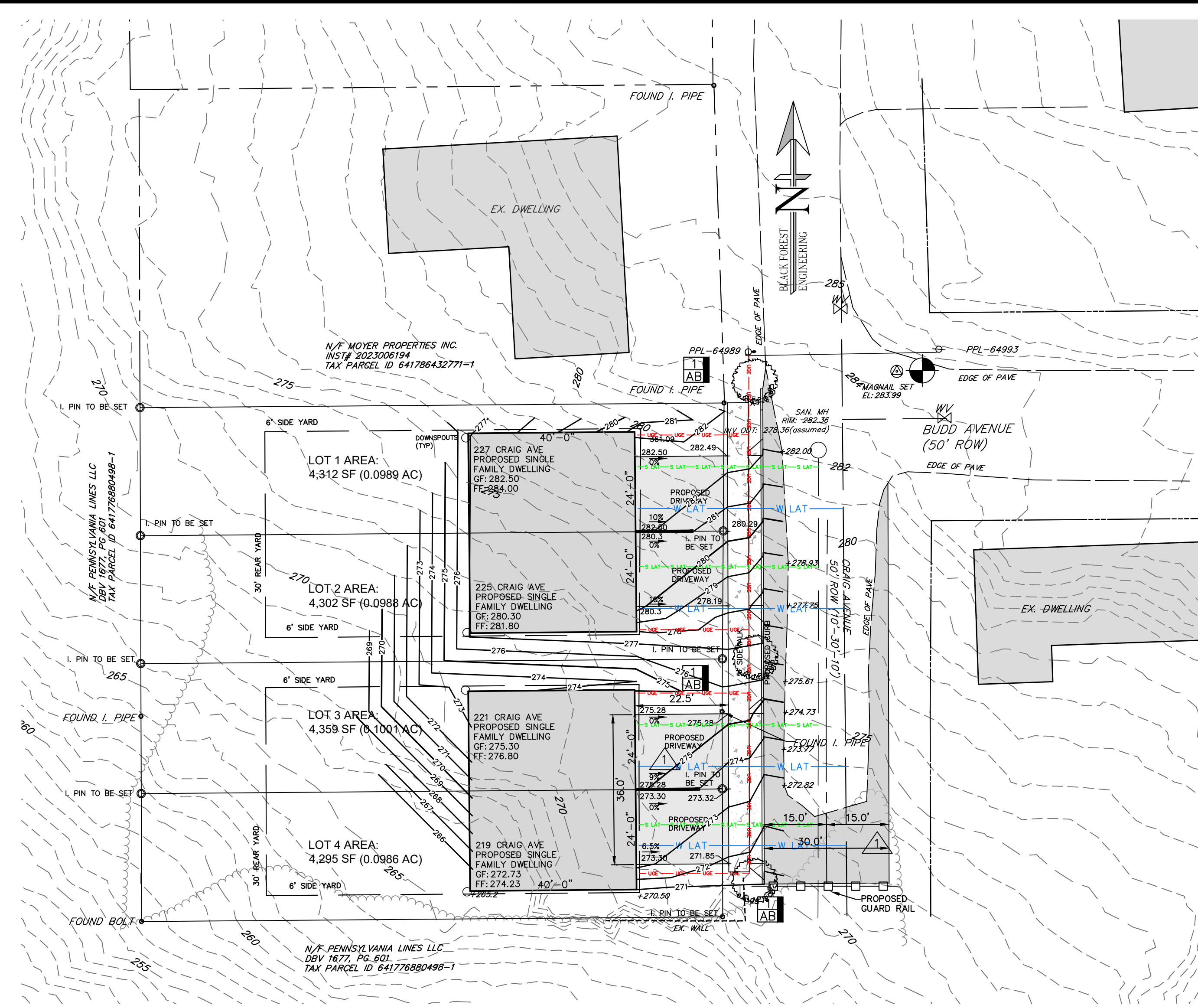
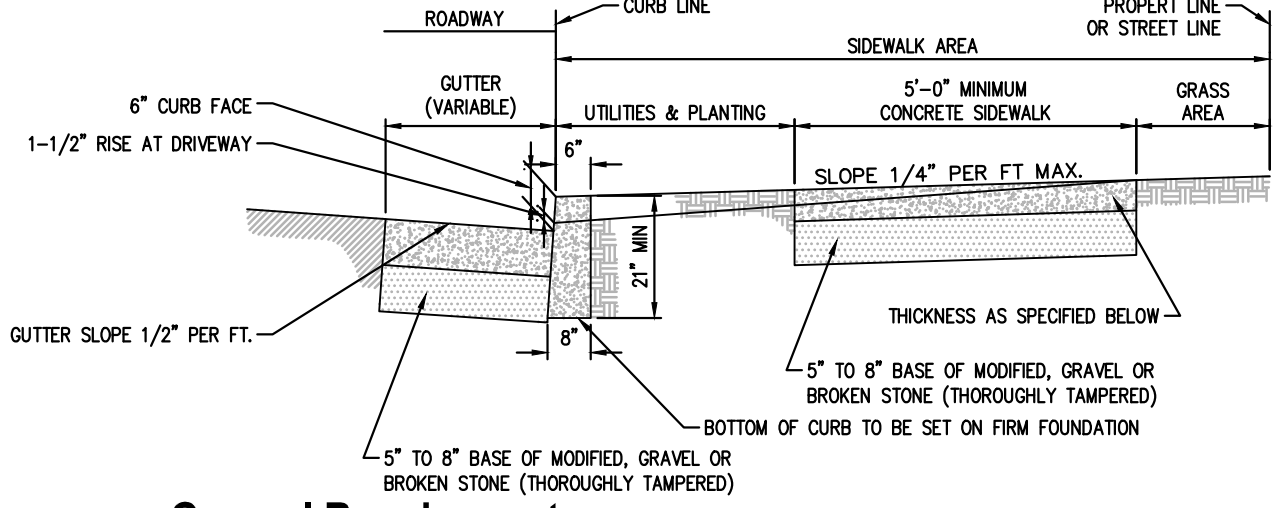


