

PRELIMINARY AND FINAL LAND DEVELOPMENT AND MAJOR SUBDIVISION PLANS

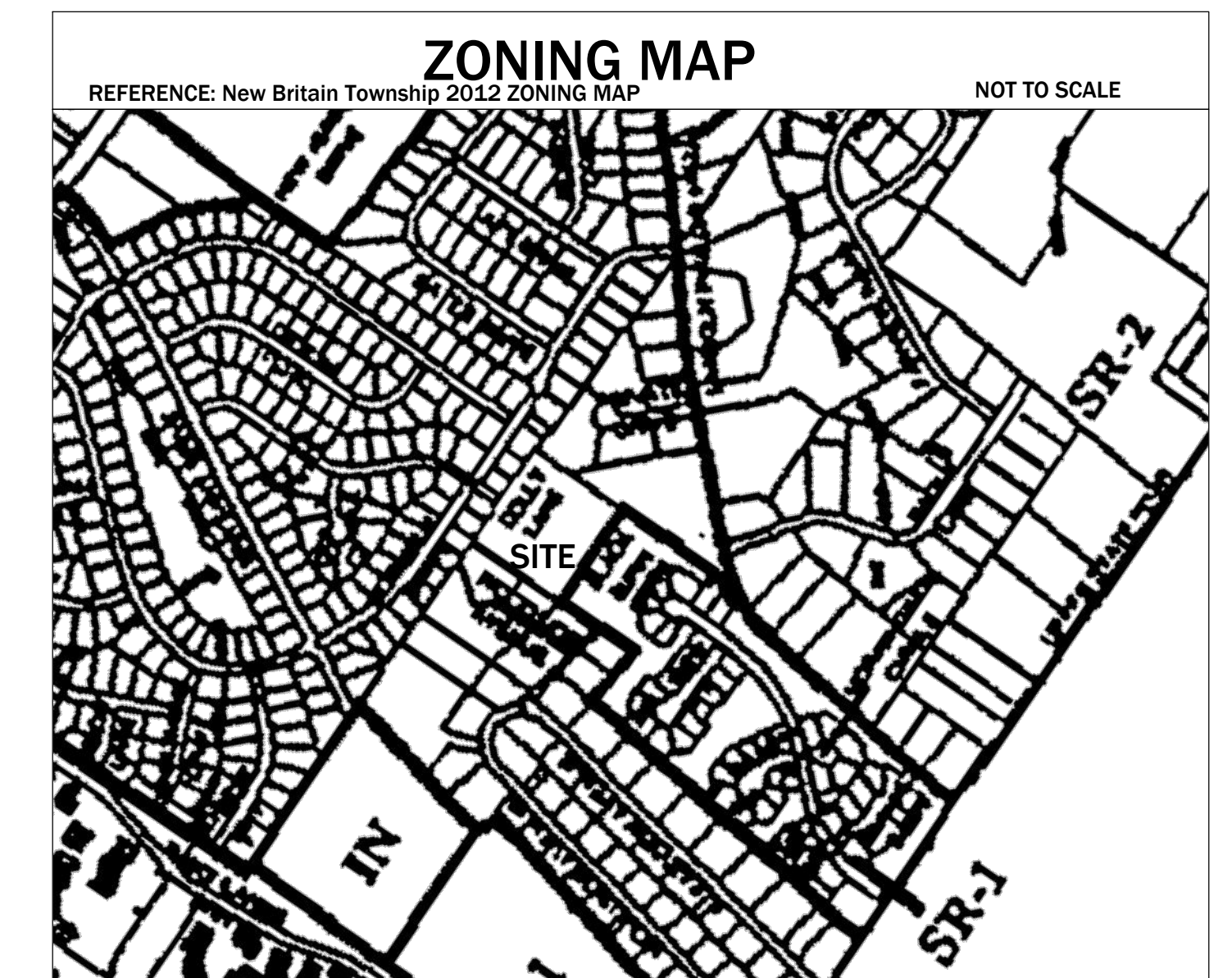
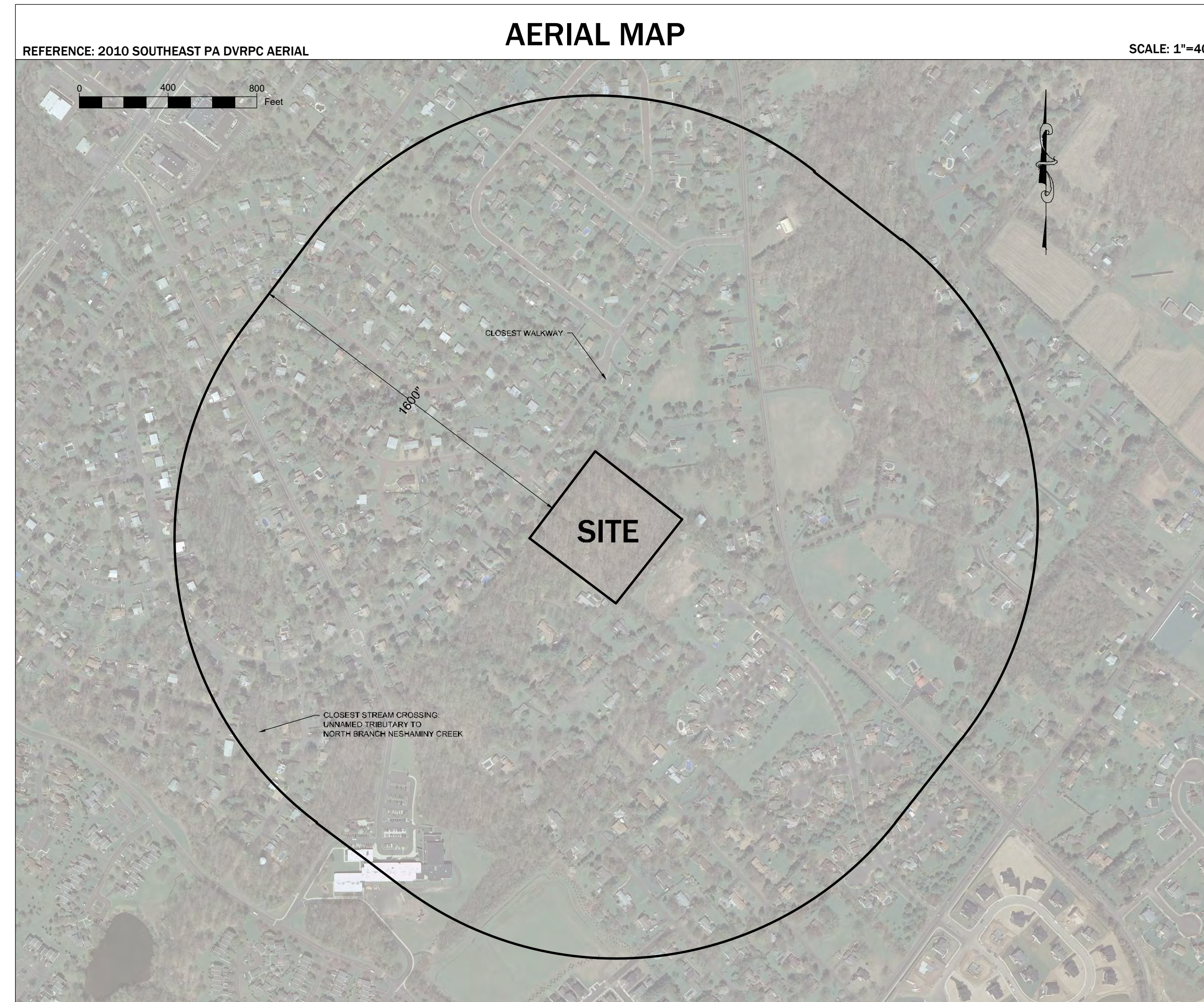
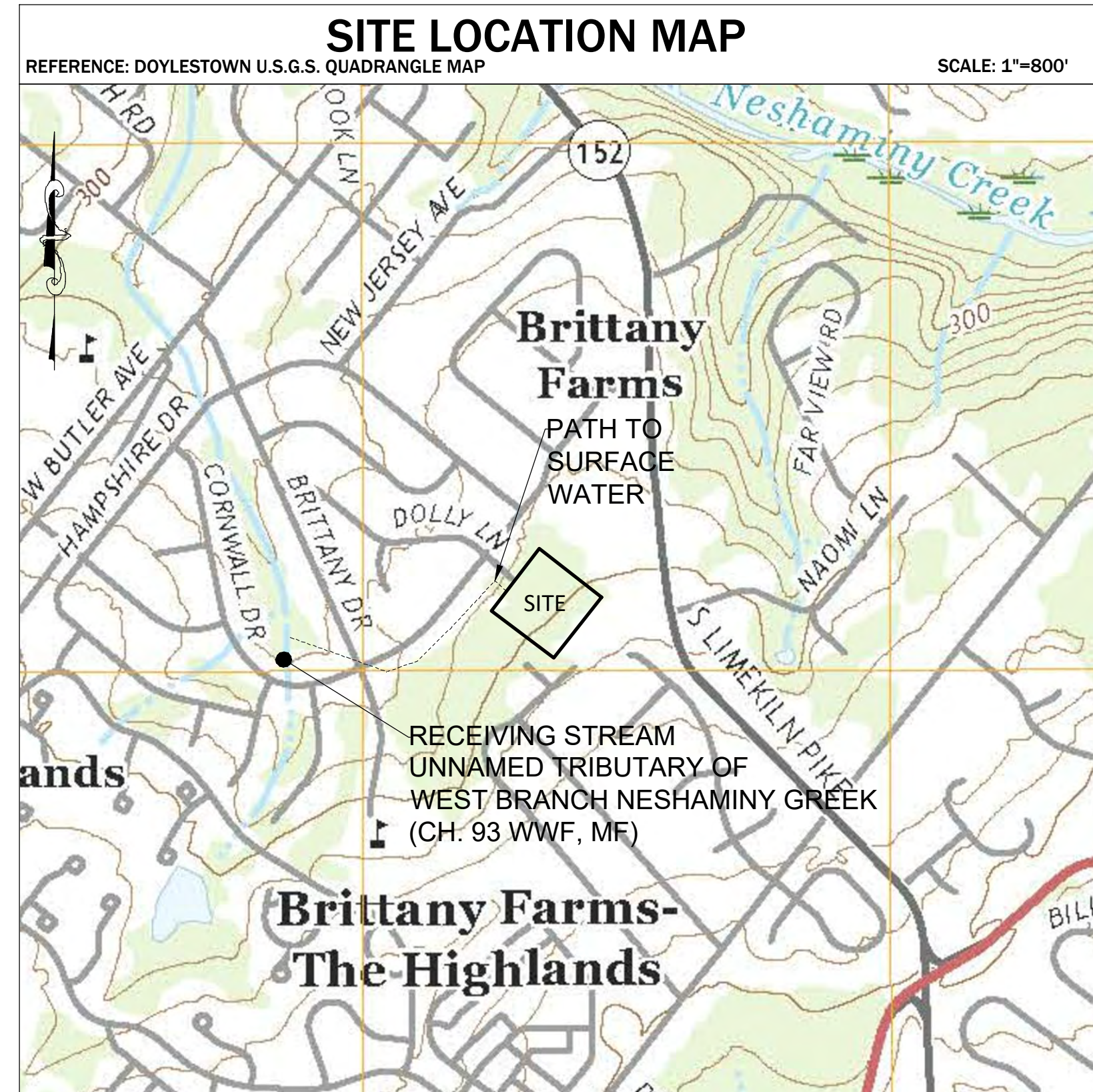
FOR

BENNER PROPERTY SUBDIVISION

TMP # 26-010-004-001

DOLLY LANE

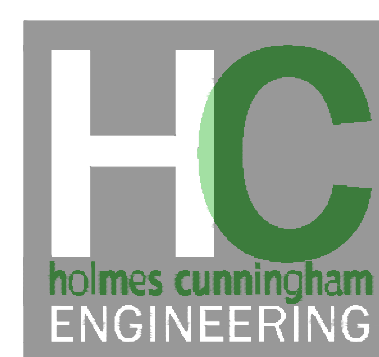
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA



DRAWING LIST			
SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	LAST REVISED DATE
1	C0.0	COVER SHEET	5/21/2021
2	C0.1	EXISTING CONDITIONS PLAN	5/21/2021
3	C0.2	SITE ANALYSIS AND RESOURCE CONSERVATION PLAN	5/21/2021
4*	C1.0	RECORD SUBDIVISION PLAN	5/21/2021
5*	C1.1	RECORD SITE PLAN	5/21/2021
6	C2.0	GRADING & DRAINAGE PLAN	5/21/2021
7	C3.0	UTILITY PLAN	5/21/2021
8	C3.1	CONSTRUCTION DETAILS	5/21/2021
9	C3.2	CONSTRUCTION DETAILS	5/21/2021
10	C4.0	PROFILE PLAN	5/21/2021
11	C5.0	SOIL EROSION AND SEDIMENT CONTROL PLAN	5/21/2021
12	C5.1	SOIL EROSION AND SEDIMENT CONTROL DETAILS	5/21/2021
13	C5.2	SOIL EROSION AND SEDIMENT CONTROL DETAILS	5/21/2021
14	C6.0	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN	5/21/2021
15	C6.1	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS	5/21/2021

* DENOTES PLAN TO BE RECORDED

PREPARED BY:



HOLMES CUNNINGHAM LLC
409 EAST BUTLER AVENUE
UNIT 5
DOYLESTOWN, PA 18901
(215) 586-3330

TOWNSHIP
NEW BRITAIN TOWNSHIP
207 PARK AVENUE
CHALFONT, Pa 18914
PHONE: (215)-822-1391

TOWNSHIP ENGINEER
GILMORE & ASSOCIATES, Inc
65 EAST BUTLER AVENUE, SUITE 100
NEW BRITAIN, PA 18901
PHONE 215 345 4330

TOWNSHIP PUBLIC WORKS DEPARTMENT
207 PARK AVENUE
CHALFONT, PA 18914
PHONE:(215)-822-1391

COUNTY PLANNING COMMISSION
BUCKS COUNTY PLANNING COMMISSION
THE ALMSHOUSE NESHAMINY MANOR CENTER
1260 ALMSHOUSE ROAD
DOYLESTOWN, PA 18901
215-345-3400

CONTACTS

COUNTY CONSERVATION DISTRICT
BUCKS COUNTY CONSERVATION DISTRICT
1456 FERRY ROAD, SUITE 704
DOYLESTOWN, PA 18901
215-345-7577

WATER
AQUA AMERICA
762 LANCASTER AVE
BRYN MAWR, PA 19010
PHONE: (610) 525 - 1400

ELECTRIC AND GAS
PHILADELPHIA ELECTRIC COMPANY
BUCKS/MONT REGION CONTRACTOR AND BUILDER SERVICES
400 PARK AVENUE
WARMINSTER, PA 18974
PHONE: (215) 956-3270
FAX: (215) 956-3240

SEWER
CHALFONT-NEW BRITAIN TOWNSHIP JOINT SEWAGE AUTHORITY
1645 UPPER STATE ROAD
DOYLESTOWN, PA 18901
PHONE: (215) 345-1225

OWNER:

VIRGINIA A BENNER
4 VALLEY DRIVE
CHALFONT, PA 18914

APPLICANT/EQUITABLE OWNER:

GEORGE KIRIAKIDI
PRIME DEVELOPMENT GROUP, LP
350 SOUTH MAIN STREET, SUITE 307
DOYLESTOWN, PA 18901

REVISED: 5/21/2021

DATE: 3/16/2021

PROJECT # 1551

DRAWING # C0.0

SHEET 1 OF 14



RESOURCE PROTECTION CALCULATIONS				
	Protection Ratio	Acres of Land in Resources	Resource Protection Land	Protected Area
Watercourses	100%	0.00	0.00	0.00
Floodplain	100%	0.00	0.00	0.00
Floodplain (Alluvial) Soils	100%	0.00	0.00	0.00
Wetlands	100%	0.00	0.00	0.00
Lakes and Ponds	100%	0.00	0.00	0.00
Riparian Buffer (75 FT)	100%	0.00	0.00	0.00
Wetlands Margins (25 FT to wetland)	80%	0.00	0.00	0.00
Woodlands (CR,WS,SR-1,SR-2,RR)	80%	5.49	4.39	4.39
Steep Slopes 8-15%	60%	0.00	0.00	0.00
Steep Slopes 15-25%	70%	0.00	0.00	0.00
Steep Slopes 25%+	85%	0.00	0.00	0.00

Site Capacity Calculations		
	Area (SF)	Area (AC)
Gross Site Area Determined by Actual On-site Survey	239,303	5.494
Existing Streets Ultimate Rights-of-Way	0	0.000
Existing Utility Rights-of-Way or Easements	4,631	0.106
Existing Preservation Easements	0	0.000
Land Not Contiguous	0	0.000
Land Shown on Previous Subdivision Reserved for Open Space, Protection, etc.	0	0.000
Land in a Different Zoning District from Primary Use	0	0.000
Base Site Area	234,672	5.387

Resource Protection Land				
Natural Resource	Protection Ratio	Acres of Land in Resources	Resource Protection Land (AC)	Proposed Resource Protection Land (AC)
Watercourses	1.00	0.00	0.00	0.00
Riparian Buffer	1.00	0.00	0.00	0.00
Floodplain	1.00	0.00	0.00	0.00
Floodplain (Alluvial) Soils	1.00	0.00	0.00	0.00
Wetlands	1.00	0.00	0.00	0.00
Lakes and Ponds	1.00	0.00	0.00	0.00
Steep Slopes 25%+	0.85	0.00	0.00	0.00
Woodlands	0.80	5.39	4.31	4.31
Steep Slopes 15-25%	0.70	0.00	0.00	0.00
Steep Slopes 8-15%	0.60	0.00	0.00	0.00
Total Land with Resource Restrictions				5.39
Total Land with 1.00 Protection Ratio Restrictions				0.00
Total Resource Protection Land Required				4.31
Total Resource Protection Land Provided				4.31
Total Disturbed Resources				1.08

Open Space Calculations	
Base Site Area	5.39 Ac.
Multiply by Minimum Open Space Ratio	0.00
Standard Minimum Open Space	0.00 Ac.
Required Open Space (Greater of 100% Protection Land or Min Open Space)	0.00 Ac.
Net Buildable Site Area Calculations	
Base Site Area	5.39 Ac.
Subtract Required Open Space	0.00 Ac.
Net Buildable Site Area	5.39 Ac.
Density Calculations	
Net Buildable Site Area	5.39 Ac.
Multiply by Maximum Density	N/A
Number of Dwelling Units Permitted	N/A
Impervious Surface Calculations	
Base Site Area	5.39 Ac.
Multiply by Maximum Impervious Surface Ratio	0.20
Maximum Permitted Site Impervious Surface	1.08 Ac.

LEGEND

- PROPERTY LINE
- EXISTING CONTOUR
- EASEMENT
- SOIL TYPE
- SOIL TYPE BOUNDARY
- LIMIT OF DISTURBANCE/ PROPOSED WOODLANDS LIMIT

SOIL TYPES						
SYM	UNIT NAME	HYDRIC (Y/N)	DEPTH TO BEDROCK (IN.)	DEPTH TO WATER TABLE (IN.)	HSG	FARMLAND CLASSIFICATION
ReB	Readington silt loam, 3 to 8 slopes	N	40-60	18-36	C	Statewide Importance
AbB	Abbotstown silt loam, 3 to 8 percent slopes	N	40-60	6-18	D	Statewide Importance
UgB	Urban land-Abbotstown complex, 0 to 8 percent slopes	N	40-60	6-18	D	Not Prime Farmland

LIMITATIONS OF PENN SYLVANIA SOILS PERTAINING TO EARTH MOVING															
SOIL NAME	CUTBANKS CAVE	CORROSIVE TO CONCRETE/STEEL	DROUGHTY	EASILY ERODIBLE	FLOODING	DEPTH TO SATURATED ZONE/ SEASONAL HYDRIC/ HYDRIC INCLUSIONS	LOW STRENGTH/ LAND SLIDE PRONE	SLOW PERCOLATION	PIPING	POOR SOURCE OF TOPSOIL	FROST ACTION	SHRINK - SWELL	POTENTIAL SINNHOLE	PONDING	WETNESS
Abbotstown	X	C/S	X	X	X	X	X	X	X	X	X	X	X	X	X
Readington	X	C/S	X	X	X	X	X	X	X	X	X	X	X	X	X
Urbana						X									

RE SOLUTIONS TO LIMITATION S:
 Cutbanks Cave; Provide shoring during excavation
 Corrosive to Steel/Concrete; Provide cathodic protection for concrete and steel
 Droughty; Provide water truck during periods of drought and dry soil conditions
 Easily Erodible; Provide an erosion control blanket on steep slopes and maintain existing vegetative cover in non-disturbed areas
 Depth to Saturated Zone/Seasonal High Water Table; Provide pumped water filter bags where a saturated zone or SHWT is encountered
 Hydric/Hydric Inclusions; Strip existing topsoil to indicating depth, import suitable fill for construction, and provide adequate site grading
 Low Strength/Landslide Prone; Import suitable fill for topsoil stockpile and provide shoring during excavation
 Slow Percolation; Replace soil with suitable fill for better percolation results
 Piping; Provide cathodic protection for pipes
 Poor Source of Topsoil; Import suitable fill for topsoil
 Frost Action; Provide capillary flow path breaks in soils
 Shrink-Swell; Compact to required dry density or Remove and Replace with suitable material
 Wetness; Minimize soil compaction for increased infiltration of water into the soil and provide adequate site grading

- NOTES:**
- THE BOUNDARY AND TOPOGRAPHIC INFORMATION IS TAKEN FROM BOUNDARY & TOPOGRAPHIC PLAN PREPARED BY CAVANAUGH SURVEYING SERVICES DATED OCTOBER 5, 2020, LAST REVISED NOVEMBER 16, 2020.
 - AERIAL PHOTOGRAPHY TAKEN FROM DVRPC AERIAL PHOTOGRAPHS 2010.
 - THE PROPOSED DEVELOPMENT IS TO BE SERVED BY PRIVATE WATER AND PUBLIC SEWER.
 - THE PROPERTY IS OUTSIDE OF SPECIAL FLOOD HAZARD AREAS AS PER FEMA PANEL 42017C0289K REVISED MARCH 21, 2017.
 - A BLANKET EASEMENT IS PROPOSED ON ALL LOTS FOR INSPECTION AND MAINTENANCE OF THE PROPOSED STORMWATER FACILITIES FOR ACCESS BY THE PROPERTY OWNERS AND NEW BRITAIN TOWNSHIP.
 - LOCATIONS OF EXISTING UNDERGROUND UTILITIES/FACILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM RECORDS, FIELD MARKOUTS BY UTILITY COMPANIES AND/OR ABOVEGROUND OBSERVATION. NO EXCAVATIONS HAVE BEEN PERFORMED TO LOCATE EXISTING UNDERGROUND UTILITIES. ALL UTILITIES SHOWN HEREON SHOULD BE CONSIDERED APPROXIMATE IN LOCATION, DEPTH, AND SIZE. THE POTENTIAL EXISTS FOR OTHER UNDERGROUND UTILITIES TO BE ENCOUNTERED WHICH ARE NOT SHOWN ON THESE DRAWINGS, BOTH ACTIVE AND ABANDONED. ONLY THE VISIBLE LOCATIONS OF UNDERGROUND UTILITIES AND FACILITIES AT THE TIME OF FIELD SURVEY SHALL BE CONSIDERED TO BE TRUE AND ACCURATE.
 - ALL CONTRACTORS WORKING ON THIS PROJECT SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO THE START OF WORK AND SHALL COMPLY WITH THE REQUIREMENTS OF PL852, NO. 287, DEC. 10, 1974 AS LAST AMENDED ON MAR. 29, 2007, PENNSYLVANIA ACT 181.
 - THE PNDI SEARCH OF THE SUBJECT PROPERTY, PNDI-728576, RESULTED IN NO KNOWN IMPACT AND NO FURTHER REVIEW REQUIRED, REVIEW DATE FEBRUARY 25, 2021.
 - PROPOSED BUILDING LOTS ARE DESIGNED TO MINIMIZE DISTURBANCE TO EXISTING CONTOURS AND VEGETATION TO THE GREATEST EXTENT PRACTICAL.
 - ALL STORMWATER AND DRAINAGE FACILITIES ARE A PERMANENT PART OF THE DEVELOPMENT AND SHALL NOT BE REMOVED, ALTERED, OR MODIFIED WITHOUT PRIOR APPROVAL FROM NEW BRITAIN TOWNSHIP. OWNERSHIP AND MAINTENANCE OF THE STORMWATER FACILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE HOMEOWNER'S ASSOCIATION.
 - REFER TO EROSION AND SEDIMENT CONTROL NARRATIVE AND POST-CONSTRUCTION STORMWATER MANAGEMENT NARRATIVE FOR INFORMATION REGARDING DESIGN AND PRESERVATION OF NATURAL RESOURCES.
 - THE ENTIRE PROPERTY IS WOODED.

Holmes Cunningham LLC
 409 E. Butler Ave,
 Unit 5
 Doylestown, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Description	Revised per Township Engineer comments
Date	9/21/2021	

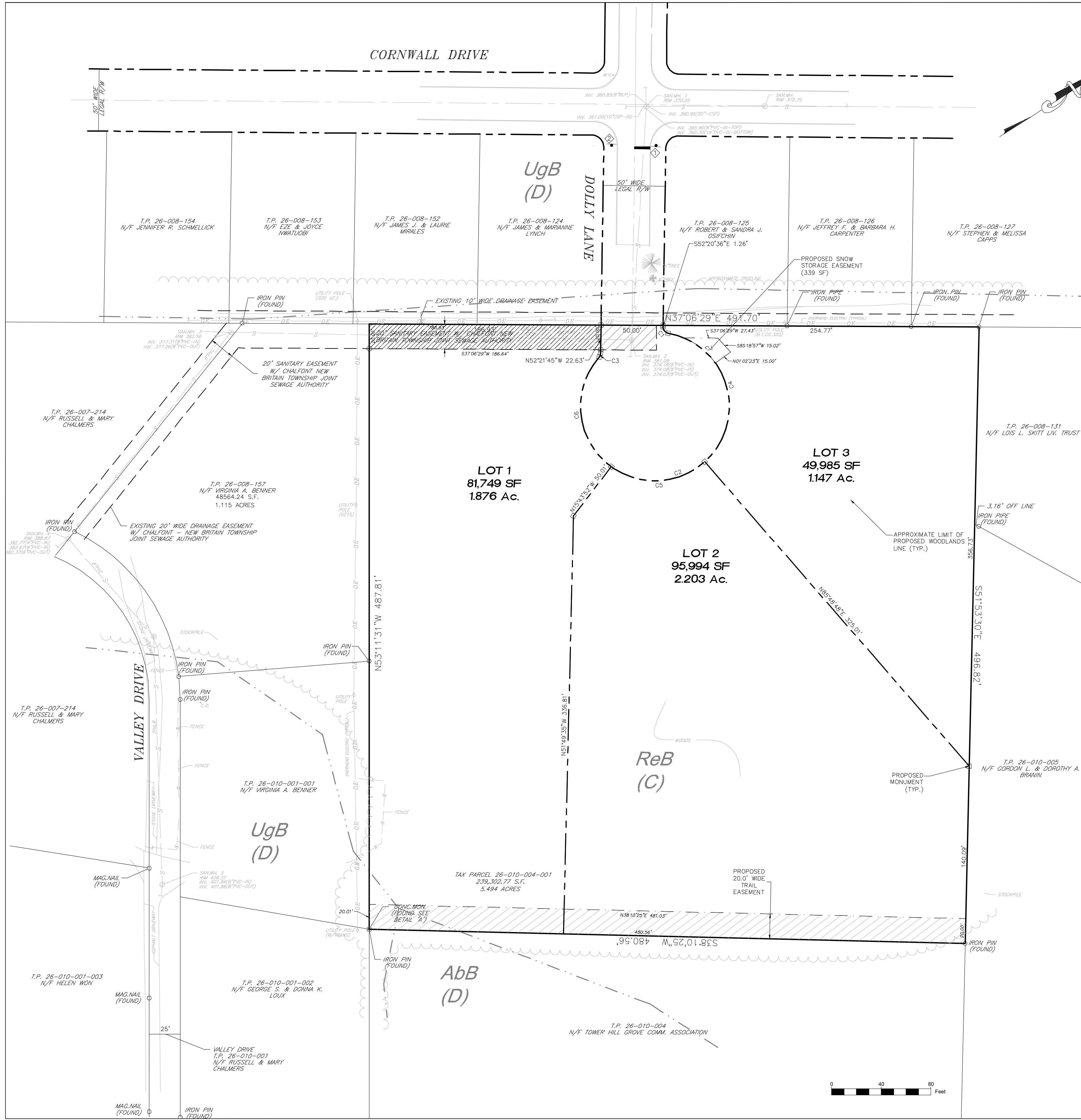
CALL BEFORE YOU DIG OR
 3 WORKING DAYS NOTICE FOR
 10 WORKING DAYS IN DESIGN STAGE
 - STOP & CALL
 1-800-242-1776
 COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF REVENUE
 PENNSYLVANIA STATE LOTTERY AND CASINO
 PENNSYLVANIA STATE GAMING BOARD
 PENNSYLVANIA STATE POLICE
 PENNSYLVANIA STATE FIRE MARSHAL
 PENNSYLVANIA STATE TOWNSHIP ENGINEER

BENNER PROPERTY SUBDIVISION
 T.M.P. # 26-010-004-001
 DOLLY LANE
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA
 SITE ANALYSIS AND RESOURCE CONSERVATION PLAN

KRISTIN R. HOLMES, P.E.
 PA Lic. No. PE073604

Date	Scale	HCE Job	Designed	KH	Sheet
3/16/2021	1"=40'	1551			3 of 15

Drawing No.
C0.2



LEGEND

- PROPOSED EASEMENT
- PROPERTY LINE
- BUILDING SETBACK
- EXISTING EASEMENT
- PROPOSED MONUMENT
- PROPOSED IRON PIN

Curve Table

Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	7.03'	5.00'	080°35'57"	N87°21'25"E	6.47'
C2	315.38'	80.00'	301°01'17"	S17°38'35"W	58.93'
C3	3.54'	5.00'	040°34'20"	N32°03'26"W	3.47'
C4	133.82'	80.00'	127°47'25"	N69°02'51"W	107.76'
C5	81.54'	80.00'	077°52'00"	N33°46'51"E	75.41'
C6	100.02'	80.00'	095°30'52"	N59°31'43"W	88.84'
C7	32.68'	60.00'	031°12'37"	N75°27'53"E	32.28'

LOT AREA AND COVERAGE TABLE

Lot	Gross Lot Area	Existing Easement Area	Net Lot Area	Impervious Coverage	Impervious Ratio	Building Coverage	Building Ratio
#	(square feet)	(square feet)	(square feet)	(square feet)	%	(square feet)	%
1	81,749	3,736	78,013	3,503	4%	1,896	2%
2	95,994	0	95,994	2,830	3%	1,896	2%
3	49,985	0	49,985	2,813	6%	1,896	4%

GENERAL NOTES:

- THE BOUNDARY AND TOPOGRAPHIC INFORMATION IS TAKEN FROM BOUNDARY & TOPOGRAPHIC PLAN PREPARED BY CAVANAUGH SURVEYING SERVICES DATED OCTOBER 5, 2020, LAST REVISED NOVEMBER 15, 2020.
- TAX PARCEL 26-010-004-001; DEED BOOK 6836, PAGE 1933.
- THE PROPOSED DEVELOPMENT IS TO BE SERVED BY PRIVATE WATER AND PUBLIC SEWER.
- THE PROPERTY IS WITHIN ZONE X AREAS OUTSIDE THE 100-YEAR FLOODPLAIN AS PER PANEL 289 OF 532, MAP 42017C0289K REVISED MARCH 21, 2017.
- A BLANKET EASEMENT IS PROPOSED ON LOTS 1, 2 & 3 FOR INSPECTION AND MAINTENANCE OF THE PROPOSED STORMWATER FACILITIES FOR ACCESS BY THE PROPERTY OWNERS AND NEW BRITAIN TOWNSHIP.
- THE APPLICANT OFFERS THE ULTIMATE RIGHT-OF-WAY OF DOLLY LANE EXTENSION FOR DEDICATION TO NEW BRITAIN TOWNSHIP.
- THE STORMWATER MANAGEMENT FACILITIES (AS SHOWN ON THIS PLAN) ARE A BASIC AND PERPETUAL PART OF THE STORMWATER MANAGEMENT SYSTEM OF THE TOWNSHIP OF NEW BRITAIN, AND AS SUCH ARE TO BE PROTECTED AND PRESERVED, IN ACCORDANCE WITH THE APPROVED FINAL PLAN BY THE OWNER ON WHOSE LANDS THE FACILITY IS LOCATED. THE TOWNSHIP OF NEW BRITAIN AND/OR ITS AGENTS RESERVE THE RIGHT AND PRIVILEGE TO ENTER UPON SUCH LANDS FROM TIME TO TIME FOR THE PURPOSE OF INSPECTION OF THE STORMWATER MANAGEMENT FACILITIES IN ORDER TO DETERMINE THAT THE STRUCTURAL AND DESIGN INTEGRITY ARE BEING MAINTAINED BY THE OWNERS.
- UPON SUBMISSION OF THE INDIVIDUAL BUILDING PERMIT PLANS, MODIFICATIONS TO THE INDIVIDUAL LOTS, STORMWATER DESIGN, AND EROSION AND SEDIMENT CONTROL PLAN WILL BE REVIEWED AND APPROVED PRIOR TO CONSTRUCTION.
- AT THE TIME OF INDIVIDUAL BUILDING PERMIT APPLICATION FOR EACH LOT, THE NATURAL RESOURCE PROTECTION STANDARDS SHOULD BE REVIEWED FOR COMPLIANCE AND SITES LAID OUT TO MINIMIZE NATURAL RESOURCE DISTURBANCE TO THE GREATEST EXTENT PRACTICABLE.
- NOTHING SHALL BE PLACED, PLANTED OR SET WITHIN THE AREA OF AN EASEMENT AND THE AREA SHALL BE KEPT AS LAWN OR IN A NATURAL STATE.
- OBSTRUCTIONS TO VISIBILITY SHALL NOT BE PERMITTED WITHIN 2 FEET AND 7 FEET ABOVE THE EDGE OF PAVING. ANY PLANT MATERIALS PLACED WITHIN CLEAR SIGHT TRIANGLES SHALL BE PROPERLY MAINTAINED TO CONTINUALLY COMPLY WITH THE HEIGHT RESTRICTIONS AND TO PREVENT THEM FROM ENTERING THE AREA AND PERFORM MAINTENANCE IF DEEMED CRITICAL TO PUBLIC WELFARE PURSUANT TO A DECLARATION OF COVENANTS, RESTRICTIONS AND CONDITIONS APPROVED BY THE BOARD.
- ALL MONUMENTATION SHALL BE SET BY A PROFESSIONAL LAND SURVEYOR AND ARE TO BE SET DURING CONSTRUCTION.

