

SITE DATA

OWNER: JAMA PROPERTIES, LLC
LOT 1
PIN: 641786422372-1
ADDRESS: 219 CRAIG AVENUE
AREA: 6,886 S.F. (0.1581 A.C.)

LOT 2
PIN: 641786422376-1
ADDRESS: 227 CRAIG AVENUE
AREA: 10,382 S.F. (0.2383 A.C.)

NUMBER OF LOTS -
EXISTING: 2
PROPOSED: 4

LINEAL FEET OF NEW STREETS - 0 L.F.

WATER SUPPLY - PUBLIC (CITY OF BETHLEHEM)
SEWER - PUBLIC (CITY OF BETHLEHEM)

ZONING DATA

ZONING DISTRICT:	RG, MEDIUM DENSITY RESIDENTIAL	PROPOSED
MINIMUM LOT SIZE:	REQUIRED 8,000	EXISTING 17,268 SF (TOTAL) 8,654 SF (LOT 3-4)
MINIMUM LOT WIDTH:	40 FT/UNIT	30.75 FT/UNIT
MINIMUM YARDS:	FRONT: 20 FT SIDE: 6 FT REAR: 30 FT	20 FT 6 FT 30 FT
MAX. BUILDING COVERAGE: 70%	NA	22%
MAX. BUILDING HEIGHT: 35FT	NA	25 FT
MINIMUM LOT AREA PER DWELLING UNIT: 4,000 SF		
PROPOSED DENSITY = 17,268 SF/4 UNITS = 4,317 SF/UNIT		

Legend

---	PROPERTY LINE
---	EXISTING RIGHT-OF-WAY
---	BUILDING RESTRICTION LINE
---	EXISTING EDGE OF PAVE
---	EXISTING VEGETATION
---	EXISTING CENTERLINE
---	EXISTING ROAD PAVEMENT
---	EXISTING SIDEWALK
---	EXISTING STRUCTURE
---	EXISTING ADJOINER
---	EXISTING GAS LINE
---	EXISTING SANITARY LINE
---	EXISTING STORM SEWER
---	EXISTING WATER LINE
---	EXISTING CURB
---	EXISTING FENCE
---	EXISTING MINOR CONTOUR
---	EXISTING MAJOR CONTOUR
---	EXISTING ELECTRIC POLE
---	EXISTING GAS VALVE
---	EXISTING WATER VALVE
---	EXISTING FIRE HYDRANT
---	EXISTING IRON PIN
---	EXISTING CONTROL POINT
---	EXISTING TEST PIT
---	EXISTING INLET

Legend

---	PROP. PROPERTY LINE
---	PROP. TRACT LINE
---	PROP. RIGHT-OF-WAY
---	PROP. EASEMENT
---	PROP. BUILDING RESTRICTION LINE
---	PROP. FENCE
---	PROP. TREE LINE
---	PROP. CENTERLINE
---	PROP. SIDEWALK
---	PROP. CURB
---	PROP. DRIVEWAY
---	PROP. CONTOUR MAJOR
---	PROP. CONTOUR MINOR
---	PROP. GAS LINE
---	PROP. GAS LATERAL LINE
---	PROP. SANITARY LINE
---	PROP. SANITARY LATERAL LINE
---	PROP. STORM LINE
---	PROP. WATER LINE
---	PROP. WATER LATERAL LINE
---	PROP. DRAINAGE PATH
---	PROP. MONUMENTATION
---	PROP. UTILITY POLE
---	PROP. SANITARY MANHOLE
---	PROP. CLEANOUT
---	PROP. VENT
---	PROP. STORM MANHOLE
---	PROP. INLET
---	PROP. SIGN
---	PROP. FIRE HYDRANT
---	PROP. WATER VALVE
---	PROP. WELL
---	PROP. GAS VALVE
---	PROP. TREE
---	PROP. BENCHMARK
---	PROP. CONCRETE WHEELSTOP
---	PROP. BUILDING/STRUCTURE
---	PROP. DRIVEWAY

SHEET INDEX

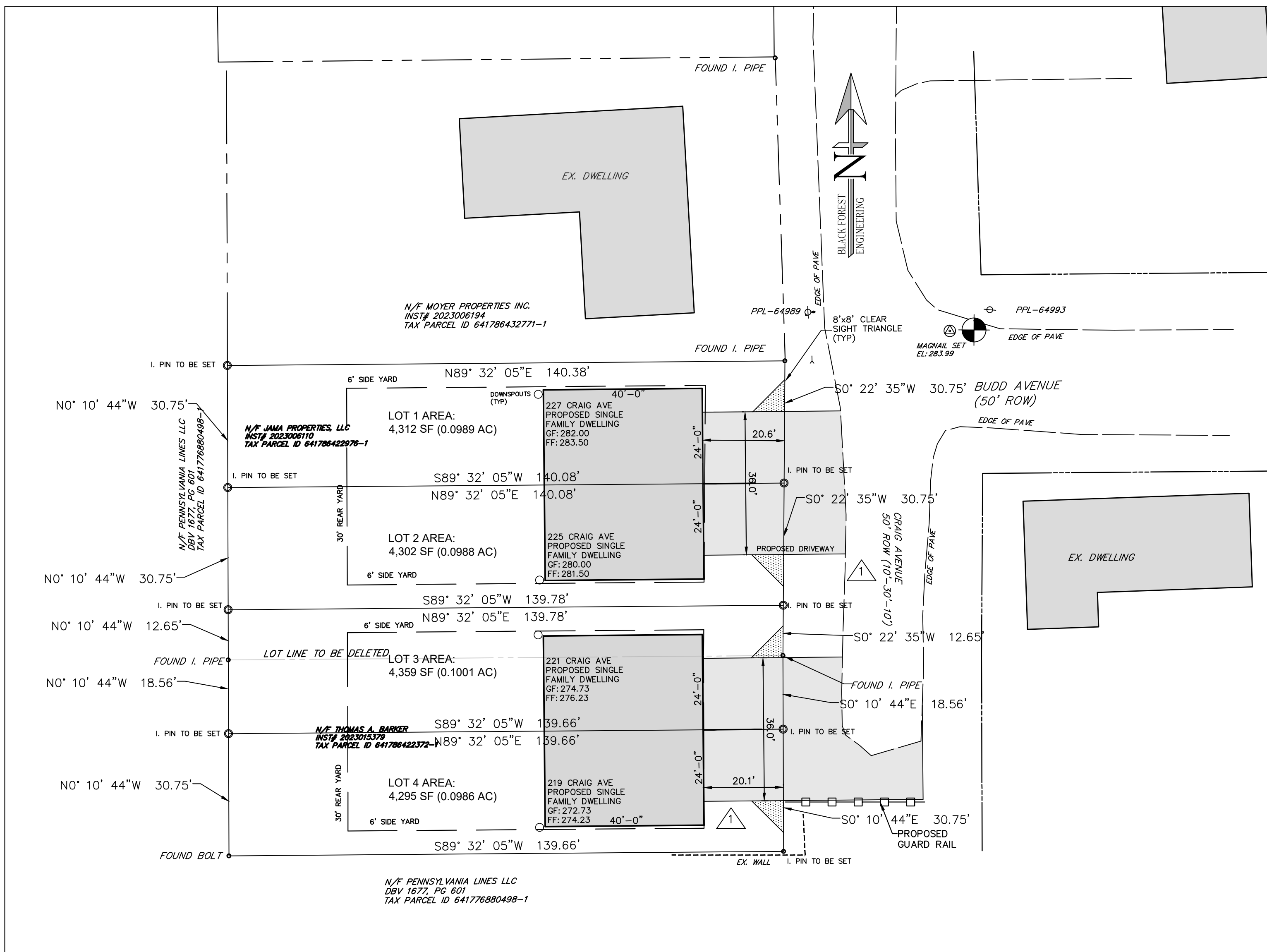
SHEET 1 OF 4	RECORD PLAN *
SHEET 2 OF 4	SITE PLANS
SHEET 3 OF 4	EROSION CONTROL PLAN
SHEET 4 OF 4	CONSTRUCTION DETAILS

* SHEETS TO BE RECORDED

THE TWINS ON CRAIG AVENUE PRELIMINARY/FINAL SUBDIVISION AND LAND DEVELOPMENT CITY OF BETHLEHEM, LEHIGH COUNTY PENNSYLVANIA

PLAN INTENT

THE APPLICANT WISHES TO SUBDIVIDE TWO EXISTING TRACTS IN ORDER TO CONSTRUCT FOUR (4) SINGLE-FAMILY ATTACHED DWELLINGS.



IMPERVIOUS COVER

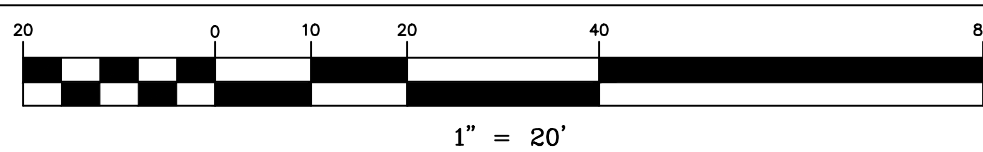
EXISTING CONDITION=1,558 SF

PROPOSED CONDITION=6,648 SF

NOTE: AN INCREASE OF 5,090 SF IS PROPOSED AND THEREFORE
ACT 167 APPROVAL IS NOT REQUIRED.

RECORD NOTES

- EACH LOT SHOWN IS SUBJECT TO ALL EASEMENTS VISIBLE, OR ON RECORD, OR AS REQUIRED BY A UTILITY TO SERVE SAID LOT AT SUCH TIME AS THE UTILITY IS INSTALLED.
- ALL IMPROVEMENTS WITHIN THE PUBLIC RIGHT-OF-WAY SHALL COMPLY WITH THE CITY OF BETHLEHEM STANDARDS AND SPECIFICATIONS AND THE APPROPRIATE PUBLIC UTILITY AUTHORITIES.
- THE SITE WAS EVALUATED FOR WETLANDS AND WATERCOURSES AND IT WAS DETERMINED THAT WETLANDS AND WATERCOURSES DO NOT EXIST ON THE SITE.
- THERE ARE NO FEMA DELINEATED 100-YR FLOODPLAINS OR WATERCOURSES ON OR NEAR THIS PROPERTY.
- ACTUAL UTILITY CONNECTION POINTS SHALL BE VERIFIED PRIOR TO CONSTRUCTION.
- ALL LOTS SHALL BE LAID OUT AND GRADED TO PREVENT CROSS LOT DRAINAGE AND TO PROVIDE POSITIVE DRAINAGE AWAY FROM PROPOSED BUILDING AREAS.
- ALL CITY PERMITS MUST BE OBTAINED PRIOR TO THE START OF CONSTRUCTION.
- RUNOFF FROM ALL ON-SITE IMPERVIOUS AREAS SHALL NOT BE DIRECTED INTO THE PUBLIC SANITARY SEWER, ACROSS THE SIDEWALK AREA WITHIN THE PUBLIC RIGHT-OF-WAY, OR ONTO ADJOINING PROPERTIES, SECTION 1753.08 B.4 OF THE CITY PROPERTY REHABILITATION & MAINTENANCE CODE.
- ALL LATERAL SANITARY SEWER PIPING IS TO BE SCH 40 OR SDR-26 PVC PIPING UNLESS OTHERWISE NOTED..
- WORK TO BE PERFORMED ONSITE, SHALL BE DONE IN ACCORDANCE WITH THE IBC.
- ANY RETAINING WALL 4 FEET OR GREATER IN HEIGHT SHALL HAVE A DESIGN PREPARED, SIGNED, AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF PENNSYLVANIA AND SHALL BE SUBMITTED AT THE TIME OF BUILDING PERMIT APPLICATION TO BE REVIEWED AND APPROVED BY AN APPROVED THIRD PARTY REVIEWER. THE WALL SHALL BE DESIGNED TO BE CONTAINED COMPLETELY WITHIN THE APPLICANT'S PROPERTY OR AN EASEMENT SHALL BE ACQUIRED AND INDICATED ON THE RECORD PLAN TO ALLOW FOR THE CONSTRUCTION OF ANY PORTION OF THE WALL AND/OR WALL TIE BACKS TO BE CONSTRUCTED ON THE ADJOINING PROPERTY.
- ALL PAVEMENT MARKINGS MUST BE THERMOPLASTIC PAVEMENT MARKINGS.
- BUILDING PERMITS SHALL NOT BE ISSUED UNTIL COMPLETION OF THE PLANNING MODULE.



