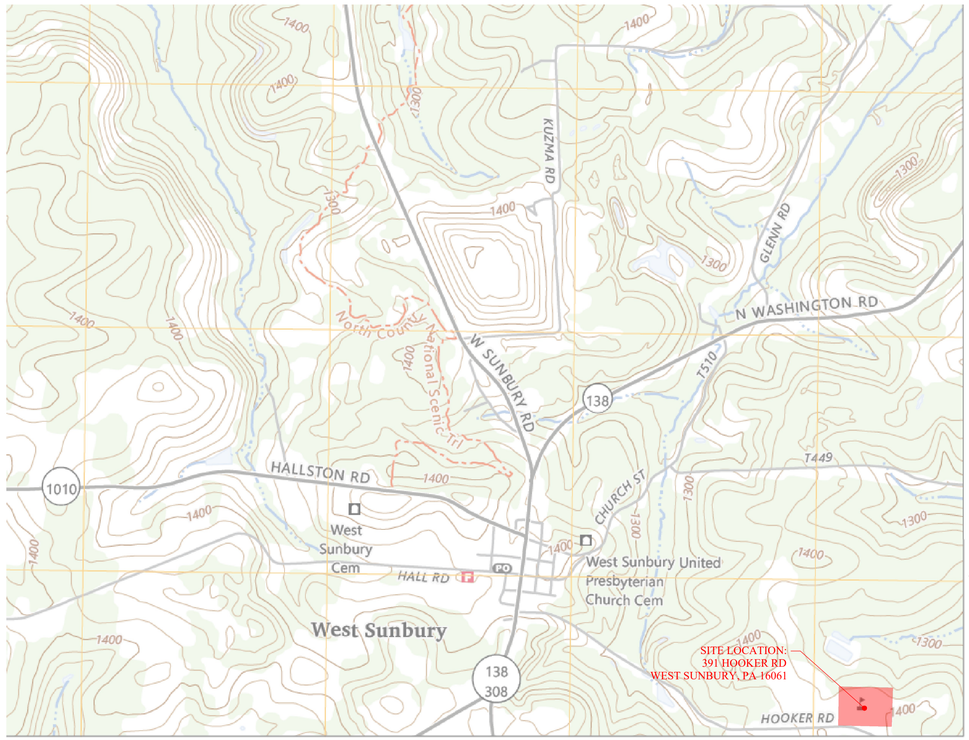
COMPANY: BRIGHTSPEED
ADDRESS: 1120 S TYRON ST, SUITE 700
CHARLOTTE, NC 28203
CONTACT: LOCATE ESCALATIONS PERSONNEL
EMAIL: relocations@brightspeed.com
PHONE: 704-314-2499

COMPANY: CONCORD TOWNSHIP BUTLER CO
ADDRESS: 690 HOOKER RD
WEST SUNBURY, PA 16061
CONTACT: MICHELLE THOMPSON
EMAIL: concordtwp167@zoominternet.net
PHONE: 724-894-2228

COMPANY: PENNSYLVANIA ELECTRIC CO
ADDRESS: 341 WHITE POND DRIVE
AKRON, OH 44320
CONTACT: MELLYSSA ADAMS
EMAIL: madams@firstenergycorp.com
PHONE: 330-252-4013

SCHEDULE OF DRAWINGS:

SHEET #	DESCRIPTION
V100	SITE MAP - OVERALL
PFD100	OVERALL WTP #301 & PUMP PIT ELEVATION
W100	WATER WELL #4 (004) - ELEVATION & DETAILS
W101	WATER WELL #5 (005) - ELEVATION & DETAILS
D100	DETAILS - PIPE INSTALLATION, BACKFILL, & E&S
D101	DETAILS - TYPICAL E&S NOTES



1 COVER

LOCATION MAP

SCALE: N.T.S.

NOTES:
- SOURCE: USGS WEST SUNBURY QUADRANGLE PENNSYLVANIA - BUTLER COUNTY 7.5-MINUTE SERIES

REVISIONS	
DATE	DESCRIPTION
----	----

Book & Proch Well Drilling, Inc.
314 Old Youngstown Road
New Castle, PA 16101
(724) 652-9861
(800) 582-2469

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JAMES BRETT VERLOTTE ENGINEER PE054491

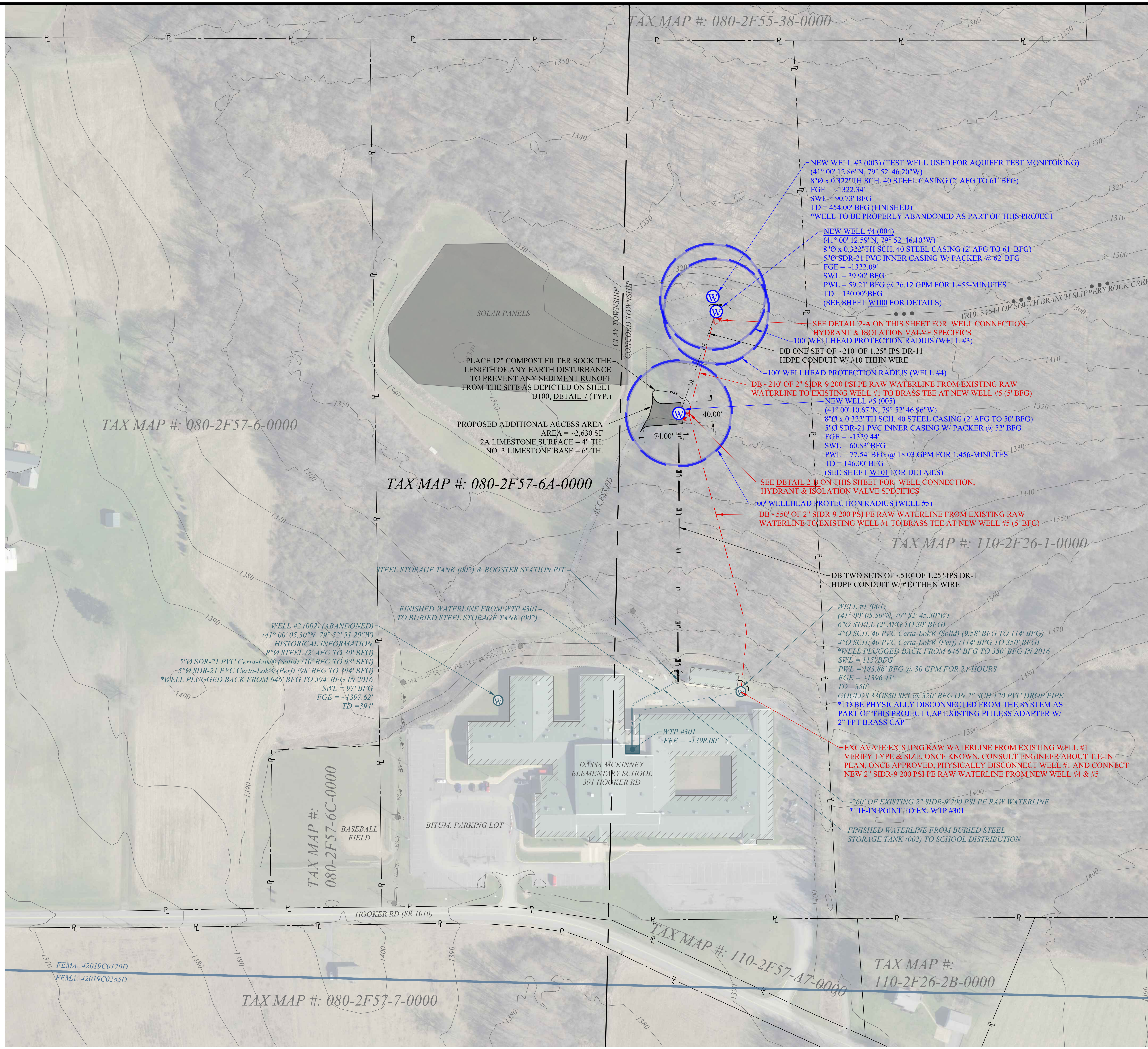
COVER

2026 WATER SYSTEM UPGRADES PROJECT
FOR
DASSA MCKINNEY ELEMENTARY SCHOOL
391 HOOKER RD
WEST SUNBURY, PA 16061
TOWNSHIP OF CLAY & CONCORD, COUNTY OF BUTLER
COMMONWEALTH OF PENNSYLVANIA

PWSID # 5100316

PROJ. NO.:	DRAWN BY:
----	J.V.
DATE:	CHK'D BY:
06/11/2026	R.B.

COVER



1 / V100 — SITE MAP - OVERALL

SCALE (22x34): 1" = 100'
SCALE (11x17): 1" = 200'
0' 100' 200' SCALE BAR: 1" = 100'

LEGEND

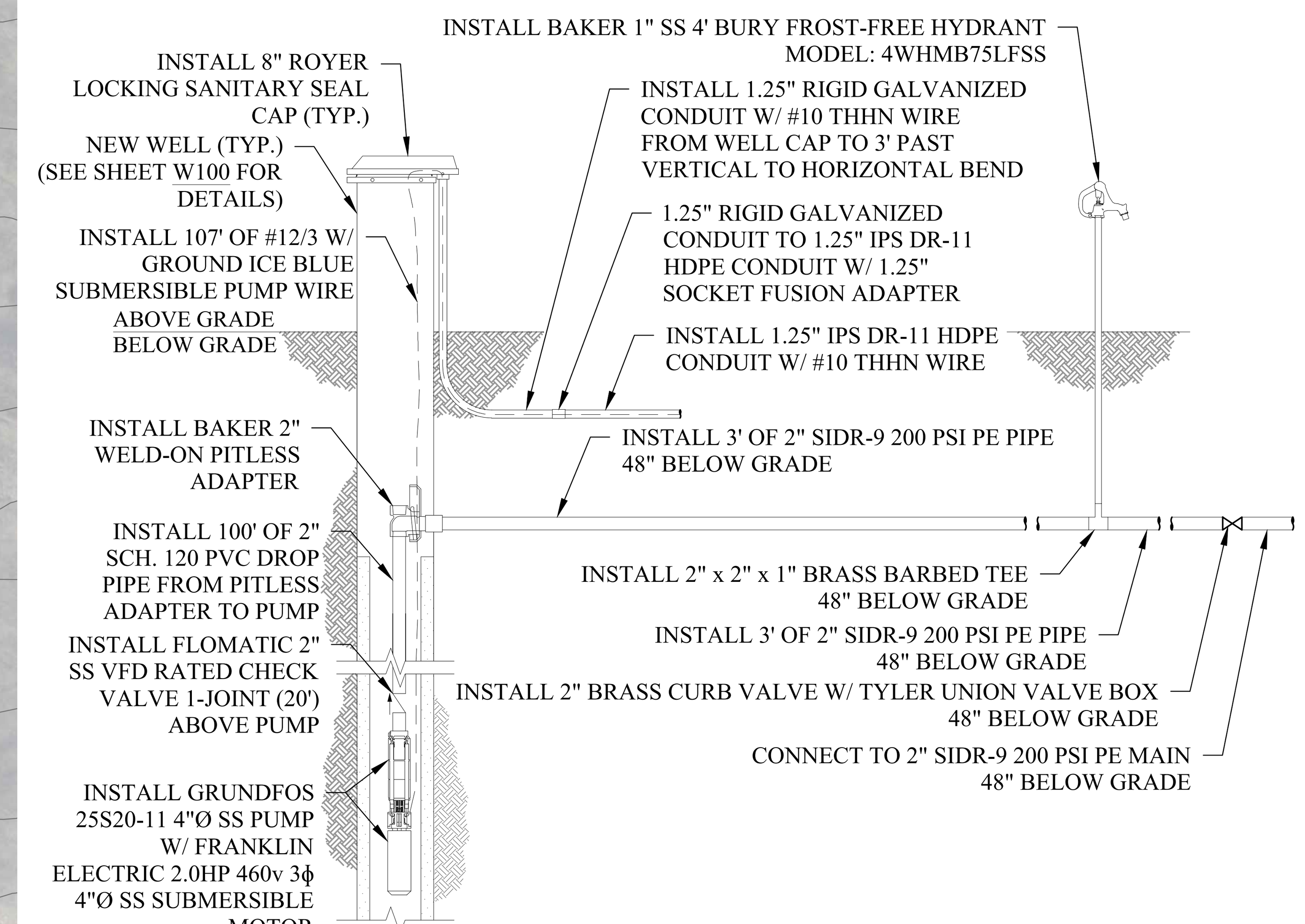
	EDGE OF ROAD/DRIVEWAY		EX. UTILITY POLE
	PROPERTY LINE		EX. WATER WELL
	PUBLIC R.O.W.		PROP. WATER WELL
	EX. STRUCTURE		100' WELLHEAD PROTECTION RADIUS
1000	MAJOR CONTOUR (10')	W	EX. WATERLINE
998	MINOR CONTOUR (2')		PROP. RAW WATERLINE
OHCATV	EX. OVERHEAD FIBER	UE	PROP. UNDERGROUND ELECTRIC LINE
UGCATV	EX. UNDERGROUND FIBER		STREAM/UNNAMED TRIBUTARY
OHE	EX. OVERHEAD ELECTRIC		FEMA FLOODPLAIN
UE	EX. UNDERGROUND ELECT.	FS12	COMPOST FILTER SOCK (12")

GENERAL NOTES:

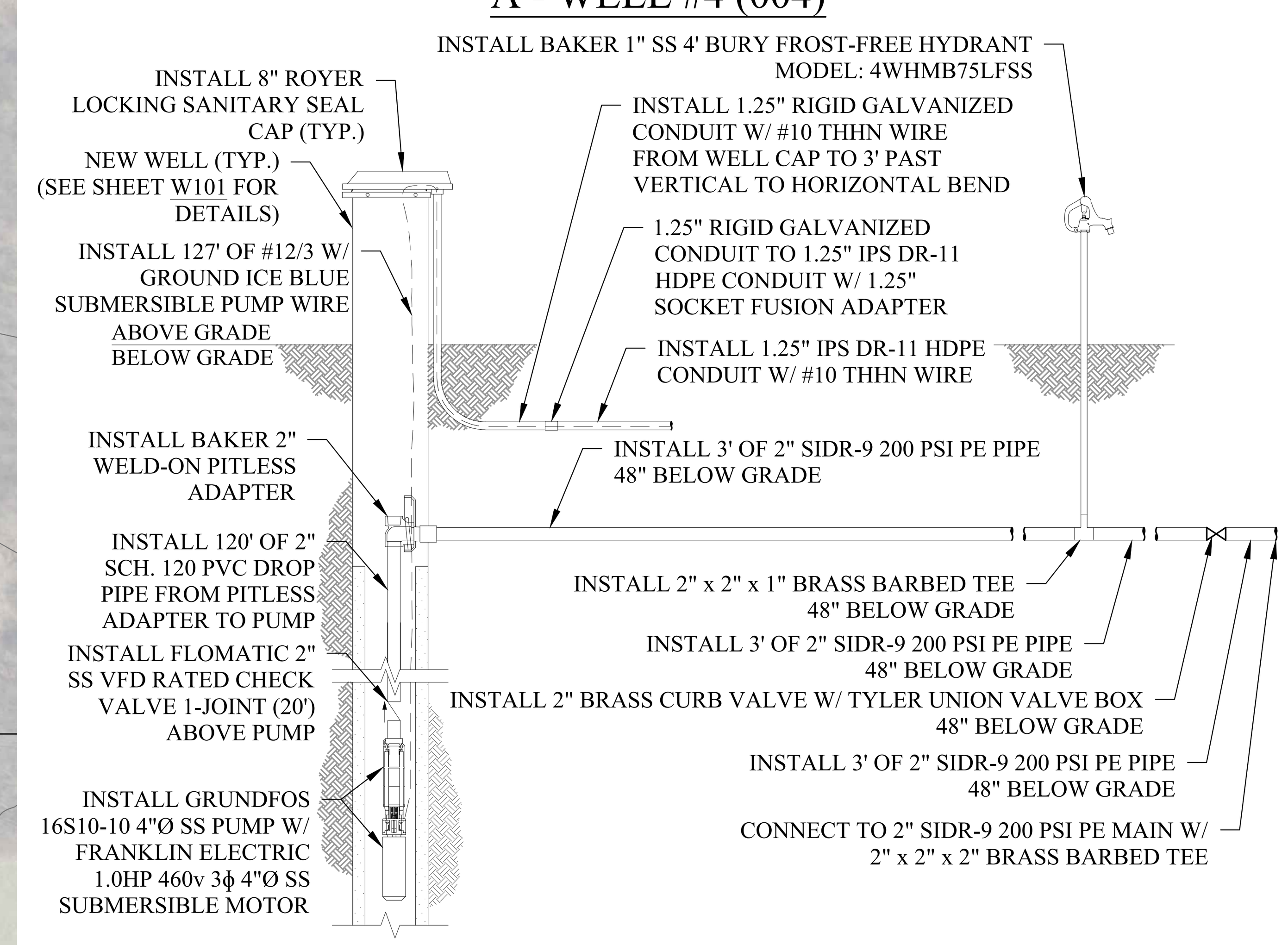
1) LOCATIONS OF UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND SHOULD BE LOCATED AND FIELD VERIFIED BY THE CONTRACTOR VIA THE PA ONE CALL SYSTEM PRIOR TO BEGINNING ANY EARTH DISTURBANCE.

2) PROPERTY LINES AS SHOWN HAVE BEEN DEVELOPED FROM INFORMATION OBTAINED FROM COUNTY TAX ASSESSMENT MAPS. APPROXIMATE LOCATIONS USING THE ABOVE REFERENCE DATA ARE FOR INFORMATION ONLY AND SHOULD NOT BE RELIED UPON AND USED AS AN ACTUAL ON THE GROUND BOUNDARY SURVEY.

3) EXISTING ELEVATIONS WERE DEVELOPED FROM INFORMATION FROM AERIAL MAPPING PROVIDED BY THE PENNSYLVANIA SPATIAL DATA ACCESS (PASDA) AS PROVIDED BY THE PENNSYLVANIA STATE UNIVERSITY.



A - WELL #4 (004)



B - WELL #5 (005)

2 / V100 — WELL CONNECTION DETAIL

SCALE = N.T.S.

NOTES:

1) CONNECTIONS BETWEEN SIDR-9 200 PSI PE WATERLINES TO BE MADE W/ BRASS BARBED TEE & DOUBLE CLAMPED W/ SS CLAMPS AT EACH CONNECTION.

REVISIONS

DATE	DESCRIPTION
----	----

Book & Proch Well Drilling Inc.
314 Old Youngstown Road
New Castle, PA 16101
(724) 652-9861
(800) 582-2469

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — JAMES BRETT VERLOTTE

SITE MAP - OVERALL

2026 WATER SYSTEM UPGRADES PROJECT
FOR
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WEST SUNBURY, PA 16061
TOWNSHIP OF CLAY & CONCORD, COUNTY OF BUTLER
COMMONWEALTH OF PENNSYLVANIA

PWSID # 5100316

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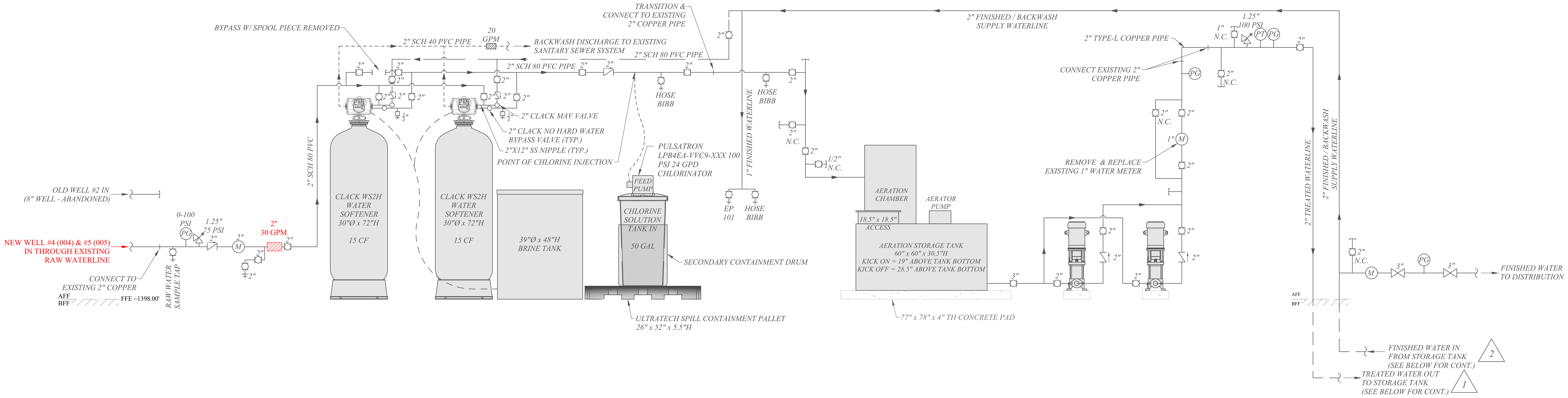
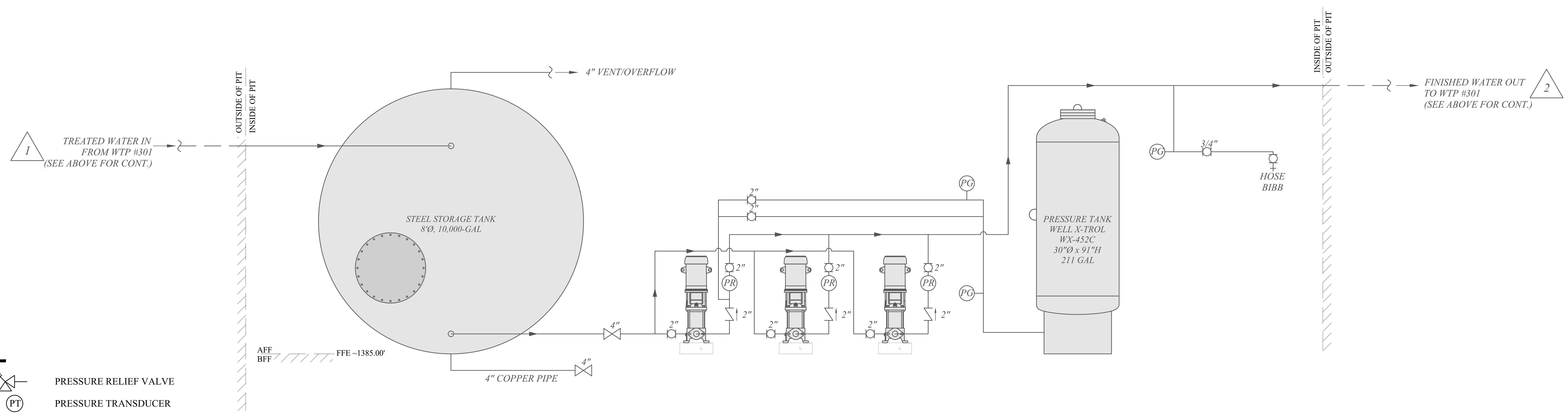
V100





LEGEND

- EX. WALL
- EX. CONCRETE FLOOR
- EX. PIPING/EQUIPMENT
- PROP. WATER TREATMENT PIPING (FINISHED WATER)
- EX. DRAIN LINE
- EX. WATER WELL
- EX. ELECTRIC PANEL
- EX. FLOOR DRAIN
- FLOW DIRECTION ARROW
- SAMPLE SPIGOT/BOILER DRAIN
- CAMLOCK
- PRESSURE GAUGE
- PRESSURE RELIEF VALVE
- PRESSURE TRANSDUCER
- PRESSURE SWITCH
- WATER METER
- CHECK VALVE
- BALL VALVE
- GATE VALVE
- BUTTERFLY VALVE
- FLOW CONTROL
- I/O PLC INPUT/OUTPUT SIGNALS
- CONCENTRIC REDUCER

NOTE(S):
1. EXISTING TO REMAIN - DARK GRAY
2. EXISTING TO BE REMOVED - LIGHT GRAY
3. DASHED WATER PIPING NOT SHOWN AS SUCH IN LEGEND INDICATES UNDERGROUND PIPING

1 / PFD100 WTP #301 & PUMP PIT ELEVATION

SCALE: N.T.S.

REVISIONS

DATE	DESCRIPTION
----	----

Book & Proch Well Drilling Inc. Water Treatment Pump Service
314 Old Youngstown Road
New Castle, PA 16101
(724) 652-9861
(800) 582-2469

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — JAMES BRETT VERLOTTE

OVERALL WTP #301 & PUMP PIT ELEVATION

2026 WATER SYSTEM UPGRADES PROJECT
FOR
DASSA MCKINNEY ELEMENTARY SCHOOL
391 HOOKER RD
WEST SUNBURY, PA 16061
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PWSID # 5100316