EXISTING FEATURES PLAN



GRADING & UTILITY PLAN

EXISTING Legend	PROPOSED 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. BENCHMARK
	PROP. CONCRETE WHEELSTOP
	PROP. BUILDING/STRUCTURE
	PROP. DRIVEWAY

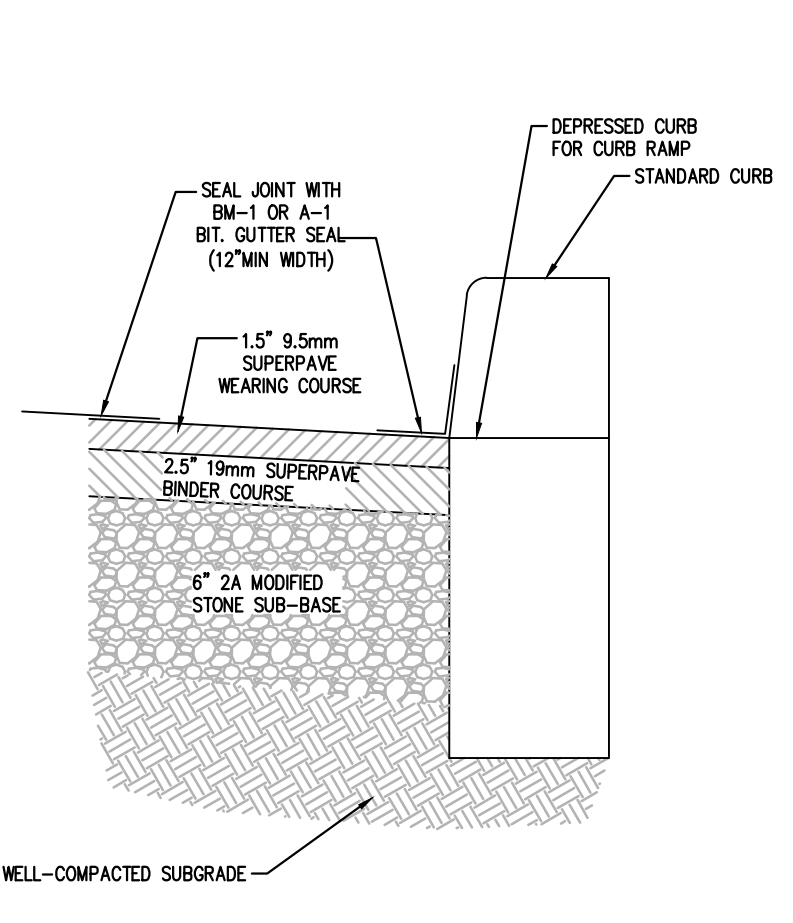


General Requirements:
ONE COURSE (MONOLITHIC) CONSTRUCTION FOR ALL CURB, GUTTER AND SIDEWALK. CONCRETE MIX TO BE CLASS A CONCRETE 3000# 6 BAG MIX - 5.6 GAL. WATER PER BAG THROUGHOUT; USE POWER BATCH MIXER, NO SLAG.
CURB: 6" MINIMUM DEPTH WITH APPROVED FINISH ON TOP AND EXPOSE FACE.
GUTTERS: 6" DEPTH - SLOPE OF GUTTER 1/2" RISE PER FOOT AWAY FROM CURB.
SIDEWALK: THICKNESS - RESIDENTIAL AREAS - 5", BUSINESS AND INDUSTRIAL AREAS - 6" AT RESIDENTIAL DRIVEWAYS - 6", AT BUSINESS AND INDUSTRIAL DRIVEWAYS - 8" ENISH - USE WOOD FLOAT TO PRODUCE SKID RESISTANCE SURFACE. COURSES OF 2" OR MORE PRODUCE A ROUGHER FINISH.
EXPANSION AND CONTRACTION JOINTS: SEE CITY CONSTRUCTION STANDARD NO. 1A.
HANDICAP RAMPS: REQUIRED ON ALL RAMPS IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
DRIVEWAYS: SEE CITY STANDARD DRIVEWAY ENTRANCE AND APRON SKETCH.