RECORDER OF DEEDS ACKNOWLEDGEMENT

RECORDED IN THE OFFICE FOR THE RECORDING OF DEEDS, ETC. IN AND FOR THE COUNTY OF BUCKS, AT DOYLESTOWN, PENNSYLVANIA IN PLAN BOOK PAGE _____ ON THIS _____ DAY OF _____, 20____.

BOARD OF SUPERVISORS ACKNOWLEDGEMENT

THIS PLAN APPROVED BY THE BOARD OF SUPERVISORS OF NEW BRITAIN TOWNSHIP THIS _____ DAY OF _____, 20____.

OWNER CERTIFICATION FOR STORMWATER BMP'S

THE STORMWATER BMP'S ARE FIXTURES THAT CAN BE ALTERED OR REMOVED ONLY AFTER APPROVAL BY NEW BRITAIN TOWNSHIP.

OWNER SIGNATURE BLOCK & ACKNOWLEDGEMENT

TO ALL WHOM THESE PRESENTS MAY COME, KNOW YE THAT I, _____ OF _____ HAS LAID OUT UPON MY/OUR LAND SITUATED IN THE TOWNSHIP OF NEW BRITAIN, COUNTY OF BUCKS, COMMONWEALTH OF PENNSYLVANIA, CERTAIN LOTS ACCORDING TO THIS PLAN WHICH IS INTENDED TO BE FORTHWITH RECORDED, WITNESS OUR HAND AND SEAL THIS _____ DAY OF _____, 20____.

OWNER SIGNATURE

BY: _____ NAME _____ TITLE _____ DATE: _____

OWNER(S)

TITLE(S): _____ COMMONWEALTH OF _____ COUNTY OF _____

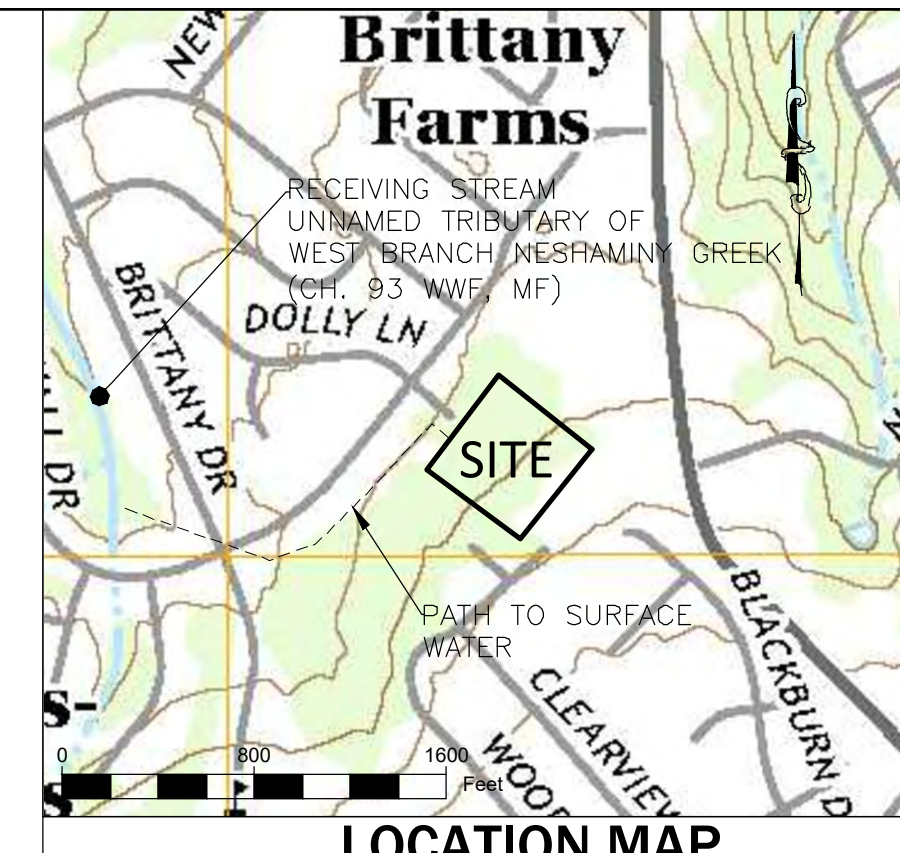
NOTARY PUBLIC

ON THIS _____ DAY OF _____, A.D., 20____, BEFORE ME A NOTARY PUBLIC, PERSONALLY APPEARED _____, OWNER OF THE SUBJECT PROPERTY, AS SUCH, BEING AUTHORIZED TO DO SO, EXECUTED THE FOREGOING INSTRUMENT ON ITS BEHALF FOR THE USES AND PURPOSES THEREIN SET FORTH.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND OFFICIAL SEAL.

SEAL

NOTARY PUBLIC _____ COMMISSION EXPIRATION DATE _____



OWNER

VIRGINIA A. BENNER
4 VALLEY DRIVE
CHALFONT, PA 18914

APPLICANT/EQUITABLE OWNER

PRIME DEVELOPMENT GROUP, LP
350 SOUTH MAIN STREET, SUITE 307
DOYLESTOWN, PA 18901

REVISIONS

Date	Description
6/21/2021	Revised per Township Engineer comments

ENGINEER'S CERTIFICATION

KRISTIN HOLMES, P.E.
PA PE073604

CERTIFICATION OF ACCURACY

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THE SURVEY AND PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT.

TOWNSHIP ENGINEER ACKNOWLEDGEMENT

THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP ENGINEER ON THIS _____ DAY OF _____, 20____.

PLANNING COMMISSION ACKNOWLEDGEMENT

BUCKS COUNTY PLANNING COMMISSION NOTATION BCPC NO 12559 PROCESSED AND REVIEWED. REPORT PREPARED BY THE BUCKS COUNTY PLANNING COMMISSION IN ACCORDANCE WITH THE MUNICIPALITIES PLANNING CODE. CERTIFIED THIS DATE _____.

WALVERS REQUESTED:

THE FOLLOWING WALTERS ARE BEING REQUESTED FROM THE NEW BRITAIN TOWNSHIP BOARD OF SUPERVISORS:

- SALDO SECTION 22-502.1.G & 502.1.H FROM PROVIDING A LANDSCAPE AND LIGHTING PLAN;
- SALDO SECTION 22-706 FROM PROVIDING CURB AND SIDEWALK ALONG DOLLY LANE;
- SALDO SECTION 22-713.4 FROM PROVIDING STREET TREES EVERY 30 FEET ALONG DOLLY LANE;
- SALDO SECTION 22-403 & 404 FROM PROVIDING SEPARATE PRELIMINARY AND FINAL SUBMISSIONS;
- SALDO SECTION 22-705.3.A FROM PROVIDING A MINIMUM CARTWAY WIDTH OF 28 FEET;
- SALDO SECTION 22-705.8.B FROM PROVIDING A CUL-DE-SAC STREET AS A MEANS OF EXTENDING THE EXISTING DOLLY LANE PUBLIC STREET WITH LESS THAN THE MINIMUM 400-FOOT LENGTH;
- SALDO SECTION 22-710.4 FROM PROVIDING AN EMERGENCY ACCESS FOR SUBDIVISIONS WITH A SINGLE ACCESS;
- SALDO SECTION 22-713.5.B(3) FROM PROVIDING TREES AND SHRUBS EVERY 20 FEET AND 10 FEET, RESPECTIVELY, ALONG THE BASIN PERIMETER.

Holmes Cunningham LLC
409 E. Butler Ave.
Unit 5
Doylestown, PA 18901
(215) 586-3330
www.hcengineering.net

HC
ENGINEERING

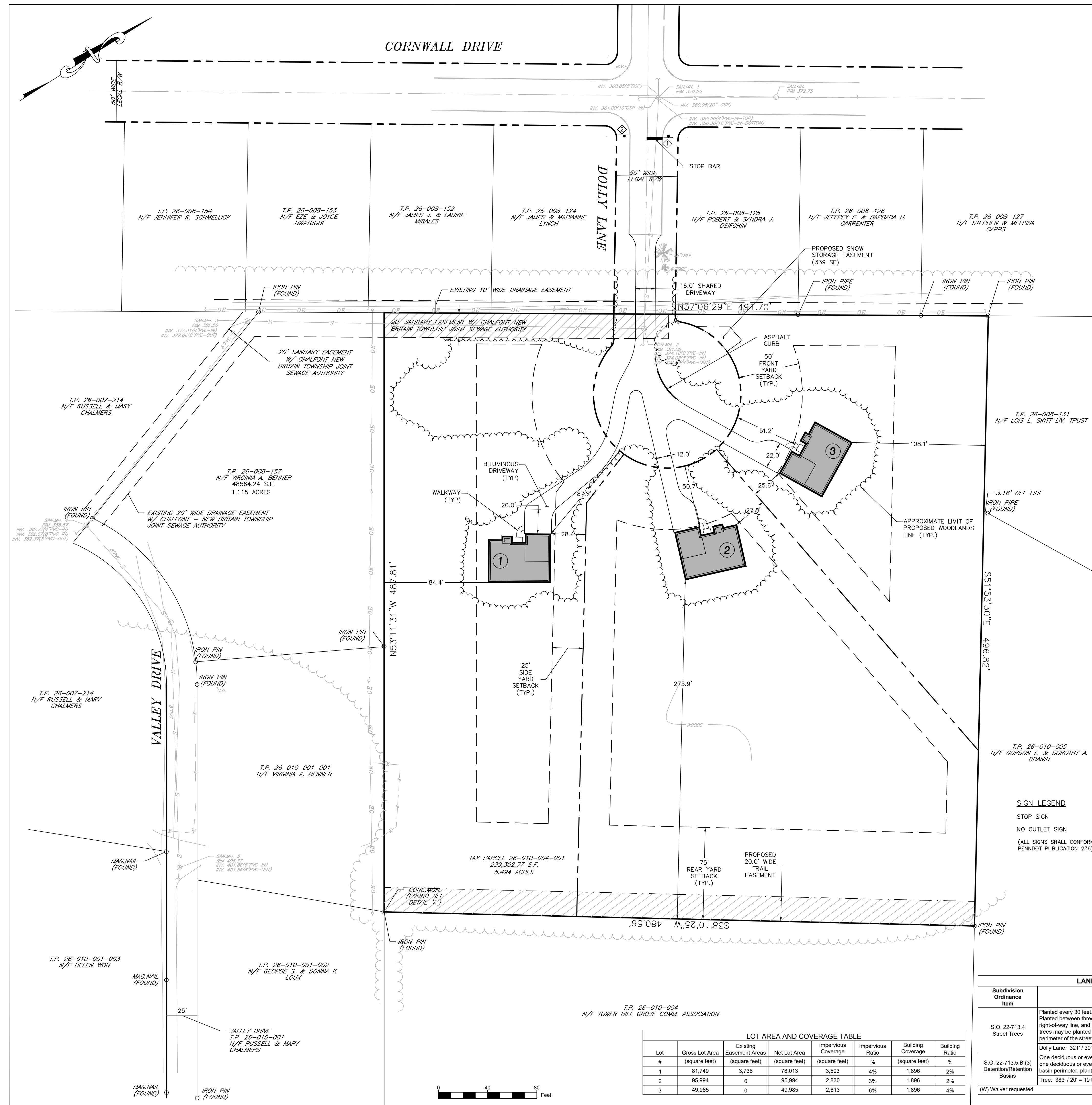
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DOLLY LANE
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

KRISTIN R. HOLMES, P.E.
PA Lic. No. PE073604

File No. 1551_C1.0 Record.DWG

Date	3/16/2021
Scale	1"=40'
HCE Job	1351
Designed	KH
Sheet	4 of 15

Drawing No. **C1.0**



Zoning Table					
Zone: RR - Residential District					
ITEM	REQUIRED/PERMITTED	PROPOSED LOT 1	PROPOSED LOT 2	PROPOSED LOT 3	ORDINANCE SECTION
Permitted Uses	B-1 Single Family Detached Dwelling, B2 Cluster Subdivision	B-1 Single Family Detached Dwelling	B-1 Single Family Detached Dwelling	B-1 Single Family Detached Dwelling	27-901.a
B-1 Single Family Detached Dwelling Requirements					
Max. Building Height	35 FT	<35 FT	<35 FT	<35 FT	27-902.a, 2110
Min. Lot Area	1 AC	1.79 AC	2.20 AC	1.15 AC	27-902.b
Min. Lot Width At Setback	150 FT	164.4 FT	153.9 FT	162.4 FT	27-902.b
Min. Lot Depth	180 FT	186.93 FT	422.92 FT	254.77 FT	27-902.b
Min. Front Yard Setback	50 FT	57.7 FT	50.7 FT	51.2 FT	27-902.b
Min. Side Yard Setback	25 FT	28.4 FT	27.6 FT	25.6 FT	27-902.b
Min. Rear Yard Setback	75 FT	84.4 FT	275.9 FT	108.1 FT	27-902.b
Max. Building Coverage	15%	2%	2%	4%	27-902.b
Max. Site Impervious Surface Coverage	20%		5%		27-902.b
Max. Lot Impervious Surface Coverage	25%	4%	3%	6%	27-902.b
General Requirements					
Min. Driveway Clear Sight Triangle	50 FT	50 FT	50 FT	50 FT	27-2111.b
Min. Off Street Parking	3 Spaces/DU	3DU	3DU	3DU	27-2901B
Min. Building Envelope in RR District	5,000 SF (B-1 Use)	5,000 SF	5,000 SF	5,000 SF	27-2401.b

- SITE PLAN NOTES:**
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 - THE PROPERTY IS WITHIN ZONE X AREAS OUTSIDE THE 100-YEAR FLOODPLAIN AS PER PANEL 289 OF 532, MAP 42017C0289K REVISED MARCH 21, 2017.
 - A BLANKET EASEMENT IS PROPOSED ON LOTS 1, 2 & 3 FOR INSPECTION AND MAINTENANCE OF THE PROPOSED STORMWATER FACILITIES FOR ACCESS BY THE PROPERTY OWNERS AND NEW BRITAIN TOWNSHIP.
 - PROJECT PROPOSES 3 SINGLE FAMILY DETACHED DWELLING LOTS WHICH WILL GENERATE 10 VEHICLE TRIPS PER DAY PER UNIT FOR A TOTAL OF 30 VEHICLE TRIPS PER DAY AS PER THE INSTITUTE FOR TRANSPORTATION ENGINEERS TRIP GENERATION HANDBOOK.
 - PROJECT PROPOSES TO BEGIN CONSTRUCTION UPON RECEIPT OF APPLICABLE PERMITS AND APPROVALS. ESTIMATED START OF CONSTRUCTION - JUNE 2021. ESTIMATED COMPLETION OF CONSTRUCTION - 2022.
 - THE STORMWATER MANAGEMENT FACILITIES (AS SHOWN ON THIS PLAN) ARE A BASIC AND PERPETUAL PART OF THE STORMWATER MANAGEMENT SYSTEM OF THE TOWNSHIP OF NEW BRITAIN, AND AS SUCH ARE TO BE PROTECTED AND PRESERVED. IN ACCORDANCE WITH THE APPROVED FINAL PLAN BY THE OWNER ON WHOSE LANDS THE FACILITY IS LOCATED, THE TOWNSHIP OF NEW BRITAIN AND/OR ITS AGENTS RESERVE THE RIGHT AND PRIVILEGE TO ENTER UPON SUCH LANDS FROM TIME TO TIME FOR THE PURPOSE OF INSPECTION OF THE STORMWATER MANAGEMENT FACILITIES IN ORDER TO DETERMINE THAT THE STRUCTURAL AND DESIGN INTEGRITY ARE BEING MAINTAINED BY THE OWNERS.
 - THE STORMWATER MANAGEMENT FACILITIES HAVE BEEN DESIGNED TO HANDLE 2,333 SQUARE FEET OF EXTRA IMPERVIOUS ON EACH BUILDING LOT.
 - TOPSOIL SHALL NOT BE REMOVED FROM THE DEVELOPMENT SITE. TOPSOIL SHALL BE STRIPPED, STOCKPILED, AND REDISTRIBUTED ON THE SITE.
 - THE STORMWATER MANAGEMENT FACILITY WILL BE OWNED AND MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.
 - A FEE-IN-LIEU WILL BE PROVIDED FOR THE REQUIRED DEDICATION OF RECREATION LAND FOR EACH NEW BUILDING LOT.
 - ALL FUTURE RESIDENTS OF THIS LAND DEVELOPMENT ARE SUBJECT TO ANY CURRENT OR FUTURE TOWNSHIP ORDINANCE, RULE OR REGULATION MANDATING THE HOOK-UP OF PROPERTIES TO THE PUBLIC SEWER SYSTEM.
 - AT THE TIME OF INDIVIDUAL ZONING PERMIT APPLICATION FOR EACH LOT, THE NATURAL RESOURCES PROTECTION STANDARDS SHALL BE REVIEWED FOR COMPLIANCE AND SITES LAID OUT TO MINIMIZE NATURAL RESOURCE DISTURBANCE TO THE GREATEST EXTENT PRACTICABLE.
 - THE APPLICANT OFFERS THE ULTIMATE RIGHT-OF-WAY OF DOLLY LANE EXTENSION FOR DEDICATION TO NEW BRITAIN TOWNSHIP.
 - THE PROPOSED ROAD EXTENSION CONSISTS OF APPROXIMATE 192 LINEAR FEET (DRIVEWAY EXTENSION).
 - IF THE DISTURBANCE ENCROACHES INTO A DESIGNATED TREE PROTECTION ZONE RESULTING IN THE DAMAGE OR DESTRUCTION OF THE EXISTING TREES AND/OR VEGETATION DESIGNATED TO REMAIN, THE APPLICANT SHALL BE RESPONSIBLE FOR REPLACING THE DAMAGED OR DESTROYED VEGETATION ON AN EQUIVALENT CALIPER BASIS.
 - A WATER RESOURCES IMPACT STUDY SHALL BE PREPARED FOR THE PROPOSED WATER SUPPLY WELLS. THE PROPOSED WELLS ARE SUBJECT TO THE PROVISIONS OF THE WELL CONSTRUCTION STANDARDS, WHICH INCLUDES REQUIREMENTS FOR WELL PERMITTING, WATER QUALITY TESTING AND WELL PRODUCTION CERTIFICATION.

OWNER SIGNATURE BLOCK & ACKNOWLEDGEMENT

TO ALL WHOM THESE PRESENTS MAY COME, KNOW YE THAT I, _____ OF _____ HAS LAID OUT UPON MY/OUR LAND SITUATED IN THE TOWNSHIP OF NEW BRITAIN, COUNTY OF BUCKS, COMMONWEALTH OF PENNSYLVANIA, CERTAIN LOTS ACCORDING TO THIS PLAN WHICH IS INTENDED TO BE FORTHWITH RECORDED. WITNESS OUR HAND AND SEAL THIS _____ DAY OF _____ 20____.

BY: _____ DATE: _____

NAME _____ TITLE _____

CORPORATION _____

OWNER(S): _____

TITLE(S): _____

COMMONWEALTH OF _____

(OR IF NOT PENNSYLVANIA, STATE OF _____)

COUNTY OF _____

ON THIS _____ DAY OF _____, A.D., 20____, BEFORE ME A NOTARY PUBLIC, PERSONALLY APPEARED _____ OF _____ OWNER OF THE SUBJECT PROPERTY, AS SUCH, BEING AUTHORIZED TO DO SO, EXECUTED THE FOREGOING INSTRUMENT ON ITS BEHALF FOR THE USES AND PURPOSES THEREIN SET FORTH.

IN WITNESS WHEREOF, I HAVE HERETO SET MY HAND AND OFFICIAL SEAL.

SEAL _____ NOTARY PUBLIC _____

COMMISSION EXPIRATION DATE _____

ENGINEER'S CERTIFICATION

KRISTIN HOLMES, A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS PLAN IS ACCURATE AND CORRECT AS INDICATED.

DATE: _____

KRISTIN HOLMES, P.E.
PA PE073604

CERTIFICATION OF ACCURACY

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THE SURVEY AND PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT.

DATE: _____

SURVEYOR _____

RECORDER OF DEEDS ACKNOWLEDGEMENT

RECORDED IN THE OFFICE FOR THE RECORDING OF DEEDS, ETC. IN AND FOR THE COUNTY OF BUCKS, AT DOYLESTOWN, PENNSYLVANIA IN PLAN BOOK _____ 20____, PAGE _____ ON THIS _____ DAY OF _____ 20____.

BUCKS COUNTY RECORDER OF DEEDS _____

BOARD OF SUPERVISORS ACKNOWLEDGEMENT

THIS PLAN APPROVED BY THE BOARD OF SUPERVISORS OF NEW BRITAIN TOWNSHIP THIS _____ DAY OF _____, 20____.

OWNER _____ PROPERTY _____

TOWNSHIP ENGINEER ACKNOWLEDGEMENT

THIS PLAN HAS BEEN REVIEWED BY THE TOWNSHIP ENGINEER ON THIS _____ DAY OF _____, 20____.

ENGINEER: _____

PLANNING COMMISSION ACKNOWLEDGEMENT

BUCKS COUNTY PLANNING COMMISSION NOTATION BCPC NO 12559 PROCESSED AND REVIEWED. REPORT PREPARED BY THE BUCKS COUNTY PLANNING COMMISSION IN ACCORDANCE WITH THE MUNICIPALITIES PLANNING CODE. CERTIFIED THIS DATE _____.

LANDSCAPE REQUIREMENTS CHART			
Subdivision Ordinance Item	Requirement	Plan Proposed	
S.O. 22-713.4 Street Trees	Planted every 30 feet. Planted between three and five feet outside the ultimate right-of-way line, and as an alternative, the same quantity of trees may be planted in an informal arrangement along the perimeter of the street, when approved by the Board.	Dolly Lane: 32' / 30' = 11 trees	0 Shade Trees (use existing trees) (W)
S.O. 22-713.5.B.(3) Detention/Retention Basins	One deciduous or evergreen tree planted every 20 feet, plus one deciduous or evergreen shrub every 10 feet along the basin perimeter, planted in an informal arrangement.	Trees: 383' / 20' = 19 trees; Shrub: 383' / 10' = 38 shrubs	0 Shade Trees 0 Shrubs (use existing trees) (W)
(W) Waiver requested			

LOT AREA AND COVERAGE TABLE							
Lot #	Gross Lot Area (square feet)	Existing Easement Areas (square feet)	Net Lot Area (square feet)	Impervious Coverage (square feet)	Impervious Ratio (%)	Building Coverage (square feet)	Building Ratio (%)
1	81,749	3,736	78,013	3,503	4%	1,896	2%
2	95,994	0	95,994	2,830	3%	1,896	2%
3	49,985	0	49,985	2,813	6%	1,896	4%

Holmes Cunningham LLC
409 E. Butler Ave., Unit 5
Doylestown, PA 18901
(215) 586-3330
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REVISIONS	Description	Date	Revised per Township Engineer comments
1		8/21/2021	

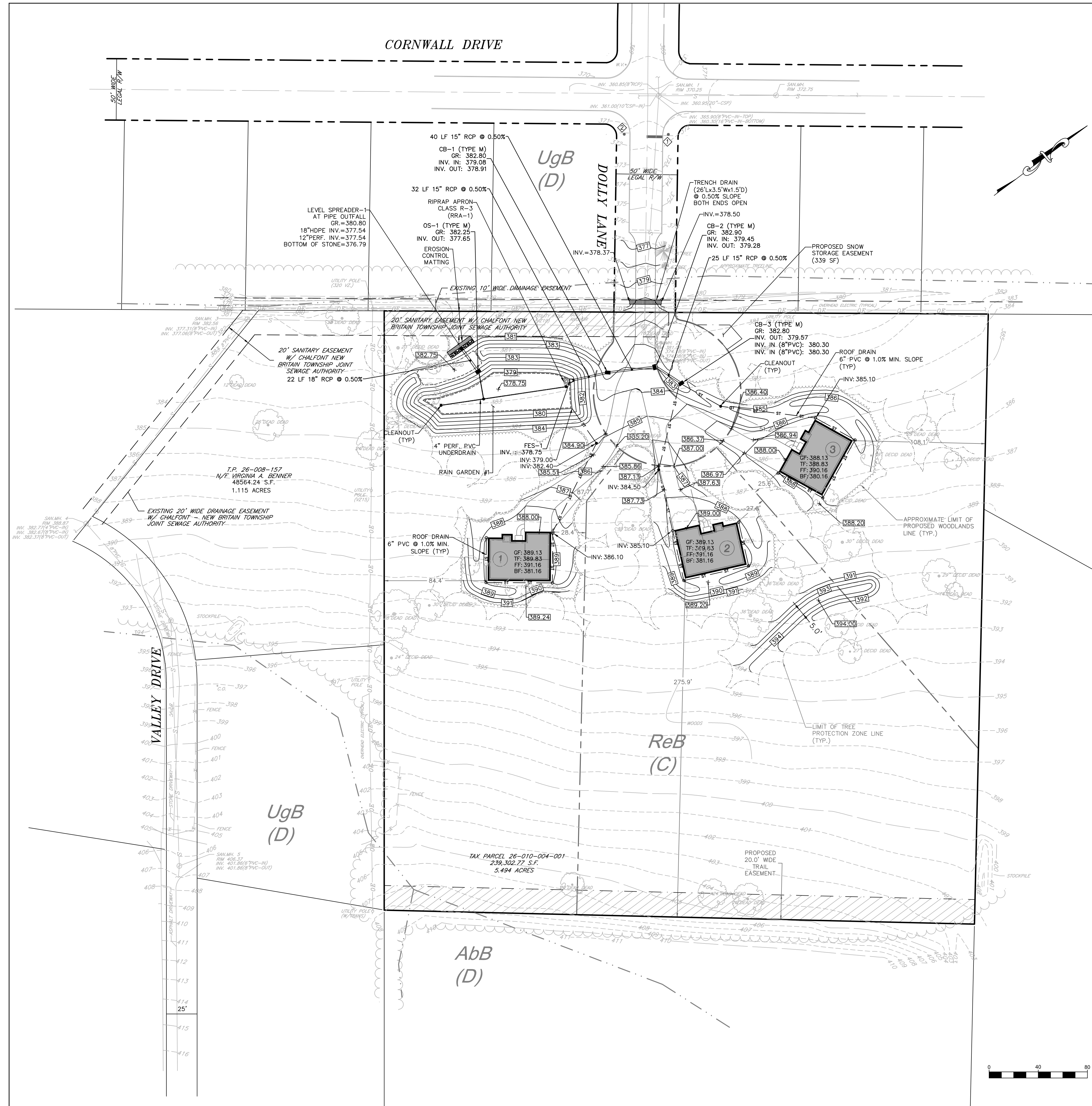
BENNER PROPERTY SUBDIVISION
T.M.P.# 26-010-004-001
DOLLY LANE
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

RECORD SITE PLAN

File No. 1551_C1.0.DWG

Date 3/16/2021 Scale 1"=40' HCE Job 1551 Designed KH Sheet 5 of 15

Drawing No. **C1.1**



	PROPERTY LINE
	R.O.W. LINE
	EXISTING CONTOUR
	LOT NUMBER
	PROPOSED CONTOUR
	PROPOSED STORM SEWER
	PROPOSED YARD INLET
	PROPOSED CURB INLET
	PROPOSED SPOT ELEVATION

- GRADING AND DRAINAGE NOTES**
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND / OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES, WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
 - CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC WATER SERVICE, ELECTRICAL, TELEPHONE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND TO ENSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE UTILITY COMPANIES AS TO LOCATION AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
 - CONTRACTOR SHALL PROVIDE A WRITTEN REQUEST FOR INFORMATION TO THE OWNER AND OWNER'S ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITEWORK ITEM DEPICTED ON THE PLANS, FOR ADDITIONAL INFORMATION REQUIRED FOR CONSTRUCTION NOT RELATED TO MEANS AND METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SPECIFIC SITEWORK ITEMS INSTALLED DIFFERENTLY THAN INTENDED AS DEPICTED ON THE PLANS IN THE ABSENCE OF SUBMITTING AND ADDRESSING WRITTEN REQUESTS FOR INFORMATION.
 - SITE GRADING SHALL NOT PROCEED UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
 - PVC = POLYVINYLCHLORIDE PIPE, HDPE = HIGH DENSITY POLYETHYLENE PIPE, RCP = REINFORCED CONCRETE PIPE
 - STORM DRAINAGE PIPING TO UTILIZE WATER TIGHT JOINTS.
 - COMPACTION CRITERIA FOR FILL PLACEMENT IN THE FOLLOWING AREAS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM PERCENTAGE OF MAXIMUM MODIFIED PROCTOR DRY DENSITY AS DETERMINED BY ASTM D-1557 USED ON REPRESENTATIVE SOIL SAMPLES, UNLESS MORE STRINGENT CRITERIA GIVEN ELSEWHERE.

