Lehigh Valley
Health Network
MUHLENBERG

MAJOR LAND DEVELOPMENT SUBMISSION

FOR

EMERGENCY DEPARTMENT EXPANSION

LOCATED IN

CITY OF BETHLEHEM, LEHIGH COUNTY, PENNSYLVANIA

SEPTEMBER 6, 2024
REVISED JANUARY 10, 2025

THE PIDCOCK COMPANY
CIVIL ENGINEERING AND LAND PLANNING   ARCHITECTURE   LAND SURVEYING

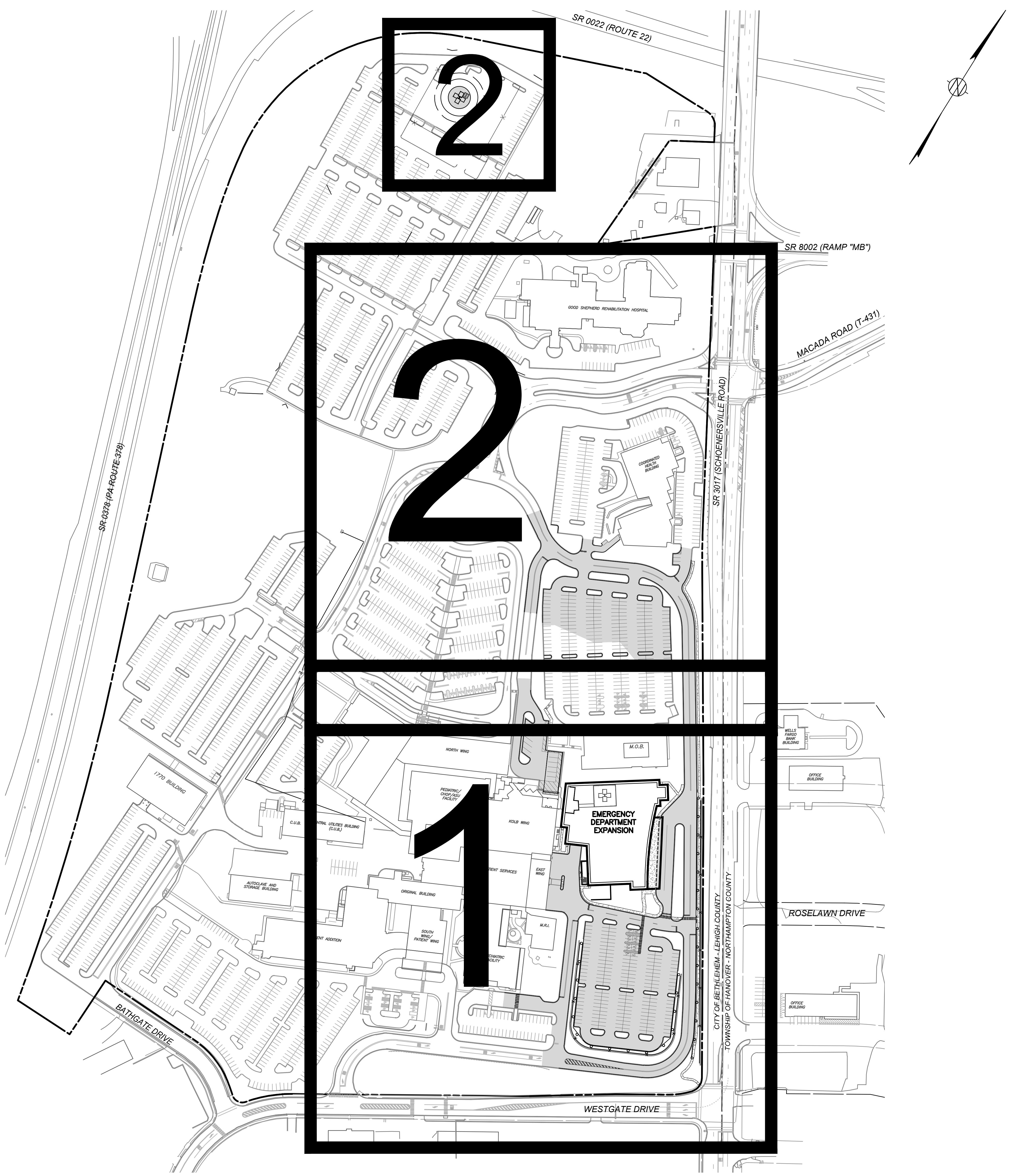
OXFORD DRIVE AT FISH HATCHERY ROAD
ALLENTOWN, PENNSYLVANIA

THE LAND DEVELOPMENT PLANS, EXCLUDING ANY PLANS, REPORTS, OR SUPPORTING DOCUMENTS PREPARED BY OTHERS, WERE PREPARED BY THE PIDCOCK COMPANY, UNDER MY DIRECTION, AND RELY ON ACCURACY AND COMPLETENESS OF INVESTIGATIONS, REPORTS, RECOMMENDATIONS, AND CALCULATIONS PREPARED BY THOSE OTHERS. IN SEALING THIS PLAN OR REPORT, I CERTIFY ONLY THAT THOSE DOCUMENTS PREPARED BY THE PIDCOCK COMPANY, AND NOT TO THE INVESTIGATIONS, REPORTS, RECOMMENDATIONS, AND CALCULATIONS PREPARED BY OTHERS, ARE COMPLETE FOR MUNICIPAL REVIEW.

BRENT C. TUCKER, P.E.　　DATE

NOTE

THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.


SR 0022 (ROUTE 22)
SR 8002 (RAMP "MB")
MACADA ROAD (T-431)
SR 3017 (SCHOENERSVILLE ROAD)
SR 0378 (PA ROUTE 378)
ROSELAWN DRIVE
WESTGATE DRIVE
BATHGATE DRIVE
CITY OF BETHLEHEM - LEHIGH COUNTY
TOWNSHIP OF HANOVER - NORTHAMPTON COUNTY
EMERGENCY DEPARTMENT EXPANSION
2
2
1

KEY PLAN

SCALE: 1"=150'

150 0 150 300

1 SHEET LAYOUT

LEGEND

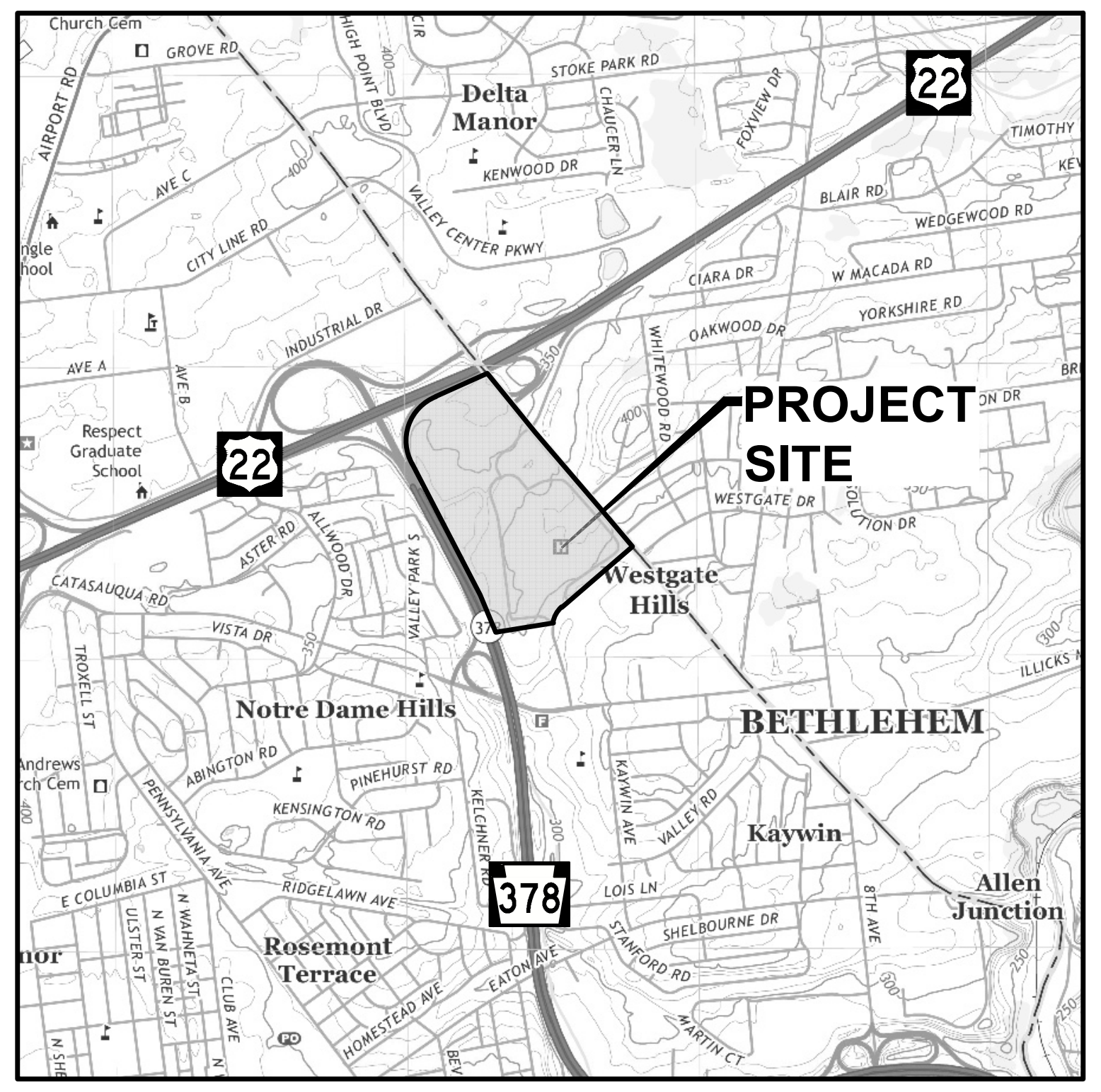
	EXISTING	PROPOSED
BUILDING		
BITUMINOUS PAVEMENT		
STONE AREA		
CONCRETE SIDEWALKS, APRONS, PADS, ETC.		
CONCRETE CURB		
BITUMINOUS CURB		
DEPRESSED CURB		
PROPERTY LINE	IRON PIPE (FND)	PROP.COR.
LOT LINE		
CENTERLINE	℄	℄
RIGHT–OF–WAY LINE		
ULTIMATE RIGHT–OF–WAY LINE	ULTIMATE R/W LINE	ULTIMATE R/W LINE
BUILDING RESTRICTION LINE	BRL	BRL
UTILITY EASEMENT		
CONTOUR	476	476
SPOT ELEVATIONS	x 449.1	449.1
FLOODPLAIN 100–YEARS		
FLOODPLAIN 500–YEARS		
SWALE, EDGES OF RIVER, CREEKS, WETLANDS, ETC.		
STORM SEWER, MANHOLE, INLET AND ROOF DRAIN	RD MH. INLET	
OUTLET CONTROL STRUCTURE	OCS	OCS
END SECTION	CES	CES
ENDWALL	ENDWALL	ENDWALL
WATERLINE, FIRE HYDRANT, VALVE, REDUCER, TEE, PLUG AND SERVICE	WV W FH PLUG	W FH PLUG
SANITARY SEWER, MANHOLE, CLEANOUT AND LATERAL	CO S SAN.MH.	CO S SAN.MH.
FORCE MAIN WITH DIRECTION OF FLOW	F	F
GAS LINE AND VALVE	G GV	G GV
UNDERGROUND ELECTRIC LINES	E	E
UNDERGROUND TELEVISION CABLE	TV	TV
UNDERGROUND TELEPHONE LINES	T	T
UNDERGROUND FIBER OPTIC LINE	FOL	FOL
OVERHEAD WIRES	OW	OW
LIGHT STANDARD	LS	LS
ELECTRIC POLE	PPL CO. POLE 123	PPL CO. POLE 123
TELEPHONE POLE	B.T. CO. POLE 456	B.T. CO. POLE 456
FENCE	X	X
GUIDERAIL		
RAILROAD		
SIGN		
EVERGREEN TREE		
DECIDUOUS TREE		
ZONING BOUNDARY	R-1 R-2	
RIPRAP		
SOILS DELINEATION		
SOILS TYPE	MeA	
LIMIT OF DISTURBANCE		

NOTE:

THE LEGEND AND ABBREVIATIONS APPLY TO ALL SHEETS IN THE PLAN SET. THEY CONTAIN A COMPREHENSIVE LIST OF DRAWING SYMBOLS AND ABBREVIATIONS THAT MAY BE DEPICTED ON A PLAN SHEET. ALL OF THE SYMBOLS OR ABBREVIATIONS MAY NOT OCCUR ON A PLAN SHEET OR IN THE DRAWING SET. IN SOME INSTANCES PROPOSED OR EXISTING FEATURES MAY BE DEPICTED DIFFERENTLY ON A PLAN THAN IN THE LEGEND TO IMPROVE OVERALL PLAN CLARITY.

ABBREVIATIONS

BC	BOTTOM OF CURB	OCS	OUTLET CONTROL STRUCTURE
BCCMP	BITUMINOUS COATED CORRUGATED METAL PIPE	PGL	PROFILE GRADE LINE
℄	BASELINE	PLCC CURB	PLAIN CEMENT CONCRETE CURB
B.M.	BENCH MARK	PL CONC MTBLE CURB	PLAIN CONCRETE MOUNTABLE CURB
BRL	BUILDING RESTRICTION LINE	PPL	PENNSYLVANIA POWER LIGHT
BT	BELL TELEPHONE	PVC	POLYVINYL CHLORIDE
BW	BOTTOM OF WALL	PC	HORIZONTAL POINT OF CURVATURE
CES	CONCRETE END SECTION	PT	HORIZONTAL POINT OF TANGENCY
CIP	CAST IRON PIPE	PVCC	POINT OF VERTICAL COMPOUND CURVATURE
CMP	CORRUGATED METAL PIPE	PVI	POINT OF VERTICAL INTERSECTION
CO	CLEANOUT	PVT	POINT OF VERTICAL TANGENCY
DIP	DUCTILE IRON PIPE	RCP	REINFORCED CONCRETE PIPE
EW	ENDWALL	RD	ROOF DRAIN
ELEV.	ELEVATION	R/W	RIGHT–OF–WAY LINE
FH	FIRE HYDRANT	SAN.MH.	SANITARY MANHOLE
GV	GAS VALVE	SSD	SIGHT STOPPING DISTANCE
HDW	HEADWALL	STA.	STATION
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE	TBR	TO BE REMOVED
HSD	HEADLIGHT SIGHT DISTANCE	TC	TOP OF CURB
INV.	INVERT	T/F	TOP OF FOUNDATION
LS	LIGHT STANDARD	TW	TOP OF WALL
MES	METAL END SECTION	VCP	VITRIFIED CLAY PIPE
ME	METROPOLITAN EDISON	WV	WATER VALVE
MH.	MANHOLE		
MO	MIDDLE ORDINATE		



SOURCE:
CATASAUQUA, PA (2019)
USGS QUADRANGLE MAP

LOCATION MAP

Scale: 1" = 2,000'

2000 0 2000 4000

PENNSYLVANIA ONE CALL SYSTEM, INC. UNDERGROUND UTILITY NOTIFICATION

THE PIDCOCK COMPANY CALLED THE PENNSYLVANIA ONE–CALL SYSTEM, INC. ON JULY 18, 2024 AND REQUESTED THAT ALL UNDERGROUND UTILITIES BE LOCATED AT THIS SITE LOCATED IN tHE CITY OF BETHLEHEM, LEHIGH COUNTY, PENNSYLVANIA INCLUDING UNDERGROUND UTILITIES IN THE ADJACENT PUBLIC ROAD RIGHTS–OF–WAY. SERIAL NUMBER 2024003247, WAS ASSIGNED TO THIS PROJECT LOCATION AND THE FOLLOWING UTILITY OPERATORS WERE CONTACTED:

FRONTIER COMMUNICATIONS
300E LAIRD ST.
WILKES BARRE, PA. 18702
CONTACT: MICHAEL NAVICH
EMAIL: MICHAEL.NAVICH@FTR.COM
PHONE: 570–208–3375

PPL ELECTRIC UTILITIES CORPORATION
437 BLUE CHURCH ROAD
PAXINOS, PA. 17860
CONTACT: DOUG HAUPT
EMAIL: dlhaupt@pplweb.com
PHONE: 610–297–2461

CITY OF BETHLEHEM
1630 CROSS LANE
BETHLEHEM, PA. 18015
CONTACT: ROBERT TAYLOR
EMAIL: rtaylor@bethlehem–pa.gov
PHONE: 610–428–0211

SERVICE ELECTRIC CABLE TV INC
2260 ANENUE A
LVIP I
BETHLEHEM, PA. 18017
CONTACT: RICH PERICH
EMAIL: rperich@sectv.com
PHONE: 610–625–8502

CROWN CASTLE
1500 CORPORATE DRIVE
CANONSBURG, PA 15317
CONTACT: FIBER DIG TEAM PERSONNEL
EMAIL: fiber.dig@crowncastle.com
PHONE: 1–800–654–3110

ZAYO BANDWIDTH FORMERLY PPL TELCOM LLC
170 ROBBINS ROAD
DOWNINGTOWN, PA 19335
CONTACT: JOHN HOWELLS
EMAIL:JOHN. HOWELLS@ZAYO.COM
PHONE: 610–764–1634

LUMEN FORMERLY LEVEL 3
1025 ELDORADO BOULEVARD
BROOMFIELD, CO. 80021
CONTACT: LUMEN OPERATOR PERSONNEL
EMAIL: RELOCATIONS@LUMEN.COM
PHONE: 877–366–8344 EXT. 3

COMMUNITY UTILITIES OF PENNSYLVANIA
570 HALLET ROAD
EAST STROUDSBURG, PA 18301
CONTACT:VINCENT VARUOLO
EMAIL: vincent.varuolo@uiwater.com
PHONE: 570–517–9884

ASTOUND BROADBAND POWERED BY RCN
5508 NOR BATH BOULEVARD
NORTHAMPTON, PA. 18067
CONTACT: ERIC BEERS
EMAIL: ERIC.BEERS@ASTOUND.COM
PHONE: 610–972–0597

UGI UTILITIES INC.
2121 CITY LINE ROAD
BETHLEHEM, PA. 18017
CONTACT: TIMOTHY STEWARD
EMAIL: tsteward@ugi.com
PHONE: 610–807–3162

VERIZON BUSINESS FORMERLY MCI
7000 WESTON PARKWAY
CARY, NC. 27513
CONTACT: VICTOR WOOD
EMAIL: victor.s.wood@verizon.com
PHONE: 919–414–2782

THE PIDCOCK COMPANY DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE OR GUARANTY THAT THE INFORMATION RECEIVED PURSUANT TO THE SAID REQUESTS UNDER PENNSYLVANIA ONE CALL SYSTEM, INC. AND AS REFLECTED ON THE PLAN IS CORRECT, ACCURATE OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF ANYONE PERFORMING WORK ON THE SITE TO ARRANGE FOR THE FIELD LOCATION AND PROTECTION OF ALL OVERHEAD AND SUBSURFACE UTILITIES WHICH MAY BE ENCOUNTERED DURING THE COURSE OF THEIR WORK.

PRIVATE AND PUBLIC UNDERGROUND LINES AND FACILITIES SUCH AS TELEPHONE, TELEVISION, GENERAL LIGHTING, ELECTRICAL, UNDERDRAINS, PLUMBING, SEWER LINES, STORAGE TANKS, ETC., SERVING THE SITE MAY EXIST ON THE SITE. THE PIDCOCK COMPANY DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE OR GUARANTY THAT THE PRIVATE AND PUBLIC UNDERGROUND LINES AND FACILITIES HAVE BEEN IDENTIFIED, LOCATED AND SHOWN ON THIS PLAN. IT SHALL BE THE RESPONSIBILITY OF ANYONE PERFORMING WORK, BE IT DESIGN WORK FOR FUTURE DEVELOPMENT OR ACTUAL CONSTRUCTION OR DEMOLITION ON THE PROPERTY SHOWN ON THIS PLAN TO ARRANGE FOR THE LOCATION AND PROTECTION OF ALL OVERHEAD, SURFACE AND SUBSURFACE UTILITIES WHICH COULD BE ENCOUNTERED AS THE RESULT OF WORK PERFORMED ON THIS SITE. DESIGN STAGE WORK SHOULD INCLUDE CALLING THE PENNSYLVANIA ONE CALL SYSTEM AT 1–800–242–1776.

LATERAL AND SERVICE LINE NOTES

UNDERGROUND LATERALS AND SERVICE LINES, INCLUDING BUT NOT LIMITED TO GAS AND ELECTRIC, MAY EXIST IN THE VICINITY OF THE PROJECT CONSTRUCTION AND MAY NOT BE SHOWN ON THE PLAN. TO THE EXTENT THAT INFORMATION WAS PROVIDED, TO US, SUCH LATERALS AND LINES HAVE BEEN INDICATED ON THE PLAN, BUT THEIR DEPICTION AND LOCATIONS SHOULD BE CONSIDERED AS ONLY APPROXIMATE, AND NOT AS COMPREHENSIVE OR ALL–INCLUSIVE.

BY SHOWING SOME LATERALS AND LINES OF THIS KIND, THE PIDCOCK COMPANY DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE, OR GUARANTY THAT ALL SUCH UNDERGROUND LATERALS AND LINES HAVE BEEN IDENTIFIED, LOCATED, AND SHOWN ON THIS PLAN.

CONTRACTORS AND ANY OTHER PERSONS DESIGNING OR PERFORMING SUBSURFACE WORK IN THE VICINITY ARE RESPONSIBLE FOR GIVING APPROPRIATE ADVANCE NOTICE BY CALLING THE PENNSYLVANIA ONE CALL SYSTEM, INC. AT 1–800–242–1776 OR BY OPENING TICKET ON THEIR WEBSITE AT https://www.pa1call.org/, AND FOR CONTACTING THE APPROPRIATE PUBLIC AND PRIVATE ENTITIES AND ARRANGING FOR THE FIELD LOCATION AND PROTECTION OF ALL SUCH UNDERGROUND LATERALS AND SERVICE LINES THAT COULD BE ENCOUNTERED AS A RESULT OF THE WORK TO BE PERFORMED ON THE SITE.

811

THREE BUSINESS DAYS BEFORE
YOU DIG - DRILL - BLAST

DIAL 8-1-1 or 1-800-242-1776

www.paonecall.org

INDEX TO DRAWINGS

SHEET NO.	TITLE	PLAN DATE OR LAST REVISION	SHEET NO.	TITLE	PLAN DATE OR LAST REVISION
1	COVER PLAN	JANUARY 10, 2025	**SUPPLEMENTAL PLANS – SOIL EROSION AND SEDIMENTATION CONTROL PLANS – S–12396**		
2*	INDEX PLAN	JANUARY 10, 2025	1	INDEX PLAN	JANUARY 10, 2025
3*	GENERAL NOTES	JANUARY 10, 2025	2	SOIL EROSION AND SEDIMENTATION CONTROL PLAN 1	JANUARY 10, 2025
4*	OVERALL SITE PLAN	JANUARY 10, 2025	3	SOIL EROSION AND SEDIMENTATION CONTROL PLAN 2	JANUARY 10, 2025
5*	SITE PLAN 1	JANUARY 10, 2025	4	SOIL EROSION AND SEDIMENTATION CONTROL NOTES	JANUARY 10, 2025
6*	SITE PLAN 2	JANUARY 10, 2025	5	SOIL EROSION AND SEDIMENTATION CONTROL DETAILS	JANUARY 10, 2025
7	OVERALL EXISTING CONDITIONS PLAN	JANUARY 10, 2025	6	MAXIMUM DURING CONSTRUCTION TRIBUTARY AREA PLAN	JANUARY 10, 2025
8	EXISTING CONDITIONS PLAN 1	JANUARY 10, 2025	**SUPPLEMENTAL PLANS – POST–CONSTRUCTION STORMWATER MANAGEMENT PLANS – S–12397**		
9	EXISTING CONDITIONS PLAN 2	JANUARY 10, 2025	1*	INDEX PLAN	JANUARY 10, 2025
10	GRADING PLAN 1	JANUARY 10, 2025	2*	POST–CONSTRUCTION STORMWATER MANAGEMENT PLAN 1	JANUARY 10, 2025
11	GRADING PLAN 2	JANUARY 10, 2025	3*	POST–CONSTRUCTION STORMWATER MANAGEMENT PLAN 2	JANUARY 10, 2025
12	UTILITY PLAN 1	JANUARY 10, 2025	4*	POST–CONSTRUCTION STORMWATER MANAGEMENT NOTES AND DETAILS	JANUARY 10, 2025
13	UTILITY PLAN 2	JANUARY 10, 2025	**SUPPLEMENTAL PLANS – IRRIGATION SYSTEM PLANS – PREPARED BY AQUA MIST IRRIGATION**		
14	UTILITY PROFILES 1	JANUARY 10, 2025	I–01 *	OVERALL SITE PLAN	NOVEMBER 22, 2024
15	UTILITY PROFILES 2	JANUARY 10, 2025	I–02 *	DATA & DETAILS	SEPTEMBER 25, 2024
16	FIRE TRUCK TURNING PLAN 1	JANUARY 10, 2025	I–03 *	PUMP & DETAILS	SEPTEMBER 25, 2024
17	FIRE TRUCK TURNING PLAN 2	JANUARY 10, 2025	I–04 *	O & M SCHEDULE	SEPTEMBER 25, 2024
18	MISCELLANEOUS DETAILS	JANUARY 10, 2025	**LANDSCAPING AND LIGHTING PLANS – PREPARED BY BROWN DESIGN CORP.**		
			LA–1	OVERALL LANDSCAPE PLAN	JANUARY 9, 2025
			LA–2	LANDSCAPE PLAN ENLARGEMENT 1	JANUARY 9, 2025
			LA–3	LANDSCAPE PLAN ENLARGEMENT 2	JANUARY 9, 2025
			LA–4	LIGHTING PLAN ENLARGEMENT 1	JANUARY 9, 2025
* DENOTES PLANS TO BE RECORDED			LA–5	LIGHTING PLAN ENLARGEMENT 2	JANUARY 9, 2025
			LA–6	DETAILS/NOTES/SCHEDULES	JANUARY 9, 2025

THE PIDCOCK COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL

NOTES:

1. THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.

2. THESE DOCUMENTS ARE PROVIDED FOR MUNICIPAL REVIEW ONLY AND ARE NOT TO BE UTILIZED FOR ANY OTHER PURPOSE. THE DOCUMENTS ARE NOT ISSUED FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED AS SUCH BELOW.

CONTRACTOR'S OBLIGATION REGARDING COORDINATION OF DOCUMENTS AND FIELD CONDITIONS

THE CONTRACT DOCUMENTS PRESENT THE DESIGN INTENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL PLANS, SPECIFICATIONS, ADDENDA, CONSTRUCTION SKETCHES AND OTHER CONTRACT DOCUMENTS FOR CONSISTENCY. SIMILARLY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW FIELD CONDITIONS, INCLUDING COORDINATION WITH ALL UTILITIES. THE CONTRACTOR SHALL COMPLETE ANY TEST EXCAVATIONS IN ADVANCE OF ORDERING MATERIALS OR OF CONSTRUCTION IN AN AREA OF UTILITY CROSSINGS OR POTENTIAL INVOLVEMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING ANY INCONSISTENCIES IN THE DOCUMENTS OR ANY APPARENT CONFLICTS TO THE ATTENTION OF THE ENGINEER BEFORE ORDERING MATERIALS AND BEFORE PROCEEDING WITH CONSTRUCTION IN THE AREA SO THAT THE ENGINEER MAY REVIEW THE CONDITIONS AND RECOMMEND ANY ADJUSTMENTS TO THE DOCUMENTS THAT MAY BE NECESSARY, OR TO RECOMMEND RELOCATION OF A UTILITY OR OTHER REMEDIAL WORK THAT MAY BE REQUIRED.

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5		
4		
3		
2		
1	JANUARY 10, 2025	REVISED PER C.O.B COMMENTS

REVISIONS

MAJOR LAND DEVELOPMENT SUBMISSION

SCALE: AS NOTED
DATE: SEPTEMBER 6, 2024
CHECKED BY: BCT
DRAWN BY: KDH/JGU
CAD FILE: INDEX.dwg
PROJECT NUMBER: 22005

Lehigh Valley Health Network
MUHLENBERG

EMERGENCY DEPARTMENT EXPANSION

CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

INDEX PLAN

FILE NUMBER
S-12395

SHEET NUMBER
2 OF 18

Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\Submission\INDEX.dwg Printed: Jan 10, 2025 - 2:55pm

SITE PLAN NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF BETHLEHEM, PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, PENNSYLVANIA DEPARTMENT OF TRANSPORTATION–BUREAU OF AVIATION, AND FEDERAL AVIATION ADMINISTRATION STANDARDS, SPECIFICATIONS, DETAILS, AND REGULATIONS AS APPLICABLE AND IS SUBJECT TO INSPECTION AND APPROVAL AS APPROPRIATE.

2. THE PROPOSED ROOFTOP AND TEMPORARY HELIPADS, INCLUDING ALL DETAILS RELATED TO LOCATION, DESIGN, OPERATION, AND SAFETY OF THE HELIPADS INCLUDING CLEARANCES TO BUILDINGS, PARKING, AND OTHER SURROUNDING FEATURES, HAVE BEEN DESIGNED BY HELIPORT SYSTEMS, INC. THE TEMPORARY HELIPAD IS PROPOSED TO UTILIZE THE EXISTING PAVEMENT SURFACE FOR THE LANDING PAD. ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH THE PROPOSED CONSTRUCTION OR PROPOSED RESTRIPING SHALL BE PERMANENTLY ERADICATED, WHICH STRIPING HAS BEEN OMITTED FROM THE PLAN FOR PLAN CLARITY. SEE THE EXISTING CONDITIONS PLAN FOR EXISTING STRIPING CONDITION. UPON PROJECT COMPLETION, THE TEMPORARY HELIPAD WILL BE REMOVED AND THE AREA RESTORED TO ITS PRE–CONSTRUCTION CONDITION.

3. THE PROPOSED ROOFTOP AND TEMPORARY HELIPADS SHALL BE LICENSED AND APPROVED BY THE PENNDOT BUREAU OF AVIATION AND THE FEDERAL AVIATION ADMINISTRATION AS REQUIRED PRIOR TO THEIR USE.

4. THE SITE IMPROVEMENTS PROPOSE A CAMPUS WIDE REDUCTION IN IMPERVIOUS COVER OF APPROXIMATELY 0.20 AC AND UTILIZE RESERVE CAPACITIES IN PREVIOUSLY CONSTRUCTED DETENTION FACILITIES AND POST–CONSTRUCTION STORMWATER MANAGEMENT BMP SYSTEMS TO MEET THE REQUIREMENTS OF THE CITY OF BETHLEHEM AND REQUIREMENTS THE MONOCACY CREEK ACT 167 STORM WATER MANAGEMENT PLAN AND NPDES PERMIT REQUIREMENTS. BY SUBMISSION OF THESE PLANS THE ENGINEER OF RECORD CERTIFIES THAT THESE PLANS ARE IN COMPLETE CONFORMANCE WITH THE CITY OF BETHLEHEM STORM WATER MANAGEMENT ORDINANCE.

5. THE CONTRACTOR SHALL REPAIR, AT HIS EXPENSE, ANY EXISTING PAVEMENT AND/OR SIDEWALK NOT SCHEDULED FOR REMOVAL AND WHICH IS DAMAGED DURING CONSTRUCTION ACTIVITIES.

6. THE CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS OF THE UNDERGROUND UTILITY LINE PROTECTION ACT.

7. THE PROPOSED USE WILL NOT RESULT IN THE CREATION OF POTENTIAL NUISANCES OR HAZARDS REGARDING NOISE, LARGE TRUCK TRAFFIC, GLARE, ODORS, DUST, FIRE, OR TOXIC OR EXPLOSIVE HAZARDS OR OTHER SIGNIFICANT PUBLIC HEALTH OR SAFETY HAZARDS.

8. THE EXISTING #2597 BUILDING IS TO BE RAZED AS PART OF THIS PROJECT BY OTHERS AND HAS BEEN OMITTED FROM THE PLANS FOR PLAN CLARITY. SEE THE EXISTING CONDITIONS PLAN FOR BUILDING LOCATION.

9. EXISTING DRIVEWAYS, PARKING AREAS, UTILITIES AND LANDSCAPING WITHIN THE AREA OF THE PROPOSED CONSTRUCTION SHALL BE REMOVED AS NECESSARY TO ACCOMMODATE THE PROPOSED CONSTRUCTION.

10. EXISTING DRIVEWAYS, PARKING AREAS, UTILITIES AND LANDSCAPING THAT ARE TO BE REMOVED DURING SITE CONSTRUCTION HAVE BEEN OMITTED FROM THE SITE PLAN FOR CLARITY. SEE THE EXISTING CONDITIONS PLAN FOR LOCATIONS OF SURFACE FEATURES WITHIN THE PROPERTY BOUNDARIES.

11. THERE ARE NO WATERCOURSES OR FLOODPLAINS WITHIN THE AREAS OF PROPOSED WORK. THERE IS NO EVIDENCE OF ANY WETLANDS, OR SEASONAL HIGH OR LOW WATER TABLE AREAS WITHIN THE AREAS OF PROPOSED WORK.

12. SEE LEGEND ON SHEET 2 FOR DESCRIPTIONS OF THE VARIOUS SYMBOLS AND TONES ON THIS SHEET.

13. THE CONTRACTOR SHALL GRADE THE SITE IN SUCH A MANNER THAT DIRECTS STORMWATER RUNOFF AWAY FROM BUILDINGS AND IN A MANNER THAT PROVIDES POSITIVE RUNOFF OF STORMWATER IN ALL AREAS AT ALL TIMES.

14. IN ORDER TO MAINTAIN CONTINUITY BETWEEN PLAN REVISIONS, ANY CHANGES TO A PREVIOUS PLAN SUBMISSION SHALL BE FLAGGED WITH A TRIANGLE. ANY CHANGES NOT FLAGGED MAY BE CONSIDERED NOT APPROVED. FLAGGED CHANGES SHALL BE REFERENCED TO THE APPROPRIATE REVISION DATE IN THE REVISION BLOCK.

15. PRIOR TO ANY WORK WITHIN THE RIGHT–OF–WAY, PERMITS MUST BE OBTAINED FROM CITY ENGINEERING OFFICE.

16. ELEVATIONS ARE BASED ON THE NAVD 88 DATUM.

17. THE RECONSTRUCTION OF THE HANDICAP RAMP AT THE NORTHWEST CORNER OF THE INTERSECTION OF WESTGATE DR AND BATHGATE DR WAS DEFERRED AS PART OF THE LVHN SIDEWALK IMPROVEMENT PROJECT ALONG WESTGATE AND BATHGATE DRIVES AND IT WILL BE RECONSTRUCTED TO MEET CURRENT ADA AND CITY STANDARDS AS PART OF THIS PROJECT. HANDICAP RAMP DESIGN PLANS WILL BE SUBMITTED TO THE CITY FOR REVIEW PRIOR TO CONSTRUCTION AND CONSTRUCTION PERMITTING.

18. ALL PUBLIC INLETS SHOULD HAVE INLET MARKERS. THE DESIGN OF THE INLET MARKERS SHALL BE APPROVED BY THE CITY ENGINEER.

19. THE MAINTENANCE OF STORM WATER FACILITIES SHALL BE THE OWNER'S RESPONSIBILITY. THE OWNER'S DEED, AND THE DEED TO ANY SUBSEQUENT OWNER, SHALL NOTE THAT THE OWNER SHALL ACCEPT THE MAINTENANCE RESPONSIBILITIES. THE CITY OF BETHLEHEM SHALL BE PERMITTED TO INSPECT THE STORM WATER FACILITIES ON AT LEAST AN ANNUAL SCHEDULE TO ENSURE THAT ANY NECESSARY CORRECTIVE WORK IS PERFORMED IN A TIMELY MANNER. THE DRAINAGE EASEMENT PROVIDES FOR THE FLOW OF STORM WATER ACROSS LOTS, AND MAY NOT BE ALTERED WITHOUT THE WRITTEN PERMISSION OF THE CITY ENGINEER. NO OBSTRUCTIONS SUCH AS PLANTING BERMS OR FENCES MAY BE INSTALLED IN THE DRAINAGE EASEMENTS AREAS WITHOUT SUFFICIENT PROVISION FOR THE PASSAGE OF STORM WATER, AND ANY SUCH PROPOSED PROVISION SHALL BE APPROVED IN WRITING BY THE CITY ENGINEER.

20. ACCURATE AS–BUILT PLANS SHALL BE KEPT UP TO DATE DURING THE CONSTRUCTION PROCESS. AT THE COMPLETION OF THE PROJECT RECORD DRAWINGS SHALL BE DEVELOPED FROM THE AS–BUILT PLANS AND SUBMITTED TO THE CITY ENGINEER'S OFFICE. ALL FINAL DRAWINGS SHALL SHOW NORTH AMERICAN DATUM (NAD) 1983 STATE PLANE COORDINATES IN FEET (PENNSYLVANIA SOUTH, FIPS ZONE 3702) AND THE DIGITAL FILE SHALL BE IN STATE PLANE FEET COORDINATES AS APPLICABLE. THE HARD COPY OF THE RECORD DRAWINGS SHALL BE IN THE FORM OF A MYLAR COPY. THE ENGINEER OF RECORD SHALL CERTIFY (I.E. P.E. STAMPED AND SIGNED) THAT THE RECORD DRAWINGS COMPLY SUBSTANTIALLY WITH THE APPROVED PLAN AND THAT THEY CONFORM TO INDUSTRY STANDARDS. ALL DIGITAL FILES SHALL RESIDE ON PC COMPATIBLE CD ROM CONTAINING THE DIGITAL REPRESENTATION OF THE FINAL PLAN AS PRESENTED ON THE TWENTY–FOUR (24) INCH BY THIRTY–SIX (36) INCH SHEETS. THE DIGITAL MAP SHALL BE AUTOCAD COMPATIBLE. ALL LAYERS INCLUDED IN THE DIGITAL MAPS SHALL BE THE STANDARDIZED LAYERS PREPARED AND UTILIZED BY THE CITY OF BETHLEHEM TO ENSURE COMPATIBILITY WITH THE CITY'S EXISTING CAD STANDARDS AND AS DESCRIBED IN APPENDIX A OF THE CITY'S SUBDIVISION AND LAND DEVELOPMENT ORDINANCE

21. THE CURRENT LANDOWNER SHALL BE RESPONSIBLE TO ENSURE THAT THE BICYCLE RACKS CONTINUE TO BE AVAILABLE, WELL MAINTAINED, AND REPLACED IF DAMAGED OR REMOVED.

22. ALL PROPOSED RETAINING WALLS SHOWN ON THE PLAN WILL BE DESIGNED BY OTHER DESIGN PROFESSIONALS. SHOP DRAWINGS INCLUDING THE DESIGN AND DETAILS FOR ALL PROPOSED RETAINING WALLS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF PENNSYLVANIA, SHALL BE SUBMITTED TO THE CITY FOR REVIEW PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THE WALL CONSTRUCTION.

GRADING AND UTILITY NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF BETHLEHEM, PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, PENNSYLVANIA DEPARTMENT OF TRANSPORTATION–BUREAU OF AVIATION, AND FEDERAL AVIATION ADMINISTRATION STANDARDS, SPECIFICATIONS, DETAILS, AND REGULATIONS AS APPLICABLE AND IS SUBJECT TO INSPECTION AND APPROVAL AS APPROPRIATE.

2. THE CONTRACTOR IS REQUIRED TO GRADE TO THE FINAL GRADE DEPICTED ON THESE PLANS. THE CONTRACTOR SHALL GRADE THE SITE IN SUCH A MANNER THAT DIRECTS STORMWATER RUNOFF AWAY FROM BUILDINGS AND THAT PROVIDES POSITIVE RUNOFF OF STORMWATER IN ALL AREAS AT ALL TIMES.

3. ALL DISTURBED AREAS WITHIN THE LIMITS OF GRADING AND NOT TO BE COVERED WITH IMPERVIOUS SURFACE SHALL BE TOPSOILED AND LANDSCAPED IN ACCORDANCE WITH THE PLANS PREPARED BY THE LANDSCAPE ARCHITECT.

4. PRIVATE AND PUBLIC UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, FIBER OPTIC, TELEPHONE, TELEVISION, GAS, STORM, CONDENSATE, ELECTRIC, WATER, SANITARY AND STORM SEWER LINES AND THEIR APPURTENANCES EXIST ON THE SITE. INCOMPLETE RECORDS CONCERNING THE LOCATION OF THESE FACILITIES ARE AVAILABLE TO AND HAVE BEEN PROVIDED BY THE OWNER'S REPRESENTATIVE. TO THE EXTENT POSSIBLE, SUCH LINES AND FACILITIES HAVE BEEN INDICATED ON THIS PLAN, BUT ALL LOCATIONS SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE PIDCOCK COMPANY DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE, OR GUARANTY THAT ALL PRIVATE AND PUBLIC UNDERGROUND LINES AND FACILITIES HAVE BEEN IDENTIFIED AND SHOWN ON THE PLAN NOR THAT THE LOCATIONS OF THESE UTILITIES ARE ACCURATE.

5. ALL EXISTING UNDERGROUND AND ABOVE GROUND LINES AND FACILITIES, SUCH AS UTILITIES, PAVEMENT, SIDEWALK, TREES, ETC. WITHIN THE LIMITS OF CONSTRUCTION SHALL BE ABANDONED, REMOVED AND/OR RELOCATED AS NECESSARY TO ACCOMMODATE THE PROPOSED CONSTRUCTION. STORM AND SANITARY SEWER STRUCTURES TO BE ABANDONED SHALL BE REMOVED TO A MINIMUM OF FOUR FEET BELOW FINISHED GRADE AND THE PIPE SHALL BE BRICK BULKHEADED AND THE STRUCTURE FILLED WITH SELECT BACKFILL MATERIAL. FACILITIES TO REMAIN IN SERVICE SHALL BE PROTECTED BY THE CONTRACTOR.

6. PRIOR TO STARTING ANY CONSTRUCTION – INCLUDING UTILITY CONSTRUCTION – THE CONTRACTOR SHALL COORDINATE, FIELD VERIFY, AND EXCAVATE TEST HOLES IF NECESSARY TO LOCATE AND DETERMINE THE ACTUAL LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES WHERE PROPOSED UTILITIES OR STRUCTURES WILL CROSS EXISTING UTILITIES OR STRUCTURES. ANY DISCREPANCIES OR CONFLICTS BETWEEN EXISTING UTILITIES AND PROPOSED UTILITIES OR STRUCTURES SHALL BE RESOLVED WITH THE ENGINEER BEFORE PROCEEDING WITH ANY WORK.

7. EXISTING DRIVEWAYS, PARKING AREAS, UTILITIES AND LANDSCAPING WITHIN THE AREA OF THE PROPOSED CONSTRUCTION SHALL BE REMOVED AS NECESSARY TO ACCOMMODATE THE PROPOSED CONSTRUCTION, WHICH FEATURES HAVE BEEN FROM THE PLAN FOR PLAN CLARITY. SEE THE EXISTING CONDITIONS PLAN FOR LOCATIONS OF SURFACE FEATURES WITHIN THE PROPERTY BOUNDARIES.

8. THE EXISTING #2597 BUILDING IS TO RAZED AS PART OF THIS PROJECT BY OTHER DESIGN PROFESSIONAL AND HAS BEEN OMITTED FROM THE PLANS FOR PLAN CLARITY. SEE THE EXISTING CONDITIONS PLAN FOR BUILDING LOCATION.

9. ALL MANHOLES AND UTILITY BOXES SHALL BE RESET TO PROPOSED GRADE IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANY AND/OR ENGINEERS STANDARDS.

10. THE CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS OF THE PA ONE CALL SYSTEM, INC.

11. EXISTING UTILITIES INCLUDING UTILITY POLES IN CONFLICT WITH THE PROPOSED CONSTRUCTION WILL BE RELOCATED.

12. SEE LEGEND ON SHEET 2 FOR DESCRIPTIONS OF THE VARIOUS SYMBOLS AND TONES ON THIS SHEET.

13. THE CONTRACTOR SHALL PROPERLY PROTECT THE EXISTING UTILITY LINES THAT ARE TO REMAIN DURING CONSTRUCTION ACTIVITIES AND SHALL BE RESPONSIBLE FOR MAINTAINING A MINIMUM OF 12" OF EARTH COVER OVER PIPES DURING CONSTRUCTION.

13. THE CONTRACTOR SHALL REMOVE AND RELOCATE EXISTING TREES WITHIN THE PROJECT AREA THAT ARE IN CONFLICT WITH THE PROPOSED CONSTRUCTION IN ACCORDANCE WITH THE PLANS PREPARED BY THE LANDSCAPE ARCHITECT.

14. IF A SINKHOLE IS ENCOUNTERED, PRIOR TO REPAIRING ANY SINKHOLE, CONTACT A PROFESSIONAL ENGINEER WITH EXPERIENCE IN GEOTECHNICAL ENGINEERING SO AS TO REPAIR THE SINKHOLE IN ACCORDANCE WITH THE PROFESSIONAL'S SPECIFIC RECOMMENDATIONS. THE REMEDIATION PLAN CHOSEN BY THE PROFESSIONAL ENGINEER SHOULD BE BASED ON THE CHARACTERISTICS OF THE SINKHOLE, THE LOCATION OF THE SINKHOLE ON THE SITE AND THE PLANNED OR POSSIBLE FUTURE DEVELOPMENT AT THE SINKHOLE LOCATION.

WATERLINE NOTES

1. WATERLINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF BETHLEHEM STANDARDS AND PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION REGULATIONS AS APPLICABLE.

2. WATERLINES SHALL BE CLASS 52 DUCTILE IRON PIPE OF THE SIZES INDICATED ON THE PLANS.

3. PROVIDE 10–FEET OF HORIZONTAL SEPARATION BETWEEN WATERLINES AND SANITARY OR STORM SEWERS. WHERE WATERLINE CROSSES A SANITARY OR STORM SEWER, PROVIDE A VERTICAL SEPARATION OF 18–INCHES BETWEEN PIPES AND CENTER A FULL LENGTH OF WATERLINE ACROSS THE SEWER LINE TO MAXIMIZE THE DISTANCE OF THE JOINTS FROM THE SEWER.

4. FIRE HYDRANTS TAKEN OUT OF SERVICE SHALL IMMEDIATELY BE "BAGGED" OR OTHERWISE IDENTIFIED TO THE SATISFACTION OF THE ENGINEER AS BEING OUT OF SERVICE.

5. EXISTING VALVE BOXES AND FIRE HYDRANTS SHALL BE RESET TO PROPOSED GRADE. INSTALL VALVE BOX EXTENSIONS WITH OPERATOR RISERS WHERE THE VALVE BOX TOP WILL BE GREATER THAN 6–FEET ABOVE THE TOP OF THE VALVE OPERATOR, SUCH THAT THE OPERATOR WILL BE WITHIN 4–FEET OF THE PROPOSED GRADE.

6. THE SITE CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION OF ALL WATERLINES TO WITHIN 5 FEET OF THE BUILDING UNLESS OTHERWISE NOTED ON THE PLANS.

7. ALL WATERLINES SHALL HAVE A MINIMUM OF 4' OF COVER.

8. ALL ANTICIPATED WATER SERVICE INTERRUPTIONS SHALL BE COORDINATED WITH CITY OF BETHLEHEM SEVENTY–TWO (72) HOURS IN ADVANCE OF THE FIELD OPERATIONS.

9. THE CONTRACTOR SHALL NOT OPERATE WATER MAIN APPURTENANCES OWNED BY THE CITY OF BETHLEHEM. THE CITY, UPON REQUEST FROM THE CONTRACTOR, WILL SCHEDULE PERSONNEL TO OPERATE ALL VALVES, HYDRANTS, ETC. UNLESS DIRECTED OTHERWISE.

10. THE GENERAL CONTRACTOR SHALL PROVIDE TO CITY OF BETHLEHEM A DETAILED CONSTRUCTION SCHEDULE FOR REVIEW AND APPROVAL PRIOR TO BEGINNING CONSTRUCTION. THE SCHEDULE SHALL INCLUDE A DETAILED SEQUENCE OF CONSTRUCTION OPERATIONS INCLUDING TIMING OF ALL WATER SYSTEM SHUT–OFFS AND INSTALLATION OF THE MAIN AND TESTING PROCEDURES.

11. AN APPROVED WATER SUPPLY FOR FIRE PROTECTION, EITHER TEMPORARY OR PERMANENT, SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ARRIVES ON THE SITE.

12. CHAPTER 22 OF THE IFC "FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION" WILL BE ENFORCED FOR THE DURATION OF THE CONSTRUCTION PROJECT.

STORM SEWER NOTES

1. ALL STORM SEWERS WILL BE CONSTRUCTED IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION AND CITY OF BETHLEHEM STANDARDS AS APPLICABLE. STORM SEWERS SHALL BE PENNDOT TYPE 'A' PIPE AND ALL PIPE JOINTS AND STRUCTURE JOINTS SHALL BE WATERTIGHT.

2. INLETS SHALL BE STANDARD PENNDOT TYPE "C" UNLESS OTHERWISE NOTED. INLETS SHALL HAVE BICYCLE SAFE GRATES. ALL STORM MANHOLES SHALL BE SHALLOW 4' DIAMETER MANHOLES UNLESS OTHERWISE NOTED. IN ACCORDANCE WITH CURRENT PENNDOT STANDARDS, ALL STORM SEWER INLETS AND MANHOLES THAT EXCEED PENNDOT STANDARD DEPTHS SHALL BE DESIGNED TO ACCOMMODATE HS–25 LOADING. SHOP DRAWINGS FOR SPECIAL STRUCTURE DESIGNS SIGNED AND SEALED BY AN ENGINEER REGISTERED IN PENNSYLVANIA SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.

3. ALL PUBLIC INLETS SHALL HAVE INLET MARKERS. THE DESIGN OF THE INLET MARKERS SHALL BE APPROVED BY THE CITY ENGINEER.

4. ALL STORM SEWER PIPE LENGTHS AND PIPE SLOPES ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

5. ALL TOP ELEVATIONS LISTED FOR TYPE C AND TYPE M INLETS ARE TOP OF GRATE ELEVATIONS. THE TOP ELEVATION LISTED FOR SPECIAL DRAINAGE STRUCTURES IS THE WEIR INVERT ELEVATION AS SHOWN ON THE RESPECTIVE DETAIL. TOP OF GRATE ELEVATION FOR TYPE C INLETS IS MEASURED AT THE GUTTER GRADE POINT FOR A STANDARD PENNDOT TYPE 'C' INLET (8" BELOW TOP OF CURB ELEVATION).

6. ALL ENDWALLS AND CONCRETE END SECTIONS SHALL HAVE SECURITY GRATES.

7. WATER QUALITY INLETS, STORMWATER OUTLET CONTROL DEVICES AND THE SPRAY IRRIGATION SYSTEM SHALL BE PERPETUALLY CLEANED AND MAINTAINED BY THE OWNER AND/OR HIS ASSIGNS.

8. THE MAINTENANCE OF STORM WATER FACILITIES SHALL BE THE OWNER'S RESPONSIBILITY. THE OWNER'S DEED, AND THE DEED TO ANY SUBSEQUENT OWNER, SHALL NOTE THAT THE OWNER SHALL ACCEPT THE MAINTENANCE RESPONSIBILITIES. THE CITY OF BETHLEHEM SHALL BE PERMITTED TO INSPECT THE STORM WATER FACILITIES ON AT LEAST AN ANNUAL SCHEDULE TO ENSURE THAT ANY NECESSARY CORRECTIVE WORK IS PERFORMED IN A TIMELY MANNER.

9. STORM SEWER PIPES AND STRUCTURES TO BE REMOVED MAY BE ABANDONED IN PLACE AT THE OWNERS DISCRETION.

SANITARY SEWER NOTES

1. THE SANITARY SEWERAGE SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF BETHLEHEM STANDARDS AND PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION REGULATIONS AS APPLICABLE.