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PFD100

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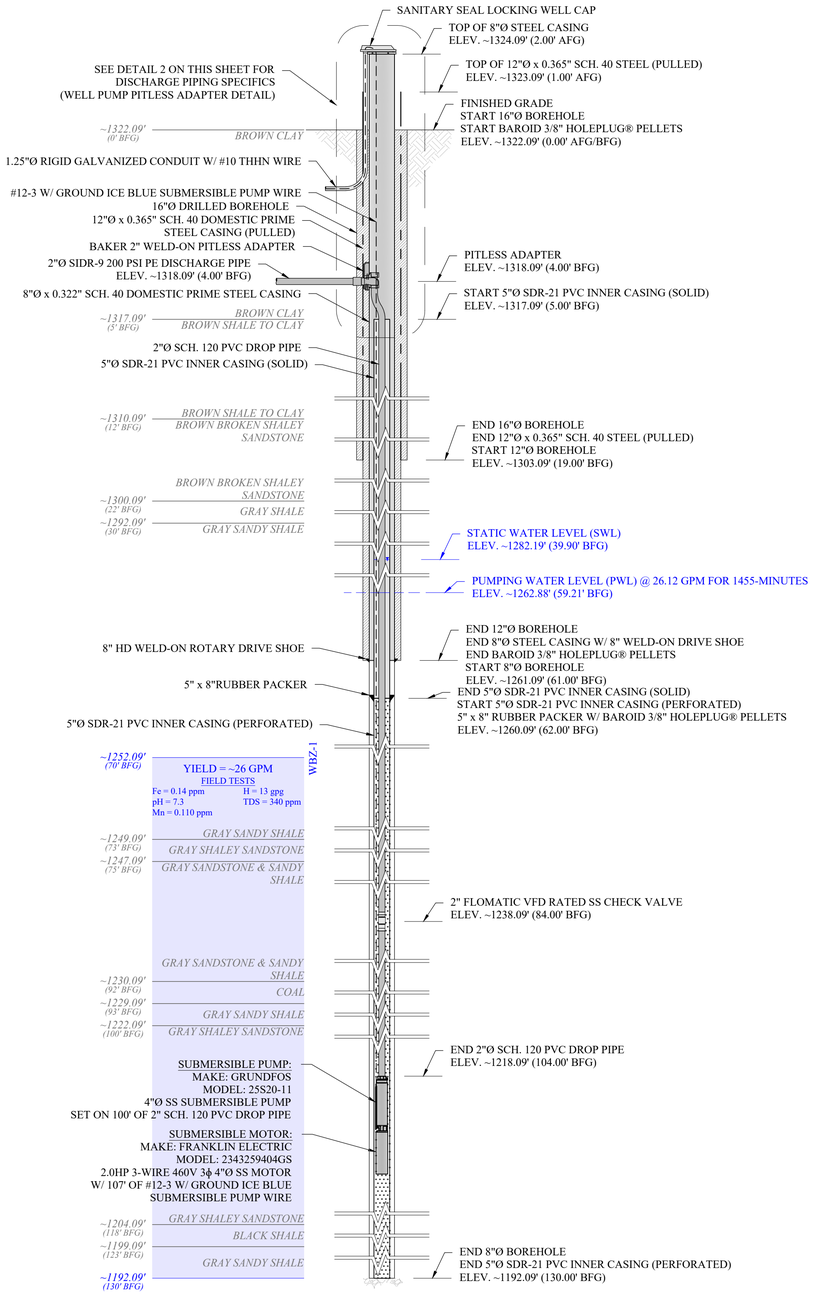


1 W100 **WELL #4 (004) DETAIL**

SCALE (22x34): 1/2" = 1'-0"
SCALE (11x17): 1/4" = 1'-0"
0' 1'-0" 2'-0" SCALE BAR

WELL #4 (004) CONSTRUCTION DETAILS

Casing Manufacturing Specification:
- Steel: ASTM A53/A53M-01
- PVC: ASTM F480

Casing:
- 20' of 12"Ø x 0.365" Sch. 40 Domestic Prime Steel Casing (1' AFG to 19' BFG) (PULLED)
- 63' of 8"Ø x 0.322" Sch. 40 Domestic Prime Steel Casing (2' AFG to 61' BFG)
- 57' of 5"Ø SDR-21 PVC Inner Well Casing (Solid) (5' BFG to 62' BFG)
- 68' of 5"Ø SDR-21 PVC Inner Well Casing (Perforated) (62' BFG to 130' BFG)

Coordinates (Google Earth):
41° 00' 12.59"N, 79° 52' 46.10"W

Elevations:
Well #4 Finished Grade Elevation: ~1322.09'
Well #4 Static Water Elevation: ~1282.19'
Well #4 Pumping Water Elevation @ 26.12 GPM: ~1262.88'
Well #4 Bottom: ~1192.09'
WTP #301 Finished Floor Elevation: ~1398.00'

Pitless Installation Device(s):
Make: Baker
Model: 62FBEZLF 2" Weld-On
Approval Type: Water Systems Council PAS-97
NSF/ANSI 372

Discharge Line(s):
Material: SIDR-9 200 PSI PE
Diameter (inches): 2"
Length (feet): ~1,020' (Well #4 to WTP #301)

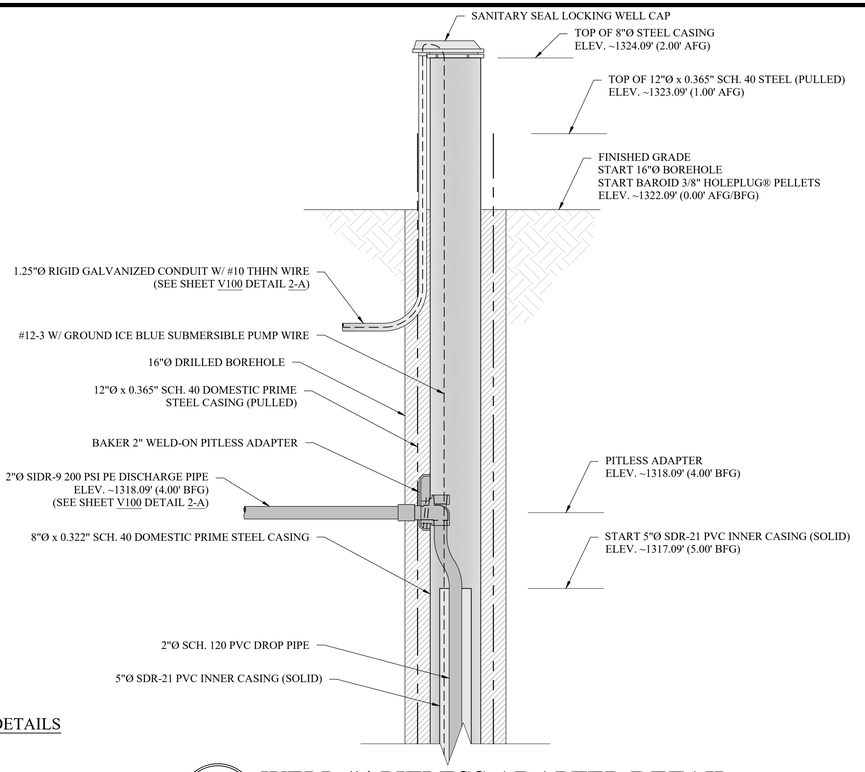
Total Dynamic Head (TDH) Calculation (Well #4 Only):
- *136' = ~1398.00' WTP #301 FFE - 1262.88' Pumping Water Elev.*
- *70' = Pressure through Treatment (30 psi)*
- *13' = ~1,020'-2" SIDR-9 200 psi PE Raw Waterline @ 26 GPM*
- *2' = 100'-2" Sch. 120 PVC Drop Pipe @ 26 GPM*
- 221' = TDH

Total Dynamic Head (TDH) Calculation (Well #4 & 5 Combined):
- *136' = ~1398.00' WTP #301 FFE - 1262.88' Pumping Water Elev.*
- *70' = Pressure through Treatment (30 psi)*
- *3' = ~210'-2" SIDR-9 200 psi PE Raw Waterline @ 25 GPM*
- *20' = ~810'-2" SIDR-9 200 psi PE Raw Waterline @ 38.5 GPM*
- *2' = 100'-2" Sch. 120 PVC Drop Pipe @ 25 GPM*
- 231' = TDH

Pumping Equipment:
Pump:
- Make: Grundfos
- Model: 25S20-11 SS Submersible (4"Ø)
- Capacity: 26 GPM @ 221' TDH / 25 GPM @ 231' TDH @ 60Hz

Motor:
- Make: Franklin Electric
- Item #: 234325940 4 GS
- Model: 3P,2,460/380,6/5,W
- Details: 2.0HP 3-wire 460v 3ϕ 4"Ø SS Submersible Motor

Well Driller:
Company Name: Book & Proch Well Drilling, Inc.
Address: 314 Old Youngstown Rd, New Castle, PA 16101
Phone #: 724-652-9861
Driller License #: 0345
Driller Well ID #: 6512
PA Well ID #: 782589



2 W100 **WELL #4 PITLESS ADAPTER DETAIL**

SCALE (22x34): 1" = 1'-0"
SCALE (11x17): 1/2" = 1'-0"
0' 1'-0" 2'-0" SCALE BAR

3 W100 **WELL #4 LOCATION MAP**

SCALE: N.T.S.
NOTES:
- SOURCE: GOOGLE MAPS

N

REVISIONS

DATE	DESCRIPTION
----	----

Book & Proch WELL DRILLING INC.
314 Old Youngstown Road
New Castle, PA 16101
(724) 652-9861
(800) 582-2469

COMMONWEALTH OF PENNSYLVANIA
JAMES BRETT VERLOTTE
REGISTERED PROFESSIONAL
ENGINEER
PENNSYLVANIA

WATER WELL #4 (004) - ELEVATION & DETAILS

2026 WATER SYSTEM UPGRADES PROJECT
FOR
DASSA MCKINNEY ELEMENTARY SCHOOL
391 HOOKER RD
WEST SUNBURY, PA 16061
TOWNSHIP OF CLAY & CONCORD, COUNTY OF BUTLER
COMMONWEALTH OF PENNSYLVANIA

PWSID # 5100316

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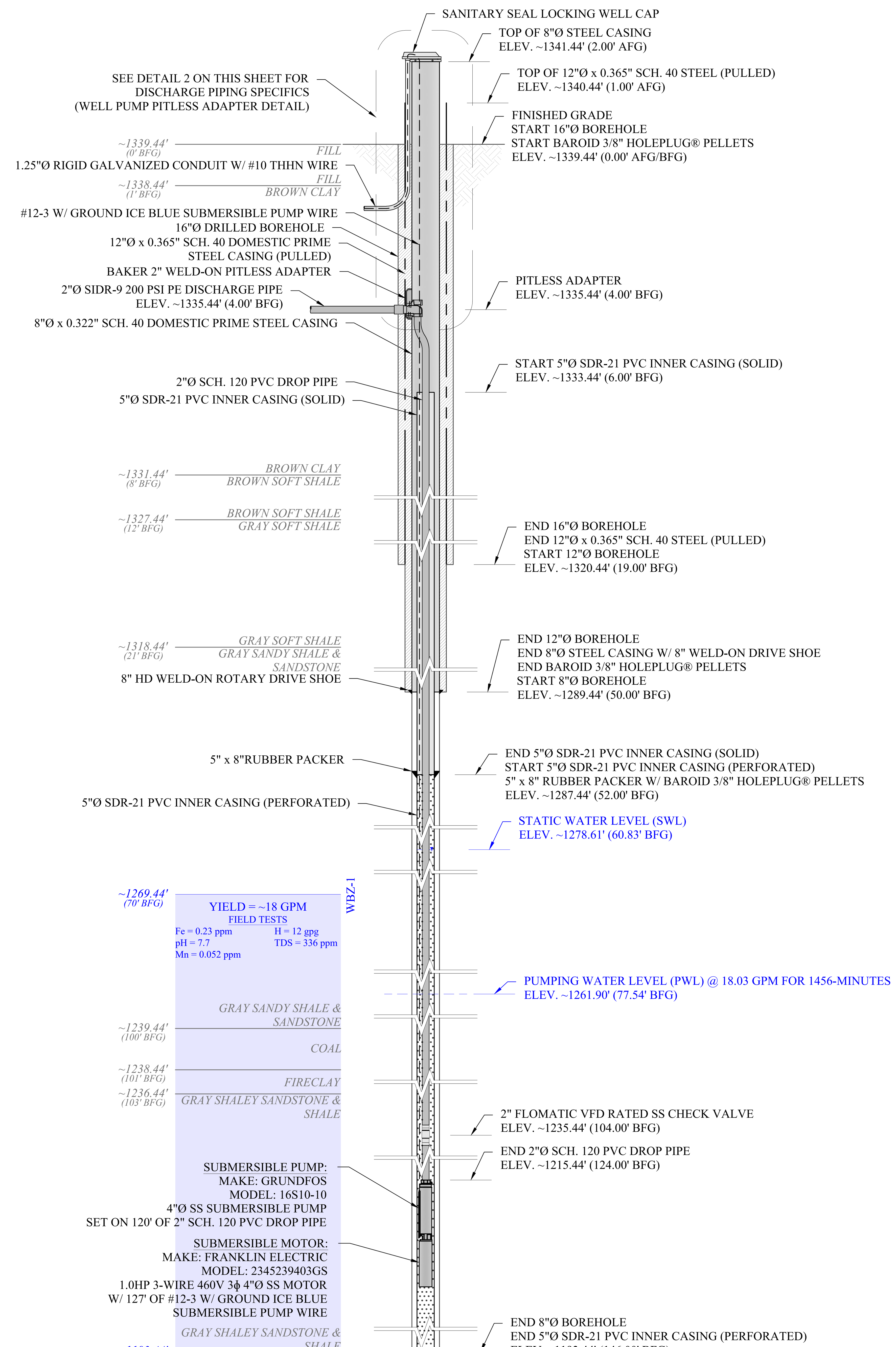
----	J.V.
DATE: 06/11/2026	CHK'D BY: R.B.