FILL AREA	PERCENT OF MAXIMUM MODIFIED PROCTOR DRY DENSITY
BUILDING FOOTPRINT	95%
PAVEMENT AND ROADWAYS	95%
SIDEWALKS	95%
LANDSCAPE AREAS	93%
TRENCH BACKFILL	SAME AS SURROUNDING AREA
 - PROTECT SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION, INCLUDING CONCRETE TRUCKS AND DUMP TRUCKS.
 - REMOVE AREAS OF FINISHED SUBGRADE FOUND TO HAVE INSUFFICIENT COMPACTION DENSITY TO DEPTH NECESSARY AND REPLACE IN A MANNER THAT WILL COMPLY WITH COMPACTION REQUIREMENTS BY USE OF MATERIAL EQUAL TO OR BETTER THEN BEST SUBGRADE MATERIAL ON SITE. SURFACE OF SUBGRADE AFTER COMPACTION SHALL BE HARD, UNIFORM, SMOOTH, STABLE, AND TRUE TO GRADE AND CROSS SECTION.
 - ALL CONCRETE, UNLESS OTHERWISE NOTED OR SPECIFIED BY REGULATORY AUTHORITIES, SHALL BE A MINIMUM OF 4,000 PSI.
 - NEW BRITAIN TOWNSHIP SHALL HAVE THE RIGHT TO ENTER PRIVATE PROPERTY TO INSPECT AND REPAIR, IF NECESSARY, ANY STORMWATER MANAGEMENT FACILITY.
 - ALL STORMWATER MANAGEMENT FACILITIES ARE A PERMANENT PART OF THE DEVELOPMENT AND SHALL NOT BE REMOVED, ALTERED OR MODIFIED WITHOUT PRIOR APPROVAL FROM NEW BRITAIN TOWNSHIP.

- GENERAL NOTES**
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE EXISTING LOCATION AND/OR ELEVATION OF FEATURES AS SHOWN ON THESE PLANS IS BASED ON A SURVEY AS IDENTIFIED ON THE EXISTING CONDITIONS PLAN. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
 - ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH MUNICIPAL STANDARDS.
 - SITE GRADING SHALL NOT PROCEED UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED AS STATED IN THE SEQUENCE OF CONSTRUCTION.
 - UNDER PENNSYLVANIA LAW, THE CONTRACTOR IS REQUIRED TO NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM AT 1-800-242-1776 PRIOR TO THE START OF HIS WORK, SO THAT ALL THE VARIOUS UNDERGROUND UTILITY OPERATORS WILL BE ABLE TO LOCATE THEIR OWN UTILITIES.
 - THE CONTRACTOR SHALL PROVIDE A WRITTEN REQUEST FOR INFORMATION TO THE OWNER AND OWNER'S ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITEWORK ITEM DEPICTED ON THE PLANS, FOR ADDITIONAL INFORMATION REQUIRED FOR CONSTRUCTION NOT RELATED TO MEANS AND METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SPECIFIC SITEWORK ITEMS INSTALLED DIFFERENTLY THAN INTENDED AS DEPICTED ON THE PLANS IN THE ABSENCE OF SUBMITTING AND ADDRESSING WRITTEN REQUESTS FOR INFORMATION.
 - THERE ARE NO HO OR EV WATERSHEDS LOCATED WITHIN THE PROJECT AREA.
 - THERE ARE NO RIPARIAN AREAS OR BUFFERS IDENTIFIED WITHIN THE PROJECT AREA. THEREFORE, RIPARIAN BUFFER OBLIGATIONS DO NOT APPLY TO THIS PROJECT.
 - THE EXISTING SITE IS NOT UNDERLAIN BY ANY NATURALLY OCCURRING GEOLOGIC FORMATIONS OR SOIL CONDITIONS WHICH COULD CAUSE POLLUTION DURING EARTH DISTURBANCE. THEREFORE, NO LOCATIONS ARE IDENTIFIED ON THIS PLAN AND NO DETAILS ARE PROVIDED FOR DISPOSAL OF SUCH MATERIAL.
 - ALL ACCESS DRIVES AND DRIVEWAYS SHALL BE PROVIDED WITH A STOPPING AREA OF 20 FEET, AT A MAXIMUM GRADE OF 3% MEASURED FROM THE ULTIMATE RIGHT-OF-WAY.

Holmes Cunningham LLC
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 Doylestown, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Description	Date	Revised per
1	Revised per Township Engineer comments	9/21/2021	

CALL BEFORE YOU DIG !!!
 3 WORKING DAYS NOTICE FOR
 10 WORKING DAYS NOTICE FOR
 10 WORKING DAYS NOTICE FOR
 - STOP & CALL
 For more info
 1-800-242-1776

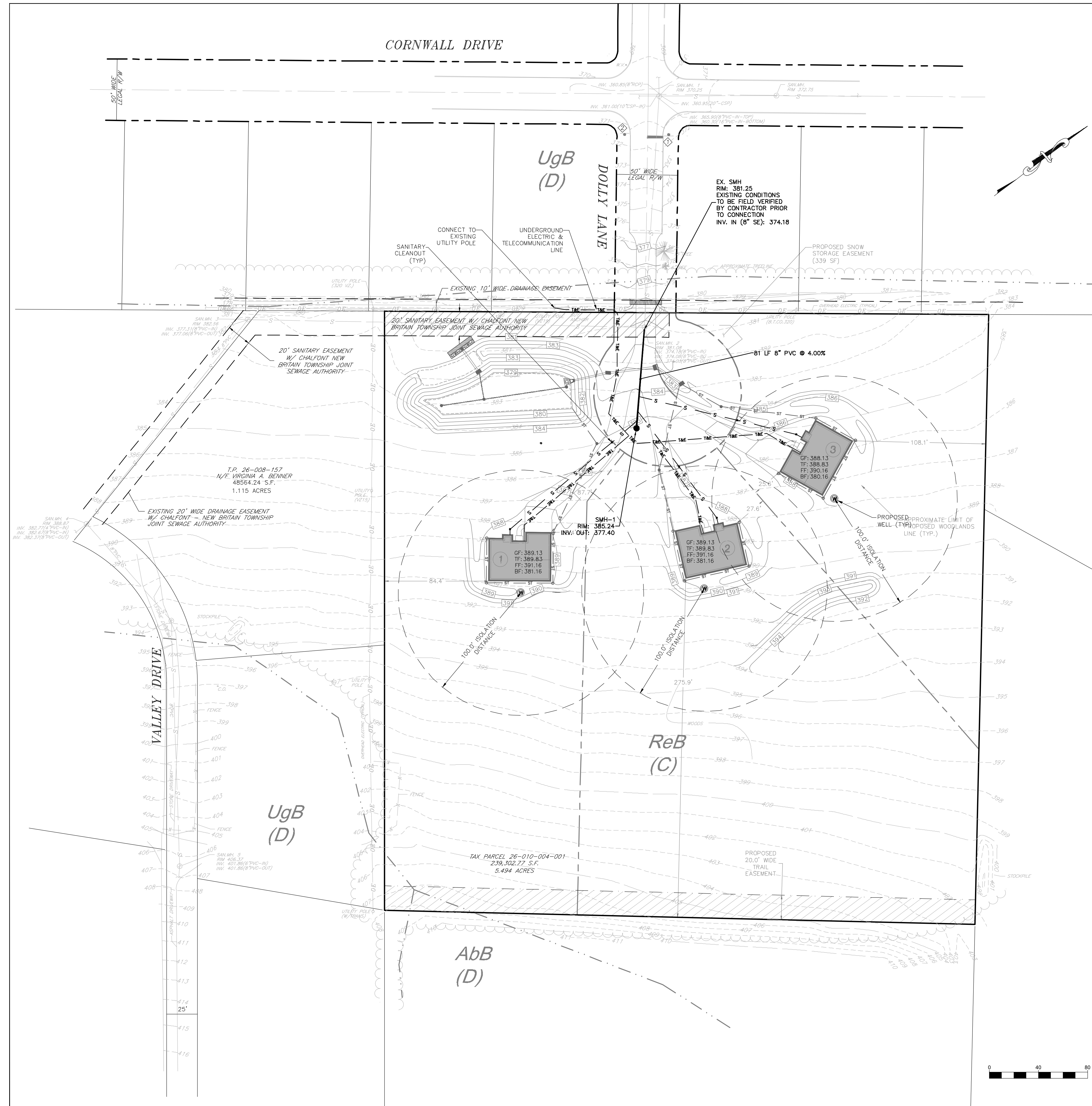
BENNER PROPERTY SUBDIVISION
 T.M.P.# 26-010-004-001
 DOLLY LANE
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

GRADING AND DRAINAGE PLAN

KRISTIN R. HOLMES, P.E.
 PA Lic. No. PE073604

File No.	1551_C2.0 GRADING.DWG		
Date	3/16/2021	Scale	1"=40'
HCE Job	1551	Designed	KH
Sheet	6	of	15

Drawing No.
C2.0



UTILITY LEGEND	
---	R.O.W. LINE
④	LOT NUMBER
340	CONTOUR
---	STORM SEWER
■	YARD INLET
■	CURB INLET
⊕	WATER WELL
●	SANITARY SEWER MAIN AND MANHOLE
-s-	SANITARY LATERAL
-T-	TELECOMMUNICATION & ELECTRIC LINE

UTILITY NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY (WATER, SEWER, GAS, ELECTRIC, TELEPHONE AND CABLE) LOCATIONS, INVERTS AND CONDITIONS PRIOR TO CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN ON THE DRAWINGS AND REQUIRING MODIFICATIONS TO THE SITE DESIGN SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE CONSTRUCTION. DIFFERING UTILITY CONDITIONS THAT ARE ENCOUNTERED BY THE CONTRACTOR, THAT REQUIRE MODIFICATION OF SITE DESIGN AND THAT ARE NOT BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CORRECT AT HIS SOLE COST. ANY UNDERGROUND UTILITIES ENCOUNTERED WHICH AFFECT OR REQUIRE MODIFICATION OF EXISTING OR PROPOSED UTILITIES SHALL BE REVIEWED AND APPROVED BY THE OWNER OF THE AFFECTED UTILITY OR ITS REPRESENTATIVE PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION THAT VARIES FROM THE APPROVED PLANS.
2. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC WATER SERVICE, ELECTRICAL, TELEPHONE, CABLE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND ASSURE PROPER DEPTHS AND LOCATIONS ARE ACHIEVED AS WELL AS COORDINATING WITH THE UTILITY AGENCIES FOR APPROVAL OF UTILITY LOCATIONS AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
3. MIN. DEPTH OF COVER OVER ELECTRIC, GAS, AND CABLE SERVICES SHALL BE TWO (2) FT.
4. SANITARY SEWER SHALL HAVE MINIMUM 4 FOOT PIPE COVER.
5. CONTRACTOR SHALL REFER TO CHALFONT-NEW BRITAIN TOWNSHIP AUTHORITY (CNBSA) STANDARD CONSTRUCTION AND MATERIAL SPECIFICATIONS, LATEST EDITION, FOR ALL INFORMATION RELATED TO SEWER UTILITY.
6. THE PROPOSED SANITARY SEWER WITHIN THE DEVELOPMENTS RIGHT-OF-WAY ARE TO BE DEDICATED TO THE CHALFONT-NEW BRITAIN TOWNSHIP AUTHORITY (CNBSA).
7. A HORIZONTAL SEPARATION OF 10 FEET AND/OR A VERTICAL CLEARANCE OF 18 INCHES SHALL BE MAINTAINED BETWEEN THE OUTER WALL OF SANITARY SEWER AND ANY OTHER UTILITY PIPELINES. WHERE PIPELINES MUST CROSS UNDER A SEWER, THE INSTALLATION MUST ALSO PROVIDE ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER TO PREVENT DEFLECTION AND BREAKING OF THE SEWER. WHERE PROPER CLEARANCES CAN NOT BE PROVIDED, THE SEWER SHALL BE CONCRETE ENCASED FOR A DISTANCE OF 10 FEET ON EITHER SIDE OF THE CONFLICT.
8. THERE SHALL NOT BE ANY TREES, SHRUBS, OR OTHER LANDSCAPING WITHIN 10 FT OF WATER OR SANITARY SEWER FACILITIES.

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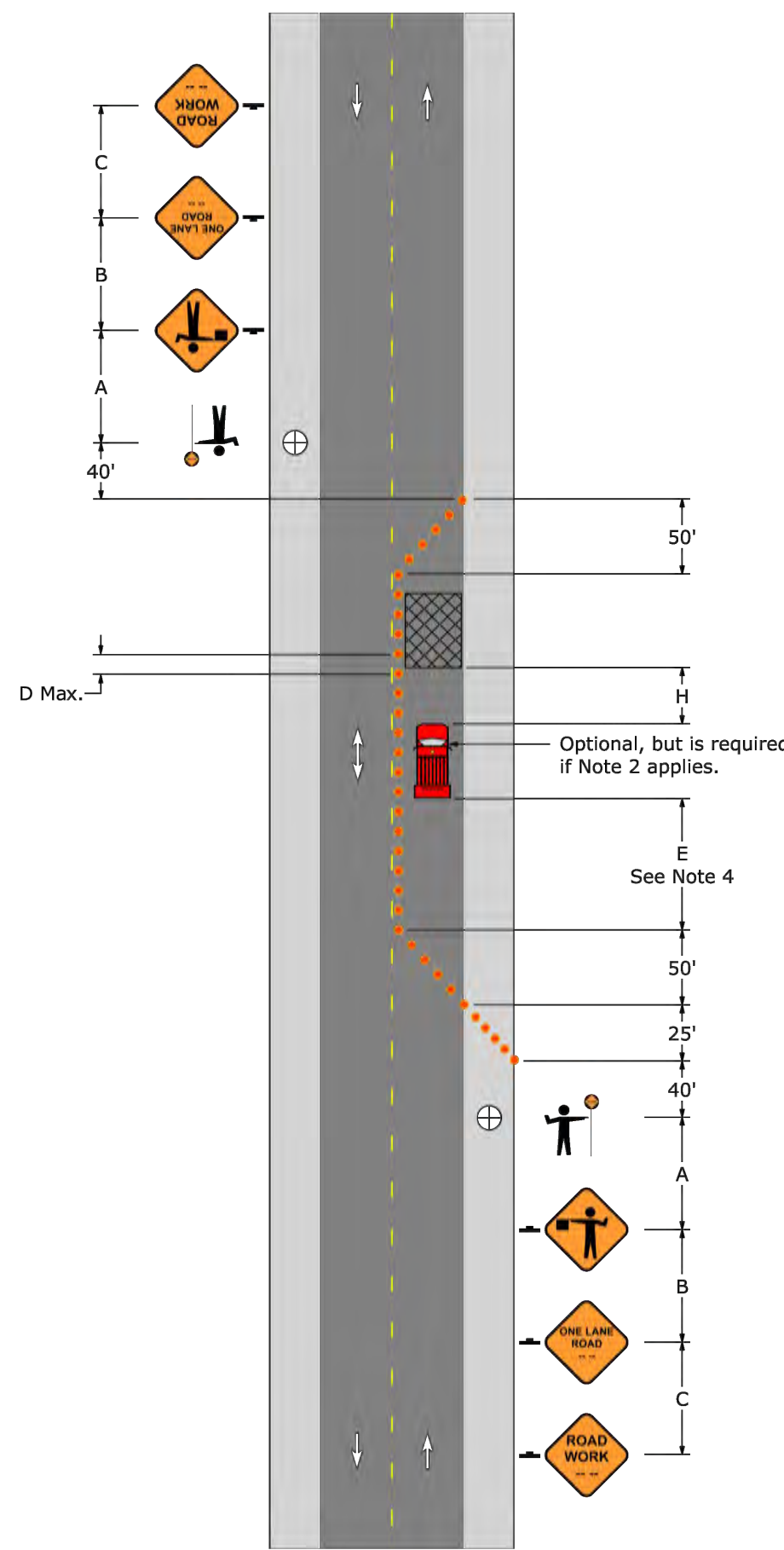
CALL BEFORE YOU DIG II
 CONSTRUCTION NOTICE FOR
 10 WORKING DAYS NOTICE FOR
 STOP & CALL
 Permittee One
 1-800-242-3176

BENNER PROPERTY SUBDIVISION
 T.M.P. # 26-010-004-001
 DOLLY LANE
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA
UTILITY PLAN

KRISTIN R. HOLMES, P.E.
 PA Lic. No. PE073604

File No.	1551_C3.0 UTILITY.DWG		
Date	3/16/2021	Scale	1"=40'
HCE Job	1551	Designed	KH
Sheet	7	of	15
Drawing No.	C3.0		

**PATA 107 (Old PATA 10a)
Work In One Lane; Two Flaggers**



PATA 107 (Old PATA 10a) - Notes

- Each flagger shall be clearly visible to traffic for a minimum distance of E and shall be in constant communication with all other flaggers.
- For operations of 15 minutes or less:
 - The Road Work (W20-1), One Lane Road (W20-4), and Flagger Symbol (W20-7) signs are not required.
 - All channelizing devices may be eliminated if a shadow vehicle is present.
- The buffer space shall be extended so that the two-way traffic taper is placed before a horizontal (or crest vertical) curve to provide adequate sight distance for the flagger and a queue of stopped vehicles.
- When a shadow vehicle is not used, distance E is measured from end of taper to beginning of work space.



Sign Spacing Chart

Condition	Distance			
	A	B	C	F
Feet	Feet	Feet	Feet	Feet
Urban 35 MPH or less	100	100	100	100
Urban Greater than 35 MPH	350	350	350	350
Rural	500	500	500	500

When multiple distance plaques are used on advance warning signs, they shall all be of the same series type.
Example: either all "AHEAD" or XXX FEET.

Taper Length Formulas

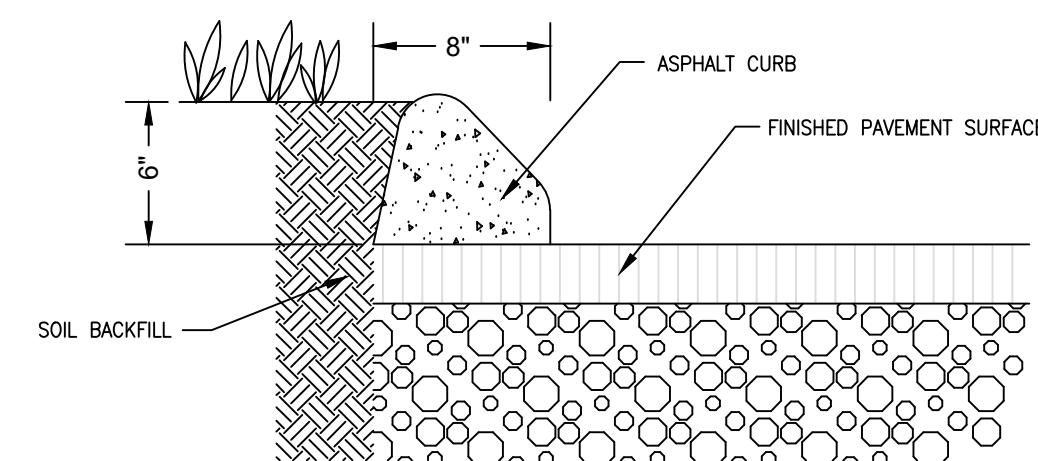
S	L
40 MPH or less	$L = \frac{WS^2}{60}$
45 MPH or more	$L = WS$

S = Regulatory Speed Limit
W = Width of Offset
L = Length

Distance and Spacing Quick Reference Chart

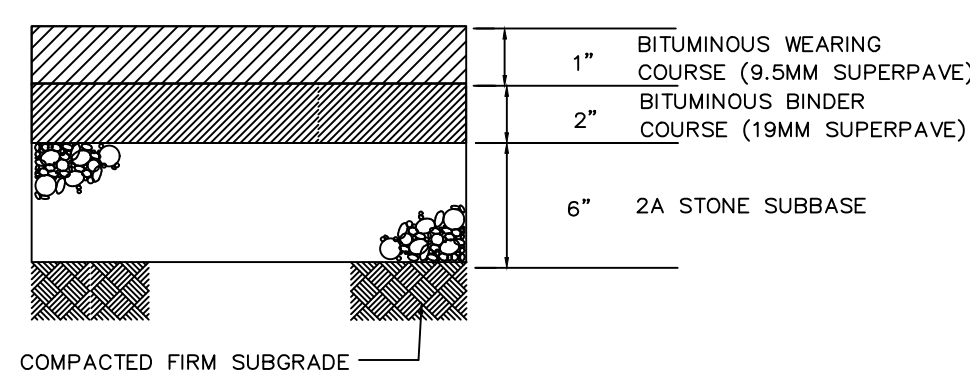
Speed MPH	W Feet	1/2L			1/3L			D Feet	E Feet	H Feet	
		Feet	Feet	Feet	Feet	Feet	Feet				
25	10	105	55	35	6	6	6	50	155	150	
	11	115	60	40	6	6	6	60	200	150	
	12	125	65	45	6	6	6	70	250	150	
30	10	150	75	50	6	6	6	60	200	150	
	11	165	85	55	7	7	7	60	200	150	
	12	180	90	60	7	7	7	70	250	150	
35	11	225	115	75	8	8	8	70	250	150	
	12	245	125	85	8	8	8	80	305	150	
	10	270	135	90	8	8	8	80	305	150	
40	11	295	150	100	9	9	9	80	305	150	
	12	320	160	110	9	9	9	90	360	150	
	10	450	225	150	11	11	11	6	100	425	250
45	11	495	250	165	12	12	12	6	100	425	250
	12	540	270	180	13	13	13	6	100	425	250
	10	500	250	170	11	11	11	6	100	425	250
50	11	550	275	185	12	12	12	6	100	425	250
	12	600	300	200	13	13	13	6	100	425	250
	10	550	275	185	11	11	11	6	100	425	250
55	11	605	305	205	12	12	12	6	100	425	250
	12	660	330	220	13	13	13	6	100	425	250
	10	550	275	185	11	11	11	6	100	425	250

Note: Channelizing devices used in taper shall be equally spaced at 1/2 D Max.

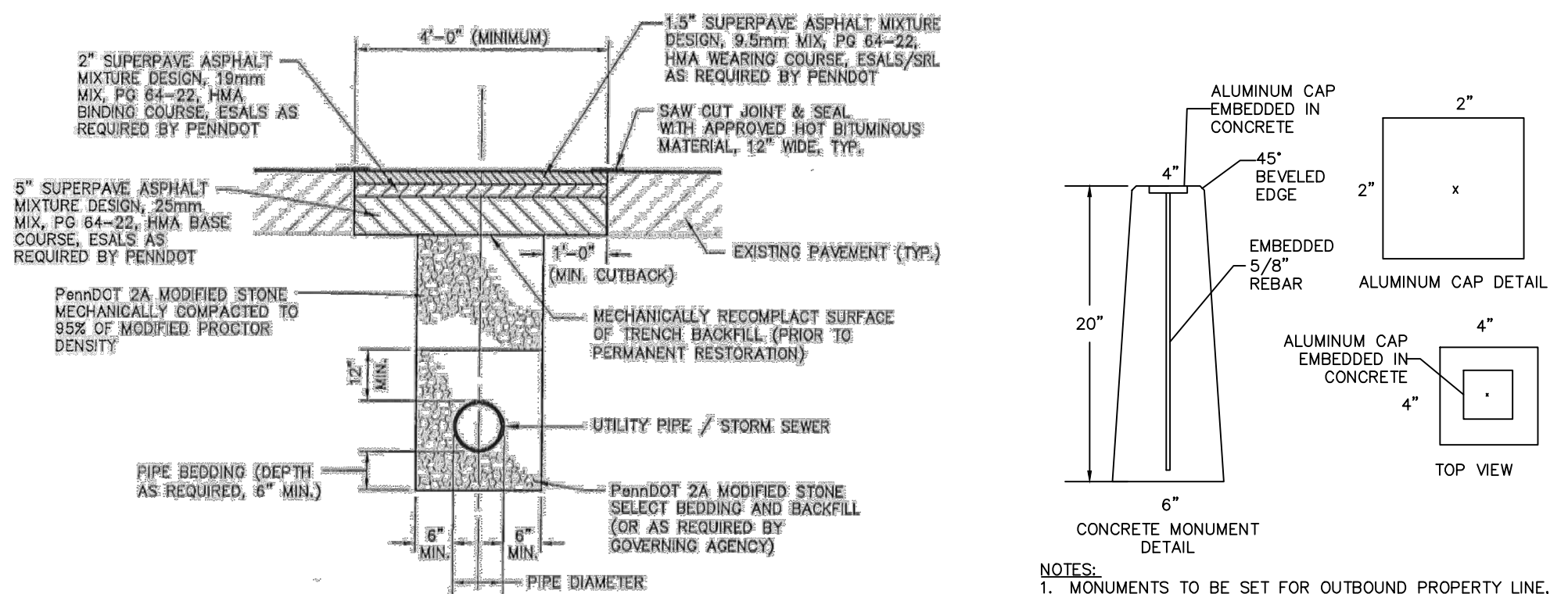


- NOTES:**
- USE AN ACCEPTABLE, SELF-PROPELLED, EXTRUDING CURB PAVER IS RECOMMENDED.
 - PRIOR TO PLACING CURB, CLEAN THE SURFACE ON WHICH IT IS TO BE PLACED, THEN APPLY A TACK COAT.
 - PLACE CURB IN A CONTINUOUS OPERATION TO ELIMINATE FREQUENT JOINTS. WHEN THE PLACING OF CURB IS DISCONTINUED FOR A TIME PERMITTING MIXTURE TO BECOME CHILLED, CUT THE CURB IN A TRUE VERTICAL PLANE. JUST PRIOR TO PLACING FRESH CURB MIXTURE AGAINST THE PREVIOUSLY CONSTRUCTED CURB, PAINT THE EXPOSED END WITH A THIN, UNIFORM COAT OF HOT ASPHALT CEMENT, CLASS AC-20.
 - PROTECT NEWLY COMPLETED CURB FROM TRAFFIC OR ANY OTHER DISTURBANCE, UNTIL ADEQUATE STABILITY HAS BEEN OBTAINED, FOR AT LEAST 12 HOURS.

ASPHALT CURB DETAIL



DRIVEWAY PAVEMENT SECTION



- NOTES:**
- BEFORE 90 DAYS, ROADS SHALL BE TEMPORARILY RESTORED WITH 2A COURSE AGGREGATE AND 2" OF PENNDOT 2A BINDER COURSE (TO GRADE) AND ALLOWED TO SETTLE 90 DAYS PRIOR TO PERMANENT RESTORATION, AS SHOWN ABOVE. PERMANENT RESTORATION OF TRENCHES SHALL BE COMPLETED ONLY AFTER APPROVAL BY TOWNSHIP ENGINEER.
 - RETAINED SUITABLE MATERIAL MAY BE USED AS BACKFILL FOR TRENCHES IN TOWNSHIP RIGHT-OF-WAY (OUTSIDE OF CARTWAY) WHEN MORE THAN THREE (3) FEET FROM EDGE OF EXISTING CARTWAY, CURB, AND/OR SIDEWALK.
 - MINIMUM WIDTH OF ALL RESTORATION SHALL BE FOUR (4) FEET.
 - COLD PATCH SHALL BE APPLIED ON ALL TRENCH RESTORATIONS (PRIOR TO 90 DAYS) WHEN BINDING OR BASE COURSE ARE NOT AVAILABLE DUE TO WEATHER CONDITIONS.
 - FOR PLASTIC UTILITIES, INSTALL DETECTION TAPE OVER PIPE AT TOP OF STONE BACKFILL.

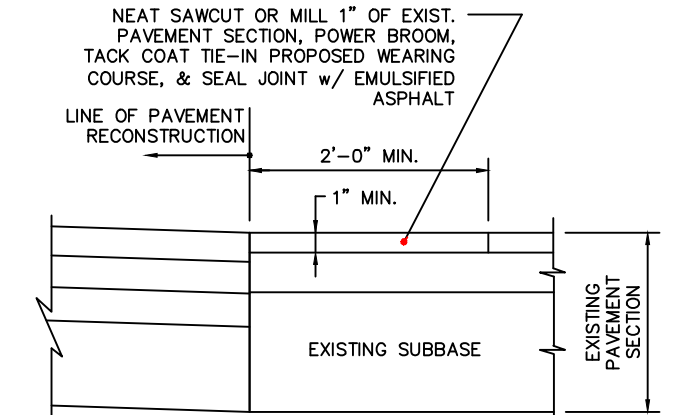
STORM SEWER & UTILITY TRENCH RESTORATION WITHIN PAVED AREAS DETAIL

AFTER 90 DAYS RESTORATION

NOTES:

- MONUMENTS TO BE SET FOR OUTBOUND PROPERTY LINE, ULTIMATE RIGHT-OF-WAYS, OPEN SPACE AND ONE SIDE OF EASEMENTS.
- PK NAILS SHALL BE USED IN PLACE OF MONUMENTS IN PAVED AREAS.