2. ALL SANITARY SEWER LATERAL CONNECTIONS TO THE PROPOSED BUILDING SHALL BE SCHEDULE 40 PVC PIPE OF THE SIZE INDICATED ON THE PLAN, UNLESS OTHERWISE NOTED ON THE PLAN. AND ALL OTHER SANITARY SEWER PIPES SHALL BE SDR 35 PVC PIPE OF SIZE INDICATED ON THE PLAN. PROVIDE CLEANOUTS AND BUILDING LATERAL TRAPS AS REQUIRED BY CITY OF BETHLEHEM AND NATIONAL PLUMBING CODE AS APPROPRIATE.

3. ALL SANITARY SEWER PIPE LENGTHS AND PIPE SLOPES ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

4. THE SITE CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION OF ALL SANITARY SEWER LATERALS TO WITHIN 5 FEET OF THE BUILDING UNLESS OTHERWISE NOTED ON THE PLANS.

5. ALL SANITARY SEWERAGE SYSTEM IMPROVEMENTS ARE TO REMAIN PRIVATE. THE OWNER ASSUMES ALL OPERATION AND MAINTENANCE RESPONSIBILITY FOR ITS SYSTEM.

PAVEMENT MARKING AND SIGNAGE NOTES

1. THE CONTRACTOR SHALL VERIFY HORIZONTAL LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

2. PROTECT EXISTING VEGETATION REQUIRED TO REMAIN DURING CONSTRUCTION.

3. THE CONTRACTOR SHALL REMOVE EXISTING SIGNS WITHIN THE PROJECT AREA THAT ARE IN CONFLICT WITH THE PROPOSED CONSTRUCTION. SIGNS SUITABLE FOR REUSE SHALL BE STORED ON–SITE IN ACCORDANCE WITH THE PROJECT MANUAL AS DIRECTED BY THE OWNER. THIS PLAN DOES NOT DISTINGUISH BETWEEN NEW SIGNS AND SIGNS TO BE REUSED. THE OWNER RESERVES THE RIGHT TO REJECT THE REUSE OF ANY EXISTING SIGN.

4. ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH THE PROPOSED CONSTRUCTION OR PROPOSED RESTRIPING SHALL BE PERMANENTLY ERADICATED, WHICH STRIPING HAS BEEN OMITTED FROM THE PLAN FOR PLAN CLARITY. SEE THE EXISTING CONDITIONS PLAN FOR EXISTING STRIPING CONDITION.

5. ALL R7–8 SIGNS SHALL BE MOUNTED ON A SIGN BOLLARD AS SHOWN IN THE DETAIL ON THE PAVEMENT MARKING AND SIGNAGE PLAN 6 AND DETAILS SHEET. ALL REMAINING GROUND MOUNTED SIGNS SHALL BE MOUNTED ON PENNDOT TYPE 'B' POSTS.

6. SEE LEGEND ON SHEET 2 FOR DESCRIPTIONS OF THE VARIOUS SYMBOLS AND TONES ON THIS SHEET.

7. ALL PAVEMENT MARKINGS MUST BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF PA PUBLICATION TC–8600 STANDARDS.

8. ALL SIGNS MUST BE PLACED IN ACCORDANCE WITH PENNDOT PUBLICATION 111M, LATEST EDITION.

9. ALL SIGNS MUST BE IN ACCORDANCE WITH PENNDOT PUBLICATION 236M, LATEST EDITION. SEE DETAILS ON PAVEMENT MARKING AND SIGNAGE PLAN 6 AND DETAILS SHEET FOR SPECIAL SIGNS.

7. PAVEMENT MARKING SYMBOLS SHALL BE THERMOPLASTIC. ALL OTHER STRIPING SHALL BE PAINT. ALL STRIPING DIMENSIONS AND MATERIALS SHALL BE IN ACCORDANCE WITH THE PENNDOT TC–STANDARDS, PUBLICATION 111, PAVEMENT MARKINGS AND SIGNING STANDARDS.

CITY OF BETHLEHEM FIRE DEPARTMENT NOTES

1. ANY CHANGE IN THE LOCATION OF THE FIRE DEPARTMENT CONNECTION MUST BE APPROVED BY THE CITY OF BETHLEHEM FIRE DEPARTMENT.

2. CHAPTER 33 OF THE IFC "FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION" SHOULD BE FOLLOWED AND WILL BE ENFORCED DURING THE DURATION OF CONSTRUCTION.

3. AN APPROVED WATER SUPPLY FOR FIRE PROTECTION, EITHER TEMPORARY OR PERMANENT, SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ARRIVES ON THE SITE. CONTACT THE OFFICE OF THE FIRE MARSHAL FOR APPROVAL OF THE PROPOSED WATER SUPPLY.

4. AS NOTED ON UTILITY PLANS, FIRE HYDRANTS LOCATED ALONG SCHOENERSVILLE ROAD SHALL BE ADJUSTED TO FACE THE LEHIGH VALLEY HEALTH NETWORK PRIVATE ACCESS DRIVE.

5. A KNOX BOX FOR CITY OF BETHLEHEM ACCESS SHALL BE PROVIDED. THE FINAL LOCATION IS TO BE DETERMINED.

THE PIDCOCK COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL

NOTES:

1. THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.

2. THESE DOCUMENTS ARE PROVIDED FOR MUNICIPAL REVIEW ONLY AND ARE NOT TO BE UTILIZED FOR ANY OTHER PURPOSE. THE DOCUMENTS ARE NOT ISSUED FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED AS SUCH BELOW.

CONTRACTOR'S OBLIGATION REGARDING COORDINATION OF DOCUMENTS AND FIELD CONDITIONS

THE CONTRACT DOCUMENTS PRESENT THE DESIGN INTENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL PLANS, SPECIFICATIONS, ADDENDA, CONSTRUCTION SKETCHES AND OTHER CONTRACT DOCUMENTS FOR CONSISTENCY. SIMILARLY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW FIELD CONDITIONS, INCLUDING COORDINATION WITH ALL UTILITIES. THE CONTRACTOR SHALL COMPLETE ANY TEST EXCAVATIONS IN ADVANCE OF ORDERING MATERIALS OR OF CONSTRUCTION IN AN AREA OF UTILITY CROSSINGS OR POTENTIAL INVOLVEMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING ANY INCONSISTENCIES IN THE DOCUMENTS OR ANY APPARENT CONFLICTS TO THE ATTENTION OF THE ENGINEER BEFORE ORDERING MATERIALS AND BEFORE PROCEEDING WITH CONSTRUCTION IN THE AREA SO THAT THE ENGINEER MAY REVIEW THE CONDITIONS AND RECOMMEND ANY ADJUSTMENTS TO THE DOCUMENTS THAT MAY BE NECESSARY, OR TO RECOMMEND RELOCATION OF A UTILITY OR OTHER REMEDIAL WORK THAT MAY BE REQUIRED.

6		
5		
4		
3		
2		
1	JANUARY 10, 2025	REVISED PER C.O.B COMMENTS

REVISIONS

MAJOR LAND DEVELOPMENT SUBMISSION

SCALE: NO SCALE
DATE: SEPTEMBER 6, 2024
CHECKED BY: BCT
DRAWN BY: KDH/JGU
CAD FILE: GENERAL NOTES.dwg
PROJECT NUMBER: 22005

811
Know what's below.
Call before you dig.
SEE SHEET 2

Lehigh Valley Health Network
MUHLENBERG

EMERGENCY DEPARTMENT EXPANSION

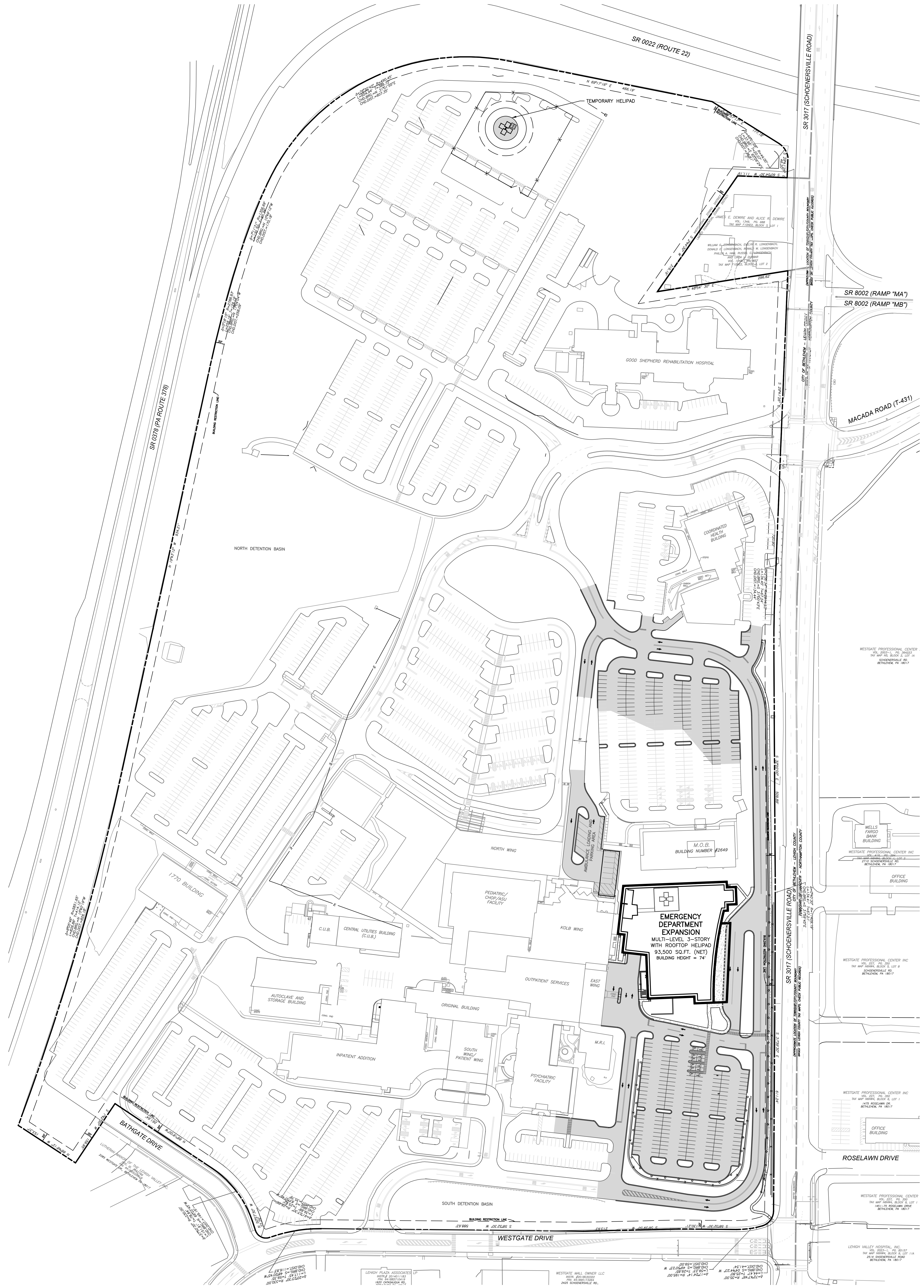
CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

GENERAL NOTES

FILE NUMBER
S-12395

SHEET NUMBER
3 OF 18

Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\Submission\GENERAL NOTES.dwg Printed: Jan 10, 2025 - 2:56pm


SR 0022 (ROUTE 22)
SR 3017 (SCHOENERSVILLE ROAD)
TEMPORARY HELIPAD
SR 8002 (RAMP "MA")
SR 8002 (RAMP "MB")
GOOD SHEPHERD REHABILITATION HOSPITAL
MACADA ROAD (T-431)
SR 0378 (PA ROUTE 378)
NORTH DETENTION BASIN
COORDINATED HEALTH BUILDING
EMERGENCY DEPARTMENT EXPANSION
MULTI-LEVEL 3-STORY WITH ROOFTOP HELIPAD
93,500 SQ.FT. (NET)
BUILDING HEIGHT = 74'
M.O.B. BUILDING NUMBER #2649
NORTH WING
1770 BUILDING
PEDIATRIC/CHOP/ASU FACILITY
KOLB WING
C.U.B.
CENTRAL UTILITIES BUILDING (C.U.B.)
AUTOCLAVE AND STORAGE BUILDING
OUTPATIENT SERVICES
EAST WING
ORIGINAL BUILDING
INPATIENT ADDITION
SOUTH WING/PATIENT WING
PSYCHIATRIC FACILITY
M.R.I.
SOUTH DETENTION BASIN
BATHGATE DRIVE
WESTGATE DRIVE
ROSELAWN DRIVE
WELLS FARGO BANK BUILDING
OFFICE BUILDING

ZONING LEGEND

CITY OF BETHLEHEM

🟨	RESIDENTIAL
🟧	COMMERCIAL
🟪	INDUSTRIAL
🟦	INSTITUTIONAL
🟩	REDEVELOPMENT

HANOVER TOWNSHIP
(NORTHAMPTON COUNTY)

AGRICULTURAL DISTRICTS

A	AGRICULTURAL
MCPD	MONOCACY CREEK PRESERVATION DISTRICT

RESIDENTIAL DISTRICTS

R1-A	ADULT
R1-R	RURAL
R1-S	SUBURBAN
R1-U	URBAN
R-2	MULTIPLE FAMILY RESIDENTIAL
PHR	PLANNED HIGHWAY RESIDENTIAL

COMMERCIAL DISTRICTS

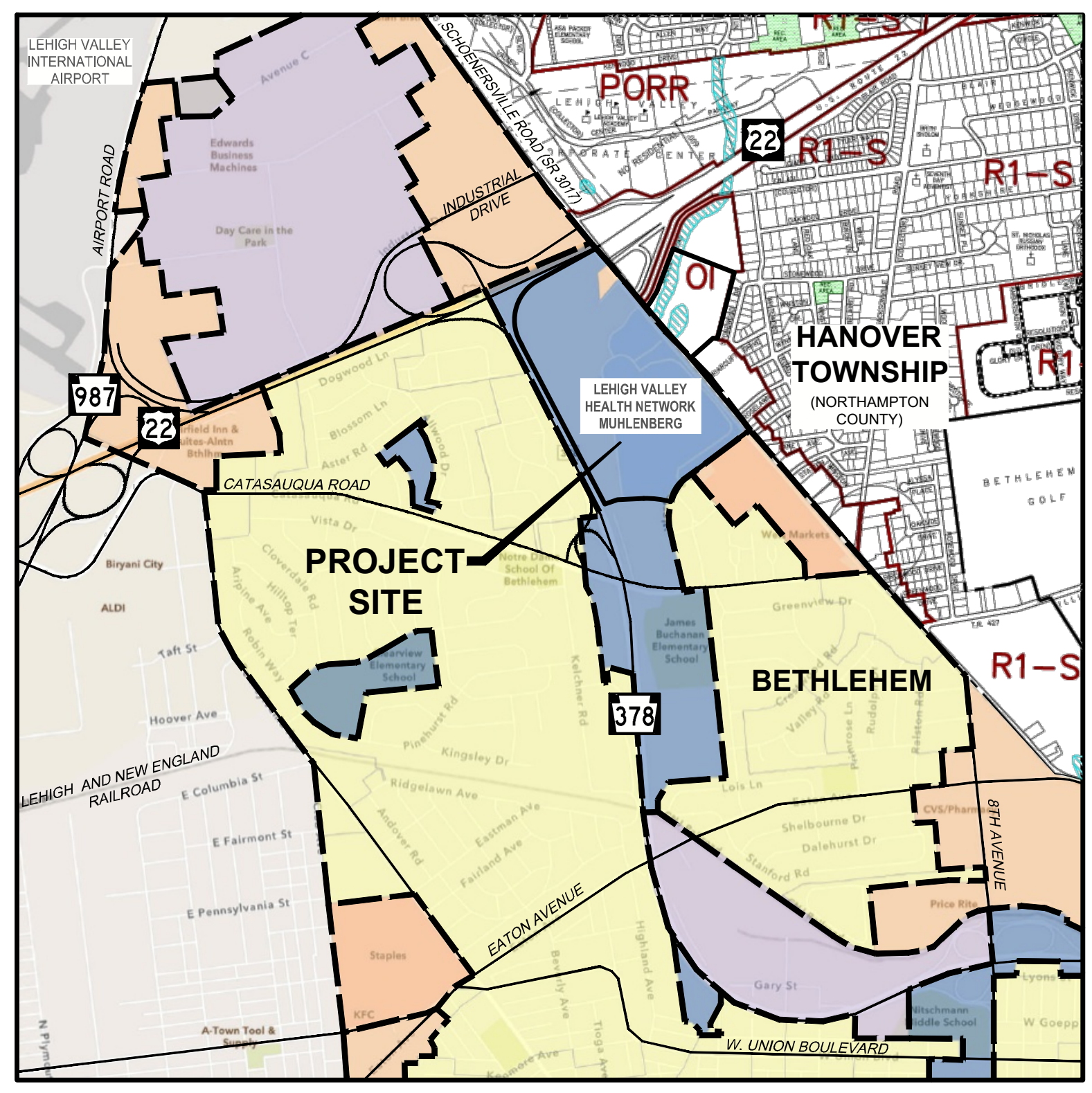
C-1	SERVICE COMMERCIAL
C-2	COMMERCIAL CENTER
C-2R	COMMERCIAL CENTER RESTRICTED

EMPLOYMENT DISTRICTS

OI	OFFICE AND INSTITUTIONAL
PIBD	PLANNED INDUSTRIAL/BUSINESS PARK DISTRICT
PORR	PLANNED OFFICE, RESEARCH AND RESIDENTIAL
LBD	LIMITED BUSINESS DISTRICT
AFHBD	AIRCRAFT FLIGHT PATH HIGHWAY BUSINESS DISTRICT

SECONDARY (OVERLAY) DISTRICTS

SCD	▨	SPECIAL CONSERVATION DISTRICT
AFD	▨	AIRCRAFT FLIGHT PATH DISTRICT


LEHIGH VALLEY INTERNATIONAL AIRPORT
AIRPORT ROAD
SCHOENERSVILLE ROAD (SR 3017)
PORR
R1-S
OI
INDUSTRIAL DRIVE
HANOVER TOWNSHIP
(NORTHAMPTON COUNTY)
LEHIGH VALLEY HEALTH NETWORK MUHLENBERG
987
22
378
CATASAUQUA ROAD
PROJECT SITE
BETHLEHEM
LEHIGH AND NEW ENGLAND RAILROAD
EATON AVENUE
8TH AVENUE
W. UNION BOULEVARD

SOURCE:
ZONING MAP – CITY OF BETHLEHEM,
CITY OF BETHLEHEM, LEHIGH AND NORTHAMPTON COUNTIES, PENNSYLVANIA,
EFFECTIVE: JUNE 15, 2012, AND LAST REVISED: AUGUST 21, 2023

ZONING MAP – HANOVER TOWNSHIP
HANOVER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA
LAST REVISED: NOVEMBER 6, 2022

LOCATION MAP

2000' 1000' 0 2000' 4000'
SCALE IN FEET

SITE DATA

RECORD OWNER:	DOCUMENT ID.	TAX MAP:	PIN NUMBER:	TOTAL AREA:
MUHLENBERG REALTY CORPORATION	DOC. ID. 7057034	F10NE3, BLOCK 2, LOT 2D	641877243187-1	18.806 ACRES
MMC LEHIGH INVESTMENT CORPORATION (LEASED TO GOOD SHEPHERD LONG TERM CARE FACILITY, INC.)	VOL. 1346, PAGE 911	F10NE3, BLOCK 2, LOT 2E	641877677456-1	4.207 ACRES
LEHIGH VALLEY HOSPITAL-MUHLENBERG	DOC. ID. 7057033	F10NE3, BLOCK 2, LOT 2	641877825739-1	22.523 ACRES
MUHLENBERG REALTY CORPORATION	DOC. ID. 7057034	F10NE3, BLOCK 2, LOT 2C	641885163671-1	3.906 ACRES
MUHLENBERG REALTY CORPORATION	VOL. 1658, PAGE 1087	F10NE3, BLOCK 2, LOT 2A	641886386275-1	2.691 ACRES
LEHIGH VALLEY HOSPITAL-MUHLENBERG	DOC. ID. 7057032	F10NE3, BLOCK 2, LOT 2B	641886739542-1	7.984 ACRES
MUHLENBERG REALTY CORPORATION	VOL. 1590, PAGE 531	F10NE3, BLOCK 2, LOT 3	641876531178-1	16.532 ACRES
MUHLENBERG REALTY CORPORATION	VOL. 1658, PAGE 1087	F10NE3, BLOCK 2, LOT 2F	641887211922-1	3.828 ACRES

CITY WARD 13; BLOCK SM1 AND SM2

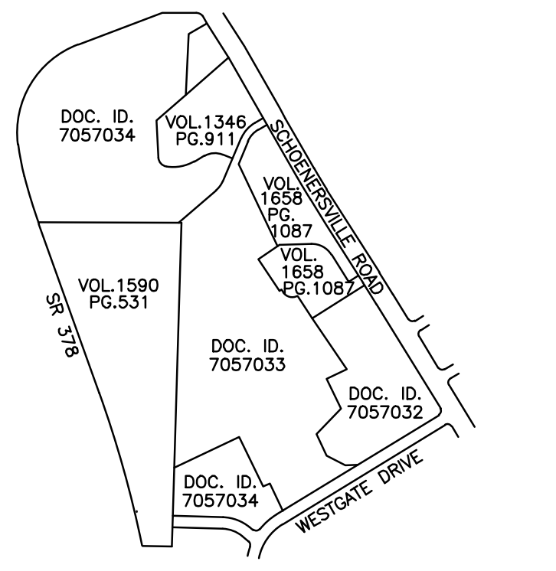
* SEE DEED PLOTTING THIS SHEET FOR LOCATION OF PROPERTY.

GROSS SITE AREA:	80.477 ACRES
WESTGATE DRIVE:	0.062 ACRES
NET SITE AREA:	80.415 ACRES

INTENDED USE:
HOSPITAL AND PARKING LOTS

SITE ADDRESS:
2545 SCHOENERSVILLE ROAD
BETHLEHEM, PA 18017

OWNER/APPLICANT:
LEHIGH VALLEY HEALTH NETWORK
FACILITIES AND CONSTRUCTION
2100 MACK BOULEVARD – 5TH FLOOR
P.O. BOX 4000
ALLENTOWN, PA 18105-4000
(484) 884-7565
EMAIL: GREGORY.MARUSHAK@LVHN.ORG


DOC. ID. 7057034
VOL.1346 PG.911
SCHOENERSVILLE ROAD
VOL. 1658 PG. 1087
VOL. 1658 PG.1087
VOL.1590 PG.531
SR 378
DOC. ID. 7057033
DOC. ID. 7057032
DOC. ID. 7057034
WESTGATE DRIVE

DEED PLOTTING

SCALE: 1"=1000'

ZONING DATA

MINIMUM LOT AND SETBACK REGULATIONS
ZONING DISTRICT: INSTITUTIONAL

	REQUIRED	PROPOSED
MIN. LOT AREA	2 ACRES	78.78 AC.
MIN. LOT WIDTH AT MIN. BLDG. SETBACK LINE	20 FEET	>20 FT.
MIN. FRONT YARD SETBACK (FT.)	20 FEET	>20 FT.
MIN. REAR YARD SETBACK (FT.)	15 FEET	>15 FT.
MIN. SIDE YARD SETBACK (EACH) (FT.)	15 FEET	>15 FT.
MAXIMUM PERCENT BUILDING COVERAGE	65%	13%
MAXIMUM PERCENT IMPERVIOUS COVERAGE	80%	55%
MAXIMUM HEIGHT	100 FEET*	74 FEET**

* MAXIMUM HEIGHT IS EQUAL TO RIGHT-OF-WAY WIDTH OF SCHOENERSVILLE ROAD, IN ACCORDANCE WITH 1306.02(f). BUILDINGS MAY EXCEED THIS HEIGHT IF BUILDING IS SET BACK, IN ADDITION TO THE REQUIRED SETBACK, ONE (1) FOOT FOR EACH THREE (3) FEET, OR FRACTION THEREOF BY WHICH SUCH BUILDING EXCEEDS THE WIDTH OF THE STREET.

**BUILDING HEIGHT MEASURED FROM THE ELEVATION AT THE BUILDING ENTRANCE TO THE ELEVATION OF THE TOP OF THE ROOF ELEVATOR/STAIR TOWER.

INTENT

THE INTENT OF THIS PLAN IS TO EXPAND THE HOSPITAL EMERGENCY DEPARTMENT AND PROVIDE THE NECESSARY ACCESS DRIVE, PATIENT DROP-OFF, PARKING AREA, UTILITY SERVICE, HELIPAD FACILITY, AND

PARKING TABULATION

REQUIRED PARKING:	
HOSPITAL CAMPUS PARKING SPACES REQUIRED BY CITY ORDINANCE: [1]	1,342
ADDITIONAL PARKING SPACES REQUIRED FOR ED EXPANSION	
REQUIRED PARKING: HOSPITAL USE: 1 PARKING SPACES PER 4 BEDS 3 PARKING SPACE PER 4 EMPLOYEES	
PROPOSED NO. BEDS WITHIN BUILDING ADDITION= 108 BEDS PROPOSED NO. EMPLOYEES ON LARGEST SHIFT = 100 EMPLOYEES	
ADDITIONAL PARKING SPACES REQUIRED:	102
PROPOSED BIKE PARKING SPACES (102 x 5%=5.1)	6
TOTAL REQUIRED PARKING SPACES	1,444
PARKING PROVIDED: [1]	
EXISTING PARKING SPACES	2,754
PROPOSED PARKING SPACES (NET)	-22
TOTAL CAMPUS PARKING SPACES PROVIDED	2,732
HANDICAP ACCESSIBLE PARKING SPACES:	
REQUIRED ACCESSIBLE PARKING: 20 SPACES PLUS 1 FOR EACH 100 SPACES IN THE LOT OVER 1,000 $\frac{1}{8}$ OF REQUIRED SPACES MUST BE VAN ACCESSIBLE	
REQUIRED SPACES (INCLUDES VAN ACCESSIBLE)	48
REQUIRED VAN ACCESSIBLE SPACES	48
EXISTING ACCESSIBLE PARKING SPACES (INCLUDES VAN ACCESSIBLE)	110
EXISTING VAN ACCESSIBLE PARKING SPACES	67
PROPOSED ADDITIONAL PARKING SPACES (NET) (INCLUDES VAN ACCESSIBLE)	-4
PROPOSED ADDITIONAL VAN ACCESSIBLE PARKING SPACES (NET)	-2
TOTAL ACCESSIBLE PARKING SPACES AT COMPLETION OF PROJECT	106
TOTAL VAN ACCESSIBLE PARKING SPACES AT COMPLETION OF PROJECT	65

NOTES:

1. REQUIRED PARKING AND EXISTING NUMBER OF PARKING SPACES ARE AS SHOWN ON THE SITE PLAN FOR LEHIGH VALLEY HOSPITAL – PROPOSED HELIPAD, PREPARED BY TPC, BEARING OUR FILE NO. S-12084, LAST REVISED FEBRUARY 9, 2021.
2. THE TEMPORARY HELIPAD REDUCES THE NUMBER OF PARKING SPACES AVAILABLE ON THE CAMPUS BY 204 SPACES. THE REQUIRED CAMPUS PARKING CONTINUES TO BE MET WHILE THE TEMPORARY HELIPAD IS IN OPERATION.

CERTIFICATION OF OWNERSHIP

I, ____________________ OF LEHIGH VALLEY HEALTH NETWORK
BEING DULY SWORN ACCORDING TO LAW, AND ACTING IN MY CAPACITY AS
____________________ DEPOSE AND SAY THAT THE ABOVE NAMED CORPORATION IS THE TRUE AND LAWFUL OWNER OF THE PROPERTY KNOWN AS LEHIGH VALLEY HOSPITAL-MUHLENBERG, INC. ; THAT THE ABOVE DESCRIBED PROPERTY IS IN PEACEFUL POSSESSION OF SAID CORPORATION AND THAT THERE ARE NO SUITS OR LIENS PENDING AFFECTING THE TITLE THEREOF.

NOTARIZATION

SWORN AND SUBSCRIBED BEFORE ME THIS_____ DAY OF __________,A.D. _____.

NOTARY PUBLIC

MY COMMISSION EXPIRES: ______________

CITY OF BETHLEHEM

APPROVED BY THE CITY OF BETHLEHEM PLANNING COMMISSION
ON ____________________

DARLENE L. HELLER, AICP
DIRECTOR, PLANNING AND ZONING
DATE

ROBERT MELOSKY
PLANNING COMMISSION CHAIR
DATE

CERTIFICATION OF LEHIGH VALLEY PLANNING COMMISSION

REVIEWED BY THE LEHIGH VALLEY PLANNING COMMISSION.

PLANNER
DATE

PROOF OF RECORDING

PLAN RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF LEHIGH COUNTY, PENNSYLVANIA, AS INSTRUMENT ID # ____________________
ON THE ________ DAY OF ________ , 20____ .

WITNESS MY HAND AND SEAL OF OFFICE THIS______ DAY OF ________________, 20____

WITNESS
RECORDER OF DEEDS

ENGINEER'S CERTIFICATION

I, BRENT C. TUCKER, DO HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE INFORMATION CONTAINED IN THE ACCOMPANYING PLANS, SPECIFICATIONS AND REPORTS HAS BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES.

DATE
BRENT C. TUCKER, REG.PROF.ENGR. PA #PE086987

THE PIDCOCK COMPANY
2451 PARKWOOD DRIVE
ALLENTOWN, PA 18103
PHONE: 610-791-2252
EMAIL: btucker@pidcockcompany.com

SURVEYOR'S CERTIFICATION

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

DATE
WILLIAM G. KMETZ, REG. SURVEYOR PA. #SU56281-E

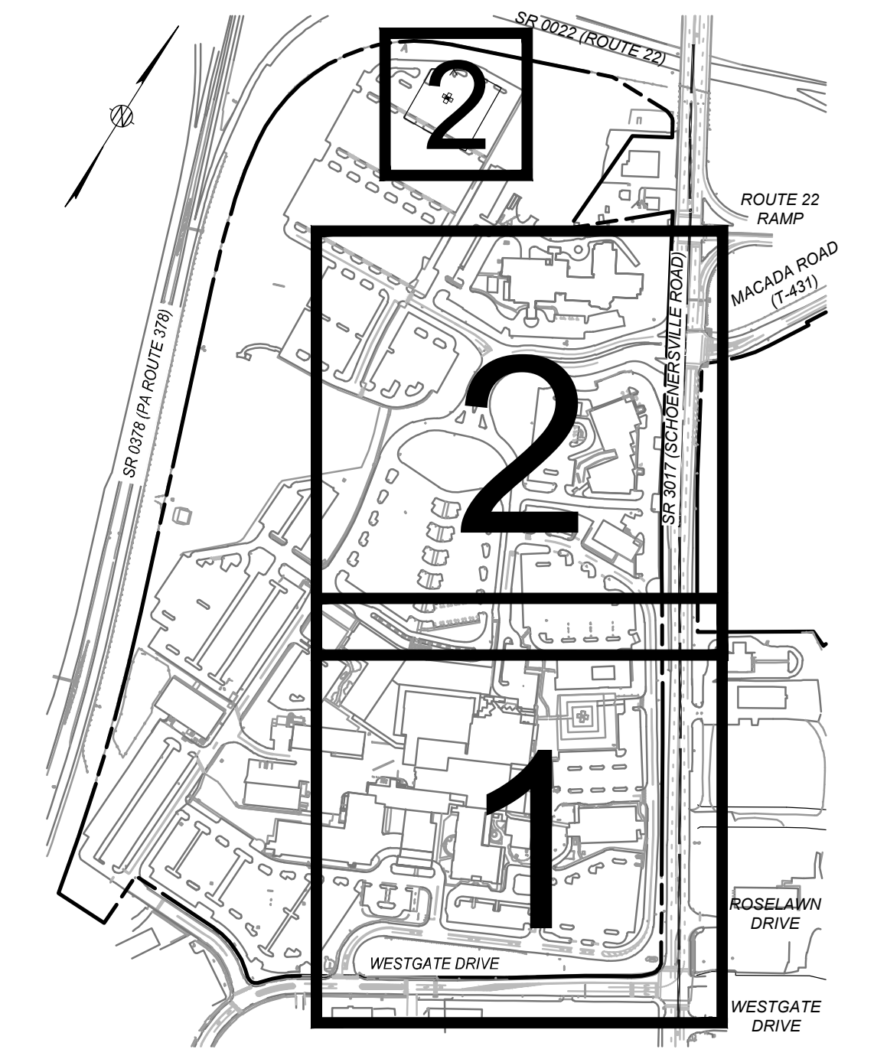
THE PIDCOCK COMPANY
2451 PARKWOOD DRIVE

THE PIDCOCK COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL


2
SR 0022 (ROUTE 22)
ROUTE 22 RAMP
MACADA ROAD (T-431)
SR 0378 (PA ROUTE 378)
2
1
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

NOTES:

1. THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.
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CONTRACTOR'S OBLIGATION REGARDING COORDINATION OF DOCUMENTS AND FIELD CONDITIONS

THE CONTRACT DOCUMENTS PRESENT THE DESIGN INTENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL PLANS, SPECIFICATIONS, ADDENDA, CONSTRUCTION SKETCHES AND OTHER CONTRACT DOCUMENTS FOR CONSISTENCY. SIMILARLY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW FIELD CONDITIONS, INCLUDING COORDINATION WITH ALL UTILITIES. THE CONTRACTOR SHALL COMPLETE ANY TEST EXCAVATIONS IN ADVANCE OF ORDERING MATERIALS OR OF CONSTRUCTION IN AN AREA OF UTILITY CROSSINGS OR POTENTIAL INVOLVEMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING ANY INCONSISTENCIES IN THE DOCUMENTS OR ANY APPARENT CONFLICTS TO THE ATTENTION OF THE ENGINEER BEFORE ORDERING MATERIALS AND BEFORE PROCEEDING WITH CONSTRUCTION IN THE AREA SO THAT THE ENGINEER MAY REVIEW THE CONDITIONS AND RECOMMEND ANY ADJUSTMENTS TO THE DOCUMENTS THAT MAY BE NECESSARY, OR TO RECOMMEND RELOCATION OF A UTILITY OR OTHER REMEDIAL WORK THAT MAY BE REQUIRED.

6		
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4		
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2		
1	JANUARY 10, 2025	REVISED PER C.O.B COMMENTS

REVISIONS

MAJOR LAND DEVELOPMENT SUBMISSION

SCALE: 1"=100'
DATE: SEPTEMBER 6, 2024
CHECKED BY: BCT
DRAWN BY: KDH/JGU
CAD FILE: OVERALL SITE.dwg
PROJECT NUMBER: 22005

Know what's below.
Call before you dig.
SEE SHEET 2

GRAPHIC SCALE: 100' 50' 0' 100' 200'

Lehigh Valley Health Network
MUHLENBERG

EMERGENCY DEPARTMENT EXPANSION

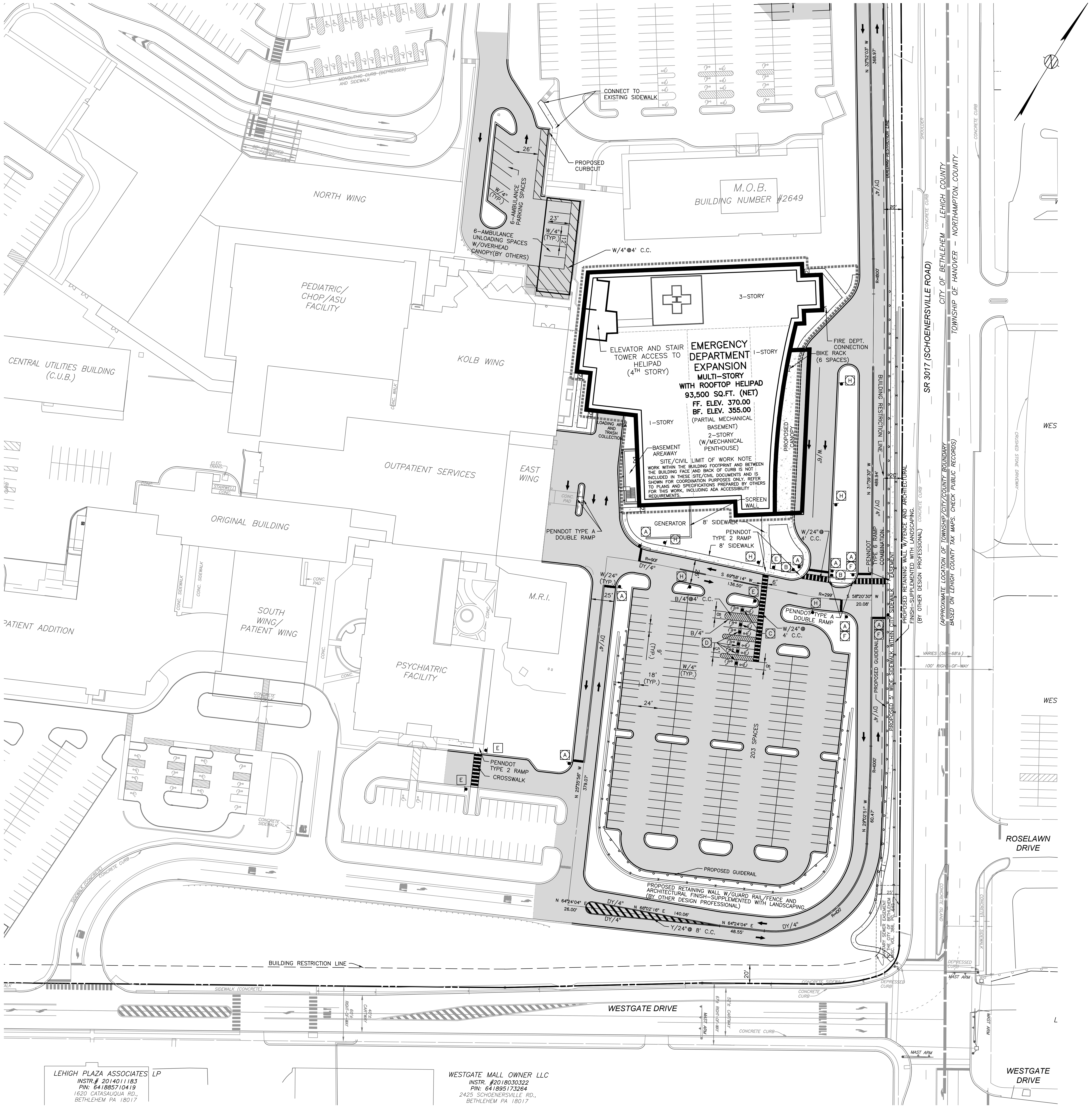
CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

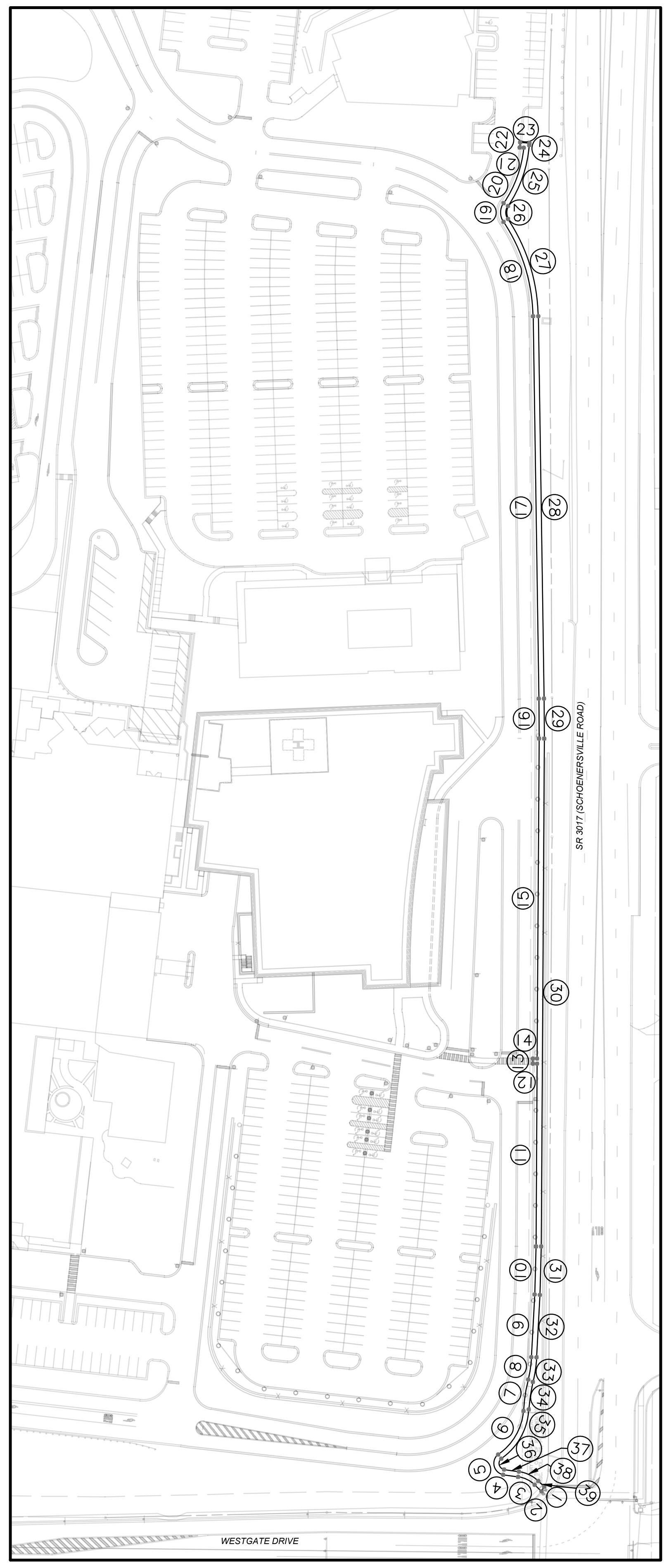
OVERALL SITE PLAN

FILE NUMBER
S-12395

SHEET NUMBER
4 OF 18

CONTINUED ON SITE PLAN 2


NORTH WING
M.O.B.
BUILDING NUMBER #2649
CONNECT TO EXISTING SIDEWALK
PROPOSED CURBCUT
6-AMBULANCE PARKING SPACES
6-AMBULANCE UNLOADING SPACES W/OVERHEAD CANOPY(BY OTHERS)
W/4"@4' C.C.
PEDIATRIC/CHOP/ASU FACILITY
CENTRAL UTILITIES BUILDING (C.U.B.)
KOLB WING
EMERGENCY DEPARTMENT EXPANSION
MULTI-STORY WITH ROOFTOP HELIPAD
93,500 SQ.FT. (NET)
FF. ELEV. 370.00
BF. ELEV. 355.00
3-STORY
1-STORY
(PARTIAL MECHANICAL BASEMENT)
2-STORY (W/MECHANICAL PENTHOUSE)
ELEVATOR AND STAIR TOWER ACCESS TO HELIPAD (4TH STORY)
FIRE DEPT. CONNECTION
BIKE RACK (6 SPACES)
PROPOSED CANOPY
LOADING AREA AND TRASH COLLECTION
BASEMENT AREAWAY
SITE/CIVIL LIMIT OF WORK NOTE
WORK WITHIN THE BUILDING FOOTPRINT AND BETWEEN THE BUILDING FACE AND BACK OF CURB IS NOT INCLUDED IN THESE SITE/CIVIL DOCUMENTS AND IS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO PLANS AND SPECIFICATIONS PREPARED BY OTHERS FOR THIS WORK, INCLUDING ADA ACCESSIBILITY REQUIREMENTS.
SCREEN WALL
GENERATOR
8' SIDEWALK
PENNDOT TYPE 2 RAMP
PENNDOT TYPE A DOUBLE RAMP
OUTPATIENT SERVICES
EAST WING
ORIGINAL BUILDING
SOUTH WING/PATIENT WING
PATIENT ADDITION
PSYCHIATRIC FACILITY
M.R.I.
203 SPACES
PROPOSED GUIDERAIL
PROPOSED RETAINING WALL W/GUARD RAIL/FENCE AND ARCHITECTURAL FINISH-SUPPLEMENTED WITH LANDSCAPING (BY OTHER DESIGN PROFESSIONAL)
PROPOSED 5' WIDE SIDEWALK WITHIN CITY SIDEWALK EASEMENT
PENNDOT TYPE 6 RAMP COMBINATION
BUILDING RESTRICTION LINE
SR 3017 (SCHOENERSVILLE ROAD)
CITY OF BETHLEHEM – LEHIGH COUNTY
TOWNSHIP OF HANOVER – NORTHAMPTON COUNTY
(APPROXIMATE LOCATION OF TOWNSHIP/CITY/COUNTY BOUNDARY BASED ON LEHIGH COUNTY TAX MAPS. CHECK PUBLIC RECORDS)
100' RIGHT-OF-WAY
SANITARY SEWER EASEMENT TO THE CITY OF BETHLEHEM MISC. VOL. 386, PG. 645
N 25°35'56" W 379.07'
N 31°39'30" W 489.94'
N 29°02'51" W 60.47'
S 69°58'14" W 136.50'
S 58°20'30" W 20.08'
N 64°24'04" E 26.00'
N 66°02'16" E 140.06'
N 64°24'04" E 48.55'
Y/24"@ 8' C.C.
WESTGATE DRIVE
ROSELAWN DRIVE
WESTGATE DRIVE
60'± RIGHT-OF-WAY
40'± CARTWAY
SIDEWALK (CONCRETE)
LEHIGH PLAZA ASSOCIATES LP
INSTR.# 2014011183
PIN: 641885710419
1620 CATASAUQUA RD., BETHLEHEM PA 18017
WESTGATE MALL OWNER LLC
INSTR. #2018030322
PIN: 641895173264
2425 SCHOENERSVILLE RD., BETHLEHEM PA 18017

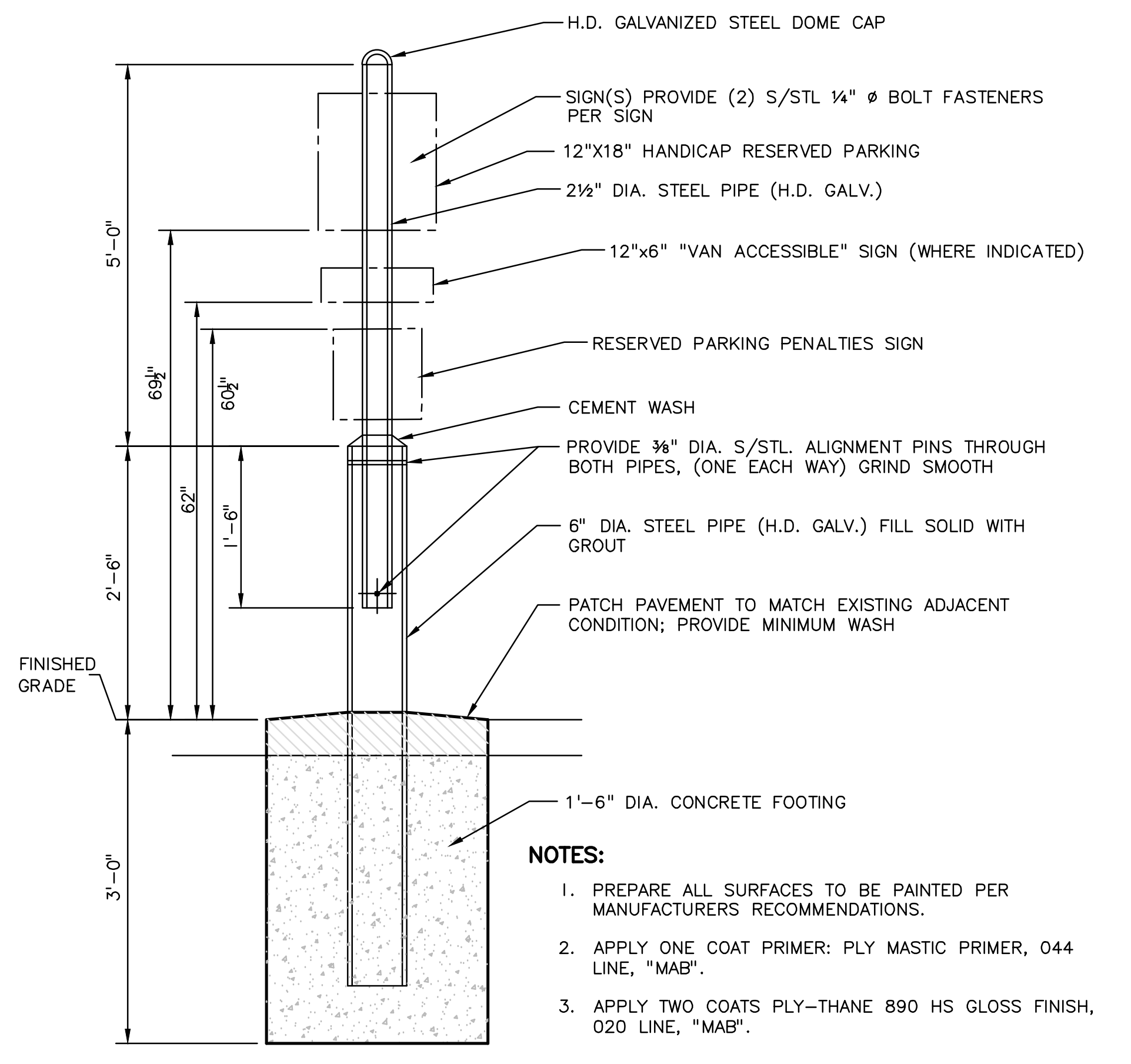

WESTGATE DRIVE
SR 3017 (SCHOENERSVILLE ROAD)

SIDEWALK AND ACCESS EASEMENT

SCALE: 1"=100'

SIDEWALK AND ACCESS EASEMENT
AREA=6,786 S.F.
OR 0.156 ACRE

①	Δ=8°22'38" R=35.00' L=5.12' T=2.56' CHD. BRG.=S0°43'39"E CHD. DIST.=5.11'
②	N78°40'12"W 8.97'
③	Δ=34°56'30" R=29.50' L=17.99' T=9.28' CHD. BRG.=S83°51'33"W CHD. DIST.=17.71'
④	S66°23'18"W 14.64'
⑤	Δ=128°17'22" R=11.08' L=24.81' T=22.86' CHD. BRG.=N45°49'48"W CHD. DIST.=19.94'
⑥	Δ=51°11'56" R=56.21' L=50.23' T=26.93' CHD. BRG.=N1°46'42"W CHD. DIST.=48.57'
⑦	Δ=12°23'43" R=141.46' L=30.60' T=15.36' CHD. BRG.=N23°40'08"W CHD. DIST.=30.54'
⑧	Δ=10°37'37" R=119.00' L=22.07' T=11.07' CHD. BRG.=N23°44'03"W CHD. DIST.=22.04'
⑨	N29°02'51"W 60.47'
⑩	Δ=2°36'39" R=1,019.00' L=46.43' T=23.22' CHD. BRG.=N30°21'11"W CHD. DIST.=46.43'
⑪	N31°39'30"W 176.16'
⑫	S58°20'30"W 4.00'
⑬	N31°39'30"W 5.00'
⑭	N58°20'30"E 4.00'
⑮	N31°39'30"W 308.78'
⑯	Δ=1°12'33" R=1,819.00' L=38.38' T=19.19' CHD. BRG.=N32°15'46"W CHD. DIST.=38.38'
⑰	N32°52'03"W 368.97'
⑱	Δ=32°49'40" R=169.00' L=96.83' T=49.78' CHD. BRG.=N49°16'53"W CHD. DIST.=95.51'
⑲	Δ=67°51'02" R=16.00' L=18.95' T=10.76' CHD. BRG.=N31°46'11"W CHD. DIST.=17.86'
⑳	Δ=28°21'51" R=116.00' L=57.43' T=29.31' CHD. BRG.=N12°01'36"W CHD. DIST.=56.84'
㉑	S62°20'04"W 4.00'
㉒	N27°13'14"W 5.00'
㉓	N62°20'04"E 9.00'
㉔	S27°39'56"E 2.05'
㉕	Δ=29°49'16" R=121.00' L=62.98' T=32.22' CHD. BRG.=S12°45'18"E CHD. DIST.=62.27'
㉖	Δ=67°51'02" R=11.00' L=13.03' T=7.40' CHD. BRG.=S31°46'11"E CHD. DIST.=12.28'
㉗	Δ=32°49'40" R=174.00' L=99.69' T=51.26' CHD. BRG.=S49°16'53"E CHD. DIST.=98.34'
㉘	S32°52'03"E 368.97'
㉙	Δ=1°12'33" R=1,824.00' L=38.49' T=19.25' CHD. BRG.=S32°15'46"E CHD. DIST.=38.49'
㉚	S31°39'30"E 489.94'
㉛	Δ=2°36'39" R=1,024.00' L=46.66' T=23.33' CHD. BRG.=S30°21'11"E CHD. DIST.=46.66'
㉜	S29°02'51"E 60.47'
㉝	Δ=11°06'35" R=124.00' L=24.04' T=12.06' CHD. BRG.=S23°29'34"E CHD. DIST.=24.01'
㉞	Δ=11°15'47" R=136.46' L=26.83' T=13.46' CHD. BRG.=S23°34'10"E CHD. DIST.=26.78'
㉟	Δ=52°45'32" R=61.21' L=56.36' T=30.36' CHD. BRG.=S2°49'18"E CHD. DIST.=54.39'
㊱	Δ=125°08'02" R=6.08' L=13.28' T=11.71' CHD. BRG.=S46°08'04"E CHD. DIST.=10.79'
㊲	N66°23'18"E 14.45'
㊳	Δ=34°56'30" R=34.50' L=21.04' T=10.86' CHD. BRG.=N83°51'33"E CHD. DIST.=20.72'
㊴	S78°40'12"E 7.90'

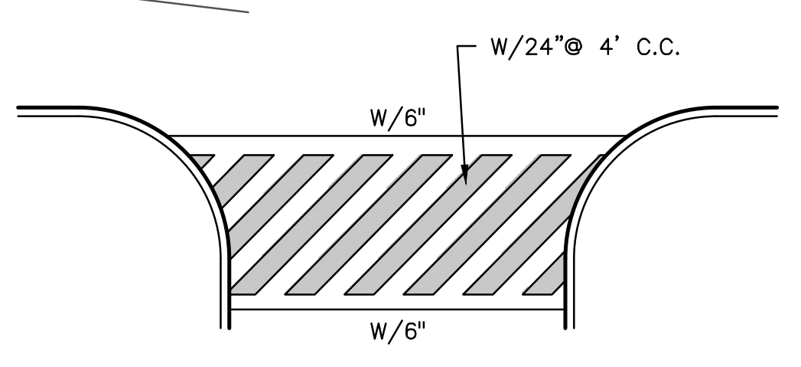

H.D. GALVANIZED STEEL DOME CAP
SIGN(S) PROVIDE (2) S/STL ¼" ø BOLT FASTENERS PER SIGN
12"X18" HANDICAP RESERVED PARKING
2½" DIA. STEEL PIPE (H.D. GALV.)
12"x6" "VAN ACCESSIBLE" SIGN (WHERE INDICATED)
RESERVED PARKING PENALTIES SIGN
CEMENT WASH
PROVIDE ⅜" DIA. S/STL. ALIGNMENT PINS THROUGH BOTH PIPES, (ONE EACH WAY) GRIND SMOOTH
6" DIA. STEEL PIPE (H.D. GALV.) FILL SOLID WITH GROUT
PATCH PAVEMENT TO MATCH EXISTING ADJACENT CONDITION; PROVIDE MINIMUM WASH
FINISHED GRADE
1'-6" DIA. CONCRETE FOOTING
5'-0"
2'-6"
3'-0"
69½"
62"
60½"
1'-6"

NOTES:

1. PREPARE ALL SURFACES TO BE PAINTED PER MANUFACTURERS RECOMMENDATIONS.
2. APPLY ONE COAT PRIMER: PLY MASTIC PRIMER, 044 LINE, "MAB".
3. APPLY TWO COATS PLY-THANE 890 HS GLOSS FINISH, 020 LINE, "MAB".