EXCAVATION IN CARTWAY: WHEN EXCAVATING IN THE CARTWAY OF THE CITY STREET, A CLEAN, FULL DEPTH CUT-BY-JACK HAMMERS OR SAWCUTTING-SHALL BE MADE IN THE STREET BETWEEN THE AFFECTED AND THE UNAFFECTED WORK AREAS. FURTHER, FINAL RESTORATION IN THE AFFECTED AREA OF THE STREET SHALL CONSIST OF CREATING A NEW CLEAN CUT BY SAWCUTTING 12" BEYOND THE EDGE OF ANY AFFECTED WORK AREAS, BACKFILLING WITH PENNDOT 2A MODIFIED STONE, AND PROPERLY COMPACTING THIS STONE TO THE ELEVATION OF THE TOP OF THE SUBBASE (I.E. BOTTOM OF THE BASE COURSE OF MACADAM), BUT NO HIGHER THAN 3-INCHES BELOW THE FINISH GRADE-EXCEPT AS REQUIRED TO PROVIDE REASONABLE TEMPORARY ACCESS AT DRIVEWAYS.

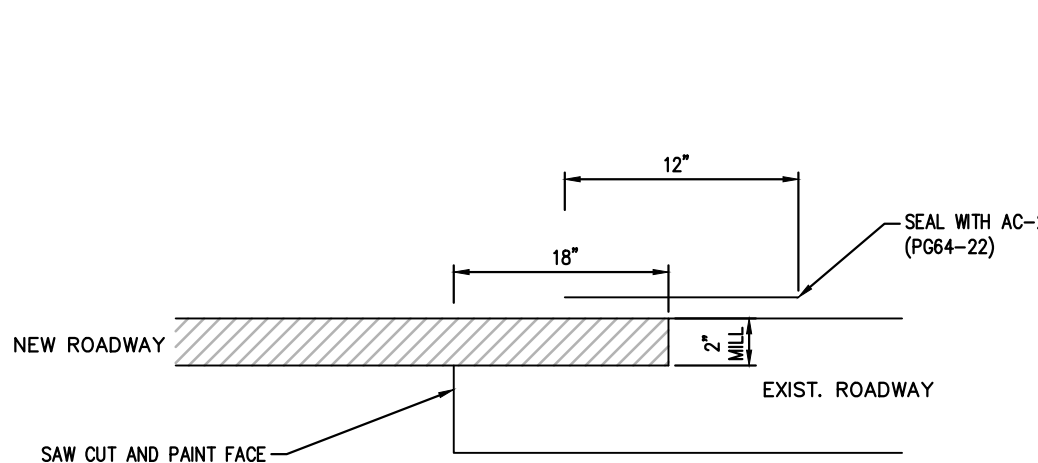
Ordinance Requirements:
WARRANT OF SURVEY - PROCURED FROM THE CITY ENGINEER'S OFFICE; PROVIDES FOR ESTABLISHING LINE & GRADES; STAKES TO BE PROTECTED BY APPLICANT AND USED WITHIN 30 DAYS.
EXCAVATION PERMIT - PROCURED FROM THE CITY ENGINEER'S OFFICE; FOR SIDEWALK AND DRIVEWAY CONSTRUCTION.
DETAIL REQUIREMENTS: FOR FURTHER DETAILS AND OTHER REQUIREMENTS SEE THE FOLLOWING DOCUMENTS ON FILE IN THE OFFICE OF THE CITY ENGINEER:
 "STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF CONCRETE CURB, GUTTER AND SIDEWALK" COPIED ORDINANCES OF THE CITY OF BETHLEHEM, ARTICLES 903 AND 909.