CONCRETE MONUMENT



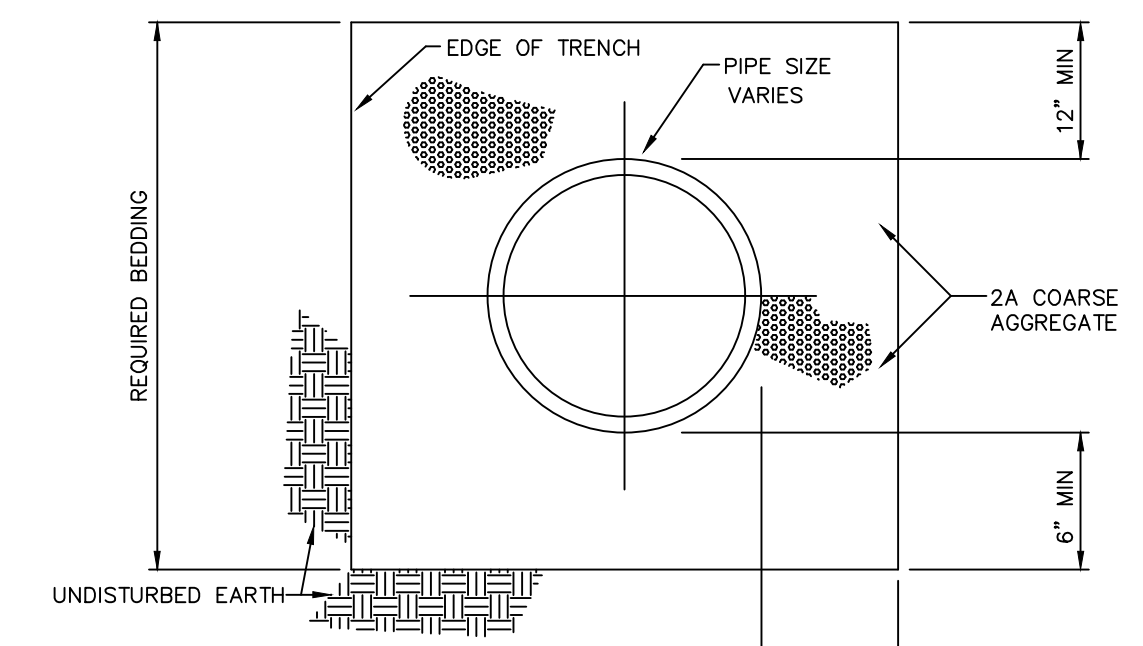
PAVEMENT TIE-IN



- W14-1 NO OUTLET SIGN OR APPROVED EQUAL (24" X 24")
- R1-1 STOP SIGN OR APPROVED EQUAL (30" X 30")

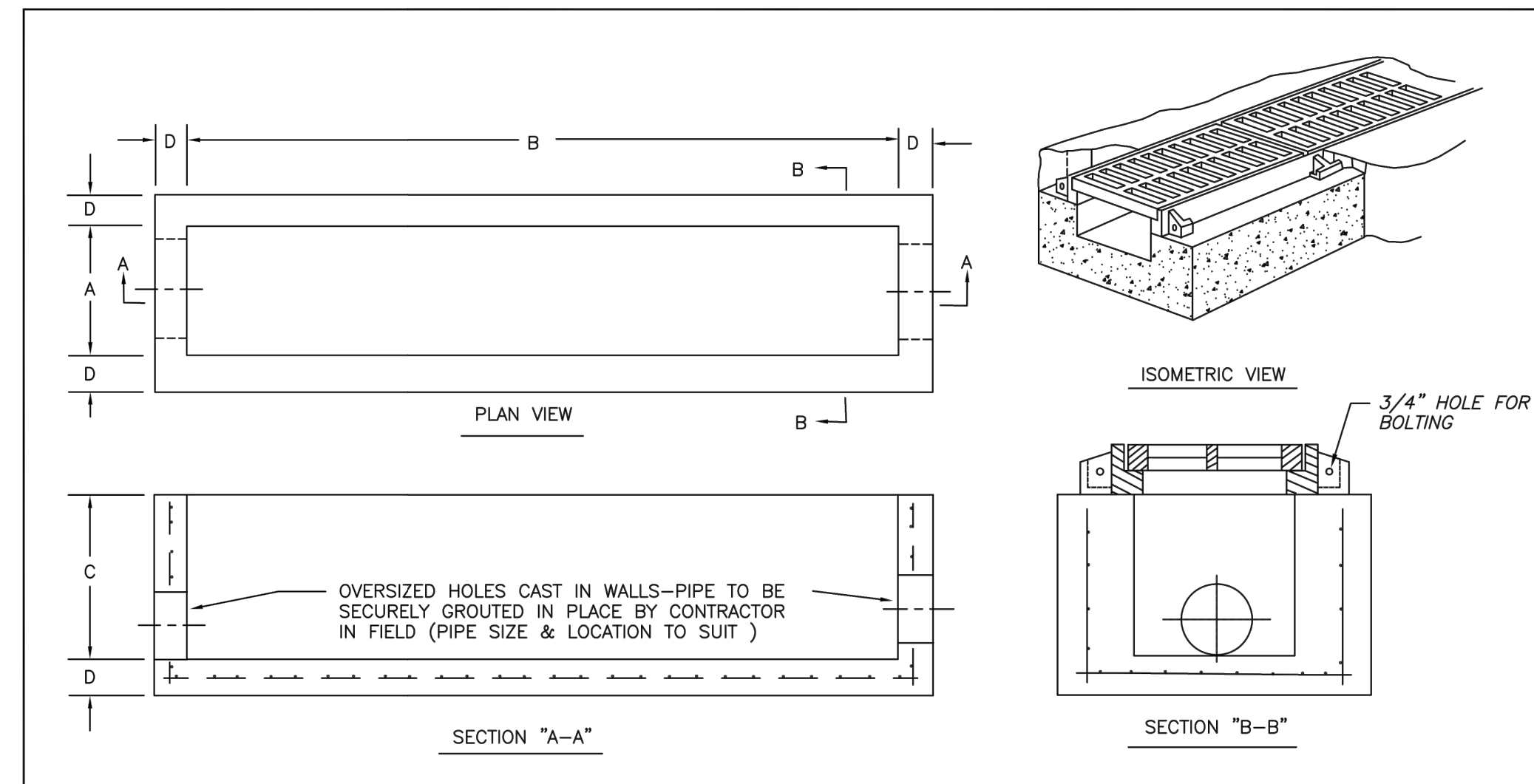
- NOTES:**
- ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" WITH LATEST REVISIONS.
 - ALL POSTS SHALL BE EMBEDDED 3'-0" MINIMUM BELOW GRADE.
 - ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH CURRENT A.S.T.M. SPECIFICATION A123-78 (OR LATEST REVISED).
 - POSTS MAY BE STEEL, ALUMINUM, OR TWO-PIECE U-POST.
 - SIGN PANEL SIZES SHALL DETERMINE POST TYPE AND NUMBERS AS SHOWN ON THIS DETAIL AND DIRECTIONAL SIGN SHEET.
 - BOLTS SHALL NOT PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT BUT SHALL ENGAGE ALL THREADS IN THE NUT.
 - ALL TRAFFIC AND PEDESTRIAN SIGNAGE AND LOCATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION WITH LATEST REVISIONS.

SIGNS DETAIL



STANDARD PIPE BEDDING DETAIL

N.T.S.



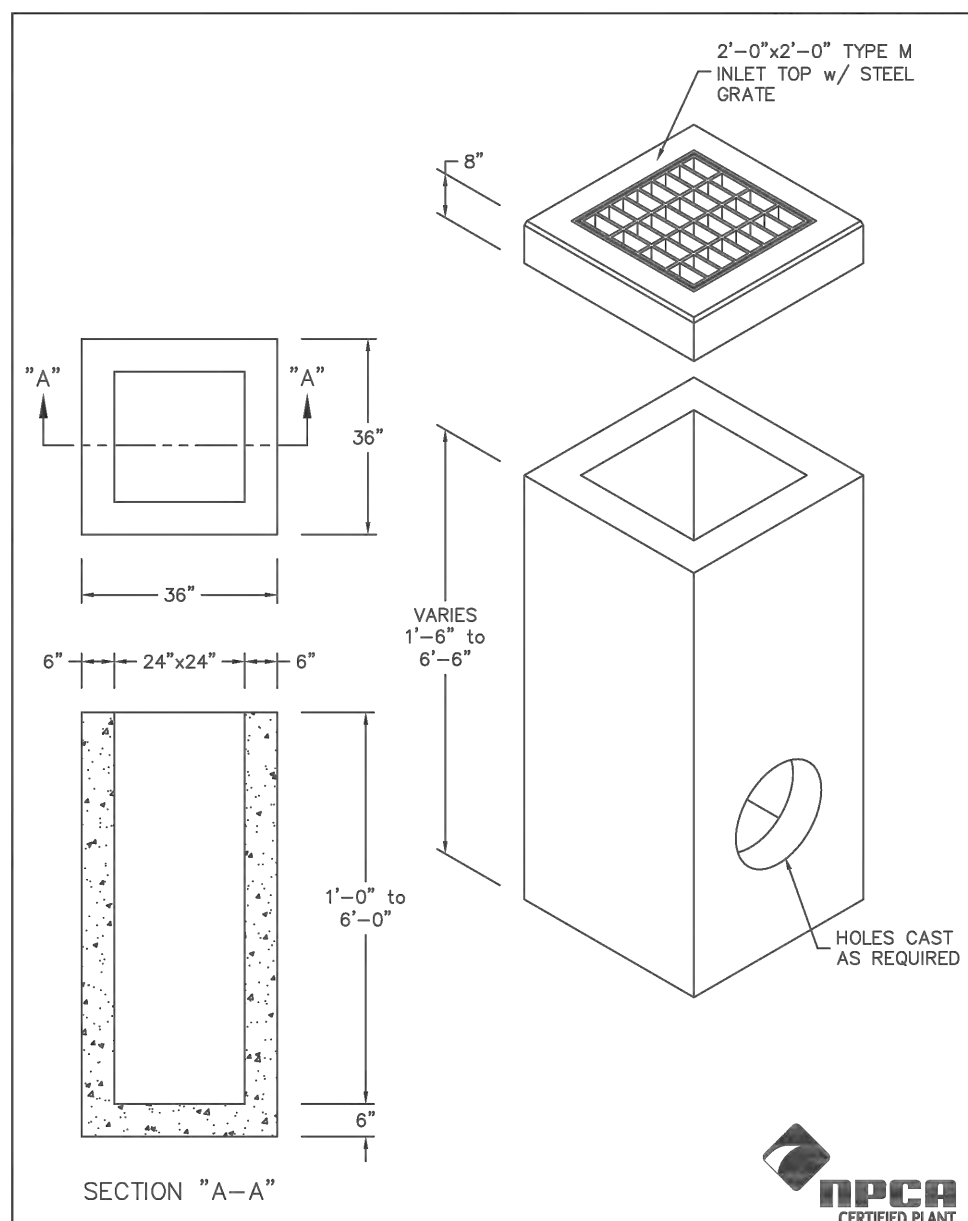
DIMENSION SCHEDULE

- A = 12" THRU 48"
- B = LENGTH AS REQUIRED
- 4'-0" MINIMUM
- C = DEPTH AS REQUIRED
- D = 6" OR 8"
- * = OTHER SIZES AVAILABLE AS REQUIRED

Precast Manufacturing Co., LLC
187 Strykers Road Phillipsburg N.J. 08865
Tel. (908) 434-2122 Fax (908) 434-0512

CONT.	JOB
TRENCH DRAIN	
DATE	DRAWN BY
1 / 17	CLASSIC DESIGN
	DRAWING NO.
	140

TRENCH DRAIN DETAIL (OR APPROVE EQUAL)
N.T.S.

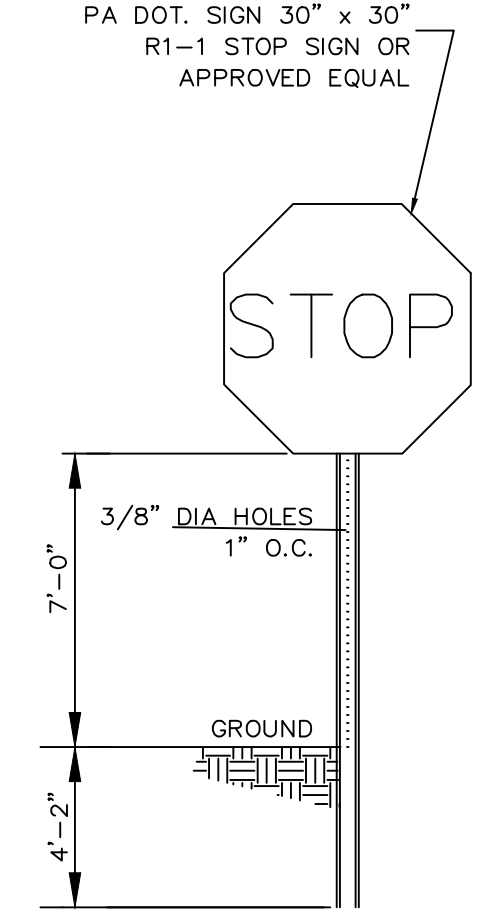


MONARCH PRECAST CONCRETE CORP.
425 NORTH DAUPHIN STREET ALLENTOWN, PA. 18109 PHONE (610) 435-6748
WWW.MONARCHPRECAST.COM FAX (610) 437-7133

24"x24" INLET BOX w/ TYPE M INLET TOP

INLET WITH GRATE DETAIL (LEVEL SPREADER)
N.T.S.

REFER TO DRAWING C6.1 FOR LEVEL SPREADER STRUCTURE DETAIL AND INFORMATION



- PA DOT. SIGN 30" x 30" R1-1 STOP SIGN OR APPROVED EQUAL
- NOTES:**
- ALL POSTS SHALL BE BREAKAWAY POSTS AND OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".
 - ALL POSTS SHALL BE EMBEDDED 4'-2" MINIMUM BELOW GRADE.
 - ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH CURRENT A.S.T.M. SPECIFICATION A123-78 (OR LATEST REVISED).
 - POSTS MAY BE STEEL, ALUMINUM, OR TWO-PIECE U-POST.
 - SIGN PANEL SIZES SHALL DETERMINE POST TYPE AND NUMBERS AS SHOWN ON THIS DETAIL AND DIRECTIONAL SIGN SHEET.
 - BOLTS SHALL NOT PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT BUT SHALL ENGAGE ALL THREADS IN THE NUT.
 - ALL TRAFFIC AND PEDESTRIAN SIGNAGE AND LOCATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND ALL CURRENT AMENDMENTS.

STOP SIGN

Holmes Cunningham LLC
409 E. Butler Ave.
Unit 5
Doylestown, PA 18901
(215) 586-3330
www.hcengineering.net

REVISIONS	Description	Revised per	Engineer comments
Date			
9/21/2021			

CALL BEFORE YOU DIG OR
CONSTRUCTION NOTICE FOR
10 WORKING DAYS BEFORE
START OF CONSTRUCTION
- STOP & CALL
Pennsylvania One
1-800-242-3176

BENNER PROPERTY SUBDIVISION
T.M.P.# 26-010-004-001
DOLLY LANE
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

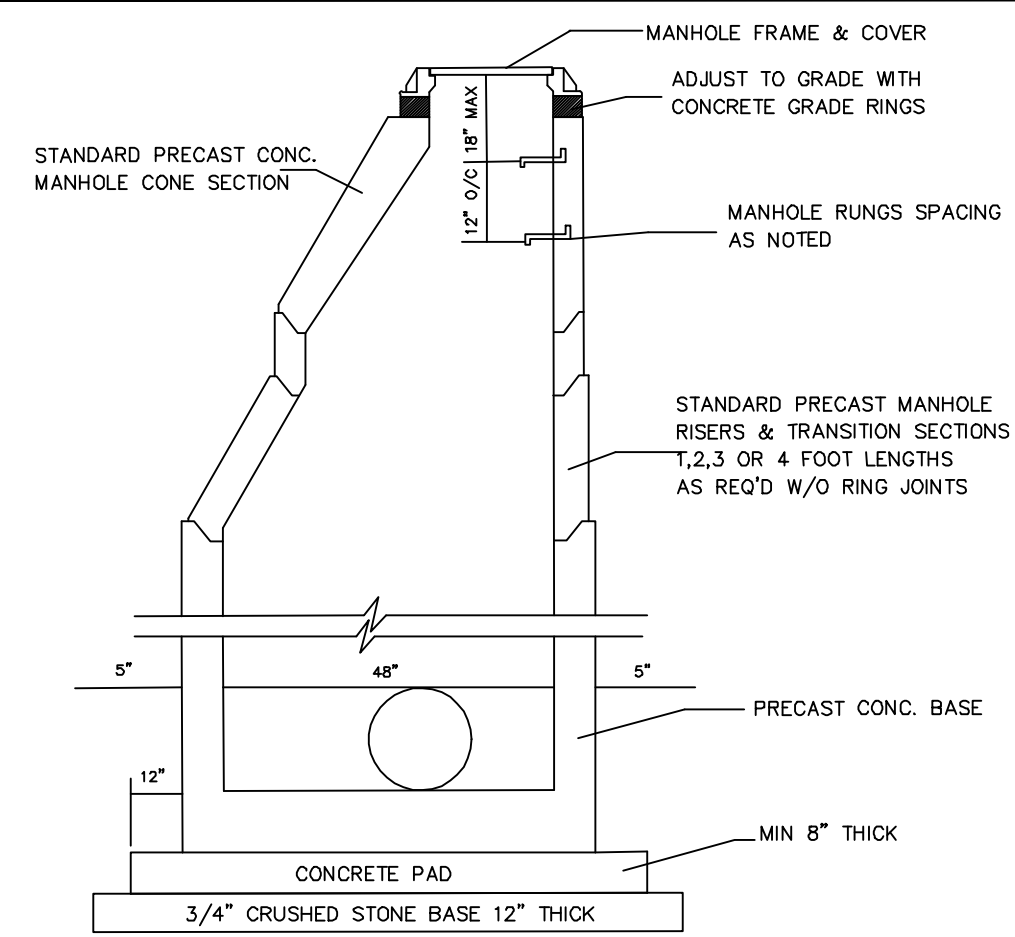
CONSTRUCTION DETAILS

REGISTERED PROFESSIONAL ENGINEER
KRISTIN R. HOLMES, P.E.
PA Lic. No. PE073604

File No. 1551_C3.1 DETAILS.DWG

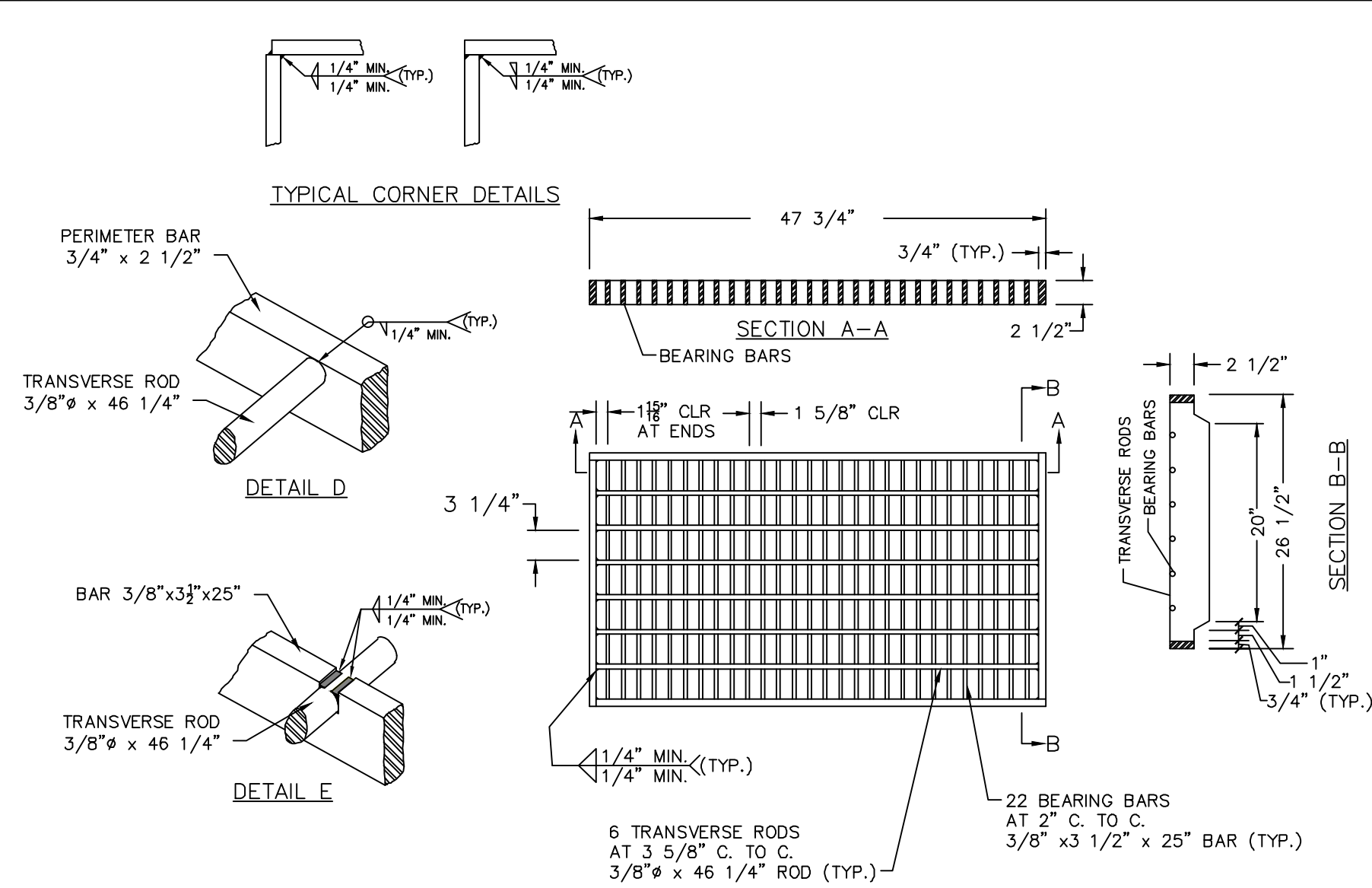
Date	Scale	N/T/S	HCE Job	1551	Designed	KH	Sheet	8 of 15
3/16/2021	N/T/S							

Drawing No. **C3.1**



- NOTES:
1. PRECAST CONCRETE MANHOLES SHALL BE AS DETAILED IN PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB #72M) RC-39M, STANDARD MANHOLES, PRECAST MANHOLES AND MANHOLE STEPS.
 2. STEPS SHALL BE PROVIDED WHENEVER STRUCTURE EXCEEDS 4 FEET IN DEPTH.
 3. STEP DIMENSIONS AND CONFIGURATION SHALL BE IN ACCORDANCE WITH PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB 172M) RC-39M.
 4. STEP AND STEP INSTALLATION SHALL MEET ALL REQUIREMENTS OF ASTM C 478 AND C 497 FOR DIMENSIONS, LOAD RATING AND PULLOUT RESISTANCE.
 5. PROVIDE FRAME AND GRATE AS DETAILED IN PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB 172M) RC-39M, STANDARD MANHOLES, COVERS, FRAMES AND ADJUSTMENT RISERS.
 6. THE CONTRACTOR SHALL PROVIDE CUT SHEETS TO ENGINEER TO REVIEW PRIOR TO CONSTRUCTION.
 7. STORM MANHOLE COVERS SHALL HAVE THE WORD "STORM" ON THE COVER IN 2-INCH HIGH LETTERS.

PRECAST CONCRETE STORM MANHOLE

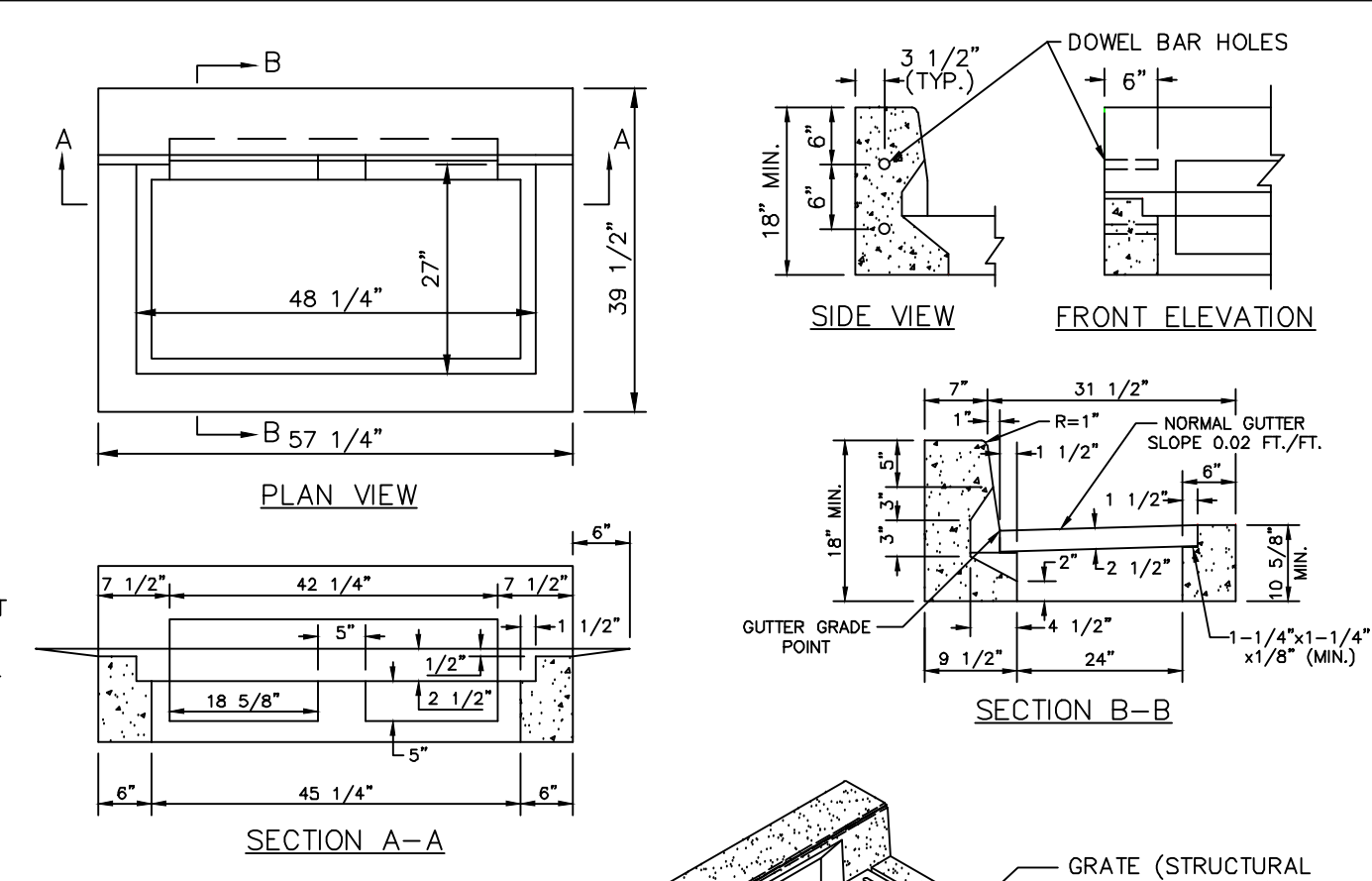


STRUCTURAL STEEL BICYCLE SAFE INLET GRATE DETAIL

- NOTE:
1. REFER TO "COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, BUREAU OF HIGHWAY DESIGN, STANDARDS FOR ROADWAY CONSTRUCTION", PAGE RC-34, SHEETS 1 and 2 of 9, LATEST ISSUE, FOR NOTES AND SPECIFICATIONS REGARDING PRECAST INLET CONSTRUCTION.
 2. ALL INLET TOP SHALL BE THE ENVIRONMENT TYPE.
 3. ALL INLET IN AREAS TO BE PAVED ARE TO BE BACKFILLED WITH 2A MATERIAL.

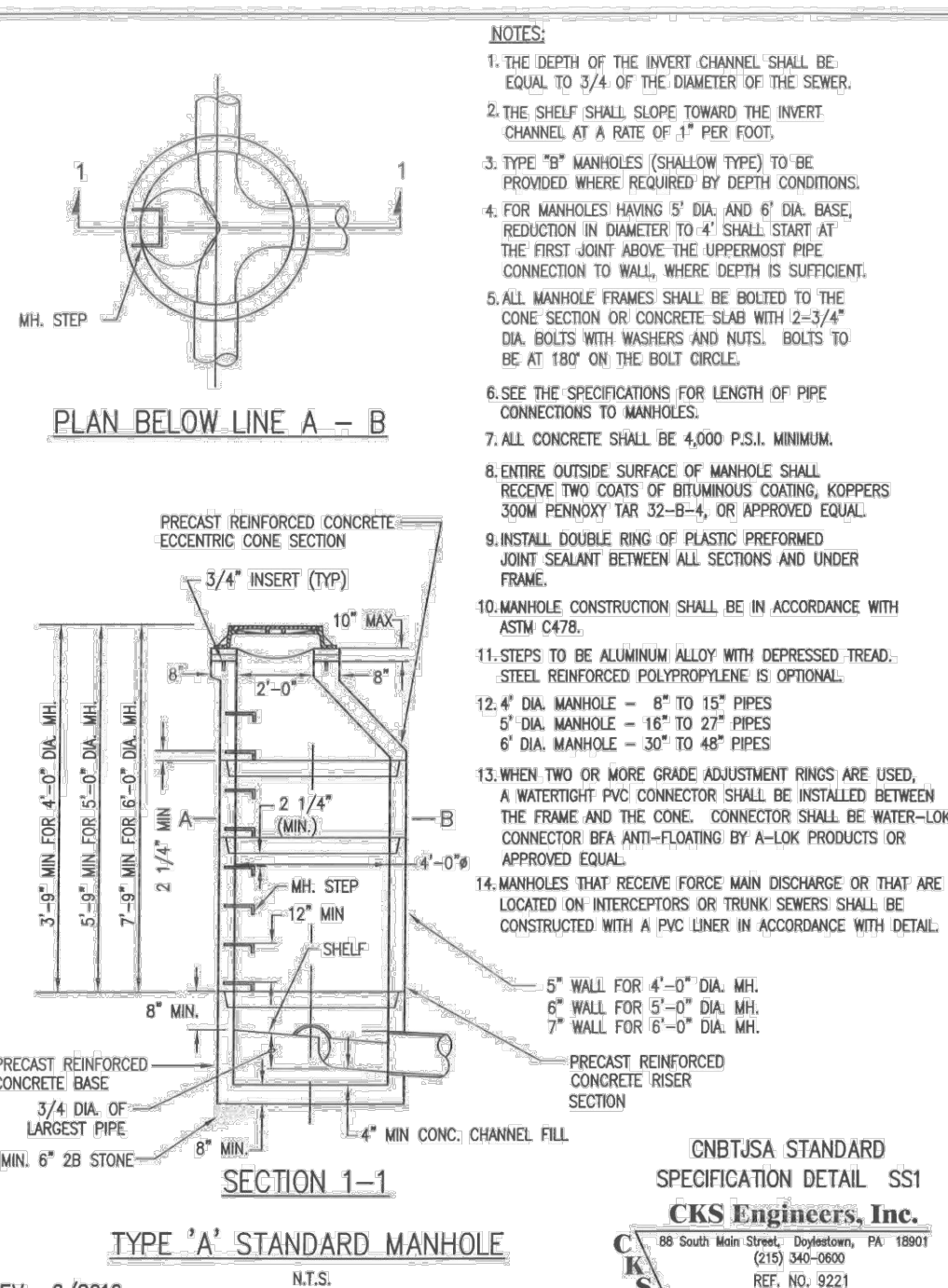
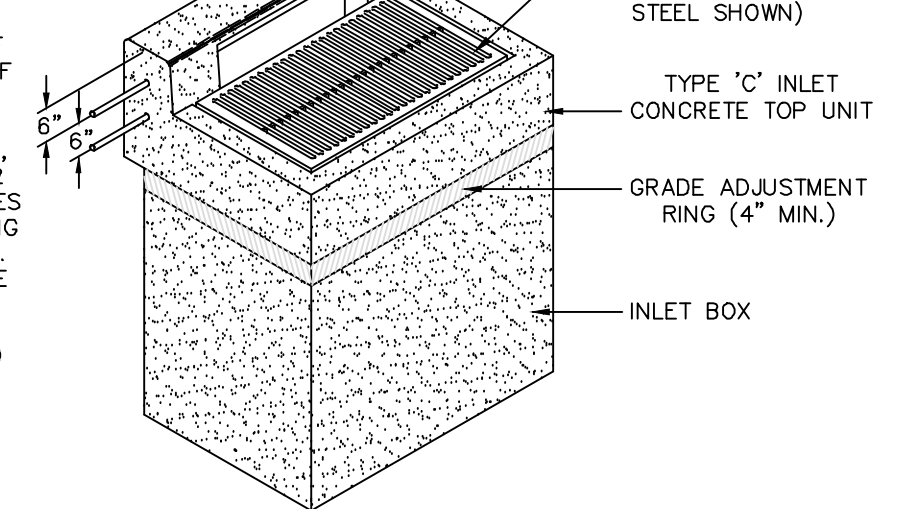
TYPE M INLET DETAIL

REFER TO DRAWING C6.1 FOR OUTLET STRUCTURE DETAILS AND INFORMATION

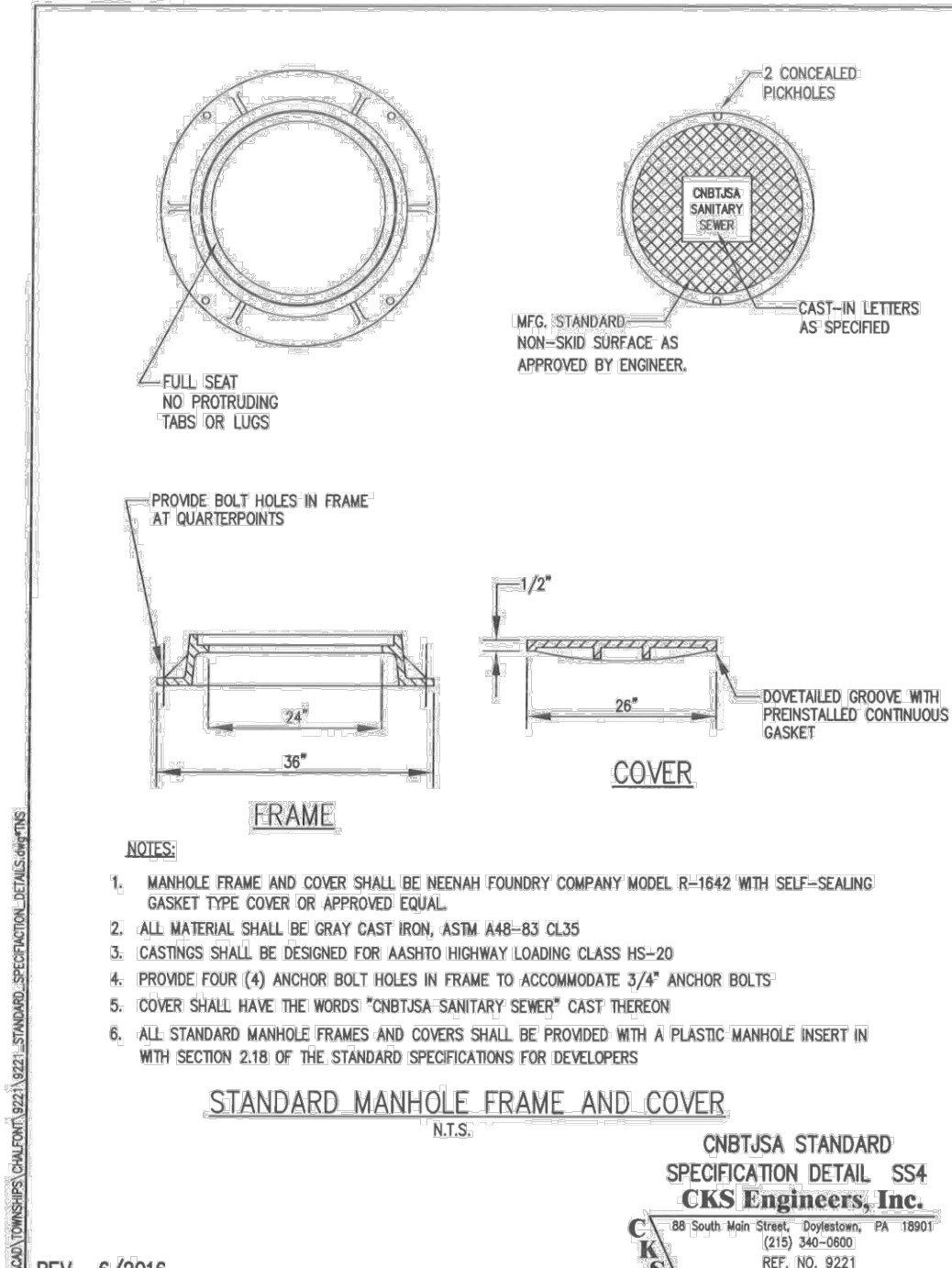


- NOTE:
1. REFER TO "COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, BUREAU OF HIGHWAY DESIGN, STANDARDS FOR ROADWAY CONSTRUCTION", PAGE RC-34, SHEETS 1 and 2 of 9, LATEST ISSUE, FOR NOTES AND SPECIFICATIONS REGARDING PRECAST INLET CONSTRUCTION.
 2. ALL INLET TOPS SHALL BE THE ENVIRONMENTAL TYPE.
 3. ALL INLETS IN AREAS TO BE PAVED ARE TO BE BACKFILLED WITH 2A MATERIAL.