BOLLARD SIGN POST DETAIL

NO SCALE


W/24"@ 4' C.C.
W/6"
W/6"

CROSSWALK MARKING DETAIL

NO SCALE

SIGN TABULATION

PLAN SYMBOL	SERIES	SIZE	MESSAGE
Ⓐ	R1-1	30"x30"	STOP
Ⓑ	R5-1	30"x30"	DO NOT ENTER
Ⓒ	R7-8	12"x18"	RESERVED PARKING
	R7-8P	12"x6"	VAN ACCESSIBLE
	R7-8F	12"x18"	RESERVED PARKING PENALTIES
Ⓓ	R7-8	12"x18"	RESERVED PARKING
	R7-8F	12"x18"	RESERVED PARKING PENALTIES
Ⓔ	W11-2	30"x30"	PEDESTRIAN
	W16-7PL	24"x12"	DIAGONAL DOWNWARD POINTING ARROW
Ⓕ	R1-3P	18"x6"	ALLWAY PLAQUE
Ⓖ	R5-101	24"x30"	EMERGENCY AND AUTHORIZED VEHICLES ONLY
Ⓗ	R7-6	12"x18"	NO PARKING FIRE LANE

MARKING LEGEND

W/4"	– SOLID WHITE LINE/WIDTH
W/6"	– SOLID WHITE LINE/WIDTH
W/24"	– SOLID WHITE LINE/WIDTH
Y/24"	– SOLID YELLOW LINE/WIDTH
DY/24"	– DOUBLE SOLID YELLOW LINE/WIDTH
B/4"	– SOLID BLUE LINE/WIDTH

SIGN LEGEND

● PROPOSED SIGN

THE PIDCOCK COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
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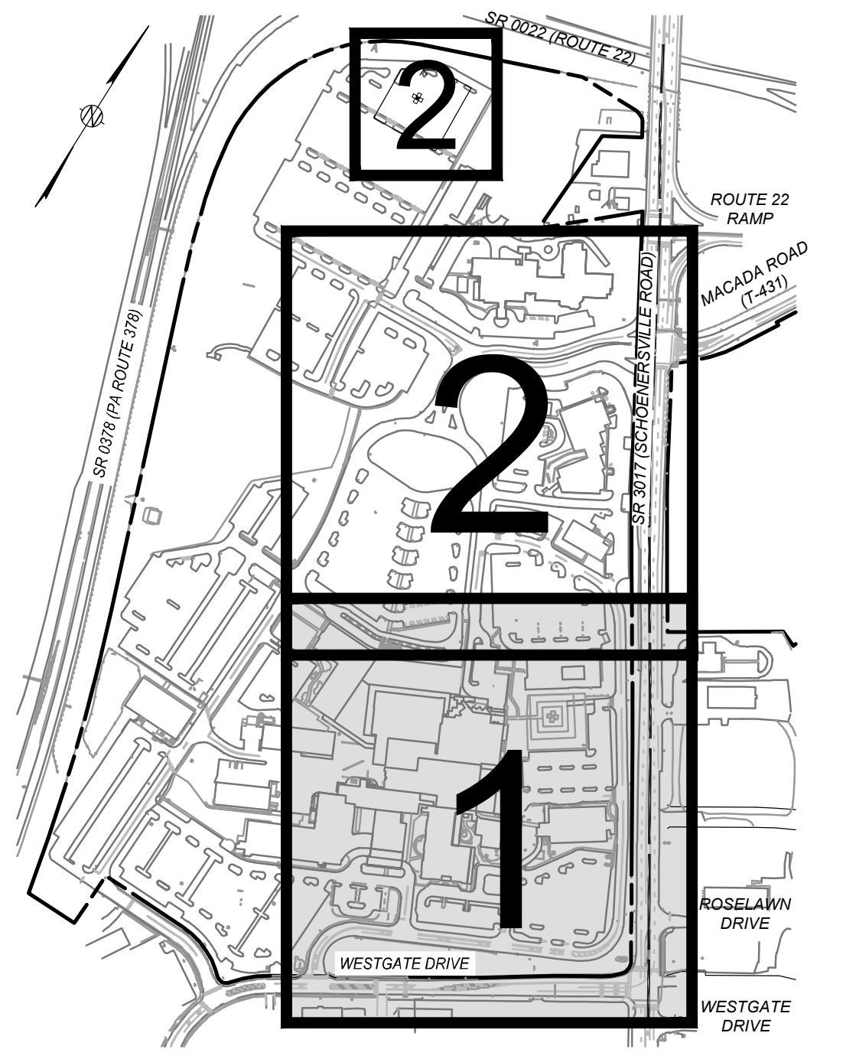
PROFESSIONAL SEAL


2
2
1
ROUTE 22 RAMP
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

NOTES:

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6		
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1	JANUARY 10, 2025	REVISED PER C.O.B COMMENTS

REVISIONS

MAJOR LAND DEVELOPMENT SUBMISSION

SCALE: 1"=50'
DATE: SEPTEMBER 6, 2024
CHECKED BY: BCT
DRAWN BY: KDH/JGU
CAD FILE: SITE.dwg
PROJECT NUMBER: 22005

Know what's below.
Call before you dig.
SEE SHEET 2

GRAPHIC SCALE: 50' 25' 0' 50' 100'

Lehigh Valley Health Network
MUHLENBERG

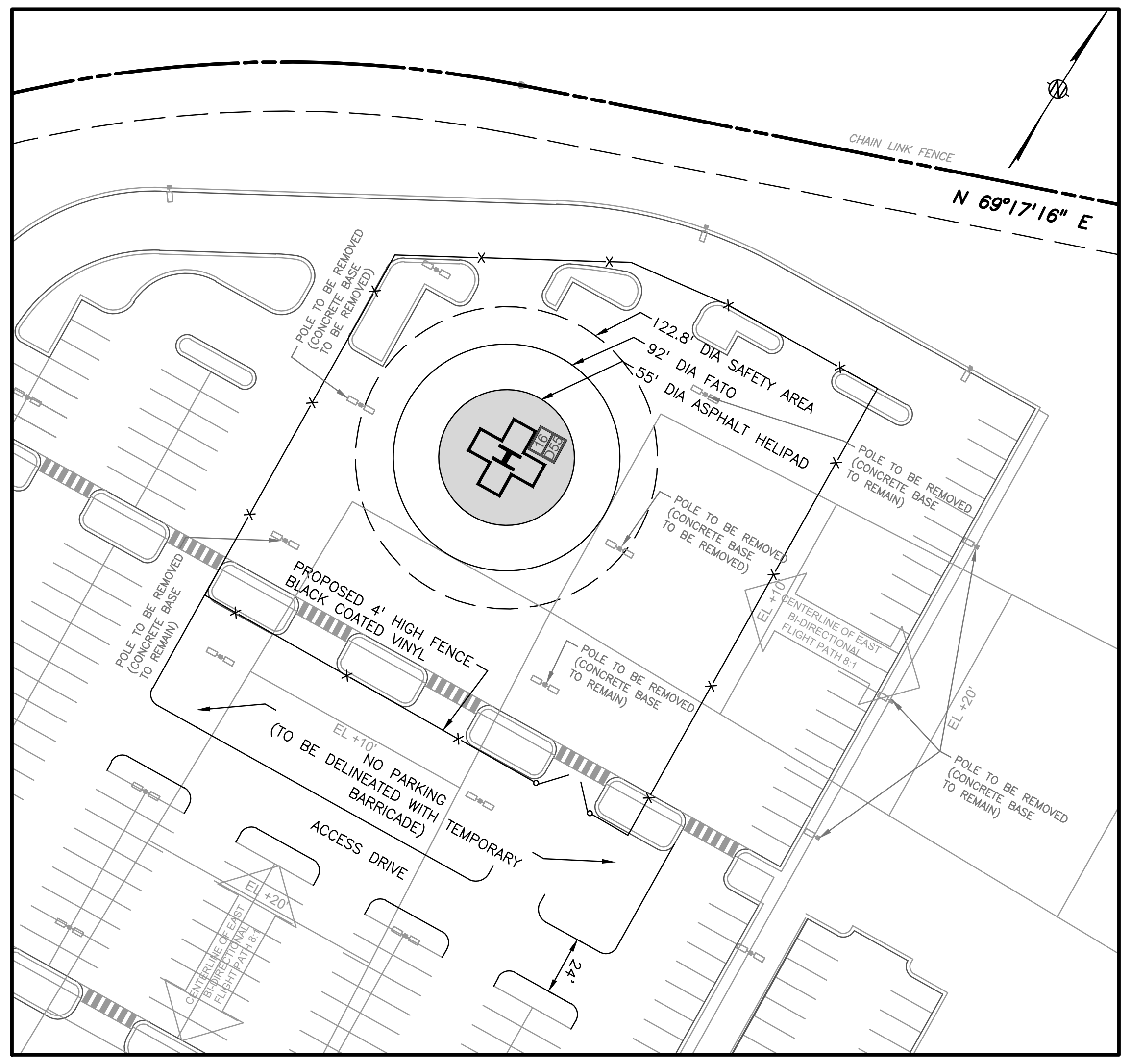
EMERGENCY DEPARTMENT EXPANSION

CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

SITE PLAN 1

FILE NUMBER
S-12395

SHEET NUMBER
5 OF 18


CHAIN LINK FENCE
N 69°17'16" E
POLE TO BE REMOVED (CONCRETE BASE TO BE REMOVED)
122.8' DIA SAFETY AREA
92' DIA FATO
55' DIA ASPHALT HELIPAD
16
D55
POLE TO BE REMOVED (CONCRETE BASE TO REMAIN)
POLE TO BE REMOVED (CONCRETE BASE TO BE REMOVED)
EL +10'
CENTERLINE OF EAST BI-DIRECTIONAL FLIGHT PATH 8:1
PROPOSED 4' HIGH FENCE BLACK COATED VINYL
POLE TO BE REMOVED (CONCRETE BASE TO REMAIN)
EL +20'
POLE TO BE REMOVED (CONCRETE BASE TO REMAIN)
EL +10'
NO PARKING (TO BE DELINEATED WITH TEMPORARY BARRICADE)
ACCESS DRIVE
EL +20'
CENTERLINE OF EAST BI-DIRECTIONAL FLIGHT PATH 8:1
24'

TEMPORARY HELIPAD SITE PLAN

SCALE: 1"=50

NOTE: SEE OVERALL SITE PLAN FOR CAMPUS WIDE LOCATION

SIGN TABULATION

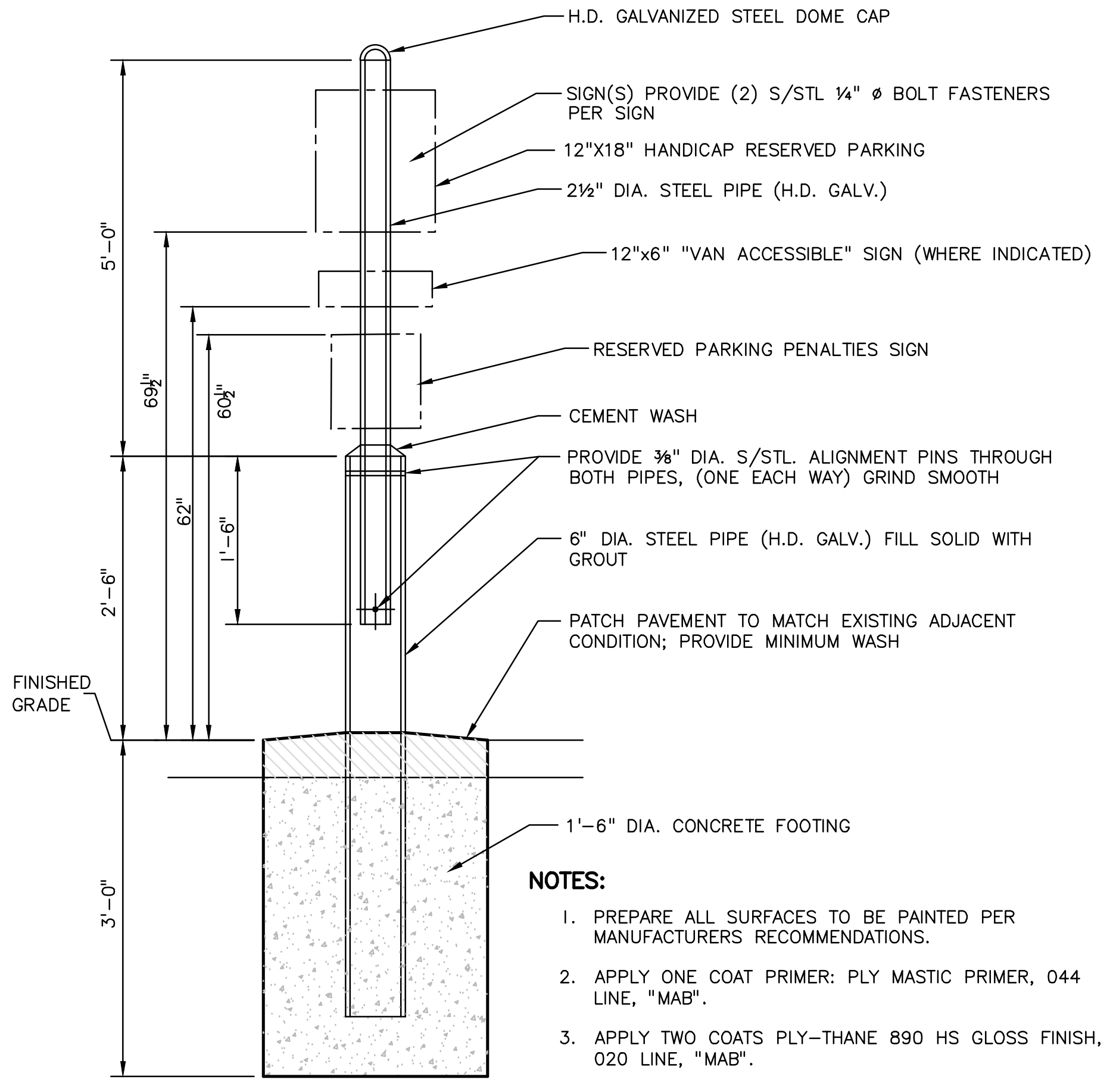
PLAN SYMBOL	SERIES	SIZE	MESSAGE
A	R1-1	30"x30"	STOP
B	R5-1	30"x30"	DO NOT ENTER
C	R7-8	12"x18"	RESERVED PARKING
	R7-8P	12"x6"	VAN ACCESSIBLE
	R7-8F	12"x18"	RESERVED PARKING PENALTIES
D	R7-8	12"x18"	RESERVED PARKING
	R7-8F	12"x18"	RESERVED PARKING PENALTIES
E	W11-2	30"x30"	PEDESTRIAN
	W16-7PL	24"x12"	DIAGONAL DOWNWARD POINTING ARROW
F	R1-3P	18"x6"	ALLWAY PLAQUE
G	R5-101	24"x30"	EMERGENCY AND AUTHORIZED VEHICLES ONLY
H	R7-6	12"x18"	NO PARKING FIRE LANE

MARKING LEGEND

W/4" – SOLID WHITE LINE/WIDTH
W/6" – SOLID WHITE LINE/WIDTH
W/24" – SOLID WHITE LINE/WIDTH
Y/24" – SOLID YELLOW LINE/WIDTH
DY/24" – DOUBLE SOLID YELLOW LINE/WIDTH
B/4" – SOLID BLUE LINE/WIDTH

SIGN LEGEND

● PROPOSED SIGN

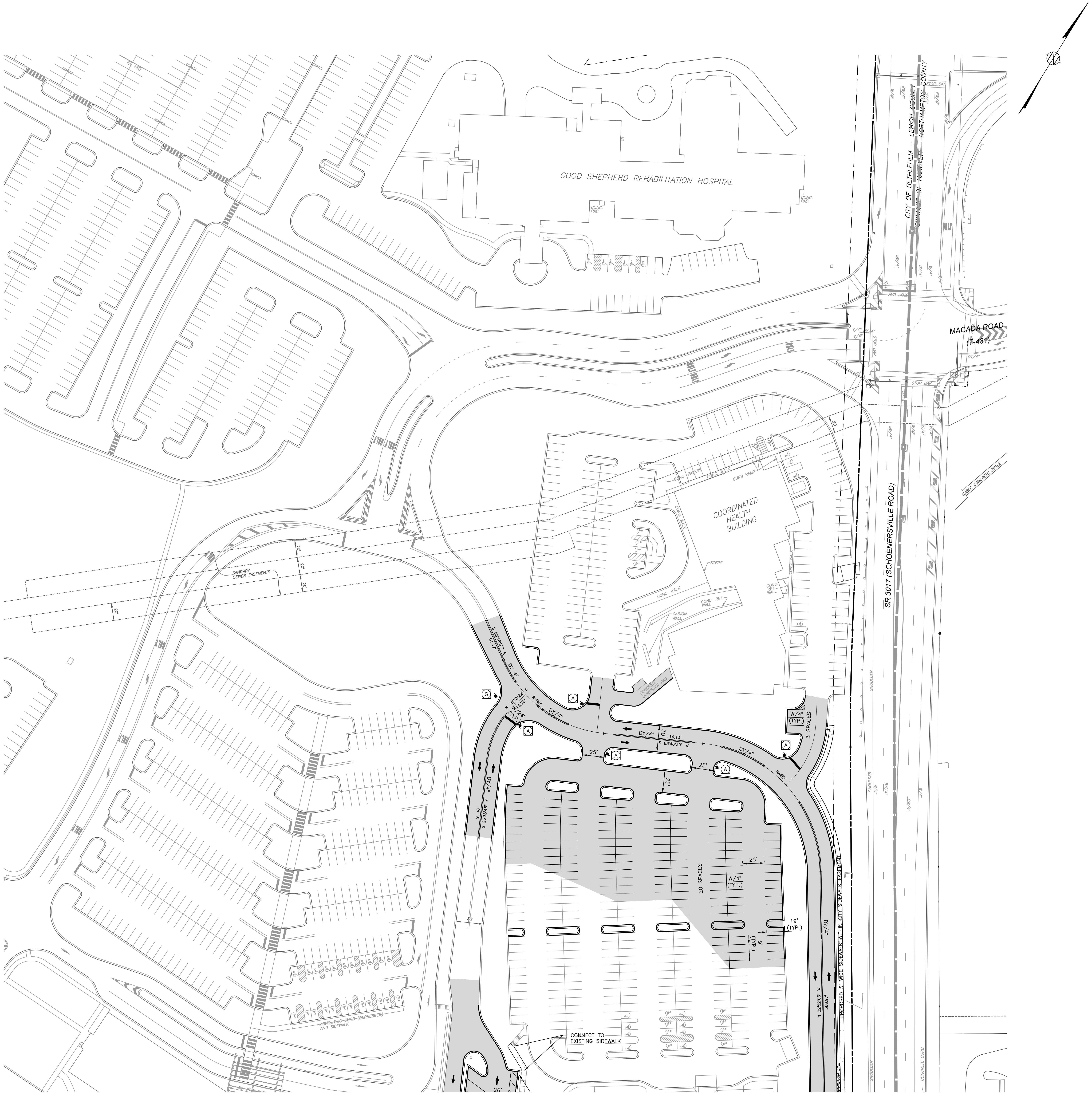

H.D. GALVANIZED STEEL DOME CAP
SIGN(S) PROVIDE (2) S/STL ¼" ø BOLT FASTENERS PER SIGN
12"X18" HANDICAP RESERVED PARKING
2½" DIA. STEEL PIPE (H.D. GALV.)
12"x6" "VAN ACCESSIBLE" SIGN (WHERE INDICATED)
RESERVED PARKING PENALTIES SIGN
CEMENT WASH
PROVIDE ⅜" DIA. S/STL. ALIGNMENT PINS THROUGH BOTH PIPES, (ONE EACH WAY) GRIND SMOOTH
6" DIA. STEEL PIPE (H.D. GALV.) FILL SOLID WITH GROUT
PATCH PAVEMENT TO MATCH EXISTING ADJACENT CONDITION; PROVIDE MINIMUM WASH
FINISHED GRADE
1'-6" DIA. CONCRETE FOOTING
5'-0"
2'-6"
3'-0"
69½"
62"
60½"
1'-6"

NOTES:

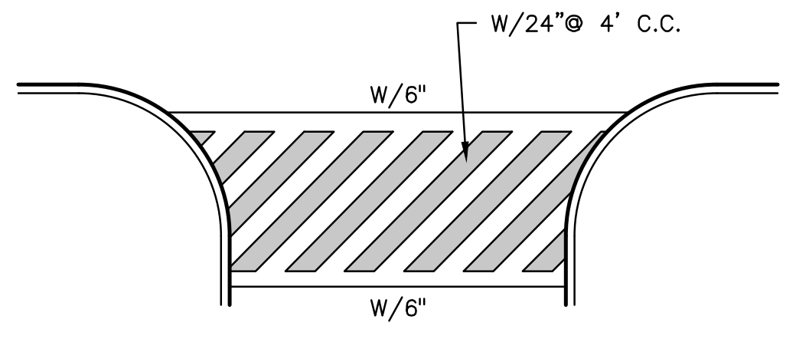
1. PREPARE ALL SURFACES TO BE PAINTED PER MANUFACTURERS RECOMMENDATIONS.
2. APPLY ONE COAT PRIMER: PLY MASTIC PRIMER, 044 LINE, "MAB".
3. APPLY TWO COATS PLY-THANE 890 HS GLOSS FINISH, 020 LINE, "MAB".

BOLLARD SIGN POST DETAIL

NO SCALE


GOOD SHEPHERD REHABILITATION HOSPITAL
CONC. PAD
CITY OF BETHLEHEM – LEHIGH COUNTY
TOWNSHIP OF HANOVER – NORTHAMPTON COUNTY
STOP BAR
BW/4"
W/4"
DY/4"
Y/4"
ONLY
MACADA ROAD (T-431)
CABLE CONCRETE SWALE
SR 3017 (SCHOENERSVILLE ROAD)
SANITARY SEWER EASEMENTS
20'
COORDINATED HEALTH BUILDING
CONC. PAVERS
CONC. WALK
CURB RAMP
STEPS
CONC. RET. WALL
GABION WALL
CONCRETE DUMPSTER PAD
SHOULDER
S 55°16'57" E
51.17'
DY/4"
N 15°23'22" E
16.75'
R=140'
W/24" (TYP.)
30'
114.13'
S 63°46'39" W
R=150'
25'
W/4" (TYP.)
3 SPACES
91.47'
S 25°33'46" E
120 SPACES
19' (TYP.)
9' (TYP.)
30'
CONNECT TO EXISTING SIDEWALK
26'
N 32°52'03" W
368.97'
PROPOSED 5' WIDE SIDEWALK WITHIN CITY SIDEWALK EASEMENT
A
G

CONTINUED ON SITE PLAN 1


W/24"@ 4" C.C.
W/6"
W/6"

CROSSWALK MARKING DETAIL

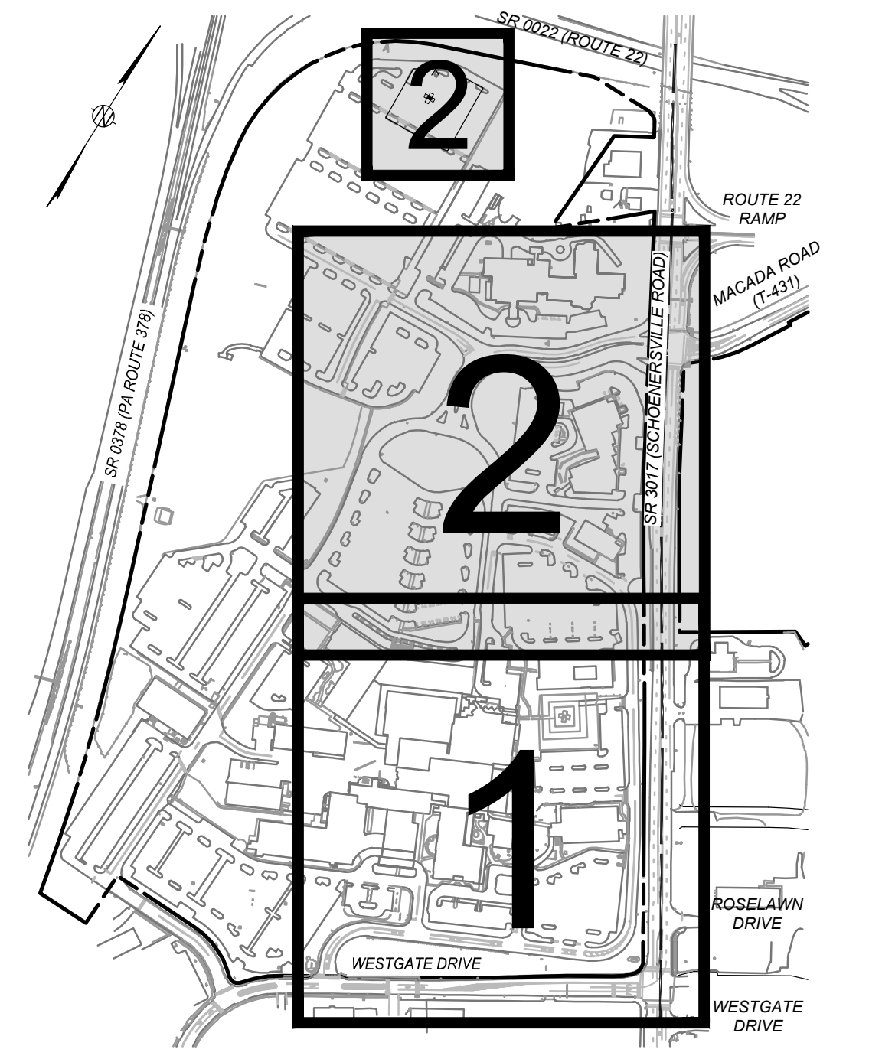
NO SCALE

THE PIDCOCK COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL


2
ROUTE 22 RAMP
MACADA ROAD (T-431)
2
1
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

NOTES:

1. THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.
2. THESE DOCUMENTS ARE PROVIDED FOR MUNICIPAL REVIEW ONLY AND ARE NOT TO BE UTILIZED FOR ANY OTHER PURPOSE. THE DOCUMENTS ARE NOT ISSUED FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED AS SUCH BELOW.

CONTRACTOR'S OBLIGATION REGARDING COORDINATION OF DOCUMENTS AND FIELD CONDITIONS

THE CONTRACT DOCUMENTS PRESENT THE DESIGN INTENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL PLANS, SPECIFICATIONS, ADDENDA, CONSTRUCTION SKETCHES AND OTHER CONTRACT DOCUMENTS FOR CONSISTENCY. SIMILARLY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW FIELD CONDITIONS, INCLUDING COORDINATION WITH ALL UTILITIES. THE CONTRACTOR SHALL COMPLETE ANY TEST EXCAVATIONS IN ADVANCE OF ORDERING MATERIALS OR OF CONSTRUCTION IN AN AREA OF UTILITY CROSSINGS OR POTENTIAL INVOLVEMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING ANY INCONSISTENCIES IN THE DOCUMENTS OR ANY APPARENT CONFLICTS TO THE ATTENTION OF THE ENGINEER BEFORE ORDERING MATERIALS AND BEFORE PROCEEDING WITH CONSTRUCTION IN THE AREA SO THAT THE ENGINEER MAY REVIEW THE CONDITIONS AND RECOMMEND ANY ADJUSTMENTS TO THE DOCUMENTS THAT MAY BE NECESSARY, OR TO RECOMMEND RELOCATION OF A UTILITY OR OTHER REMEDIAL WORK THAT MAY BE REQUIRED.

6		
5		
4		
3		
2		
1	JANUARY 10, 2025	REVISED PER C.O.B COMMENTS

REVISIONS

MAJOR LAND DEVELOPMENT SUBMISSION

SCALE: 1"=50'
DATE: SEPTEMBER 6, 2024
CHECKED BY: BCT
DRAWN BY: KDH/JGU
CAD FILE: SITE.dwg
PROJECT NUMBER: 22005

811
Know what's below.
Call before you dig.
SEE SHEET 2

GRAPHIC SCALE: 50' 25' 0' 50' 100'

Lehigh Valley Health Network
MUHLENBERG

EMERGENCY DEPARTMENT EXPANSION

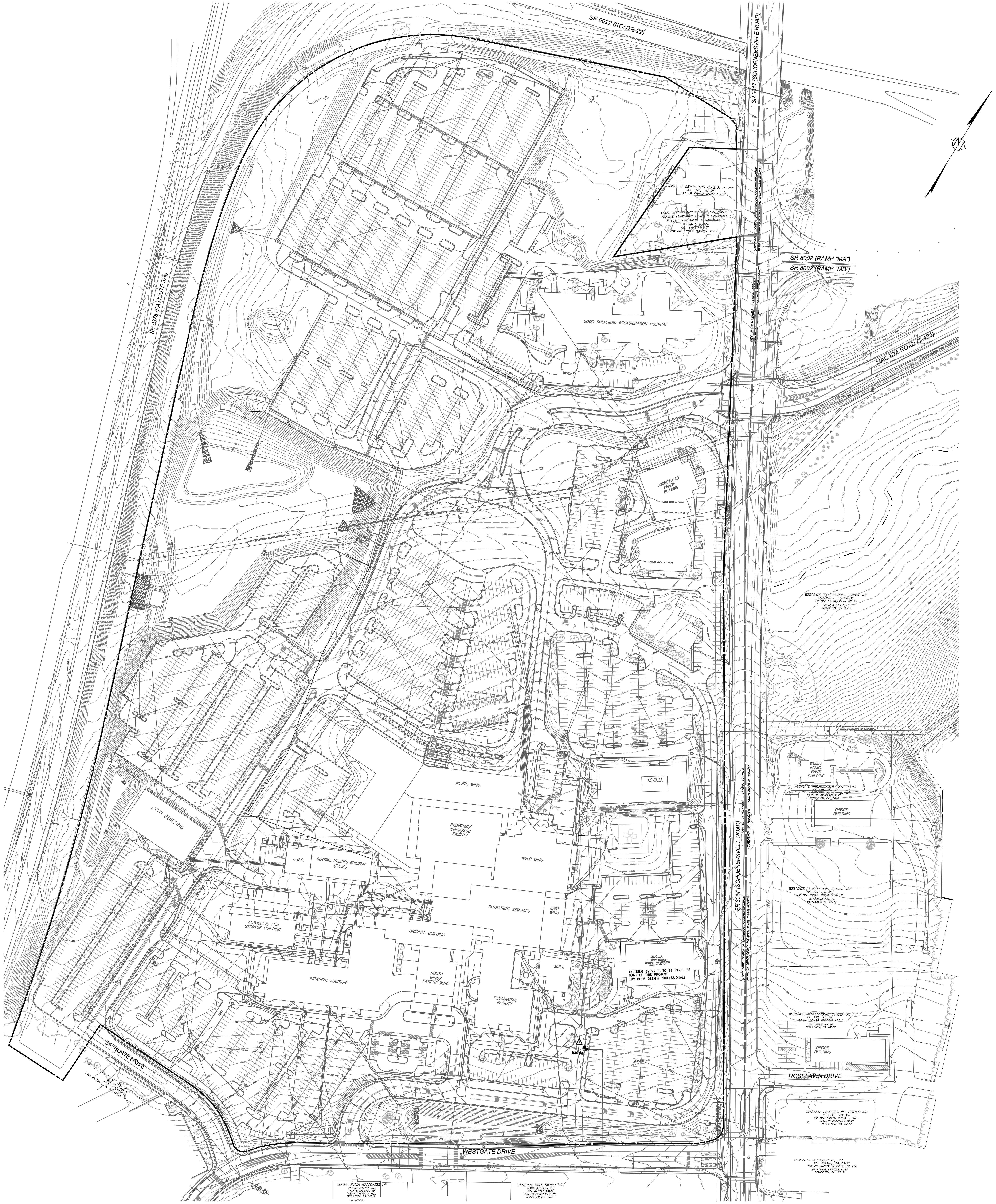
CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

SITE PLAN 2

FILE NUMBER
S-12395

SHEET NUMBER
6 OF 18

Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\Submission\SITE.dwg Printed: Jan 10, 2025 - 2:57pm


SR 0022 (ROUTE 22)
SR 3017 (SCHOENERSVILLE ROAD)
SR 0378 (PA ROUTE 378)
SR 8002 (RAMP "MA")
SR 8002 (RAMP "MB")
MACADA ROAD (T-431)
INSTITUTIONAL ZONING DISTRICT
LIMITED COMMERCIAL ZONING DISTRICT
JAMES E. DEWIRE AND ALICE R. DEWIRE
VOL. 1349, PG. 688
TAX MAP F10NE2, BLOCK 3, LOT 1
WILLIAM G. LONGENBACH, EVELYN R. LONGENBACH,
DONALD E. LONGENBACH, RONALD W. LONGENBACH
PHILLIS A. HAM, RUSSEL C. LONGENBACH
AND LINDA L. DUNBAR
VOL. 1448, PG. 877
TAX MAP F10NE2, BLOCK 3, LOT 2
CITY OF BETHLEHEM — LEHIGH COUNTY
TOWNSHIP OF HANOVER — NORTHAMPTON COUNTY
(APPROXIMATE LOCATION OF TOWNSHIP/CITY/COUNTY BOUNDARY BASED ON LEHIGH COUNTY TAX MAPS. CHECK PUBLIC RECORDS)
GOOD SHEPHERD REHABILITATION HOSPITAL
COORDINATED HEALTH BUILDING
WESTGATE PROFESSIONAL CENTER INC
VOL. 2003-1, PG. 364223
TAX MAP N5, BLOCK 2, LOT 1A
SCHOENERSVILLE RD.
BETHLEHEM, PA 18017
WELLS FARGO BANK BUILDING
OFFICE BUILDING
M.O.B.
NORTH WING
PEDIATRIC/CHOP/ASU FACILITY
KOLB WING
1770 BUILDING
C.U.B.
CENTRAL UTILITIES BUILDING (C.U.B.)
OUTPATIENT SERVICES
EAST WING
AUTOCLAVE AND STORAGE BUILDING
ORIGINAL BUILDING
INPATIENT ADDITION
SOUTH WING/PATIENT WING
PSYCHIATRIC FACILITY
M.R.I.
M.O.B.
3 STORY BUILDING
BUILDING NO. #2597F.F.
ELEV. = 366.09
BUILDING #2597 IS TO BE RAZED AS PART OF THIS PROJECT (BY OHER DESIGN PROFESSIONAL)
B.M. #3
OFFICE BUILDING
ROSELAWN DRIVE
WESTGATE PROFESSIONAL CENTER INC
VOL. 227, PG. 350
TAX MAP N6NW4, BLOCK 9, LOT 1
1451-75 ROSELAWN DRIVE
BETHLEHEM, PA 18017
LEHIGH VALLEY HOSPITAL, INC.
VOL. 2023-1, PG. 85157
TAX MAP N6NW4, BLOCK 9, LOT 11A
2514 SHOENERSVILLE ROAD
BETHLEHEM, PA 18017
BATHGATE DRIVE
WESTGATE DRIVE
LEHIGH PLAZA ASSOCIATES LP
INSTR.# 2014011183
PIN: 641885710419
1620 CATASAUQUA RD.,
BETHLEHEM PA 18017
BONTON
WESTGATE MALL OWNER LLC
INSTR. #2018030322
PIN: 641895173264
2425 SCHOENERSVILLE RD.,
BETHLEHEM PA 18017

B.M. #3
TOP OF FIRE HYDRANT
ELEVATION = 352.47

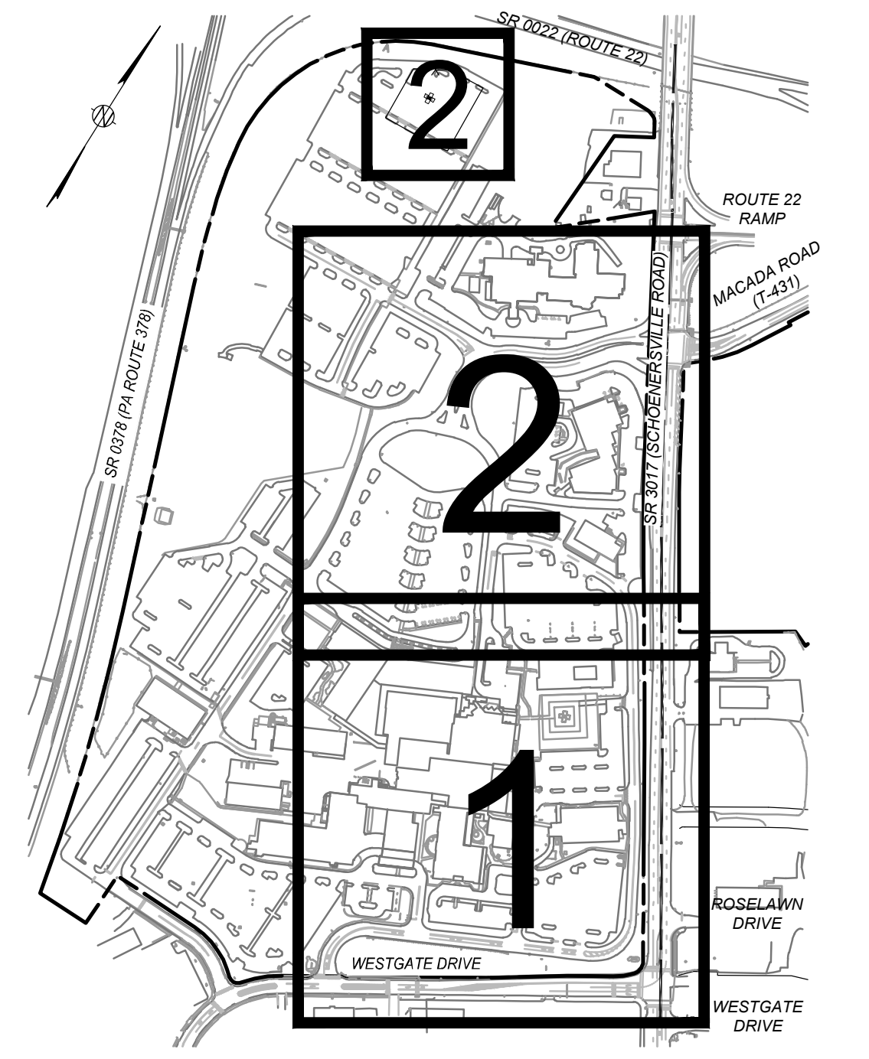
Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\Submission\OVERALL XCOND.dwg   Printed: Jan 10, 2025 - 2:57pm

THE PIDCOCK COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive   Allentown, Pennsylvania   18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL


2
2
1
ROUTE 22 RAMP
MACADA ROAD (T-431)
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

NOTES:

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6		
5		
4		
3		
2		
1	JANUARY 10, 2025	REVISED PER C.O.B COMMENTS

REVISIONS

MAJOR LAND DEVELOPMENT SUBMISSION

SCALE: 1"=100'
DATE: SEPTEMBER 6, 2024
CHECKED BY: BCT
DRAWN BY: KDH/JGU
CAD FILE: OVERALL XCOND.dwg
PROJECT NUMBER: 22005

811
Know what's below.
Call before you dig.
SEE SHEET 2

GRAPHIC SCALE: 100' 50' 0' 100' 200'

Lehigh Valley Health Network
MUHLENBERG

EMERGENCY DEPARTMENT EXPANSION

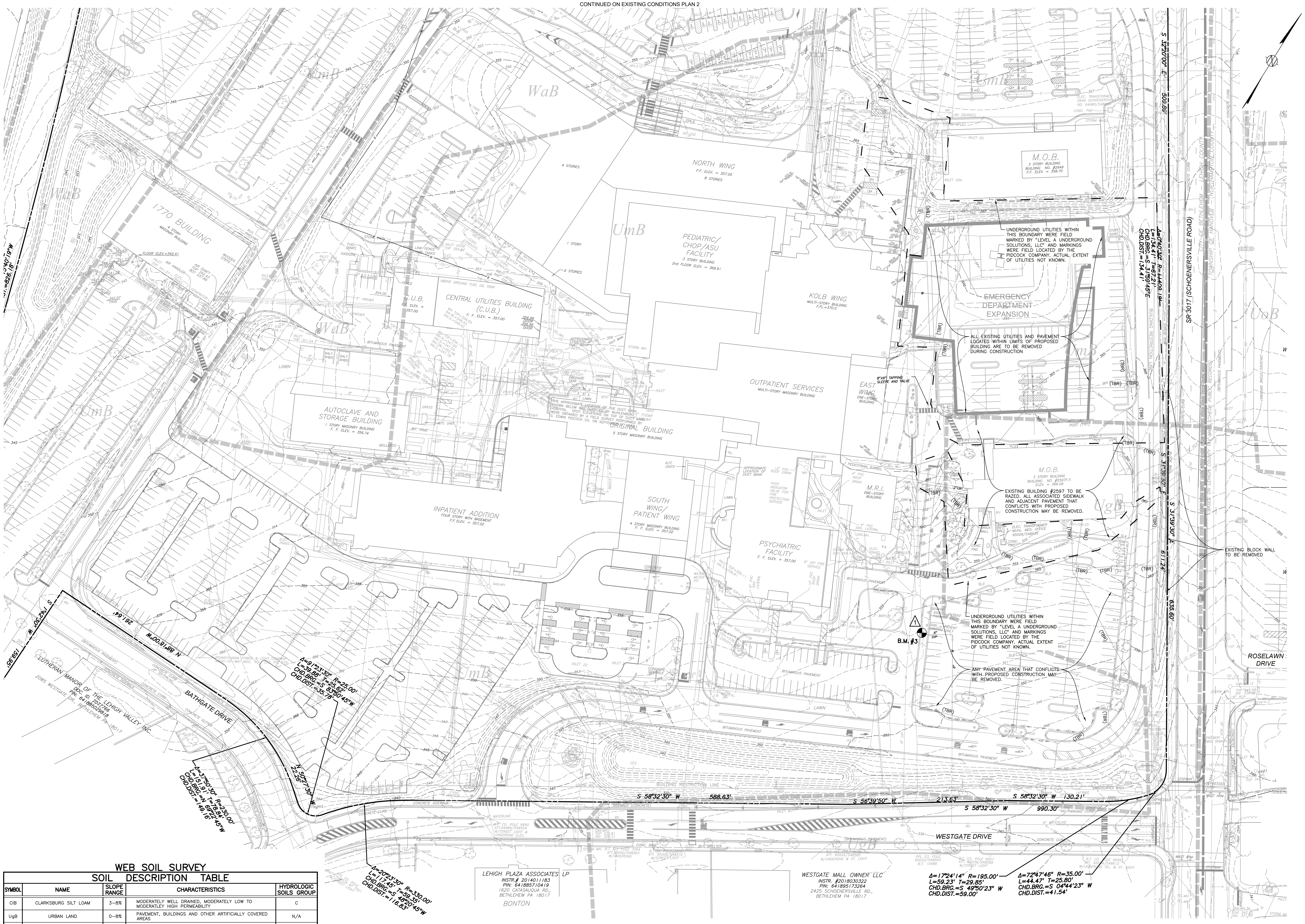
CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

OVERALL EXISTING CONDITIONS PLAN

FILE NUMBER
S-12395

SHEET NUMBER
7 OF 18

CONTINUED ON EXISTING CONDITIONS PLAN 2


NORTH WING
F.F. ELEV. = 357.00
8 STORIES
PEDIATRIC/ CHOP/ASU FACILITY
3 STORY BUILDING
2nd FLOOR ELEV. = 369.91
KOLB WING
MULTI-STORY BUILDING
OUTPATIENT SERVICES
MULTI-STORY MASONRY BUILDING
EAST WING
ONE-STORY BUILDING
ORIGINAL BUILDING
5 STORY MASONRY BUILDING
INPATIENT ADDITION
FOUR STORY WITH BASEMENT
F.F. ELEV. = 357.02
SOUTH WING/ PATIENT WING
4 STORY MASONRY BUILDING
F. F. ELEV. = 357.02
PSYCHIATRIC FACILITY
F. F. ELEV. = 357.00
M.R.I.
ONE-STORY BUILDING
CENTRAL UTILITIES BUILDING (C.U.B.)
F. F. ELEV. = 357.00
AUTOCLAVE AND STORAGE BUILDING
1 STORY MASONRY BUILDING
F. F. ELEV. = 356.74
1770 BUILDING
FLOOR ELEV.=342.41
M.O.B.
3 STORY BUILDING
BUILDING NO. #2649
F.F. ELEV. = 358.70
M.O.B.
3 STORY BUILDING
BUILDING NO. #2597F.F.
ELEV. = 366.09
EMERGENCY DEPARTMENT EXPANSION
SR 3017 (SCHOENERSVILLE ROAD)
WESTGATE DRIVE
BATHGATE DRIVE
ROSELAWN DRIVE
LUTHERAN MANOR OF THE LEHIGH VALLEY, INC.
LEHIGH PLAZA ASSOCIATES LP
INSTR.# 2014011183
PIN: 641885710419
1620 CATASAUQUA RD.,
BETHLEHEM PA 18017
BONTON
WESTGATE MALL OWNER LLC
INSTR. #2018030322
PIN: 641895173264
2425 SCHOENERSVILLE RD.,
BETHLEHEM PA 18017
WaB
UmB
UgB
UoB
S 58°32'30" W 588.63'
S 56°39'50" W 213.53'
S 58°32'30" W 130.21'
S 58°32'30" W 990.30'
S 31°39'30" E 611.24'
635.60'
N 88°18'00" W
N 50°27'30" W 22.26'
Δ=0°40'30" R=11409.19'
L=134.41' T=67.21'
CHD.BRG.=S 31°59'45"E
CHD.DIST.=134.41'
Δ=91°23'30" R=25.00'
L=39.88' T=25.62'
CHD.BRG.=S 83°30'45"W
CHD.DIST.=35.78'
Δ=37°50'30" R=230.00'
L=151.91' T=78.84'
CHD.BRG.=N 69°22'45"W
CHD.DIST.=149.16'
Δ=20°23'30" R=330.00'
L=117.45' T=59.35'
CHD.BRG.=S 48°20'45"W
CHD.DIST.=116.83'
Δ=17°24'14" R=195.00'
L=59.23' T=29.85'
CHD.BRG.=S 49°50'23" W
CHD.DIST.=59.00'
Δ=72°47'46" R=35.00'
L=44.47' T=25.80'
CHD.BRG.=S 04°44'23" W
CHD.DIST.=41.54'
B.M. #3
(TBR)

UNDERGROUND UTILITIES WITHIN THIS BOUNDARY WERE FIELD MARKED BY "LEVEL A UNDERGROUND SOLUTIONS, LLC" AND MARKINGS WERE FIELD LOCATED BY THE PIDCOCK COMPANY. ACTUAL EXTENT OF UTILITIES NOT KNOWN.

ALL EXISTING UTILITIES AND PAVEMENT LOCATED WITHIN LIMITS OF PROPOSED BUILDING ARE TO BE REMOVED DURING CONSTRUCTION

EXISTING BUILDING #2597 TO BE RAZED. ALL ASSOCIATED SIDEWALK AND ADJACENT PAVEMENT THAT CONFLICTS WITH PROPOSED CONSTRUCTION MAY BE REMOVED.

EXISTING BLOCK WALL TO BE REMOVED

UNDERGROUND UTILITIES WITHIN THIS BOUNDARY WERE FIELD MARKED BY "LEVEL A UNDERGROUND SOLUTIONS, LLC" AND MARKINGS WERE FIELD LOCATED BY THE PIDCOCK COMPANY. ACTUAL EXTENT OF UTILITIES NOT KNOWN.

ANY PAVEMENT AREA THAT CONFLICTS WITH PROPOSED CONSTRUCTION MAY BE REMOVED.

THE APPROXIMATE LOCATION OF THE DUCT BANK SHOWN BELOW WAS OBTAINED FROM MUHLENBERG HOSPITAL. SPOT ELEVATIONS ON TOP OF DUCT BANK WERE OBTAINED BY A FIELD SURVEY PERFORMED BY E. EDWIN POLLOCK CO. ON SEPTEMBER 21, 1993.