W100



1 — W101 — WELL #5 (005) DETAIL
SCALE (22x34): 1/2" = 1'-0"
SCALE (11x17): 1/4" = 1'-0"
0' 1'-0" 2'-0" SCALE BAR

WELL #5 (005) CONSTRUCTION DETAILS

Casing Manufacturing Specification:
- Steel: ASTM A53/A53M-01
- PVC: ASTM F480

Casing:
- 20' of 12"Ø x 0.365" Sch. 40 Domestic Prime Steel Casing (1' AFG to 19' BFG) (PULLED)
- 52' of 8"Ø x 0.322" Sch. 40 Domestic Prime Steel Casing (2' AFG to 50' BFG)
- 46' of 5"Ø SDR-21 PVC Inner Well Casing (Solid) (6' BFG to 52' BFG)
- 94' of 5"Ø SDR-21 PVC Inner Well Casing (Perforated) (52' BFG to 146' BFG)

Coordinates (Google Earth):
41° 00' 10.67"N, 79° 52' 46.96"W

Elevations:
Well #5 Finished Grade Elevation: ~1339.44'
Well #5 Static Water Elevation: ~1278.61'
Well #5 Pumping Water Elevation @ 18.03 GPM: ~1261.90'
Well #5 Bottom: ~1193.44'
WTP #301 Finished Floor Elevation: ~1398.00'

Pitless Installation Device(s):
Make: Baker
Model: 62FBEZLF 2" Weld-On
Approval Type: Water Systems Council PAS-97 NSF/ANSI 372

Discharge Line(s):
Material: SIDR-9 200 PSI PE
Diameter (inches): 2"
Length (feet): ~810' (Well #5 to WTP #301)

Total Dynamic Head (TDH) Calculation (Well #5 Only):
- *137' = ~1398.00' WTP #301 FFE - 1261.90' Pumping Water Elev.*
- *70' = Pressure through Treatment (30 psi)*
- *4' = ~810'-2" SIDR-9 200 psi PE Raw Waterline @ 15 GPM*
- *1' = 120'-2" Sch. 120 PVC Drop Pipe @ 15 GPM*
- 212' = TDH

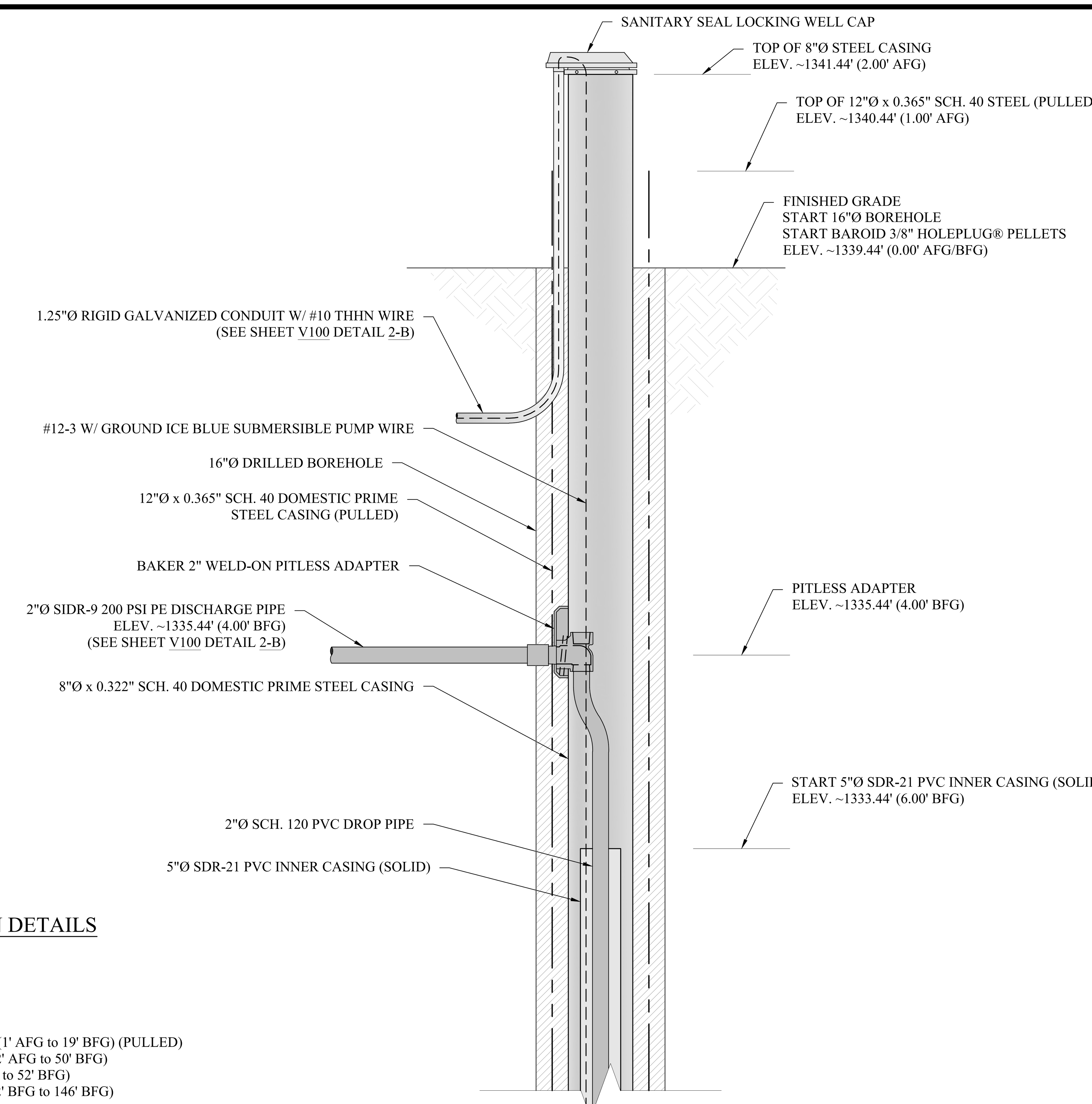
Total Dynamic Head (TDH) Calculation (Well #4 & 5 Combined):
- *137' = ~1398.00' WTP #301 FFE - 1262.88' Pumping Water Elev.*
- *70' = Pressure through Treatment (30 psi)*
- *20' = ~810'-2" SIDR-9 200 psi PE Raw Waterline @ 38.5 GPM*
- *1' = 120'-2" Sch. 120 PVC Drop Pipe @ 13.5 GPM*
- 228' = TDH

Pumping Equipment:

Pump:
- Make: Grundfos
- Model: 16S10-10 SS Submersible (4"Ø)
- Capacity: 15 GPM @ 212' TDH / 13.5 GPM @ 228' TDH @ 60Hz

Motor:
- Make: Franklin Electric
- Item #: 2345239403 GS
- Model: 3P,1,460,60,W
- Details: 1.0HP 3-wire 460v 3ϕ 4"Ø SS Submersible Motor

Well Driller:
Company Name: Book & Proch Well Drilling, Inc.
Address: 314 Old Youngstown Rd, New Castle, PA 16101
Phone #: 724-652-9861
Driller License #: 0345
Driller Well ID #: 6513
PA Well ID #: 782590



2 — W101 — WELL #5 PITLESS ADAPTER DETAIL
SCALE (22x34): 1" = 1'-0"
SCALE (11x17): 1/2" = 1'-0"
0' 1'-0" 2'-0" SCALE BAR

3 — W101 — WELL #5 LOCATION MAP
SCALE: N.T.S.
NOTES:
- SOURCE: GOOGLE MAPS

REVISIONS	
DATE	DESCRIPTION
----	----

Book & Proch Well Drilling Inc. — Pump Service — Water Treatment
314 Old Youngstown Road
New Castle, PA 16101
(724) 652-9861
(800) 582-2469

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — JAMES BRETT VERLOTTE

WATER WELL #5 (005) - ELEVATION & DETAILS

2026 WATER SYSTEM UPGRADES PROJECT FOR DASSA MCKINNEY ELEMENTARY SCHOOL
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COMMONWEALTH OF PENNSYLVANIA

PWSID # 5100316

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DATE: 06/11/2026	CHK'D BY: R.B.

W101

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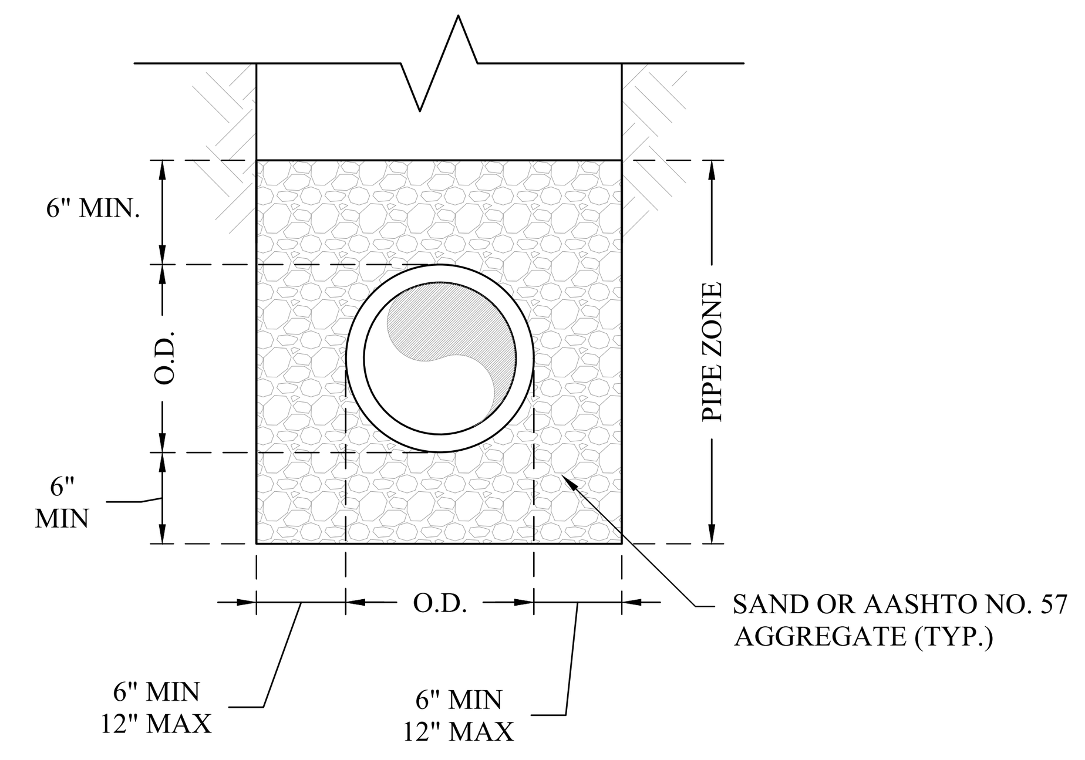
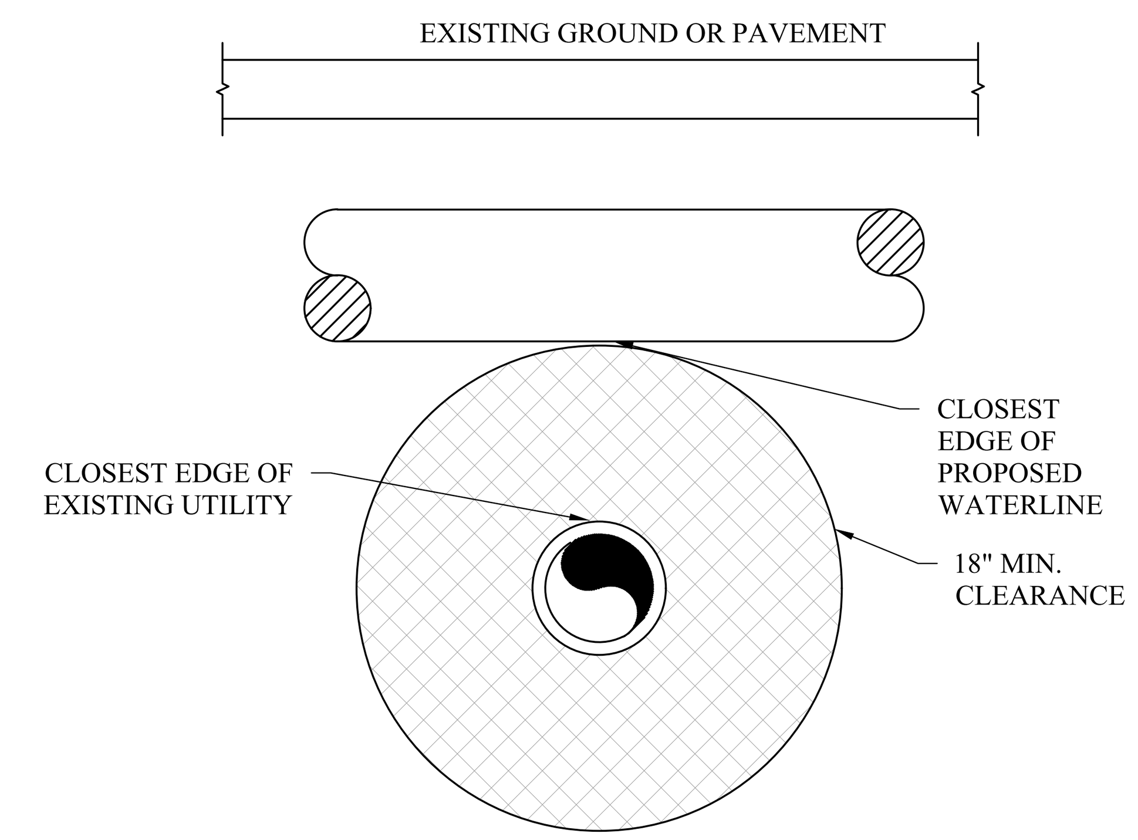


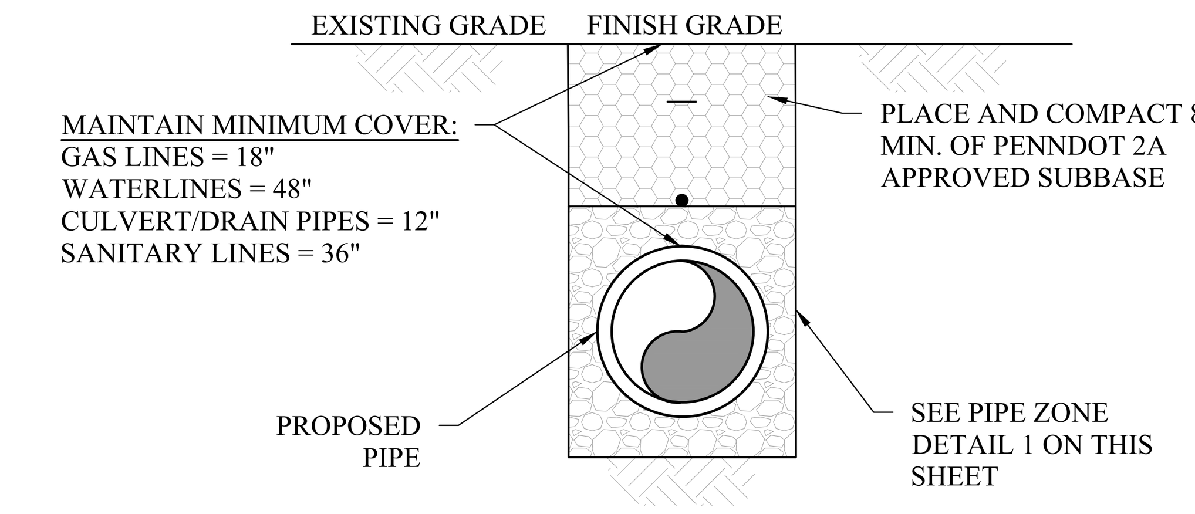
1 PIPE ZONE DETAIL
D100 SCALE: N.T.S.