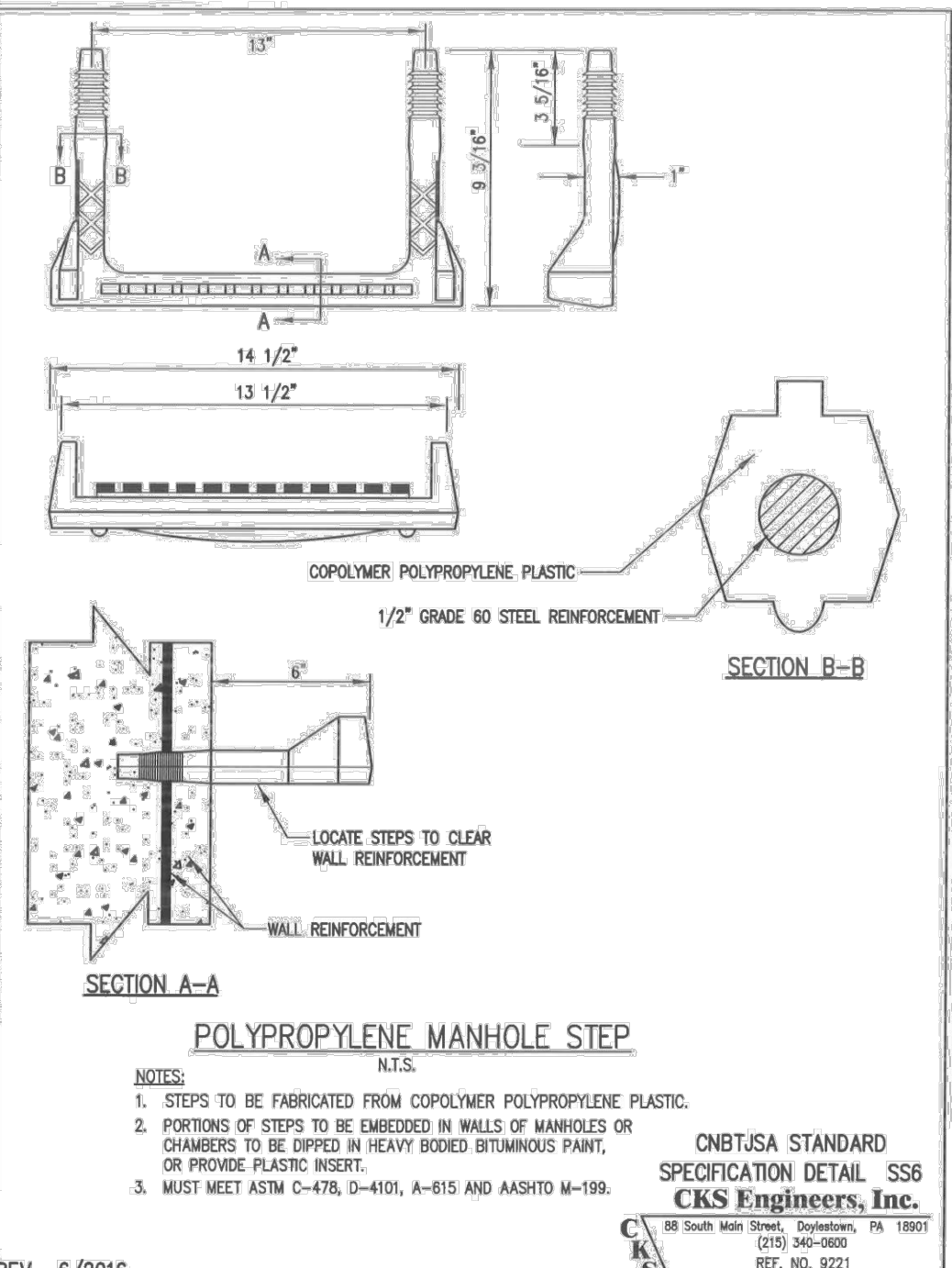
TYPE C INLET DETAIL



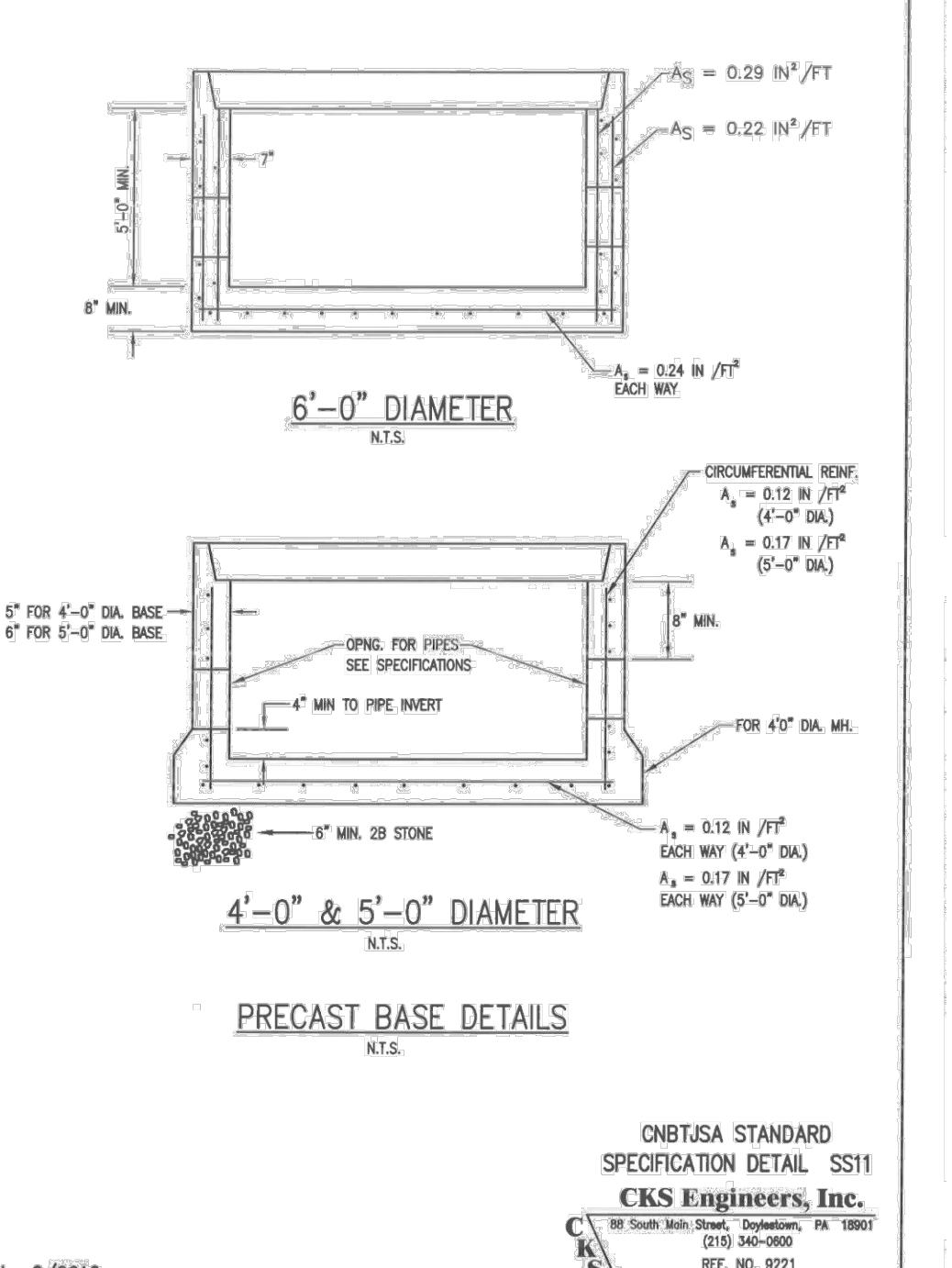
CNTBSA STANDARD SPECIFICATION DETAIL SS1
CKS Engineers, Inc.
88 South Main Street, Doylestown, PA 19507
(215) 340-0800
REF. NO. 9221



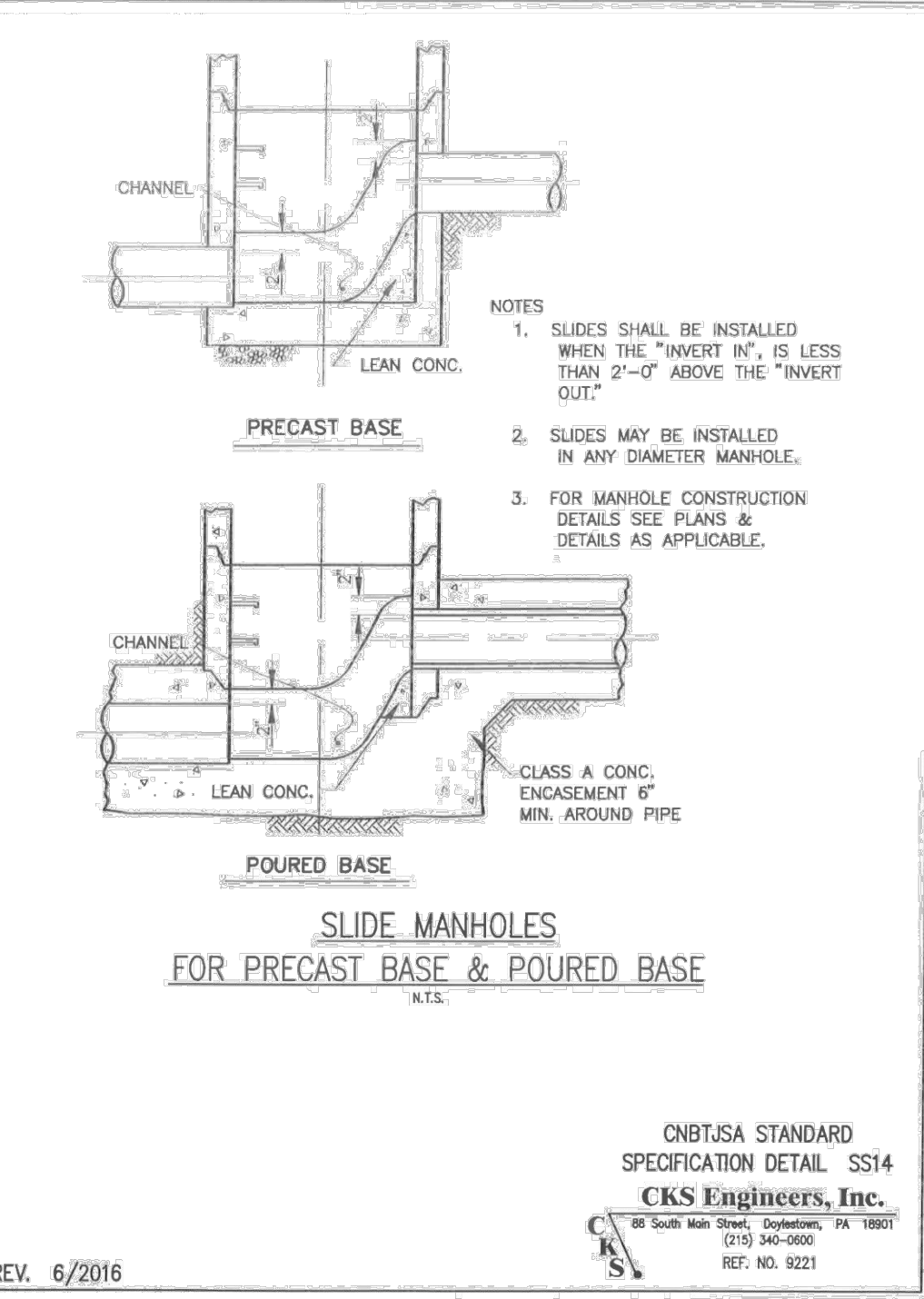
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CKS Engineers, Inc.
88 South Main Street, Doylestown, PA 19507
(215) 340-0800
REF. NO. 9221



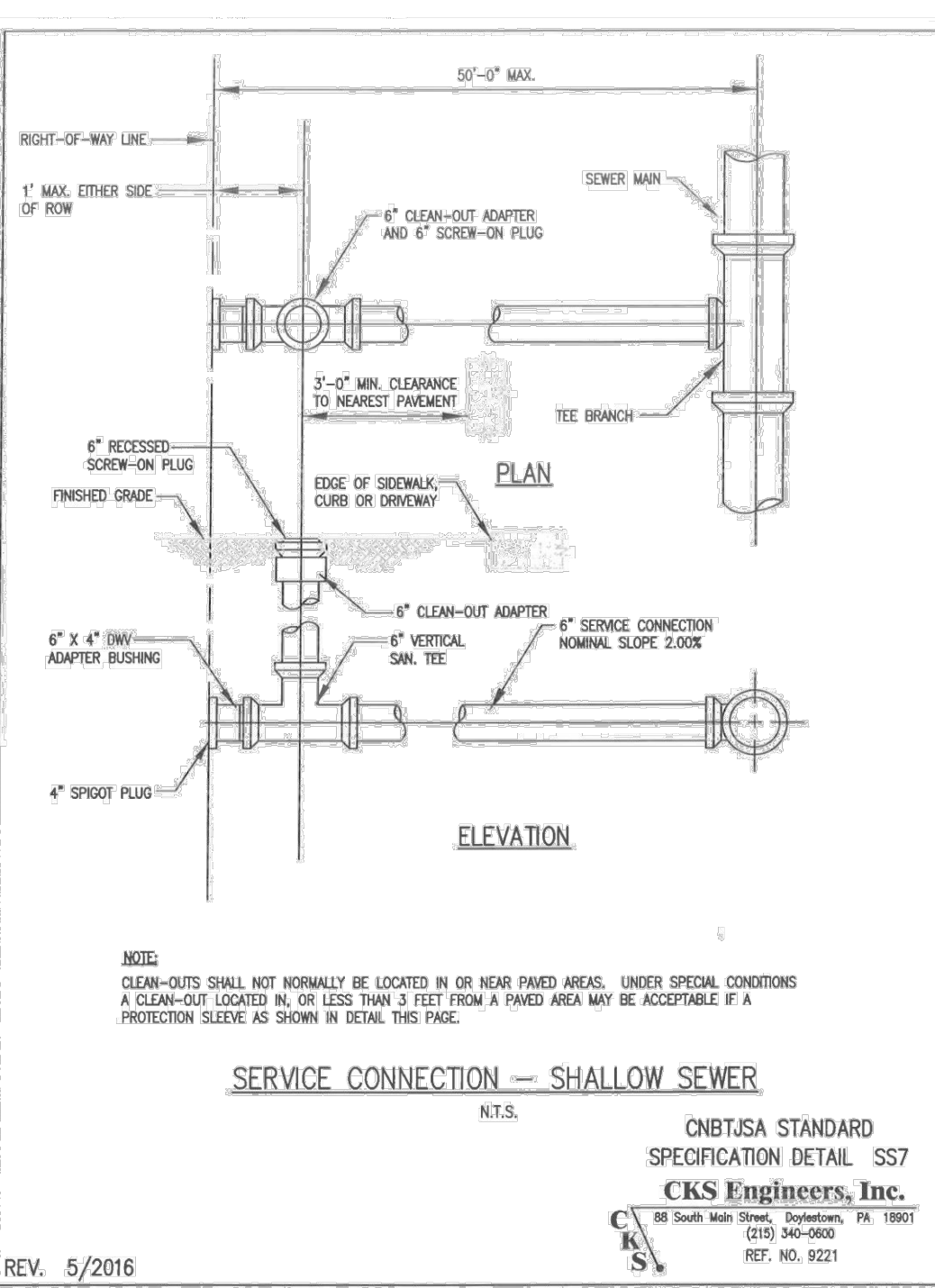
CNTBSA STANDARD SPECIFICATION DETAIL SS5
CKS Engineers, Inc.
88 South Main Street, Doylestown, PA 19507
(215) 340-0800
REF. NO. 9221



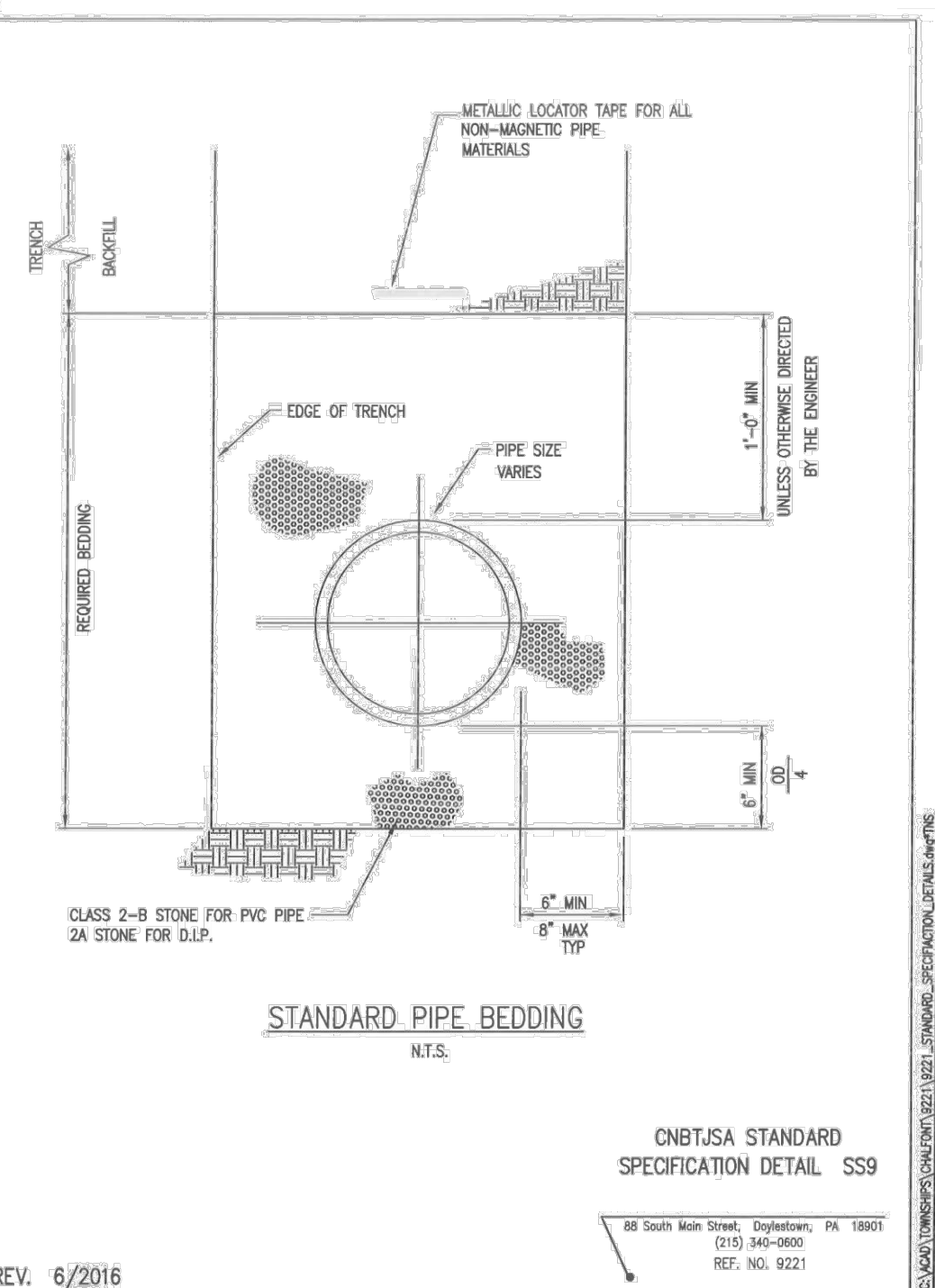
CNTBSA STANDARD SPECIFICATION DETAIL SS11
CKS Engineers, Inc.
88 South Main Street, Doylestown, PA 19507
(215) 340-0800
REF. NO. 9221



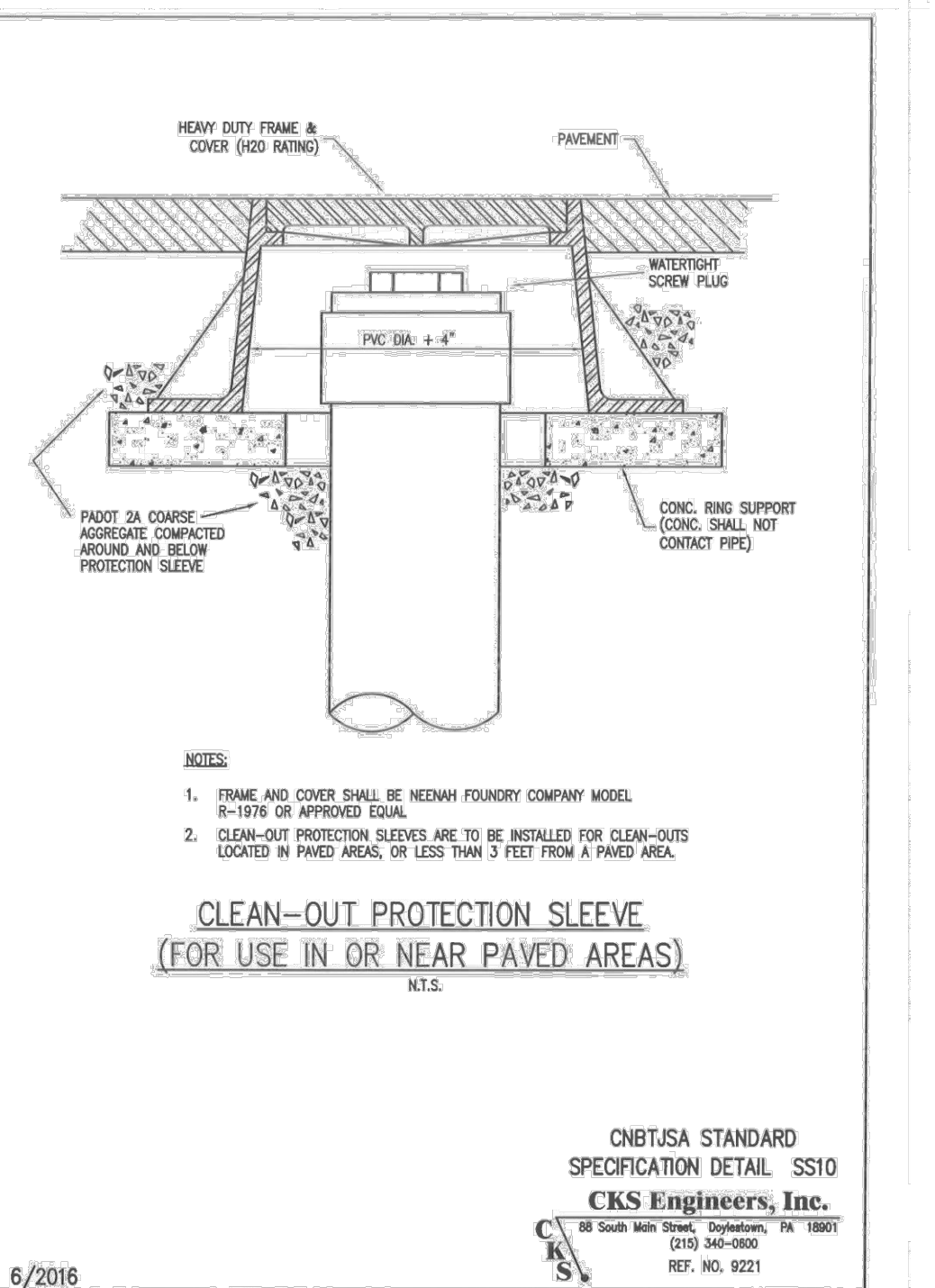
CNTBSA STANDARD SPECIFICATION DETAIL SS14
CKS Engineers, Inc.
88 South Main Street, Doylestown, PA 19507
(215) 340-0800
REF. NO. 9221



CNTBSA STANDARD SPECIFICATION DETAIL SS7
CKS Engineers, Inc.
88 South Main Street, Doylestown, PA 19507
(215) 340-0800
REF. NO. 9221



CNTBSA STANDARD SPECIFICATION DETAIL SS9
CKS Engineers, Inc.
88 South Main Street, Doylestown, PA 19507
(215) 340-0800
REF. NO. 9221



CNTBSA STANDARD SPECIFICATION DETAIL SS8
CKS Engineers, Inc.
88 South Main Street, Doylestown, PA 19507
(215) 340-0800
REF. NO. 9221

CONCRETE FLARED END SECTION
N.T.S.
NOTE: ALL NUMBERS REPRESENT INCHES UNLESS OTHERWISE SPECIFIED.

I.D.	12	15	18	24	30	36	42
A	2	2 1/2	2 1/2	3	3 1/2	4	4 1/2
R	4	6	9	9 1/2	12	15	21
S	48	46	46	30	19 3/4	34 3/4	35
T	24	27	27	43 1/2	54	63	63
U	6'-0"	6'-1"	6'-1"	6'-1 1/2"	6'-1 3/4"	6'-2"	6'-2"
V	24	30	36	48	60	72	78
WT. (POUNDS)	530	740	990	1520	2190	4100	5380

Hoimes Cunningham LLC
409 E. Butler Ave.
Unit 5
Doylestown, PA 18901
(215) 586-3330
www.hcengineering.net

REVISIONS

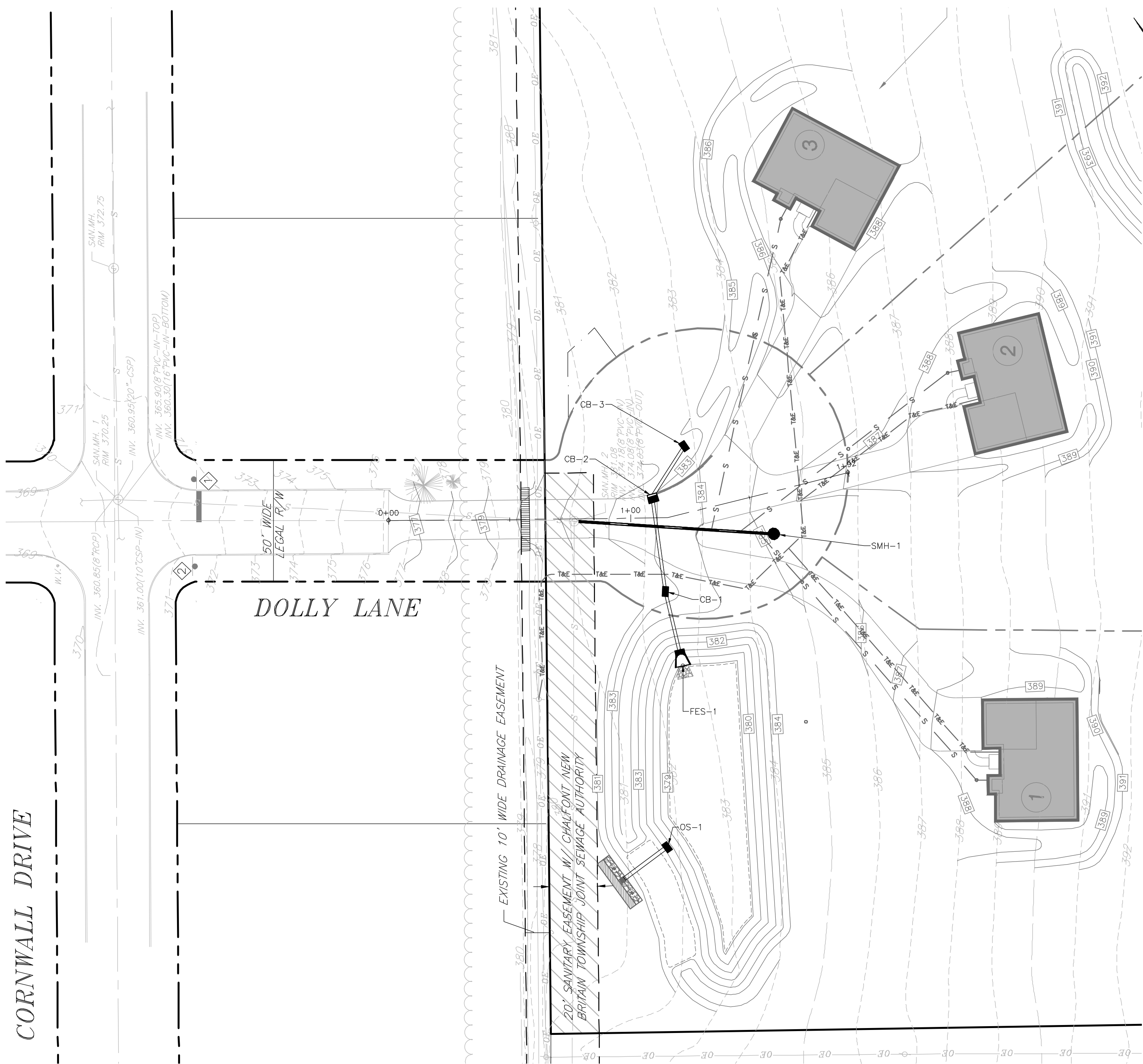
Date	Description	Revised per
9/21/2021	Revised per Township Engineer comments	

BENNER PROPERTY SUBDIVISION
T.M.P. # 26-010-004-001
DOLLY LANE
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

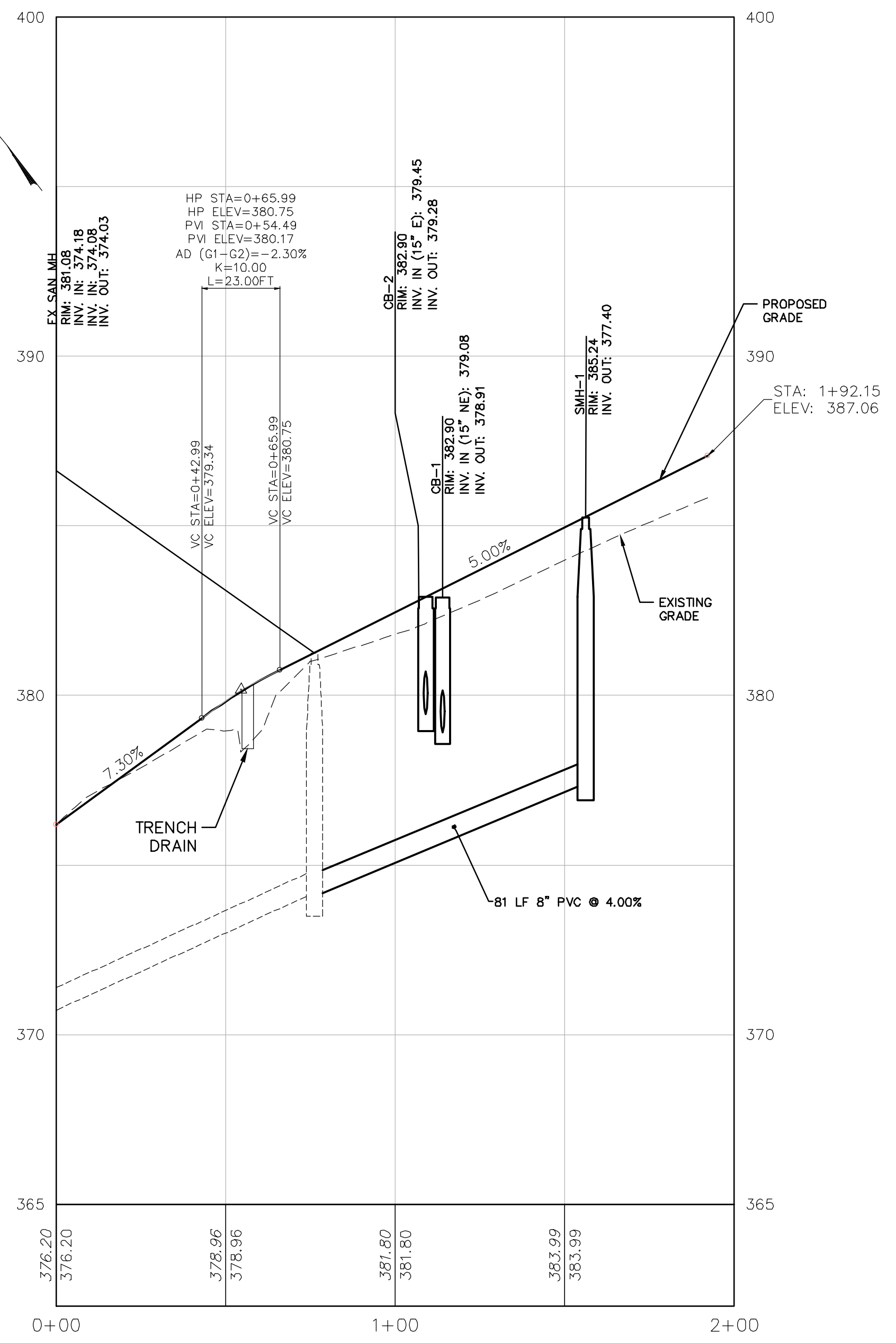
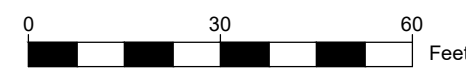
CONSTRUCTION DETAILS
PA Lic. No. PE073604
KRISTIN R. HOLMES, P.E.