NOTE: REFER TO MEP PLANS (PREPARED BY OTHERS) FOR ALL EXISTING AND PROPOSED ELECTRICAL, COMMUNICATIONS AND GAS UTILITIES. REFER TO ELECTRICAL PLANS FOR ABANDONMENT/REMOVAL OF EXISTING LIGHT POLES AND ELECTRICAL CONDUITS.

1 B.M. #3
TOP OF FIRE HYDRANT
ELEVATION = 352.47

WEB SOIL SURVEY
SOIL DESCRIPTION TABLE

SYMBOL	NAME	SLOPE RANGE	CHARACTERISTICS	HYDROLOGIC SOILS GROUP
CIB	CLARKSBURG SILT LOAM	3–8%	MODERATELY WELL DRAINED, MODERATELY LOW TO MODERATLEY HIGH PERMEABILITY	C
UgB	URBAN LAND	0–8%	PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS	N/A
UmB	URBAN LAND–DUFFIELD COMPLEX	0–8%	PAVEMENT, BUILDINGS, AND OTHER ARTIFICIALLY COVERED AREAS	B
UoB	URBAN LAND–DUFFIELD COMPLEX	0–8%	PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS	B
WaA	WASHINGTON SILT LOAM	0–3%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B
WaB	WASHINGTON SILT LOAM	3–8%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B
WaC	WASHINGTON SILT LOAM	8–15%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B

NOTES:

THE SOIL TYPES AND LOCATIONS ARE BASED UPON THE U. S. DEPARTMENT OF AGRICULTURE–NATIONAL RESOURCES CONSERVATION SERVICE (USDA–NRCS) WEB SOIL SURVEY, AVAILABLE ONLINE AT HTTP://WEBSOILSURVEY.SC.EGOV.USDA.GOV/.

SOIL TYPE USE LIMITATIONS AND RESOLUTIONS

THE SOIL USE LIMITATIONS THAT EXIST FOR THE ABOVE–MENTIONED SOILS AND THEIR RESOLUTIONS ARE AS FOLLOWS:

1. ACCORDING TO THE AFOREMENTIONED SOIL SURVEY, WASHINGTON SILT LOAM HAS FEW LIMITATIONS TO MOST NON–FARM USES. ONE OF THESE LIMITATIONS IS THE POTENTIAL FOR SINKHOLES. THE POTENTIAL FOR THE FORMATIONS OF SINKHOLES WILL BE MINIMIZED THROUGH THE CONSTRUCTION OF A STORMWATER MANAGEMENT SYSTEM. HOWEVER, IN THE EVENT THAT A SINKHOLE DEVELOPS ON THE SITE, SURFACE WATER SHALL BE DIVERTED AWAY FROM THE AREA AND THE SINKHOLE SHALL BE REPAIRED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A PROFESSIONAL ENGINEER OR GEOLOGIST.
2. THE DUFFIELD SERIES IS LIMITED BY SLOW PERMEABILITY AND A SEASONABLY HIGH WATER TABLE. ALSO THESE SOILS EXHIBIT A MODERATE TO SEVERE EROSION HAZARD. A PUMPED WATER FILTER BAG HAS BEEN SPECIFIED TO ADEQUATELY FILTER ANY WATER THAT MAY BE ENCOUNTERED. FURTHER, STRUCTURAL EARTHWORK SHALL ONLY BE DONE WHEN THE SOIL IS AT THE OPTIMUM MOISTURE CONTENT FOR COMPACTION.

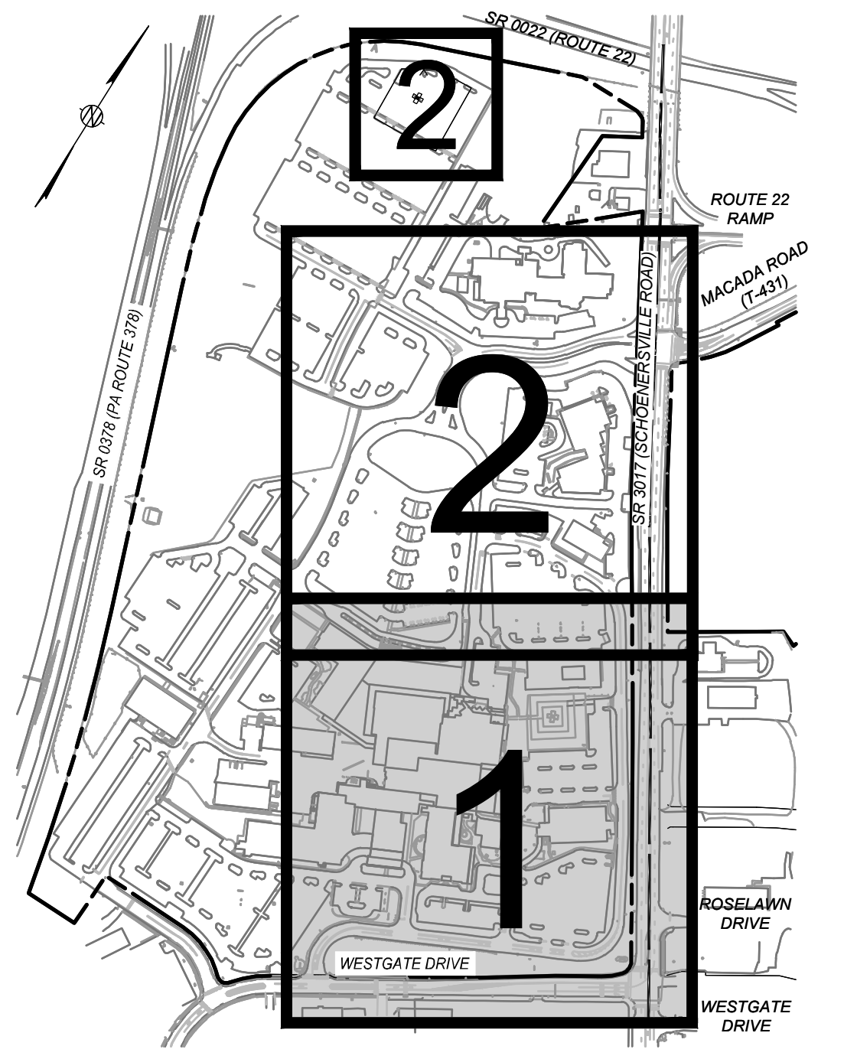
Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\Submission\XCOND.dwg   Printed: Jan 10, 2025 - 2:57pm

THE
PIDCOCK
COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive   Allentown, Pennsylvania   18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL


2
2
1
ROUTE 22 RAMP
MACADA ROAD
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

NOTES:
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1	JANUARY 10, 2025	REVISED PER C.O.B COMMENTS

REVISIONS

MAJOR LAND DEVELOPMENT SUBMISSION

SCALE: 1"=50'
DATE: SEPTEMBER 6, 2024
CHECKED BY: BCT
DRAWN BY: KDH/JGU
CAD FILE: XCOND.dwg
PROJECT NUMBER: 22005

811
Know what's below.
Call before you dig.
SEE SHEET 2

GRAPHIC SCALE: 50' 25' 0' 50' 100'

Lehigh Valley Health Network
MUHLENBERG

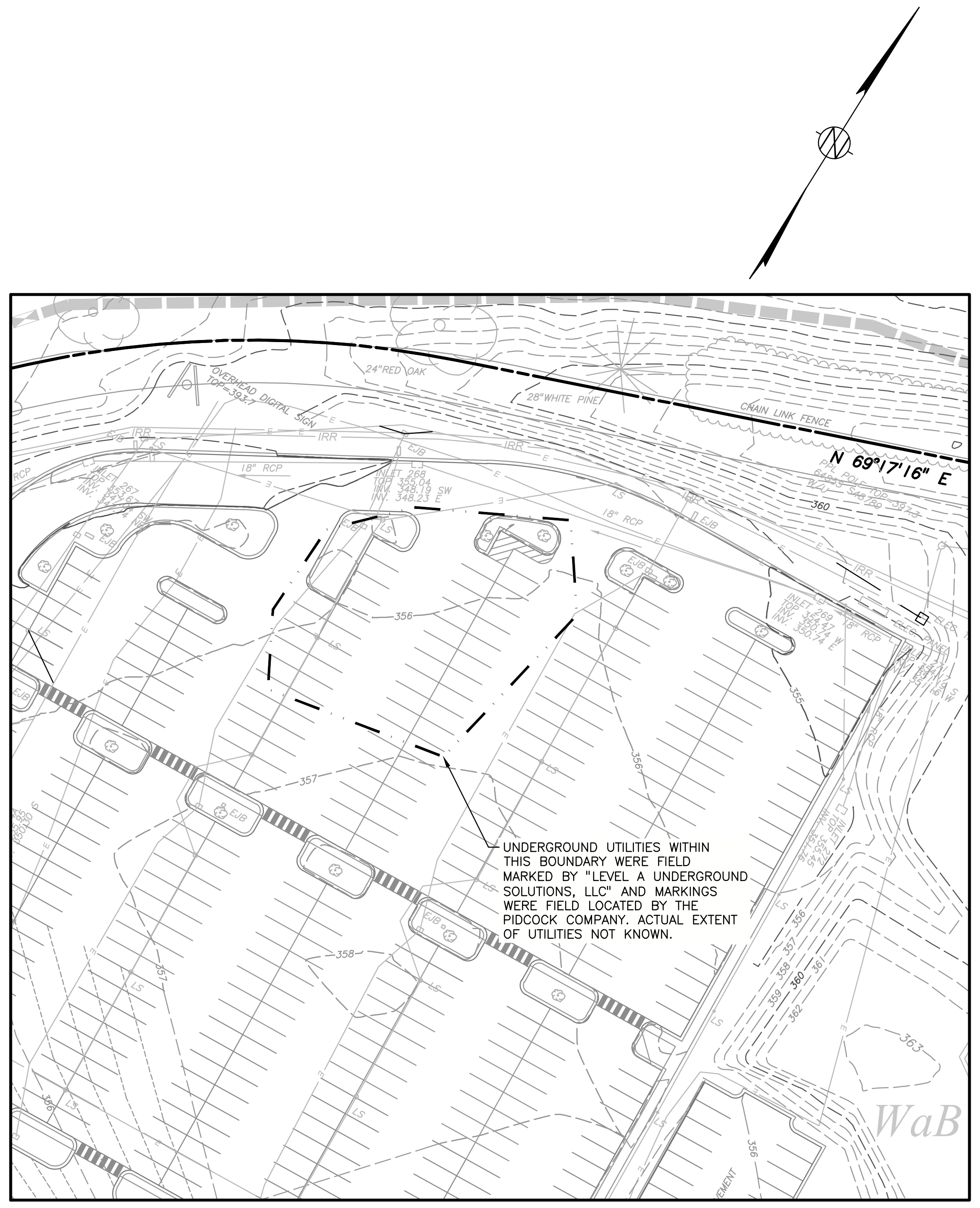
EMERGENCY DEPARTMENT EXPANSION

CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

EXISTING CONDITIONS PLAN 1

FILE NUMBER
S-12395

SHEET NUMBER
8 OF 18


N 69°17'16" E
UNDERGROUND UTILITIES WITHIN THIS BOUNDARY WERE FIELD MARKED BY "LEVEL A UNDERGROUND SOLUTIONS, LLC" AND MARKINGS WERE FIELD LOCATED BY THE PIDCOCK COMPANY. ACTUAL EXTENT OF UTILITIES NOT KNOWN.
WaB
CHAIN LINK FENCE

TEMPORARY HELIPAD SITE PLAN

SCALE: 1"=50

NOTE: SEE OVERALL SITE PLAN FOR CAMPUS WIDE LOCATION

WEB SOIL SURVEY

SOIL DESCRIPTION TABLE

SYMBOL	NAME	SLOPE RANGE	CHARACTERISTICS	HYDROLOGIC SOILS GROUP
CIB	CLARKSBURG SILT LOAM	3-8%	MODERATELY WELL DRAINED, MODERATELY LOW TO MODERATLEY HIGH PERMEABILITY	C
UgB	URBAN LAND	0-8%	PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS	N/A
UmB	URBAN LAND-DUFFIELD COMPLEX	0-8%	PAVEMENT, BUILDINGS, AND OTHER ARTIFICIALLY COVERED AREAS	B
UoB	URBAN LAND-DUFFIELD COMPLEX	0-8%	PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS	B
WaA	WASHINGTON SILT LOAM	0-3%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B
WaB	WASHINGTON SILT LOAM	3-8%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B
WaC	WASHINGTON SILT LOAM	8-15%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B

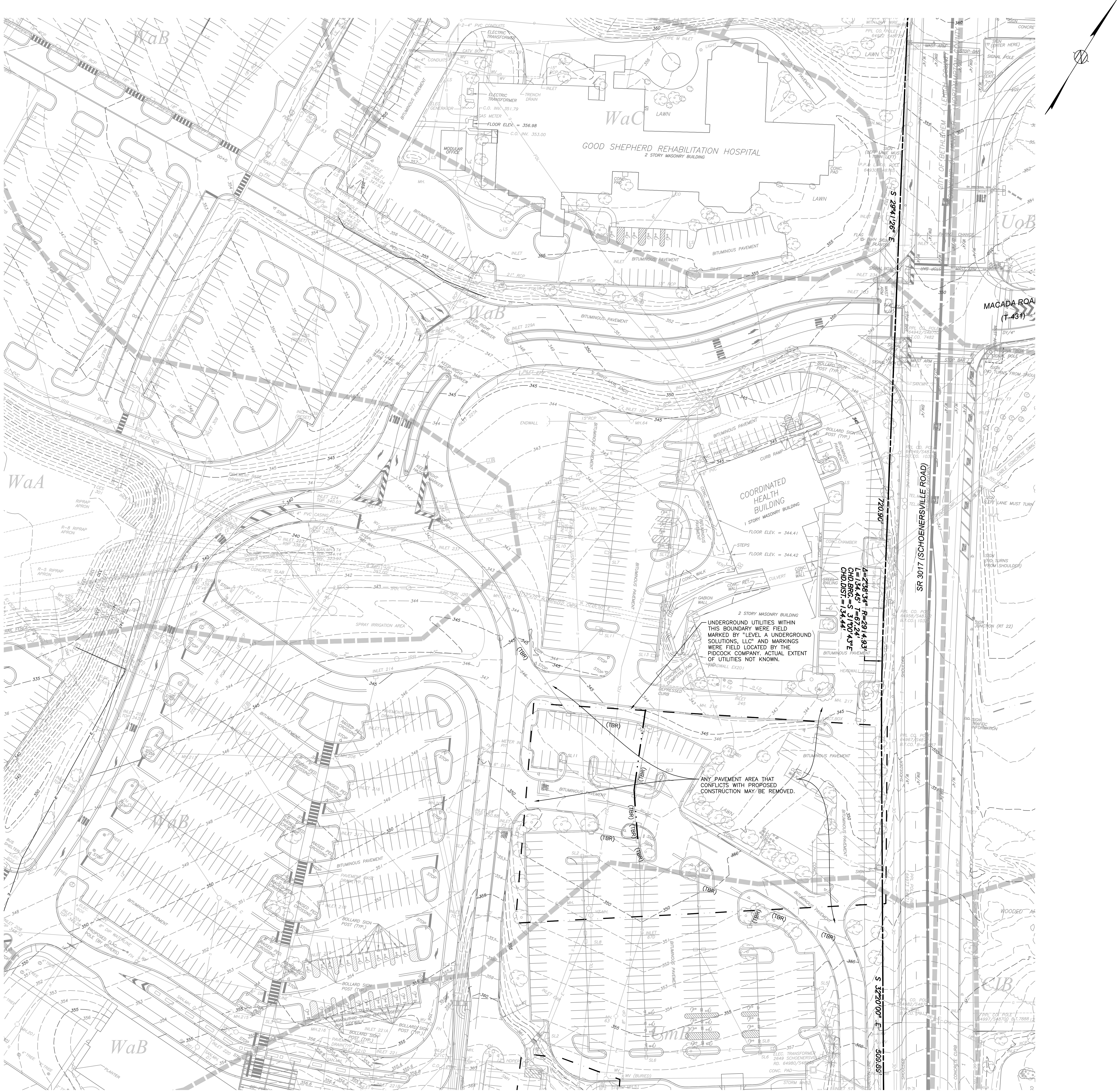
NOTES:

THE SOIL TYPES AND LOCATIONS ARE BASED UPON THE U. S. DEPARTMENT OF AGRICULTURE-NATIONAL RESOURCES CONSERVATION SERVICE (USDA-NRCS) WEB SOIL SURVEY, AVAILABLE ONLINE AT HTTP://WEBSOILSURVEY.SC.EGOV.USDA.GOV/.

SOIL TYPE USE LIMITATIONS AND RESOLUTIONS

THE SOIL USE LIMITATIONS THAT EXIST FOR THE ABOVE-MENTIONED SOILS AND THEIR RESOLUTIONS ARE AS FOLLOWS:

1. ACCORDING TO THE AFOREMENTIONED SOIL SURVEY, WASHINGTON SILT LOAM HAS FEW LIMITATIONS TO MOST NON-FARM USES. ONE OF THESE LIMITATIONS IS THE POTENTIAL FOR SINKHOLES. THE POTENTIAL FOR THE FORMATIONS OF SINKHOLES WILL BE MINIMIZED THROUGH THE CONSTRUCTION OF A STORMWATER MANAGEMENT SYSTEM. HOWEVER, IN THE EVENT THAT A SINKHOLE DEVELOPS ON THE SITE, SURFACE WATER SHALL BE DIVERTED AWAY FROM THE AREA AND THE SINKHOLE SHALL BE REPAIRED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A PROFESSIONAL ENGINEER OR GEOLOGIST.
2. THE DUFFIELD SERIES IS LIMITED BY SLOW PERMEABILITY AND A SEASONABLY HIGH WATER TABLE. ALSO THESE SOILS EXHIBIT A MODERATE TO SEVERE EROSION HAZARD. A PUMPED WATER FILTER BAG HAS BEEN SPECIFIED TO ADEQUATELY FILTER ANY WATER THAT MAY BE ENCOUNTERED. FURTHER, STRUCTURAL EARTHWORK SHALL ONLY BE DONE WHEN THE SOIL IS AT THE OPTIMUM MOISTURE CONTENT FOR COMPACTION.


GOOD SHEPHERD REHABILITATION HOSPITAL
2 STORY MASONRY BUILDING
FLOOR ELEV. = 356.98
MODULAR OFFICE
WaC
WaB
WaA
UoB
CIB
UmB
LAWN
BITUMINOUS PAVEMENT
COORDINATED HEALTH BUILDING
1 STORY MASONRY BUILDING
FLOOR ELEV. = 344.41
FLOOR ELEV. = 344.42
STEPS
CULVERT
CONC. RET. WALL
GABION WALL
2 STORY MASONRY BUILDING
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ANY PAVEMENT AREA THAT CONFLICTS WITH PROPOSED CONSTRUCTION MAY BE REMOVED.
(TBR)
SPRAY IRRIGATION AREA
ENDWALL
S 29°41'26" E
720.90'
Δ=2°38'34" R=2914.93'
L=134.45' T=67.24'
CHD.BRG.=S 31°00'43"E
CHD.DIST.=134.44'
S 32°20'00" E
509.69'
SR 3017 (SCHOENERSVILLE ROAD)
MACADA ROAD (T-431)
CITY OF BETHLEHEM
BOLLARD SIGN POST (TYP.)
INLET 220
INLET 221
MH.216
MH. 217
PLANTER
CONTINUED ON EXISTING CONDITIONS PLAN 1

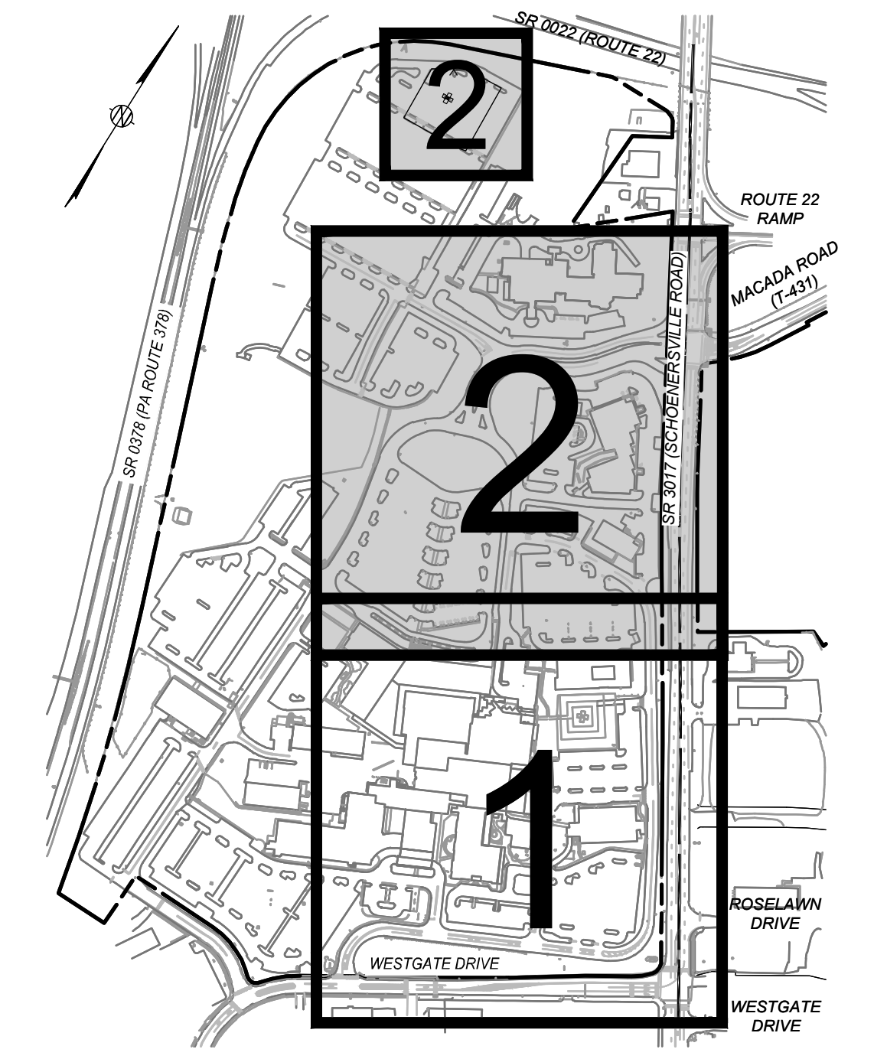
NOTE: REFER TO MEP PLANS (PREPARED BY OTHERS) FOR ALL EXISTING AND PROPOSED ELECTRICAL, COMMUNICATIONS AND GAS UTILITIES. REFER TO ELECTRICAL PLANS FOR ABANDONMENT/REMOVAL OF EXISTING LIGHT POLES AND ELECTRICAL CONDUITS.

THE PIDCOCK COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL


2
2
1
SR 22 (ROUTE 22)
ROUTE 22 RAMP
MACADA ROAD (T-431)
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

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MUHLENBERG

EMERGENCY DEPARTMENT EXPANSION

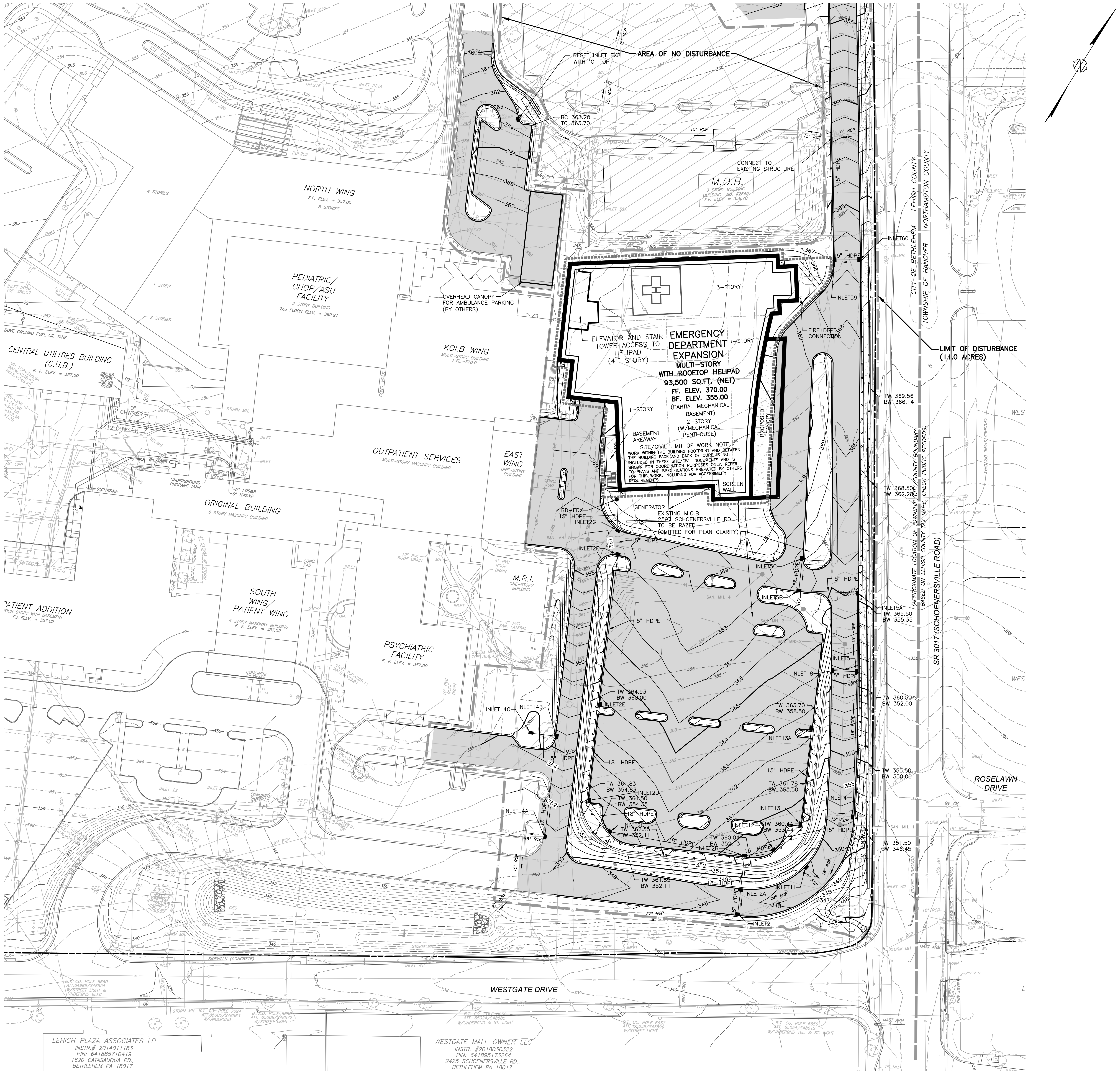
CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

EXISTING CONDITIONS PLAN 2

FILE NUMBER
S-12395

SHEET NUMBER
9 OF 18

CONTINUED ON GRADING PLAN 2

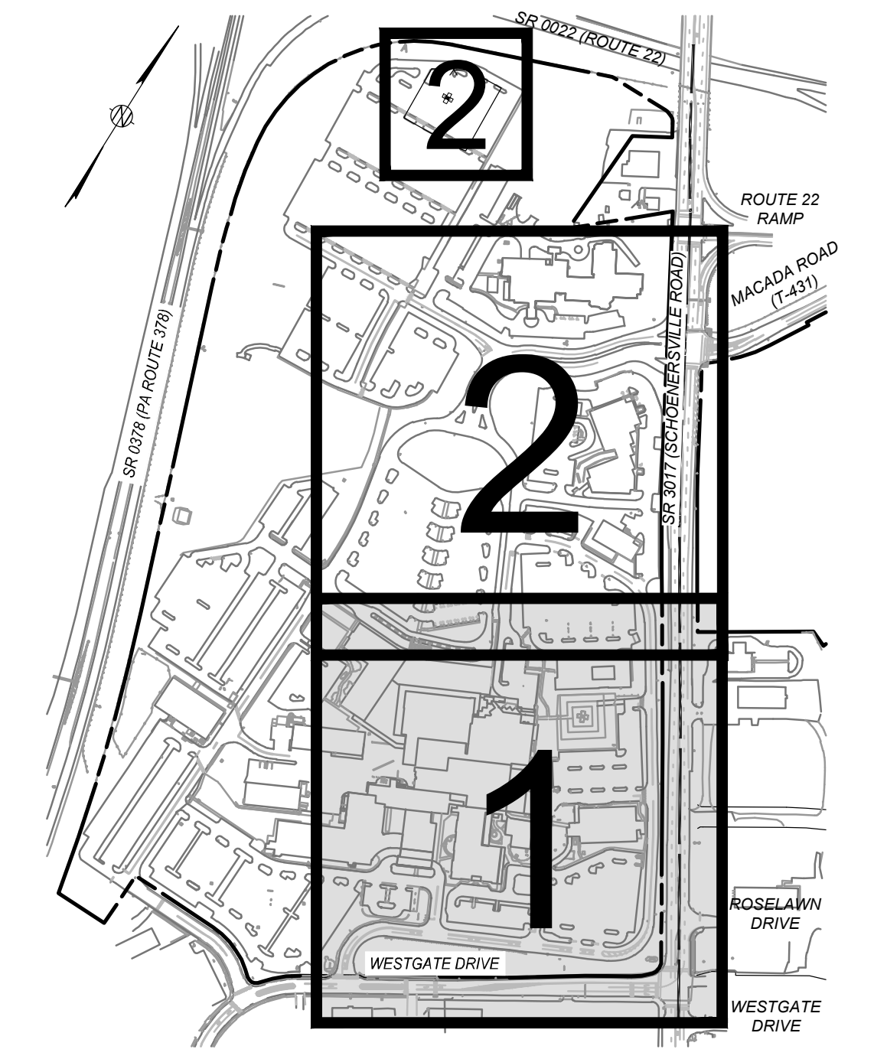

RESET INLET EX8 WITH 'C' TOP
AREA OF NO DISTURBANCE
BC 363.20
TC 363.70
CONNECT TO EXISTING STRUCTURE
M.O.B.
3 STORY BUILDING
BUILDING NO. #2649
F.F. ELEV. = 358.70
NORTH WING
F.F. ELEV. = 357.00
6 STORIES
4 STORIES
PEDIATRIC/ CHOP/ASU FACILITY
3 STORY BUILDING
2nd FLOOR ELEV. = 369.91
OVERHEAD CANOPY FOR AMBULANCE PARKING (BY OTHERS)
KOLB WING
CENTRAL UTILITIES BUILDING (C.U.B.)
F. F. ELEV. = 357.00
OUTPATIENT SERVICES
MULTI-STORY MASONRY BUILDING
EAST WING
ORIGINAL BUILDING
5 STORY MASONRY BUILDING
SOUTH WING/ PATIENT WING
4 STORY MASONRY BUILDING
F. F. ELEV. = 357.02
PSYCHIATRIC FACILITY
F. F. ELEV. = 357.00
M.R.I.
PATIENT ADDITION
ELEVATOR AND STAIR TOWER ACCESS TO HELIPAD (4TH STORY)
3-STORY
1-STORY
EMERGENCY DEPARTMENT EXPANSION
MULTI-STORY WITH ROOFTOP HELIPAD
93,500 SQ.FT. (NET)
FF. ELEV. 370.00
BF. ELEV. 355.00
(PARTIAL MECHANICAL BASEMENT)
2-STORY (W/MECHANICAL PENTHOUSE)
BASEMENT AREAWAY
SITE/CIVIL LIMIT OF WORK NOTE
WORK WITHIN THE BUILDING FOOTPRINT AND BETWEEN THE BUILDING FACE AND BACK OF CURB IS NOT INCLUDED IN THESE SITE/CIVIL DOCUMENTS AND IS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO PLANS AND SPECIFICATIONS PREPARED BY OTHERS FOR THIS WORK, INCLUDING ADA ACCESSIBILITY REQUIREMENTS.
SCREEN WALL
PROPOSED CANOPY
FIRE DEPT CONNECTION
GENERATOR
EXISTING M.O.B. 2597 SCHOENERSVILLE RD. TO BE RAZED (OMITTED FOR PLAN CLARITY)
RD-EDX
15" HDPE
INLET2G
INLET2F
INLET5C
INLET5B
INLET59
INLET60
LIMIT OF DISTURBANCE (11.0 ACRES)
CITY OF BETHLEHEM – LEHIGH COUNTY
TOWNSHIP OF HANOVER – NORTHAMPTON COUNTY
(APPROXIMATE LOCATION OF TOWNSHIP/COUNTY BOUNDARY BASED ON LEHIGH COUNTY TAX MAPS, CHECK PUBLIC RECORDS)
SR 3017 (SCHOENERSVILLE ROAD)
TW 369.56
BW 366.14
TW 368.50
BW 362.28
INLET5A
TW 365.50
BW 355.35
INLET5
INLET1B
TW 364.93
BW 363.00
INLET2E
TW 363.70
BW 358.50
INLET13A
TW 360.50
BW 352.00
INLET14C
INLET14B
INLET14A
18" HDPE
TW 361.83
BW 354.83
INLET2D
TW 361.50
BW 354.35
INLET2C
TW 362.55
BW 352.11
INLET2B
INLET12
TW 360.41
BW 353.44
TW 360.01
BW 352.13
INLET13
TW 361.78
BW 355.50
INLET4
TW 355.50
BW 350.00
TW 351.50
BW 346.45
TW 361.80
BW 352.11
INLET2A
INLET2
INLET1
24" RCP
27" RCP
15" RCP
ROSELAWN DRIVE
WESTGATE DRIVE
SIDEWALK (CONCRETE)
LEHIGH PLAZA ASSOCIATES LP
INSTR.# 2014011183
PIN: 641885710419
1620 CATASAUQUA RD.
BETHLEHEM PA 18017
WESTGATE MALL OWNER LLC
INSTR. #2018030322
PIN: 641895173264
2425 SCHOENERSVILLE RD.
BETHLEHEM PA 18017

THE PIDCOCK COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL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ROUTE 22 RAMP
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

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SCALE: 1"=50'
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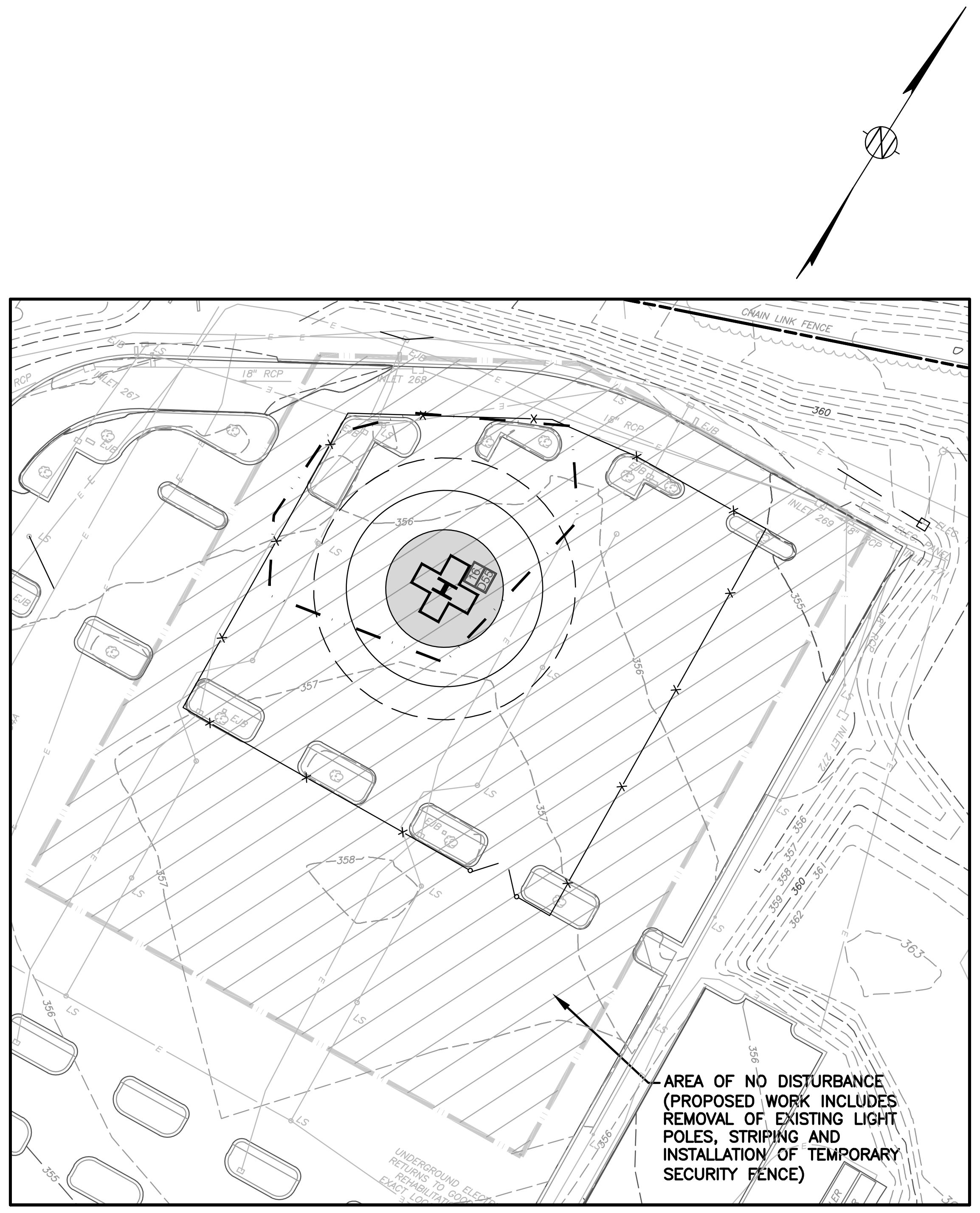
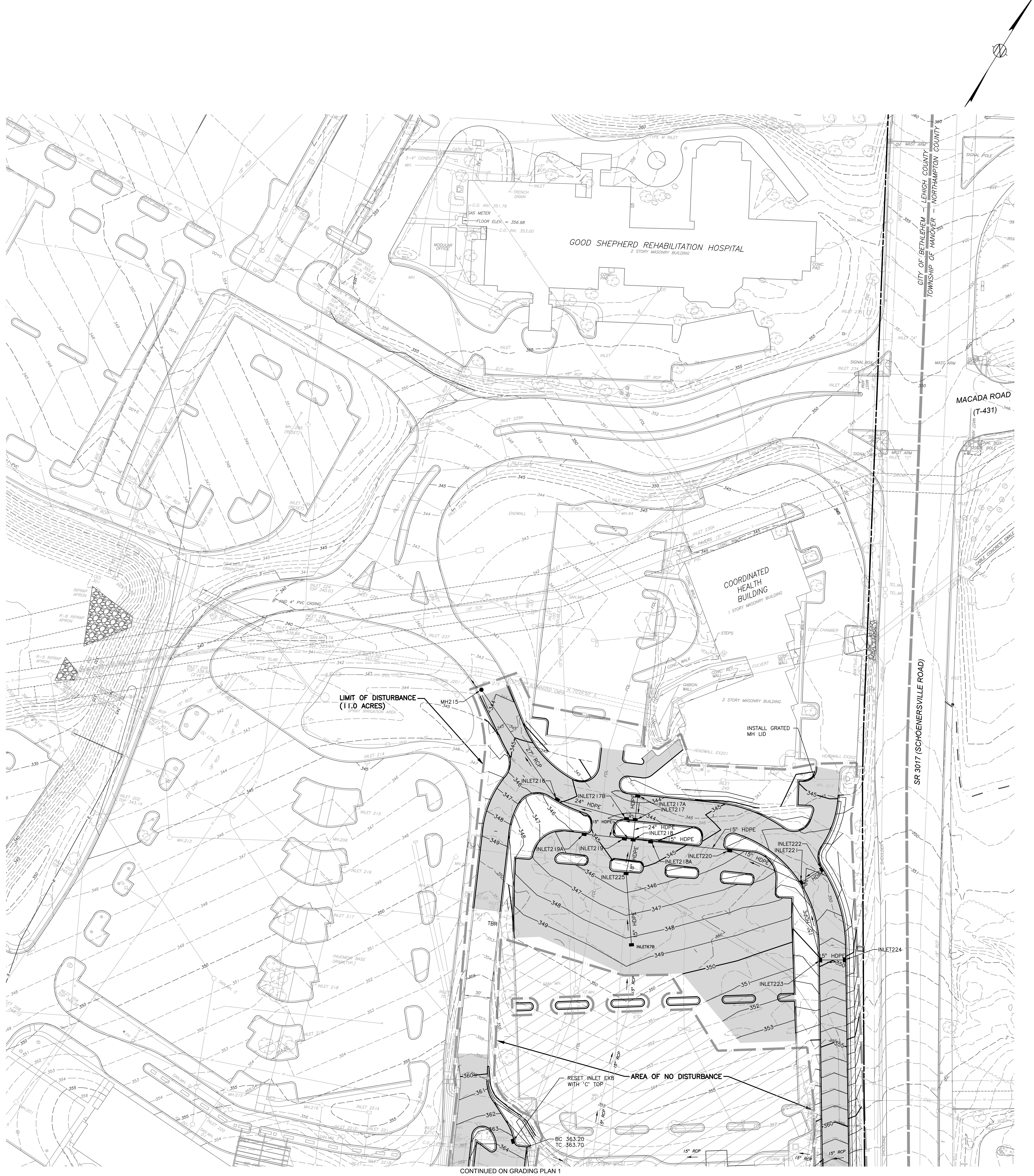

AREA OF NO DISTURBANCE (PROPOSED WORK INCLUDES REMOVAL OF EXISTING LIGHT POLES, STRIPING AND INSTALLATION OF TEMPORARY SECURITY FENCE)
CHAIN LINK FENCE

TEMPORARY HELIPAD
SITE PLAN

SCALE: 1"=50'
NOTE: SEE OVERALL SITE PLAN FOR CAMPUS WIDE LOCATION


GOOD SHEPHERD REHABILITATION HOSPITAL
2 STORY MASONRY BUILDING
COORDINATED HEALTH BUILDING
1 STORY MASONRY BUILDING
2 STORY MASONRY BUILDING
CITY OF BETHLEHEM - LEHIGH COUNTY
TOWNSHIP OF HANOVER - NORTHAMPTON COUNTY
MACADA ROAD (T-431)
SR 3017 (SCHOENERSVILLE ROAD)
LIMIT OF DISTURBANCE (11.0 ACRES)
MH215
INSTALL GRATED MH LID
INLET216
INLET217B
INLET217A
INLET217
INLET218
INLET218A
INLET219A
INLET219
INLET220
INLET221
INLET222
INLET223
INLET224
INLET225
INLET67B
24" HDPE
15" HDPE
27" RCP
TBR
AREA OF NO DISTURBANCE
RESET INLET EXB WITH 'C' TOP
BC 363.20
TC 363.70

CONTINUED ON GRADING PLAN 1

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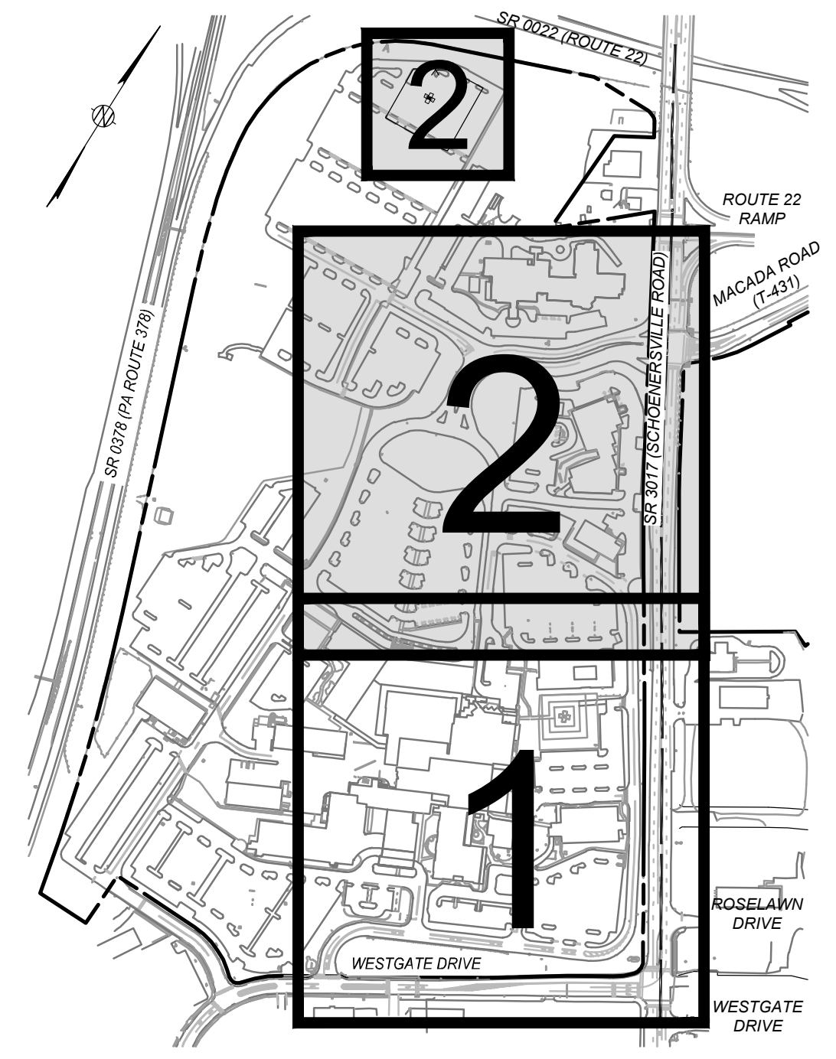
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MACADA ROAD (T-431)
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WESTGATE DRIVE
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FILE NUMBER
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SHEET NUMBER
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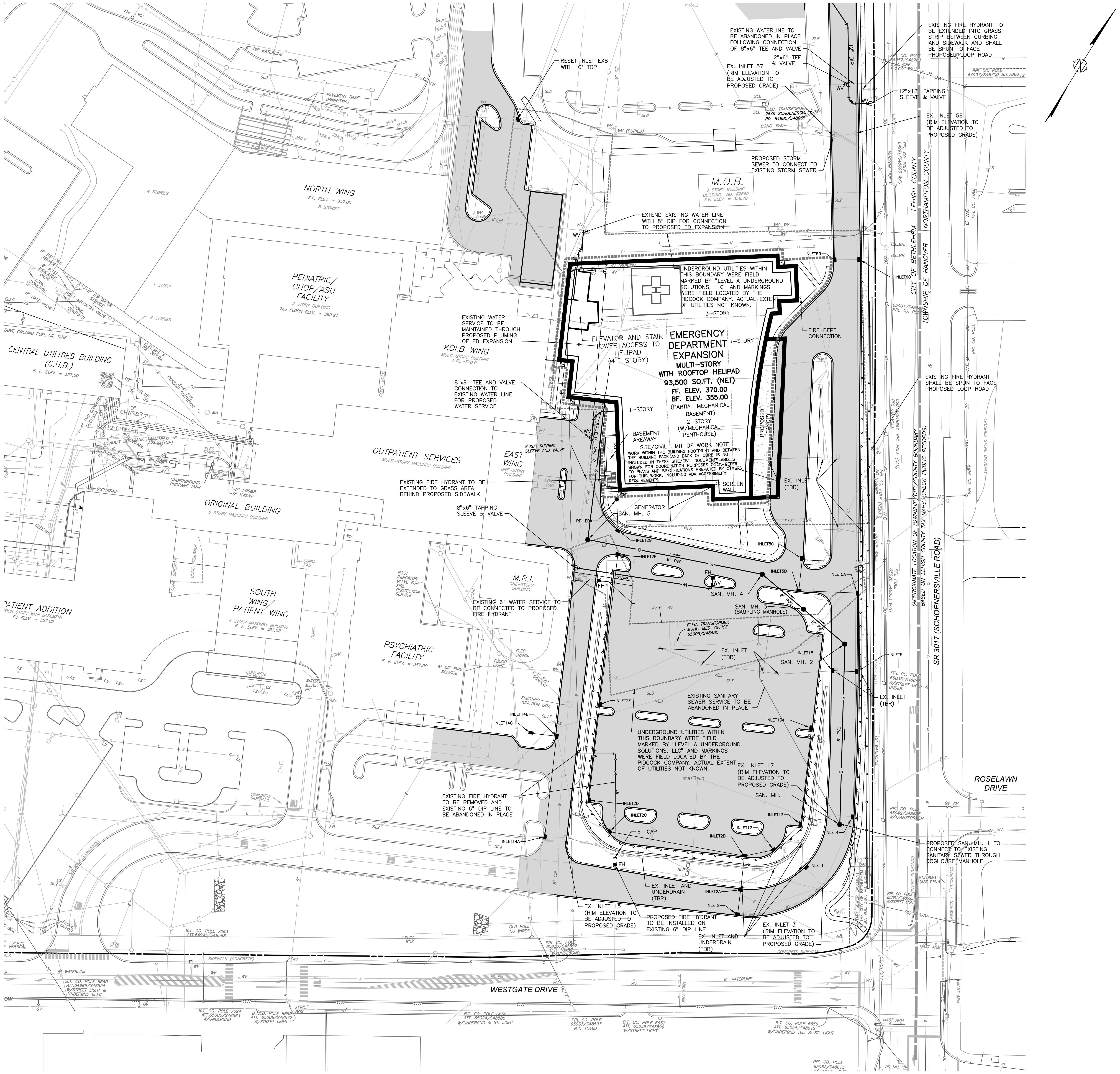
Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\Submission\GU.dwg Printed: Jan 10, 2025 - 2:56pm

CONTINUED ON GRADING PLAN 2


RESET INLET EX8
WITH 'C' TOP
EXISTING WATERLINE TO BE ABANDONED IN PLACE FOLLOWING CONNECTION OF 8"x6" TEE AND VALVE
12"x6" TEE & VALVE
EX. INLET 57 (RIM ELEVATION TO BE ADJUSTED TO PROPOSED GRADE)
EXISTING FIRE HYDRANT TO BE EXTENDED INTO GRASS STRIP BETWEEN CURBING AND SIDEWALK AND SHALL BE SPUN TO FACE PROPOSED LOOP ROAD
12"x12" TAPPING SLEEVE & VALVE
EX. INLET 58 (RIM ELEVATION TO BE ADJUSTED TO PROPOSED GRADE)
ELEC. TRANSFORMER 2649 SCHOENERSVILLE RD. 64980/S48965
CONC. PAD
PROPOSED STORM SEWER TO CONNECT TO EXISTING STORM SEWER
M.O.B.
3 STORY BUILDING
BUILDING NO. #2649
F.F. ELEV. = 358.70
EXTEND EXISTING WATER LINE WITH 8" DIP FOR CONNECTION TO PROPOSED ED EXPANSION
12" DIP
NORTH WING
F.F. ELEV. = 357.00
8 STORIES
4 STORIES
PEDIATRIC/CHOP/ASU FACILITY
2 STORY BUILDING
2nd FLOOR ELEV. = 369.91
CENTRAL UTILITIES BUILDING (C.U.B.)
F. F. ELEV. = 357.00
KOLB WING
MULTI-STORY BUILDING
F.FL.=370.0
EXISTING WATER SERVICE TO BE MAINTAINED THROUGH PROPOSED PLUMING OF ED EXPANSION
8"x8" TEE AND VALVE CONNECTION TO EXISTING WATER LINE FOR PROPOSED WATER SERVICE
OUTPATIENT SERVICES
MULTI-STORY MASONRY BUILDING
EAST WING
ONE-STORY BUILDING
8"X6" TAPPING SLEEVE AND VALVE
EXISTING FIRE HYDRANT TO BE EXTENDED TO GRASS AREA BEHIND PROPOSED SIDEWALK
8"x6" TAPPING SLEEVE & VALVE
ORIGINAL BUILDING
5 STORY MASONRY BUILDING
UNDERGROUND UTILITIES WITHIN THIS BOUNDARY WERE FIELD MARKED BY "LEVEL A UNDERGROUND SOLUTIONS, LLC" AND MARKINGS WERE FIELD LOCATED BY THE PIDCOCK COMPANY. ACTUAL EXTENT OF UTILITIES NOT KNOWN.
3-STORY
ELEVATOR AND STAIR TOWER ACCESS TO HELIPAD (4TH STORY)
EMERGENCY DEPARTMENT EXPANSION
MULTI-STORY WITH ROOFTOP HELIPAD
93,500 SQ.FT. (NET)
FF. ELEV. 370.00
BF. ELEV. 355.00
(PARTIAL MECHANICAL BASEMENT)
2-STORY (W/MECHANICAL PENTHOUSE)
1-STORY
1-STORY
FIRE DEPT. CONNECTION
PROPOSED CANOPY
BASEMENT AREAWAY
SITE/CIVIL LIMIT OF WORK NOTE
WORK WITHIN THE BUILDING FOOTPRINT AND BETWEEN THE BUILDING FACE AND BACK OF CURB IS NOT INCLUDED IN THESE SITE/CIVIL DOCUMENTS AND IS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO PLANS AND SPECIFICATIONS PREPARED BY OTHERS FOR THIS WORK, INCLUDING ADA ACCESSIBILITY REQUIREMENTS.
SCREEN WALL
GENERATOR
SAN. MH. 5
EX. INLET (TBR)
EXISTING FIRE HYDRANT SHALL BE SPUN TO FACE PROPOSED LOOP ROAD
INLET59
INLET60
INLET2G
INLET2F
INLET5C
INLET5B
INLET5A
8" PVC
SAN. MH. 4
SAN. MH. 3 (SAMPLING MANHOLE)
M.R.I.
ONE-STORY BUILDING
POST INDICATOR VALVE FOR FIRE PROTECTION SERVICE
EXISTING 6" WATER SERVICE TO BE CONNECTED TO PROPOSED FIRE HYDRANT
SOUTH WING/PATIENT WING
4 STORY MASONRY BUILDING
F. F. ELEV. = 357.02
PATIENT ADDITION
F.F. ELEV. = 357.02
PSYCHIATRIC FACILITY
F. F. ELEV. = 357.00
6" DIP FIRE SERVICE
ELEC. TRANSFORMER MUHL. MED. OFFICE 65009/S48635
EX. INLET (TBR)
SAN. MH. 2
INLET18
INLET5
EX. INLET (TBR)
EXISTING SANITARY SEWER SERVICE TO BE ABANDONED IN PLACE
INLET2E
INLET14B
INLET14C
INLET13A
UNDERGROUND UTILITIES WITHIN THIS BOUNDARY WERE FIELD MARKED BY "LEVEL A UNDERGROUND SOLUTIONS, LLC" AND MARKINGS WERE FIELD LOCATED BY THE PIDCOCK COMPANY. ACTUAL EXTENT OF UTILITIES NOT KNOWN.
EX. INLET 17 (RIM ELEVATION TO BE ADJUSTED TO PROPOSED GRADE)
SAN. MH. 1
EXISTING FIRE HYDRANT TO BE REMOVED AND EXISTING 6" DIP LINE TO BE ABANDONED IN PLACE
INLET2D
INLET2C
6" CAP
INLET12
INLET13
INLET2B
INLET4
INLET14A
PROPOSED SAN. MH. 1 TO CONNECT TO EXISTING SANITARY SEWER THROUGH DOGHOUSE MANHOLE
INLET11
EX. INLET AND UNDERDRAIN (TBR)
INLET2A
INLET2
EX. INLET 15 (RIM ELEVATION TO BE ADJUSTED TO PROPOSED GRADE)
PROPOSED FIRE HYDRANT TO BE INSTALLED ON EXISTING 6" DIP LINE
EX. INLET AND UNDERDRAIN (TBR)
EX. INLET 3 (RIM ELEVATION TO BE ADJUSTED TO PROPOSED GRADE)
CITY OF BETHLEHEM – LEHIGH COUNTY
TOWNSHIP OF HANOVER – NORTHAMPTON COUNTY
(APPROXIMATE LOCATION OF TOWNSHIP/CITY/COUNTY BOUNDARY BASED ON LEHIGH COUNTY TAX MAPS. CHECK PUBLIC RECORDS)
SR 3017 (SCHOENERSVILLE ROAD)
ROSELAWN DRIVE
WESTGATE DRIVE
8" WATERLINE
12" WATERLINE
SANITARY SEWER EASEMENT TO THE CITY OF BETHLEHEM MISC. VOL. 386, PG. 645

NOTE: REFER TO MEP PLANS (PREPARED BY OTHERS) FOR ALL EXISTING AND PROPOSED ELECTRICAL, COMMUNICATIONS AND GAS UTILITIES. REFER TO ELECTRICAL PLANS FOR ABANDONMENT/REMOVAL OF EXISTING LIGHT POLES AND ELECTRICAL CONDUITS.