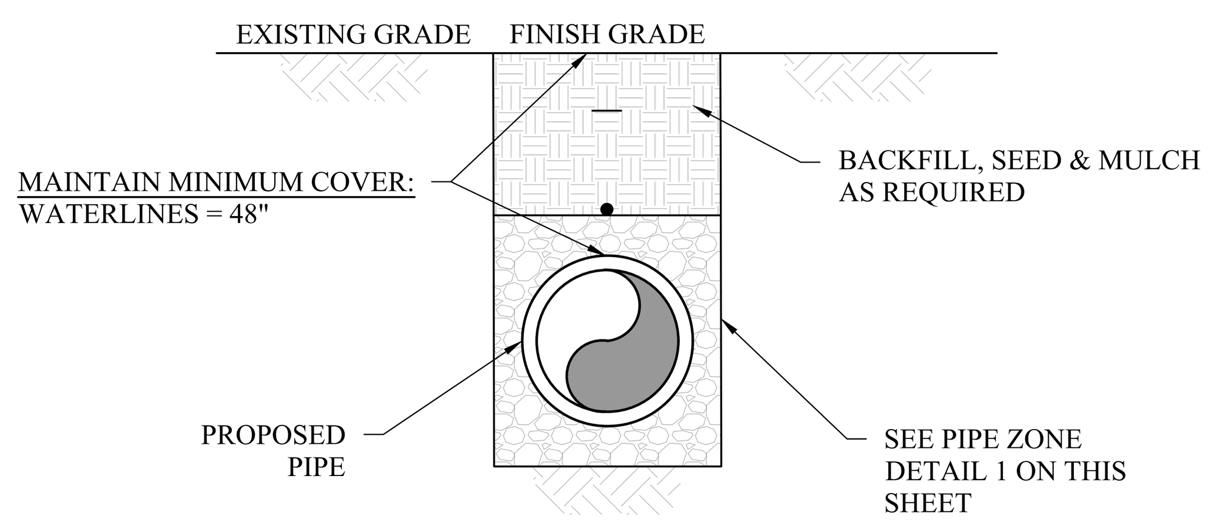
2 PIPE CLEARANCE DETAIL
D100 SCALE: N.T.S.

SEPARATION REQUIREMENTS FOR WATER MAINS:

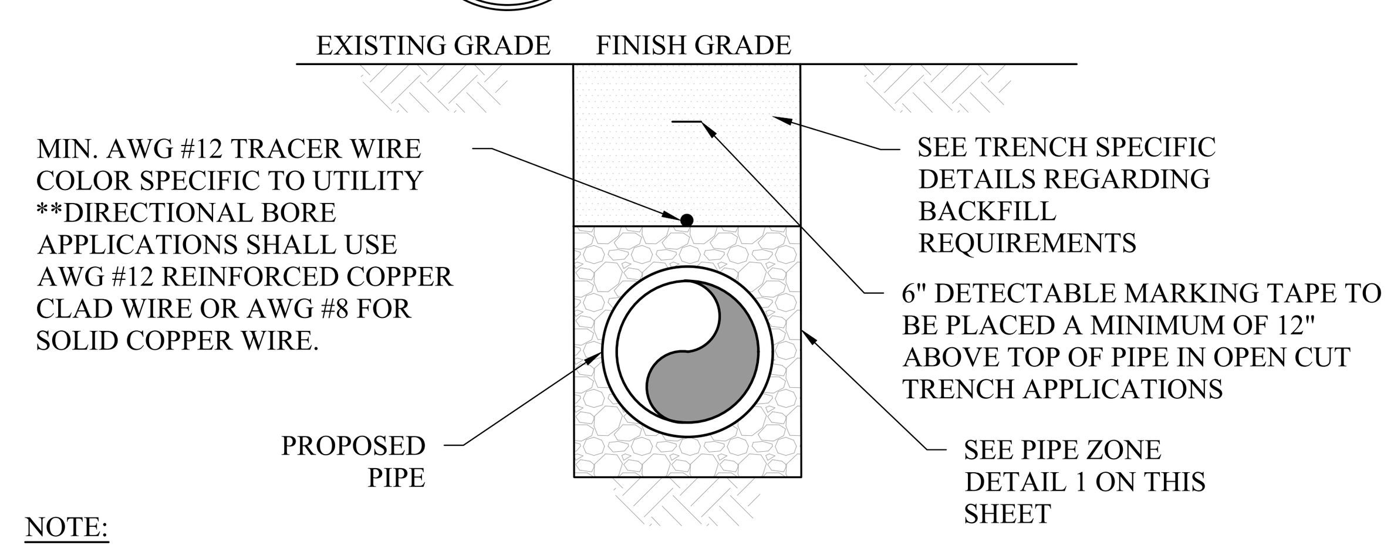
1. PARALLEL INSTALLATIONS SHALL BE LAID AT LEAST 10 FEET APART FROM ANY SANITARY SEWER OR STORM DRAIN.
2. CROSSINGS SHALL BE INSTALLED WHERE THE BOTTOM OF THE WATER MAIN IS AT LEAST 18" ABOVE BUILDING DRAINS, STORM DRAINS OR SANITARY SEWERS FOR A MINIMUM OF 10 FEET BEYOND EACH SIDE OF THE PIPE CROSSED.
3. WATERLINE JOINTS SHALL BE CENTERED ON THE CROSSING, SO JOINTS ARE AN EQUAL DISTANCE AND AS FAR AWAY FROM THE CROSSING AS POSSIBLE.
4. WHERE THERE IS NOT A SUFFICIENT DEPTH TO MAINTAIN A MINIMUM OF 18" OF SEPARATION ABOVE AND MAINTAIN MINIMUM COVERAGE OF THE WATERLINE, THE WATERLINE SHALL BE INSTALLED 18" BELOW THE CROSSING PIPE AND CONCRETE ENCASED. THE CONCRETE ENCASEMENT SHALL EXTEND FOR 24 INCHES ON EACH SIDE OF THE CROSSING.



3 TYP. GRAVEL ROAD PIPE TRENCH DETAIL
D100 SCALE: N.T.S.

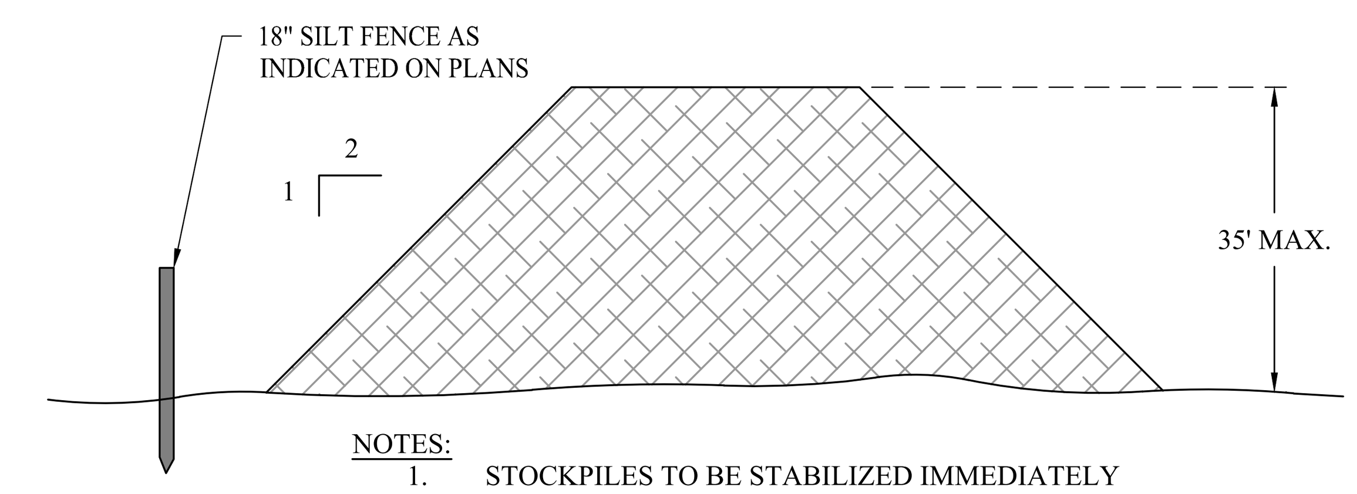


4 TYP. LAWN AREA PIPE TRENCH DETAIL
D100 SCALE: N.T.S.



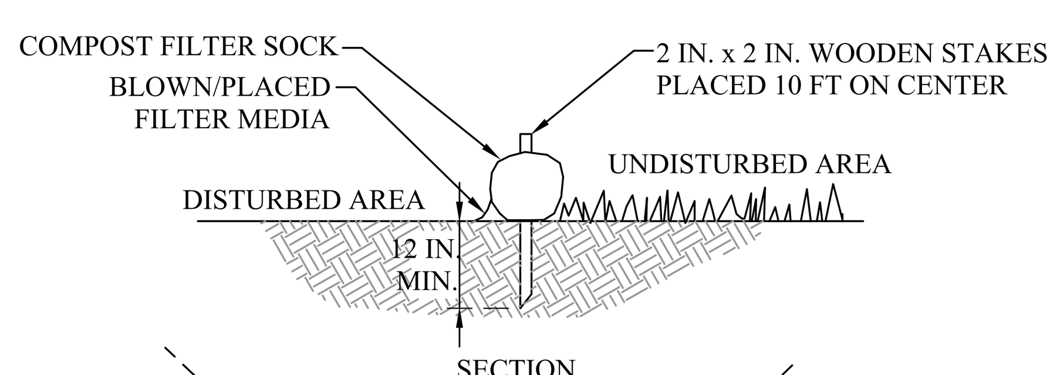
NOTE:
TRACER WIRE & DETECTABLE WARNING TAPE TO BE UTILIZED WHEN INSTALLING SANITARY SEWER, WATER, & GAS LINES. LOCATE STATIONS TO BE INSTALLED AS REQUIRED BY EACH UTILITY COMPANY

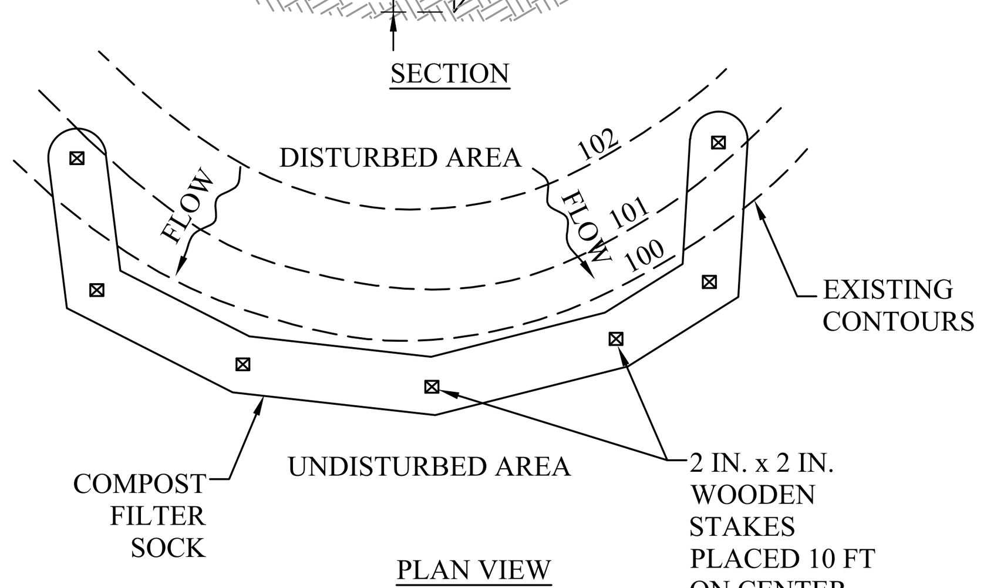
5 TYP. TRACER WIRE & DETECTABLE WARNING TAPE PIPE TRENCH DETAIL
D100 SCALE: N.T.S.