NOTE:
 * WHENEVER A CURB, GUTTER AND/OR SIDEWALK IS LOCATED IN THE HISTORIC DISTRICT, SPECIAL REQUIREMENTS MAY APPLY.
 * CHANGES TO DIMENSIONAL REQUIREMENTS MAY BE CONSIDERED IN CASES WHERE OBSTRUCTIONS OR ENCROACHMENTS EXIST. ANY EXCEPTIONS MUST BE APPROVED BY THE CITY ENGINEER. CURRENT ADA REQUIREMENTS MUST BE IN ALL CASES.

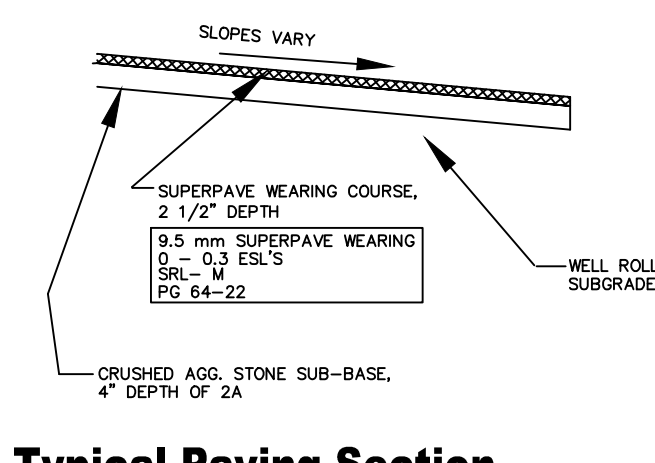
CITY OF BETHLEHEM, PA.
BUREAU OF ENGINEERING
Construction Standard No. 1
 NOT TO SCALE



Pavement and Curb Installation
 NOT TO SCALE

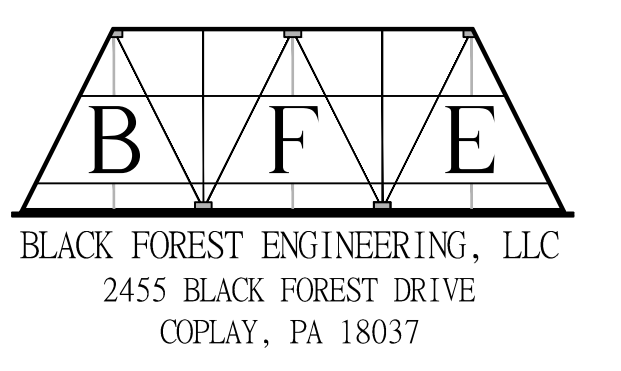


Paving Joint Detail
 (TIE INTO EXISTING PAVEMENT)
 NOT TO SCALE



Typical Paving Section
 Driveway
 NOT TO SCALE

"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



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SEAL:

JOSEPH E. RENTKO, P.E. #PE0805609
 2455 BLACK FOREST DRIVE
 COPLAY, PA 18037
 717-239-4499

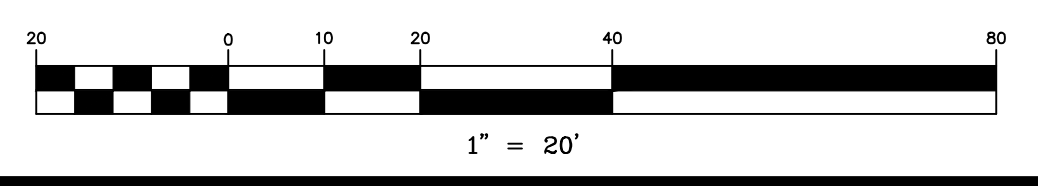
NO.	DESCRIPTION	DATE	BY
2	ADD SIDEWALK & CURB	JER	1/19/24
1	ADDRESS 10-20-23 REVIEW LETTER	JER	11/15/23
REV:	DESCRIPTION:	BY	DATE