File No.
1551_C3.1 DETAILS.DWG
Date 3/16/2021
Scale N.T.S.
HCE Job 1551
Designed KH
Sheet 9 of 15
Drawing No.
C3.2

CORNWALL DRIVE



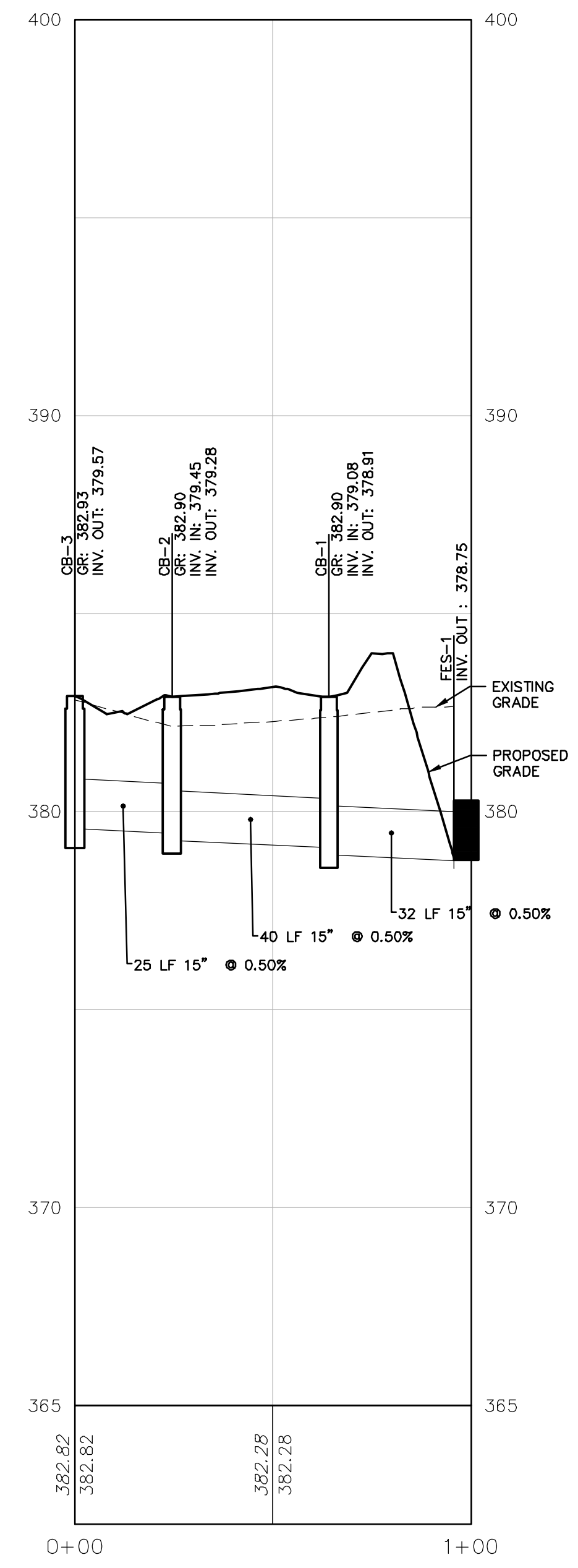
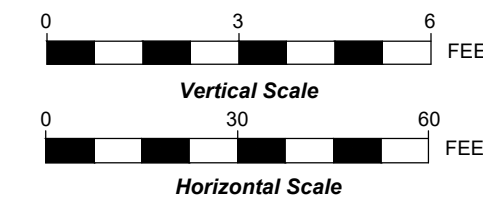
PLAN VIEW



DOLLY LANE EXTENSION PROFILE

PROFILE VIEW

STANDARD = PROPOSED PROFILE ELEVATION
 ITALICIZED = EXISTING PROFILE ELEVATION



CB-3 TO FES-1 PROFILE

Holmes Cunningham LLC
 409 E. Butler Ave,
 Unit 5
 Doylestown, PA 18901
 (215) 586-3330
 www.hcengineering.net

Date	Description	Revised per
9/21/2021	Revised per Township Engineer comments	

CALL BEFORE YOU DIG!!
 3 WORKING DAYS NOTICE FOR
 10 WORKING DAYS NOTICE FOR
 - STOP & CALL
 Pennsylvania One
 1-800-242-3178

UTILITY LOCATIONS AS SHOWN ON THIS
 DRAWING ARE THE RESPONSIBILITY OF THE CONTRACTOR.
 COMPANIES PRIOR TO ANY EXCAVATION.
 (SERIAL P08131199)

BENNER PROPERTY SUBDIVISION
 T.M.P.# 26-010-004-001
 DOLLY LANE
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

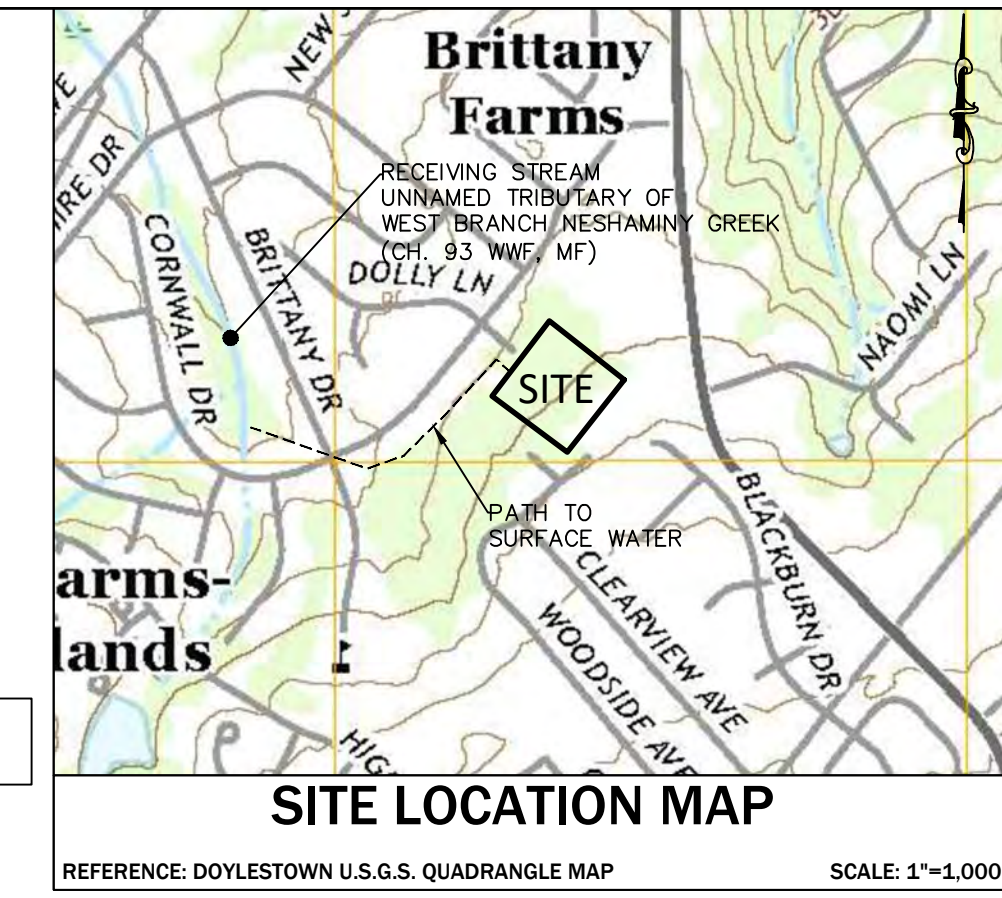
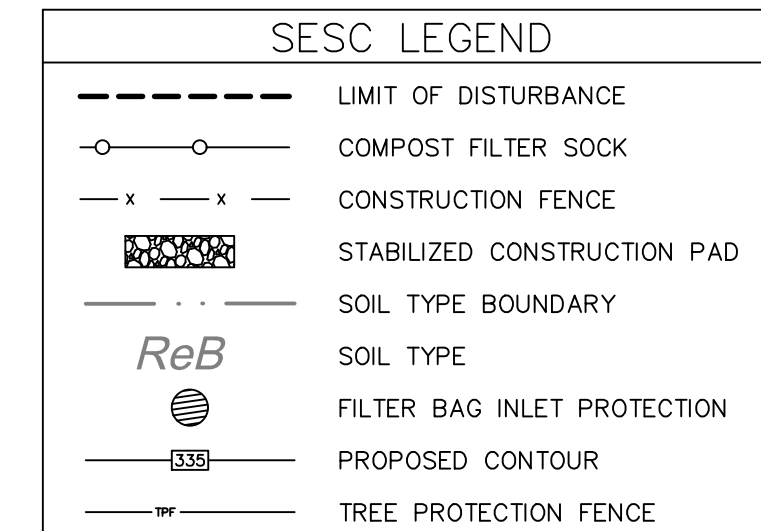
PROFILE PLAN

KRISTIN R. HOLMES, P.E.
 PA Lic. No. PE073604

File No.	1551_C4.0 PROFILE.DWG				
Date	3/16/2021	Scale	AS SHOWN	Sheet	10 of 15
HCE Job	1551	Designed	KH		
Drawing No.	C4.0				

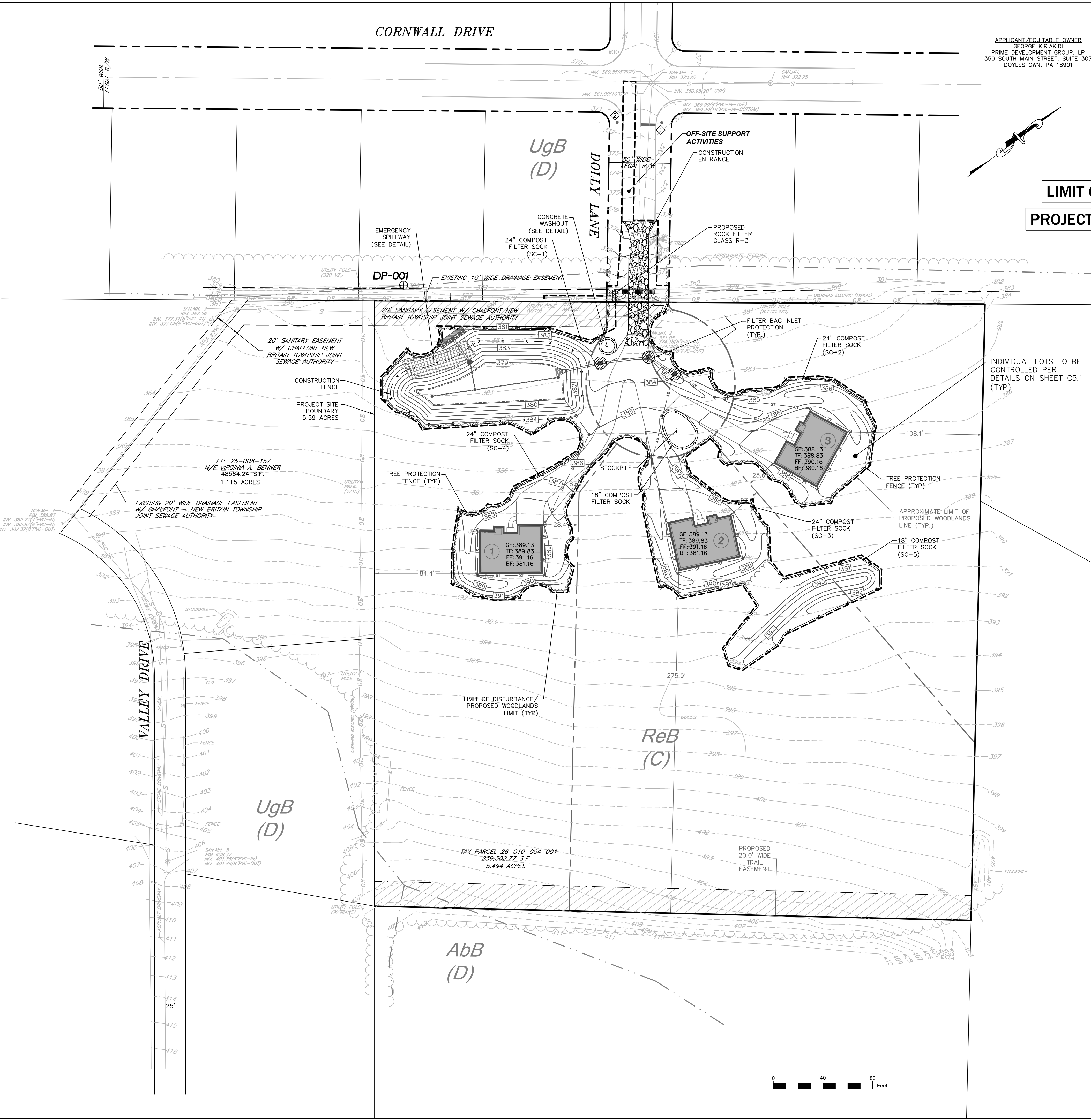
CORNWALL DRIVE

APPLICANT/EQUITABLE OWNER
GEORGE KIRAKIDI
PRIME DEVELOPMENT GROUP, LP
350 SOUTH MAIN STREET, SUITE 307
DOYLESTOWN, PA 18901



LIMIT OF DISTURBANCE = 1.20 ACRES
PROJECT SITE BOUNDARY = 5.59 ACRES

CRITICAL STAGES OF PCSM PLAN IMPLEMENTATION
THE INSTALLATION OF THE PROPOSED RAIN GARDEN WITH MRC, SHALL BE OVERSEEN BY A LICENSED PROFESSIONAL ENGINEER OR THEIR DESIGNEE.



SEQUENCE OF CONSTRUCTION

- NOTES:
- SITE DEVELOPMENT OPERATIONS SHOULD BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING GENERAL SEQUENCE OF OPERATIONS. THE CONTRACTOR MAY DEViate FROM THE STAGING OF PERMANENT SITE IMPROVEMENT CONSTRUCTION ITEMS, WITH APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR. DEVIATION FROM THE RELATIVE ORDER OF EROSION AND SEDIMENT CONTROL MEASURES SHOULD NOT OCCUR WITHOUT APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR AND SITE ENGINEER. NO VERTICAL CONSTRUCTION MAY OCCUR UNTIL SUBGRADE IS SET.
 - IF THE INDIVIDUAL LOTS WILL BE CONSTRUCTED ONE AT A TIME; THE E&S BMPs FOR THE INDIVIDUAL LOTS SHALL BE IMPLEMENTED PRIOR TO CONSTRUCTION.
 - CONTACT THE BUCKS COUNTY CONSERVATION DISTRICT (215-345-7577), NEW BRITAIN TOWNSHIP, AND THE TOWNSHIP ENGINEER AT LEAST THREE (3) WORKING DAYS PRIOR TO SITE DISTURBANCE.
 - EACH STAGE OF THE SEQUENCE OF CONSTRUCTION MUST BE COMPLETED PRIOR TO INITIATION OF THE NEXT STAGE OF THE SEQUENCE OF CONSTRUCTION. CONSTRUCTION MAY OVERLAP INTO A SUBSEQUENT PHASE AS LONG AS ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED IN THE PREVIOUS PHASE.
 - INSTALL CONSTRUCTION ENTRANCE AT SITE ACCESS, STOCKPILE, COMPOST FILTER SOCK AND TREE PROTECTION FENCE WHERE SHOWN ON THE PLAN. INSTALL CONSTRUCTION FENCE AROUND FUTURE BMPs.
 - STRIP TOPSOIL AND STOCKPILE WHERE SHOWN ON PLAN. ALL STRIPPED TOPSOIL STOCKPILES SHALL HAVE TEMPORARY SEEDING INSTALLED. ROUGH GRADE SITE, ROADWAY AND BUILDING PADS. INSTALL TEMPORARY EROSION CONTROL BLANKETS.
 - BEGIN CONSTRUCTION OF BUILDING FOUNDATIONS. BUILDING CONSTRUCTION MAY COINCIDE WITH ADDITIONAL SITE WORK, INCLUDING UTILITY AND STREET CONSTRUCTION, THAT IS LISTED IN THIS SEQUENCE OF CONSTRUCTION. PRIOR TO VERTICAL CONSTRUCTION, SUBGRADE IS TO BE SET, INCLUDING BUT NOT LIMITED TO FOUNDATION WORK, STABLE SUBGRADE/SUBBASE, SUBSURFACE UTILITY WORK, AND ROADWAY SUBGRADE.
 - INSTALL WATER, SANITARY SEWER, AND STORM SEWER SYSTEM STARTING AT THE DOWNSTREAM ENDS AND WORKING UPSTREAM. ALL TRENCHES SHALL BE BACKFILLED AT THE END OF EACH DAY. MAKE OFFSITE UTILITY CONNECTIONS AND INSTALL OFFSITE WATER AND SANITARY SEWER, INSTALL CURB, SUBBASE AND BASE COURSE FOR THE ROADS.
 - COMPLETE FINAL GRADING AND INSTALL WEARING COURSE AT EACH DRIVEWAY AFTER THE BUILDINGS ARE COMPLETED. AFTER FINAL GRADING IS COMPLETED, APPLY PERMANENT SEEDING MIXTURE AND INSTALL ALL REQUIRED PLANTINGS, FENCING, AND LIGHTING. LIGHTING SHALL BE INSTALLED PRIOR TO THE ISSUANCE OF ANY USE AND OCCUPANCY PERMITS. ONCE ALL BUILDINGS ARE COMPLETED, FLUSH ALL AFFECTED STORM DRAINAGE PIPES OF ACCUMULATED SILT.
 - INSTALL STORMWATER FACILITY UPON COMPLETING AND STABILIZING EACH TRIBUTARY AREA. INSTALLATION SHALL BE IN ACCORDANCE WITH THE PCSM PLANS, NOTES, AND DETAILS. INSTALLATION OF STORMWATER FACILITY IS A CRITICAL STAGE OF THE CONSTRUCTION SEQUENCE.
 - UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AFTER EACH STORM EVENT OR ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING, MUST BE PERFORMED IMMEDIATELY.
 - UPON COMPLETE STABILIZATION OF SITE, REMOVE EROSION CONTROL DEVICES, REMOVE TEMPORARY ORIFICE PLATES AND INSTALL PERMANENT STORMWATER BMPs PER THE CONSTRUCTION SEQUENCES AND DETAILS FOUND ON THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN. THE SITE SHALL BE CONSIDERED STABILIZED WHEN THE PERMANENT VEGETATION HAS PROVIDED A 70% GROUND COVER.
 - AFTER CONSTRUCTION IS COMPLETED, INSTALL WEARING COURSE FOR THE ROADS. REPAIR ANY DAMAGED CURBING, STORM SEWER STRUCTURES, SANITARY SEWER STRUCTURES, LANDSCAPING, LIGHTING, SIDEWALK, DRIVEWAYS, AND/OR ANY OTHER AMENITIES FROM INSTALLATION OF WEARING COURSE.
 - UPON COMPLETION OF ALL WORK, THE NOTICE OF TERMINATION (N.O.T.) FORM SHALL BE FILED WITH THE BUCKS COUNTY CONSERVATION DISTRICT.

GENERAL NOTES

- SITE GRADING SHALL NOT PROCEED UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- UNDER PENNSYLVANIA LAW, THE CONTRACTOR IS REQUIRED TO NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM AT 1-800-242-1776 PRIOR TO THE START OF HIS WORK, SO THAT ALL THE VARIOUS UNDERGROUND UTILITY OPERATORS WILL BE ABLE TO LOCATE THEIR OWN UTILITIES.
- THERE ARE NO HD OR EV WATERSHEDS LOCATED WITHIN THE PROJECT AREA.
- THERE IS NO RIPARIAN AREA OR BUFFER IDENTIFIED. THEREFORE, RIPARIAN BUFFER OBLIGATIONS APPLY TO THIS PROJECT.
- THERE ARE NO INFILTRATION BMPs LOCATED OUTSIDE PROPOSED GRADING AREAS.
- THE EXISTING SITE IS NOT UNDERLAIN BY ANY NATURALLY OCCURRING GEOLOGIC FORMATIONS OR SOIL CONDITIONS WHICH COULD CAUSE POLLUTION DURING EARTH DISTURBANCE. THEREFORE, NO LOCATIONS ARE IDENTIFIED ON THIS PLAN AND NO DETAILS ARE PROVIDED FOR DISPOSAL OF SUCH MATERIAL.
- SITE DISTURBANCE IS UNDER 10 ACRES THEREFORE A PHMC LETTER IS NOT REQUIRED.
- THERMAL IMPACTS WILL BE AVOIDED DURING CONSTRUCTION BY IMMEDIATELY STABILIZING DISTURBED AREAS. AFTER CONSTRUCTION, THERMAL IMPACTS WILL BE MINIMIZED BY FILTERING STORMWATER THROUGH STORMWATER FACILITIES AND DISCONNECTING IMPERVIOUS AREAS.

RECYCLING/ DISPOSAL OF MATERIALS

THE CONSTRUCTION WASTES ANTICIPATED INCLUDE DEMOLITION MATERIALS FROM THE BUILDING AND SITE DEMOLITION AND EXCESS BUILDING MATERIAL SUCH AS CONCRETE, WOOD, ETC.
ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ.), AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED OR DISCHARGED AT THE SITE.

SOIL TYPES						
SYM	UNIT NAME	HYDRIC (Y/N)	DEPTH TO BEDROCK (IN.)	DEPTH TO WATER TABLE (IN.)	HSG	FARMLAND CLASSIFICATION
ReB	Readington silt loam, 3 to 8 slopes	N	40-60	18-36	C	Statewide Importance
AbB	Abbottstown silt loam, 3 to 8 percent slopes	N	40-60	6-18	D	Statewide Importance
UgB	Urban land-Abbottstown complex, 0 to 8 percent slopes	N	40-60	6-18	D	Not Prime Farmland

SOIL NAME	LIMITATIONS OF PENNSYLVANIA SOILS PERTAINING TO EARTHMOVING													
	CUTBANKS CAVE	CORROSIVE TO CONCRETE/STEEL	DROUGHTY	EASILY ERODIBLE	FLOODING	DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE	HYDRIC/HYDRIC INCLUSIONS	LOW STRENGTH / LANDSLIDE PRONE	SLOW PERCOLATION	PIPING	POOR SOURCE OF TOPSOIL	FROST ACTION	SHRINK-SWELL POTENTIAL SINKHOLE	PONDING WETNESS
Abbottstown	X	C/S	X	X	X	X	X	X	X	X	X	X	X	X
Readington	X	C/S	X	X	X	X	X	X	X	X	X	X	X	X
Urbana	X	C/S	X	X	X	X	X	X	X	X	X	X	X	X

RESOLUTIONS TO LIMITATIONS:

Cutbanks Cave; Provide shoring during excavation
Corrosive to Steel/Concrete; Provide cathodic protection for concrete and steel
Droughty; Provide water truck during periods of drought and dry soil conditions
Easily Erodible; Provide an erosion control blanket on steep slopes and maintain existing vegetative cover in non-disturbed areas
Depth to Saturated Zone/Seasonal High Water Table; Provide pumped water filter bags where a saturated zone or SHWT is encountered
Hydric/Hydric Inclusions; Strip existing topsoil to indicating depth, import suitable fill for construction, and provide adequate site grading
Low Strength/Landslide Prone; Import suitable fill for topsoil stockpile and provide shoring during excavation
Slow Percolation; Replace soil with suitable fill for better percolation results
Piping; Provide cathodic protection for pipes
Poor Source of Topsoil; Import suitable fill for topsoil
Frost Action; Provide capillary flow path breaks in soils
Shrink-Swell; Compact to required dry density or Remove and Replace with suitable material
Wetness; Minimize soil compaction for increased infiltration of water into the soil and provide adequate site grading

Holmes Cunningham LLC
409 E. Butler Ave.
Unit 5
Doylestown, PA 18901
(215) 586-3330
www.hcengineering.net

REVISIONS	Description	Date
1	Revised per Township Engineer comments	9/21/2021

BENNER PROPERTY SUBDIVISION
T.M.P. # 26-010-004-001
DOLLY LANE
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

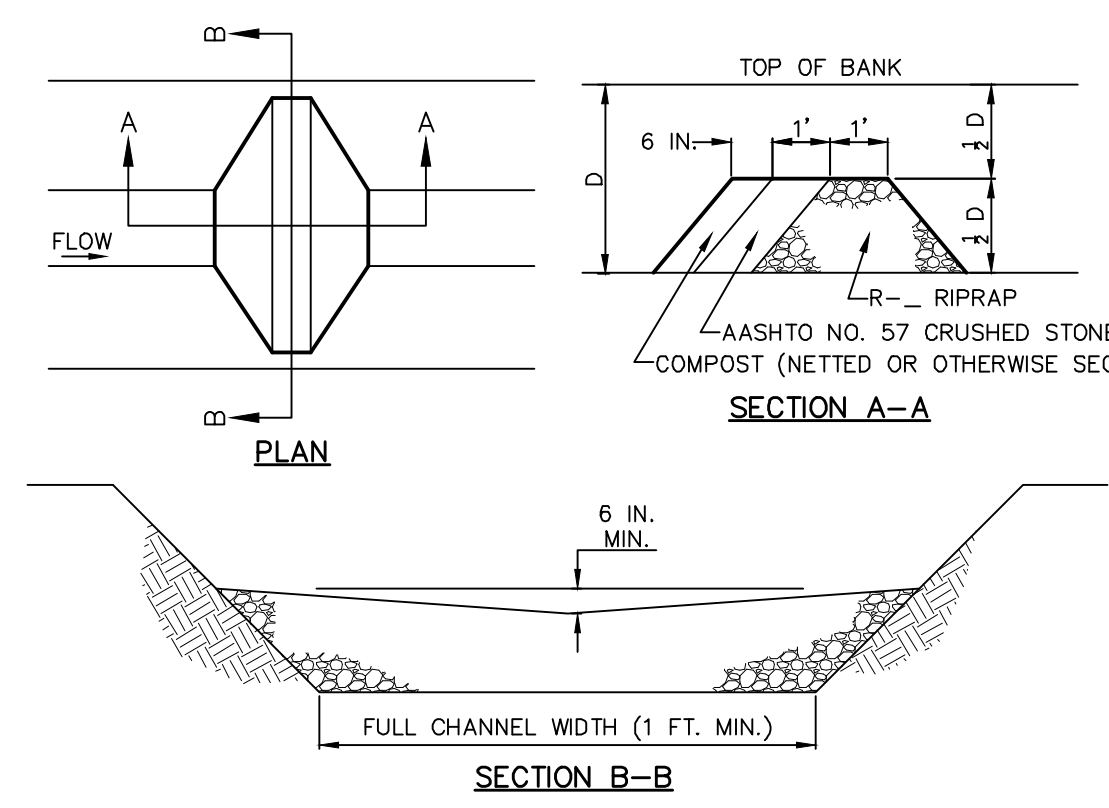
SOIL EROSION AND SEDIMENT CONTROL PLAN

KRISTIN R. HOLMES, P.E.
PA Lic. No. PE073604

File No.
1551_C5.0 E&S.DWG

Date: 3/16/2021
Scale: 1"=40'
HCE Job: 1551
Designed: KH
Sheet: 11 of 15

Drawing No.
C5.0

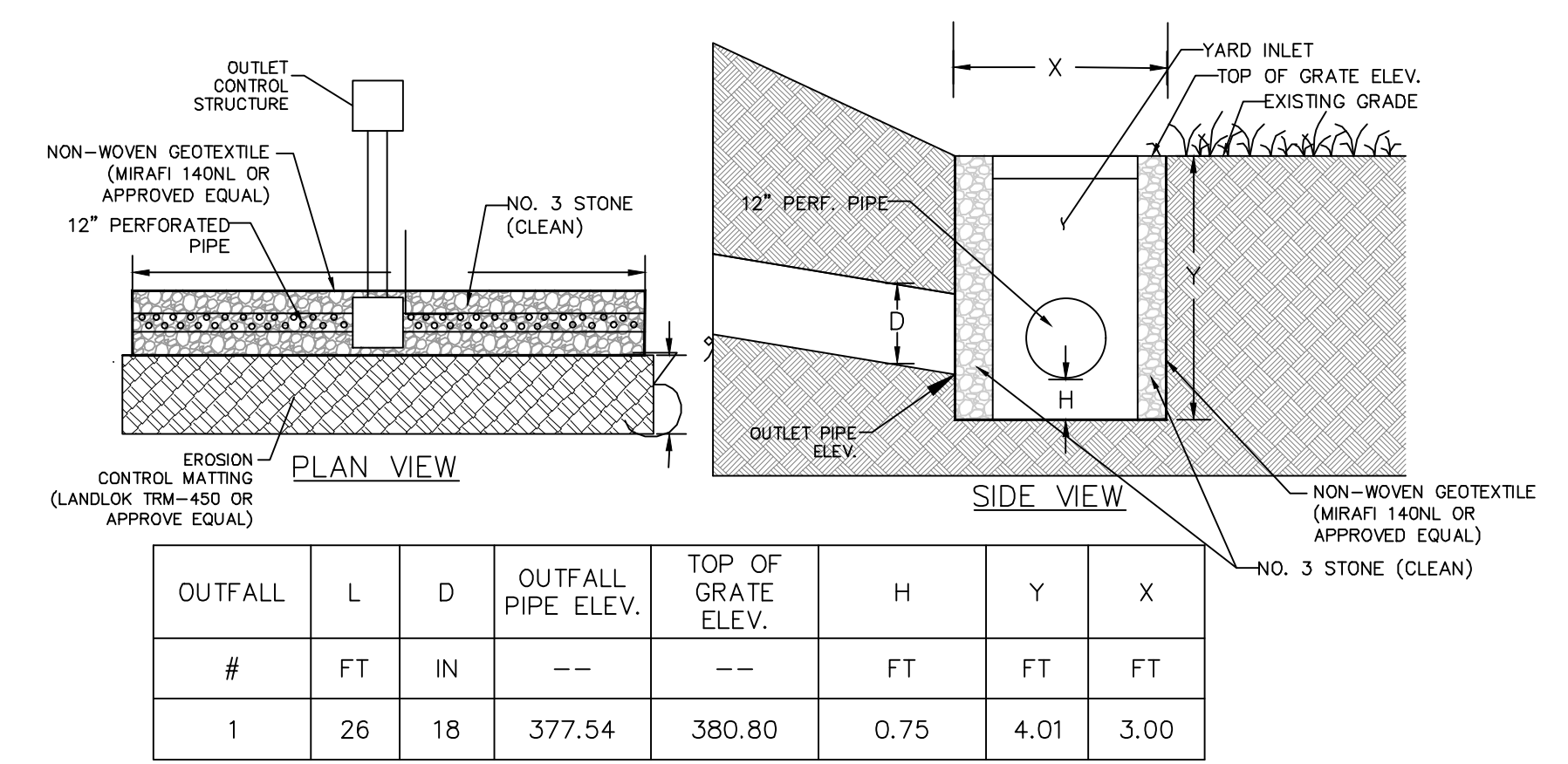


NOTES:
 SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTERS.
 IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.