NOTES:
1. STOCKPILES TO BE STABILIZED IMMEDIATELY
2. STOCKPILE HEIGHTS MUST NOT EXCEED 35'
3. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER

6 TEMPORARY STOCKPILE DETAIL
D100 SCALE: N.T.S.





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.

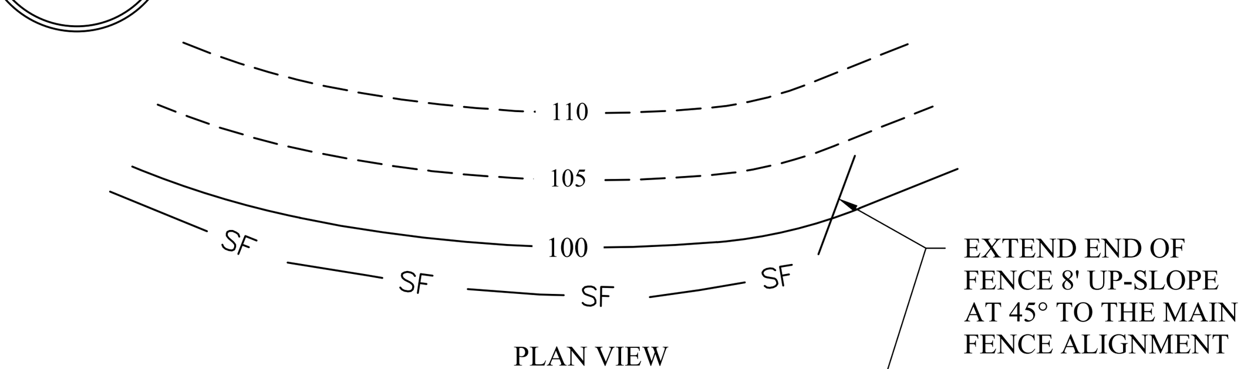
ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

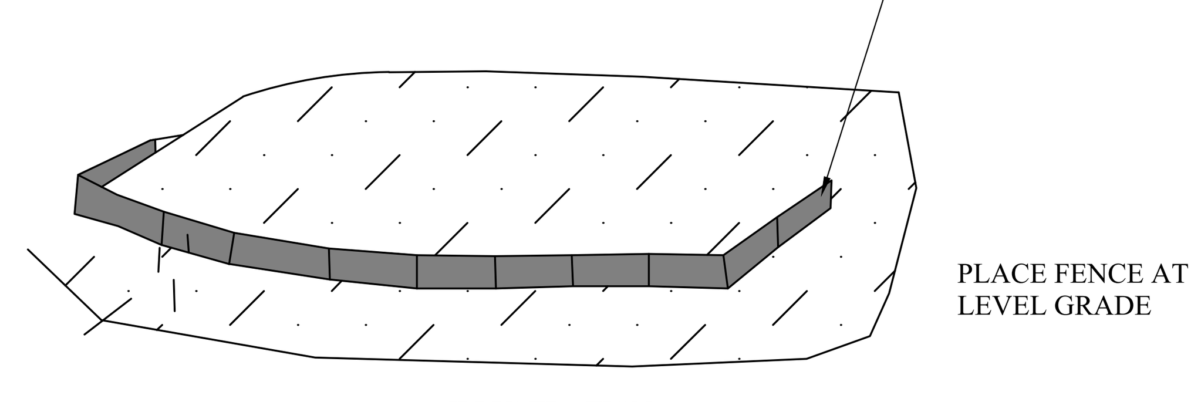
COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

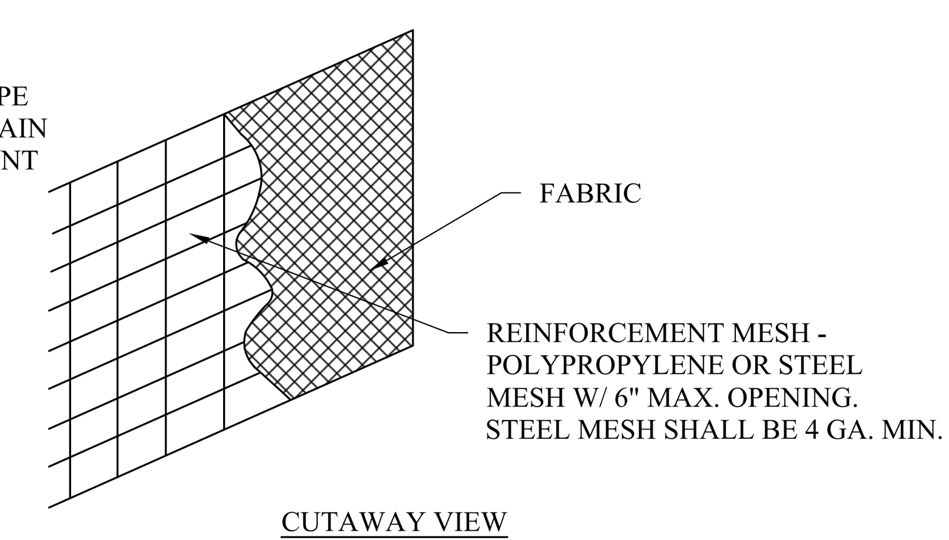
BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

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.

7 12" COMPOST FILTER SOCK DETAIL
D100 SCALE: N.T.S.



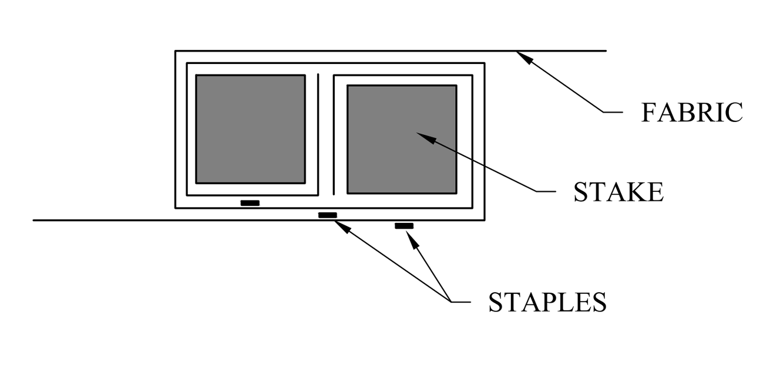


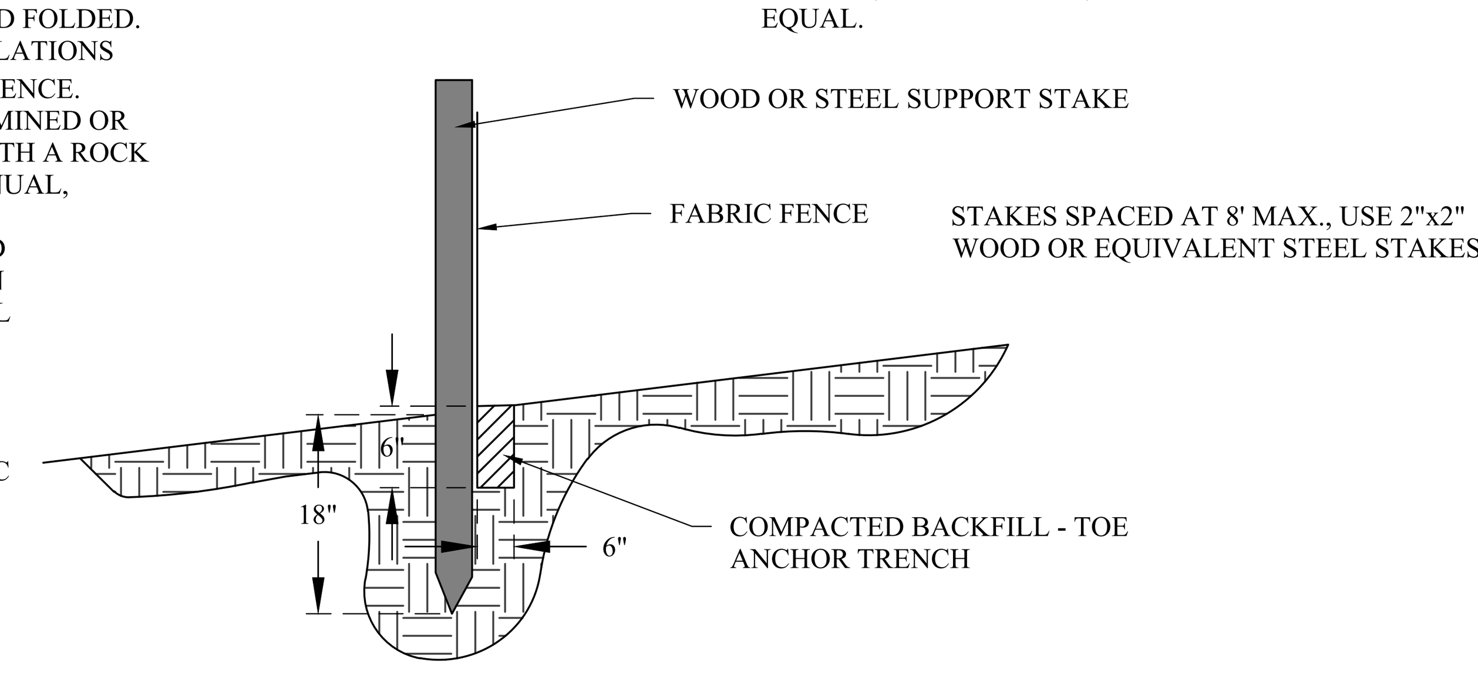


LIST OF MATERIALS:

POST:	STEEL - EITHER T OR U TYPE OR 2" HARDWOOD AT MAX. 8' SPACING.
FENCE:	WOVEN WIRE, 14 GAUGE (MIN.), 6" MAX. MESH OPENING.
FILTER FABRIC:	FILTER X, MIRAFI 100 X, STABILINKA T140 N OR EQUAL.
PREFAB UNIT:	GEOFAB, ENVIROFENCE, OR EQUAL.

NOTES:
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER FABRIC TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID-SECTION.
3. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
4. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH ½ THE ABOVE GROUND HEIGHT OF THE FENCE.
5. ANY FENCE SECTION WHICH HAS BEEN UNDERMINED OR TOPPED, MUST IMMEDIATELY BE REPLACED WITH A ROCK FILTER OUTLET PER PA DEP E&S CONTROL MANUAL, LATEST EDITION.
6. FILTER FABRIC FENCE WILL BE INSTALLED AND MAINTAINED DOWN-SLOPE OF ALL DISRUPTION ACTIVITIES AS INDICATED ON THE PLANS UNTIL STABILIZATION IS COMPLETED.





8 SILT FENCE DETAIL
D100 SCALE: N.T.S.

REVISIONS	
DATE	DESCRIPTION
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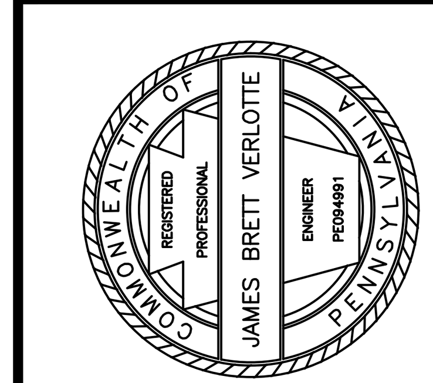
314 Old Youngstown Road
New Castle, PA 16101
(724) 652-9861
(800) 582-2469

Book & Proch WELL DRILLING INC. PUMP SERVICE WATER TREATMENT



DETAILS - PIPE INSTALLATION, BACKFILL, & E&S

2026 WATER SYSTEM UPGRADES PROJECT
FOR
DASSA MCKINNEY ELEMENTARY SCHOOL
391 HOOKER RD
WEST SUNBURY, PA 16061
TOWNSHIP OF CLAY & CONCORD, COUNTY OF BUTLER
COMMONWEALTH OF PENNSYLVANIA

PWSID # 5100316

PROJ. NO.: ----	DRAWN BY: J.V.
DATE: 06/11/2026	CHK'D BY: R.B.

D100

C:\Users\jverlotte\OneDrive - Book and Proch Well Drilling\Company Folder\CAD_Drawings\Moniteau - Dassa McKinney Elem\2026 NCWSA\Moniteau-DMES-2026 NCWSA-Site Map 2026.06.11.dwg, 6/17/2026 10:42:28 AM

STAGING OF ACTIVITIES:

THE STAGING OF CONSTRUCTION SHALL BE PERFORMED IN A MANNER TO MINIMIZE SOIL EROSION AND SEDIMENTATION.