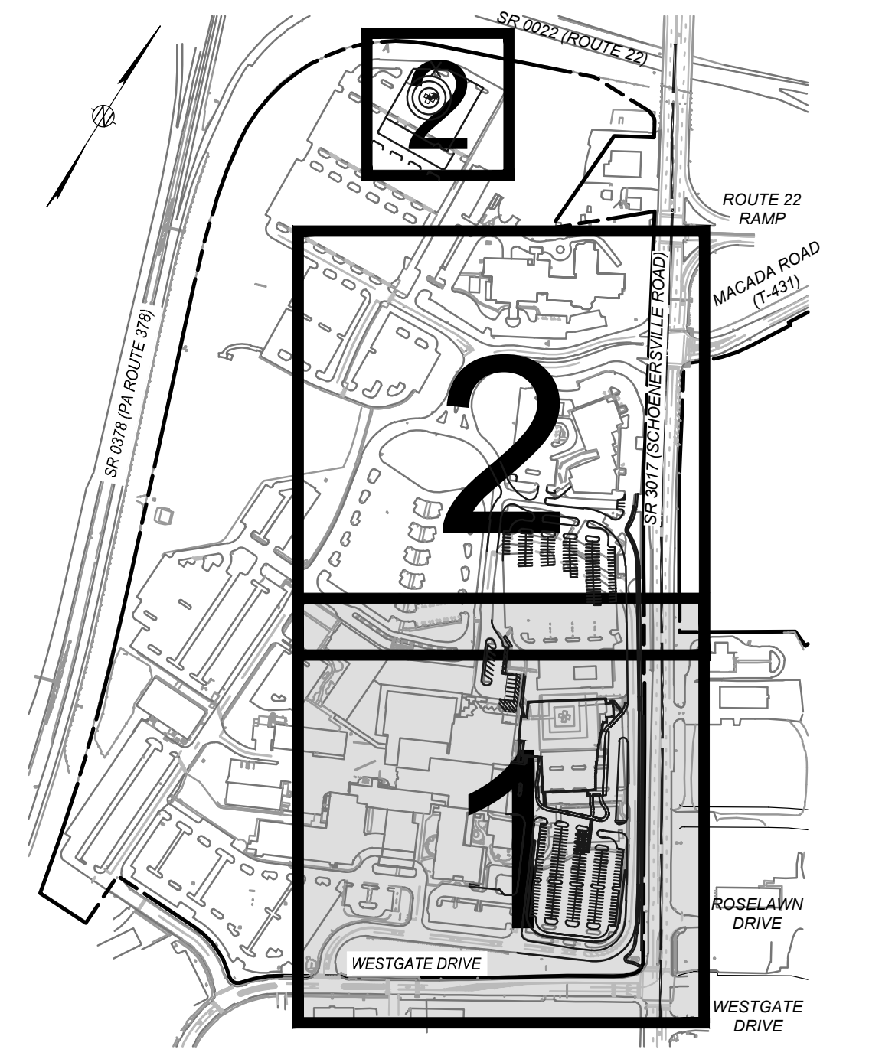
Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\Submission\UTILITY.dwg Printed: Jan 10, 2025 - 2:56pm

THE
PIDCOCK
COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL


2
ROUTE 22 RAMP
2
1
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

NOTES:

1. THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.

2. THESE DOCUMENTS ARE PROVIDED FOR MUNICIPAL REVIEW ONLY AND ARE NOT TO BE UTILIZED FOR ANY OTHER PURPOSE. THE DOCUMENTS ARE NOT ISSUED FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED AS SUCH BELOW.

CONTRACTOR'S OBLIGATION REGARDING COORDINATION OF DOCUMENTS AND FIELD CONDITIONS

THE CONTRACT DOCUMENTS PRESENT THE DESIGN INTENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL PLANS, SPECIFICATIONS, ADDENDA, CONSTRUCTION SKETCHES AND OTHER CONTRACT DOCUMENTS FOR CONSISTENCY. SIMILARLY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW FIELD CONDITIONS, INCLUDING COORDINATION WITH ALL UTILITIES. THE CONTRACTOR SHALL COMPLETE ANY TEST EXCAVATIONS IN ADVANCE OF ORDERING MATERIALS OR OF CONSTRUCTION IN AN AREA OF UTILITY CROSSINGS OR POTENTIAL INVOLVEMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING ANY INCONSISTENCIES IN THE DOCUMENTS OR ANY APPARENT CONFLICTS TO THE ATTENTION OF THE ENGINEER BEFORE ORDERING MATERIALS AND BEFORE PROCEEDING WITH CONSTRUCTION IN THE AREA SO THAT THE ENGINEER MAY REVIEW THE CONDITIONS AND RECOMMEND ANY ADJUSTMENTS TO THE DOCUMENTS THAT MAY BE NECESSARY, OR TO RECOMMEND RELOCATION OF A UTILITY OR OTHER REMEDIAL WORK THAT MAY BE REQUIRED.

6		
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1	JANUARY 10, 2025	REVISED PER C.O.B COMMENTS

REVISIONS

MAJOR LAND DEVELOPMENT SUBMISSION

SCALE: 1"=50'
DATE: SEPTEMBER 6, 2024
CHECKED BY: BCT
DRAWN BY: KDH/JGU
CAD FILE: UTILITY.dwg
PROJECT NUMBER: 22005

811
Know what's below.
Call before you dig.

SEE SHEET 2

GRAPHIC SCALE: 50' 25' 0' 50' 100'

Lehigh Valley Health Network
MUHLENBERG

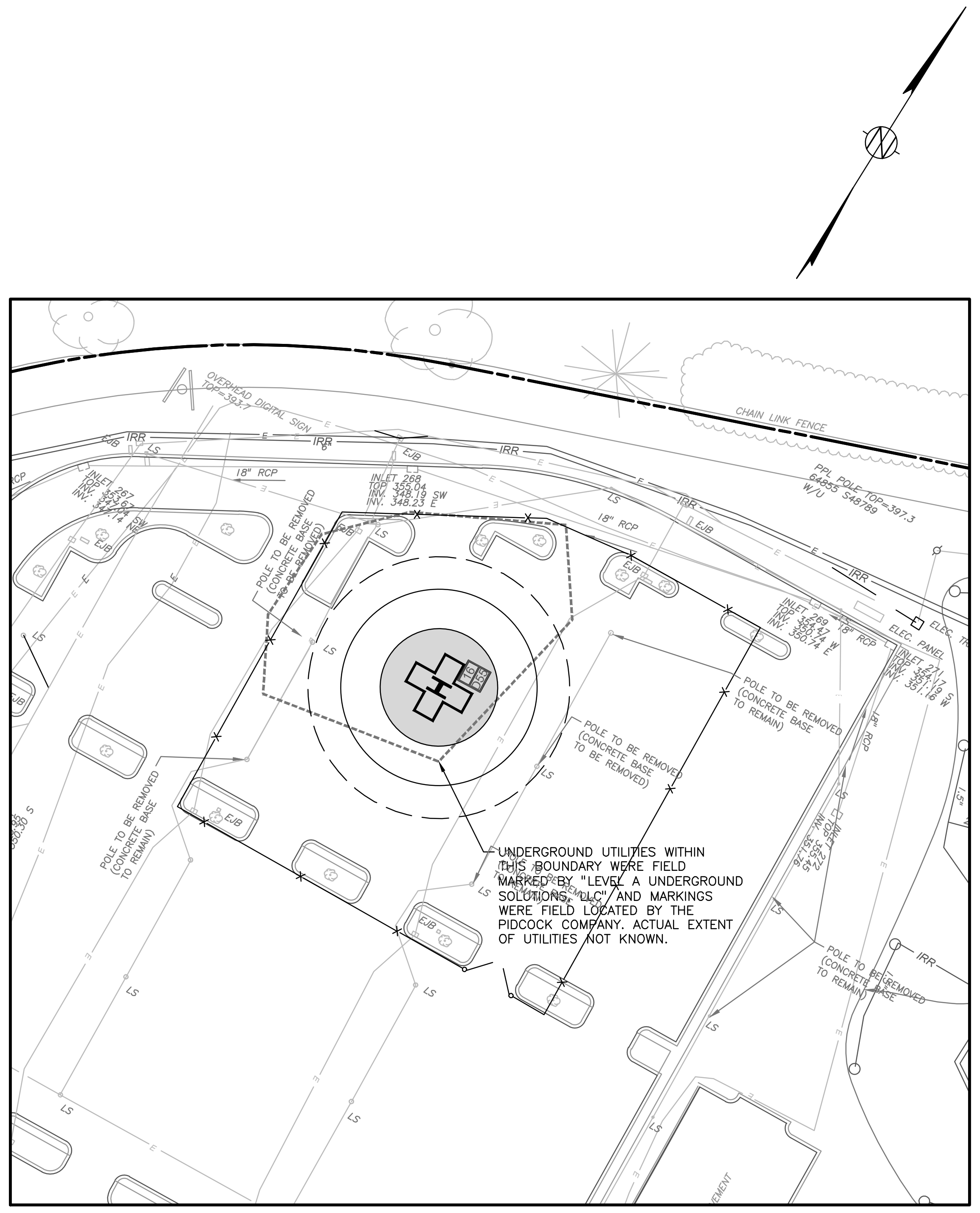
EMERGENCY DEPARTMENT EXPANSION

CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

UTILITY PLAN 1

FILE NUMBER
S-12395

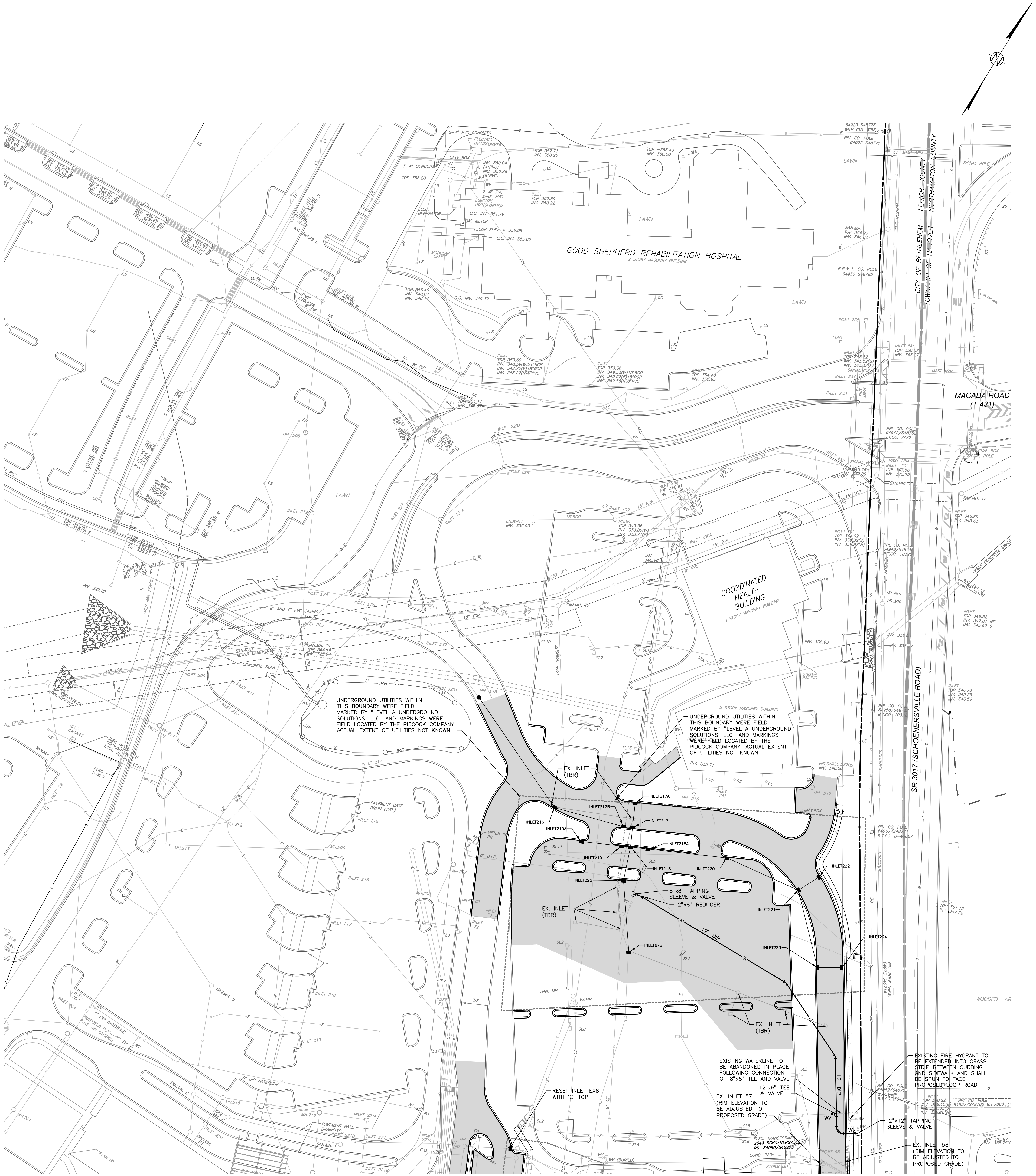
SHEET NUMBER
12 OF 18


OVERHEAD DIGITAL SIGN TOP=393.7
CHAIN LINK FENCE
PPL POLE TOP=397.3 64855 S48789 W/U
INLET 267
INLET 268 TOP 355.04 INV. 348.19 SW INV. 348.23 E
INLET 269
INLET 271
INLET 272
18" RCP
IRR
EJB
ELEC. PANEL
POLE TO BE REMOVED (CONCRETE BASE TO BE REMOVED)
POLE TO BE REMOVED (CONCRETE BASE TO REMAIN)
UNDERGROUND UTILITIES WITHIN THIS BOUNDARY WERE FIELD MARKED BY "LEVEL A UNDERGROUND SOLUTIONS, LLC" AND MARKINGS WERE FIELD LOCATED BY THE PIDCOCK COMPANY. ACTUAL EXTENT OF UTILITIES NOT KNOWN.

TEMPORARY HELIPAD SITE PLAN

SCALE: 1"=50

NOTE: SEE OVERALL SITE PLAN FOR CAMPUS WIDE LOCATION


GOOD SHEPHERD REHABILITATION HOSPITAL
2 STORY MASONRY BUILDING
COORDINATED HEALTH BUILDING
1 STORY MASONRY BUILDING
MACADA ROAD (T-431)
SR 3017 (SCHOENERSVILLE ROAD)
CITY OF BETHLEHEM – LEHIGH COUNTY
TOWNSHIP OF HANOVER – NORTHAMPTON COUNTY
LAWN
WOODED AR
UNDERGROUND UTILITIES WITHIN THIS BOUNDARY WERE FIELD MARKED BY "LEVEL A UNDERGROUND SOLUTIONS, LLC" AND MARKINGS WERE FIELD LOCATED BY THE PIDCOCK COMPANY. ACTUAL EXTENT OF UTILITIES NOT KNOWN.
EX. INLET (TBR)
INLET216
INLET217
INLET217A
INLET217B
INLET218
INLET218A
INLET219
INLET219A
INLET220
INLET221
INLET222
INLET223
INLET224
INLET225
INLET67B
8"x8" TAPPING SLEEVE & VALVE
12"x8" REDUCER
12" DIP
EXISTING WATERLINE TO BE ABANDONED IN PLACE FOLLOWING CONNECTION OF 8"x6" TEE AND VALVE
12"x6" TEE & VALVE
EX. INLET 57 (RIM ELEVATION TO BE ADJUSTED TO PROPOSED GRADE)
EXISTING FIRE HYDRANT TO BE EXTENDED INTO GRASS STRIP BETWEEN CURBING AND SIDEWALK AND SHALL BE SPUN TO FACE PROPOSED LOOP ROAD
12"x12" TAPPING SLEEVE & VALVE
EX. INLET 58 (RIM ELEVATION TO BE ADJUSTED TO PROPOSED GRADE)
RESET INLET EX8 WITH 'C' TOP
ELEC. TRANSFORMER 2649 SCHOENERSVILLE RD. 64980/S48965
CONC. PAD
STORM MH
HEADWALL EX202 INV. 340.28
JUNCT. BOX
STEEL RAILING
6" D.I.P.
8" CIP
10"± TRANSITE
8" DIP WATERLINE
PAVEMENT BASE DRAIN (TYP.)
SAN. MH.
MH. 215
MH. 216
MH. 217
WV
30'

CONTINUED ON GRADING PLAN 1

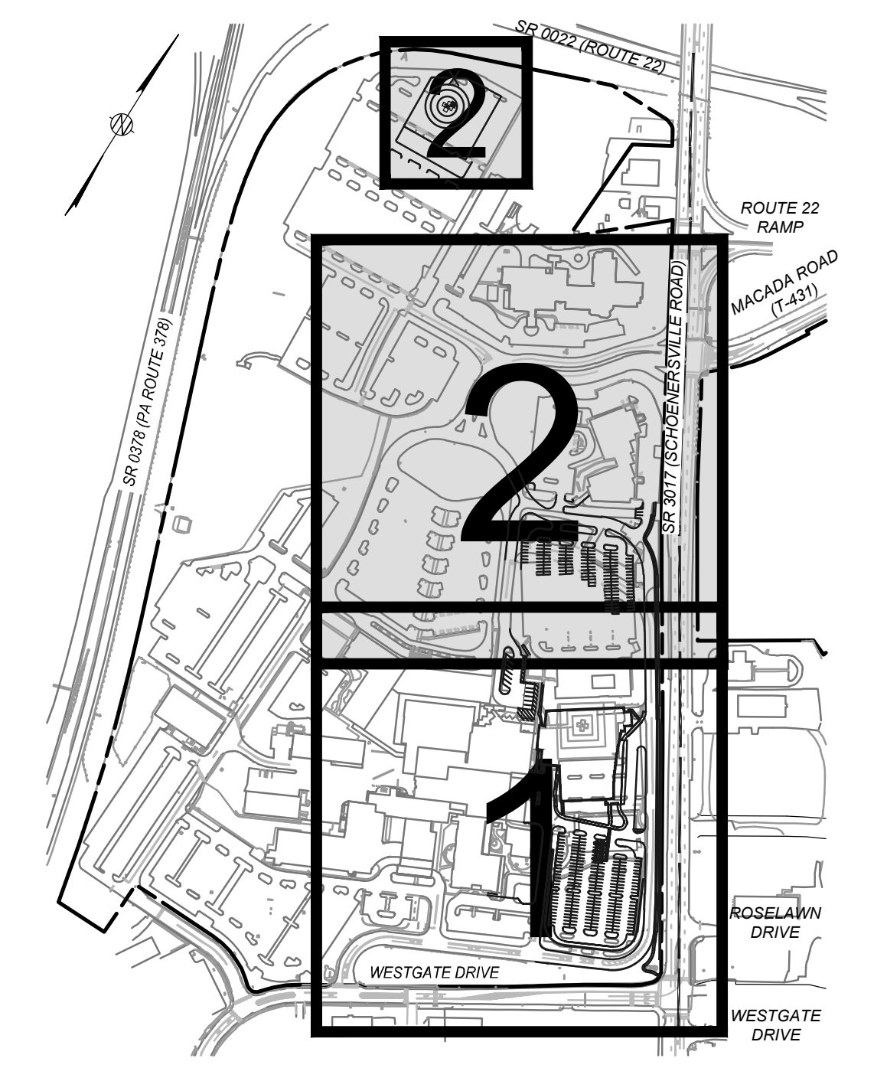
NOTE: REFER TO MEP PLANS (PREPARED BY OTHERS) FOR ALL EXISTING AND PROPOSED ELECTRICAL, COMMUNICATIONS AND GAS UTILITIES. REFER TO ELECTRICAL PLANS FOR ABANDONMENT/REMOVAL OF EXISTING LIGHT POLES AND ELECTRICAL CONDUITS.

THE PIDCOCK COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL


2
1
ROUTE 22 RAMP
MACADA ROAD (T-431)
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

NOTES:

1. THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.
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6		
5		
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1	JANUARY 10, 2025	REVISED PER C.O.B COMMENTS

REVISIONS

MAJOR LAND DEVELOPMENT SUBMISSION

SCALE: 1"=50'
DATE: SEPTEMBER 6, 2024
CHECKED BY: BCT
DRAWN BY: KDH/JGU
CAD FILE: UTILITY.dwg
PROJECT NUMBER: 22005

811
Know what's below.
Call before you dig.
SEE SHEET 2

GRAPHIC SCALE: 50' 25' 0' 50' 100'

Lehigh Valley Health Network
MUHLENBERG

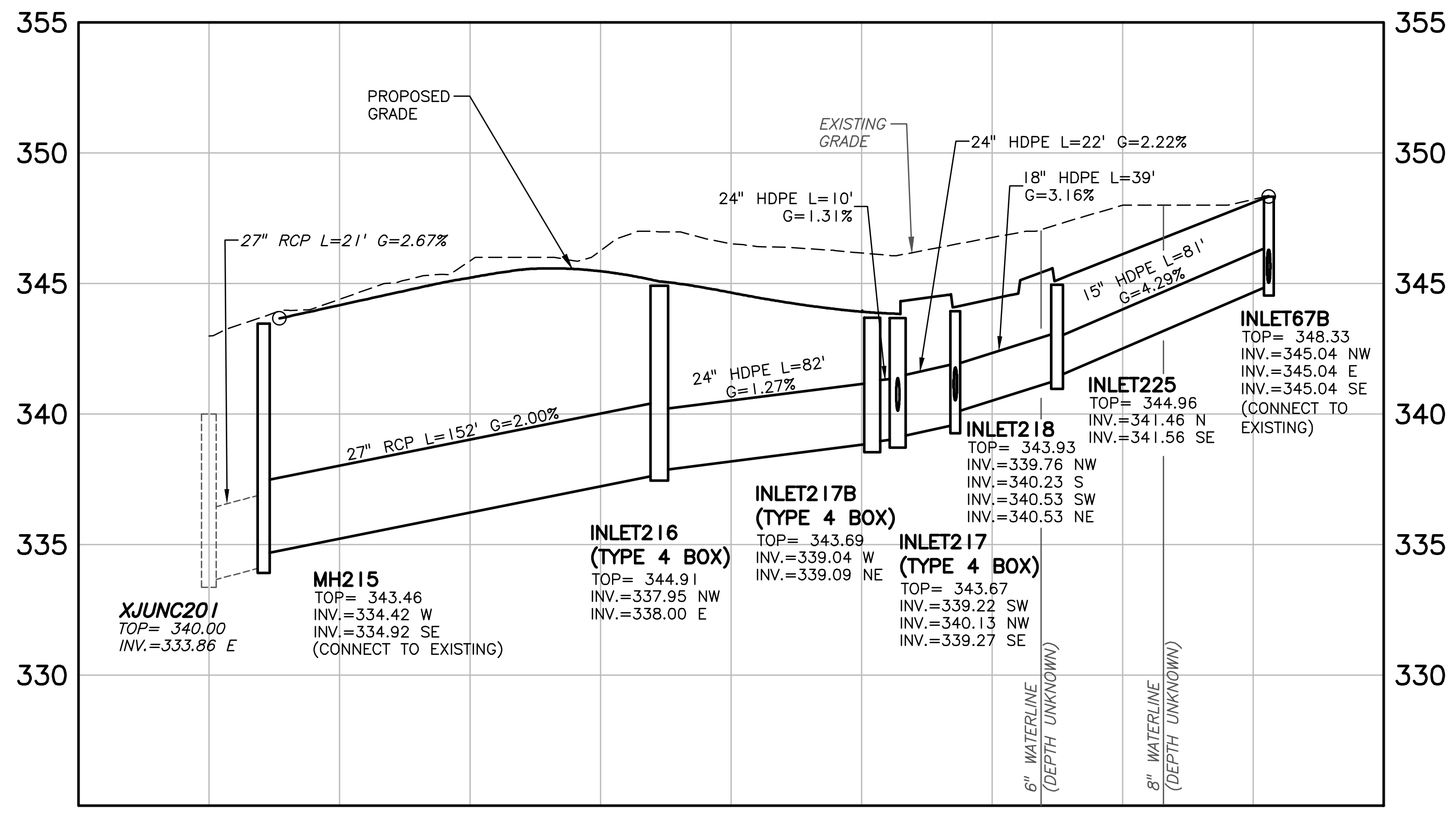
EMERGENCY DEPARTMENT EXPANSION

CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

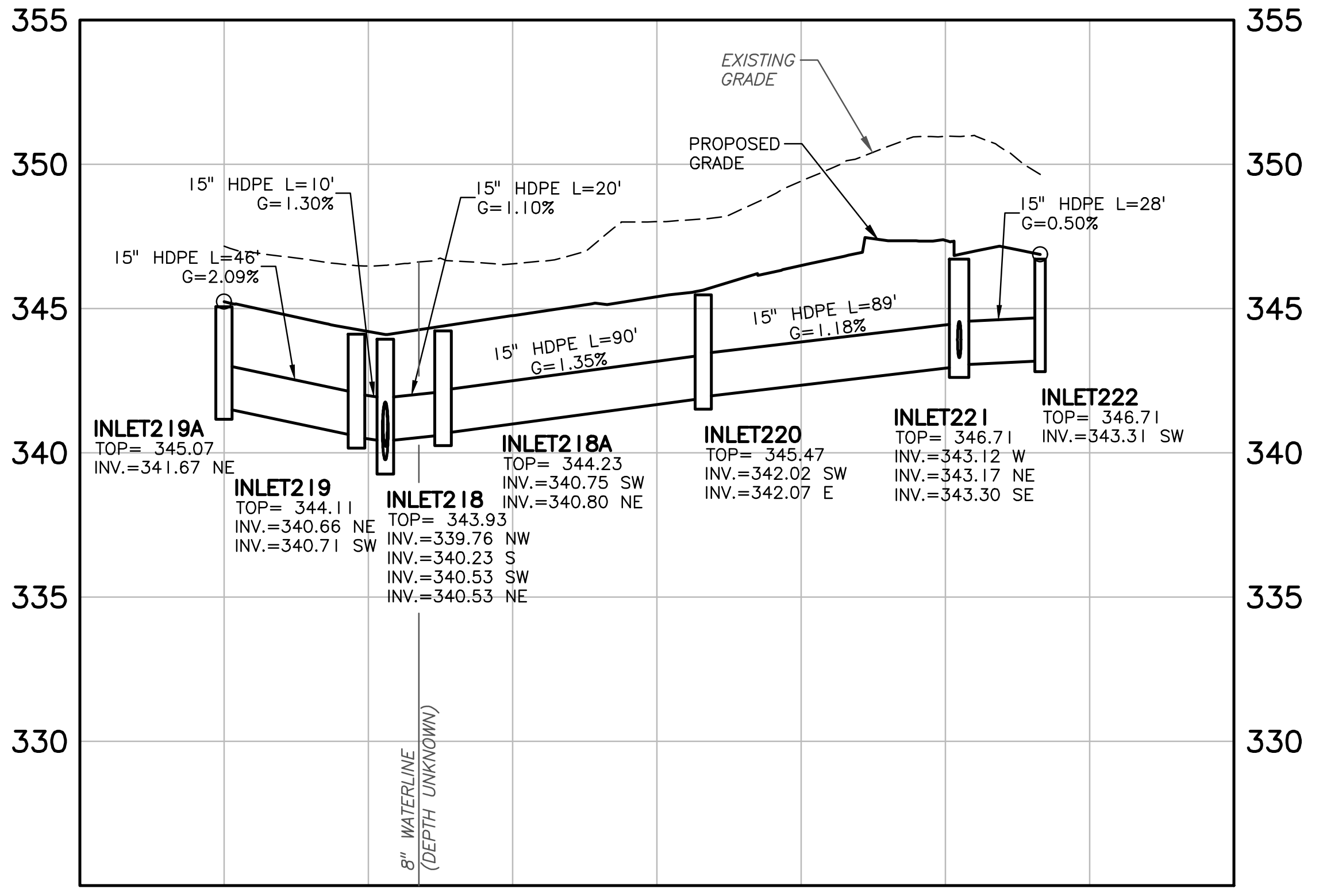
UTILITY PLAN 2

FILE NUMBER
S-12395

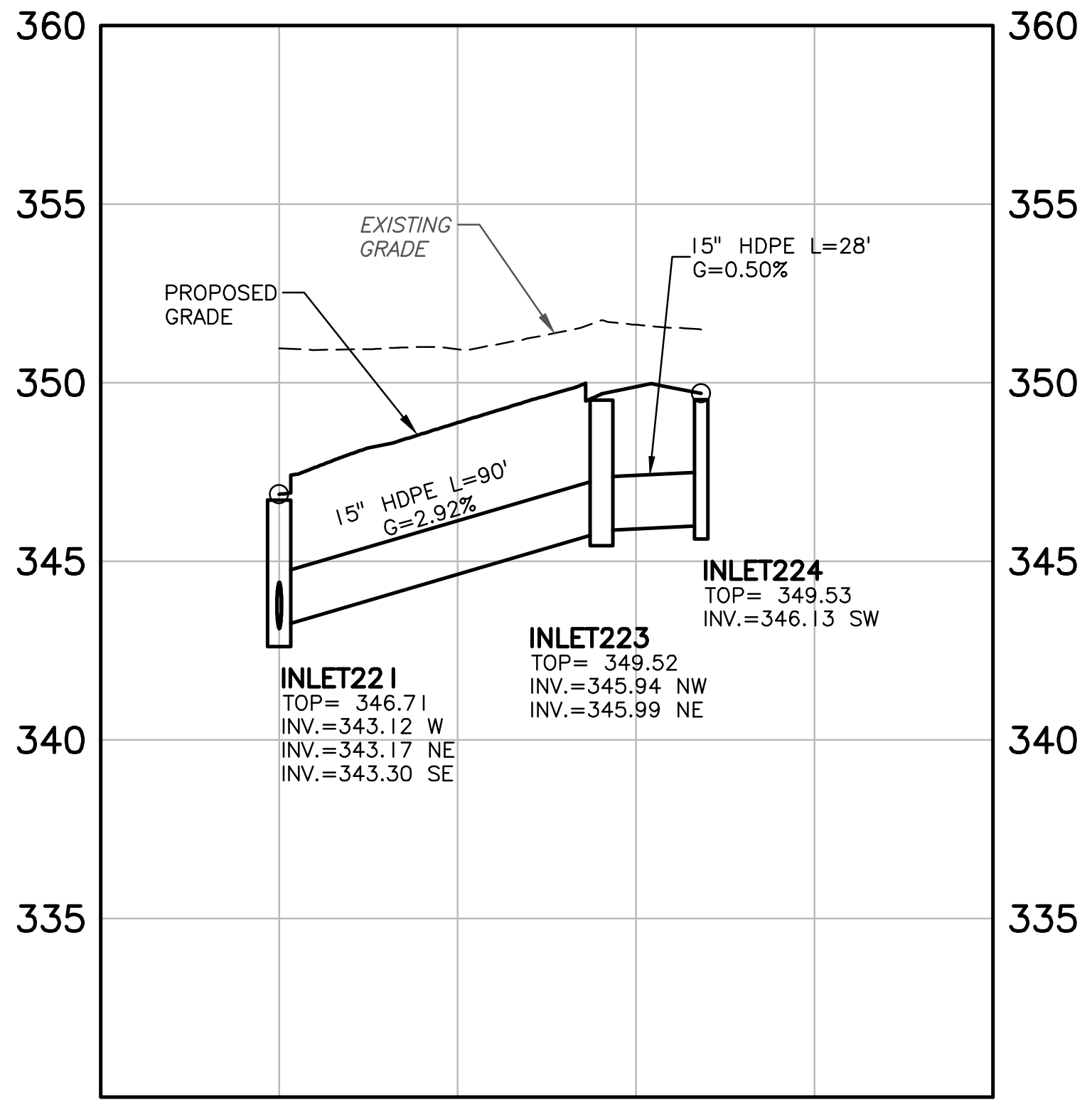
SHEET NUMBER
13 OF 18


355
350
345
340
335
330
PROPOSED GRADE
EXISTING GRADE
24" HDPE L=22' G=2.22%
18" HDPE L=39' G=3.16%
24" HDPE L=10' G=1.31%
27" RCP L=21' G=2.67%
15" HDPE L=81' G=4.29%
24" HDPE L=82' G=1.27%
27" RCP L=152' G=2.00%
INLET67B
TOP= 348.33
INV.=345.04 NW
INV.=345.04 E
INV.=345.04 SE
(CONNECT TO EXISTING)
INLET225
TOP= 344.96
INV.=341.46 N
INV.=341.56 SE
INLET218
TOP= 343.93
INV.=339.76 NW
INV.=340.23 S
INV.=340.53 SW
INV.=340.53 NE
INLET217B
(TYPE 4 BOX)
TOP= 343.69
INV.=339.04 W
INV.=339.09 NE
INLET216
(TYPE 4 BOX)
TOP= 344.91
INV.=337.95 NW
INV.=338.00 E
INLET217
(TYPE 4 BOX)
TOP= 343.67
INV.=339.22 SW
INV.=340.13 NW
INV.=339.27 SE
MH215
TOP= 343.46
INV.=334.42 W
INV.=334.92 SE
(CONNECT TO EXISTING)
XJUNC201
TOP= 340.00
INV.=333.86 E
6" WATERLINE (DEPTH UNKNOWN)
8" WATERLINE (DEPTH UNKNOWN)

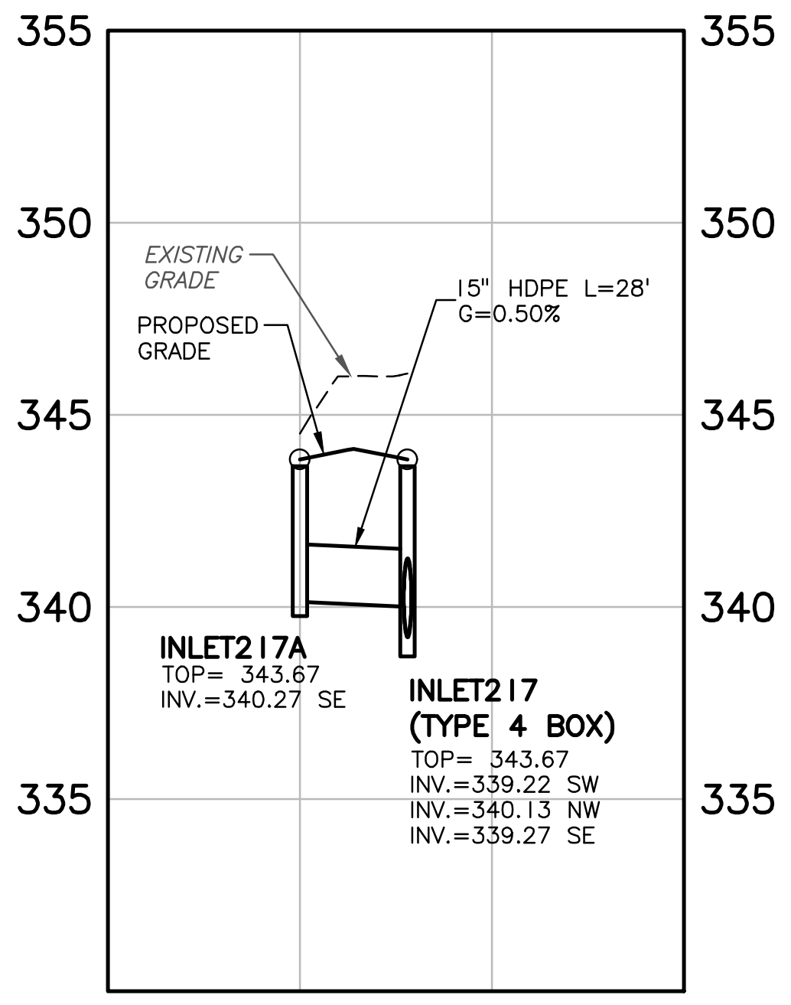
XJUNC 201 TO XINLET67B
SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'


355
350
345
340
335
330
EXISTING GRADE
PROPOSED GRADE
15" HDPE L=10' G=1.30%
15" HDPE L=20' G=1.10%
15" HDPE L=46' G=2.09%
15" HDPE L=28' G=0.50%
15" HDPE L=90' G=1.35%
15" HDPE L=89' G=1.18%
INLET219A
TOP= 345.07
INV.=341.67 NE
INLET219
TOP= 344.11
INV.=340.66 NE
INV.=340.71 SW
INLET218
TOP= 343.93
INV.=339.76 NW
INV.=340.23 S
INV.=340.53 SW
INV.=340.53 NE
INLET218A
TOP= 344.23
INV.=340.75 SW
INV.=340.80 NE
INLET220
TOP= 345.47
INV.=342.02 SW
INV.=342.07 E
INLET221
TOP= 346.71
INV.=343.12 W
INV.=343.17 NE
INV.=343.30 SE
INLET222
TOP= 346.71
INV.=343.31 SW
8" WATERLINE (DEPTH UNKNOWN)

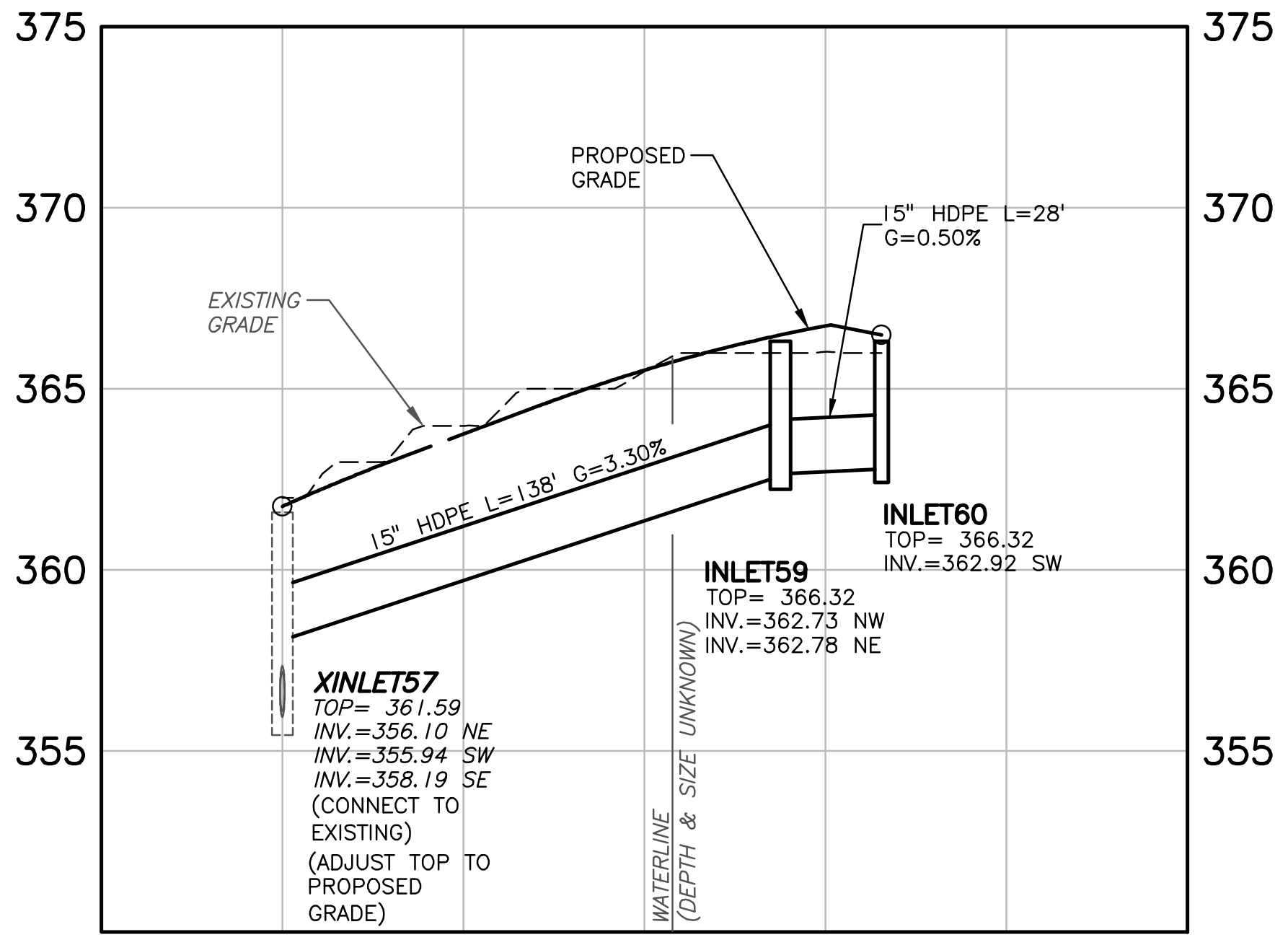
INLET219A TO INLET222
SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'


360
355
350
345
340
335
EXISTING GRADE
PROPOSED GRADE
15" HDPE L=28' G=0.50%
15" HDPE L=90' G=2.92%
INLET221
TOP= 346.71
INV.=343.12 W
INV.=343.17 NE
INV.=343.30 SE
INLET223
TOP= 349.52
INV.=345.94 NW
INV.=345.99 NE
INLET224
TOP= 349.53
INV.=346.13 SW

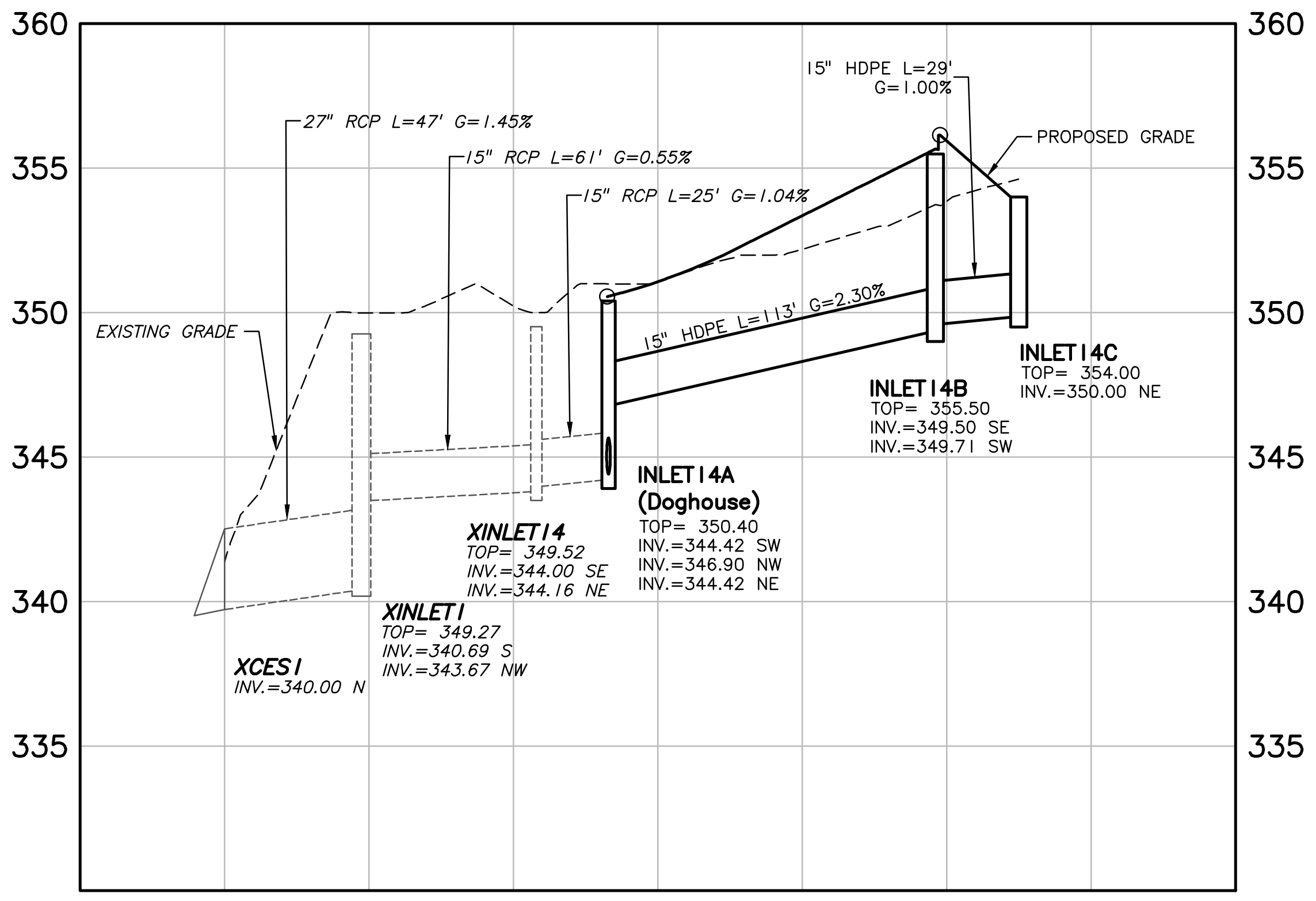
INLET221 TO INLET224
SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'


355
350
345
340
335
EXISTING GRADE
PROPOSED GRADE
15" HDPE L=28' G=0.50%
INLET217A
TOP= 343.67
INV.=340.27 SE
INLET217
(TYPE 4 BOX)
TOP= 343.67
INV.=339.22 SW
INV.=340.13 NW
INV.=339.27 SE

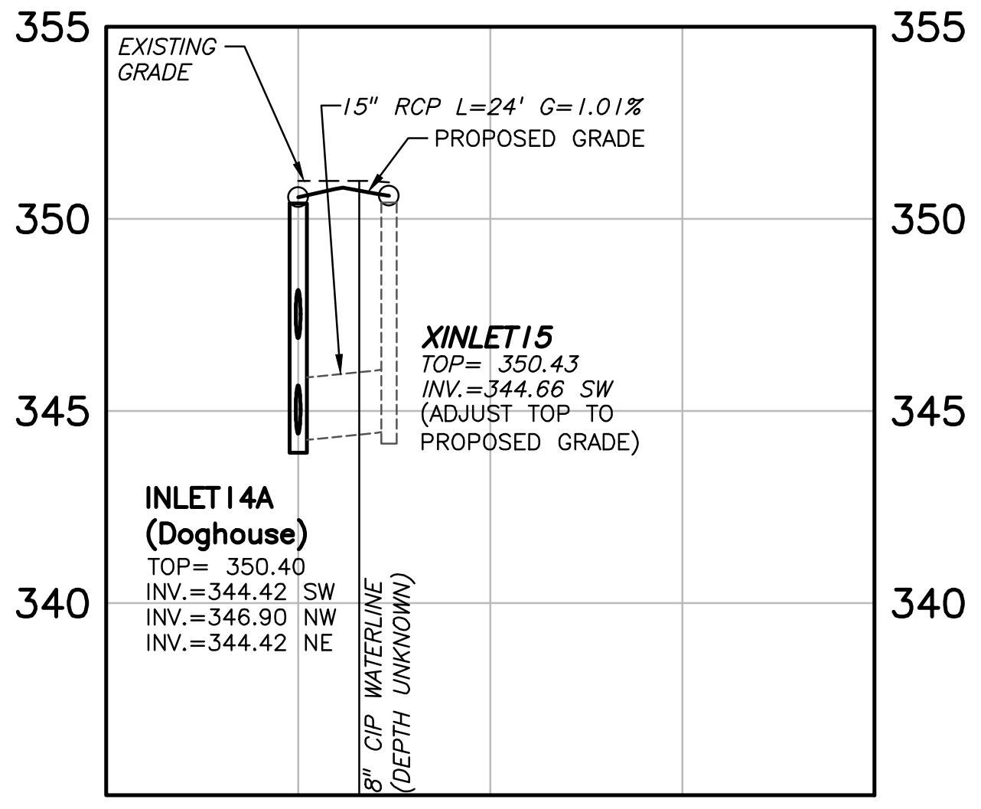
INLET217A TO INLET217
SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'