REQUIRED VARIANCES

VARIANCES WERE REQUESTED FROM THE CITY OF BETHLEHEM ZONING BOARD FROM:

ARTICLE 1306.01(a) TO ALLOW LESS THAN 40 FT LOT WIDTH PER DWELLING UNIT. AS DEPICTED, 8.75 FT OF RELIEF IS NEEDED PER UNIT.

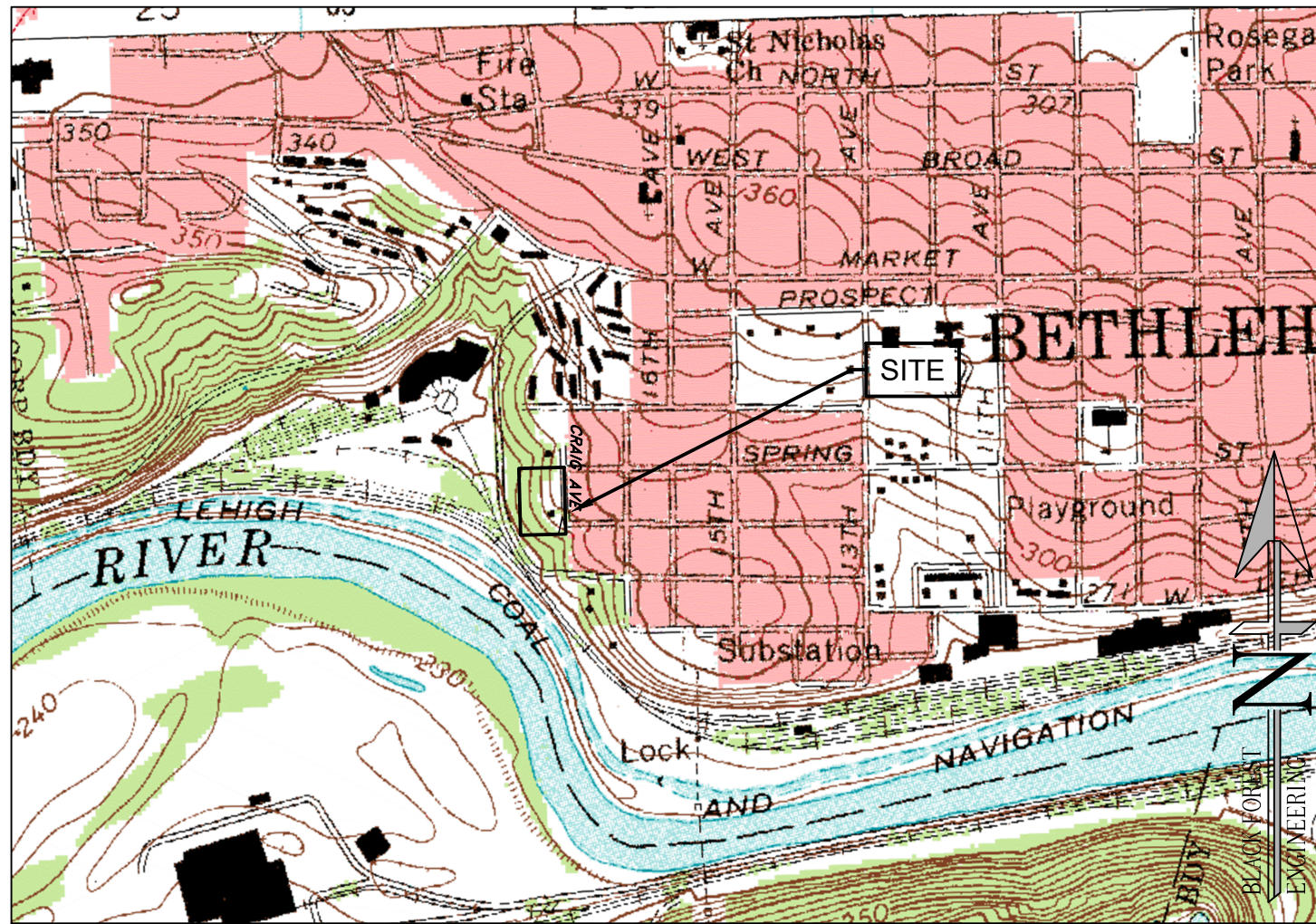
ARTICLE 1316.01(c) TO ALLOW FOR THE CONSTRUCTION OF THE SINGLE-FAMILY HOMES ON STEEP SLOPES WITHOUT FURTHER LIMITING THE MINIMUM LOT AREA AND MAXIMUM IMPERVIOUS COVERAGE OF EACH LOT.

THE CITY OF BETHLEHEM ZONING BOARD ON JULY 26, 2023, GRANTED A VARIANCE FROM THE ABOVE ARTICLES.

NOTES:
THERE ARE NO EXISTING TREES WITHIN THE PROPOSED CONSTRUCTION AREA.
PROPOSED DRIVEWAY SLOPES SHALL CONFORM TO 1316.01(d)

PARKING REQUIREMENT

2 SPACES PER SINGLE FAMILY UNIT
4 UNITS x 2 = 8 SPACES REQ'D (8 PROVIDED)



LOCATION MAP

USGS ALLENTOWN EAST QUADRANGLE
SCALE: 1"=1000'

SIGNATURE BLOCKS

CERTIFICATION OF OWNERSHIP

I (WE) THE OWNER(S) OF _____ BEING DULY SWORN ACCORDING TO LAW, DEPOSE AND SAY THAT I (WE) AM (ARE) THE SOLE OWNER(S) OF THE ABOVE PROPERTY IN PEACEFUL POSSESSION OF THE SAME AND THAT THERE ARE NO SUITS OR LIENS PENDING AFFECTING THE TITLE THEREOF.

SIGNATURE OF OWNER _____ PRINTED NAME OF OWNER _____

NOTARIZATION

SWORN AND SUBSCRIBED BEFORE ME THIS _____ DAY

OF _____ A.D.

(LEGIBLE IMPRESSION OF NOTARY SEAL)

NOTARY PUBLIC

MY COMMISSION EXPIRES: _____

PLANNING COMMISSION APPROVAL

THE WITHIN PLOT OR PLAN OF LAND LOCATED IN BETHLEHEM, LEHIGH COUNTY, PENNSYLVANIA, WAS APPROVED BY THE BETHLEHEM CITY PLANNING COMMISSION.

CHAIRMAN _____ DATE _____

PLANNING DIRECTOR _____ DATE _____

ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN CORRECTLY AND ACCURATELY REPRESENTS THE LANDS OF THE OWNER AND, WHERE APPLICABLE, THE LOTS, BUILDINGS, STREETS, PARKING AREAS, WALKWAYS, AND OTHER STRUCTURES AND IMPROVEMENTS SHOWN THEREON.

JOSEPH EDWARD RENTKO
REGISTRATION NO. PE085609

PROOF OF RECORDING

PLAN RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF LEHIGH COUNTY.

PENNSYLVANIA, UNDER DOCKET ID # _____

ON THE _____ DAY OF _____ 20____

WITNESS MY HAND AND SEAL OF OFFICE THIS _____ DAY

OF _____ 20____

RECORDER OF DEEDS _____

WITNESS: _____

L.V.P.C. REVIEW

REVIEWED BY THE LEHIGH VALLEY PLANNING COMMISSION

PLANNING _____ DATE _____

BENCHMARK FOR THIS PLAN

VERTICAL CONTROL IS BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). BEARING SYSTEM BASED UPON THE PENNSYLVANIA NORTH AMERICAN DATUM OF 1983, SOUTH ZONE, US FOOT (PA-NAD83).

1. EXISTING MAG NAIL=283.99

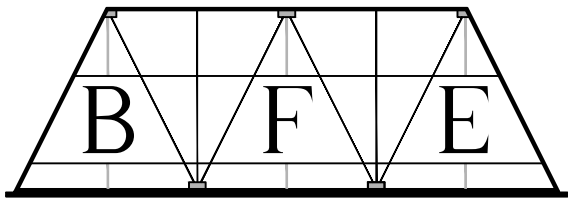
SURVEY NOTES:

- THIS PLAN IS BASED ON A FIELD SURVEY CONDUCTED ON AUGUST 13, 2023 BY BLACK FOREST ENGINEERING LLC USING A TOTAL STATION AND GPS RTK UNIT.
- THE BEARING AND COORDINATE SYSTEM IS BASED ON PA STATE PLANE SOUTH-NAD 83.
- THE SHOWN ELEVATIONS ARE BASED ON NAVD88.
- UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE AND HAVE BEEN BASED ON VISIBLE ABOVE-GROUND EVIDENCE. A CONTRACTOR SHALL DETERMINE THE ACTUAL LOCATION OF ALL UTILITIES SHOWN ON THIS PLAN AND ANY ADDITIONAL EXISTING UTILITIES NOT SHOWN ON THIS PLAN.
- BOUNDARY LINES SHOWN WITH BEARINGS AND DISTANCES OR CURVE INFORMATION HAVE BEEN FIELD VERIFIED BY THIS SURVEY.
- FIELD SURVEY PERFORMED WITHOUT THE BENEFIT OF A TITLE SEARCH.
- PLAN REFERENCE:
A. REVISED PLAN OF BUILDING LOTS ON ELLIOTT HEIGHTS ANNEX AND ANNEX TO MT. AIRY PARK; RECORDED IN MAP BOOK MAJOR VOL. 1; PG 101.

"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
SN: 20232490303



BLACK FOREST ENGINEERING, LLC
2455 BLACK FOREST DRIVE
COPLAY, PA 18037

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SEAL:



JOSEPH E. RENTKO, P.E. #PE085609
2455 BLACK FOREST DRIVE
COPLAY, PA 18037
717-239-4469

REV.	DESCRIPTION:	BY	DATE
1	ADDRESS 10-20-23 REVIEW LETTER	JER	11/15/23

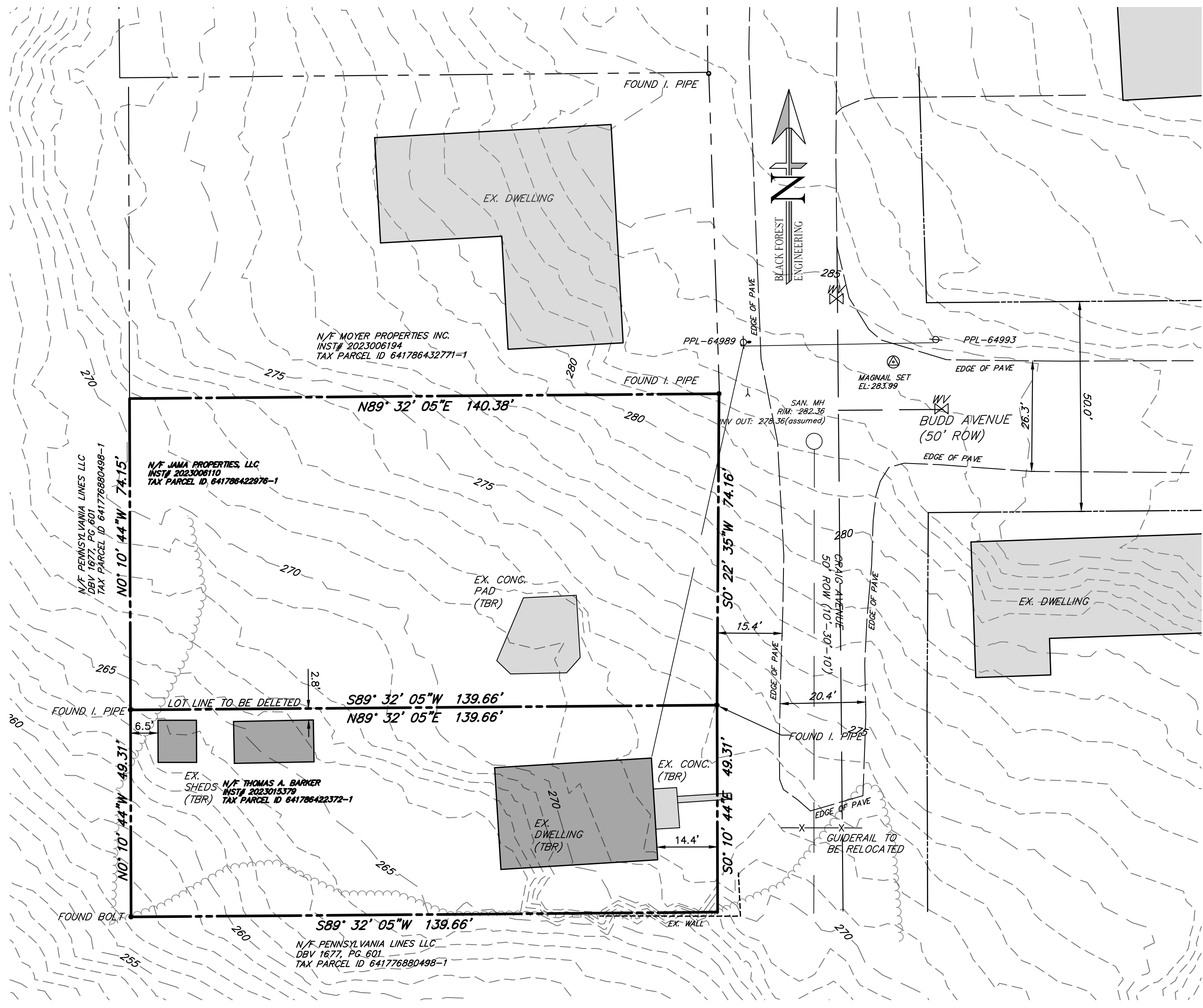
PROJECT TITLE:
THE TWINS ON CRAIG AVENUE