1. CONTRACTOR IS RESPONSIBLE TO CLEARLY FIELD MARK THE LIMITS OF DISTURBANCE AND ANY AREAS OF SPECIAL ENVIRONMENTAL CONCERN BEFORE ANY EARTH DISTURBANCE ACTIVITY IS CONDUCTED OR BMP HAS BEEN CONSTRUCTED.
2. EXISTING ACCESS ROADS SHALL BE USED AS ACCESS TO/FROM THE SITE.
3. 18" SILT FENCE SHALL BE PLACED DOWN GRADIENT OF THE STAGING AREAS AND AS SHOWN ON THE PLAN MAPPING AS WELL AS IN THE AREAS SHOWN ON THE PLAN MAPPING FOR STREAM PROTECTION BEFORE ANY CLEARING AND GRUBBING OCCURS.
4. FOLLOW THE GUIDELINES IN THE ATTACHED TYPICAL SOIL EROSION AND SEDIMENT POLLUTION CONTROL DETAILS FOR PLACEMENT OF TRENCH MATERIAL BASED ON THE TYPE OF CONSTRUCTION.
5. TOPSOIL STOCKPILE AREAS WILL BE LOCATED AS SHOWN ON PLAN. ALL TOPSOIL WILL BE STORED IN THESE LOCATIONS. CONTRACTOR IS RESPONSIBLE TO LOCATE AND ENSURE THAT ALL EROSION AND SEDIMENTATION BMP'S ARE IN PLACE AT THESE TOPSOIL STOCKPILE LOCATIONS.
6. THE WORK CREW SHALL CONSTRUCT THE SANITARY NETWORKS, INCLUDING EXCAVATING TRENCHES, PLACING THE PIPE, CONSTRUCTING TRENCH PLUGS WHERE APPROPRIATE, BACKFILLING THE TRENCH, AND RESTORATION AFTER THE INSTALLATION OF THE PIPE IS COMPLETE.
7. TRENCHING OPERATIONS ARE LIMITED TO A DISTANCE EQUAL TO THE LENGTH OF PIPE THAT CAN BE INSTALLED IN ONE DAY. NO MORE THAN 50 LINEAL FEET OF OPEN TRENCH SHOULD EXIST WHEN THE PIPELINE/UTILITY LINE INSTALLATION CEASES AT THE END OF THE DAY. ANY REMAINING OPEN TRENCH MUST BE PROPERLY PROTECTED.
8. WATER WHICH ACCUMULATES IN OPEN TRENCHES WILL BE COMPLETELY REMOVED FROM THE TRENCH BY PUMPING AND SHALL BE DISCHARGED INTO A PUMPED WATER FILTER BAG SIZED TO TREAT THE PUMP DISCHARGE CAPACITY. REFER TO THE SOIL EROSION AND SEDIMENTATION POLLUTION CONTROL DETAILS SHEETS.
9. PUMPED WATER FILTER BAGS SHALL BE USED ALONG THE TRENCHING ACTIVITIES WHERE WATER ACCUMULATES IN THE TRENCH. SEE PUMPED WATER FILTER BAG DETAIL.
10. ALL TRENCHES SHALL BE BACKFILLED WITHIN ONE DAY AFTER PIPE PLACEMENT EXCEPT WHERE HYDROSTATIC TESTING IS REQUIRED. IN THIS CASE, A MAXIMUM OF SIX DAYS MAY ELAPSE BETWEEN PIPELINE INSTALLATION AND TRENCH BACKFILL OPERATIONS. CONTRACTOR IS RESPONSIBLE FOR KEEPING OPEN EXCAVATIONS PROTECTED AT THE END OF EACH WORKING DAY.
11. ROCK FILTER OUTLETS SHALL BE USED TO ADDRESS PROBLEMS OF CONCENTRATED FLOWS TO SEDIMENT BARRIERS. WHEREVER A SEDIMENT BARRIER HAS FAILED DUE TO AN UNANTICIPATED CONCENTRATED FLOW, A ROCK FILTER SHALL BE INSTALLED UNLESS THAT FLOW CAN BE OTHERWISE DIRECTED AWAY FROM THE BARRIER.
12. STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THE SEEDING TABLES ON THIS PAGE WITHIN THREE DAYS FROM BACKFILL.
13. ONCE THERE IS STABILIZATION OF UNIFORM COVERAGE OR DENSITY OF 70 PERCENT (MINIMUM) ACROSS THE ENTIRE DISTURBED UPSLOPE AREA. REMOVE SILT FENCE WITH THE MINIMAL AMOUNT OF DISTURBANCE. SEED AND MULCH ANY DISTURBED AREAS.
14. TEMPORARY SEEDING SHALL BE APPLIED TO ALL DISTURBED AREAS AS AN INTERIM STABILIZATION MEASURE FOR AREAS EXPOSED FOR A PERIOD OF 3 DAYS OR GREATER. IF PERMANENT SEEDING IS NOT ATTAINABLE BETWEEN MARCH 1 AND SEPTEMBER 30, THEN TEMPORARY SEEDING SHALL BE APPLIED TO ALL EXPOSED UNSTABILIZED AREAS UNTIL NEXT SEASON WHEN PERMANENT SEEDING CAN BE PLACED.

ANY EXCESS MATERIAL NOT USED ON SITE SHALL BE DISPOSED OF AT A SITE THAT HAS EROSION CONTROL MEASURES THAT MEET THE REQUIREMENTS OF THE DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL - MARCH 2012.

DESIGN PARAMETERS:

THIS PROJECT SITE DOES NOT PROPOSE ANY CHANGES TO STORMWATER RUNOFF OR VOLUME FROM THE PRE DEVELOPMENT CONDITION. THIS IS ACHIEVED BY RESTORING OR ENHANCING ALL DISTURBED SURFACES TO THEIR EXISTING LAND USE CONDITION. THE CONTRACTOR WILL BE HELD ACCOUNTABLE FOR RESTORING ALL AREAS TO THEIR PRE DEVELOPMENT CONDITION. ANY DEFICIENCIES WILL BE DOCUMENTED BY THE OWNER AND/OR THEIR REPRESENTATIVES AND SENT TO THE CONTRACTOR FOR REMEDIATION.

MAINTENANCE OF CONTROL MEASURES:

ALL MAINTENANCE AND DISPOSAL METHODS USED FOR EROSION & SEDIMENTATION POLLUTION CONTROL MEASURES AND FACILITIES SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL - MARCH 2012 STANDARDS AND SPECIFICATIONS. CONTROLS ARE TO BE INSPECTED WEEKLY AND AFTER EACH RAIN EVENT; ANY DAMAGE FOUND SHALL BE REPAIRED IMMEDIATELY. ALL SEDIMENT WILL BE DISPOSED OF ON-SITE ONTO THE TOPSOIL STOCKPILES. THE CONTRACTOR SHALL BE ASSIGNED RESPONSIBILITY FOR MAINTENANCE OF THE CONTROL MEASURES. ANY ACCUMULATED SEDIMENT SHALL BE DISPOSED OF AT THE DESIGNATED TOPSOIL STOCKPILE LOCATION. AFTER THE REQUIRED STABILIZATION IS COMPLETE AND THE TEMPORARY CONTROL MEASURES HAVE BEEN REMOVED, PERMANENT MAINTENANCE WILL BE THE RESPONSIBILITY OF THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR LOGGING INSPECTIONS ONTO DEP FORM 3150-FM-BWEW0083 DATED 2/2012 AND KEEPING ON SITE AT ALL TIMES.

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROVIDING RECYCLING BINS FOR RECYCLING AND A DUMPSTER FOR DISPOSAL OF MATERIAL ASSOCIATED WITH OR FROM THE PROJECT. THE RECYCLING MATERIALS ARE TO BE TRANSPORTED TO THE VOLUNTEER DROP-OFF RECYCLABLES COLLECTION FACILITIES FOR DISPOSAL. THE SOLID WASTE MATERIALS ARE TO BE TRANSPORTED TO THE COUNTY SOLID WASTE AUTHORITY FOR DISPOSAL. ALL RECYCLABLES OR WASTE REMOVED FROM THIS PROJECT SHALL BE COMPLETED IN ACCORDANCE WITH DEP REGULATIONS.

TEMPORARY CONTROL MEASURES:

SILT FENCE -

a. DEFINITION: A TEMPORARY SEDIMENT BARRIER CONSISTING OF FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID-SECTION.

b. PURPOSE: TO INTERCEPT AND RETAIN SMALL AMOUNTS OF SEDIMENT FROM DISTURBED AREAS DURING CONSTRUCTION OPERATIONS IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE. TO DECREASE THE VELOCITY OF SHEET FLOWS AND LOW-TO-MODERATE LEVEL CHANNEL FLOWS.

c. WHERE APPLICABLE: BELOW DISTURBED AREAS WHERE EROSION WOULD OCCUR IN THE FORM OF SHEET AND RILL EROSION. IT IS ALSO USED IN MINOR SWALES OR DITCH LINES.

d. MAINTENANCE: INSPECT AFTER EACH RAINFALL AND DAILY DURING PROLONGED RAINFALL. REPLACE DAMAGED FENCE SECTIONS. REMOVE SEDIMENT DEPOSITS AFTER EACH STORM EVENT AND PLACE ON TOPSOIL STOCKPILE.

PUMPED WATER FILTER BAG -

a. DEFINITION: A FILTER BAG MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. A SUITABLE MEANS OF ACCESSING THE BAG IS REQUIRED FOR DISPOSAL.

b. PURPOSE: TO INTERCEPT AND RETAIN SMALL AMOUNTS OF SEDIMENT FROM DISTURBED AREAS DURING CONSTRUCTION OPERATIONS IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE.

c. WHERE APPLICABLE: DEWATERING TRENCHES OR OTHER EXCAVATIONS THAT LOCALIZED PONDING DUE TO RECENT RUNOFF EVENTS.

d. MAINTENANCE: INSPECT WEEKLY AND AFTER EACH RAINFALL EVENT AND DAILY DURING PROLONGED RAINFALL EVENTS. BAGS SHALL BE EMPTIED ONTO THE TOPSOIL STOCKPILE AND REPLACED WHEN HALF FULL OR DAMAGED. SPARE BAGS SHALL BE KEPT ONSITE AT ALL TIMES.

TEMPORARY SEEDING

1. INCORPORATE AGRICULTURAL LIME AT A RATE OF 1 TON PER ACRE AND 10-10-10 FERTILIZER AT A RATE OF 500 LB PER ACRE INTO THE TOP 4 TO 6 INCHES OF TOPSOIL. SEE TABLE 1.
2. SEED ALL DISTURBED ARES WITH AN APPROPRIATE SEED MIXTURE NUMBER FROM TABLE 3 AT AN APPROPRIATE RATE OF POUNDS PER ACRE FROM TABLE 3.
3. STABILIZE ALL SEEDED AREAS WITH STRAW AT A RATE OF 3 TONS PER ACRE. STRAW MULCH SHOULD BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO "CRIMP" THE STRAW OR HAY INTO THE SOIL - ABOUT 3 INCHES. THIS METHOD SHOULD BE LIMITED TO SLOPES NO STEEPER THAN 3H:1V. POLYMERIC AND GUM TACKIFIERS MIXED AND APPLIED TO MANUFACTURE'S RECOMMENDATIONS MAY BE USED TO TACK MULCH. AVOID APPLICATION DURING RAIN AND ON WINDY DAYS. A 24 HOUR CURING PERIOD AND A SOIL TEMPERATURE HIGHER THAN 45° F ARE TYPICALLY REQUIRED. APPLICATION SHOULD GENERALLY BE HEAVIEST AT EDGES OF SEEDED AREAS AND AT CRESTS OF RIDGES AND BANKS TO PREVENT LOSS BY WIND. THE REMAINDER OF THE AREA SHOULD HAVE BINDER APPLIED UNIFORMLY. BINDERS MAY BE APPLIED AFTER MULCH IS SPREAD OR SPRAYED INTO THE MULCH AS IT IS BEING BLOWN ONTO THE SOIL. APPLYING STRAW AND BINDER TOGETHER IS GENERALLY MORE EFFECTIVE. INSTALL EROSION CONTROL BLANKETS OR HYDRAULICALLY APPLIED BLANKETS (BONDED FIBER MATRIX (BFM), FLEXIBLE GROWTH MEDIUM (FGM) OR POLYMER STABILIZED FIBER MATRIX (PSFM)) ON SLOPES 3H:1V AND GREATER.

PERMANENT CONTROL MEASURES:

STORMWATER MANAGEMENT HAS BEEN PROVIDED FOR THIS PROJECT BASED UPON THE ABILITY TO RESTORE ALL DISTURBED AREAS TO THEIR PRE DEVELOPMENT CONDITION. ALL NON-IMPERVIOUS DISTURBED AREAS SHALL BE STABILIZED USING THE PERMANENT SEEDING/MULCHING MEASURES SPECIFIED HEREIN. ALL IMPERVIOUS SURFACES SHALL BE RESTORED TO THEIR EXISTING CONDITION.