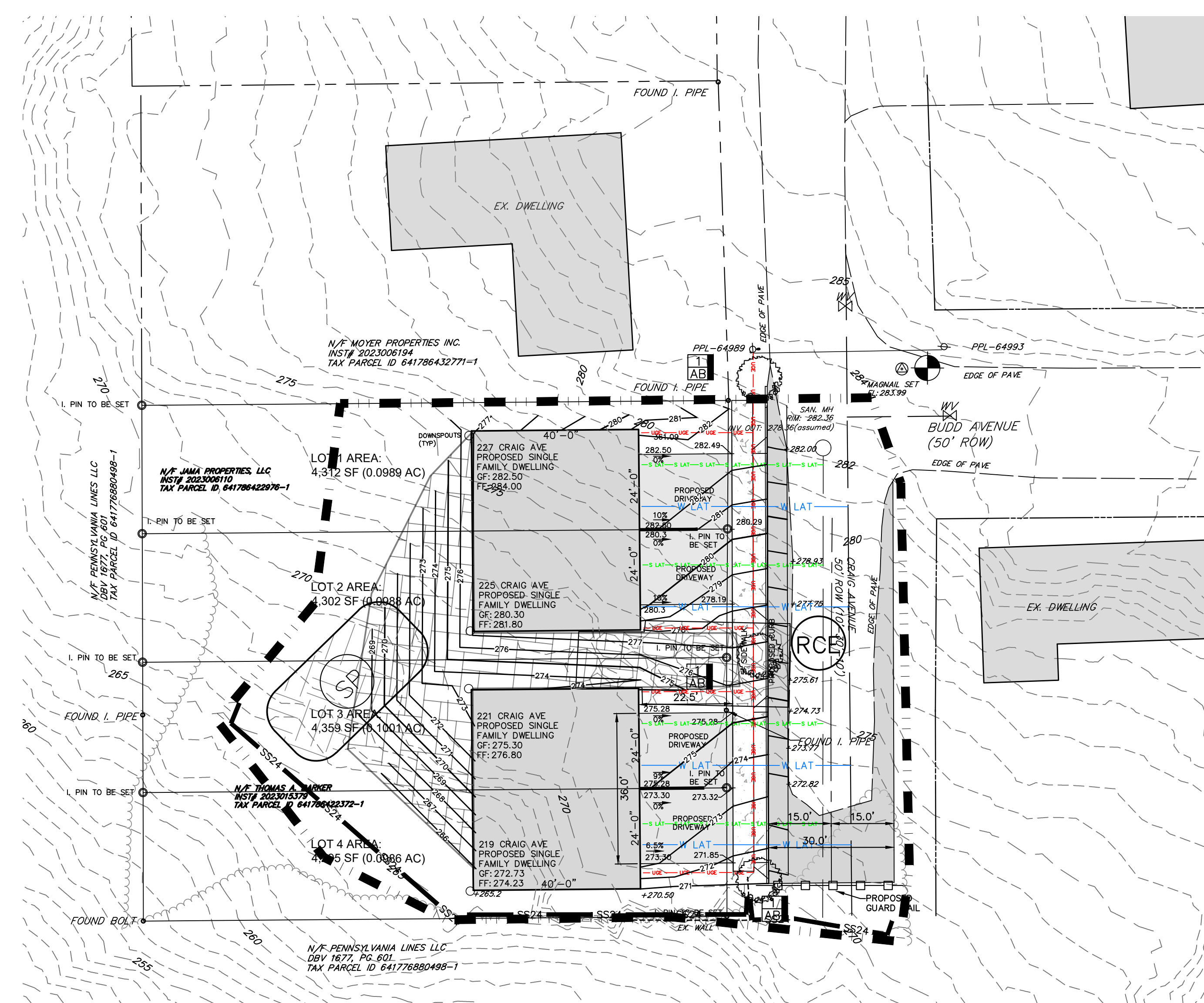
PROJECT TITLE:
THE TWINS ON CRAIG AVENUE
 PROJECT OWNER:
 JAMA PROPERTIES LLC
 484 357 0858
 1007 PROSPECT AVENUE
 BETHLEHEM, PA 18018