PROJECT OWNER:
JAMA PROPERTIES LLC
484.357.0858
1007 PROSPECT AVENUE
BETHLEHEM, PA 18018

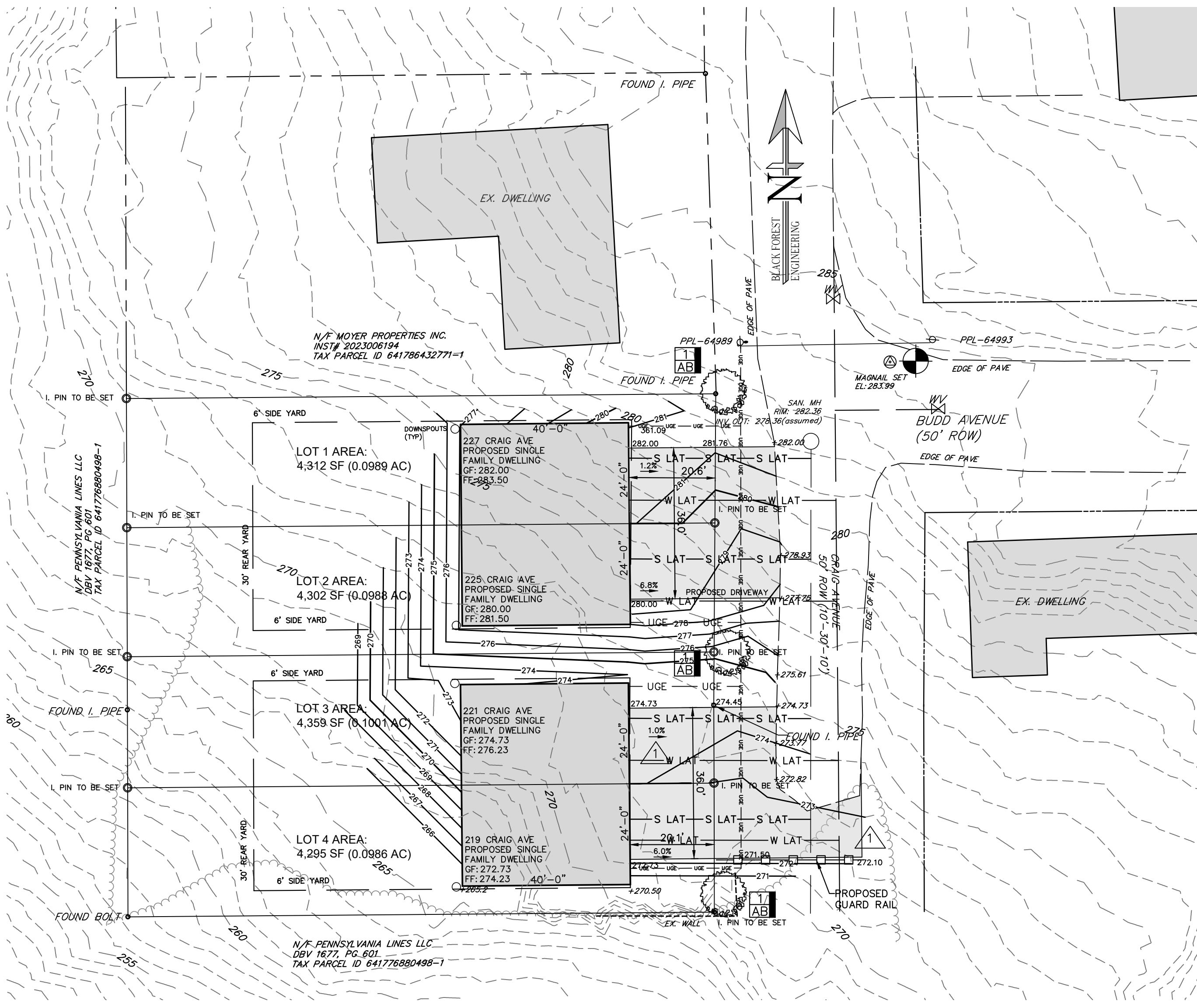
PROJECT LOCATION:
**CITY OF BETHLEHEM
WARD 13; BLOCK 40
LEHIGH COUNTY
PENNSYLVANIA**

PLAN TITLE:
RECORD

SCALE:	DATE:	DRAWN:	CHECKED:
1"=20'	9/12/23	JER	JER
PROJECT NO.	DRAWING NO.	REVISION:	
238	1 OF 4		00



EXISTING FEATURES PLAN



GRADING & UTILITY PLAN

EXISTING Legend	
	PROPERTY LINE
	EXISTING RIGHT-OF-WAY
	BUILDING RESTRICTION LINE
	EXISTING EDGE OF PAVE
	EXISTING VEGETATION
	EXISTING CENTERLINE
	EXISTING ROAD PAVEMENT
	EXISTING SIDEWALK
	EXISTING STRUCTURE
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	EXISTING TEST PIT
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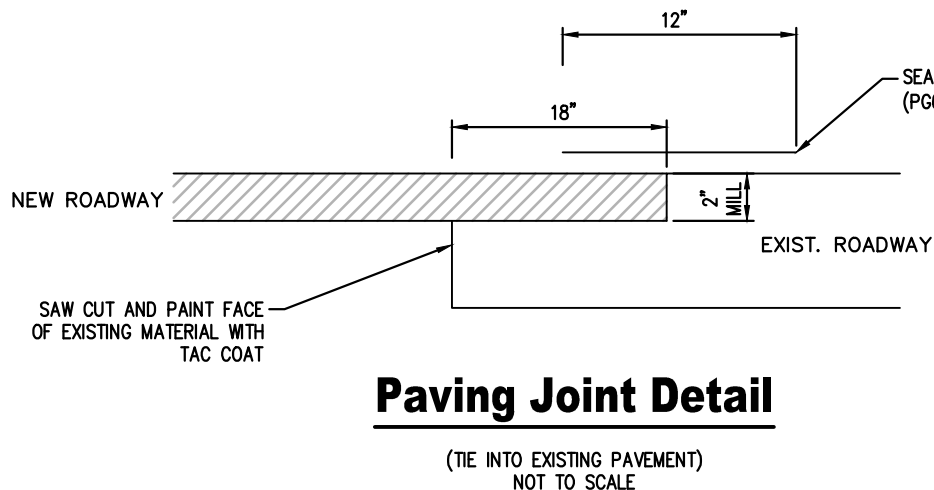
PROPOSED Legend	
	PROP. PROPERTY LINE
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	PROP. BENCHMARK
	PROP. CONCRETE WHEELSTOP
	PROP. BUILDING/STRUCTURE
	PROP. DRIVEWAY



Notes.

Include the following notes on the site or grading plan in addition to the landscape plan when applicable:

- No soil disturbance or compaction, construction materials, traffic, burial pits, trenching or other land disturbance is allowed in the tree protection zone unless indicated on the plan.
- Barricades must be installed prior to any destruction and/or construction activity.
- The root protection zone shall be the area encompassed by a circle with a radius extending 1.25 ft. from the trunk of the tree for every inch DBH (diameter at breast height) of the tree.
- Violations of tree protection requirements are subject to penalty per City ordinance.
- All trees on public property are protected by ordinance: no pruning, root pruning of roots over one inch in diameter, and/or tree removal is to be performed without a permit and work must be performed by a City licensed tree contractor.
- All plant materials are to conform to the American Standard for Nursery Stock, Latest Edition, American Nursery and Landscape Association.
- Street and parking lot trees shall be a minimum of 14' in height and have a single straight trunk with the first lateral branch at 7' above the root ball. Trees with an upright branching habit, such as zelkova, may have the first lateral branch at 6' above the root ball.
- All landscaping shall conform to the current edition of the Arboricultural Specifications and Standards of Practice of the City of Bethlehem.

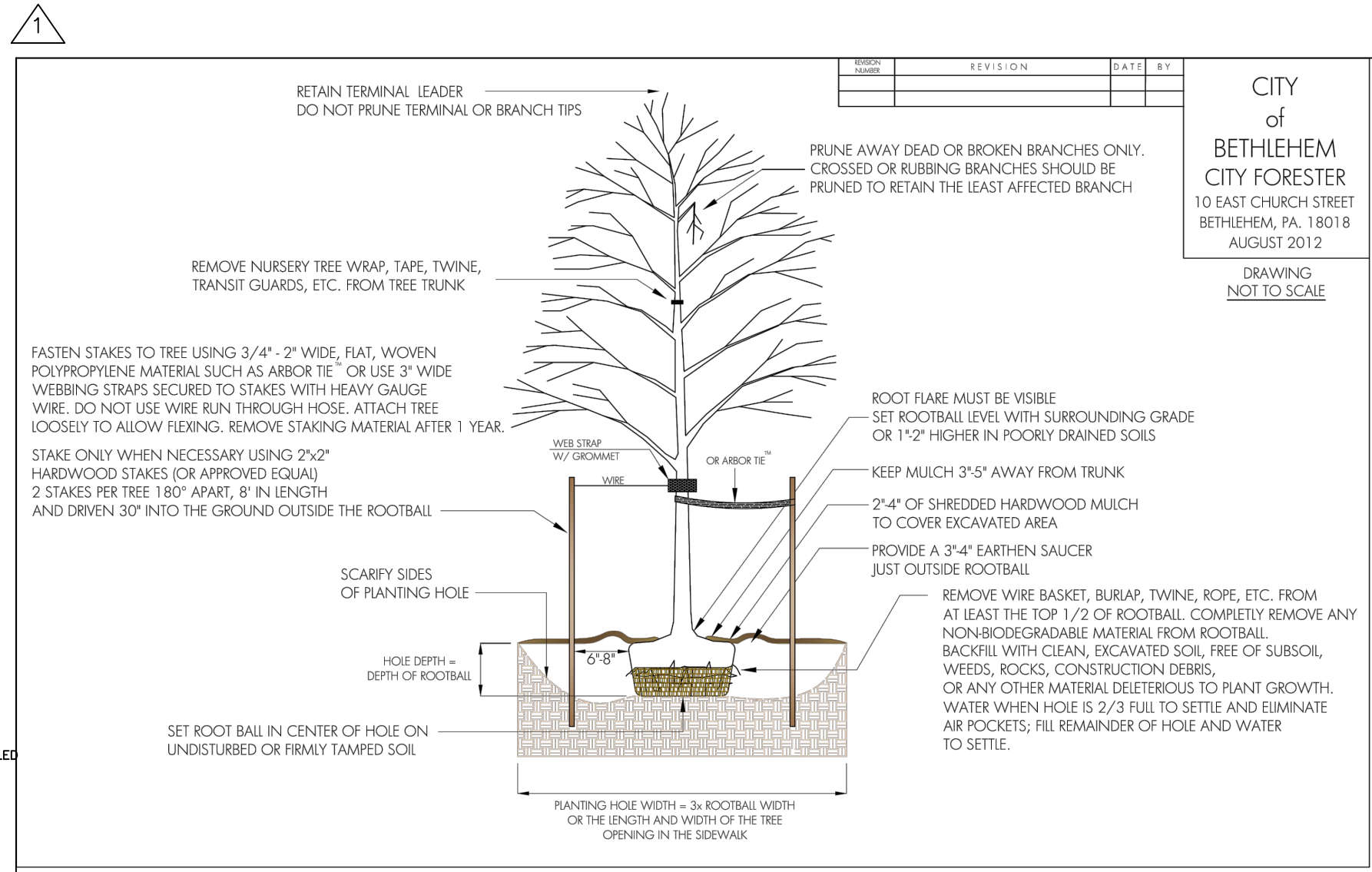


Paving Joint Detail

(TIE INTO EXISTING PAVEMENT)
NOT TO SCALE

Typical Paving Section
Driveway

NOT TO SCALE



REQUIRED LANDSCAPING:

STREET TREES:
CRAIG AVE =120 LF FRONTAGE (1 TREE REQD PER 50 LF); 2 TREES REQD

NOTE: THERE ARE NO TREES CURRENTLY ON THE PROPERTY.