PERMANENT SEEDING / MULCHING:

1. SPREAD TOPSOIL OVER AREAS TO BE PERMANENTLY SEEDED IN ACCORDANCE WITH PENNSYLVANIA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL CHAPTER 11 AND TABLE 6.
2. INCORPORATE AGRICULTURAL LIME AT A RATE OF 6 TONS PER ACRE AND 10-10-20 FERTILIZER AT A RATE OF 1000 LB PER ACRE INTO THE TOP 4 TO 6 INCHES OF TOPSOIL OR AT A RATE APPROPRIATE WITH SOIL TEST RESULTS. IF COMPOST IS BEING ADDED, WORK INTO SOIL WITH OTHER AMENDMENTS UNLESS IT IS BEING APPLIED AS AN EROSION CONTROL BMP.
3. SEED ALL DISTURBED AREAS WITH AN APPROPRIATE SEED MIXTURE NUMBER FROM TABLE 3 AT AN APPROPRIATE RATE OF POUNDS PER ACRE AS DESCRIBED IN TABLE 3.
4. STABILIZE ALL SEEDED AREAS WITH STRAW AT A RATE OF 3 TONS PER ACRE. STRAW MULCH SHOULD BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO "CRIMP" THE STRAW OR HAY INTO THE SOIL - ABOUT 3 INCHES. THIS METHOD SHOULD BE LIMITED TO SLOPES NO STEEPER THAN 3H:1V. POLYMERIC AND GUM TACKIFIERS MIXED AND APPLIED TO MANUFACTURE'S RECOMMENDATIONS MAY BE USED TO TACK MULCH. AVOID APPLICATION DURING RAIN AND ON WINDY DAYS. A 24 HOUR CURING PERIOD AND A SOIL TEMPERATURE HIGHER THAN 45° F ARE TYPICALLY REQUIRED. APPLICATION SHOULD GENERALLY BE HEAVIEST AT EDGES OF SEEDED AREAS AND AT CRESTS OF RIDGES AND BANKS TO PREVENT LOSS BY WIND. THE REMAINDER OF THE AREA SHOULD HAVE BINDER APPLIED UNIFORMLY. BINDERS MAY BE APPLIED AFTER MULCH IS SPREAD OR SPRAYED INTO THE MULCH AS IT IS BEING BLOWN ONTO THE SOIL. APPLYING STRAW AND BINDER TOGETHER IS GENERALLY MORE EFFECTIVE.
5. INSTALL EROSION CONTROL BLANKETS OR HYDRAULICALLY APPLIED BLANKETS (BONDED FIBER MATRIX (BFM), FLEXIBLE GROWTH MEDIUM (FGM) OR POLYMER STABILIZED FIBER MATRIX (PSFM)) ON SLOPES 3H:1V AND GREATER AND WHERE POTENTIAL EXISTS FOR SEDIMENT POLLUTION TO RECEIVING SURFACE WATERS. SINCE ROCK SLOPES POSE LITTLE, IF ANY, POTENTIAL FOR EROSION, CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILL SLOPES NEED NOTE BE BLANKETED. EROSION CONTROL BLANKETS SHOULD BE USED FOR ALL SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER - 100 FEET OF A SPECIAL PROTECTION WATER - REGARDLESS OF SLOPE.

MANAGEMENT OF FILL (CLEAN FILL POLICY):

A. ALL MATERIAL FROM EXCAVATIONS THAT IS NOT SUITABLE OR NEEDED FOR BACKFILL, OR NEEDED FOR BACKFILL OR ANY FILL MATERIAL BROUGHT INTO THE PROJECT SITE FOR BACKFILL SHALL COMPLY WITH THE PA DEP MANAGEMENT OF FILL POLICY ("THE FILL POLICY").

B. KEY PROVISIONS OF "THE FILL POLICY"

1. THERE IS A NEW CATEGORY OF MATERIAL CALL "REGULATED FILL". REGULATED FILL CAN BE USED UNDER A GENERAL PERMIT AS A CONSTRUCTION MATERIAL TO GRADE AREAS. MAXIMUM CONCENTRATION STANDARDS FOR REGULATED FILL ARE TO BE THE ACT 2 STATEWIDE HEALTH STANDARDS (NON-RESIDENTIAL). THE ACTUAL LIMITS ARE IN TABLE GP-1A AND B OF THE FILL GUIDANCE DOCUMENT.
2. TO DETERMINE IF FILL IS CONTAMINATED, ENVIRONMENTAL DUE DILIGENCE SHOULD BE PERFORMED. IN MOST CASES, TESTING WILL ALSO BE REQUIRED, IF THE QUANTITIES ARE > 125 C.Y.
3. MATERIAL WHICH IS ABOVE REGULATED FILL NUMERIC CONCENTRATIONS MUST BE MANAGED AS WASTE.
4. REGULATED FILL MATERIALS MOVED TO ACT 2 BROWNFIELDS SITES DO NOT HAVE TO APPLY FOR GENERAL PERMIT APPLICABILITY.
5. A DEP FORM MUST BE USED TO DOCUMENT THE RECEIPT OF CLEAN FILL WHICH HAS BEEN AFFECTED BY A SPILL OR RELEASE.
6. HAZARDOUS FILL MATERIAL ENCOUNTERED MUST BE HANDLED UNDER THE PROVISIONS OF THE WASTE MANAGEMENT ACT.

THERMAL IMPACT ANALYSIS:

A. THERMAL IMPACTS ON THE SITE WILL BE MITIGATED BY RESTORING ALL DISTURBED AREAS BACK TO THEIR EXISTING CONDITION AND CONVERTING 0.08 ACRES OF IMPERVIOUS SURFACE TO A LAWN. MAINTAINED LAWNS WILL BE RESTABILIZED TO THEIR EXISTING CONDITIONS AND PAVEMENT AND GRAVEL WILL BE RESTORED. THIS PROJECT DOES NOT PROPOSE ANY IMPERVIOUS SURFACES THAT WOULD GENERATE HEAT OR INCREASE THERMAL IMPACTS TO OVERLAND RUNOFF.

GENERAL EROSION AND SEDIMENTATION CONTROL NOTES

1. IF APPLICABLE, 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. IF APPLICABLE, 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 THE PCSM PLAN, 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. IF APPLICABLE, 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 MAPS(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 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.
11. IF APPLICABLE, 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.
12. 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.
13. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
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. IF APPLICABLE, 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 SWEPT 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 IN PLACE 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, SOD, 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 A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
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 CONVERTED TO PERMANENT POST 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.

TABLE 1
Soil Amendment Application Rate Equivalents

Soil Amendment	Permanent Seeding Application Rate			Notes
	Per Acre	Per 1,000 sq. ft.	Per 1,000 sq. yd.	
Agricultural lime	6 tons	240 lb.	2,480 lb.	Or as per soil test; may not be required in agricultral fields
10-10-20 fertilizer	1,000 lb.	25 lb.	210 lb.	
	Temporary Seeding Application Rate			
Agricultural lime	1 Ton	40 lb.	410 lb.	Typically not required for topsoil stockpiles
10-10-10 fertilizer	500 lb.	12.5 lb.	100 lb.	

Note: A compost blanket which meets the standards may be substituted for soil amendments shown above.

From Table 11.2 from Erosion and Sediment Pollution Control Program Manual - March 2012

TABLE 2
Plant Tolerances of Soil Limitation Factors

Species	Growth Habit[1]	Tolerates				Minimum Seed Specifications3				
		Wet Soil	Dry Site	Low Fertility	Acid Soil (pH 5-5.5)[2]	Purity	Ready Germ	Hard Seed	Total Germ	Seeds/lb (1,000s)
Warm-Season Grasses										
Deertongue	bunch	yes	yes	yes	yes	95%	75%		75%	250
Weeping lovegrass	bunch	no	yes	yes	yes	97%	75%		75%	1,500
Swithgrass[4]	bunch	yes	yes	yes	yes	(60 PLS)				390
Big bluestem	bunch	no	yes	yes	yes	(60 PLS)				150
Cool-Season Grasses										
Tall Fescue	bunch	yes	no	yes	yes	95%	80%		80%	227
Redtop	sod	yes	yes	yes	yes	92%	80%		80%	5,000
Fine fescues	sod	no	no	yes	no	95%	80%		80%	400
Perennial ryegrass	bunch	yes	no	no	no	95%	85%		85%	227
Annual ryegrass	bunch	yes	no	yes	no	95%	85%		85%	227
Kentucky bluegrass	sod	no	no	no	no	85%	75%		75%	2,200
Reed canarygrass	sod	yes	yes	yes	no	95%	70%		70%	520
Orchardgrass	bunch	yes	yes	yes	yes	95%	80%		80%	654
Timothy	bunch	yes	no	yes	yes	95%	80%		80%	1,230
Smooth bromegrass	sod	no	yes	yes	no	95%	80%		80%	136
Legumes[5]										
Crownvetch	sod	no	yes	yes	no	98%	40%	30%	65%	120
Birdsfoot trefoil[6]	bunch	yes	no	yes	yes	98%	60%	20%	80%	400
Flatpea	sod	no	no	yes	yes	98%	55%	20%	75%	10
Serecia lespedeza	bunch	no	yes	yes	yes	98%	60%	20%	80%	335
Cereals										
Winter wheat	bunch	no	no	no	no	98%	85%		85%	15
Winter rye	bunch	no	no	yes	yes	98%	85%		85%	18
Spring oats	bunch	no	no	no	no	98%	85%		85%	13
Sundangrass	bunch	no	yes	no	no	98%	85%		85%	55
Japanese millet	bunch	yes	no	yes	yes	98%	80%		80%	155

1. Growth habit refers to the ability of the species to either form a dense sod by vegetatibe means (stolons, rhizomes, or roots) or remain in a bunch or single plan form. If seeded heavily enough, even bunch formers can produce very dense stand. This is sometimes called a sod, but not in the sense of a sod formed by vegetative means.

2. Once established, plants may grow at a somewhat lower pH, but cover generally is only adequate at pH 6.0 or above.

3. Minimum seed lots are truly minimum, and seed lots to be used for revegetation purposes should equal or exceed these standards. Thus, deertongue grass should germinate 75% or better. Crownvetch should have at least 40% readily germenable seed and 30% hard seed. Commonly, seed lots are available that equal or exceed minimum specifications. Remember that disturbed sites are adverse for plant establishment. Ready germination refers to seed that germinates during the period of the germination test and that would be expected, if conditions are favorable, to germinate rapidly when planted. The opposite of ready germination is dormant seed, of which hard seed is one type.

4. Switchgrass seed is sold only on the basis of PLS.

5. Need Specific legume inoculant. Inoculant suitable for garden peas and sweetpeas usually is satisfactory for flatpea.

6. Birdsfoot trefoil is adapted over the entire state, except in the extreme southeast where crown and root rots may injure stands.

From Table 11.3 from Erosion and Sediment Pollution Control Program Manual - March 2012

TABLE 3
Recommended Seed Mixtures

Mixture Number	Species	Seeding Rate - Pure Live Seed[1]	
		Most Sites	Adverse Sites
1[2]	Spring oats (spring), or Annual ryegrass (spring or fall), or Winter wheat (fall), or Winter rye (fall)	64 10 90 56	96 15 120 112
2[3]	Tall fescue, or Fine fescue, or Kentucky bluegrass, plus Redtop 4, or Perennial ryegrass	60 35 25 3 15	75 40 30 3 20
3	Birdsfoot trefoil, plus Tall fescue	6 30	10 35
4	Birdsfoot trefoil, plus Reed canarygrass	6 10	10 15
5[8]	Crownvetch, plus Tall fescue, or Perennial ryegrass	10 20 20	15 25 25
6[5,8]	Crownvetch, plus Annual ryegrass	10 20	15 25
7[8]	Birdsfoot trefoil, plus Crownvetch, plus Tall fescue	6 10 20	10 15 30
8	Flatpea, plus Tall fescue, or Perennial ryegrass	20 20 20	30 30 25
9[6]	Serecia lespedeza, plus Tall fescue, plus Redtop[4]	10 20 3	20 25 3
10	Tall fescue, plus Fine fescue	40 10	60 15
11	Deertongue, plus Birdsfoot trefoil	15 6	20 10
12[7]	Switchgrass, or Big Bluestem, plus Birdsfoot trefoil	15 15 6	20 20 10
13	Orchardgrass, or Smooth bromegrass, plus Birdfoot trefoil	20 25 6	30 35 10

1. PLS is the product of the percentage of pure seed times percentage germination divided by 100. For example, to secure the actual planting rate for swithgrass, divide 12 pounds PLS shown on the seed tag. Thus, if the PLS content of a given seed lot is 35%, divide by 12 PLS by 0.35 to obtain 34.3 pounds of seed required to plant one acre. All mixutures in this table are shown in terms of PLS.

2. If high-quality seed is used, for most sites seed spring oats at a rate of 2 bushels per acre, winter wheat at 11.5 bushels per acre, and winter rye at 1 bushel per acre. If germination is below 90%, increase these suggested seeding rates by 0.5 bushel per acre.

3. This mixture is suitable for frequent mowing. Do not cut shorter than 4 inches.

4. Keep seeding rate to that recommended in table. These species have many seeds per pound and are very competitive. To seed small quantities of small seeds such as weeping lovegrass and redtop, dilute with dry sawdust, sand, rice hulls, buckwheat hulls, etc.

5. Use for highway slopes and similar sites where the desired species after establishment is crownvetch.

6. From Table 11.4 from Erosion and Sediment Pollution Control Program Manual - March 2012

PLAN VIEW

ELEVATION VIEW

NOTES:

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

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

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

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

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

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

1
D101

PUMPED WATER FILTER BAG DETAIL

SCALE: N.T.S.

REVISIONS

DATE	DESCRIPTION
----	----

Book & Proch
WELL DRILLING INC.
PUMP SERVICE WATER TREATMENT
314 Old Youngstown Road
New Castle, PA 16101
(724) 652-9861
(800) 582-2469

JAMES BRETT VERLOTTE
PE094991

DETAILS - TYPICAL E&S NOTES

2026 WATER SYSTEM UPGRADES PROJECT
FOR
DASSA MCKINNEY ELEMENTARY SCHOOL
391 HOOKER RD
WEST SUNBURY, PA 16061
TOWNSHIP OF CLAY & CONCORD, COUNTY OF BUTLER
COMMONWEALTH OF PENNSYLVANIA

PWSID # 5100316

PROJ. NO.: ----	DRAWN BY: J.V.
DATE: 06/11/2026	CHK'D BY: R.B.

D101