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

PLAN TITLE:
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

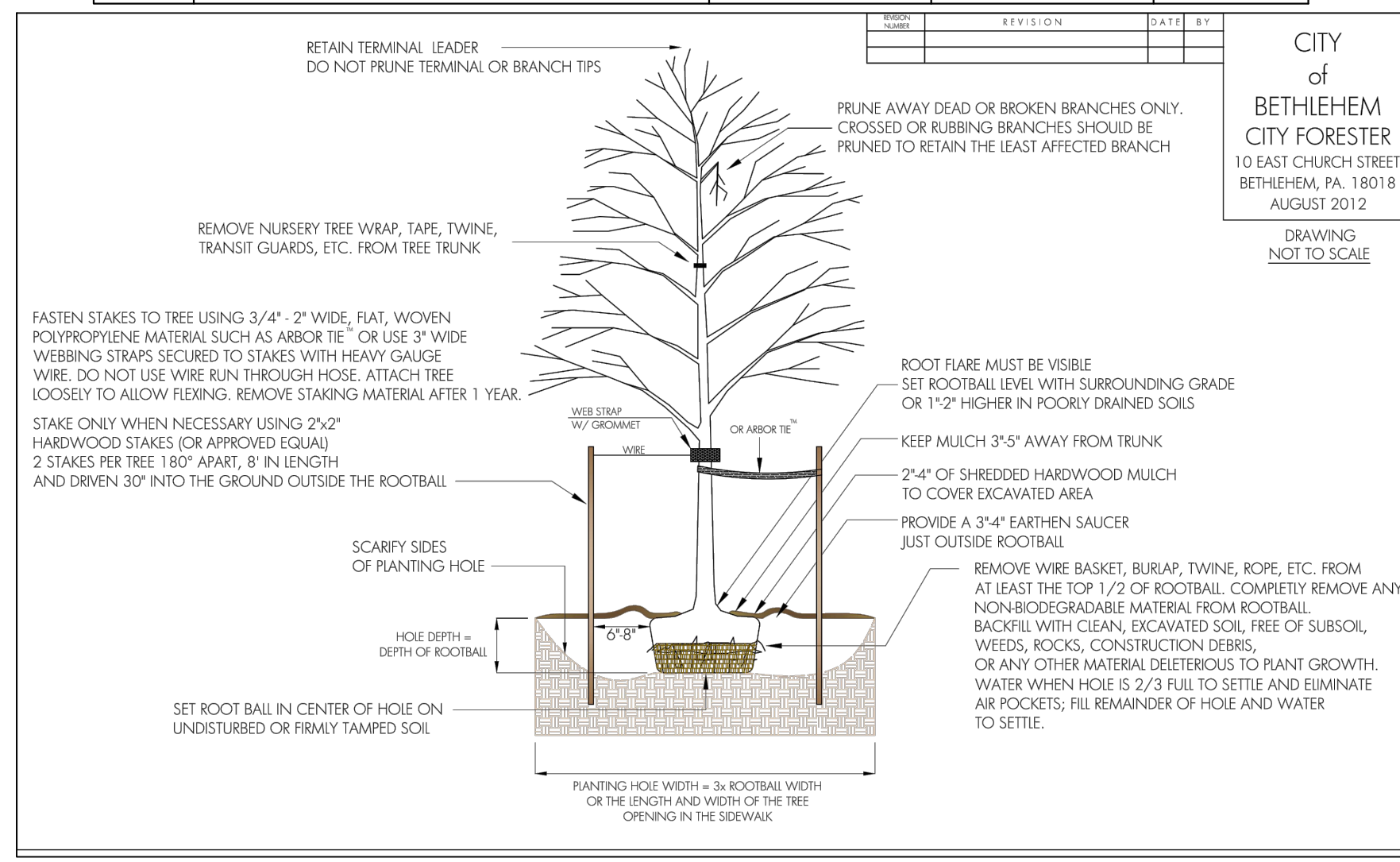
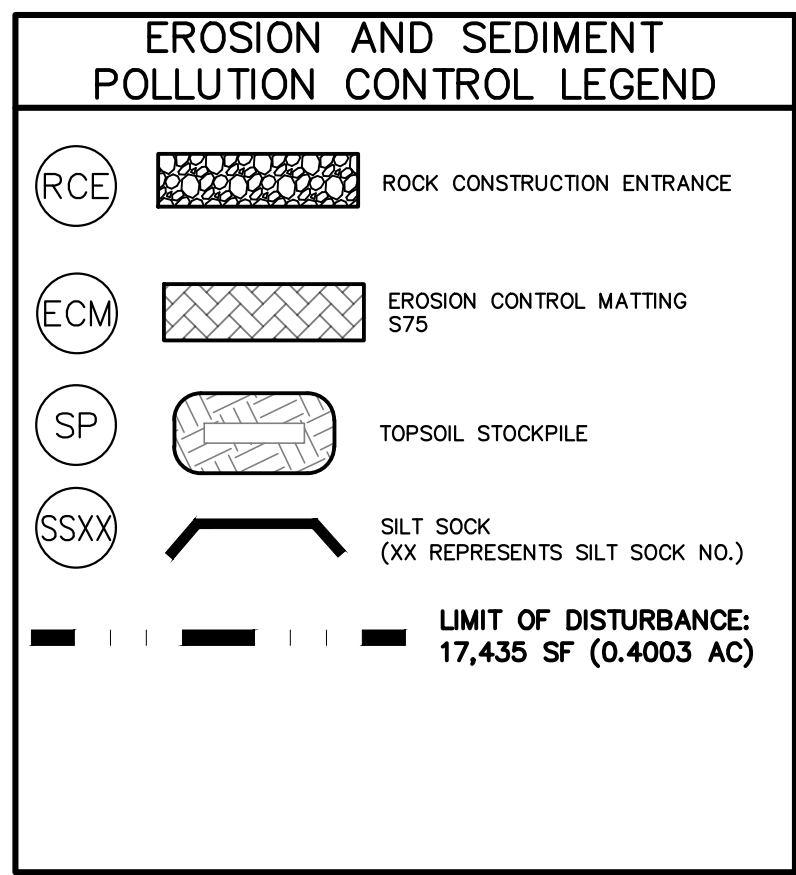
REQUIRED LANDSCAPING:

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 / TRENT MAPLE	2"-2.5" CAL.	B&B	3



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. Install curb and sidewalk, and widening of Craig Ave. 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.
- Begin building construction and utility connection installation. Complete final paving (wearing course).
- 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 E&S 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.



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 or 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.

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.

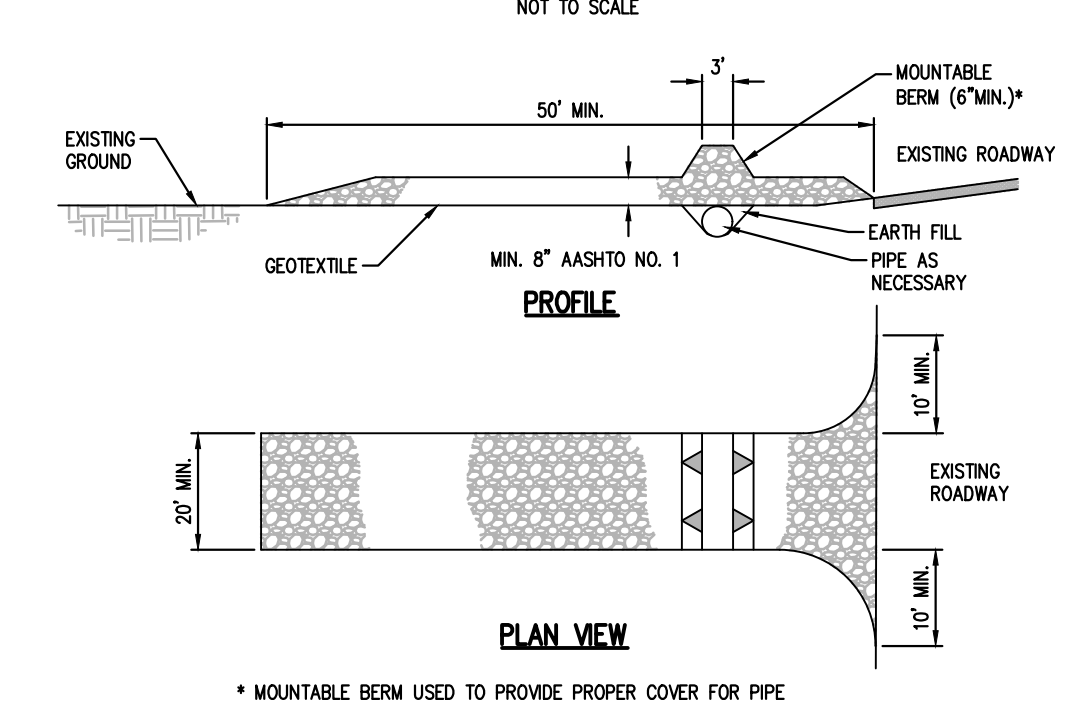
Apply mulches at the rates shown in table 11.6

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.	
Straw	3 tons	140 lb., 1,240 lb.	Either wheat or oat straw, free of weeds, not chipped 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