PLANT LIST: STREET & PARKING LOT TREES

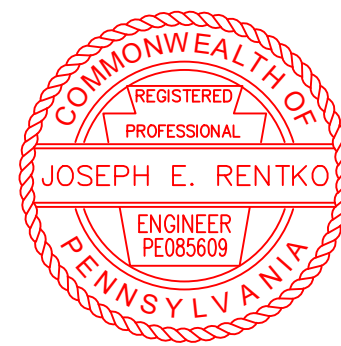
KEY	BOTANIC / COMMON NAME	SIZE	ROOT CONDITION	QUANTITY
AB	ACER BUERGERIAUM / TRIDENT MAPLE	2"-2.5" CAL.	B&B	3

"CALL BEFORE YOU DIG"
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FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN
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SEAL:



JOSEPH E. RENTKO, P.E. #PE085609
2455 BLACK FOREST DRIVE
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202-239-4469

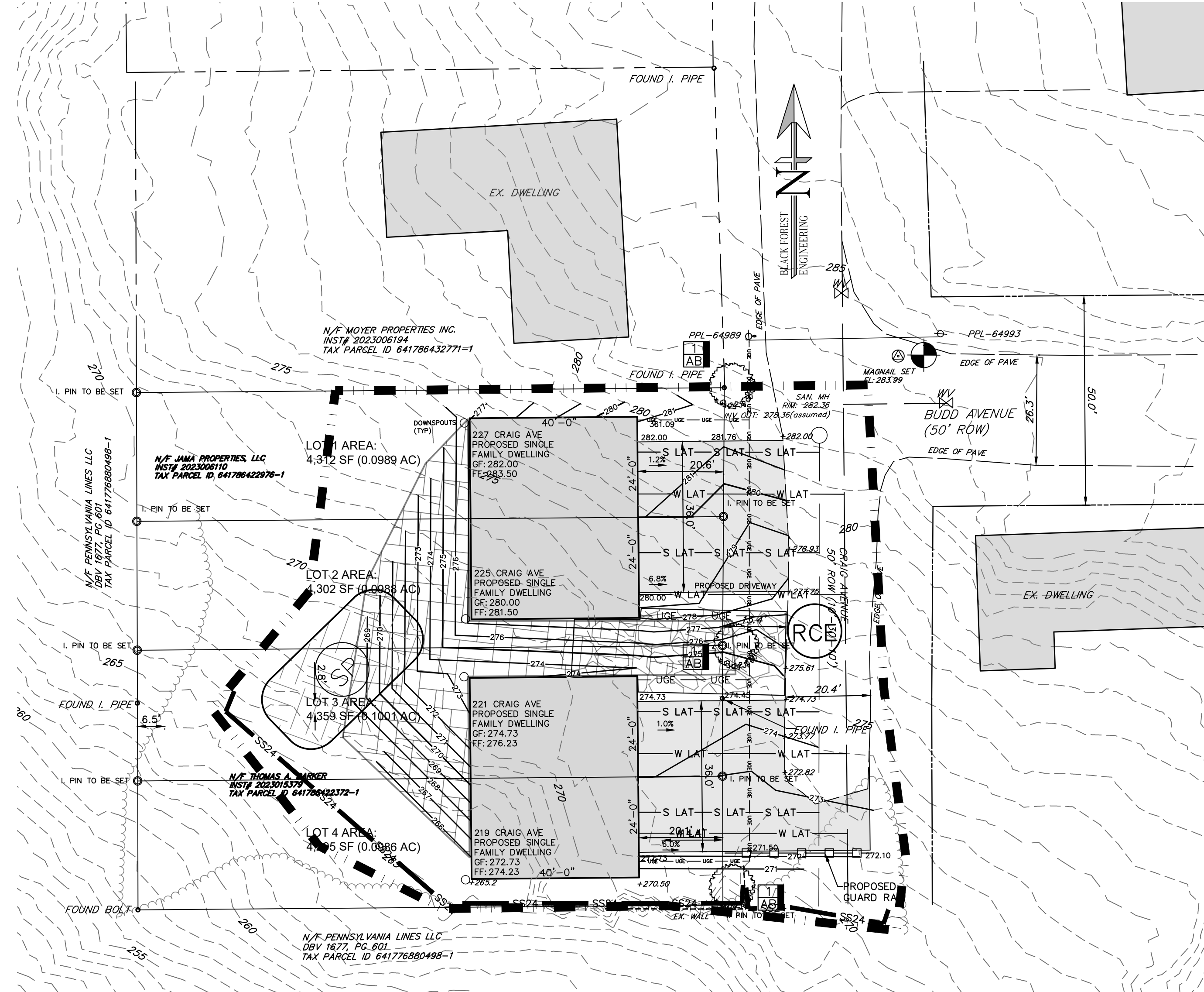
REV.	DESCRIPTION	BY	DATE
1	ADDRESS 10-20-23 REVIEW LETTER	JER	11/15/23

PROJECT TITLE:
THE TWINS ON CRAIG AVENUE
PROJECT OWNER:
JAMA PROPERTIES LLC
494.357.0858
1007 PROSPECT AVENUE
BETHLEHEM, PA 18018

PROJECT LOCATION:
**CITY OF BETHLEHEM
WARD 13; BLOCK 40
LEHIGH COUNTY
PENNSYLVANIA**

PLAN TITLE:
EXISTING FEAT/ G&U

SCALE:	DATE:	DRAWN:	CHECKED:
1"=20'	9/12/23	JDC	JER
PROJECT NO.	DRAWING NO.	REVISION:	
238	2 OF 4	00	



EROSION CONTROL PLAN

EROSION AND SEDIMENT POLLUTION CONTROL LEGEND

RCE ROCK CONSTRUCTION ENTRANCE

ECM EROSION CONTROL MATTING S75

SP TOPSOIL STOCKPILE

SSXX SILT SOCK (XX REPRESENTS SILT SOCK NO.)

LIMIT OF DISTURBANCE:
17,435 SF (0.4003 AC)

PLAN PREPARER
BLACK FOREST ENGINEERING, LLC
2455 BLACK FOREST DRIVE
COPLAY, PA 18037
(570)-239-4499

CONSTRUCTION NOTES:

- All grading shall be done in accordance with the City of Bethlehem.
- No earthmoving or grading activities may take place until a grading permit is granted by the City of Bethlehem.
- The City Engineer and/or staff may enter the property to inspect all grading and construction activities on the site.
- At least 7 days prior to any earth disturbance activities, the operator shall notify the City and invite all contractors involved in those activities, and the landowner to an on-site meeting.
- At least 7 days prior to any earth disturbance activities, the operator shall provide notice in writing to the City of Bethlehem that earth disturbance activities will be commencing.
- Temporary and permanent seeding shall be in accordance with requirements on the details. Compost Filter Socks shall be installed downslope of all topsoil stockpiles as indicated in the Topsoil Stockpile detail.
- Topsoil pile locations may be adjusted to fit the contractor schedule as long as the silt sock is placed downslope of the pile locations.
- Prior to any seeding and lime and fertilizer application, a soil test shall be performed to determine the pH factor. Additional lime and fertilizer may be required.
- All disturbed areas shall be immediately stabilized if earth disturbance/construction has ceased. Disturbed slopes of 3:1 or greater shall be stabilized with erosion control matting.
- Soil compaction and vehicle traffic shall be kept to a minimum at areas designated for sanitary absorption or stormwater infiltration BMPs.
- Topsoil should be stripped and stockpiled prior to all earthwork. Only strip the amount of topsoil necessary to perform earthwork. All disturbed areas shall be stabilized immediately if disturbance has ceased.
- On a daily basis, the Contractor shall inspect and clean any sediment that is tracked onto existing roads.
- All erosion control facilities shall be inspected after every runoff event and on a weekly basis, any necessary repairs must be made immediately.
- 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 or other movements.
- NAGS75 matting to be applied to all proposed 3:1 slopes.

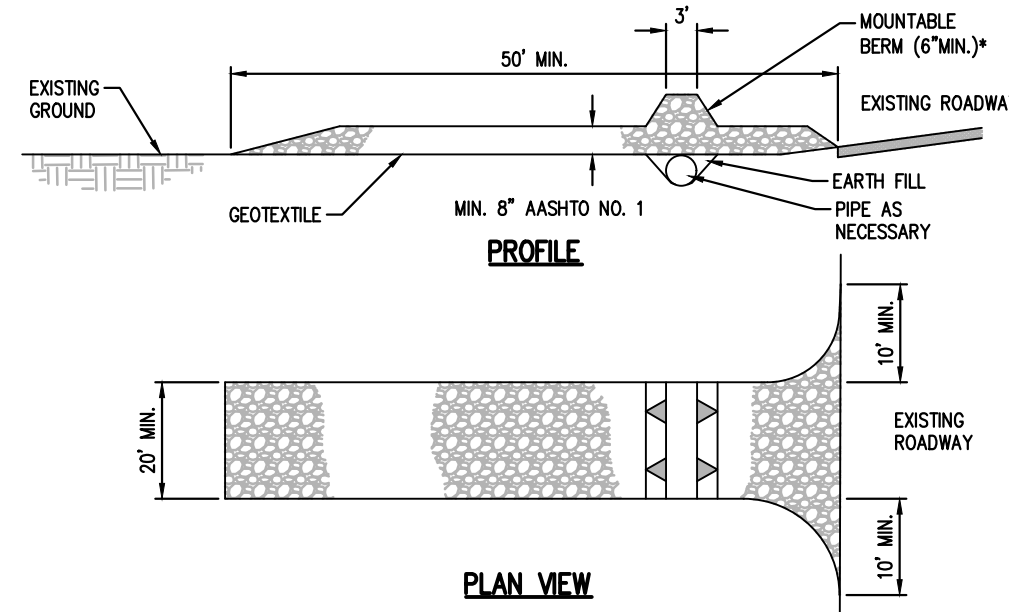
SEQUENCE OF CONSTRUCTION

- At least 7 days before starting any earth disturbance activities, the operator provide written notification to the City of Bethlehem and shall invite all contractors involved in those activities, appropriate municipal officials, the ESDC plan preparer and the landowner to an on-site meeting.
- 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.
- Flag and mark the Limits of Disturbance. No grading or earthmoving may take place beyond the Limits of Disturbance.
- Install Rock Construction Entrance (RCE) off of Craig Ave where indicated on the Plan. This shall be the only ingress and egress from the site. Any sediment tracked onto the public roadway shall be collected and returned to the site by the end of each workday. Any sediment tracked onto the public roadway during RCE construction shall be cleaned immediately.
- Install perimeter compost filter socks at locations indicated on plan and per details.
- Remove existing buildings, structures and asphalt from the site. Immediately stabilize any disturbed areas outside of construction area. Any remaining topsoil shall be stockpiled in stockpile locations indicated on the Plan.
- Begin bulk earthwork for the building pads and driveways. Rough grade the driveway; Fill should be compacted in layers so as to minimize sliding, slumping and erosion of soil. Erosion Control matting shall be installed on any graded slopes of 3:1 or greater.
- Install paving base course.
- Begin building construction and utility connection installation. Complete final paving.
- Upon completion of proposed improvements, any temporary staging area shall be restored to existing condition. Proposed landscaping shall be installed upon completion of building.
- After the site is stabilized, remove ESD BMPs. Immediately stabilize any areas disturbed by the removal of the erosion and sediment pollution controls and plant street trees. 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 or other movements.