ROCK FILTER NO.	LOCATION	D (FT)	RIPRAP SIZE R--
1	EXISTING SWALE (SEE E&S PLAN)	1.5	3

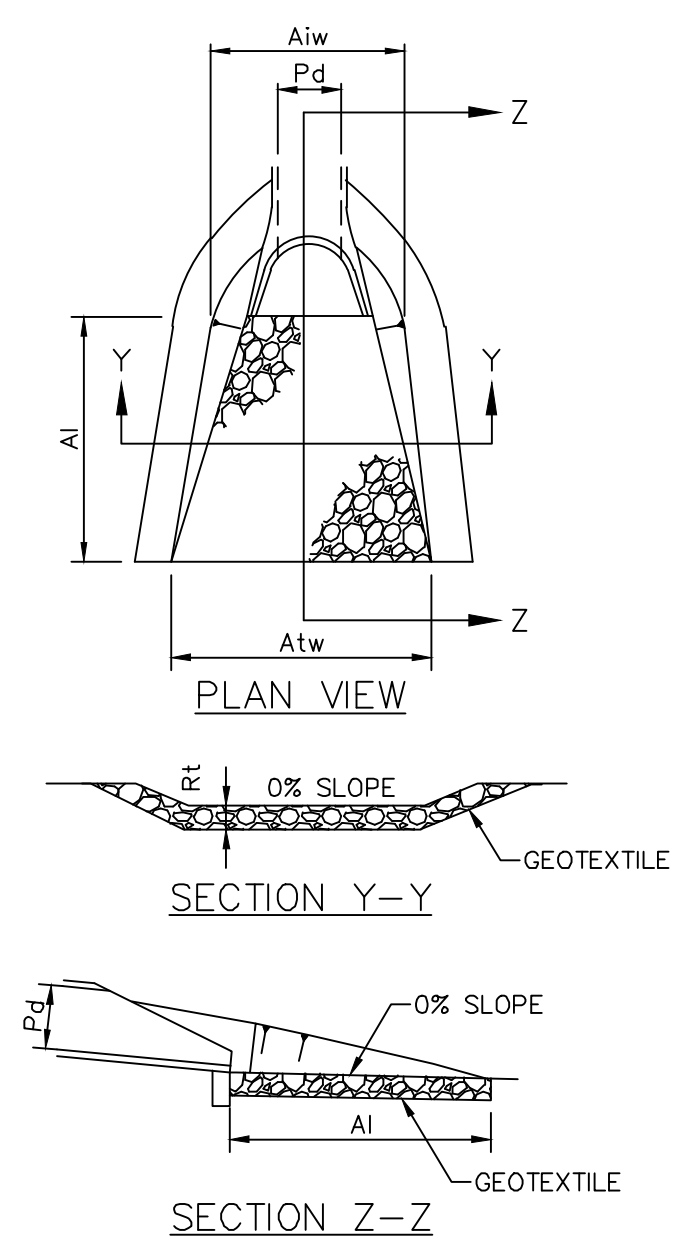
FOR D ≥ 3 FT. - USE R-4
 FOR D ≥ 2 FT. TO D < 3 FT. - USE R-3
 NOT APPLICABLE FOR D < 2 FT.

STANDARD CONSTRUCTION DETAIL #4-14
 ROCK FILTER
 NOT TO SCALE



OUTFALL #	L FT	D IN	OUTFALL PIPE ELEV.	TOP OF GRATE ELEV.	H FT	Y FT	X FT
1	26	18	377.54	380.80	0.75	4.01	3.00

LEVEL SPREADER



OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP			APRON	
		SIZE R--	THICK. Rt (IN)	LENGTH Ai (FT)	INITIAL WIDTH Aiw (FT)	TERMINAL WIDTH Atw (FT)
RRA-1	15	3	9	6.00	3.75	6.15

NOTES:
 ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.
 ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #9-1
 RIPRAP APRON AT PIPE OUTLET
 WITH FLARED END SECTION OR ENDWALL

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CALL BEFORE YOU DIG II
 3 WORKING DAYS NOTICE FOR
 10 WORKING DAYS NOTICE FOR
 15 WORKING DAYS NOTICE FOR
 -- STOP & CALL --
 Pennsylvania One
 1-800-242-3178

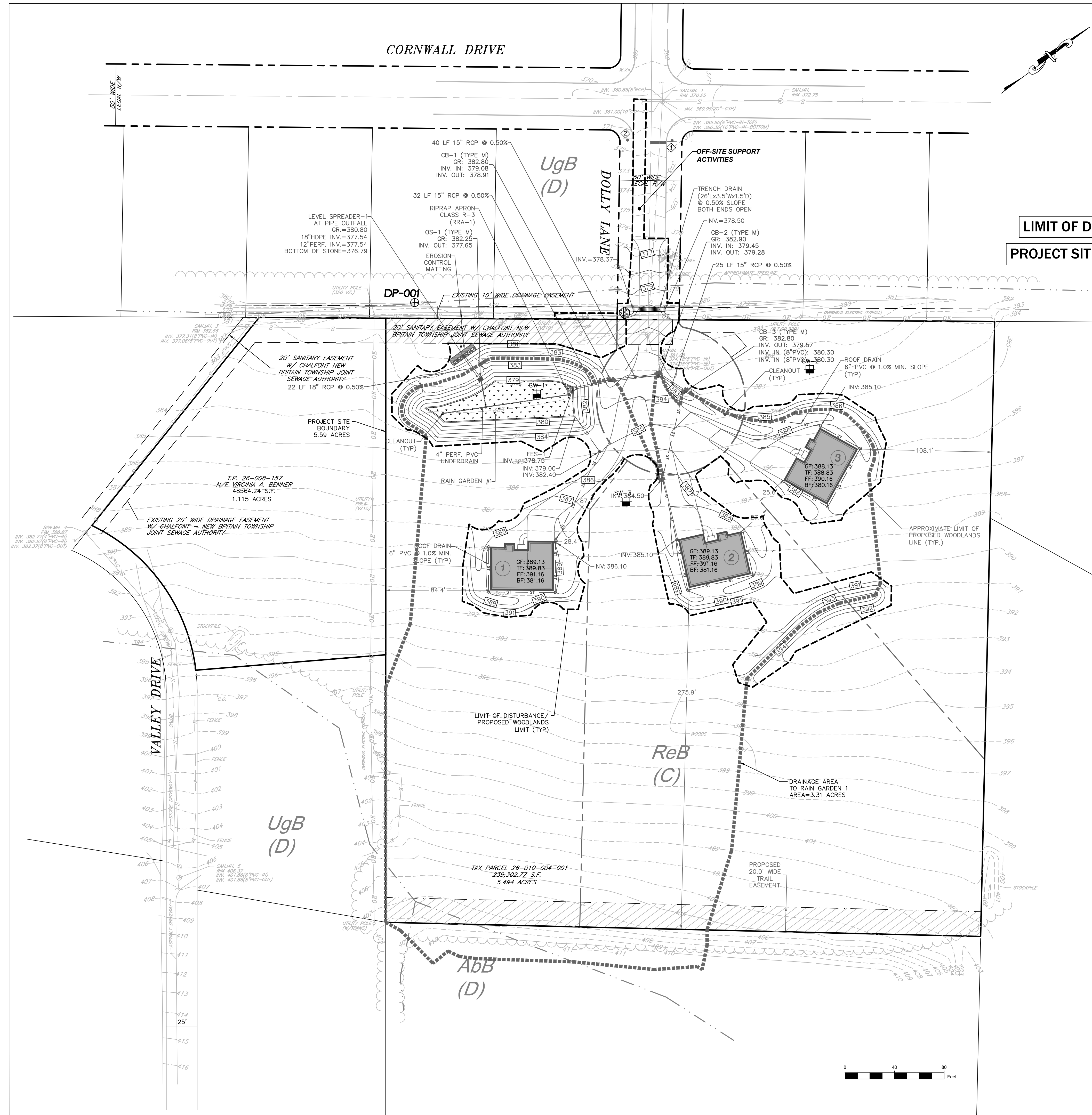
BENNER PROPERTY SUBDIVISION
 T.M.P.# 26-010-004-001
 DOLLY LANE
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

SOIL EROSION AND SEDIMENT CONTROL DETAILS

KRISTIN R. HOLMES, P.E.
 PA Lic. No. PE073604

File No.	1551_C5.0 E&S.DWG		
Date	3/16/2021	Scale	N.T.S.
Designed	KH	Checked	KH
Sheet	13	of	15

Drawing No.
C5.2



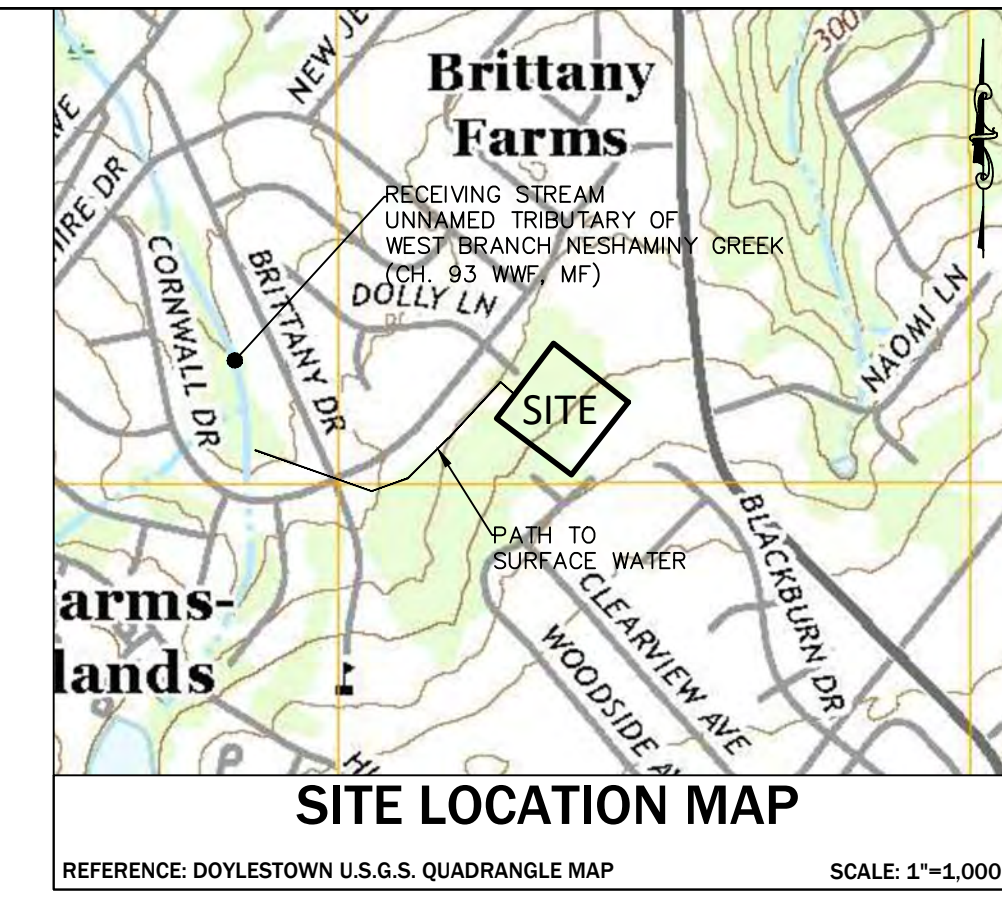
PCSM LEGEND

---	LIMIT OF DISTURBANCE
---	PROJECT SITE BOUNDARY
---	SOIL TYPE BOUNDARY
---	SOIL TYPE
-----	DRAINAGE AREA TO INF. BMP
.....	INFILTRATION BMP SOIL/ ERMIX-180 RAIN GARDEN SEED MIX
SW-1	TEST PIT LOCATION

CRITICAL STAGES OF PCSM PLAN IMPLEMENTATION
 THE INSTALLATION OF THE PROPOSED RAIN GARDEN WITH MRC, SHALL BE OVERSEEN BY A LICENSED PROFESSIONAL ENGINEER OR THEIR DESIGNEE.

LIMIT OF DISTURBANCE = 1.20 ACRES
PROJECT SITE BOUNDARY = 5.59 ACRES

APPLICANT/EQUITABLE OWNER
 GEORGE KIRIAKIDIS
 PRIME DEVELOPMENT GROUP, LP
 350 SOUTH MAIN STREET, SUITE 307
 DOYLESTOWN, PA 18901



APPLICANT'S ACKNOWLEDGEMENT
 I, KRISTIN HOLMES, ON THIS DATE, HEREBY CERTIFY THAT THE STORMWATER MANAGEMENT PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE NEW BRITAIN TOWNSHIP.

DESIGN ENGINEER CERTIFICATION
 I, KRISTIN HOLMES, P.E., ON THIS DATE, HEREBY CERTIFIES THAT THE STORMWATER MANAGEMENT PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE NEW BRITAIN TOWNSHIP.

KRISTIN R. HOLMES, P.E.
 PA LICENSE # PE073604

Test Pit Elevations

Test Pit #	Approx. Ground Surf. Elev. (ft)	Rock Elevation (ft)	Groundwater Elevation (ft)
SW-1	382.5	< 375.5 (NE)	< 375.5 (NE)
SW-2	382.7	< 375.7 (NE)	< 375.7 (NE)
SW-3	386.8	< 379.8 (NE)	< 379.8 (NE)

*NE = Not Encountered

GENERAL NOTES

- SITE GRADING SHALL NOT PROCEED UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- UNDER PENNSYLVANIA LAW, THE CONTRACTOR IS REQUIRED TO NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM AT 1-800-242-1776 PRIOR TO THE START OF HIS WORK, SO THAT ALL THE VARIOUS UNDERGROUND UTILITY OPERATORS WILL BE ABLE TO LOCATE THEIR OWN UTILITIES.
- THERE ARE NO HQ OR EV WATERSHEDS LOCATED WITHIN THE PROJECT AREA.
- THERE IS NO RIPARIAN AREA OR BUFFER IDENTIFIED. THEREFORE, RIPARIAN BUFFER OBLIGATIONS APPLY TO THIS PROJECT.
- THERE ARE NO INFILTRATION BMPs LOCATED OUTSIDE PROPOSED GRADING AREAS.
- THE EXISTING SITE IS NOT UNDERLAIN BY ANY NATURALLY OCCURRING GEOLOGIC FORMATIONS OR SOIL CONDITIONS WHICH COULD CAUSE POLLUTION DURING EARTH DISTURBANCE. THEREFORE, NO LOCATIONS ARE IDENTIFIED ON THIS PLAN AND NO DETAILS ARE PROVIDED FOR DISPOSAL OF SUCH MATERIAL.
- SITE DISTURBANCE IS UNDER 10 ACRES THEREFORE A PHMC LETTER IS NOT REQUIRED.
- THERMAL IMPACTS WILL BE AVOIDED DURING CONSTRUCTION BY IMMEDIATELY STABILIZING DISTURBED AREAS. AFTER CONSTRUCTION, THERMAL IMPACTS WILL BE MINIMIZED BY FILTERING STORMWATER THROUGH STORMWATER FACILITIES AND DISCONNECTING IMPERVIOUS AREAS.
- THE STORMWATER MANAGEMENT FACILITY HAVE BEEN DESIGN TO HANDLE 2,500 SQUARE FEET EXTRA IMPERVIOUS ON EACH LOT.

MINIMIZE IMPERVIOUS AREAS
 THE PROJECT HAS LIMITED IMPERVIOUS AREAS PROPOSED TO THE MAXIMUM EXTENT POSSIBLE. THE SITE PLAN HAS CLUSTERED THE DEVELOPMENT TO REDUCE THE EXTENT OF PROPOSED ROADWAYS AND THE DRIVEWAYS ARE THE MINIMUM ACCEPTABLE LENGTH.

PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION
 THE LIMIT OF DISTURBANCE IS MINIMIZED TO REDUCE THE DISTURBANCE TO THE EXISTING FEATURES. THE EXISTING VEGETATION AROUND THE PERIMETER OF THE SITE IS TO REMAIN TO THE MAXIMUM EXTENT POSSIBLE. THERE IS NO PROPOSED DISTURBANCE TO DRAINAGE FEATURES.

MINIMIZE LAND CLEARING
 THE PROJECT HAS LIMITED THE SOIL DISTURBANCE AREA TO THE MAXIMUM EXTENT POSSIBLE AND LAND CLEARING IS LIMITED TO THE AREAS SHOWN ON THE PLAN.

STRUCTURAL AND NON-STRUCTURAL BMPs TO DECREASE STORMWATER RUNOFF
 RE-VEGETATE DISTURBED AREAS: ALL DISTURBED AREAS WILL BE PERMANENTLY SEEDED OR LANDSCAPED. ADDITIONALLY, NEW TREES WILL BE PLANTED THROUGH THE SITE TO REDUCE THE THERMAL IMPACTS OF IMPERVIOUS SURFACES AND REDUCE RUNOFF VOLUME THROUGH TRANSPIRATION.

ROOFTOP DISCONNECTION: DISCONNECTING ROOF LEADERS FROM CONVENTIONAL STORMWATER CONVEYANCE SYSTEMS ALLOWS ROOFTOP RUNOFF TO BE COLLECTED AND MANAGED ON SITE. ROOFTOP RUNOFF CAN BE DIRECTED TO DESIGNATED AREAS FOR ON-SITE STORAGE, TREATMENT AND VOLUME CONTROL. THE PROPOSED ROOF LEADERS FOR EACH DWELLING UNIT WILL DISCHARGE TO VEGETATED AREAS.

SOIL TYPES

SYM	UNIT NAME	HYDRIC (Y/N)	DEPTH TO BEDROCK (IN.)	DEPTH TO WATER TABLE (IN.)	HSG	FARMLAND CLASSIFICATION
ReB	Readington silt loam, 3 to 8 slopes	N	40-60	18-36	C	Statewide Importance
AbB	Abbotstown silt loam, 3 to 8 percent slopes	N	40-60	6-18	D	Statewide Importance
UgB	Urban land-Abbotstown complex, 0 to 8 percent slopes	N	40-60	6-18	D	Not Prime Farmland

LIMITATIONS OF PENNSYLVANIA SOILS PERTAINING TO EARTHMOVING

SOIL NAME	CUTBANKS CAVE	CORROSIVE TO CONCRETE/STEEL	DROUGHTY	EASILY ERODIBLE	FLOODING	DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE	HYDRIC/HYDRIC INCLUSIONS	LOW STRENGTH / LANDSLIDE PRONE	SLOW PERCOLATION	PIPING	POOR SOURCE OF TOPSOIL	FROST ACTION	SHRINK-SWELL	POTENTIAL SINKHOLE	PONDING	WETNESS
Abbotstown	X	C/S	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Readington	X	C/S	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Urbana	X	C/S	X	X	X	X	X	X	X	X	X	X	X	X	X	X

RESOLUTIONS TO LIMITATIONS:
 Cutbanks Cave; Provide shoring during excavation
 Corrosive to Steel/Concrete; Provide cathodic protection for concrete and steel
 Droughty; Provide water truck during periods of drought and dry soil conditions
 Easily Erodible; Provide an erosion control blanket on steep slopes and maintain existing vegative cover in non-disturbed areas
 Depth to Saturated Zone/Seasonal High Water Table; Provide pumped water filter bags where a saturated zone or SHWT is encountered
 Hydric/Hydric Inclusions; Strip existing topsoil to indicating depth, import suitable fill for construction, and provide adequate site grading
 Low Strength/Landslide Prone; Import suitable fill for topsoil stockpile and provide shoring during excavation
 Slow Percolation; Replace soil with suitable fill for better percolation results
 Piping; Provide cathodic protection for pipes
 Poor Source of Topsoil; Import suitable fill for topsoil
 Frost Action; Provide capillary flow path breaks in soils
 Shrink-Swell; Compact to required dry density or Remove and Replace with suitable material
 Wetness; Minimize soil compaction for increased infiltration of water into the soil and provide adequate site grading

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8/21/2021	Revised per Township Engineer comments	

BENNER PROPERTY SUBDIVISION
 T.M.P. # 26-010-004-001
 DOLLY LANE
 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

KRISTIN R. HOLMES, P.E.
 PA Lic. No. PE073604

File No.
 1551_C6.0_PCSM.DWG

Date 3/16/2021
 Scale 1"=40'
 HCE Job 1551
 Designed KH
 Sheet 14 of 15

Drawing No.
C6.0

SEEDING NOTES:

TEMPORARY SEEDING:

- 1. TEMPORARY SEEDING SHALL BE DONE IN AREAS WHERE NO ACTIVITY WORK WILL BE PERFORMED. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED MUST BE SEEDED AND MULCHED IMMEDIATELY.
2. DURING NON-GERMINATING PERIODS, ONLY MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. AREAS MULCHED DURING THE NON-GERMINATING PERIODS, MUST BE LIMED, FERTILIZED, SEEDED, AND MULCHED IMMEDIATELY FOLLOWING THE END OF THE NON-GERMINATING PERIODS.
3. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (1) YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEED MIXTURE.
4. DISTURBED AREAS WHICH ARE AT EITHER FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.
5. TEMPORARY SEEDING STEPS:
A. APPLY AGRICULTURAL LIMESTONE AT A RATE OF ONE (1) TON PER ACRE. (5 POUNDS PER, 1000 SQUARE FEET)
B. APPLY FERTILIZER AT THE RATE OF 50-50-50 PER ACRE.
C. WORK THE LIMESTONE AND FERTILIZER INTO THE SOIL.
D. UTILIZING THE FOLLOWING SEEDING TYPES, RATES AND TIME SCHEDULE:

Table with 4 columns: SEASON, TEMPERARY SEEDING, RATE, TYPE. Rows include MARCH 1 TO JUNE 15, MAY 15 TO SEPT 15, SEPT 15 TO OCT 15, and E. APPLY HAY OR STRAW MULCH.

PERMANENT SEEDING:

- 1. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.
2. SEEDING SHALL BE DONE DURING PERIODS FROM APRIL 15TH TO OCTOBER 1ST, UNLESS OTHERWISE DIRECTED. IF SEEDING IS DONE AFTER OCTOBER 1ST, DORMANT SEED MUST BE USED AND DISTURBED AREAS MUST BE MULCHED.
3. DISTURBED FINAL GRADED AREAS AND DRAINAGE SWALES WILL BE PERMANENTLY SEEDED AS FOLLOWS:
A. MINIMUM OF 4" OF TOPSOIL SHALL BE SPREAD OVER ALL AREAS TO BE SEEDED. TOPSOIL SHALL BE FREE OF STONES, STICKS, WASTE MATERIAL AND SIMILAR DEBRIS. FROZEN GROUND SHALL NOT BE SPREAD AS TOPSOIL AND TOPSOIL SHALL NOT BE SPREAD OVER FROZEN GROUND.
B. A SOIL ANALYSIS IS RECOMMENDED, HOWEVER, IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AND FERTILIZER AT RATES RECOMMENDED BELOW (OR AS SUGGESTED BY THE SOIL TEST RESULTS (ONE (1) TEST PER 25 ACRES)).
C. THE LIMESTONE AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO DEPTHS OF 3 TO 4 INCHES. D. GRASS SHALL NOT BE PLANTED AFTER HEAVY RAIN OR WATERING.
D. ALL SEED USED SHALL BE LABELED IN ACCORDANCE WITH THE U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS UNDER THE FEDERAL SEED ACT IN EFFECT AT THE TIME OF PURCHASE. INERT MATTER SHALL NOT EXCEED 15% AND BLUE TAG CERTIFIED SEED SHALL BE USED WHEREVER POSSIBLE.
E. SMOOTH AND FIRM SEED BED WITH CULTIPACKER OR SIMILAR EQUIPMENT PRIOR TO SEEDING. APPLY SEED UNIFORMLY BY BROADCASTING, DRILLING OR HYDRO SEEDING. COVER SEEDS WITH 1/2" OF SOIL WITH SUITABLE EQUIPMENT.
F. APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER ACRE.

Table with 4 columns: SEASON, PERMANENT SEEDING FOR NORMAL MOWED LAWN AREAS, RATE, TYPE. Rows include MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1, OCT 1 TO MARCH 1 & JUNE 1 TO AUG 1, and PERMANENT SEEDING FOR SPECIAL AREAS.

NOTE: SEEDING PERIODS AND SPECIFICATIONS MAY VARY DUE TO SITE CONDITIONS AND VARIANCES FROM THE TIME THIS REPORT IS WRITTEN AND APPROVED. IT MAY BE NECESSARY TO ADAPT SEED SPECIFICATION, VARIETIES, AND QUALITIES. FOR SPECIAL CONDITIONS CONSULT "GUIDELINE FOR RECLAMATION OF SEVERELY DISTURBED AREAS", PENNSYLVANIA STATE UNIVERSITY.

- 4. FERTILIZER: A SOIL ANALYSIS IS RECOMMENDED BUT IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AT A RATE OF FOUR (4) TONS/ACRE AND 10-20-20 FERTILIZED AT A RATE OF 50 LBS. PER 1000 SF. THESE MATERIALS WILL BE UNIFORMLY APPLIED AND WORKED INTO THE TOPSOIL TO A DEPTH OF 3 TO 4 INCHES. IMMEDIATELY BEFORE SEEDING, A 1 0-1 0-10 FERTILIZER WILL BE WORKED INTO THE SURFACE AT A RATE OF 10 LBS. PER 1000 SF.
5. HYDRO SEEDING: LIME AND SEED SHALL BE AS SPECIFIED ABOVE, AND FERTILIZER SHALL BE APPLIED AT A RATE OF 40-80. CROWN VETCH SHALL BE INOCULATED WITH THE MANUFACTURER'S RATE. SHOULD FERTILIZER BE APPLIED WITH THE INOCULANT, THE MIXTURE SHALL NOT REMAIN IN A SLURRY FOR MORE THAN ONE HOUR. WOOD CELLULOSE FIBER, APPLIED AT A RATE OF 35 LBS. PER 1000 SF, MAY BE APPLIED AS PART OF THE SLURRY IN LIEU OF MULCHING. SYNTHETIC MULCH BINDER, SUCH AS CURASOL, DCA-70, TERRE-TACK OR AN APPROVED EQUAL SHALL BE USED PER THE MANUFACTURER'S INSTRUCTIONS TO ANCHOR THE MULCH.
6. MULCHING: MULCHING SHALL BE APPLIED AS FOLLOWS:
A. STRAW - SHALL BE ALL DRIED AND FREE FROM UNDESIRABLE SEEDS AND COARSE MATERIAL. APPLY AT A RATE OF 115 TO 150 LBS. PER 1000 SF OR 3 TONS PER ACRE. MULCHED AREAS SHALL BE CHECKED PERIODICALLY AND IMMEDIATELY AFTER STORMS AND WIND. DAMAGED OR MISSING MULCH SHALL BE REPLACED. A TACKIFIER APPLIED AFTER STRAW IS RECOMMENDED. TACKIFIER MAY BE ASPHALT OR POLYMER SPRAY. APPLY AT A RATE RECOMMENDED BY THE MANUFACTURER WITH SUITABLE EQUIPMENT. IN LIEU OF MANUFACTURER'S RECOMMENDATIONS APPLY AT A RATE OF .04 TO .06 GALLONS PER SQUARE YARD.
B. NETTING / EROSION CONTROL BLANKETS - THE USE AND INSTALLATION OF EROSION CONTROL BLANKETS OR NETTING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION AND SHALL BE SELECTED FOR THE PROPER APPLICATION AND CONDITIONS.

CONSTRUCTION SEQUENCE FOR PCSM BMPs

- 1. REFER TO SHEET C6.0 FOR SITE-SPECIFIC CONSTRUCTION SEQUENCE.
2. ONCE ALL UPSTREAM MEASURES FOR THE BMP HAVE BEEN STABILIZED, THE INDIVIDUAL BMP MAY BE CONSTRUCTED PER THE SEQUENCES IDENTIFIED BELOW.