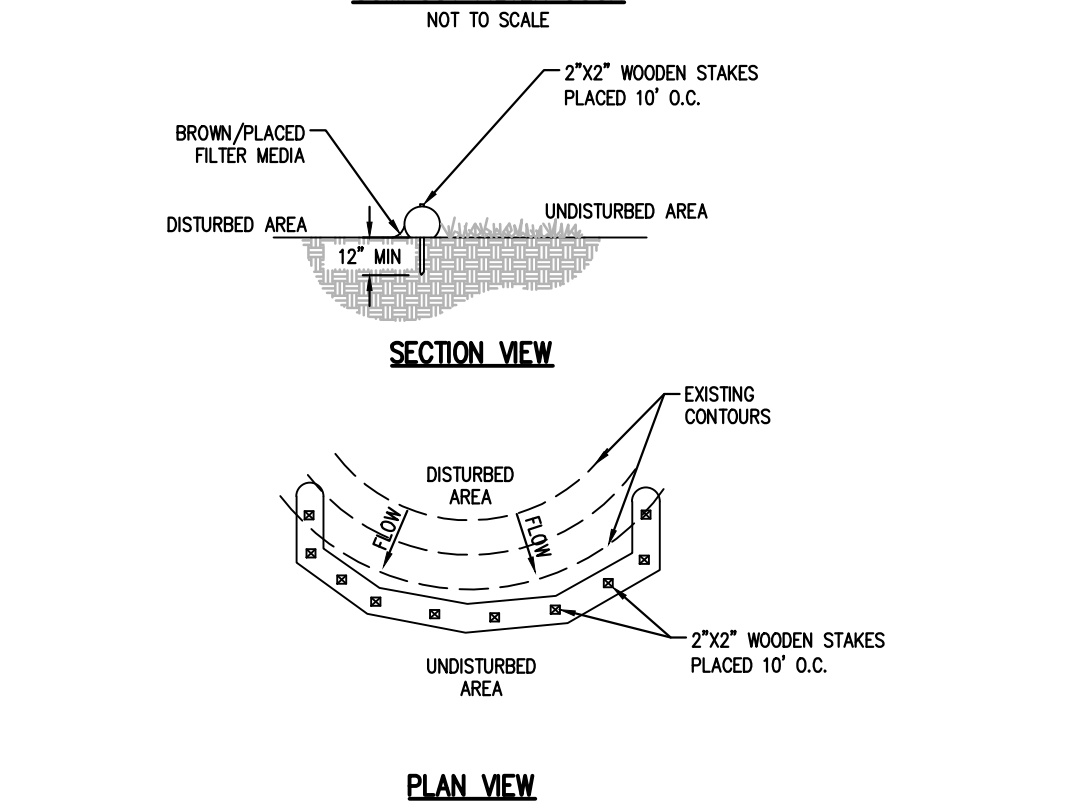
Standard Construction Detail # 3-1
ROCK CONSTRUCTION ENTRANCE



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. EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY. EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

Standard Construction Detail # 4-1
COMPOST FILTER SOCK



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).
- 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

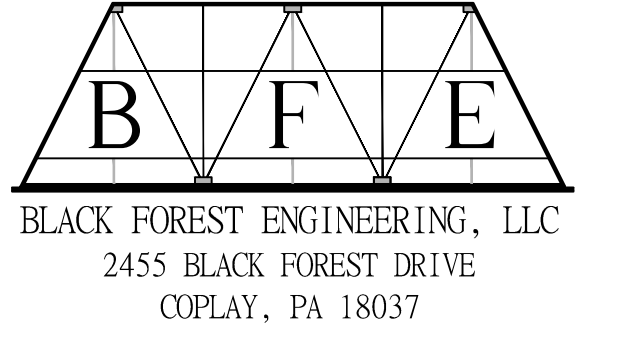
MATERIAL TYPE	3 mil HDPE	5 mil HDPE	5 mil HDPE	MULTI-FILAMENT POLYPROPYLENE (MPPF)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (DMPPF)
	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	BIO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH		26 psi	26 psi	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

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:

TABLE 4.2
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% - SOX PASS THROUGH 3/8" SIEVE
SOLUBLE SALT CONCENTRATION	5.0 gS/m (mmhos/cm) MAXIMUM

"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. #1208509
2455 BLACK FOREST DRIVE
COPLAY, PA 18037
570-239-4499

NO.	DESCRIPTION	DATE	BY
2	ADD SIDEWALK & CURB	JER	1/19/24
1	ADDRESS 10-20-23 REVIEW LETTER	JER	11/15/23

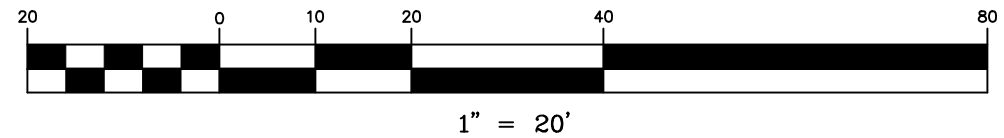
PROJECT TITLE:
THE TWINS ON CRAIG AVENUE

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

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

EROSION CONTROL

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



1" = 20'