Standard Construction Detail # 3-1

ROCK CONSTRUCTION ENTRANCE

NOT TO SCALE



* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

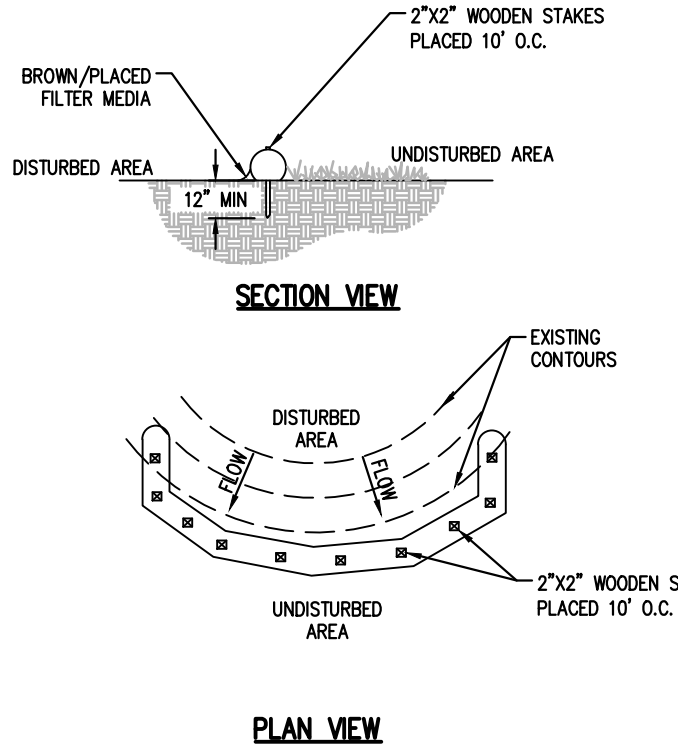
General Notes:

- REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
 - RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
 - MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.
- MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVATED OR INSTALL WASH ROCK, WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

Standard Construction Detail # 4-1

COMPOST FILTER SOCK

NOT TO SCALE



PLAN VIEW

General Notes:

- COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (SEE FIGURE 4.1 OF THE PA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL, MAR. 2012).
- MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN OF FIGURE 4.2 OF THE PA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL, (MAR. 2012). STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
- TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
- ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
- 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 FILTER SOCK 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.

TABLE 4.1
COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

MATERIAL TYPE	3 mil HDPE	5 mil HDPE	5 mil HDPE	MULTI-FILAMENT POLYPROPYLENE (MFPF)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (HDMFPF)
MATERIAL CHARACTERISTICS	PHOTO - DEGRADABLE	PHOTO - DEGRADABLE	BIO - DEGRADABLE	PHOTO - DEGRADABLE	PHOTO - DEGRADABLE
SOCK DIAMETERS	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH	26 psi	26 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.	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-WELD JUNCTURES				
OUTER FILTRATION MESH	3/4" X 3/4" MAX. APERTURE SIZE				
	COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER & NON-WOVEN 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.

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (MAR. 2012). COMPOST SHALL MEET THE FOLLOWING STANDARDS:

COMPOST STANDARDS	
ORGANIC MATTER CONTENT	25% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 - 8.5
MOISTURE CONTENT	50% - 60%
PARTICLE SIZE	30%-50% PASS THROUGH 3/8" SIEVE
SOLUBLE SALT CONCENTRATION	5.0 gS/m (mmhos/cm) MAXIMUM

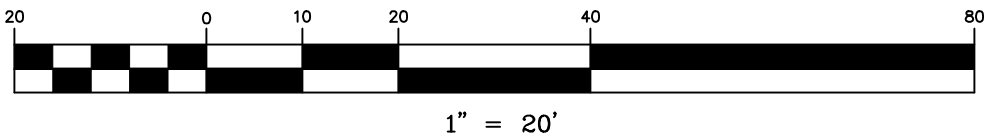
MULCHING—Mulch absorbs rainfall impact, increases the rate of infiltration, reduces soil moisture loss due to evaporation, moderates soil temperatures, provides a suitable environment for germination, and protects the seeding from intense sunlight. All seeded areas should be mulched or blanketed to minimize the potential for failure to establish an adequate vegetative cover. Mulching may also be used as a temporary stabilization of disturbed areas in non-germinating seasons.

Apply mulches at the rates shown in table 11.6

Straw and hay mulch should be anchored 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. The machinery should be operated on the contour. (Note: Crimping of hay or straw by running over it with tracked machinery is not recommended.)

Table 11.6. Mulch Application Rates

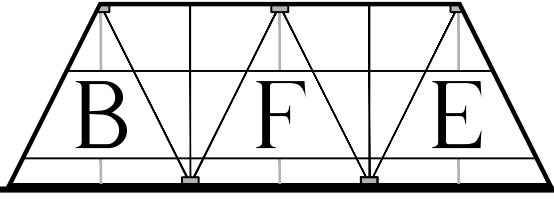
Mulch Type	Application Rate (Min.)			Notes
	Per Acre	Per 1,000 sq. ft.	Per 1,000 sq.yd.	
Straw	3 tons	140 lb.	1,240 lb.	Either wheat or oat straw, free of weeds, not chopped or finely broken
Hay	3 tons	140 lb.	1,240 lb.	Timothy, mixed clover and timothy or other native forage grasses
Wood Chips	4-6 tons	185-275 lb.	1,650-2,500 lb.	May prevent germination of grasses and legumes
Hydromulch	1 ton	47 lb.	415	See limitations above



1" = 20'

"CALL BEFORE YOU DIG"

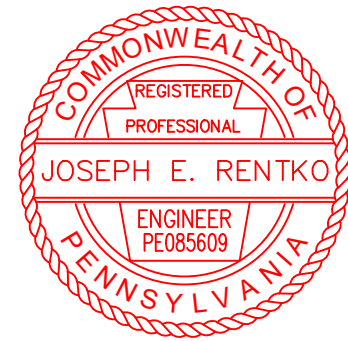
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL
PENNSYLVANIA ONE CALL SYSTEM, INC.
1-800-242-1776
SN: 20232490303



BLACK FOREST ENGINEERING, LLC
2455 BLACK FOREST DRIVE
COPLAY, PA 18037

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SEAL:



JOSEPH E. RENTKO, P.E. #PE085609
2455 BLACK FOREST DRIVE
COPLAY, PA 18037
270-239-4499

ADDRESS 10-20-23 REVIEW LETTER JER 11/15/23
REV: DESCRIPTION: BY DATE

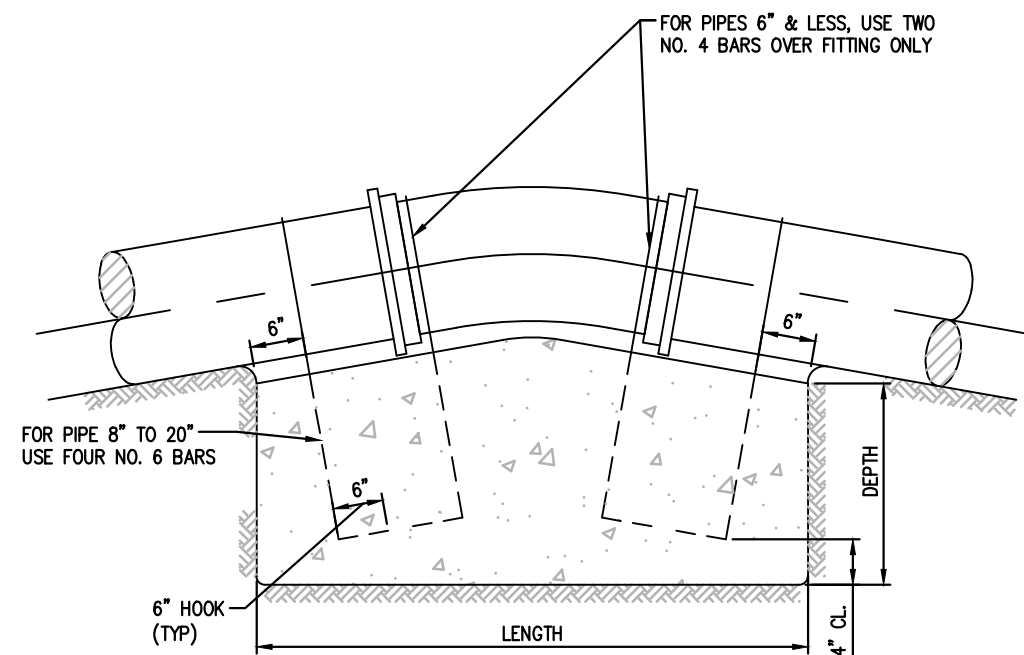
THE TWINS ON CRAIG AVENUE

PROJECT OWNER:
JAMA PROPERTIES LLC
484.357.0858
1007 PROSPECT AVENUE
BETHLEHEM, PA 18018

PROJECT LOCATION:
CITY OF BETHLEHEM
WARD 13; BLOCK 40
LEHIGH COUNTY
PENNSYLVANIA

EROSION CONTROL

SCALE: 1"=20'	DATE: 9/12/23	DRAWN: JDC	CHECKED: JER
PROJECT NO. 238	DRAWING NO. 3 OF 4	REVISION: 00	



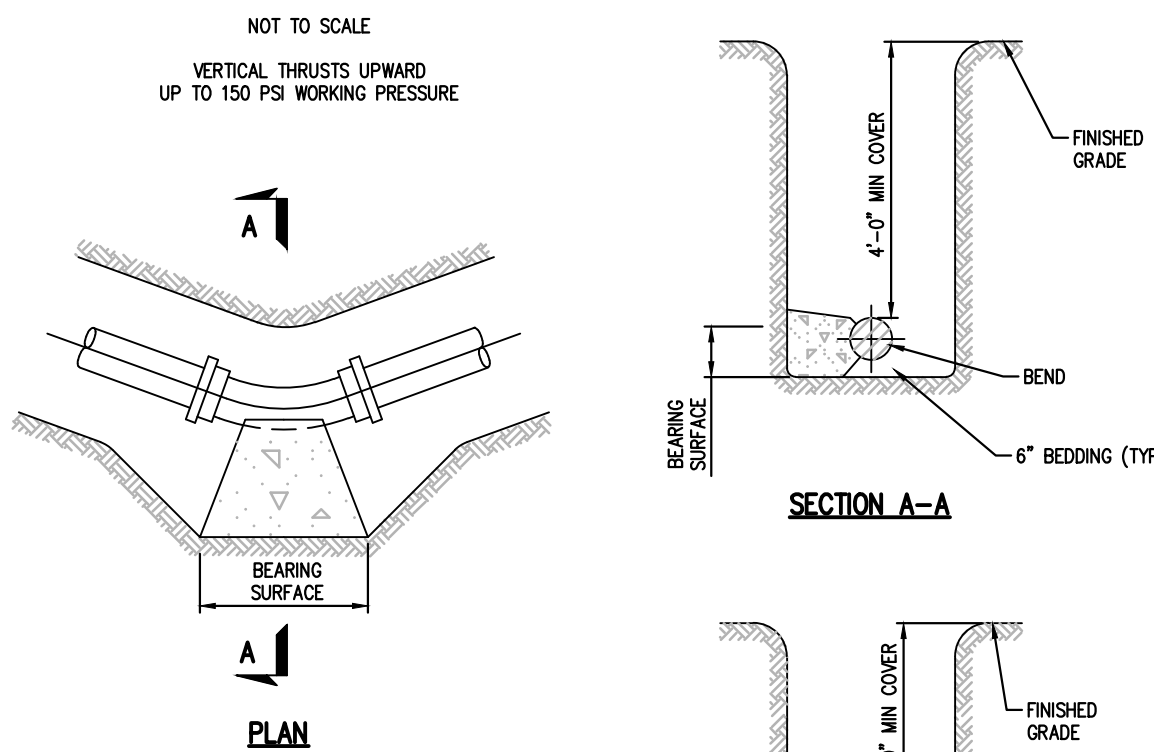
TYPICAL SECTION

PIPE SIZES (inches)	DIMENSIONS OF CONCRETE BLOCKING							
	LENGTH				WIDTH			
4 & SMALLER	11 1/4	22 1/2	45	11 1/4	22 1/2	45	11 1/4	22 1/2
6 & 8	2'	4'	4'	1.5'	3'	3'	1'	2'
10 & 12	4.5'	6'	8'	3'	3'	4'	3'	4.5'
14 & 16	6'	8'	11'	3.5'	3.5'	5'	3.5'	5'
18 & 20	7'	9'	13'	4'	5'	5.5'	4'	5'

Notes:

1. NO COUPLING OR JOINTS SHALL BE COVERED WITH CONCRETE.
2. REINFORCING BAR STRAPS TO BE SHAPED TO PIPE CURVATURE.
3. ALL EXPOSED STEEL TO BE PAINTED WITH TWO COATS ASPHALTIC PAINT.