RAIN GARDEN (MANAGED RELEASE CONCEPT) CONSTRUCTION SEQUENCE

- 1. IF ANY UNFAVORABLE CONDITIONS ARE ENCOUNTERED DURING THE INSTALLATION OF THE BASINS (I.E. GROUNDWATER AND/OR BEDROCK PINNACLES OF CARBONATE BEDROCK, ETC.), THE OWNER/ENGINEER SHOULD BE NOTIFIED IMMEDIATELY SINCE THE PROPOSED BASINS MAY NEED TO BE RELOCATED TO A MORE SUITABLE LOCATION ON THE PROPERTY.
2. INSTALL TEMPORARY SEDIMENT CONTROL BMPs AS SHOWN ON THE PLANS.
3. EXISTING SUB-GRADE IN BIOINFILTRATION AREAS SHALL NOT BE COMPACTED OR SUBJECTED TO EXCESSIVE CONSTRUCTION EQUIPMENT TRAFFIC.
4. INITIAL EXCAVATION CAN BE PERFORMED DURING ROUGH SITE GRADING BUT SHALL NOT BE CARRIED TO WITHIN ONE FEET OF THE FINAL BOTTOM ELEVATION. FINAL EXCAVATION SHOULD NOT TAKE PLACE UNTIL ALL DISTURBED AREAS IN THE DRAINAGE AREA HAVE BEEN STABILIZED. BASIN BED AREAS MAY BE USED AS TEMPORARY SEDIMENT FACILITIES PROVIDED THAT THE PROPOSED FINISH ELEVATION OF THE BED IS 12 INCHES LOWER THAN THE BOTTOM ELEVATION OF THE SEDIMENT TRAP. IF SEDIMENT FACILITIES ARE LOCATED WITHIN 12 INCHES OF BMP ELEVATION, CONTRACTOR SHALL EXCAVATE MATERIAL TO A DEPTH 36 INCHES BELOW FINAL GRADE AND REPLACE WITH 12 INCHES OF CLEAN, LIGHTLY COMPACTED SOIL PRIOR TO PLACING PLANTING SOIL.
5. WHERE EROSION OF SUB-GRADE HAS CAUSED ACCUMULATION OF FINE MATERIALS AND/OR SURFACE PONDING IN THE GRADED BOTTOM, THIS MATERIAL SHALL BE REMOVED WITH LIGHT EQUIPMENT AND THE UNDERLYING SOILS SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES WITH A YORK RAKE OR EQUIVALENT BY LIGHT TRACTOR.
6. BRING SUBGRADE OF BIOINFILTRATION AREA TO LINE, GRADE AND ELEVATIONS INDICATED. FILL AND LIGHTLY REGRADE ANY AREAS DAMAGED BY EROSION, PONDING OR TRAFFIC.
7. UPON COMPLETION OF THE SUBGRADE WORK, THE ENGINEER SHALL BE NOTIFIED AND SHALL INSPECT AT THE ENGINEER'S DISCRETION BEFORE PROCEEDING WITH INSTALLATION.
8. PLANTING SOIL SHALL BE PLACED IMMEDIATELY AFTER APPROVAL OF SUBGRADE. ANY ACCUMULATION OF DEBRIS OR SEDIMENT THAT TAKES PLACE AFTER APPROVAL OF SUBGRADE SHALL BE REMOVED PRIOR TO INSTALLATION OF PLANTING SOIL AT NO EXTRA COST TO THE OWNER.
9. INSTALL PLANTING SOIL IN 12 INCH MAXIMUM LIFTS AND DO NOT COMPACT. KEEP EQUIPMENT MOVING TO A MINIMUM. DO NOT OVER COMPACT. INSTALL PLANTING SOIL TO GRADES SHOWN ON PLANS.
10. PLANT TREES AND SHRUBS ACCORDING TO BASIN DETAILS AND NOTES.
11. AFTER INSTALLATION OF ERNST SEED MIX, STABILIZE THE BOTTOM OF THE BASIN WITH BIODEGRADABLE REVEGETATIVE MATTING TO ENSURE SEED MIX DOES NOT WASH AWAY PRIOR TO STABILIZATION.
12. PROTECT BASINS FROM SEDIMENT AT ALL TIMES. HAYBALES, DIVERSION BERMS AND/OR OTHER APPROPRIATE MEASURES SHALL BE USED AT THE TOE OF THE SLOPES THAT ARE ADJACENT TO THE RAIN GARDENS TO PREVENT SEDIMENT FROM WASHING INTO THESE AREAS DURING SITE DEVELOPMENT.
13. WHEN SITE IS FULLY VEGETATED AND THE SOIL MANTLE IS STABILIZED THE PLAN DESIGNER SHALL BE NOTIFIED AND SHALL INSPECT THE BASIN DRAINAGE AREA AT THE ENGINEER'S DISCRETION BEFORE THE AREA IS BROUGHT ONLINE AND SEDIMENT CONTROL DEVICES REMOVED.
14. CONTINUOUS MOISTURE FOR 4-6 WEEKS MUST BE INSURED TO ALLOW PROPER GERMINATION, IF RAIN DOES NOT OCCUR CONTRACTOR SHALL PROVIDE SUPPLEMENTAL IRRIGATION TO NEWLY SEEDED AREAS PER INSTRUCTIONS INCLUDED IN SEEDING SPECIFICATION.

RECYCLING / DISPOSAL OF MATERIALS

THE CONSTRUCTION WASTES ANTICIPATED INCLUDE DEMOLITION MATERIALS FROM THE BUILDING AND SITE DEMOLITION AND EXCESS BUILDING MATERIAL SUCH AS CONCRETE, WOOD, ETC.

ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOIL WASTE REGULATIONS (25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ.), AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED OR DISCHARGED AT THE SITE.

RAIN GARDEN FLOOR SEEDING

SEED IN ERNST SEED MIX (ERNMX-180); RAIN GARDEN AREA MIX. SEEDING RATE IS 20 LBS. PER ACRE WITH 30 LBS. PER ACRE GRAIN RYE (COVER CROP)

- ERNMX-180 RAIN GARDEN AREA MIX
26% River Oats, PA/VA Ecotype blend (Chasmanthium latifolium (Uniola latifolia), PA/VA Ecotype blend)
17% Virginia Wildrye, PA Ecotype (Elymus virginicus, PA Ecotype)
15% Fowl Bluegrass (Poa palustris)
10% Fox Sedge, PA Ecotype (Carex vulpinoidea, PA Ecotype)
6% Purple Coneflower (Echinacea purpurea)
4% Blackeyed Susan, Coastal Plain NC Ecotype (Rudbeckia hirta, Coastal Plain NC Ecotype)
3% Zigzag Aster, PA Ecotype (Aster prenanthoides (Symphytrichum p.), PA Ecotype)
3% Blue False Indigo, Southern WV Ecotype (Baptisia australis, Southern WV Ecotype)
3% Ohio Spiderwort, PA Ecotype (Tradescantia ohioensis, PA Ecotype)
2% Lanceleaf Coreopsis, Coastal Plain NC Ecotype (Coreopsis lanceolata, Coastal Plain NC Ecotype)
2% Wish Bergamot, PA Ecotype (Monarda fistulosa, PA Ecotype)
2% Wild Senna, VA & WV Ecotype (Senna hebecarpa (Cassia h.), VA & WV Ecotype)
2% Autumn Bentgrass, PA Ecotype (Agrostis perennans, PA Ecotype)
2% Marsh (Dense) Blazing Star (Spiked Gayfeather), PA Ecotype (Liatris spicata, PA Ecotype)
1% Early Goldenrod, PA Ecotype (Solidago juncea, PA Ecotype)
1% Oweya Sunflower, PA Ecotype (Helipopsis helianthoides, PA Ecotype)
1% Swamp Milkweed, PA Ecotype (Asclepias incarnata, PA Ecotype)

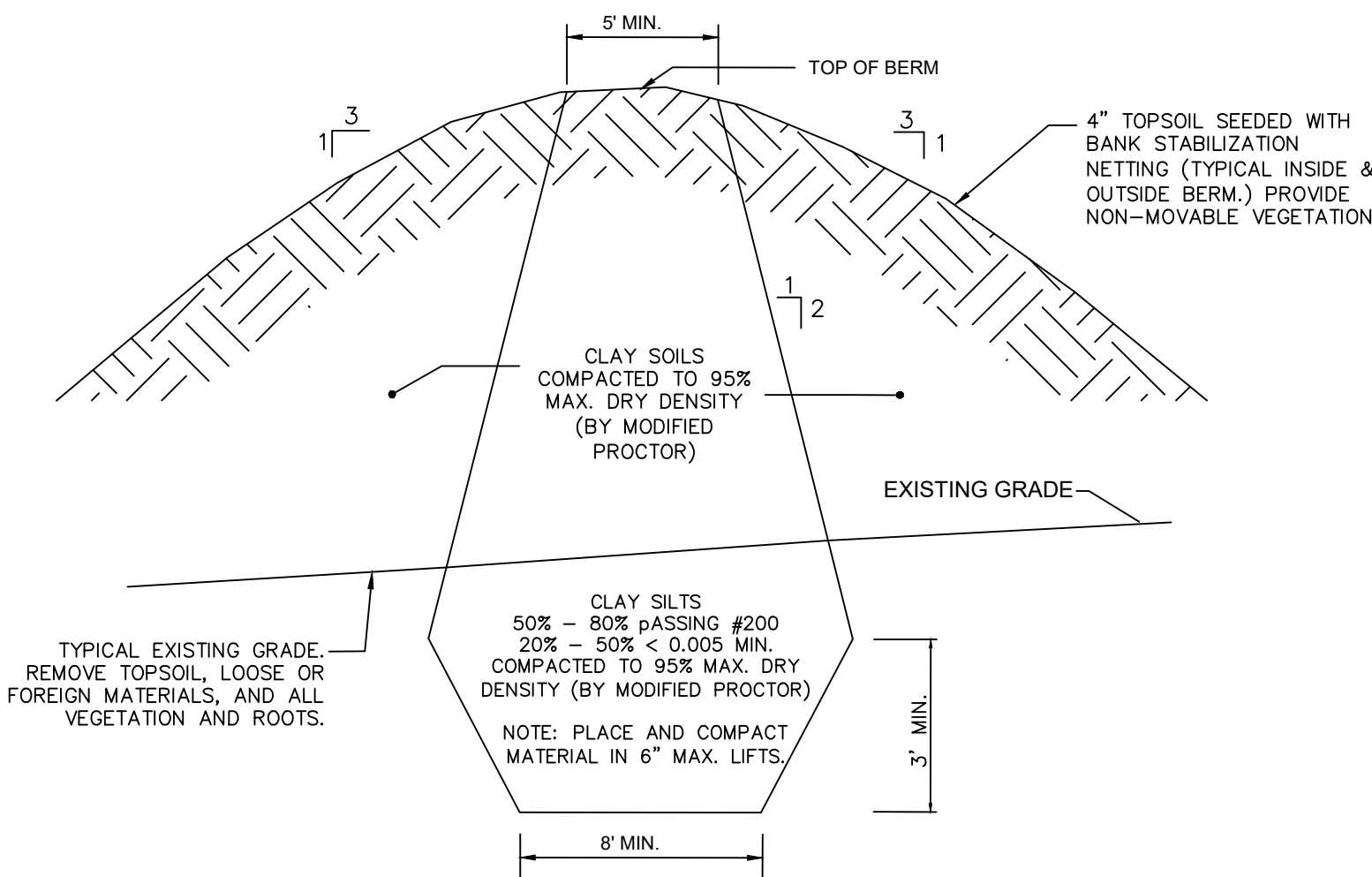
RAIN GARDEN LANDSCAPE MAINTENANCE

THIS RAIN GARDEN IS DESIGNED TO BECOME NATURALIZED OVER TIME AND WILL REQUIRE LESS MAINTENANCE AS TIME GOES ON.

MOWING - ESTABLISH AND MAINTAIN A NO-MOW ZONE THAT ENCOMPASSES THE FLOOR AND SIDE SLOPES. MOW THE NO-MOW ZONE 1X/YEAR TO A MINIMUM HEIGHT OF 6". (ANNUALLY IN LATE APRIL/EARLY MAY). RAKE MOWN MATERIAL AND COMPOST OR DISPOSE OF OFF SITE.

INSPECTIONS - INSPECT RAIN GARDEN AND NO-MOW ZONES FOR INVASIVE SPECIES SUCH AS PURPLE LOOSESTRIPE, PHRAGMITES, HONEYSUCKLE, ETC. (ANNUALLY IN JULY). IF INVASIVE SPECIES ARE FOUND REMOVE PER RECOMMENDED STANDARDS FOR SPECIFIC SPECIES FOLLOWING GUIDELINES BY PA DCNR (DEPT OF CONSERVATION & NATURAL RESOURCES).

CLEANING - REMOVE TRASH AND DEBRIS (JANUARY & APRIL)



STANDARD BASIN BERM CONSTRUCTION NOTES

- 1. SITE PREPARATION - AREAS UNDER THE EMBANKMENT AND ANY STRUCTURES SHALL BE CLEARED, GRUBBED AND THE TOPSOIL STRIPPED TO REMOVE TREES, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. IN ORDER TO FACILITATE CLEAN-OUT AND RESTORATION, THE POOL AREA WILL BE CLEARED OF ALL BRUSH AND EXCESS TREES.
2. CUT OFF TRENCH - A CUT-OFF TRENCH WILL BE EXCAVATED ALONG THE BERM CENTERLINE BENEATH EARTH FILL EMBANKMENTS. THE MINIMUM DEPTH SHALL BE 3 FEET. THE CUT-OFF TRENCH SHALL EXTEND TO THE RISER CREST ELEVATION. THE MINIMUM BOTTOM WIDTH SHALL BE 8 FEET BUT WIDE ENOUGH TO PERMIT OPERATION OF COMPACTION EQUIPMENT. THE SIDE SLOPES SHALL BE NO STEEPER THAN 1:1. COMPACTION REQUIREMENTS SHALL BE THE SAME AS THOSE FOR EMBANKMENTS. THE TRENCH SHALL BE KEPT FREE OF STANDING WATER DURING THE BACKFILLING OPERATIONS.
3. EMBANKMENT - THE FILL MATERIAL SHALL BE TAKEN FROM SELECTED BORROW AREAS. IT SHALL BE FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES, ROCKS OR OTHER OBJECTIONABLE MATERIAL. AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. THE FILL MATERIAL SHOULD CONTAIN SUFFICIENT MOISTURE SO THAT IT CAN BE FORMED BY HAND INTO A BALL WITHOUT CRUMBLING. IF WATER CAN BE SQUEEZED OUT OF THE BALL, IT IS TOO WET FOR PROPER COMPACTION. FILL MATERIAL MUST BE PLACED IN 6 TO 8 INCH LAYERS AND SHALL BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. COMPACTION MUST BE OBTAINED BY MECHANICAL SHEEP FOOT ROLLERS. THE EMBANKMENT SHALL BE CONSTRUCTED TO AN ELEVATION OF 5% HIGHER THAN THE DESIGN HEIGHT TO ALLOW FOR SETTLEMENT.

BASIN BERM DETAIL

BASIN MAINTENANCE SCHEDULE

THIS BASIN IS DESIGNED TO BECOME NATURALIZED OVER TIME AND WILL REQUIRE LESS MAINTENANCE AS TIME GOES ON.

MOWING - ESTABLISH AND MAINTAIN A NO-MOW ZONE THAT ENCOMPASSES THE BASIN FLOOR AND SIDE SLOPES. MOW THE NO-MOW ZONE 1X/YEAR TO A MINIMUM HEIGHT OF 6". (ANNUALLY IN LATE APRIL/EARLY MAY).

INSPECTIONS - INSPECT BASIN AND NO-MOW ZONES FOR INVASIVE SPECIES SUCH AS PURPLE LOOSESTRIPE, PHRAGMITES, HONEYSUCKLE, ETC. (ANNUALLY IN JULY). IF INVASIVE SPECIES ARE FOUND REMOVE PER RECOMMENDED STANDARDS FOR SPECIFIC SPECIES FOLLOWING GUIDELINES BY PA DCNR (DEPT OF CONSERVATION & NATURAL RESOURCES).

CLEANING - REMOVE TRASH AND DEBRIS (JANUARY & APRIL) OR AS NEEDED.

BMP MAINTENANCE PLAN

NOTE: AN ANNUAL REPORT SHALL BE PREPARED AND RETAINED BY THE RESPONSIBLE PARTY STATING THE FOLLOWING MAINTENANCE HAS BEEN PERFORMED.

INDIVIDUAL LOT OWNERS ARE RESPONSIBLE FOR MAINTENANCE OF THE STORMWATER CONVEYANCE SYSTEM, AND ALL OTHER PROPOSED BMP'S LOCATED ON EACH LOT.

STORMWATER CONVEYANCE SYSTEM

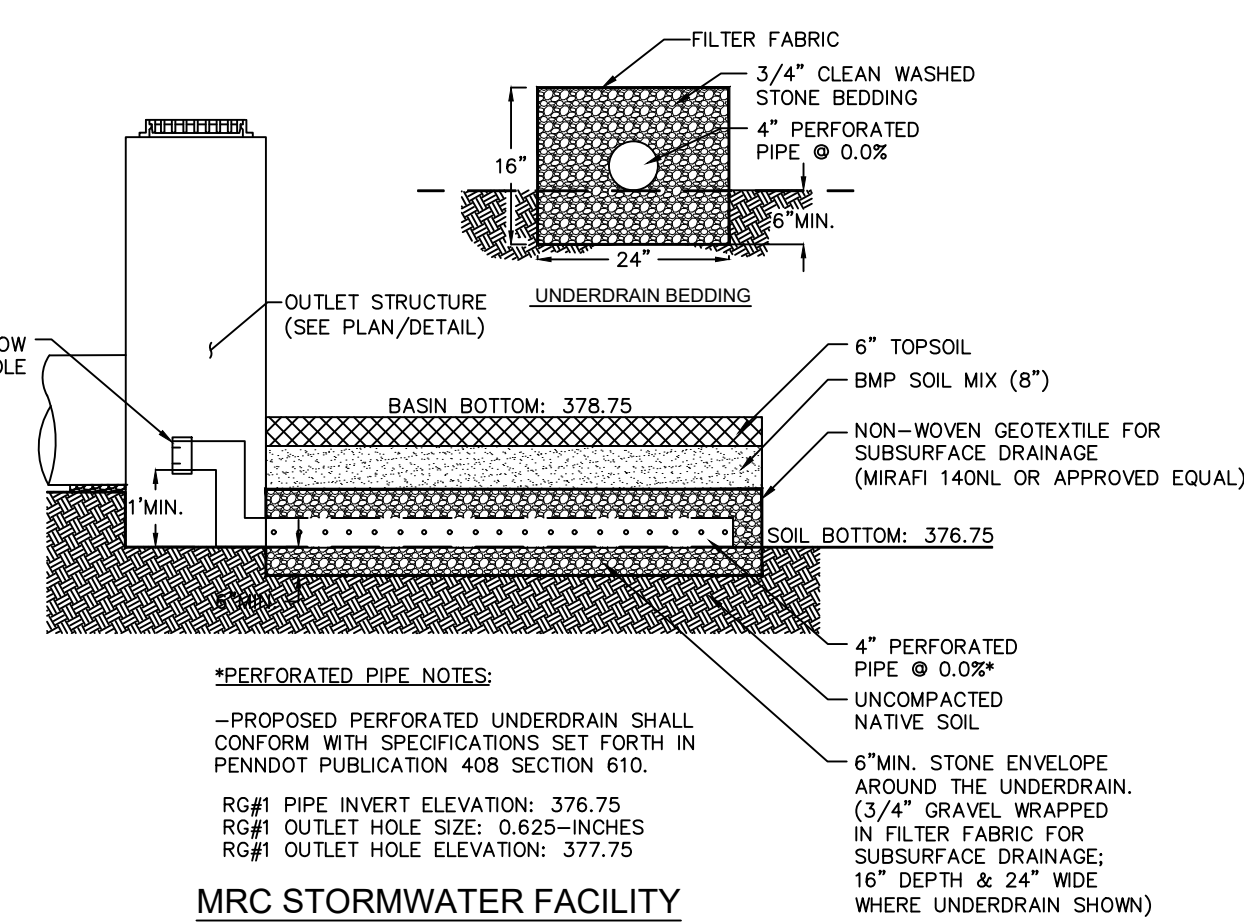
- CATCH BASINS, MANHOLES AND PIPES TO BE INSPECTED FOR CLOGGING AND EXCESSIVE DEBRIS AND SEDIMENT ACCUMULATION AT LEAST ANNUALLY AS WELL AS AFTER EVERY STORM EXCEEDING 1-INCH OF RAINFALL.
ALL STRUCTURAL COMPONENTS MUST BE INSPECTED FOR CRACKING, SUBSIDENCE, BREACHING, WEARING, AND DETERIORATION AT LEAST ANNUALLY.

STORMWATER FACILITY - RAIN GARDEN (MANAGED RELEASE CONCEPT)

- UPGRADIENT CATCH BASINS AND INLETS SHOULD BE INSPECTED AND CLEANED ANNUALLY, OR MORE OFTEN IF HISTORICAL MAINTENANCE RECORDS SUGGEST A MORE FREQUENT CLEANING.
THE VEGETATION (FOR THE MRC BMP AND CONTRIBUTING DRAINAGE AREA) SHOULD BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS REVEGETATED IN THE SPRING AND FALL.
CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS. MOW ONLY AS APPROPRIATE FOR VEGETATIVE SPECIES.
INSPECT AT LEAST FOUR TIMES PER YEAR AFTER RUNOFF EVENTS GREATER THAN 0.8 INCH AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN THE DESIGN PARAMETERS (THE LICENSED PROFESSIONAL ENGINEER SHOULD CLEARLY IDENTIFY WHAT THESE PARAMETERS ARE).
AT LEAST FOUR TIMES PER YEAR, OR MORE IF HISTORICAL MAINTENANCE INDICATE IT IS NECESSARY, INSPECT FOR ACCUMULATION OF SEDIMENT, DAMAGE TO OUTLET CONTROL STRUCTURES, EROSION, SIGNS OF WATER CONTAMINATION/SPILLS, AND INSTABILITY. LEAF LITTER NEEDS TO BE REMOVED ANNUALLY.
AS NEEDED, REMOVE ACCUMULATED SEDIMENT AS REQUIRED TO MAINTAIN INFILTRATION THROUGH THE MRCS SOIL MEDIA AND TO MAINTAIN WATER QUALITY FUNCTIONALITY. RESTORE ORIGINAL CROSS SECTION, PROPERLY DISPOSE OF SEDIMENT.
IF POROUS PAVEMENT IS INCLUDED IN THE DESIGN, VACUUM AT LEAST TWICE PER YEAR. VACUUM SHOULD HAVE SUFFICIENT SUCTION POWER AND BE DESIGNED FOR USE WITH POROUS PAVEMENTS.
ALL MRC BMP COMPONENTS SHOULD BE MAINTAINED AS INDICATED IN THE STORMWATER BMP MANUAL.

LEVEL SPREADER:

- MONITOR THE LEVEL SPREADER PERFORMANCE AND THE DOWN SLOPE AREA FOR TWO YEARS ON A QUARTERLY BASIS AND SEMI-ANNUALLY THEREAFTER. INSPECT FOR CLOGGING, DENSITY OF VEGETATION, DAMAGE BY FOOT OR VEHICULAR TRAFFIC, EXCESSIVE ACCUMULATIONS, AND CHANNELIZATION.
INSPECT THE LEVEL SPREADER FOLLOWING RAINFALLS EVENTS EXCEEDING 1-INCH.
UPGRADIENT CATCH BASINS AND INLETS SHOULD BE INSPECTED AND CLEANED ANNUALLY, OR MORE OFTEN IF HISTORICAL MAINTENANCE RECORDS SUGGEST A MORE FREQUENT CLEANING.
AT LEAST TWO TIMES PER YEAR, OR MORE IF HISTORICAL MAINTENANCE INDICATE IT IS NECESSARY, REMOVED SEDIMENT AND DEBRIS, WHEN BUILDUP OCCURS IN THE CLEAN OUTS. REGRADE AND RESEED AS NECESSARY THE AREAS BELOW THE LEVEL SPREADER, IF POOLS OF STANDING WATER ARE OBSERVED ALONG THE SLOPES - IN NOT CASE SHOULD STANDING WATER BE ALLOWED FOR LONGER THAN 72-HOURS.
ALL THE LEVEL SPREADER COMPONENTS SHOULD BE MAINTAINED AS INDICATED IN THE EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL AND STORMWATER BMP MANUAL.



MRC STORMWATER FACILITY UNDERDRAIN DETAIL

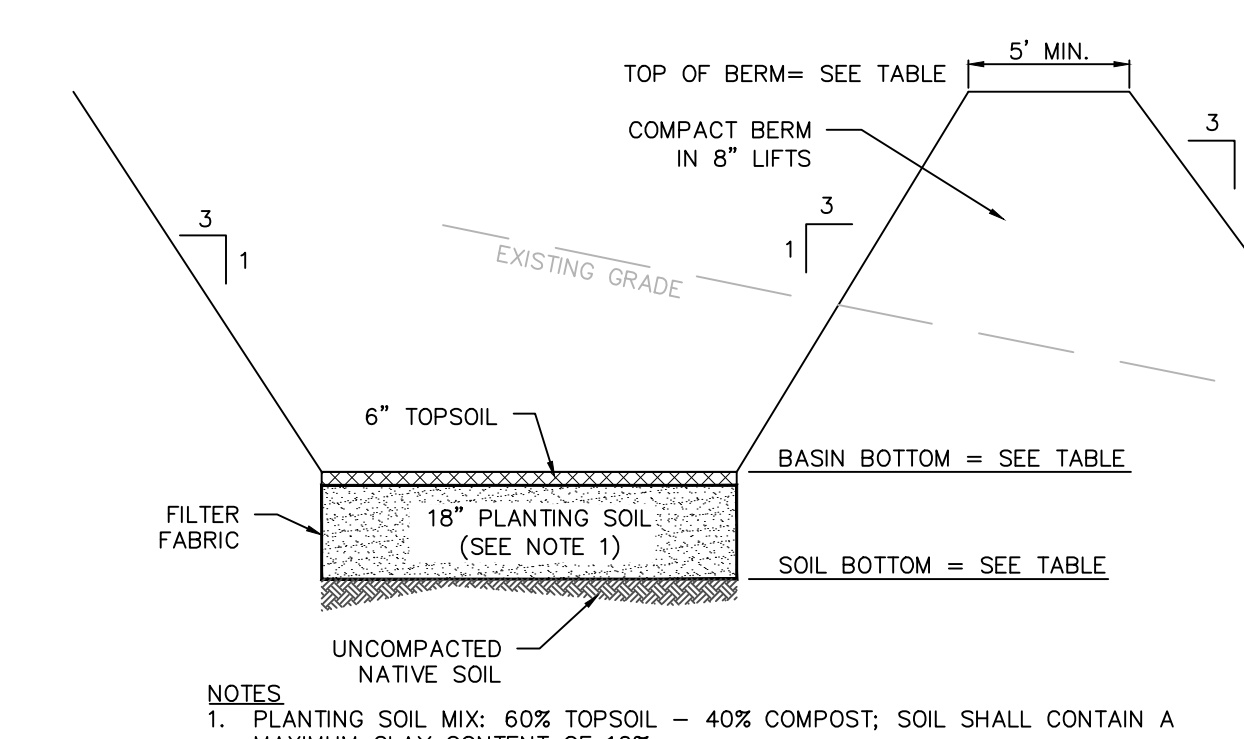
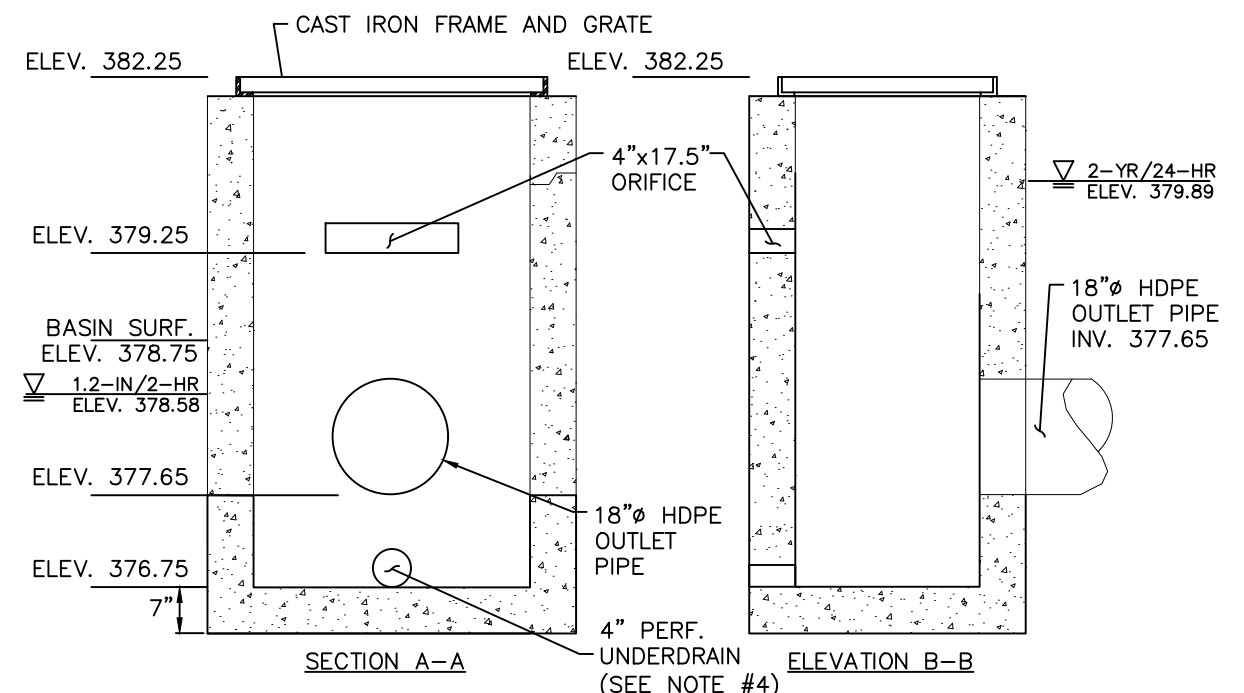


Table with 4 columns: #, TOP OF BERM, BASIN BOTTOM, SOIL BOTTOM. Row 1: RAIN GARDEN 1, 384.00, 378.75, 376.75.

MRC STORMWATER FACILITY SECTION



RAIN GARDEN #1 (OS-1) OUTLET STRUCTURE DETAIL

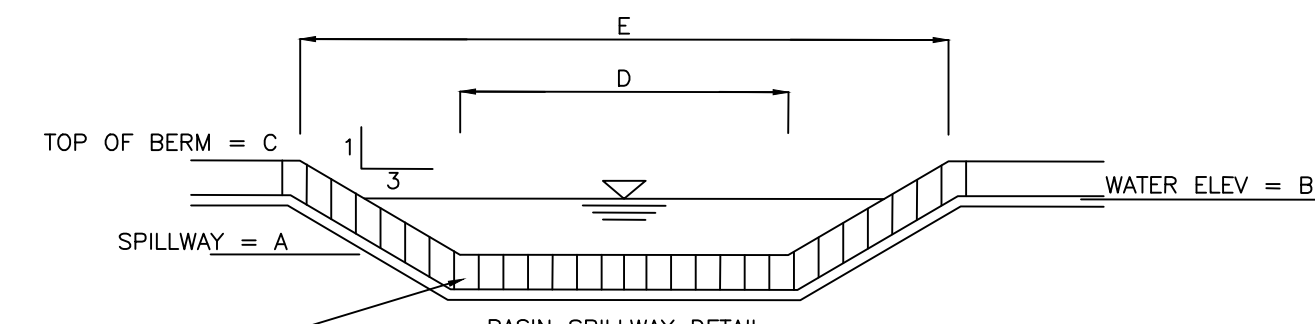


Table with 7 columns: FACILITY, A, B, C, D, E, VELOCITY, LINING. Row 1: 1, 382.75, 383.00, 384.00, 50, 57.5, 1.27, LANDLOCK TRM450.

- NOTE:
1. BASIN OUTLET PIPES SHALL BE CONSTRUCTED WITH WATER TIGHT JOINTS.
2. BASIN BERM TO BE PLACED IN 8 INCH LIFTS AND COMPACTED TO 95% OF MODIFIED DRY DENSITY AS ESTABLISHED BY ASTM-1557 PRIOR TO PROCEEDING TO THE NEXT LIFT.
3. SPILLWAY LINING TO BE PLACED FROM 1' INSIDE BASIN TO TOE OF SLOPE OUTSIDE OF BASIN.
4. SPILLWAY LINING SHALL BE NORTH AMERICAN GREEN ERONET P300 OR APPROVED EQUAL.

BASIN SPILLWAY DETAIL

Logo for Holmes Cunningham LLC, 409 E. Butler Ave., Unit 5, Doylestown, PA 18901, (215) 586-3330, www.hcengineering.net

Table with 3 columns: REVISIONS, Description, Date. Row 1: 6/21/2021, Revised per Township Engineer comments.

Professional Engineer Seal for Kristin R. Holmes, P.E., License No. PE073604, State of Pennsylvania.

BENNER PROPERTY SUBDIVISION, T.M.P.# 26-010-004-001, DOLLY LANE, NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA, POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS

Professional Engineer Seal for Kristin R. Holmes, P.E., License No. PE073604, State of Pennsylvania.

Table with 5 columns: Date, Scale, HCE Job, Designed, Sheet. Row 1: 3/16/2021, N.T.S, 1551, KH, 15 of 15.

Drawing No. C6.1