375
370
365
360
355
PROPOSED GRADE
15" HDPE L=28' G=0.50%
EXISTING GRADE
15" HDPE L=138' G=3.30%
INLET60
TOP= 366.32
INV.=362.92 SW
INLET59
TOP= 366.32
INV.=362.73 NW
INV.=362.78 NE
XINLET57
TOP= 361.59
INV.=356.10 NE
INV.=355.94 SW
INV.=358.19 SE
(CONNECT TO EXISTING)
(ADJUST TOP TO PROPOSED GRADE)
WATERLINE (DEPTH & SIZE UNKNOWN)

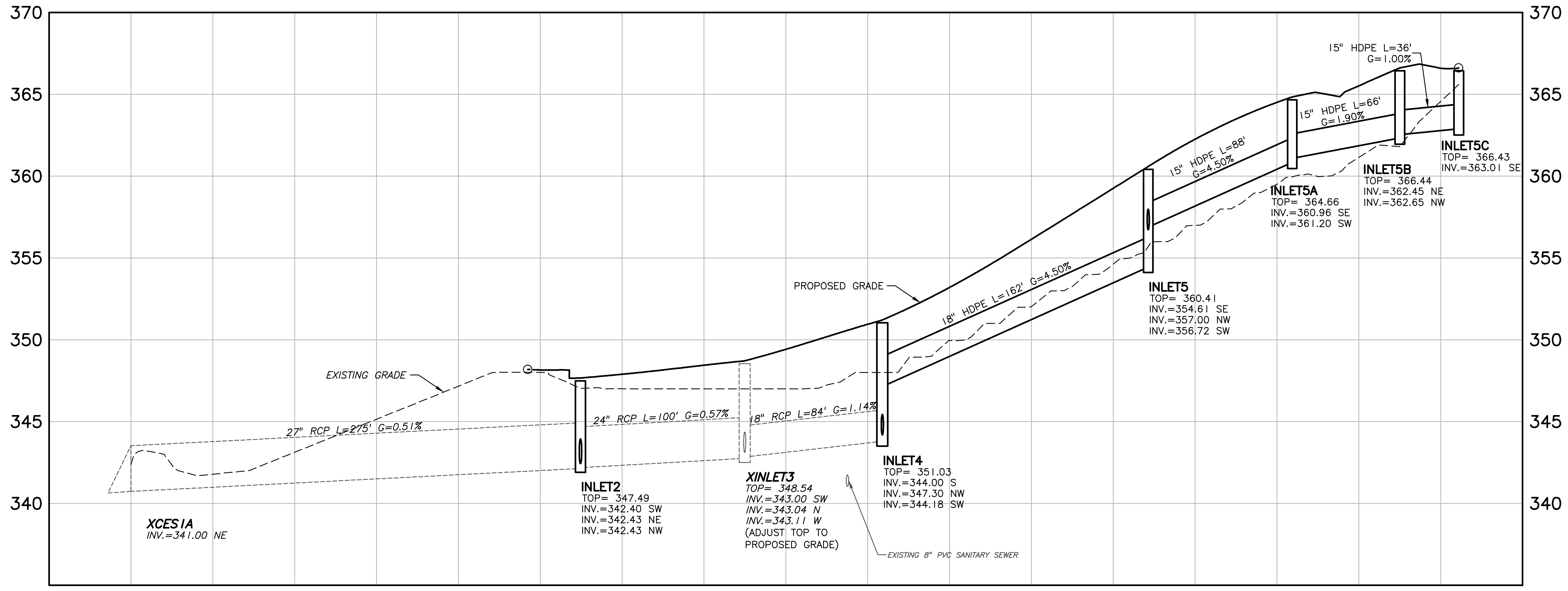
XINLET57 TO INLET60
SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'


360
355
350
345
340
335
15" HDPE L=29' G=1.00%
27" RCP L=47' G=1.45%
PROPOSED GRADE
15" RCP L=61' G=0.55%
15" RCP L=25' G=1.04%
EXISTING GRADE
15" HDPE L=113' G=2.30%
INLET14C
TOP= 354.00
INV.=350.00 NE
INLET14B
TOP= 355.50
INV.=349.50 SE
INV.=349.71 SW
INLET14A
(Doghouse)
TOP= 350.40
INV.=344.42 SW
INV.=346.90 NW
INV.=344.42 NE
XINLET14
TOP= 349.52
INV.=344.00 SE
INV.=344.16 NE
XINLET1
TOP= 349.27
INV.=340.69 S
INV.=343.67 NW
XCES1
INV.=340.00 N

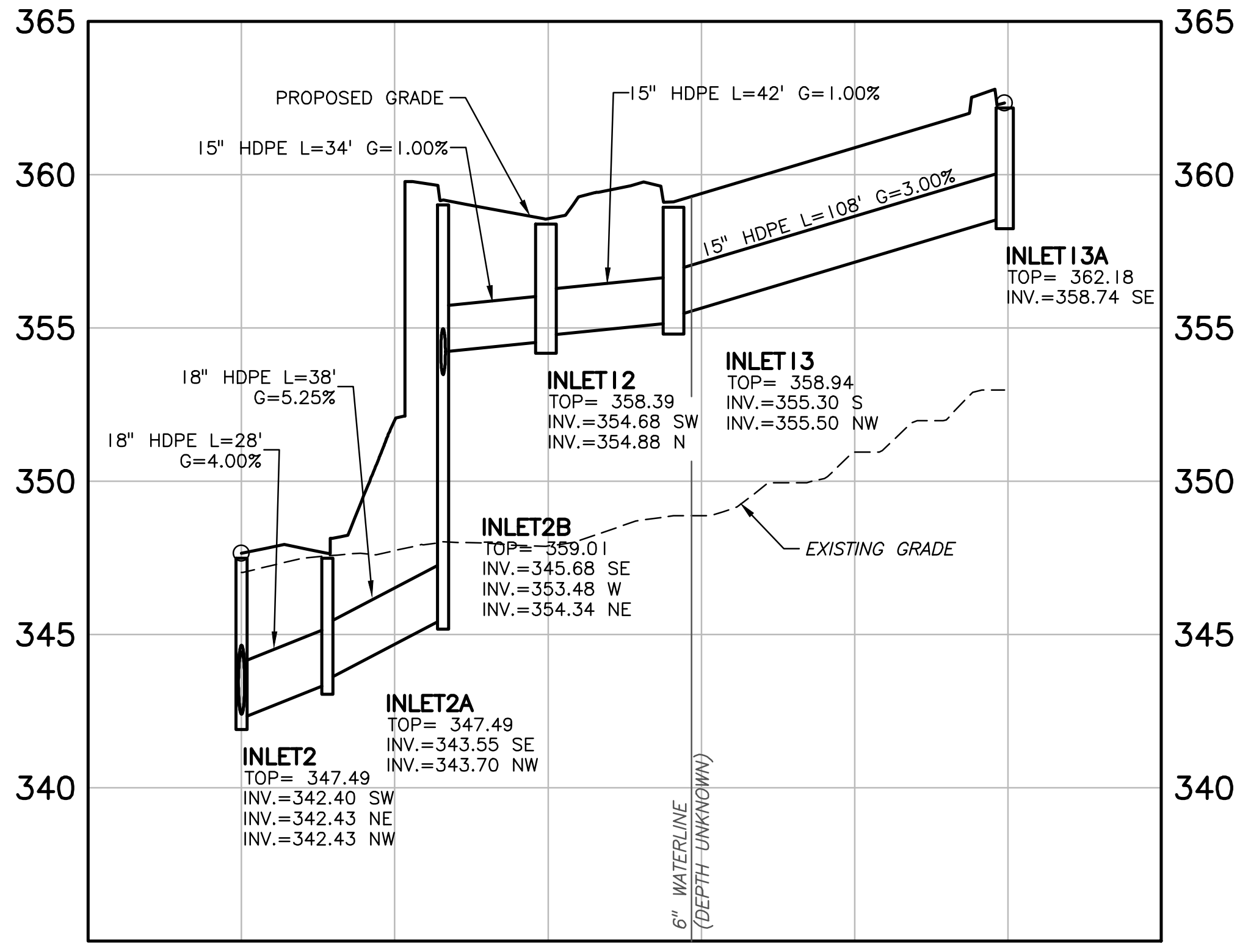
XCES1 TO INLET14C
SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'


355
350
345
340
EXISTING GRADE
15" RCP L=24' G=1.01%
PROPOSED GRADE
XINLET15
TOP= 350.43
INV.=344.66 SW
(ADJUST TOP TO PROPOSED GRADE)
INLET14A
(Doghouse)
TOP= 350.40
INV.=344.42 SW
INV.=346.90 NW
INV.=344.42 NE
8" CIP WATERLINE (DEPTH UNKNOWN)

INLET14A TO XINLET15
SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'


370
365
360
355
350
345
340
15" HDPE L=36' G=1.00%
15" HDPE L=66' G=1.90%
15" HDPE L=88' G=4.50%
INLET5C
TOP= 366.43
INV.=363.01 SE
INLET5B
TOP= 366.44
INV.=362.45 NE
INV.=362.65 NW
INLET5A
TOP= 364.66
INV.=360.96 SE
INV.=361.20 SW
PROPOSED GRADE
18" HDPE L=162' G=4.50%
INLET5
TOP= 360.41
INV.=354.61 SE
INV.=357.00 NW
INV.=356.72 SW
EXISTING GRADE
27" RCP L=275' G=0.51%
24" RCP L=100' G=0.57%
18" RCP L=84' G=1.14%
INLET4
TOP= 351.03
INV.=344.00 S
INV.=347.30 NW
INV.=344.18 SW
INLET2
TOP= 347.49
INV.=342.40 SW
INV.=342.43 NE
INV.=342.43 NW
XINLET3
TOP= 348.54
INV.=343.00 SW
INV.=343.04 N
INV.=343.11 W
(ADJUST TOP TO PROPOSED GRADE)
XCES1A
INV.=341.00 NE
EXISTING 8" PVC SANITARY SEWER

XCES1A TO INLET5C
SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'


365
360
355
350
345
340
PROPOSED GRADE
15" HDPE L=42' G=1.00%
15" HDPE L=34' G=1.00%
15" HDPE L=108' G=3.00%
INLET13A
TOP= 362.18
INV.=358.74 SE
18" HDPE L=38' G=5.25%
18" HDPE L=28' G=4.00%
INLET12
TOP= 358.39
INV.=354.68 SW
INV.=354.88 N
INLET13
TOP= 358.94
INV.=355.30 S
INV.=355.50 NW
INLET2B
TOP= 359.01
INV.=345.68 SE
INV.=353.48 W
INV.=354.34 NE
EXISTING GRADE
INLET2A
TOP= 347.49
INV.=343.55 SE
INV.=343.70 NW
INLET2
TOP= 347.49
INV.=342.40 SW
INV.=342.43 NE
INV.=342.43 NW
6" WATERLINE (DEPTH UNKNOWN)

XINLET2 TO INLET13A
SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'

Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\Submission\MISC PROFILES.dwg Printed: Jan 10, 2025 - 2:57pm

THE PIDCOCK COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL

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1	JANUARY 10, 2025	REVISED PER C.O.B COMMENTS

REVISIONS

MAJOR LAND DEVELOPMENT SUBMISSION

SCALE: AS NOTED
DATE: SEPTEMBER 6, 2024
CHECKED BY: BCT
DRAWN BY: KDH/JGU
CAD FILE: MISC PROFILES.dwg
PROJECT NUMBER: 22005

811
Know what's below.
Call before you dig.
SEE SHEET 2

Lehigh Valley Health Network
MUHLENBERG

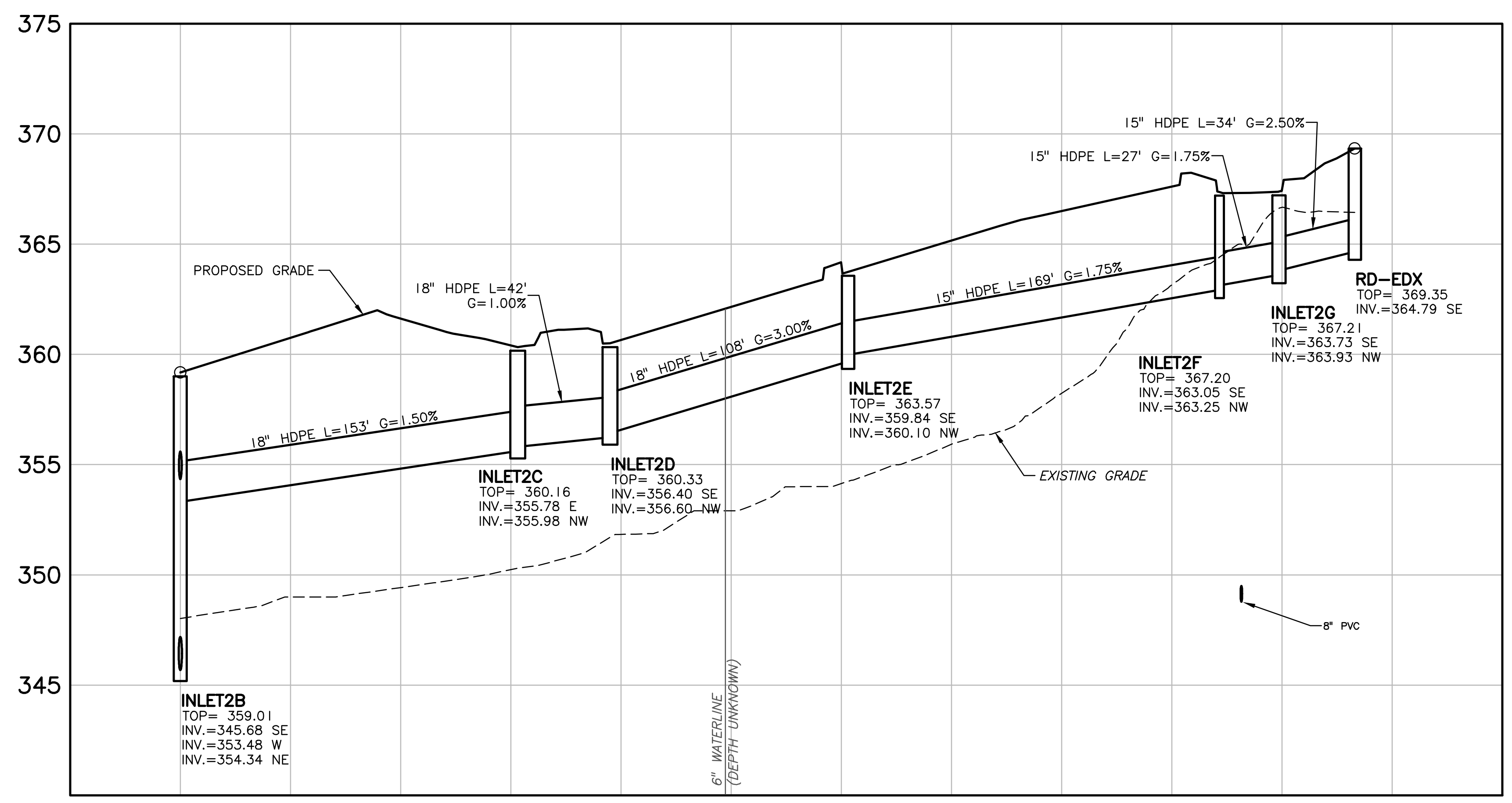
EMERGENCY DEPARTMENT EXPANSION

CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

UTILITY PROFILES 1

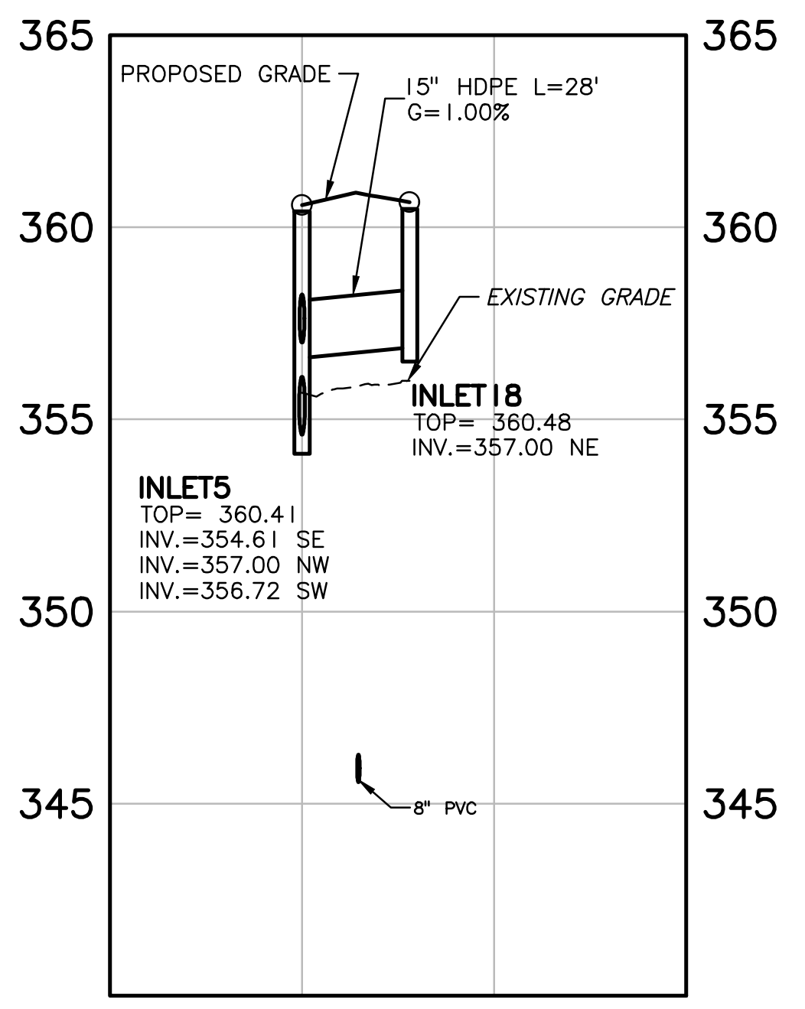
FILE NUMBER
S-12395

SHEET NUMBER
14 OF 18


375
370
365
360
355
350
345
PROPOSED GRADE
18" HDPE L=42'
G=1.00%
18" HDPE L=153' G=1.50%
18" HDPE L=108' G=3.00%
15" HDPE L=169' G=1.75%
15" HDPE L=27' G=1.75%
15" HDPE L=34' G=2.50%
EXISTING GRADE
6" WATERLINE (DEPTH UNKNOWN)
8" PVC
INLET2B
TOP= 359.01
INV.=345.68 SE
INV.=353.48 W
INV.=354.34 NE
INLET2C
TOP= 360.16
INV.=355.78 E
INV.=355.98 NW
INLET2D
TOP= 360.33
INV.=356.40 SE
INV.=356.60 NW
INLET2E
TOP= 363.57
INV.=359.84 SE
INV.=360.10 NW
INLET2F
TOP= 367.20
INV.=363.05 SE
INV.=363.25 NW
INLET2G
TOP= 367.21
INV.=363.73 SE
INV.=363.93 NW
RD-EDX
TOP= 369.35
INV.=364.79 SE

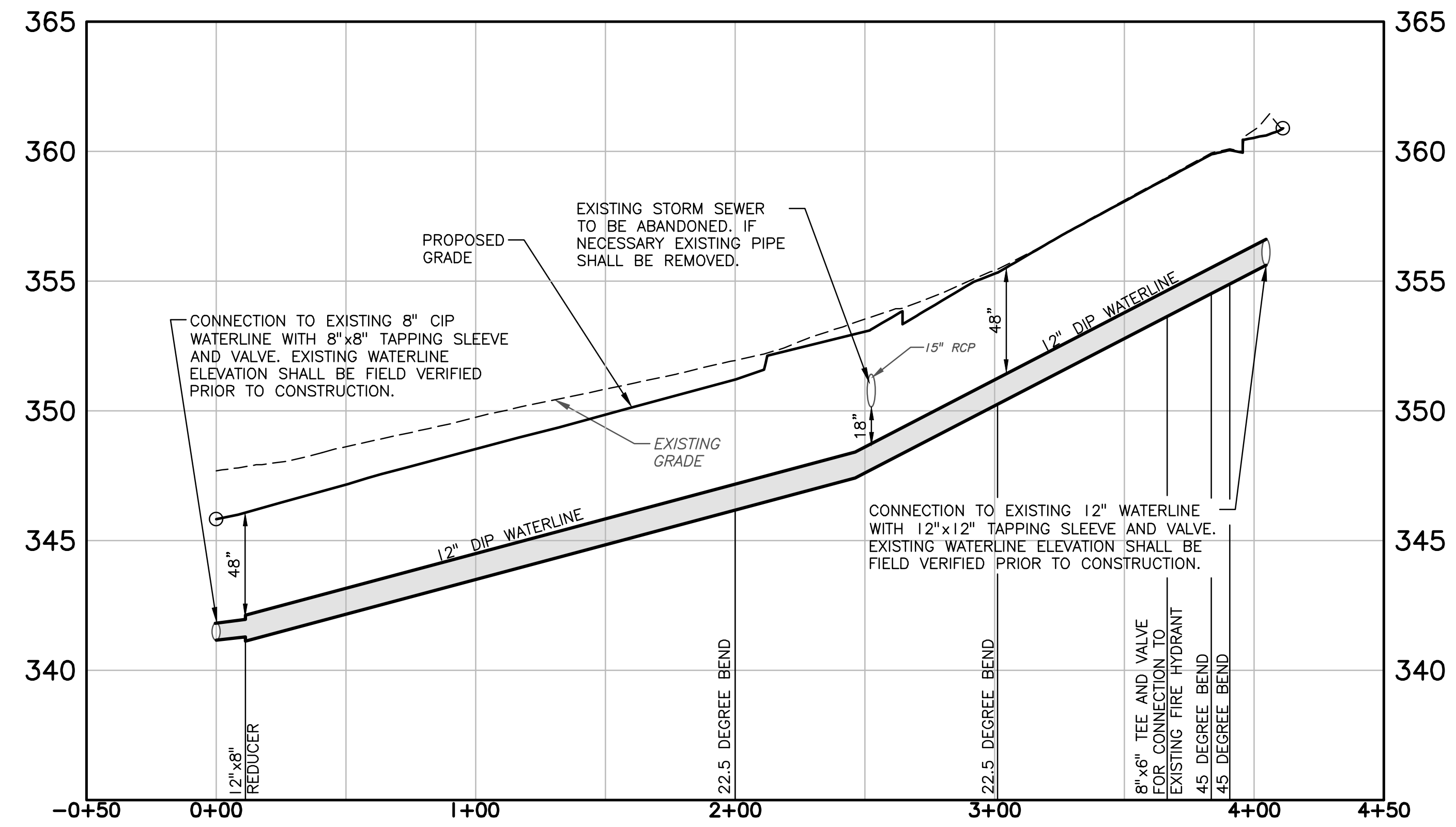
INLET2B TO RD-EDX

SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'


365
360
355
350
345
PROPOSED GRADE
15" HDPE L=28'
G=1.00%
EXISTING GRADE
8" PVC
INLET18
TOP= 360.48
INV.=357.00 NE
INLET5
TOP= 360.41
INV.=354.61 SE
INV.=357.00 NW
INV.=356.72 SW

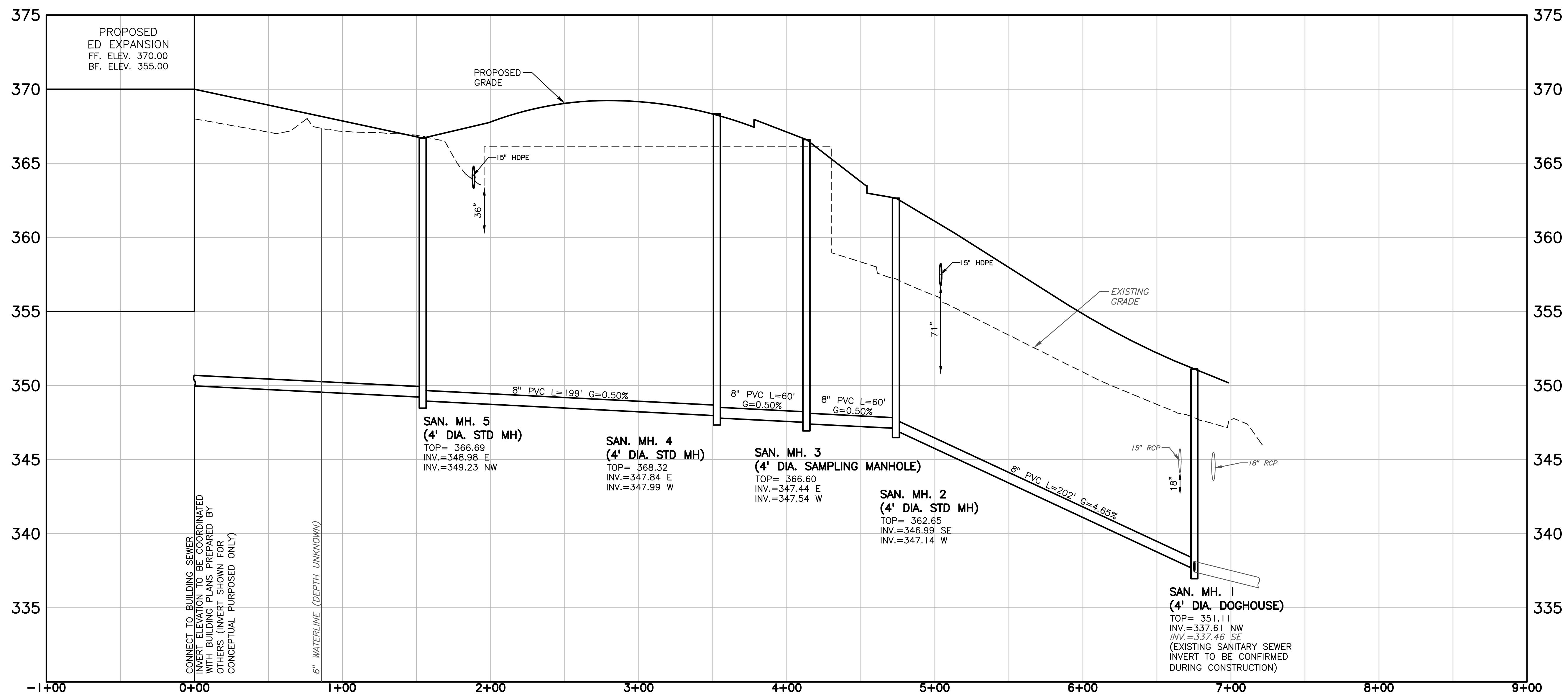
INLET5 TO INLET18

SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'


365
360
355
350
345
340
PROPOSED GRADE
EXISTING STORM SEWER TO BE ABANDONED. IF NECESSARY EXISTING PIPE SHALL BE REMOVED.
CONNECTION TO EXISTING 8" CIP WATERLINE WITH 8"x8" TAPPING SLEEVE AND VALVE. EXISTING WATERLINE ELEVATION SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
EXISTING GRADE
15" RCP
48"
18"
48"
12" DIP WATERLINE
12" DIP WATERLINE
CONNECTION TO EXISTING 12" WATERLINE WITH 12"x12" TAPPING SLEEVE AND VALVE. EXISTING WATERLINE ELEVATION SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
12"x8" REDUCER
22.5 DEGREE BEND
22.5 DEGREE BEND
8"x6" TEE AND VALVE FOR CONNECTION TO EXISTING FIRE HYDRANT
45 DEGREE BEND
45 DEGREE BEND
−0+50
0+00
1+00
2+00
3+00
4+00
4+50

PROPOSED WATERLINE CONNECTION

SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'


375
370
365
360
355
350
345
340
335
PROPOSED
ED EXPANSION
FF. ELEV. 370.00
BF. ELEV. 355.00
PROPOSED GRADE
15" HDPE
36"
15" HDPE
71"
EXISTING GRADE
15" RCP
18"
18" RCP
8" PVC L=199' G=0.50%
8" PVC L=60'
G=0.50%
8" PVC L=60'
G=0.50%
8" PVC L=202' G=4.65%
SAN. MH. 5
(4' DIA. STD MH)
TOP= 366.69
INV.=348.98 E
INV.=349.23 NW
SAN. MH. 4
(4' DIA. STD MH)
TOP= 368.32
INV.=347.84 E
INV.=347.99 W
SAN. MH. 3
(4' DIA. SAMPLING MANHOLE)
TOP= 366.60
INV.=347.44 E
INV.=347.54 W
SAN. MH. 2
(4' DIA. STD MH)
TOP= 362.65
INV.=346.99 SE
INV.=347.14 W
SAN. MH. 1
(4' DIA. DOGHOUSE)
TOP= 351.11
INV.=337.61 NW
INV.=337.46 SE
(EXISTING SANITARY SEWER INVERT TO BE CONFIRMED DURING CONSTRUCTION)
CONNECT TO BUILDING SEWER INVERT ELEVATION TO BE COORDINATED WITH BUILDING PLANS PREPARED BY OTHERS (INVERT SHOWN FOR CONCEPTUAL PURPOSED ONLY)
6" WATERLINE (DEPTH UNKNOWN)
−1+00
0+00
1+00
2+00
3+00
4+00
5+00
6+00
7+00
8+00
9+00

SANITARY SEWER SERVICE

SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'

Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\Submission\MISC PROFILES.dwg   Printed: Jan 10, 2025 - 2:57pm

THE PIDCOCK COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive   Allentown, Pennsylvania   18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

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1	JANUARY 10, 2025	REVISED PER C.O.B COMMENTS

REVISIONS

MAJOR LAND DEVELOPMENT SUBMISSION

SCALE: AS NOTED
DATE: SEPTEMBER 6, 2024
CHECKED BY: BCT
DRAWN BY: KDH/JGU
CAD FILE: MISC PROFILES.dwg
PROJECT NUMBER: 22005

Know what's below.
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Lehigh Valley Health Network
MUHLENBERG

EMERGENCY DEPARTMENT EXPANSION

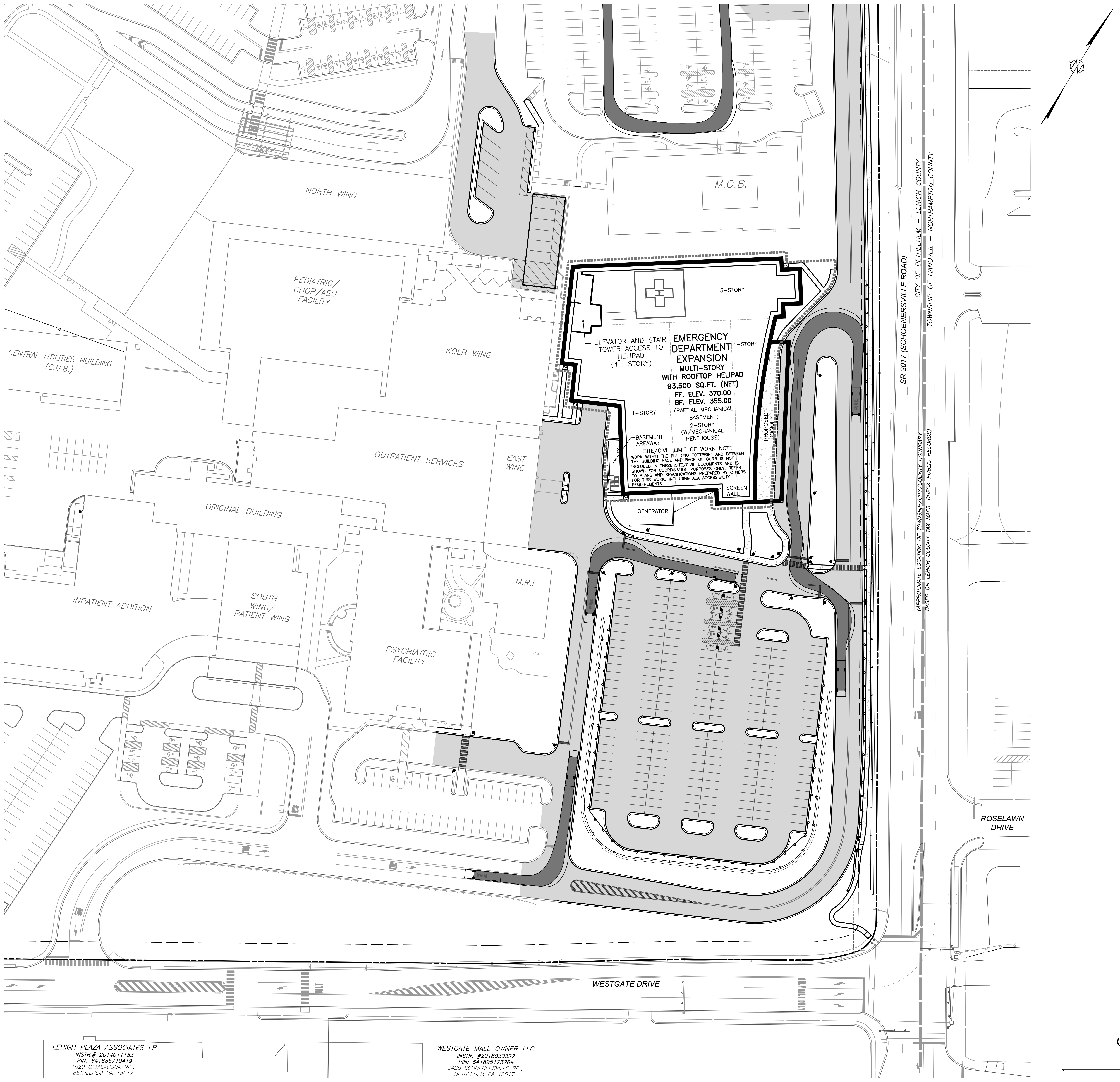
CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

UTILITY PROFILES 2

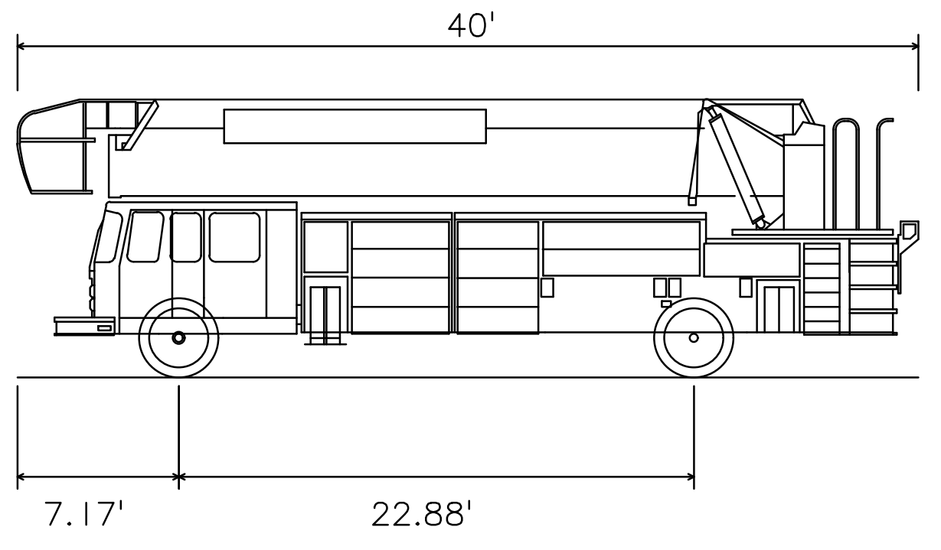
FILE NUMBER
S-12395

SHEET NUMBER
15 OF 18

CONTINUED ON FIRE TRUCK TURNING PLAN 2


NORTH WING
M.O.B.
PEDIATRIC/ CHOP/ASU FACILITY
KOLB WING
CENTRAL UTILITIES BUILDING (C.U.B.)
ELEVATOR AND STAIR TOWER ACCESS TO HELIPAD (4TH STORY)
3–STORY
EMERGENCY DEPARTMENT EXPANSION
MULTI–STORY WITH ROOFTOP HELIPAD
93,500 SQ.FT. (NET)
FF. ELEV. 370.00
BF. ELEV. 355.00
(PARTIAL MECHANICAL BASEMENT)
2–STORY (W/MECHANICAL PENTHOUSE)
I–STORY
I–STORY
BASEMENT AREAWAY
SITE/CIVIL LIMIT OF WORK NOTE
WORK WITHIN THE BUILDING FOOTPRINT AND BETWEEN THE BUILDING FACE AND BACK OF CURB IS NOT INCLUDED IN THESE SITE/CIVIL DOCUMENTS AND IS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO PLANS AND SPECIFICATIONS PREPARED BY OTHERS FOR THIS WORK, INCLUDING ADA ACCESSIBILITY REQUIREMENTS.
SCREEN WALL
GENERATOR
PROPOSED CANOPY
OUTPATIENT SERVICES
EAST WING
ORIGINAL BUILDING
INPATIENT ADDITION
SOUTH WING/ PATIENT WING
M.R.I.
PSYCHIATRIC FACILITY
SR 3017 (SCHOENERSVILLE ROAD)
CITY OF BETHLEHEM – LEHIGH COUNTY
TOWNSHIP OF HANOVER – NORTHAMPTON COUNTY
(APPROXIMATE LOCATION OF TOWNSHIP/CITY/COUNTY BOUNDARY BASED ON LEHIGH COUNTY TAX MAPS. CHECK PUBLIC RECORDS)
ROSELAWN DRIVE
WESTGATE DRIVE
ONLY
LEHIGH PLAZA ASSOCIATES LP
INSTR.# 2014011183
PIN: 641885710419
1620 CATASAUQUA RD.,
BETHLEHEM PA 18017
WESTGATE MALL OWNER LLC
INSTR. #2018030322
PIN: 641895173264
2425 SCHOENERSVILLE RD.,
BETHLEHEM PA 18017

COB FIRE TRUCK



Width	:	10.0'
Track	:	10.0'
Lock to Lock Time	:	5.0
Steering Angle	:	45.0

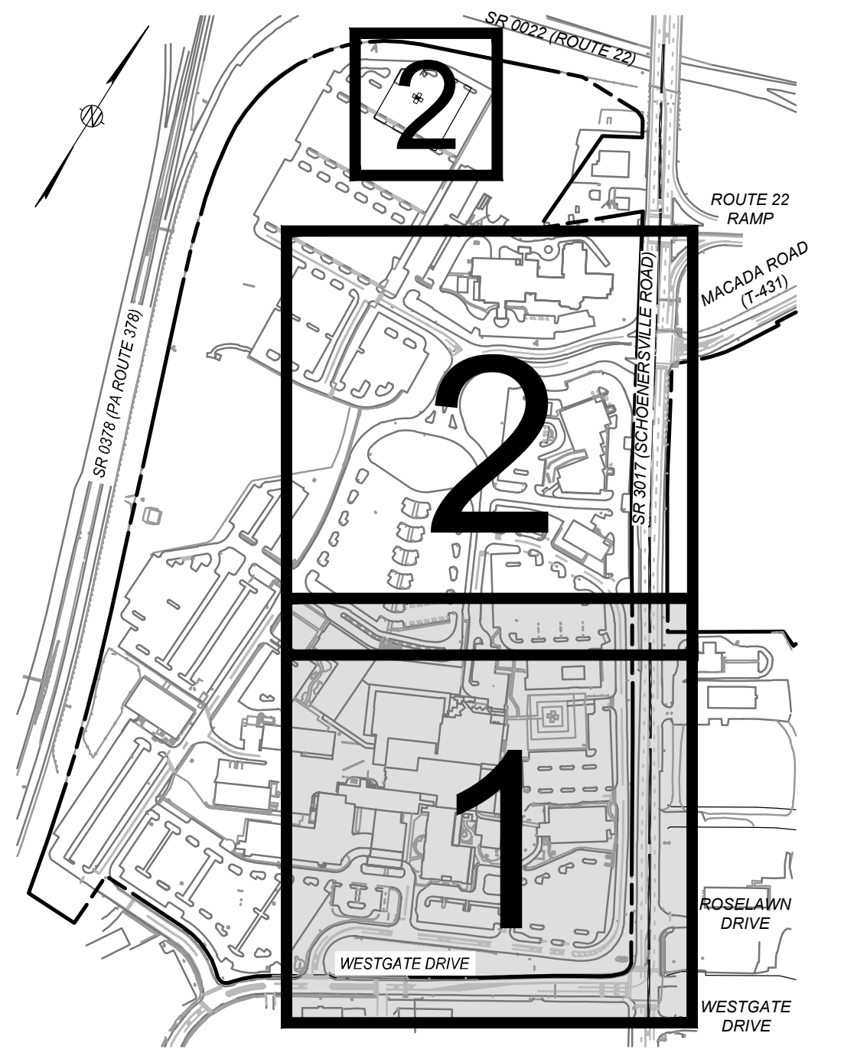
NOT TO SCALE

THE
PIDCOCK
COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL


2
2
1
SR 0022 (ROUTE 22)
ROUTE 22 RAMP
MACADA ROAD (T-431)
SR 0378 (PA ROUTE 378)
SR 3017 (SCHOENERSVILLE ROAD)
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

NOTES:

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1	JANUARY 10, 2025	REVISED PER C.O.B COMMENTS

REVISIONS

MAJOR LAND DEVELOPMENT SUBMISSION

SCALE: 1"=50'
DATE: SEPTEMBER 6, 2024
CHECKED BY: BCT
DRAWN BY: KDH/JGU
CAD FILE: TRUCK TURNING.dwg
PROJECT NUMBER: 22005

811
Know what's below.
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GRAPHIC SCALE: 50' 25' 0' 50' 100'

Lehigh Valley Health Network
MUHLENBERG

EMERGENCY DEPARTMENT EXPANSION

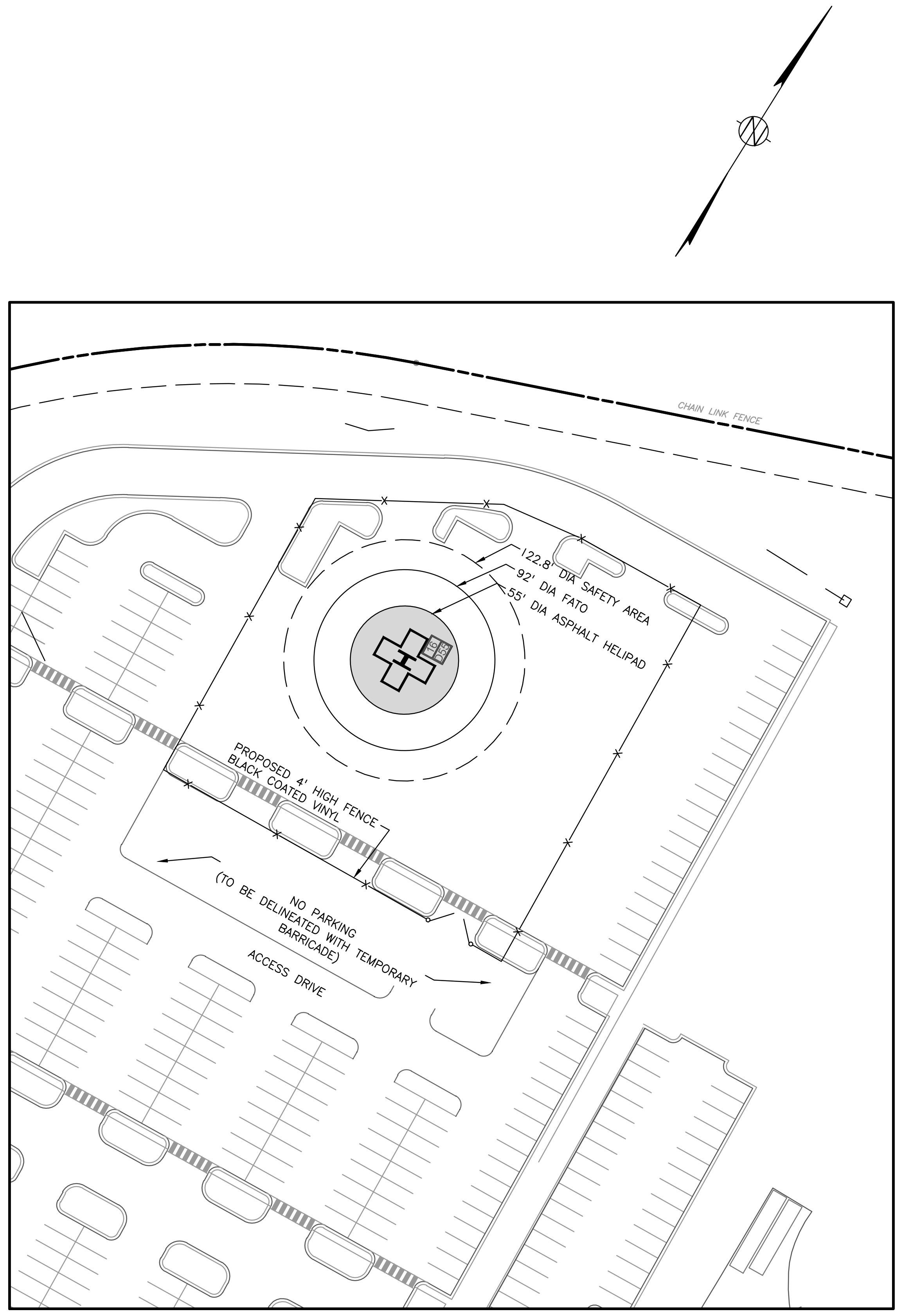
CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

FIRE TRUCK TURNING PLAN 1

FILE NUMBER
S-12395

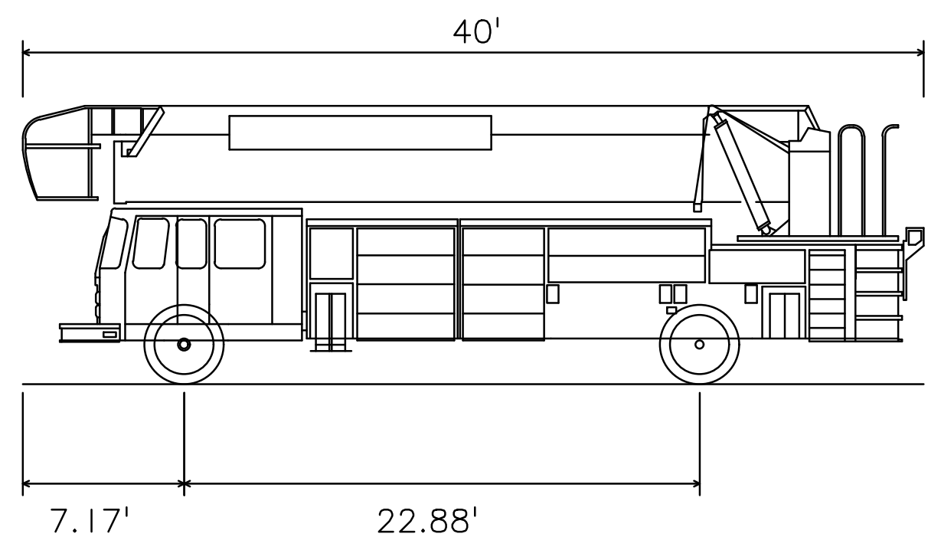
SHEET NUMBER
16 OF 18

Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\Submission\TRUCK TURNING.dwg Printed: Jan 10, 2025 - 2:57pm


CHAIN LINK FENCE
122.8' DIA SAFETY AREA
92' DIA FATO
55' DIA ASPHALT HELIPAD
PROPOSED 4' HIGH FENCE BLACK COATED VINYL
NO PARKING (TO BE DELINEATED WITH TEMPORARY BARRICADE)
ACCESS DRIVE

TEMPORARY HELIPAD LOCATION

COB FIRE TRUCK



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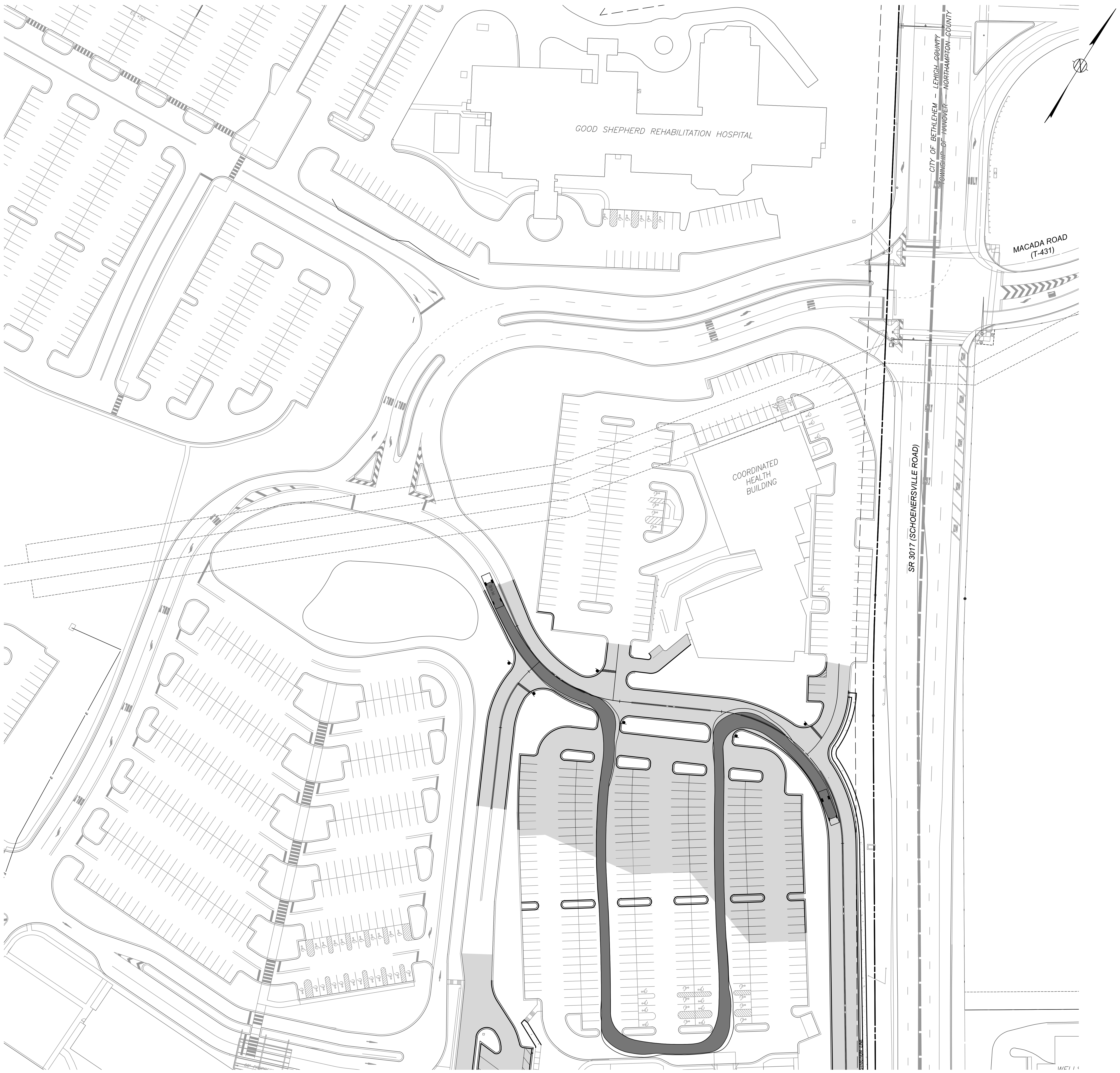
Track : 10.0'
Lock to Lock Time : 5.0
Steering Angle : 45.0

NOT TO SCALE


GOOD SHEPHERD REHABILITATION HOSPITAL
CITY OF BETHLEHEM – LEHIGH COUNTY
TOWNSHIP OF HANOVER – NORTHAMPTON COUNTY
MACADA ROAD (T-431)
COORDINATED HEALTH BUILDING
SR 3017 (SCHOENERSVILLE ROAD)