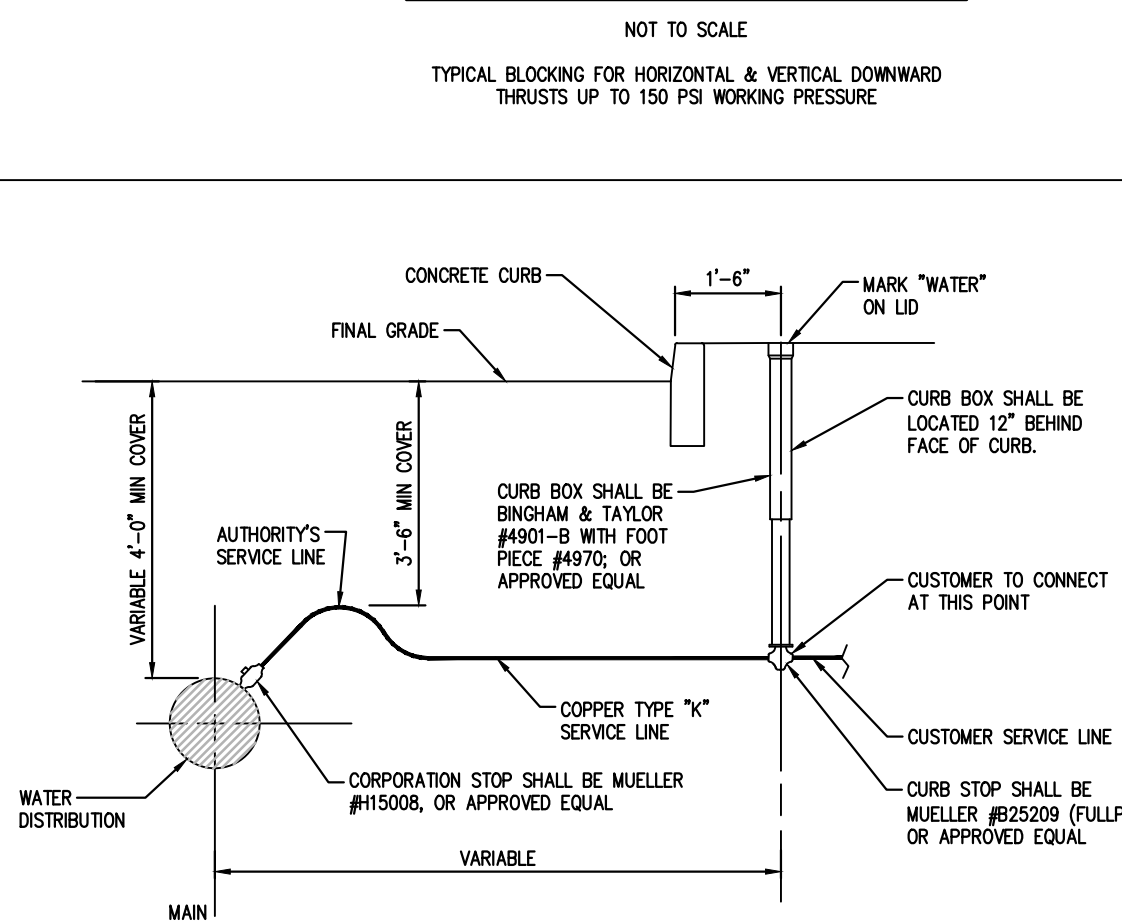
Thrust Blocking - Vertical Thrusts



Notes:

1. SEE STANDARD DETAIL STANDARD DETAIL VI-27 FOR BEARING AREA REQUIRED.
2. NO COUPLING OR JOINTS SHALL BE COVERED WITH CONCRETE.

Thrust Blocking For Bends

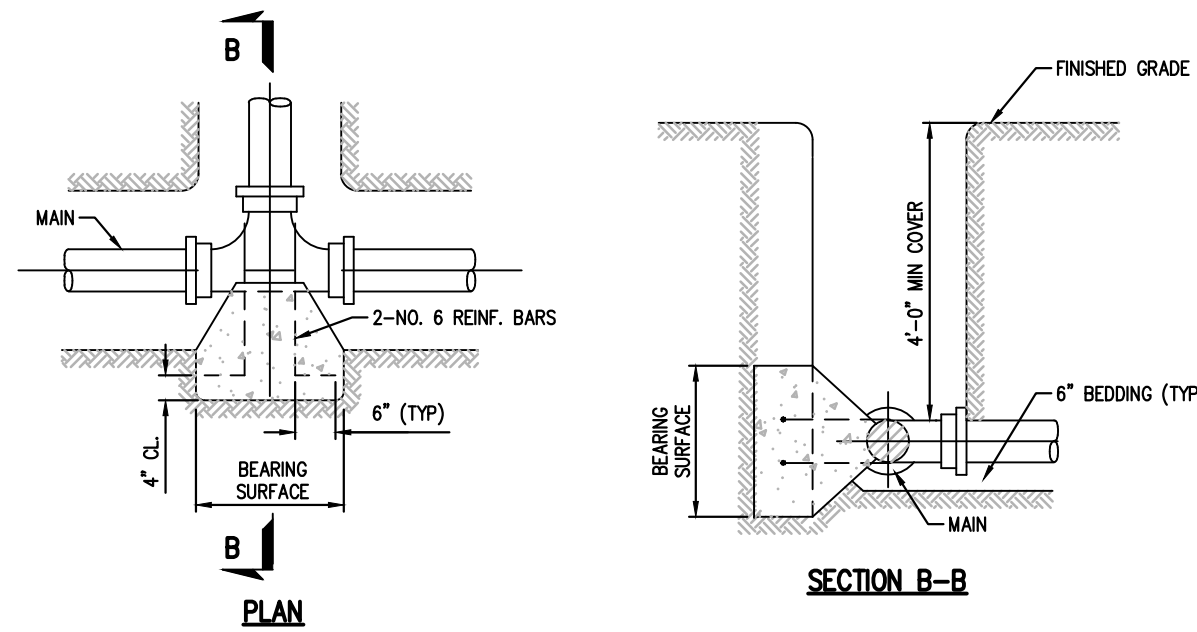


Notes:

1. ALL PIPE MUST BE BEDDED IN A MIN. 4" LAYER OF SAND OR SCREENINGS AND SHALL BE BACK FILLED WITH THE SAME MATERIAL IN MAX. 6" LAYERS COMPACTED. EACH LAYER SHALL BE HAND TAMPED UNTIL 1" OF COVER EXISTS OVER THE PIPE.
2. PIPES AROUND WIRES AND ALL PLUGS, CAPS, HYDRANTS, TEES, CROSSES, VALVES, ETC., SHALL BE BLOCKED WITH CONCRETE TO TAKE THE REACTION AND OR THRUST.

Water Lateral Small Service Connection

NOT TO SCALE



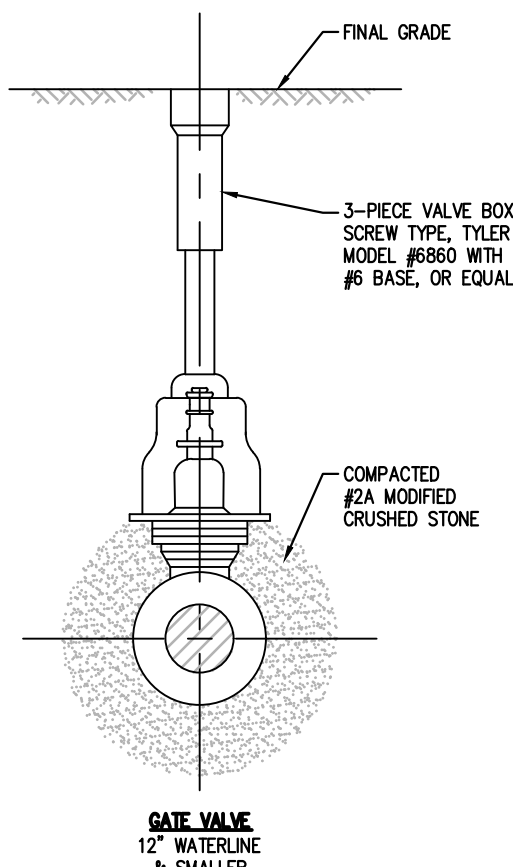
Notes:

1. SEE STANDARD DETAIL STANDARD DETAIL VI-27 FOR BEARING AREA REQUIRED.
2. NO COUPLING OR JOINTS SHALL BE COVERED WITH CONCRETE.
3. REINFORCING BAR STRAPS TO BE SHAPED TO PIPE CURVATURE.
4. ALL EXPOSED STEEL TO BE PAINTED WITH TWO COATS ASPHALTIC PAINT.

Thrust Blocking For Tees

NOT TO SCALE

TYPICAL BLOCKING FOR HORIZONTAL & VERTICAL DOWNWARD THRUSTS UP TO 150 PSI WORKING PRESSURE



Valving Detail

NOT TO SCALE

NOTE:

1. VALVES 8" OR SMALLER SHALL BE RODDED TO A FITTING WITH 2 ALL-THREAD RODS, 12" VALVES WITH 4 ALL-THREAD RODS.
2. ROD DIAMETER SHALL BE EQUAL TO THAT OF THE GLAND BOLTS. RODS SHALL BE GIVEN ONE COAT OF BITUMASTIC PAINT.

Type of Bearing Material and Allowable loads, psf	4" and less DEGREE BEND				6" and 8" DEGREE BEND				10" and 12" DEGREE BEND			
	11 1/4	22 1/2	45	90	11 1/4	22 1/2	45	90	11 1/4	22 1/2	45	90
LOOSE SAND OR MEDIUM CLAY - 2,000	1.0	2.0	2.7	4.0	1.5	3.0	6.0	10.0	3.0	6.2	12.0	22.0
PACKED GRAVEL AND SAND - 4,000	1.0	1.0	1.5	2.0	1.0	1.5	3.0	5.0	1.5	3.1	6.0	11.0
ROCK - 10,000	1.0	1.0	1.0	1.0	1.0	1.0	1.2	2.0	1.0	1.3	2.4	4.4

Type of Bearing Material and Allowable Loads	14" and 16" DEGREE BEND OR DEFLECTION				18" and 20" DEGREE BEND OR DEFLECTION			
	11 1/4	22 1/2	45	90	11 1/4	22 1/2	45	90
LOOSE SAND OR MEDIUM CLAY - 2,000	6.0	12.0	22.5	40.0	9.5	19.0	37.0	67.0
PACKED GRAVEL AND SAND - 4,000	3.0	6.0	11.3	20.0	4.8	9.5	18.5	33.5
ROCK - 10,000	1.2	2.4	4.5	8.0	2.0	3.8	7.4	13.5