CONTINUED ON FIRE TRUCK TURNING PLAN 1

THE
PIDCOCK
COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
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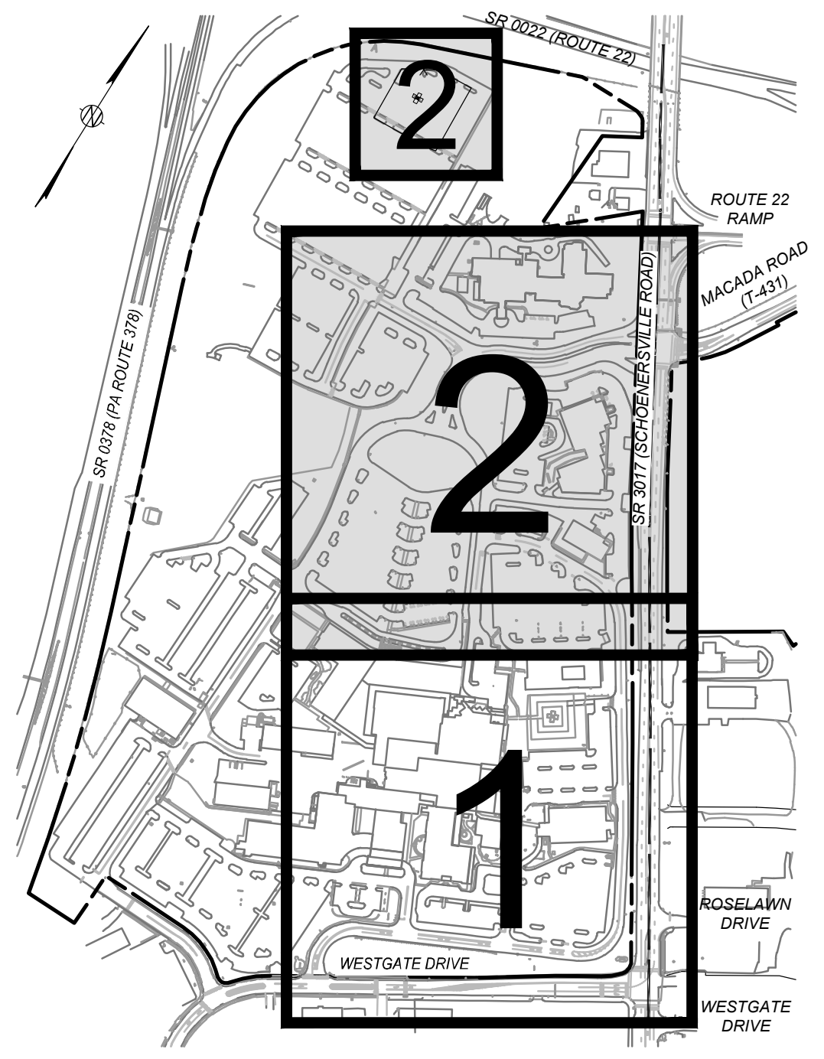
PROFESSIONAL SEAL


2
2
1
SR 0022 (ROUTE 22)
ROUTE 22 RAMP
MACADA ROAD (T-431)
SR 0378 (PA ROUTE 378)
SR 3017 (SCHOENERSVILLE ROAD)
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

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SCALE: 1"=50'
DATE: SEPTEMBER 6, 2024
CHECKED BY: BCT
DRAWN BY: KDH/JGU
CAD FILE: TRUCK TURNING.dwg
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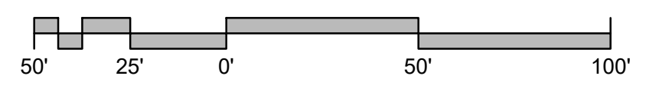

50'
25'
0'
50'
100'

Lehigh Valley Health Network
MUHLENBERG

EMERGENCY DEPARTMENT EXPANSION

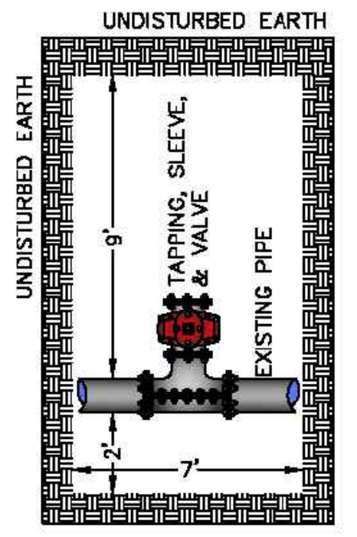
CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

FIRE TRUCK TURNING PLAN 2

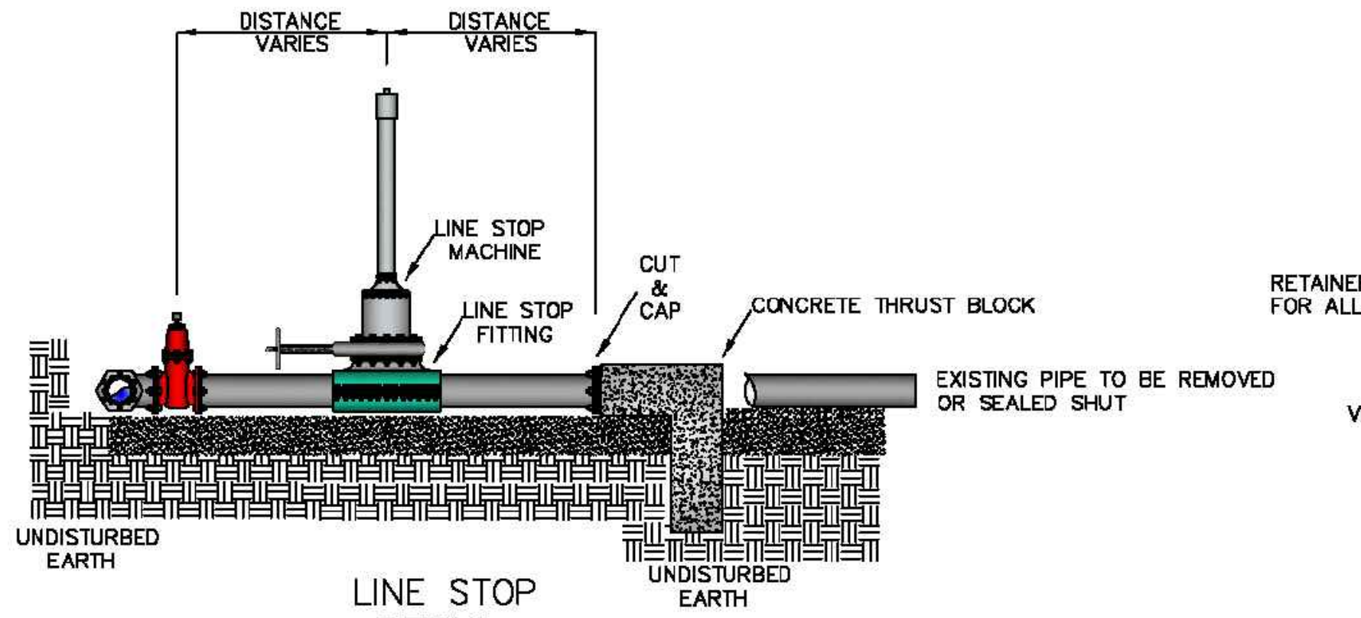
FILE NUMBER
S-12395

SHEET NUMBER
17 OF 18

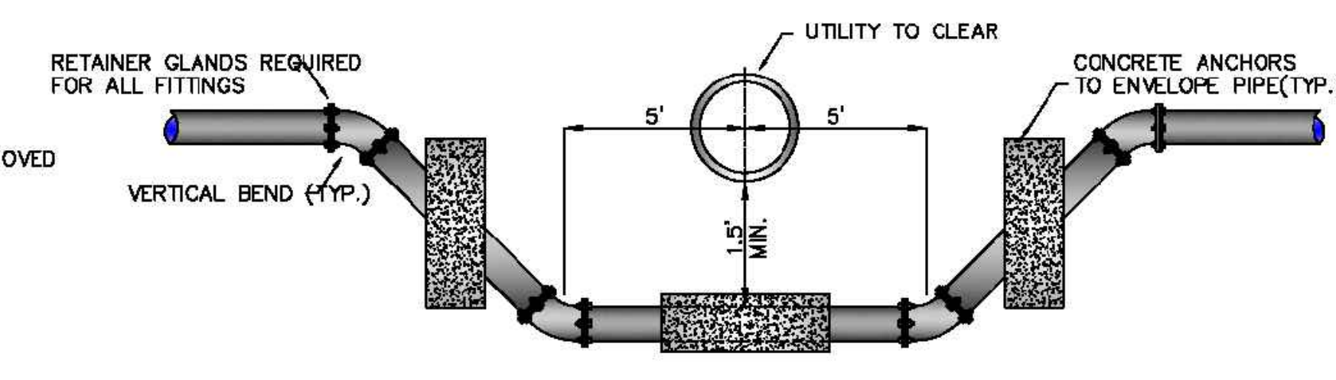
Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\Submission\TRUCK TURNING.dwg Printed: Jan 10, 2025 - 2:57pm


UNDISTURBED EARTH
UNDISTURBED EARTH
TAPPING, SLEEVE, & VALVE
EXISTING PIPE
9'
2'
7'

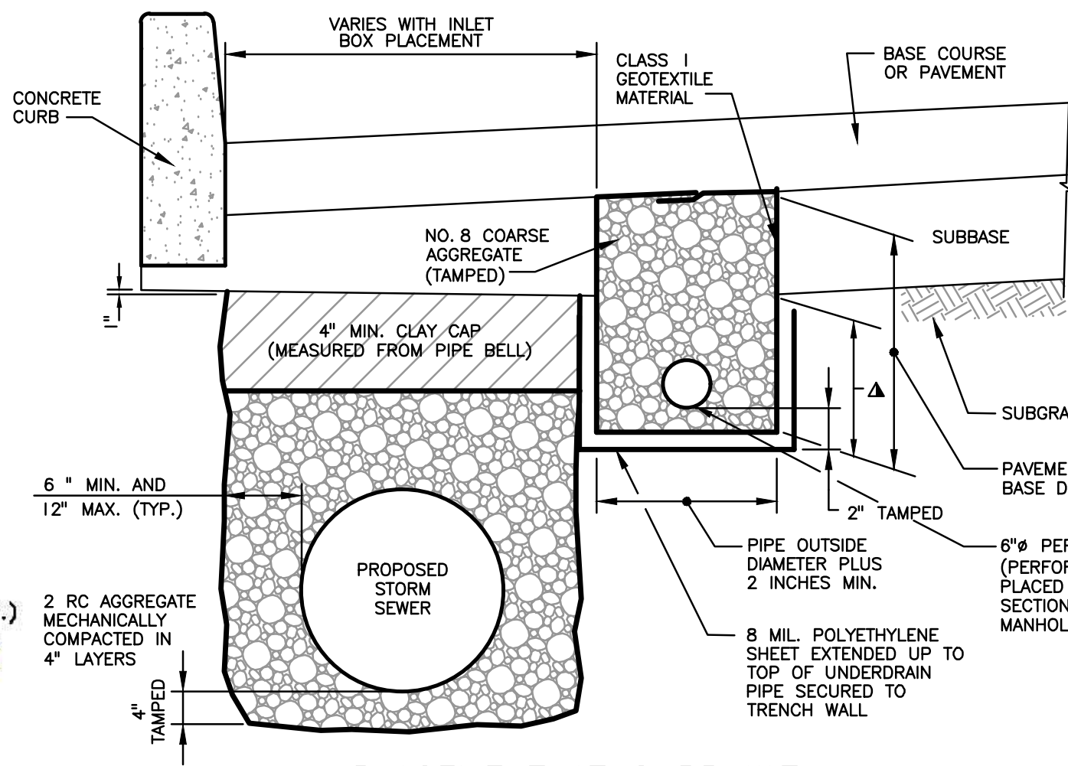
TAPPING, SLEEVE, & VALVE TRENCH DETAIL
NTS


DISTANCE VARIES
DISTANCE VARIES
LINE STOP MACHINE
LINE STOP FITTING
CUT & CAP
CONCRETE THRUST BLOCK
EXISTING PIPE TO BE REMOVED OR SEALED SHUT
UNDISTURBED EARTH
UNDISTURBED EARTH

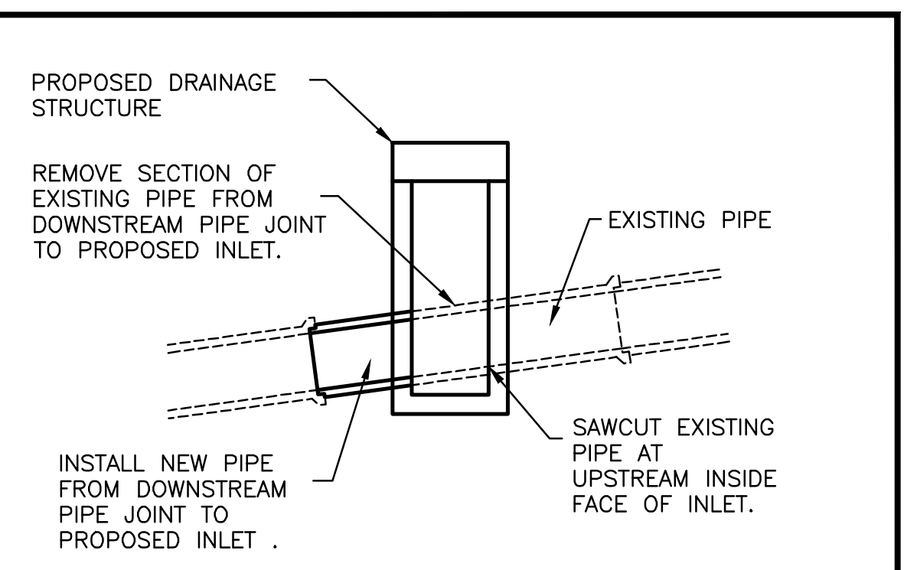
LINE STOP DETAIL SIDE VIEW
NTS


RETAINER GLANDS REQUIRED FOR ALL FITTINGS
UTILITY TO CLEAR
CONCRETE ANCHORS TO ENVELOPE PIPE (TYP.)
VERTICAL BEND (TYP.)
5'
5'
1.5' MIN.

LOWERING DETAIL USING VERTICAL BENDS
NTS


CONCRETE CURB
VARIES WITH INLET BOX PLACEMENT
CLASS 1 GEOTEXTILE MATERIAL
BASE COURSE OR PAVEMENT
SUBBASE
NO. 8 COARSE AGGREGATE (TAMPED)
4" MIN. CLAY CAP (MEASURED FROM PIPE BELL)
PROPOSED STORM SEWER
SUBGRADE
PAVEMENT BASE DRAIN
2" TAMPED
6" MIN. AND 12" MAX. (TYP.)
2" RC AGGREGATE MECHANICALLY COMPACTED IN 4" LAYERS
PIPE OUTSIDE DIAMETER PLUS 2 INCHES MIN.
8 MIL. POLYETHYLENE SHEET EXTENDED UP TO TOP OF UNDERDRAIN PIPE SECURED TO TRENCH WALL
6"ø PERFORATED CMP OR PVC (PERFORATIONS SHALL BE PLACED DOWN EXCEPT AT SECTION ENTERING INLET OR MANHOLE
2" TAMPED

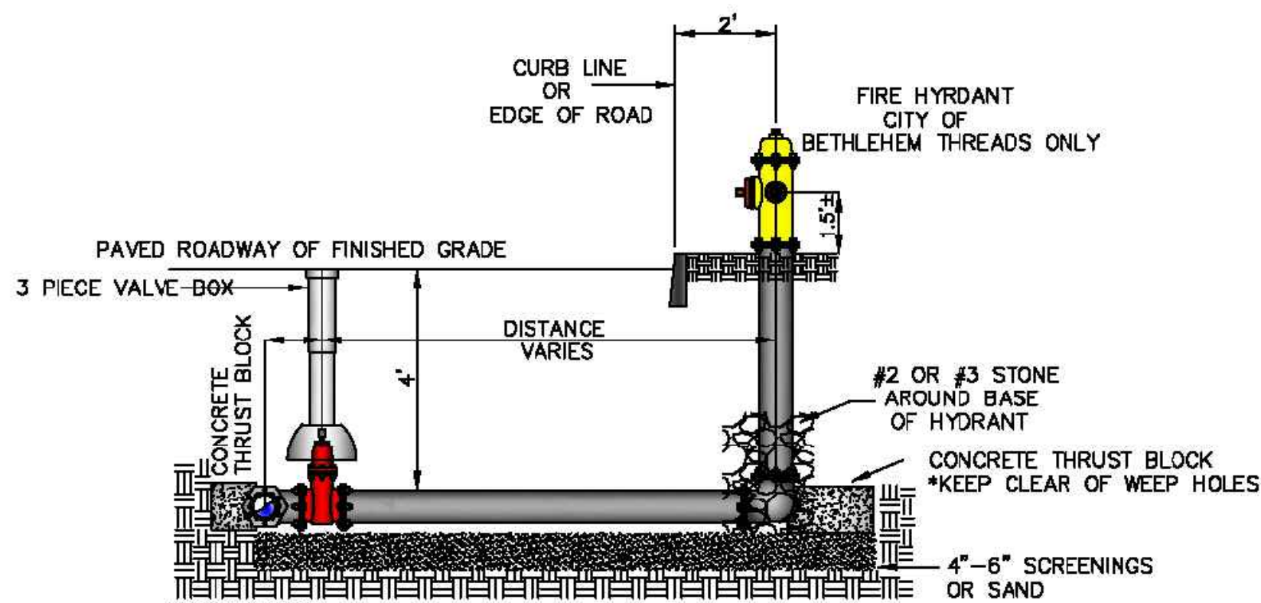
PLACEMENT AT CURB WITH LONGITUDINAL STORM SEWER


PROPOSED DRAINAGE STRUCTURE
REMOVE SECTION OF EXISTING PIPE FROM DOWNSTREAM PIPE JOINT TO PROPOSED INLET.
EXISTING PIPE
INSTALL NEW PIPE FROM DOWNSTREAM PIPE JOINT TO PROPOSED INLET .
SAWCUT EXISTING PIPE AT UPSTREAM INSIDE FACE OF INLET.

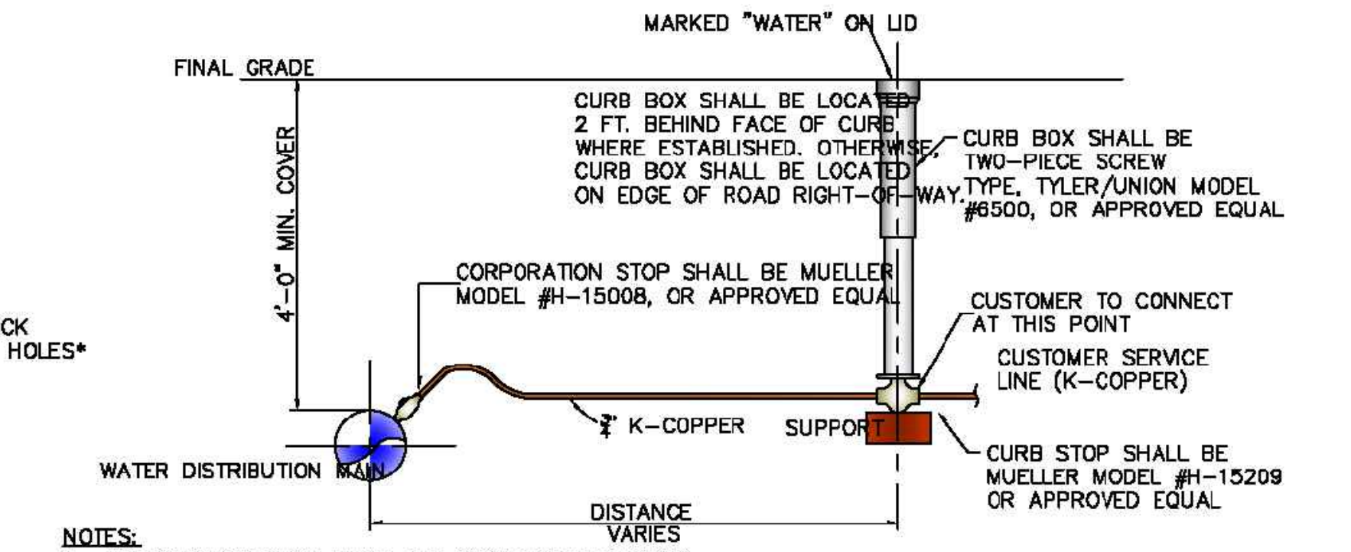
INLET INSTALLATION NOTES:

1. EXCAVATE EXISTING PIPE TO LOCATE THE NEAREST PIPE JOINT DOWNSTREAM FROM THE PROPOSED INLET.
2. SAWCUT EXISTING PIPE AT UPSTREAM INSIDE FACE OF PROPOSED INLET. REMOVE SECTION OF EXISTING PIPE FROM DOWNSTREAM PIPE JOINT TO PROPOSED INLET.
3. INSTALL PROPOSED INLET.
4. INSTALL REPLACEMENT PIPE FROM DOWNSTREAM PIPE JOINT TO PROPOSED INLET.

DRAINAGE STRUCTURE CONNECTION TO EXISTING STORM SEWER PIPE
NOT TO SCALE

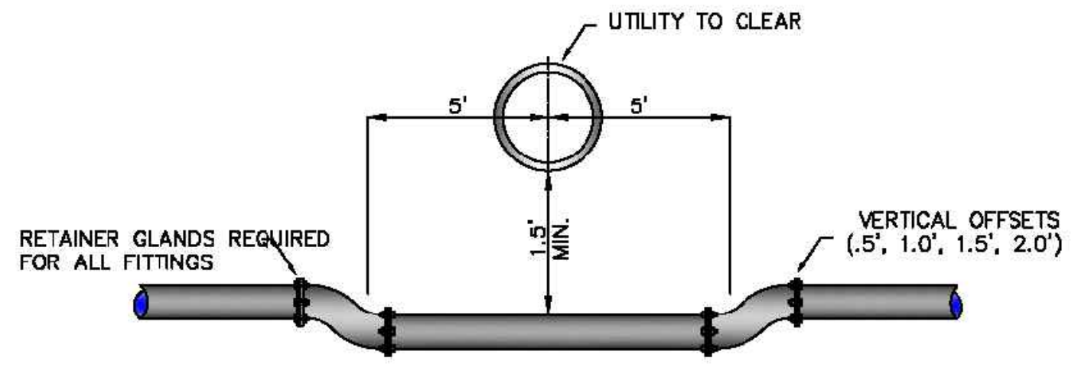

CURB LINE OR EDGE OF ROAD
2'
FIRE HYDRANT CITY OF BETHLEHEM THREADS ONLY
PAVED ROADWAY OF FINISHED GRADE
3 PIECE VALVE-BOX
CONCRETE THRUST BLOCK
DISTANCE VARIES
#2 OR #3 STONE AROUND BASE OF HYDRANT
CONCRETE THRUST BLOCK *KEEP CLEAR OF WEEP HOLES*
4"–6" SCREENINGS OR SAND
UNDISTURBED EARTH

FIRE HYDRANT SET-UP USING FIRE HYDRANT TEE DETAIL
NTS

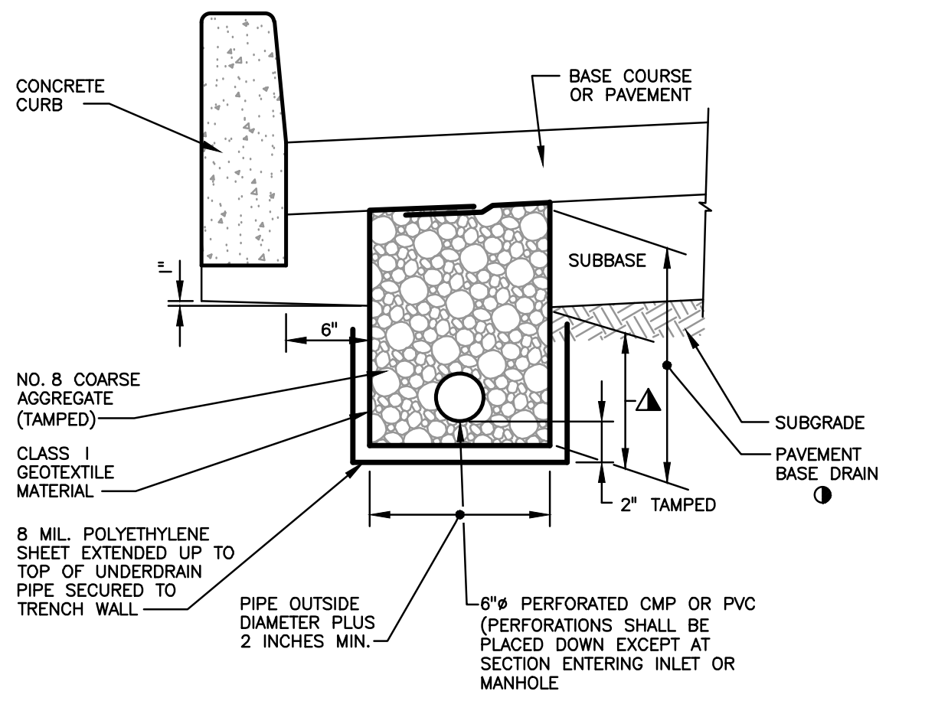

MARKED "WATER" ON LID
FINAL GRADE
4'-0" MIN. COVER
CURB BOX SHALL BE LOCATED 2 FT. BEHIND FACE OF CURB WHERE ESTABLISHED. OTHERWISE CURB BOX SHALL BE LOCATED ON EDGE OF ROAD RIGHT-OF-WAY
CURB BOX SHALL BE TWO-PIECE SCREW TYPE, TYLER/UNION MODEL #6500, OR APPROVED EQUAL
CORPORATION STOP SHALL BE MUELLER MODEL #H-15008, OR APPROVED EQUAL
CUSTOMER TO CONNECT AT THIS POINT
CUSTOMER SERVICE LINE (K-COPPER)
¾" K-COPPER
SUPPORT
CURB STOP SHALL BE MUELLER MODEL #H-15209 OR APPROVED EQUAL
WATER DISTRIBUTION MAIN
DISTANCE VARIES

NOTES:
1. CORPORATION STOP SHALL BE AWWA TAPER THREAD AT COONECTION TO MAIN.
2. ALL COPPER TUBING CONNECTIONS SHALL BE COMPRESSION FITTINGS.
3. CORPORATION SHALL BE SUPPORTED AT CONNECTION TO MAIN.
4. COPPER SHOULD BE INSTALLED WITH ENOUGH GIVE SO NOT TO PUT TENSION ON THE FITTINGS WHEN BACKFILLED.

TYPICAL WATER SERVICE CONNECTION
NTS

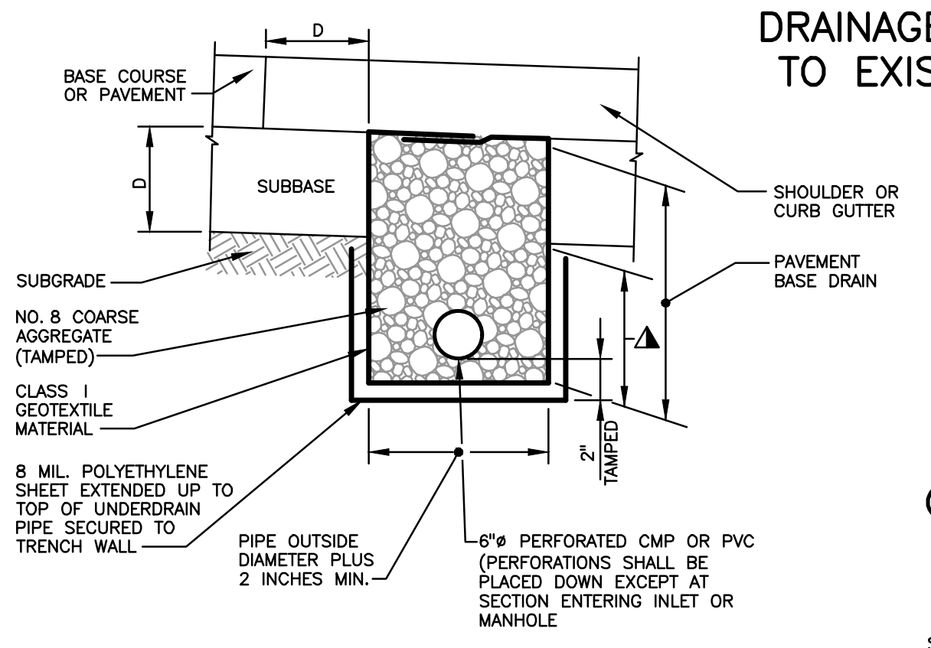

UTILITY TO CLEAR
RETAINER GLANDS REQUIRED FOR ALL FITTINGS
VERTICAL OFFSETS (.5', 1.0', 1.5', 2.0')
5'
5'
1.5' MIN.

LOWERING DETAIL USING VERTICAL OFFSETS NO THRUST BLOCKS NEEDED
NTS


CONCRETE CURB
BASE COURSE OR PAVEMENT
SUBBASE
NO. 8 COARSE AGGREGATE (TAMPED)
CLASS 1 GEOTEXTILE MATERIAL
SUBGRADE
PAVEMENT BASE DRAIN
2" TAMPED
8 MIL. POLYETHYLENE SHEET EXTENDED UP TO TOP OF UNDERDRAIN PIPE SECURED TO TRENCH WALL
PIPE OUTSIDE DIAMETER PLUS 2 INCHES MIN.
6"ø PERFORATED CMP OR PVC (PERFORATIONS SHALL BE PLACED DOWN EXCEPT AT SECTION ENTERING INLET OR MANHOLE

PLACEMENT AT CURB SECTION

NOTE:
WHEREVER PAVEMENT UNDERDRAINS ARE CONSTRUCTED AND NO SUBBASE WAS ORIGINALLY REQUIRED, A SUBBASE COURSE SHALL BE ADDED FOR THAT HALF OF THE ROADWAY IN WHICH THE UNDERDRAIN IS BEING CONSTRUCTED. MINIMUM THICKNESS SHALL BE THREE (3) INCHES.

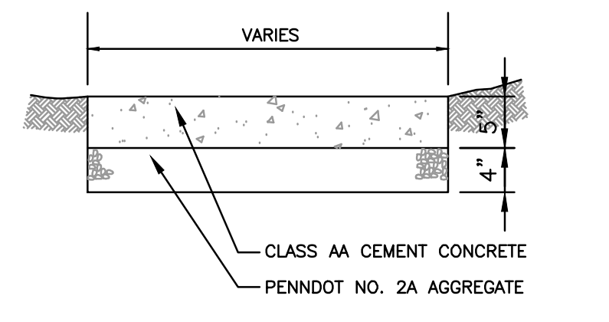

D
BASE COURSE OR PAVEMENT
SUBBASE
SHOULDER OR CURB GUTTER
PAVEMENT BASE DRAIN
SUBGRADE
NO. 8 COARSE AGGREGATE (TAMPED)
CLASS 1 GEOTEXTILE MATERIAL
8 MIL. POLYETHYLENE SHEET EXTENDED UP TO TOP OF UNDERDRAIN PIPE SECURED TO TRENCH WALL
PIPE OUTSIDE DIAMETER PLUS 2 INCHES MIN.
6"ø PERFORATED CMP OR PVC (PERFORATIONS SHALL BE PLACED DOWN EXCEPT AT SECTION ENTERING INLET OR MANHOLE
2" TAMPED

TYPICAL PLACEMENT
(STANDARD SUBBASE)

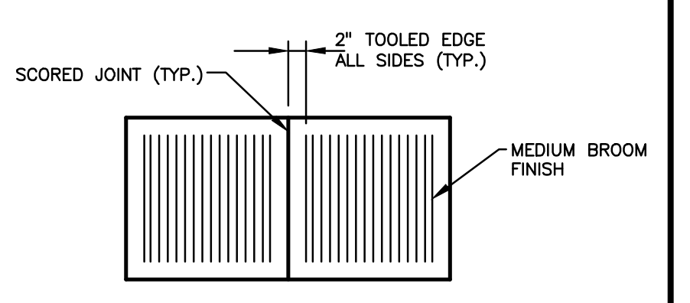
LEGEND:

- ▲ DEPTH BELOW SUBBASE EQUAL TO OUTSIDE DIAMETER OF SPECIFIED PIPE PLUS 2 INCHES.
- ◑ WHEN STORM SEWER IS REQUIRED AND IT INTERFERES WITH PLACEMENT OF PAVEMENT BASE DRAIN PLACE PAVEMENT BASE DRAIN 4' FROM FACE TO FACE.
- D= SUBBASE DEPTH–WHERE SUBBASE CAN NOT BE OUTLETTED, PLACE PAVEMENT BASE DRAIN AT THE EDGE OF SHOULDER.

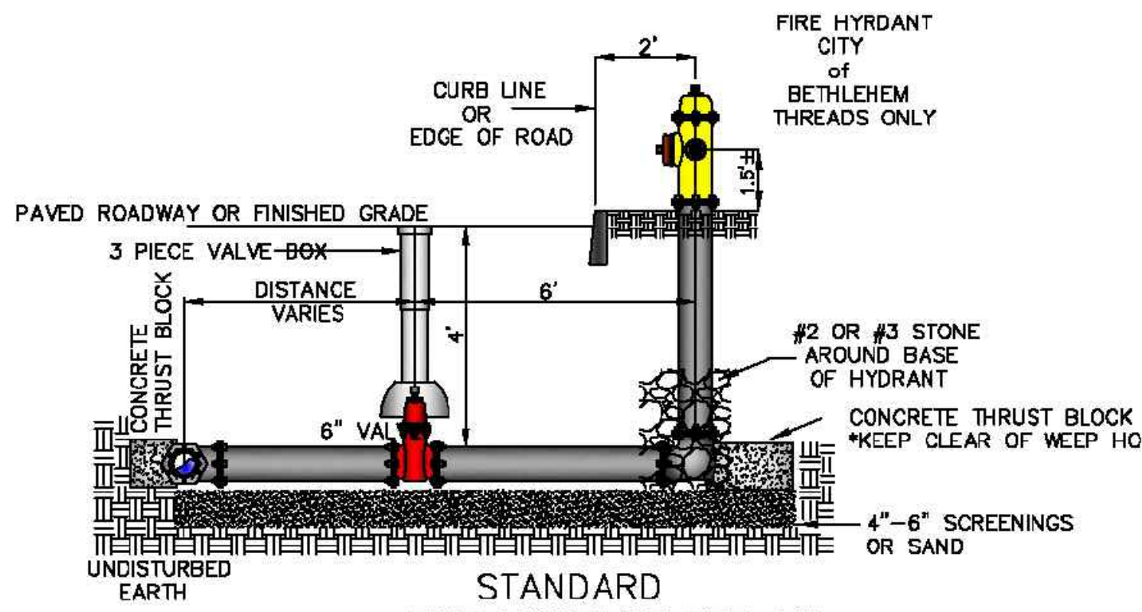
PAVEMENT BASE DRAIN DETAILS
NO SCALE


VARIES
5"
4"
CLASS AA CEMENT CONCRETE
PENNDOT NO. 2A AGGREGATE

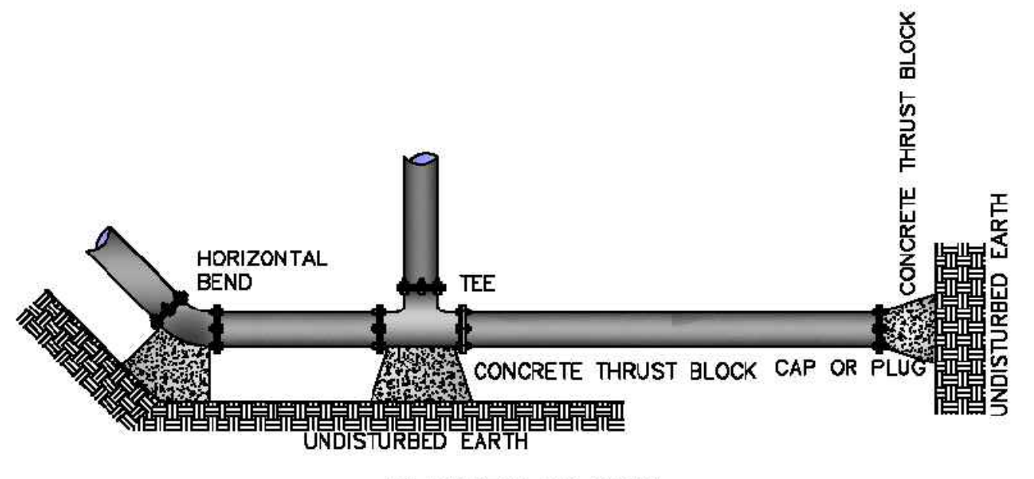
CONCRETE SIDEWALK DETAIL
NO SCALE


SCORED JOINT (TYP.)
2" TOOLED EDGE ALL SIDES (TYP.)
MEDIUM BROOM FINISH

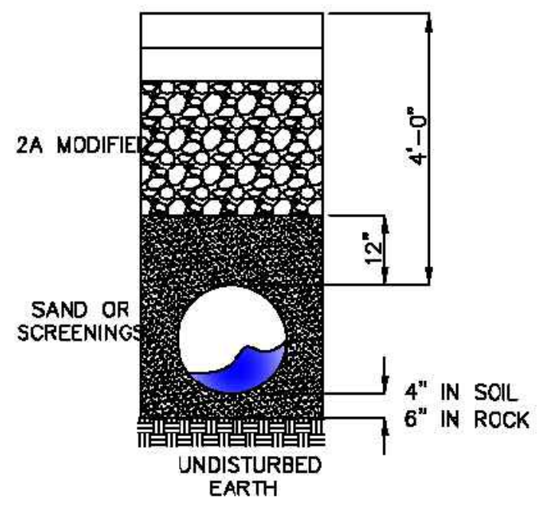
SIDEWALK FINISHING DETAIL
NO SCALE


FIRE HYDRANT CITY of BETHLEHEM THREADS ONLY
CURB LINE OR EDGE OF ROAD
2'
PAVED ROADWAY OR FINISHED GRADE
3 PIECE VALVE-BOX
CONCRETE THRUST BLOCK
DISTANCE VARIES
6'
8" VALVE
#2 OR #3 STONE AROUND BASE OF HYDRANT
CONCRETE THRUST BLOCK *KEEP CLEAR OF WEEP HOLES*
4"–6" SCREENINGS OR SAND
UNDISTURBED EARTH

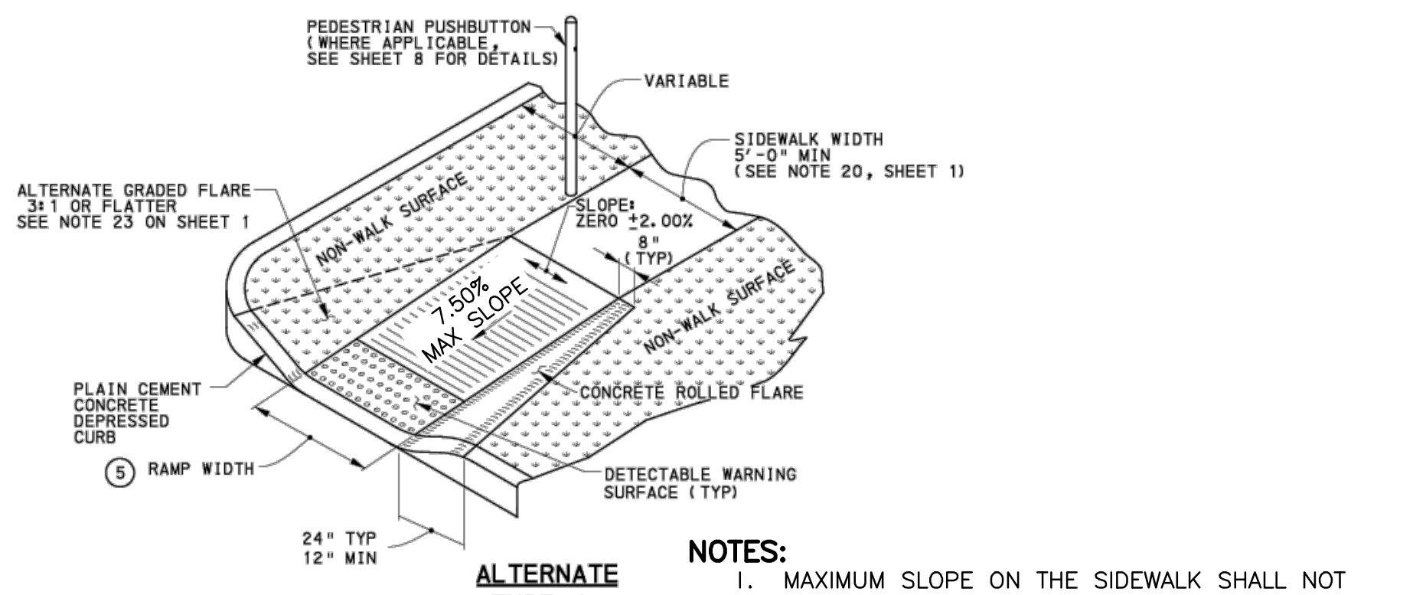
STANDARD FIRE HYDRANT SET-UP DETAIL
NTS


HORIZONTAL BEND
TEE
CONCRETE THRUST BLOCK
CONCRETE THRUST BLOCK
CAP OR PLUG
UNDISTURBED EARTH
UNDISTURBED EARTH

THRUST BLOCK DETAIL
TOP VIEW
NTS


2A MODIFIED
4'-0"
12"
SAND OR SCREENING
4" IN SOIL
6" IN ROCK
UNDISTURBED EARTH

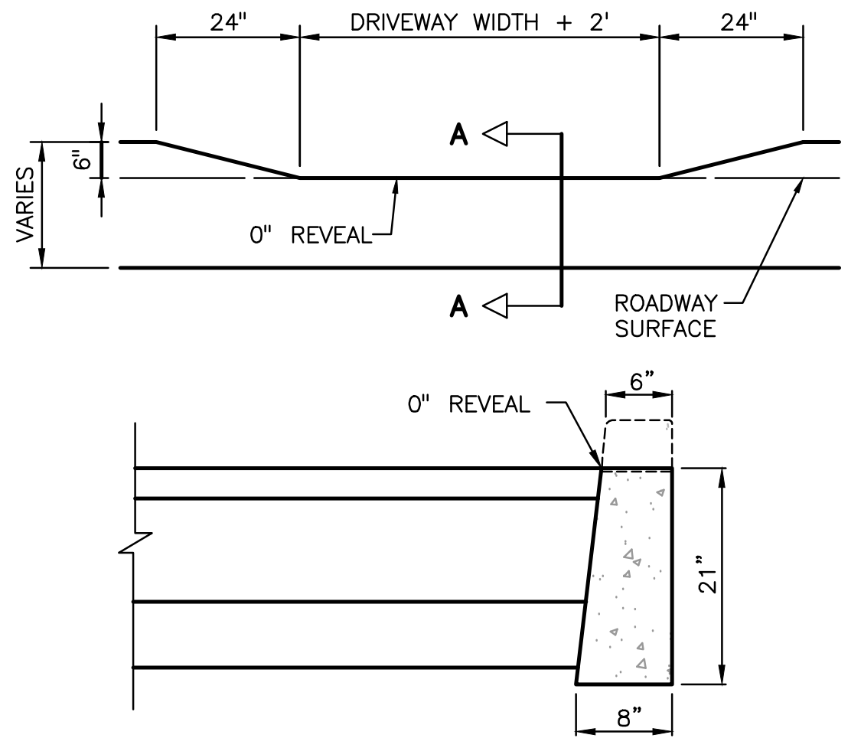
WATER MAIN TRENCH IN PAVED AREA DETAIL
NTS


PEDESTRIAN PUSHBUTTON (WHERE APPLICABLE, SEE SHEET 8 FOR DETAILS)
VARIABLE
SIDEWALK WIDTH 5'-0" MIN (SEE NOTE 20, SHEET 1)
ALTERNATE GRADED FLARE 3:1 OR FLATTER SEE NOTE 23 ON SHEET 1
SLOPE
8" (TYP)
NON-WALK SURFACE
PLAIN CEMENT CONCRETE DEPRESSED CURB
RAMP WIDTH
CONCRETE ROLLED FLARE
DETECTABLE WARNING SURFACE (TYP)
24" TYP
12" MIN

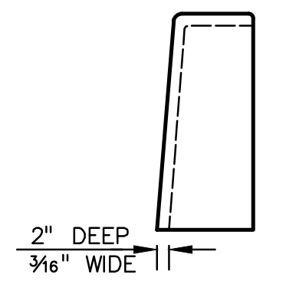
ALTERNATE TYPE 4A CURB RAMP (PARALLEL)

NOTES:
1. MAXIMUM SLOPE ON THE SIDEWALK SHALL NOT EXCEED 7.5%
2. THE DETECTABLE WARNING SURFACE SHALL BE BRICK RED IN COLOR
3. REFER TO PENNDOT RC–67M FOR STANDARD NOTES AND DETAILS
4. ROUNDED CONCRETE SURFACE NOT REQUIRED, GRADE TAPERS AT 4:1 MAX.

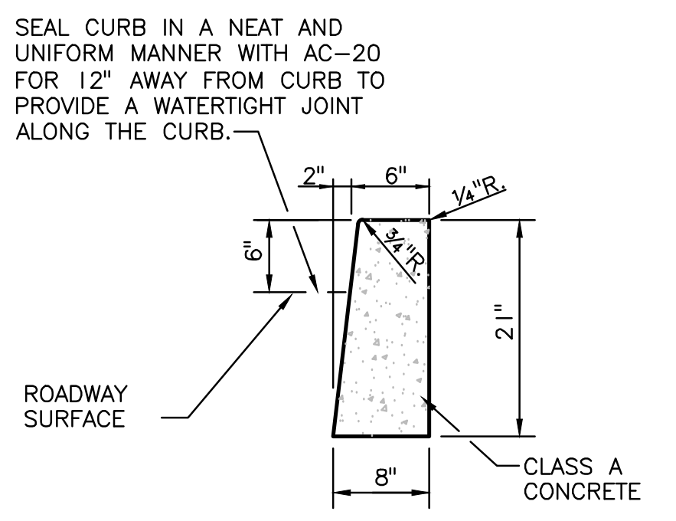
CURB RAMP AND SIDEWALK DETAIL
NO SCALE


24"
DRIVEWAY WIDTH + 2'
24"
VARIES
6"
A
0" REVEAL
A
ROADWAY SURFACE
0" REVEAL
6"
21"
8"

SECTION A–A
DEPRESSED CURB DETAIL
NO SCALE

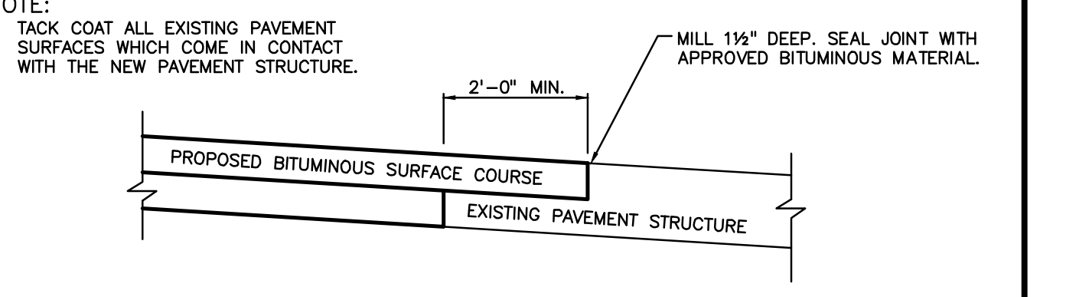

2" DEEP
3/16" WIDE

CONTRACTION JOINT DETAIL
NO SCALE

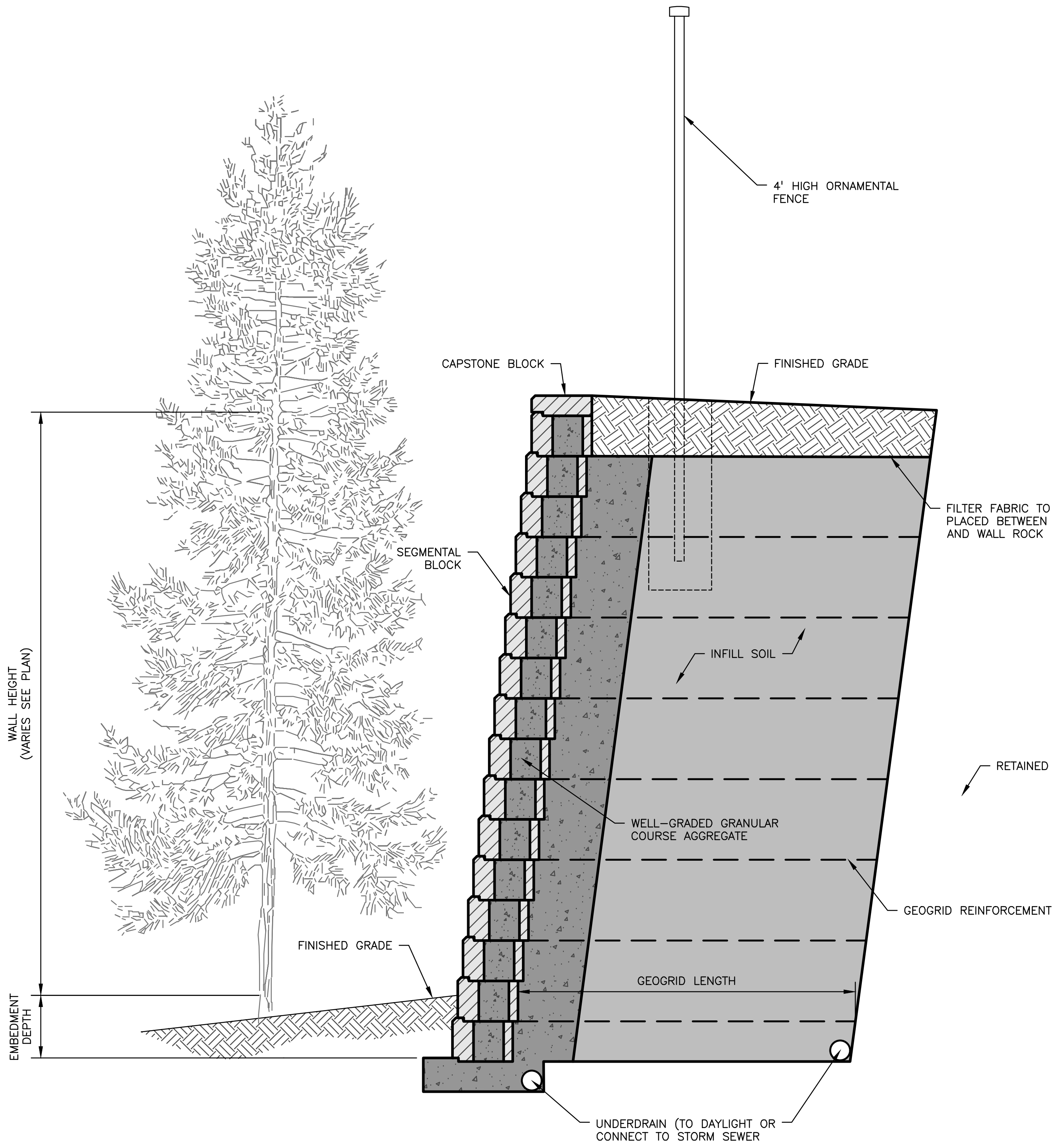

SEAL CURB IN A NEAT AND UNIFORM MANNER WITH AC–20 FOR 12" AWAY FROM CURB TO PROVIDE A WATERTIGHT JOINT ALONG THE CURB.
2"
6"
6"
21"
ROADWAY SURFACE
8"
CLASS A CONCRETE

TYPICAL CURB DETAIL
NO SCALE

NOTE:
TACK COAT ALL EXISTING PAVEMENT SURFACES WHICH COME IN CONTACT WITH THE NEW PAVEMENT STRUCTURE.