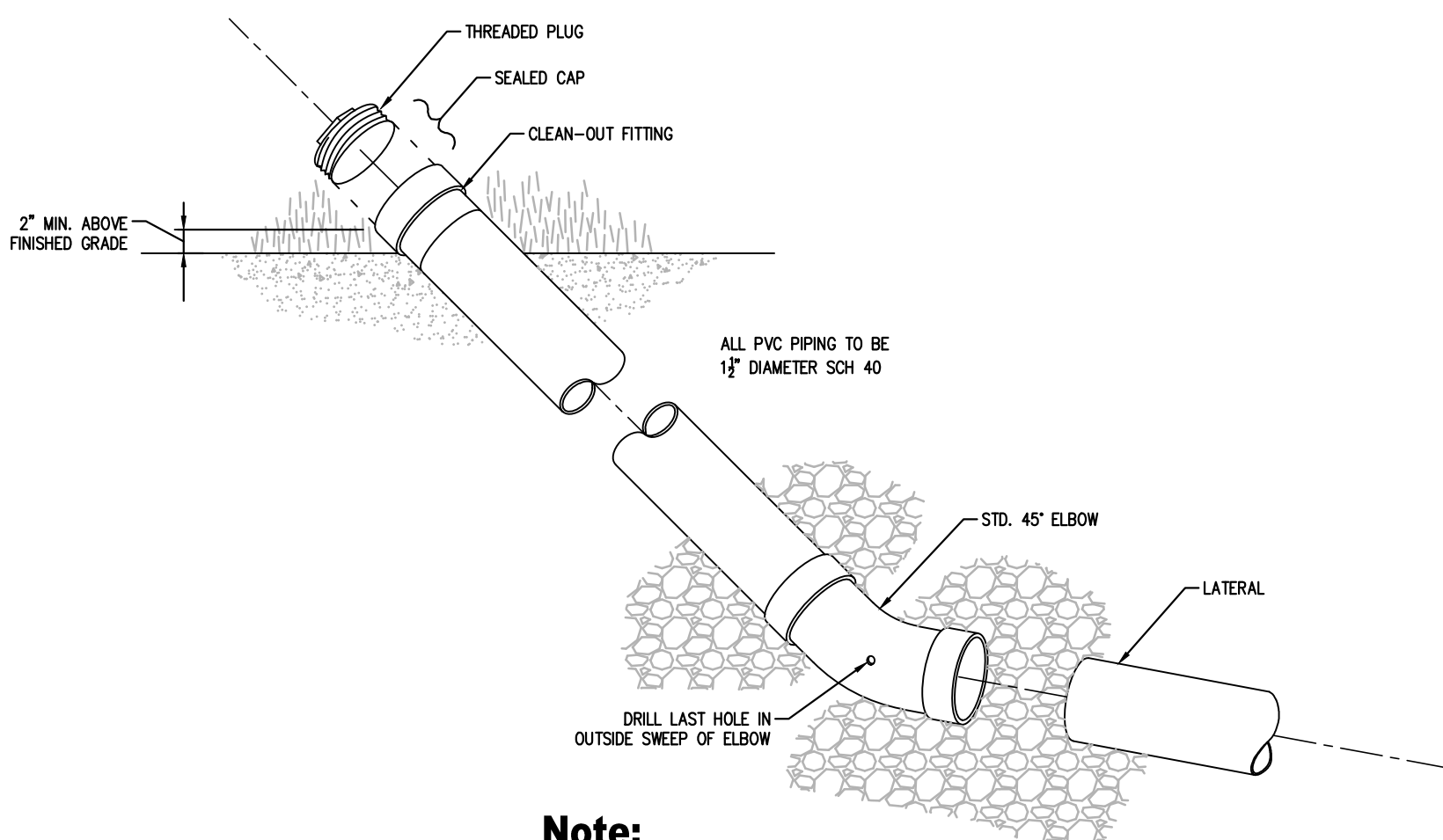
Notes:

THRUST BLOCKING FOR TEES SHALL HAVE THE SAME BEARING AREA AS 90° BENDS OF THE PIPE SIZE OF THE OUTLET. DEAD ENDS SHALL HAVE THE SAME BEARING AS 90° BENDS.

Thrust Blocking Schedule

NOT TO SCALE

SCHEDULE OF DIMENSIONS UP TO 150 PSI WORKING PRESSURE

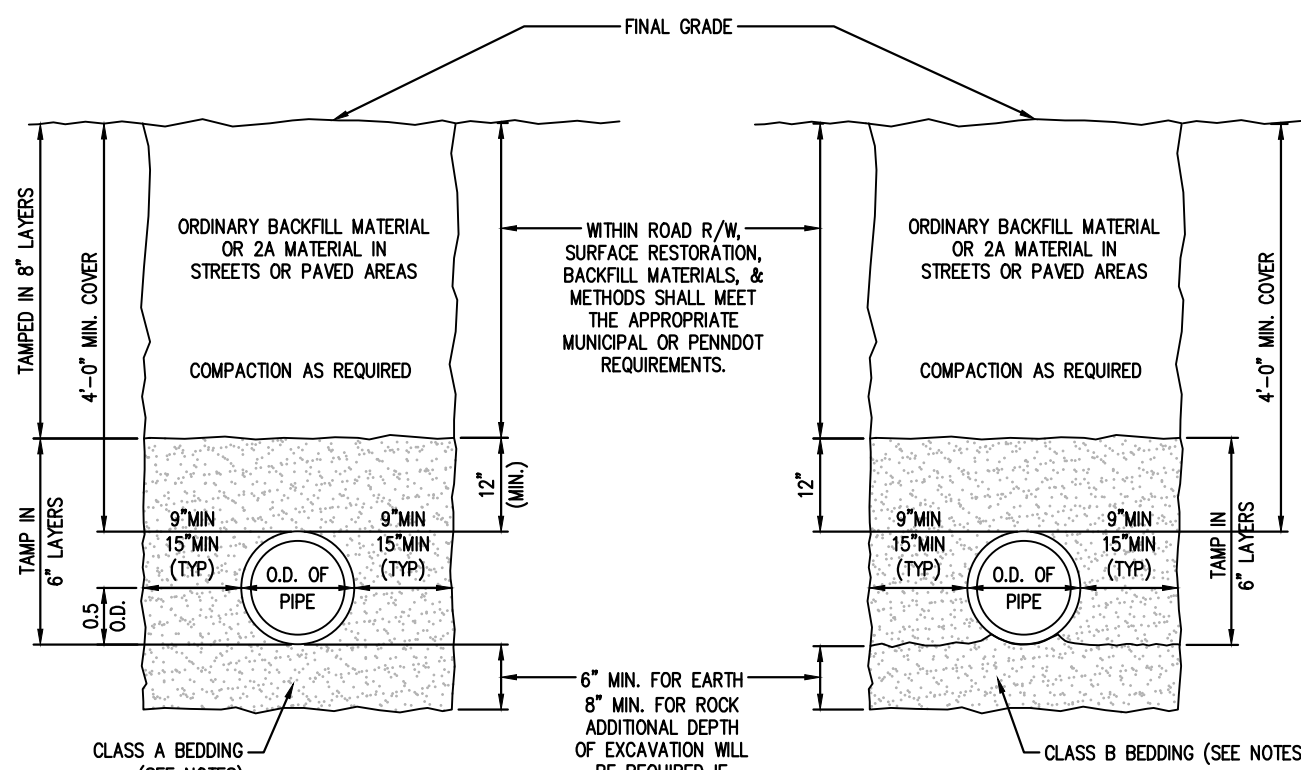


Note:

TYPICAL AT END OF ALL LATERALS

Lateral Clean-out

NOT TO SCALE



Ductile Iron & PVC Pipe

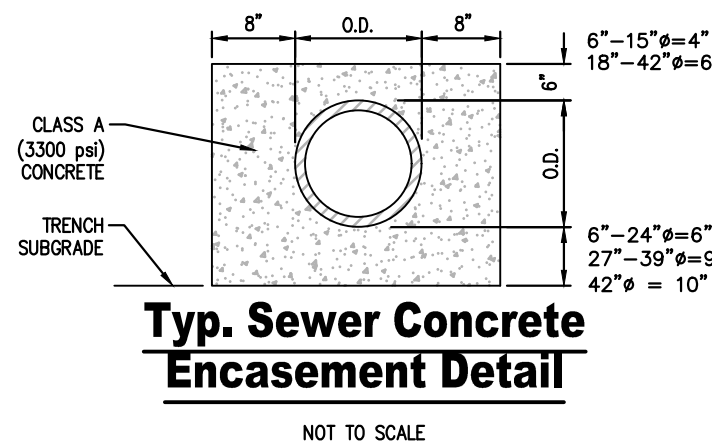
Typical Trench Details

NOT TO SCALE

HDPE Or Reinforced Concrete Pipe

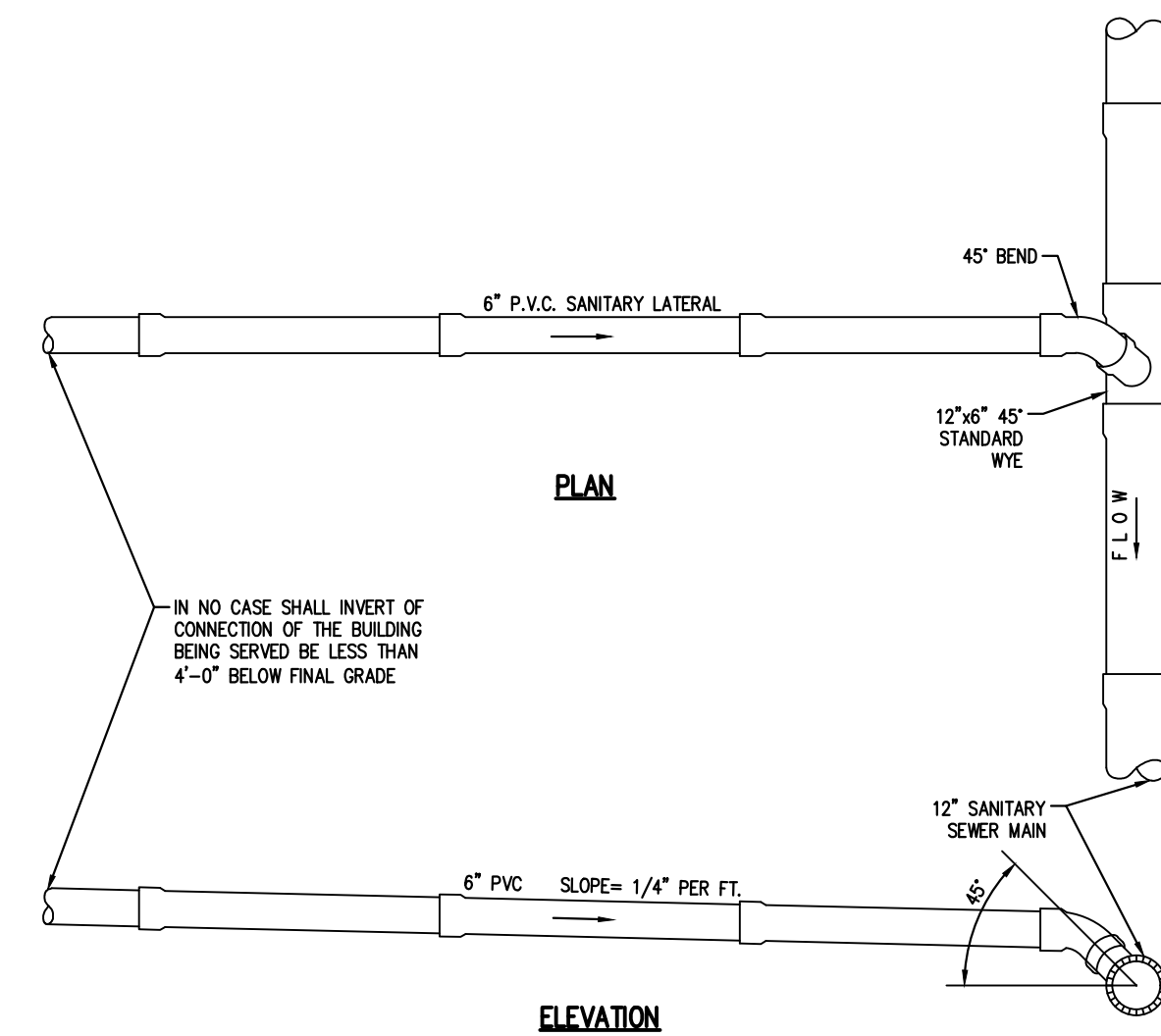
Notes:

1. ALL BACKFILL MATERIAL IS SUBJECT TO CITY APPROVAL OR UGI APPROVAL FOR GAS MAIN.
2. CLASS A BEDDING: APPROVED SCREENINGS TO 12" ABOVE PIPE.
3. CLASS B BEDDING: FINE AGGREGATE
4. SELECT BACKFILL: CLEAN DRY EARTH WITH A MAXIMUM STONE SIZE 3-INCHES.
5. ORDINARY BACKFILL: CLEAN DRY EARTH WITH A MAXIMUM STONE SIZE 6-INCHES.
6. SLAG MATERIAL IS PERMITTED ABOVE THE 12 INCHES OF INITIAL COVER MATERIAL ABOVE THE PIPE.
7. HYDRO HAMMERS CAN BE USED AT DISTANCES GREATER THAN 3' ABOVE THE TOP OF THE PIPE IF THE SOIL DENSITY HAS BEEN PREVIOUSLY COMPACTED TO A MINIMUM 95% STANDARD PROCTOR.
8. PVC PIPE TO BE SDR 35 FOR PIPE RUNS LESS THAN 15' DEEP. FOR SANITARY SEWER RUNS GREATER THAN 15' IN DEPTH, SDR 26 SHALL BE USED.



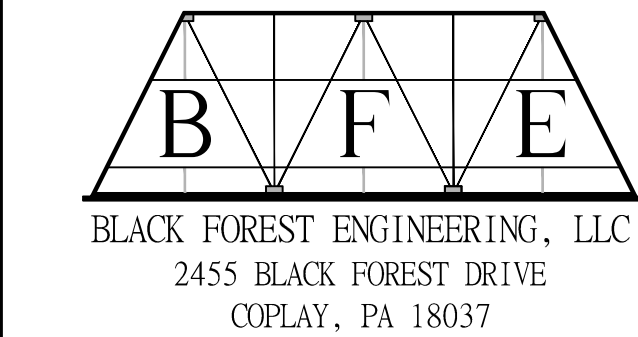
Typ. Sewer Concrete Encasement Detail

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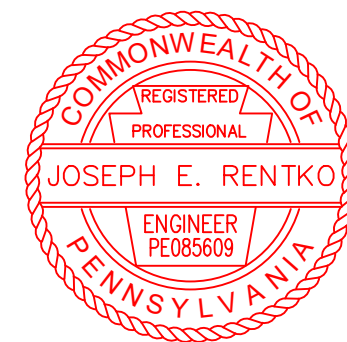
Typical Sanitary Sewer Lateral Connection

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SEAL:



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2455 BLACK FOREST DRIVE
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270-239-4469

NO.	DATE	REVISION
1	11/15/23	1

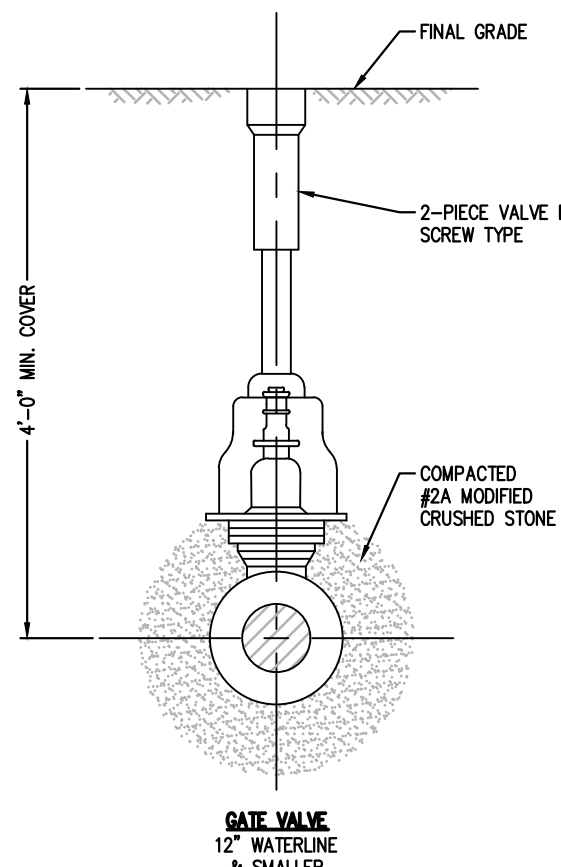
PROJECT TITLE:
THE TWINS ON CRAIG AVENUE

PROJECT OWNER:
JAMA PROPERTIES LLC
484.357.0858
1007 PROSPECT AVENUE
BETHLEHEM, PA 18018

PROJECT LOCATION:
**CITY OF BETHLEHEM
WARD 13; BLOCK 40
LEHIGH COUNTY
PENNSYLVANIA**

CONSTRUCTION DETAILS

SCALE: NOT TO SCALE	DATE: 9/12/23	DRAWN: JDC	CHECKED: JER
PROJECT NO. 238	DRAWING NO. 4 OF 4	REVISION: 00	

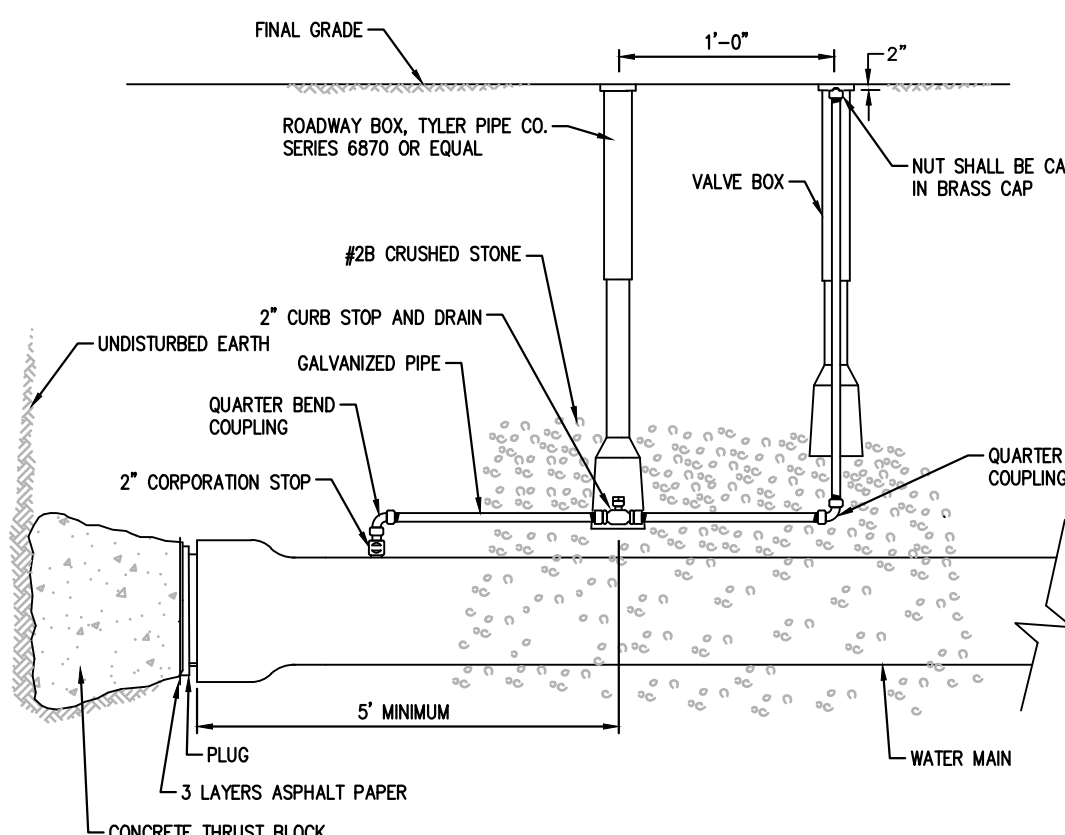


Gate Valve Detail

NOT TO SCALE

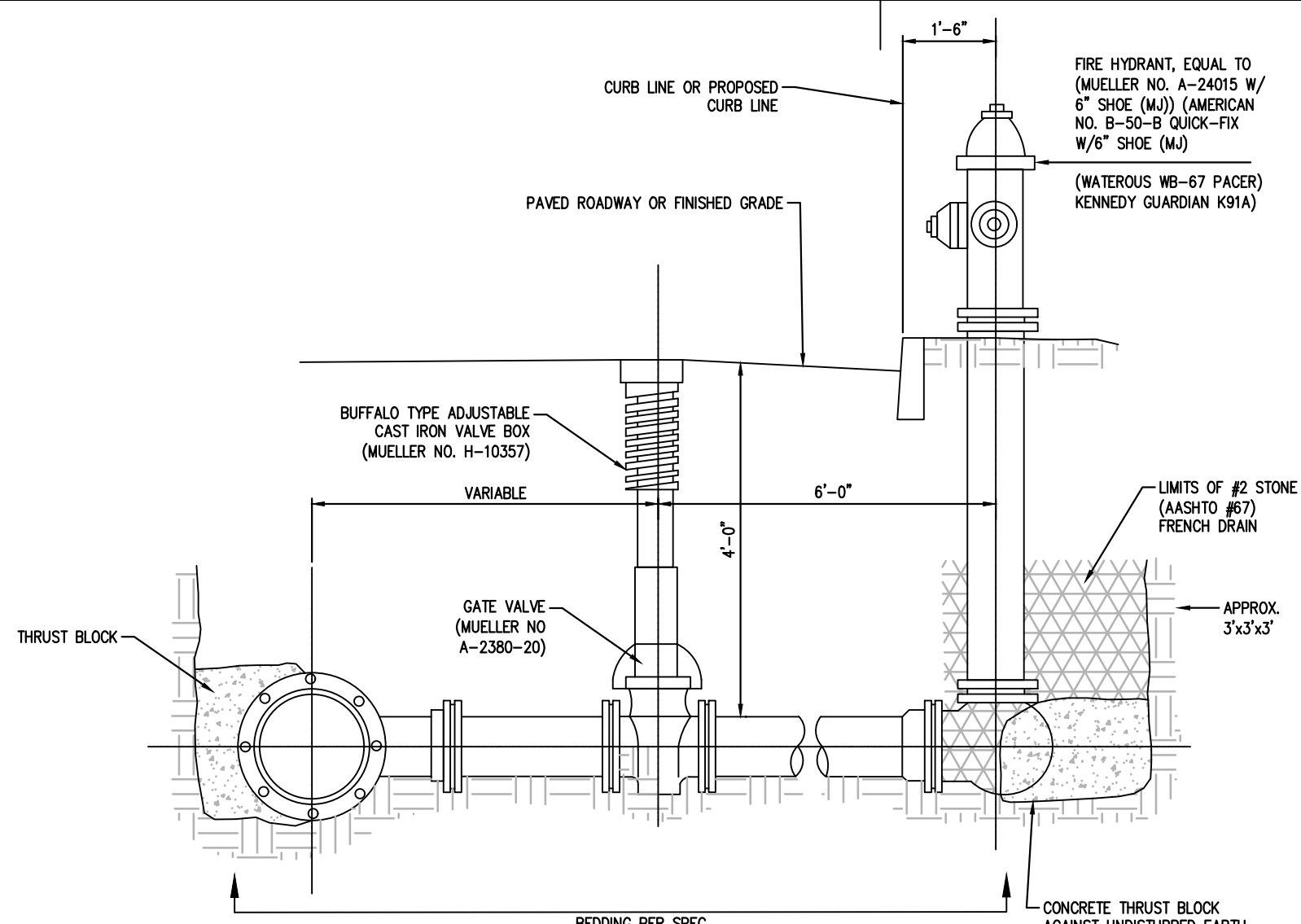
NOTE:

1. RETAINER GLANDS REQUIRED ON ALL MECHANICAL JOINT FITTINGS
2. ROD DIAMETER SHALL BE EQUAL TO THAT OF THE GLAND BOLTS. RODS SHALL BE GIVEN ONE COAT OF BITUMASTIC PAINT.



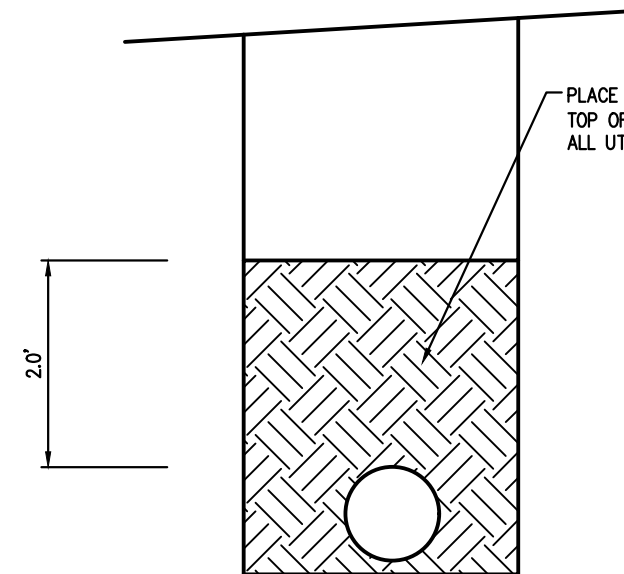
2" Surface Blowoff

NOT TO SCALE



Typical Fire Hydrant Detail

NOT TO SCALE



Typical Trench Plug

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