MILL 1½" DEEP, SEAL JOINT WITH APPROVED BITUMINOUS MATERIAL.
2'–0" MIN.
PROPOSED BITUMINOUS SURFACE COURSE
EXISTING PAVEMENT STRUCTURE

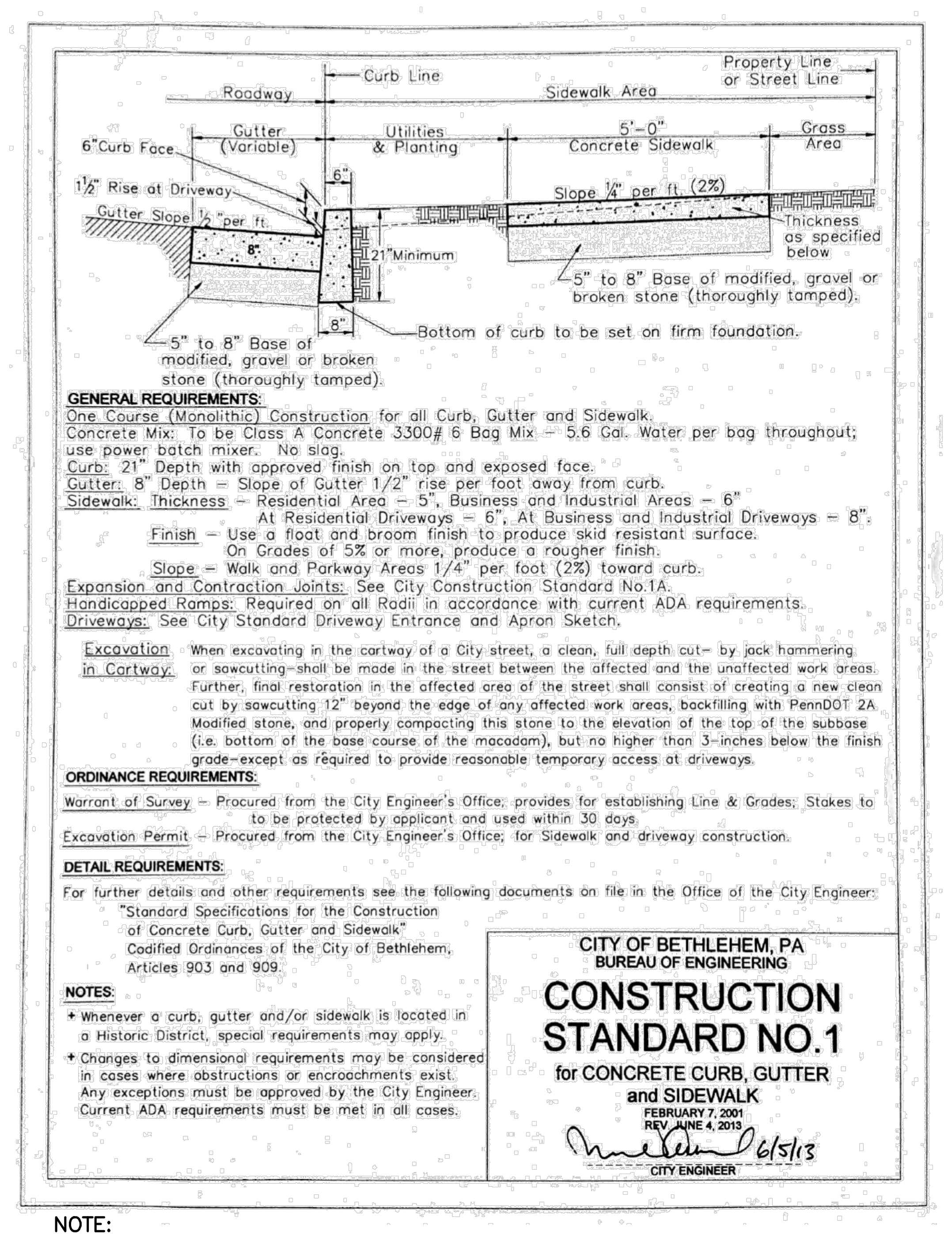
PAVEMENT CONNECTION DETAIL
NO SCALE


4' HIGH ORNAMENTAL FENCE
CAPSTONE BLOCK
FINISHED GRADE
FILTER FABRIC TO BE PLACED BETWEEN TOPSOIL AND WALL ROCK
SEGMENTAL BLOCK
INFILL SOIL
RETAINED SOIL
WALL HEIGHT (VARIES SEE PLAN)
WELL-GRADED GRANULAR COURSE AGGREGATE
GEOGRID REINFORCEMENT
FINISHED GRADE
GEOGRID LENGTH
EMBEDMENT DEPTH
UNDERDRAIN (TO DAYLIGHT OR CONNECT TO STORM SEWER

SEGMENTAL BLOCK RETAINING WALL TYPICAL DETAIL
NO SCALE

NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF BETHLEHEM STANDARDS, SPECIFICATIONS, DETAILS, AND REGULATIONS AS APPLICABLE AND IS SUBJECT TO INSPECTION AND APPROVAL AS APPROPRIATE.
2. THIS TYPICAL DETAIL IS INTEND TO SHOW THE GENERAL TYPE AND ARRANGEMENT OF THE WALL DESIGN ELEMENTS (ONLY). ALL PROPOSED RETAINING WALLS SHOWN ON THE PLAN WILL BE DESIGNED BY OTHER DESIGN PROFESSIONALS.
3. SHOP DRAWINGS SHOWING THE DESIGN AND DETAILS FOR ALL PROPOSED RETAINING WALLS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF PENNSYLVANIA, SHALL BE SUBMITTED TO THE CITY FOR REVIEW PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THE WALL CONSTRUCTION.


Property Line or Street Line
Curb Line
Roadway
Sidewalk Area
Gutter (Variable)
Utilities & Planting
5'-0" Concrete Sidewalk
Grass Area
6"Curb Face
1½" Rise at Driveway
Gutter Slope ½" per ft.
Slope ¼" per ft. (2%)
8"
21"Minimum
Thickness as specified below
5" to 8" Base of modified, gravel or broken stone (thoroughly tamped).
8"
Bottom of curb to be set on firm foundation.
5" to 8" Base of modified, gravel or broken stone (thoroughly tamped).

GENERAL REQUIREMENTS:
One Course (Monolithic) Construction for all Curb, Gutter and Sidewalk.
Concrete Mix: To be Class A Concrete 3300# 6 Bag Mix – 5.6 Gal. Water per bag throughout; use power batch mixer. No slag.
Curb: 21" Depth with approved finish on top and exposed face.
Gutter: 8" Depth – Slope of Gutter 1/2" rise per foot away from curb.
Sidewalk: Thickness – Residential Area – 5", Business and Industrial Areas – 6"
At Residential Driveways – 6", At Business and Industrial Driveways – 8".
Finish – Use a float and broom finish to produce skid resistant surface.
On Grades of 5% or more, produce a rougher finish.
Slope – Walk and Parkway Areas 1/4" per foot (2%) toward curb.
Expansion and Contraction Joints: See City Construction Standard No.1A.
Handicapped Ramps: Required on all Radii in accordance with current ADA requirements.
Driveways: See City Standard Driveway Entrance and Apron Sketch.

Excavation in Cartway: When excavating in the cartway of a City street, a clean, full depth cut– by jack hammering or sawcutting–shall be made in the street between the affected and the unaffected work areas. Further, final restoration in the affected area of the street shall consist of creating a new clean cut by sawcutting 12" beyond the edge of any affected work areas, backfilling with PennDOT 2A Modified stone, and properly compacting this stone to the elevation of the top of the subbase (i.e. bottom of the base course of the macadam), but no higher than 3–inches below the finish grade–except as required to provide reasonable temporary access at driveways.

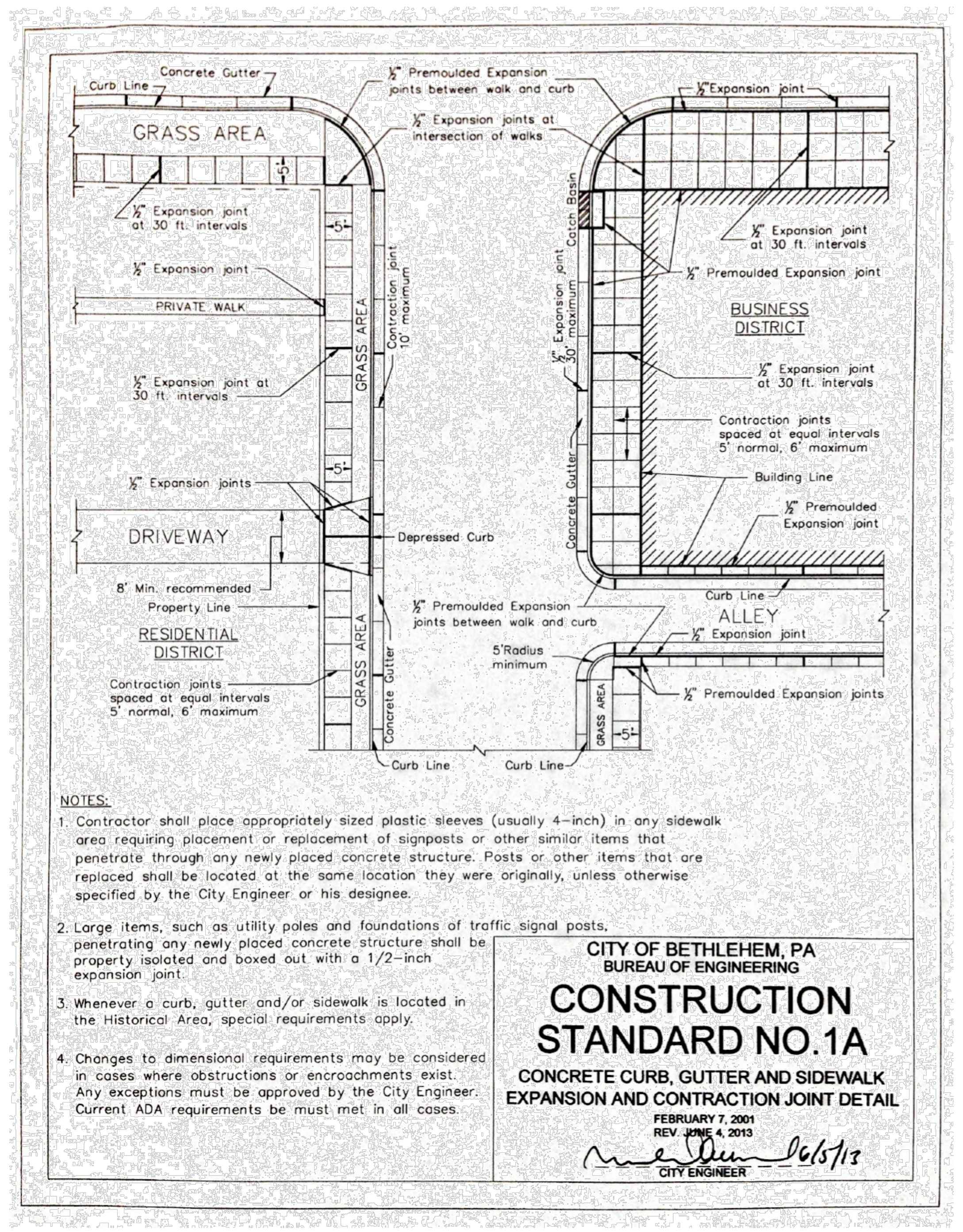
ORDINANCE REQUIREMENTS:
Warrant of Survey – Procured from the City Engineer's Office; provides for establishing Line & Grades; Stakes to to be protected by applicant and used within 30 days
Excavation Permit – Procured from the City Engineer's Office; for Sidewalk and driveway construction.

DETAIL REQUIREMENTS:
For further details and other requirements see the following documents on file in the Office of the City Engineer:
"Standard Specifications for the Construction of Concrete Curb, Gutter and Sidewalk"
Codified Ordinances of the City of Bethlehem, Articles 903 and 909.

NOTES:
+ Whenever a curb, gutter and/or sidewalk is located in a Historic District, special requirements may apply.
+ Changes to dimensional requirements may be considered in cases where obstructions or encroachments exist. Any exceptions must be approved by the City Engineer. Current ADA requirements must be met in all cases.

CITY OF BETHLEHEM, PA
BUREAU OF ENGINEERING
CONSTRUCTION STANDARD NO.1
for CONCRETE CURB, GUTTER and SIDEWALK
FEBRUARY 7, 2001
REV. JUNE 4, 2013
6/5/13
CITY ENGINEER

NOTE:
1. DETAIL PROVIDED FOR THE CONSTRUCTION OF CONCRETE SIDEWALK ADJACENT TO SCHOENERSVILLE ROAD ONLY.


Curb Line
Concrete Gutter
⅜" Premoulded Expansion joints between walk and curb
⅜" Expansion joint
GRASS AREA
⅜" Expansion joints at intersection of walks
⅜" Expansion joint at 30 ft. intervals
⅜" Expansion joint
PRIVATE WALK
⅜" Premoulded Expansion joint
BUSINESS DISTRICT
⅜" Expansion joint at 30 ft. intervals
GRASS AREA
Contraction joints spaced at equal intervals 5' normal, 6' maximum
Building Line
⅜" Premoulded Expansion joint
⅜" Expansion joints
DRIVEWAY
Depressed Curb
8' Min. recommended
Property Line
RESIDENTIAL DISTRICT
Contraction joints spaced at equal intervals 5' normal, 6' maximum
⅜" Premoulded Expansion joints between walk and curb
ALLEY
½" Expansion joint
5'Radius minimum
½" Premoulded Expansion joints
Concrete Gutter
Curb Line
Curb Line

NOTES:
1. Contractor shall place appropriately sized plastic sleeves (usually 4–inch) in any sidewalk area requiring placement or replacement of signposts or other similar items that penetrate through any newly placed concrete structure. Posts or other items that are replaced shall be located at the same location they were originally, unless otherwise specified by the City Engineer or his designee.
2. Large items, such as utility poles and foundations of traffic signal posts, penetrating any newly placed concrete structure shall be property isolated and boxed out with a 1/2–inch expansion joint.
3. Whenever a curb, gutter and/or sidewalk is located in the Historical Area, special requirements apply.
4. Changes to dimensional requirements may be considered in cases where obstructions or encroachments exist. Any exceptions must be approved by the City Engineer. Current ADA requirements be must met in all cases.

CITY OF BETHLEHEM, PA
BUREAU OF ENGINEERING
CONSTRUCTION STANDARD NO.1A
CONCRETE CURB, GUTTER AND SIDEWALK EXPANSION AND CONTRACTION JOINT DETAIL
FEBRUARY 7, 2001
REV. JUNE 4, 2013
6/5/13
CITY ENGINEER

NOTE:
1. DETAIL PROVIDED FOR THE CONSTRUCTION OF CONCRETE SIDEWALK ADJACENT TO SCHOENERSVILLE ROAD ONLY.

NOTE

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH PENNDOT STANDARDS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF PA PUBLICATION 72M, RCM STANDARDS. THE FOLLOWING ARE THE APPLICABLE STANDARDS WHICH CORRESPOND TO THIS PROJECT. THESE STANDARDS SUPERSEDE ANY AND ALL DETAILS SHOWN ON THIS PLAN.

RC–64M CURBS AND GUTTERS – JUNE 1, 2010
RC–67M CURB RAMPS AND SIDEWALKS – DECEMBER 17, 2019

ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH PENNDOT SPECIFICATIONS, PUBLICATION 408, LATEST EDITION.

THE PIDCOCK COMPANY
CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL

NOTES:
1. THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.
2. THESE DOCUMENTS ARE PROVIDED FOR MUNICIPAL REVIEW ONLY AND ARE NOT TO BE UTILIZED FOR ANY OTHER PURPOSE. THE DOCUMENTS ARE NOT ISSUED FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED AS SUCH BELOW.

CONTRACTOR'S OBLIGATION REGARDING COORDINATION OF DOCUMENTS AND FIELD CONDITIONS

THE CONTRACT DOCUMENTS PRESENT THE DESIGN INTENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL PLANS, SPECIFICATIONS, ADDENDA, CONSTRUCTION SKETCHES AND OTHER CONTRACT DOCUMENTS FOR CONSISTENCY. SIMILARLY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW FIELD CONDITIONS, INCLUDING COORDINATION WITH ALL UTILITIES. THE CONTRACTOR SHALL COMPLETE ANY TEST EXCAVATIONS IN ADVANCE OF ORDERING MATERIALS OR OF CONSTRUCTION IN AN AREA OF UTILITY CROSSINGS OR POTENTIAL INVOLVEMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING ANY INCONSISTENCIES IN THE DOCUMENTS OR ANY APPARENT CONFLICTS TO THE ATTENTION OF THE ENGINEER BEFORE ORDERING MATERIALS AND BEFORE PROCEEDING WITH CONSTRUCTION IN THE AREA SO THAT THE ENGINEER MAY REVIEW THE CONDITIONS AND RECOMMEND ANY ADJUSTMENTS TO THE DOCUMENTS THAT MAY BE NECESSARY, OR TO RECOMMEND RELOCATION OF A UTILITY OR OTHER REMEDIAL WORK THAT MAY BE REQUIRED.

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1	JANUARY 10, 2025	REVISED PER C.O.B COMMENTS

REVISIONS

MAJOR LAND DEVELOPMENT SUBMISSION

SCALE: NO SCALE
DATE: SEPTEMBER 6, 2024
CHECKED BY: BCT
DRAWN BY: KDH/JGU
CAD FILE: MISC DETAILS.dwg
PROJECT NUMBER: 22005

Lehigh Valley Health Network
MUHLENBERG

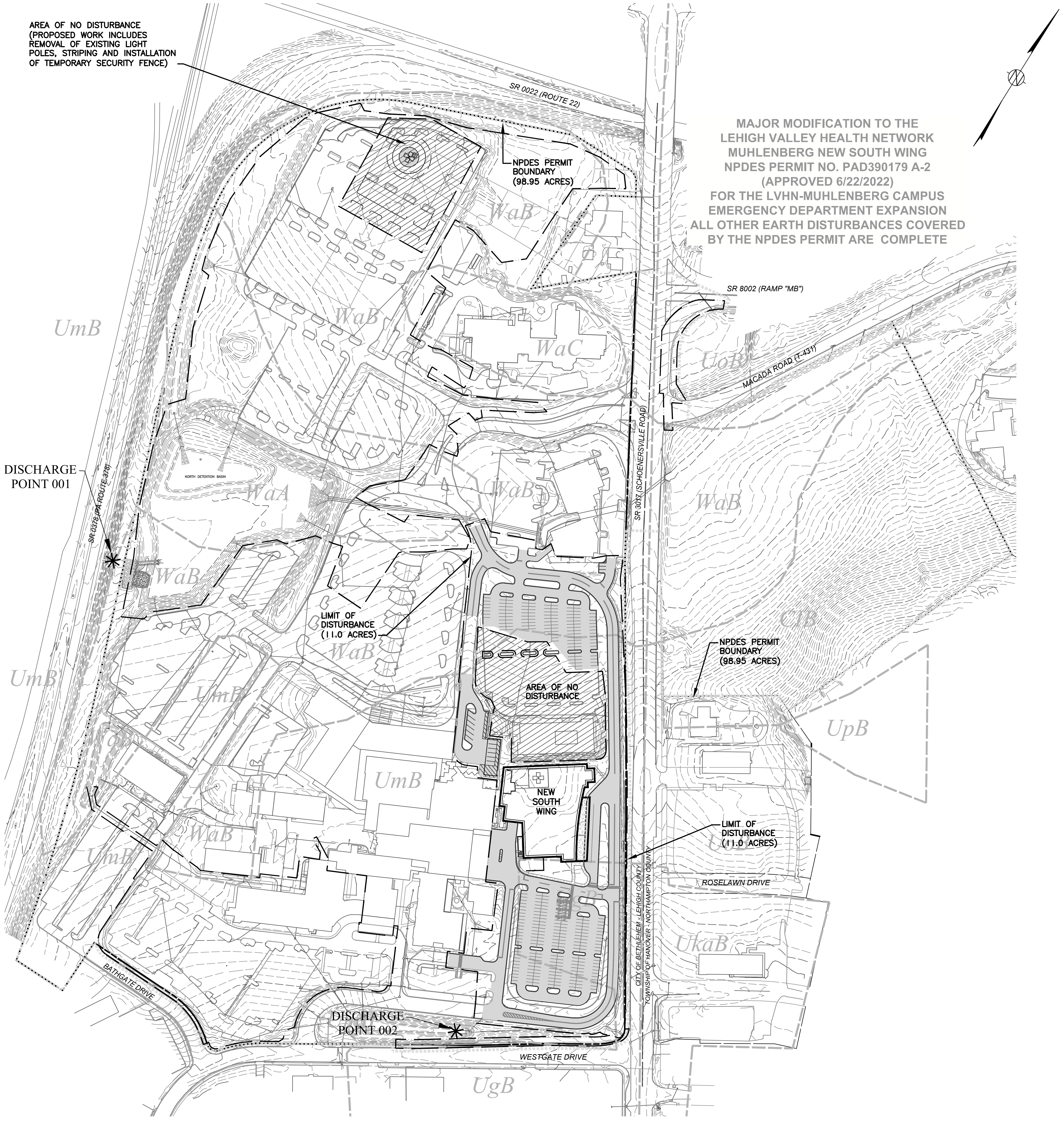
EMERGENCY DEPARTMENT EXPANSION

CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

MISCELLANEOUS DETAILS

FILE NUMBER
S-12395

SHEET NUMBER
18 OF 18


AREA OF NO DISTURBANCE (PROPOSED WORK INCLUDES REMOVAL OF EXISTING LIGHT POLES, STRIPING AND INSTALLATION OF TEMPORARY SECURITY FENCE)
SR 0022 (ROUTE 22)
NPDES PERMIT BOUNDARY (98.95 ACRES)
WaB
SR 8002 (RAMP "MB")
UmB
WaB
WaC
UoB
MACADA ROAD (T-431)
DISCHARGE POINT 001
NORTH DETENTION BASIN
WaA
WaB
SR 3017 (SCHOENERSVILLE ROAD)
WaB
SR 0378 (PA ROUTE 378)
WaB
LIMIT OF DISTURBANCE (11.0 ACRES)
WaB
CIB
NPDES PERMIT BOUNDARY (98.95 ACRES)
UmB
UmB
AREA OF NO DISTURBANCE
UpB
UmB
NEW SOUTH WING
WaB
LIMIT OF DISTURBANCE (11.0 ACRES)
UmB
ROSELAWN DRIVE
CITY OF BETHLEHEM - LEHIGH COUNTY
TOWNSHIP OF HANOVER - NORTHAMPTON COUNTY
UkaB
BATHGATE DRIVE
DISCHARGE POINT 002
WESTGATE DRIVE
UgB

MAJOR MODIFICATION TO THE
LEHIGH VALLEY HEALTH NETWORK
MUHLENBERG NEW SOUTH WING
NPDES PERMIT NO. PAD390179 A-2
(APPROVED 6/22/2022)
FOR THE LVHN-MUHLENBERG CAMPUS
EMERGENCY DEPARTMENT EXPANSION
ALL OTHER EARTH DISTURBANCES COVERED
BY THE NPDES PERMIT ARE COMPLETE

KEY PLAN

SCALE: 1"=150'

150 0 150 300

WEB SOIL SURVEY
SOIL DESCRIPTION TABLE

SYMBOL	NAME	SLOPE RANGE	CHARACTERISTICS	HYDROLOGIC SOILS GROUP
CIB	CLARKSBURG SILT LOAM	3–8%	MODERATELY WELL DRAINED, MODERATELY LOW TO MODERATLEY HIGH PERMEABILITY	C
UgB	URBAN LAND	0–8%	PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS	N/A
UmB	URBAN LAND–DUFFIELD COMPLEX	0–8%	PAVEMENT, BUILDINGS, AND OTHER ARTIFICIALLY COVERED AREAS	B
UoB	URBAN LAND–DUFFIELD COMPLEX	0–8%	PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS	B
WaA	WASHINGTON SILT LOAM	0–3%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B
WaB	WASHINGTON SILT LOAM	3–8%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B
WaC	WASHINGTON SILT LOAM	8–15%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B

NOTES:

THE SOIL TYPES AND LOCATIONS ARE BASED UPON THE U. S. DEPARTMENT OF AGRICULTURE–NATIONAL RESOURCES CONSERVATION SERVICE (USDA–NRCS) WEB SOIL SURVEY, AVAILABLE ONLINE AT HTTP://WEBSOILSURVEY.SC.EGOV.USDA.GOV/.

SOIL TYPE USE LIMITATIONS AND RESOLUTIONS

THE SOIL USE LIMITATIONS THAT EXIST FOR THE ABOVE–MENTIONED SOILS AND THEIR RESOLUTIONS ARE AS FOLLOWS:

1. ACCORDING TO THE AFOREMENTIONED SOIL SURVEY, WASHINGTON SILT LOAM HAS FEW LIMITATIONS TO MOST NON–FARM USES. ONE OF THESE LIMITATIONS IS THE POTENTIAL FOR SINKHOLES. THE POTENTIAL FOR THE FORMATIONS OF SINKHOLES WILL BE MINIMIZED THROUGH THE CONSTRUCTION OF A STORMWATER MANAGEMENT SYSTEM. HOWEVER, IN THE EVENT THAT A SINKHOLE DEVELOPS ON THE SITE, SURFACE WATER SHALL BE DIVERTED AWAY FROM THE AREA AND THE SINKHOLE SHALL BE REPAIRED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A PROFESSIONAL ENGINEER OR GEOLOGIST.
2. THE DUFFIELD SERIES IS LIMITED BY SLOW PERMEABILITY AND A SEASONABLY HIGH WATER TABLE. ALSO THESE SOILS EXHIBIT A MODERATE TO SEVERE EROSION HAZARD. A PUMPED WATER FILTER BAG HAS BEEN SPECIFIED TO ADEQUATELY FILTER ANY WATER THAT MAY BE ENCOUNTERED. FURTHER, STRUCTURAL EARTHWORK SHALL ONLY BE DONE WHEN THE SOIL IS AT THE OPTIMUM MOISTURE CONTENT FOR COMPACTION.

1963 SOIL SURVEY
SOIL DESCRIPTION TABLE

SYMBOL	NAME	SLOPE RANGE	CHARACTERISTICS	HYDROLOGIC SOILS GROUP
WgA2	WASHINGTON SILT LOAM	0–3%	VERY DEEP, WELL DRAINED. MODERATELY ERODED	B
WgB2	WASHINGTON SILT LOAM	3–8%	VERY DEEP, WELL DRAINED, MODERATE PERMEABILITY, MODERATELY ERODED	B
WgC2	WASHINGTON SILT LOAM	8–15%	VERY DEEP, WELL DRAINED, MODERATE PERMEABILITY, MODERATELY ERODED	B
WgC3	WASHINGTON SILT LOAM	8–15%	SEVERELY ERODED. VERY DEEP, WELL DRAINED. MEDIUM SURFACE ERODIBILITY	B

NOTES:

THE SOIL TYPES AND LOCATIONS ARE BASED UPON THE U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE SOIL SURVEY OF LEHIGH COUNTY, PENNYSLVANIA, ISSUED NOVEMBER 1963, AND IS SHOWN FOR GENERAL COMPARISONS ONLY, TO THE CURRENT WEB SOIL SURVEY DATA. NRCS IMPLEMENTED THE ONLINE WEB SOIL SURVEY IN 2005 AS THE NRCS SOIL SCIENCE DIVISION TRANSITIONED FROM ITS TRADITIONAL, STATIC SOIL SURVEY PUBLISHED IN BOUND HARD COPIES, TO A MORE FLUID ONLINE FORMAT THAT ALLOWS NRCS TO CONTINUALLY UPDATE SOIL SURVEY DATA AS NEEDED.

SOIL TYPE USE LIMITATIONS AND RESOLUTIONS

THE SOIL USE LIMITATIONS THAT EXIST FOR THE ABOVE–MENTIONED SOILS AND THEIR RESOLUTIONS ARE AS FOLLOWS:

1. ACCORDING TO THE AFOREMENTIONED SOIL SURVEY, WASHINGTON SILT LOAM HAS FEW LIMITATIONS TO MOST NON–FARM USES. ONE OF THESE LIMITATIONS IS THE POTENTIAL FOR SINKHOLES. THE POTENTIAL FOR THE FORMATIONS OF SINKHOLES WILL BE MINIMIZED THROUGH THE CONSTRUCTION OF A STORMWATER MANAGEMENT SYSTEM. HOWEVER, IN THE EVENT THAT A SINKHOLE DEVELOPS ON THE SITE, SURFACE WATER SHALL BE DIVERTED AWAY FROM THE AREA AND THE SINKHOLE SHALL BE REPAIRED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A PROFESSIONAL ENGINEER OR GEOLOGIST.NO HYDRIC SOILS ARE PRESENT WITHIN THE PROJECT LIMITS.

LEGEND

	EXISTING	PROPOSED
BUILDING		
BITUMINOUS PAVEMENT		
STONE AREA		
CONCRETE SIDEWALKS, APRONS, PADS, ETC.		
CONCRETE CURB		
BITUMINOUS CURB		
DEPRESSED CURB		
PROPERTY LINE	IRON PIPE (FND)	PROP.COR.
LOT LINE		
CENTERLINE		
RIGHT–OF–WAY LINE		
ULTIMATE RIGHT–OF–WAY LINE	ULTIMATE R/W LINE	ULTIMATE R/W LINE
BUILDING RESTRICTION LINE	BRL	BRL
UTILITY EASEMENT		
CONTOUR	476	476
SPOT ELEVATIONS	x 449.1	449.1
FLOODPLAIN 100–YEARS		
FLOODPLAIN 500–YEARS		
SWALE, EDGES OF RIVER, CREEKS, WETLANDS, ETC.		
STORM SEWER, MANHOLE, INLET AND ROOF DRAIN	RD MH. INLET	MH. INLET
OUTLET CONTROL STRUCTURE	OCS	OCS
END SECTION	CES	CES
ENDWALL	ENDWALL	ENDWALL
WATERLINE, FIRE HYDRANT, VALVE, REDUCER, TEE, PLUG AND SERVICE	WV W FH PLUG	W FH PLUG
SANITARY SEWER, MANHOLE, CLEANOUT AND LATERAL	CO S SAN.MH.	CO S SAN.MH.
FORCE MAIN WITH DIRECTION OF FLOW	F	F
GAS LINE AND VALVE	G GV	G GV
UNDERGROUND ELECTRIC LINES	E	E
UNDERGROUND TELEVISION CABLE	TV	TV
UNDERGROUND TELEPHONE LINES	T	T
UNDERGROUND FIBER OPTIC LINE	FOL	FOL
OVERHEAD WIRES	OW	OW
LIGHT STANDARD	LS	LS
ELECTRIC POLE	PPL CO. POLE 123	PPL CO. POLE 123
TELEPHONE POLE	B.T. CO. POLE 456	B.T. CO. POLE 456
FENCE	X	X
GUIDERAIL		
RAILROAD		
SIGN		
EVERGREEN TREE		
DECIDUOUS TREE		
ZONING BOUNDARY	R-1 R-2	
RIPRAP		
SOILS DELINEATION		
SOILS TYPE	MeA	

NOTE:

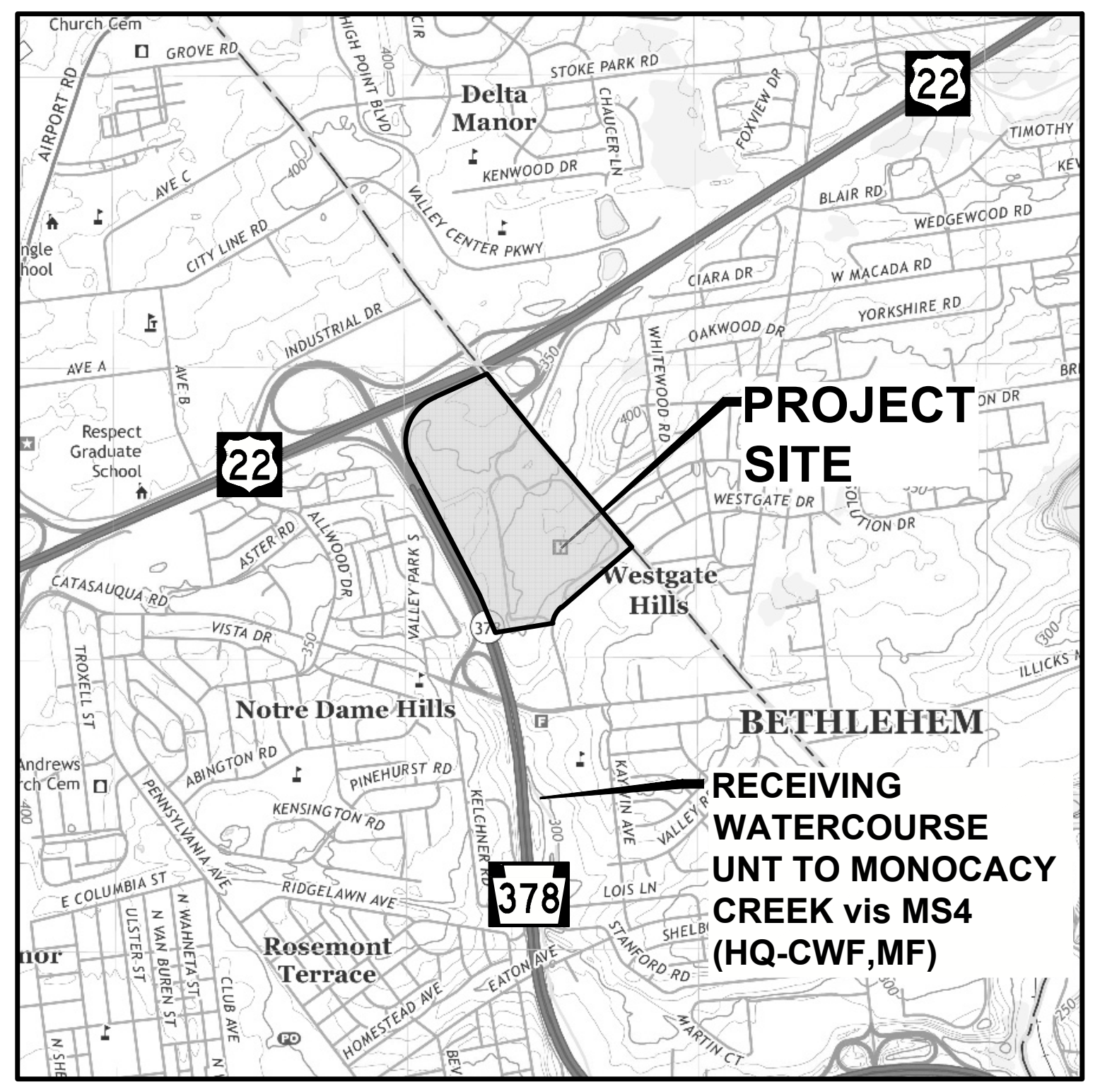
THE LEGEND AND ABBREVIATIONS APPLY TO ALL SHEETS IN THE PLAN SET. THEY CONTAIN A COMPREHENSIVE LIST OF DRAWING SYMBOLS AND ABBREVIATIONS THAT MAY BE DEPICTED ON A PLAN SHEET. ALL OF THE SYMBOLS OR ABBREVIATIONS MAY NOT OCCUR ON A PLAN SHEET OR IN THE DRAWING SET. IN SOME INSTANCES PROPOSED OR EXISTING FEATURES MAY BE DEPICTED DIFFERENTLY ON A PLAN THAN IN THE LEGEND TO IMPROVE OVERALL PLAN CLARITY.

ABBREVIATIONS

BC	BOTTOM OF CURB	OCS	OUTLET CONTROL STRUCTURE
BCCMP	BITUMINOUS COATED CORRUGATED METAL PIPE	PGL	PROFILE GRADE LINE
℄	BASELINE	PLCC CURB	PLAIN CEMENT CONCRETE CURB
B.M.	BENCH MARK	PL CONC MTBLE CURB	PLAIN CONCRETE MOUNTABLE CURB
BRL	BUILDING RESTRICTION LINE	PPL	PENNSYLVANIA POWER LIGHT
BT	BELL TELEPHONE	PVC	POLYVINYL CHLORIDE
BW	BOTTOM OF WALL	PC	HORIZONTAL POINT OF CURVATURE
CES	CONCRETE END SECTION	PT	HORIZONTAL POINT OF TANGENCY
CIP	CAST IRON PIPE	PVCC	POINT OF VERTICAL COMPOUND CURVATURE
CMP	CORRUGATED METAL PIPE	PVI	POINT OF VERTICAL INTERSECTION
CO	CLEANOUT	PVT	POINT OF VERTICAL TANGENCY
DIP	DUCTILE IRON PIPE	RCP	REINFORCED CONCRETE PIPE
EW	ENDWALL	RD	ROOF DRAIN
ELEV.	ELEVATION	R/W	RIGHT–OF–WAY LINE
FH	FIRE HYDRANT	SAN.MH.	SANITARY MANHOLE
GV	GAS VALVE	SSD	SIGHT STOPPING DISTANCE
HDW	HEADWALL	STA.	STATION
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE	TBR	TO BE REMOVED
HSD	HEADLIGHT SIGHT DISTANCE	TC	TOP OF CURB
INV.	INVERT	T/F	TOP OF FOUNDATION
LS	LIGHT STANDARD	TW	TOP OF WALL
MES	METAL END SECTION	VCP	VITRIFIED CLAY PIPE
ME	METROPOLITAN EDISON	WV	WATER VALVE
MH.	MANHOLE		
MO	MIDDLE ORDINATE		

SOIL EROSION AND SEDIMENTATION CONTROL LEGEND

LIMIT OF DISTURBANCE	
NPDES BOUNDARY	
FILTER FABRIC FENCE	
FILTER SOCK	
FILTER BAG INLET PROTECTION DEVICE	
STONE INLET PROTECTION AND BERM	
STONE AND CONCRETE BLOCK INLET PROTECTION	
ROCK FILTER	☒
ROCK FILTER BARRIER	
ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	
CONTRACTORS STAGING AREA	▨
TOPSOIL STOCKPILE AREA	
EROSION CONTROL BLANKET (NAG S75 UNLESS NOTED)	
CONCRETE WASH FACILITY	
SOILS BOUNDARY	
SOIL TYPE	MeA
TRIBUTARY AREA BOUNDARY	



SOURCE:
CATASAUQUA, PA (2019)
USGS QUADRANGLE MAP

LOCATION MAP

Scale: 1" = 2,000'

2000 0 2000 4000

RECEIVING WATER (SEE LOCATION MAP):
UNT TO MONOCACY CREEK (HQ–CWF, MF)

IMPAIRMENTS:
SOURCE UNKNOWN – PATHOGENS

PENNSYLVANIA ONE CALL SYSTEM, INC. UNDERGROUND UTILITY NOTIFICATION

THE PIDCOCK COMPANY CALLED THE PENNSYLVANIA ONE–CALL SYSTEM, INC. ON JULY 18, 2024 AND REQUESTED THAT ALL UNDERGROUND UTILITIES BE LOCATED AT THIS SITE LOCATED IN tHE CITY OF BETHLEHEM, LEHIGH COUNTY, PENNSYLVANIA INCLUDING UNDERGROUND UTILITIES IN THE ADJACENT PUBLIC ROAD RIGHTS–OF–WAY. SERIAL NUMBER 2024003247, WAS ASSIGNED TO THIS PROJECT LOCATION AND THE FOLLOWING UTILITY OPERATORS WERE CONTACTED:

FRONTIER COMMUNICATIONS
300E LAIRD ST.
WILKES BARRE, PA. 18702
CONTACT: MICHAEL NAVICH
EMAIL: MICHAEL.NAVICH@FTR.COM
PHONE: 570–208–3375

PPL ELECTRIC UTILITIES CORPORATION
437 BLUE CHURCH ROAD
PAXINOS, PA. 17860
CONTACT: DOUG HAUPT
EMAIL: dlhaupt@pplweb.com
PHONE: 610–297–2461

CITY OF BETHLEHEM
1630 CROSS LANE
BETHLEHEM, PA. 18015
CONTACT: ROBERT TAYLOR
EMAIL: rtaylor@bethlehem–pa.gov
PHONE: 610–428–0211

SERVICE ELECTRIC CABLE TV INC
2260 ANENUE A
LVIP I
BETHLEHEM, PA. 18017
CONTACT: RICH PERICH
EMAIL: rperich@sectv.com
PHONE: 610–625–8502

CROWN CASTLE
1500 CORPORATE DRIVE
CANONSBURG, PA 15317
CONTACT: FIBER DIG TEAM PERSONNEL
EMAIL: fiber.dig@crowncastle.com
PHONE: 1–800–654–3110

ZAYO BANDWIDTH FORMERLY PPL TELCOM LLC
170 ROBBINS ROAD
DOWNINGTOWN, PA 19335
CONTACT: JOHN HOWELLS
EMAIL:JOHN. HOWELLS@ZAYO.COM
PHONE: 610–764–1634

LUMEN FORMERLY LEVEL 3
1025 ELDORADO BOULEVARD
BROOMFIELD, CO. 80021
CONTACT: LUMEN OPERATOR PERSONNEL
EMAIL: RELOCATIONS@LUMEN.COM
PHONE: 877–366–8344 EXT. 3

COMMUNITY UTILITIES OF PENNSYLVANIA
570 HALLET ROAD
EAST STROUDSBURG, PA 18301
CONTACT:VINCENT VARUOLO
EMAIL: vincent.varuolo@uiwater.com
PHONE: 570–517–9884

ASTOUND BROADBAND POWERED BY RCN
5508 NOR BATH BOULEVARD
NORTHAMPTON, PA. 18067
CONTACT: ERIC BEERS
EMAIL: ERIC.BEERS@ASTOUND.COM
PHONE: 610–972–0597

UGI UTILITIES INC.
2121 CITY LINE ROAD
BETHLEHEM, PA. 18017
CONTACT: TIMOTHY STEWARD
EMAIL: tsteward@ugi.com
PHONE: 610–807–3162

VERIZON BUSINESS FORMERLY MCI
7000 WESTON PARKWAY
CARY, NC. 27513
CONTACT: VICTOR WOOD
EMAIL: victor.s.wood@verizon.com
PHONE: 919–414–2782

THE PIDCOCK COMPANY DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE OR GUARANTY THAT THE INFORMATION RECEIVED PURSUANT TO THE SAID REQUESTS UNDER PENNSYLVANIA ONE CALL SYSTEM, INC. AND AS REFLECTED ON THE PLAN IS CORRECT, ACCURATE OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF ANYONE PERFORMING WORK ON THE SITE TO ARRANGE FOR THE FIELD LOCATION AND PROTECTION OF ALL OVERHEAD AND SUBSURFACE UTILITIES WHICH MAY BE ENCOUNTERED DURING THE COURSE OF THEIR WORK.

PRIVATE AND PUBLIC UNDERGROUND LINES AND FACILITIES SUCH AS TELEPHONE, TELEVISION, GENERAL LIGHTING, ELECTRICAL, UNDERDRAINS, PLUMBING, SEWER LINES, STORAGE TANKS, ETC., SERVING THE SITE MAY EXIST ON THE SITE. THE PIDCOCK COMPANY DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE OR GUARANTY THAT THE PRIVATE AND PUBLIC UNDERGROUND LINES AND FACILITIES HAVE BEEN IDENTIFIED, LOCATED AND SHOWN ON THIS PLAN. IT SHALL BE THE RESPONSIBILITY OF ANYONE PERFORMING WORK, BE IT DESIGN WORK FOR FUTURE DEVELOPMENT OR ACTUAL CONSTRUCTION OR DEMOLITION ON THE PROPERTY SHOWN ON THIS PLAN TO ARRANGE FOR THE LOCATION AND PROTECTION OF ALL OVERHEAD, SURFACE AND SUBSURFACE UTILITIES WHICH COULD BE ENCOUNTERED AS THE RESULT OF WORK PERFORMED ON THIS SITE. DESIGN STAGE WORK SHOULD INCLUDE CALLING THE PENNSYLVANIA ONE CALL SYSTEM AT 1–800–242–1776.

LATERAL AND SERVICE LINE NOTES

UNDERGROUND LATERALS AND SERVICE LINES, INCLUDING BUT NOT LIMITED TO GAS AND ELECTRIC, MAY EXIST IN THE VICINITY OF THE PROJECT CONSTRUCTION AND MAY NOT BE SHOWN ON THE PLAN. TO THE EXTENT THAT INFORMATION WAS PROVIDED, TO US, SUCH LATERALS AND LINES HAVE BEEN INDICATED ON THE PLAN, BUT THEIR DEPICTION AND LOCATIONS SHOULD BE CONSIDERED AS ONLY APPROXIMATE, AND NOT AS COMPREHENSIVE OR ALL–INCLUSIVE.

BY SHOWING SOME LATERALS AND LINES OF THIS KIND, THE PIDCOCK COMPANY DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE, OR GUARANTY THAT ALL SUCH UNDERGROUND LATERALS AND LINES HAVE BEEN IDENTIFIED, LOCATED, AND SHOWN ON THIS PLAN.

CONTRACTORS AND ANY OTHER PERSONS DESIGNING OR PERFORMING SUBSURFACE WORK IN THE VICINITY ARE RESPONSIBLE FOR GIVING APPROPRIATE ADVANCE NOTICE BY CALLING THE PENNSYLVANIA ONE CALL SYSTEM, INC. AT 1–800–242–1776 OR BY OPENING TICKET ON THEIR WEBSITE AT https://www.pa1call.org/, AND FOR CONTACTING THE APPROPRIATE PUBLIC AND PRIVATE ENTITIES AND ARRANGING FOR THE FIELD LOCATION AND PROTECTION OF ALL SUCH UNDERGROUND LATERALS AND SERVICE LINES THAT COULD BE ENCOUNTERED AS A RESULT OF THE WORK TO BE PERFORMED ON THE SITE.

THREE BUSINESS DAYS BEFORE
YOU DIG - DRILL - BLAST

DIAL 8-1-1 or 1-800-242-1776
www.paonecall.org

INDEX TO DRAWINGS

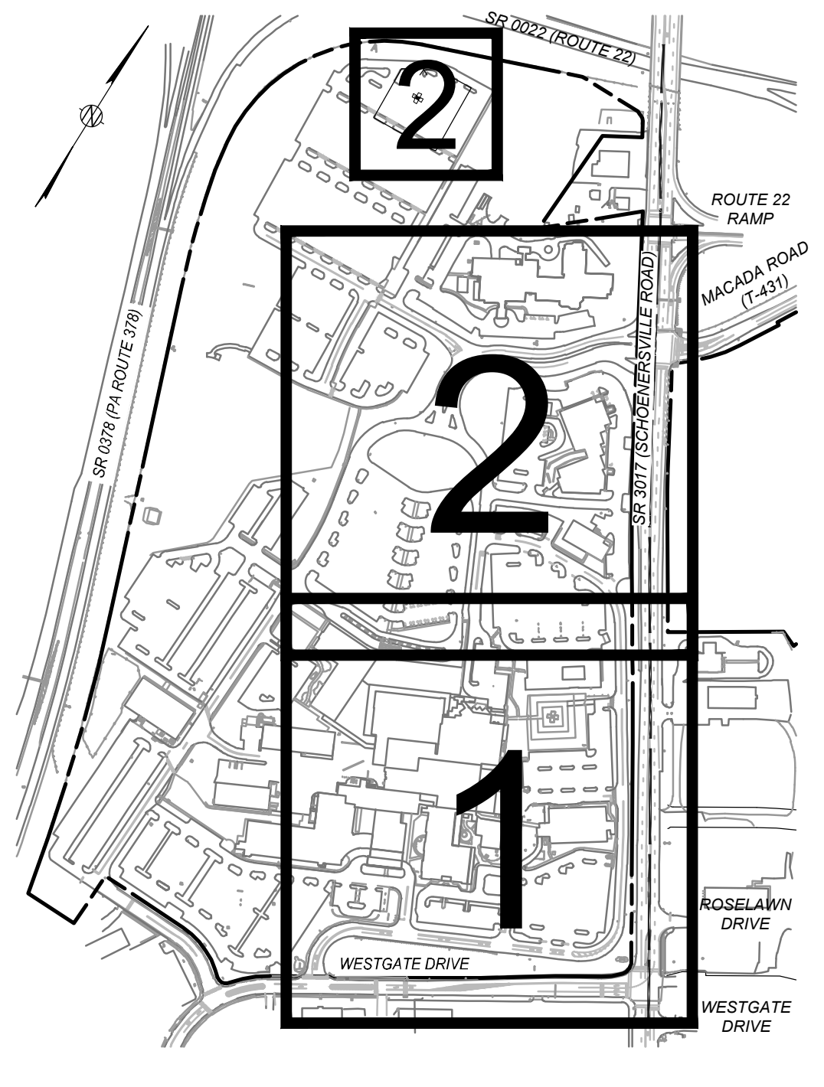
SHEET NO.	TITLE	PLAN DATE OR LAST REVISION
1	INDEX PLAN	JANUARY 10, 2025
2	SOIL EROSION AND SEDIMENTATION CONTROL PLAN 1	JANUARY 10, 2025
3	SOIL EROSION AND SEDIMENTATION CONTROL PLAN 2	JANUARY 10, 2025
4	SOIL EROSION AND SEDIMENTATION CONTROL NOTES	JANUARY 10, 2025
5	SOIL EROSION AND SEDIMENTATION CONTROL DETAILS	JANUARY 10, 2025
6	MAXIMUM DURING CONSTRUCTION TRIBUTARY AREA PLAN	JANUARY 10, 2025

THE
PIDCOCK
COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL



NOTES:

1. THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.
2. THESE DOCUMENTS ARE PROVIDED FOR MUNICIPAL REVIEW ONLY AND ARE NOT TO BE UTILIZED FOR ANY OTHER PURPOSE. THE DOCUMENTS ARE NOT ISSUED FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED AS SUCH BELOW.

CONTRACTOR'S OBLIGATION REGARDING COORDINATION OF DOCUMENTS AND FIELD CONDITIONS

THE CONTRACT DOCUMENTS PRESENT THE DESIGN INTENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL PLANS, SPECIFICATIONS, ADDENDA, CONSTRUCTION SKETCHES AND OTHER CONTRACT DOCUMENTS FOR CONSISTENCY. SIMILARLY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW FIELD CONDITIONS, INCLUDING COORDINATION WITH ALL UTILITIES. THE CONTRACTOR SHALL COMPLETE ANY TEST EXCAVATIONS IN ADVANCE OF ORDERING MATERIALS OR OF CONSTRUCTION IN AN AREA OF UTILITY CROSSINGS OR POTENTIAL INVOLVEMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING ANY INCONSISTENCIES IN THE DOCUMENTS OR ANY APPARENT CONFLICTS TO THE ATTENTION OF THE ENGINEER BEFORE ORDERING MATERIALS AND BEFORE PROCEEDING WITH CONSTRUCTION IN THE AREA SO THAT THE ENGINEER MAY REVIEW THE CONDITIONS AND RECOMMEND ANY ADJUSTMENTS TO THE DOCUMENTS THAT MAY BE NECESSARY, OR TO RECOMMEND RELOCATION OF A UTILITY OR OTHER REMEDIAL WORK THAT MAY BE REQUIRED.

PLAN PREPARER:

BRENT C. TUCKER, P.E.

THE PIDCOCK COMPANY
2451 PARKWOOD DRIVE
ALLENTOWN, PA. 18103
TELEPHONE NO.: 610-791-2252

NOTICE

THIS PLAN IS INTENDED FOR SOIL EROSION AND SEDIMENTATION CONTROL PURPOSES ONLY

6		
5		
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3		
2	JANUARY 10, 2025	GENERAL REVISIONS
1	NOVEMBER 22, 2024	REVISED PER LCCD COMMENTS

REVISIONS

SOIL EROSION AND SEDIMENTATION CONTROL PLANS

SCALE: AS NOTED
DATE: SEPTEMBER 27, 2024
CHECKED BY: BCT
DRAWN BY: JGU
CAD FILE: SE INDEX.dwg
PROJECT NUMBER: 22005

Lehigh Valley Health Network
MUHLENBERG

NEW SOUTH WING EMERGENCY DEPARTMENT EXPANSION MAJOR AMENDMENT

CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

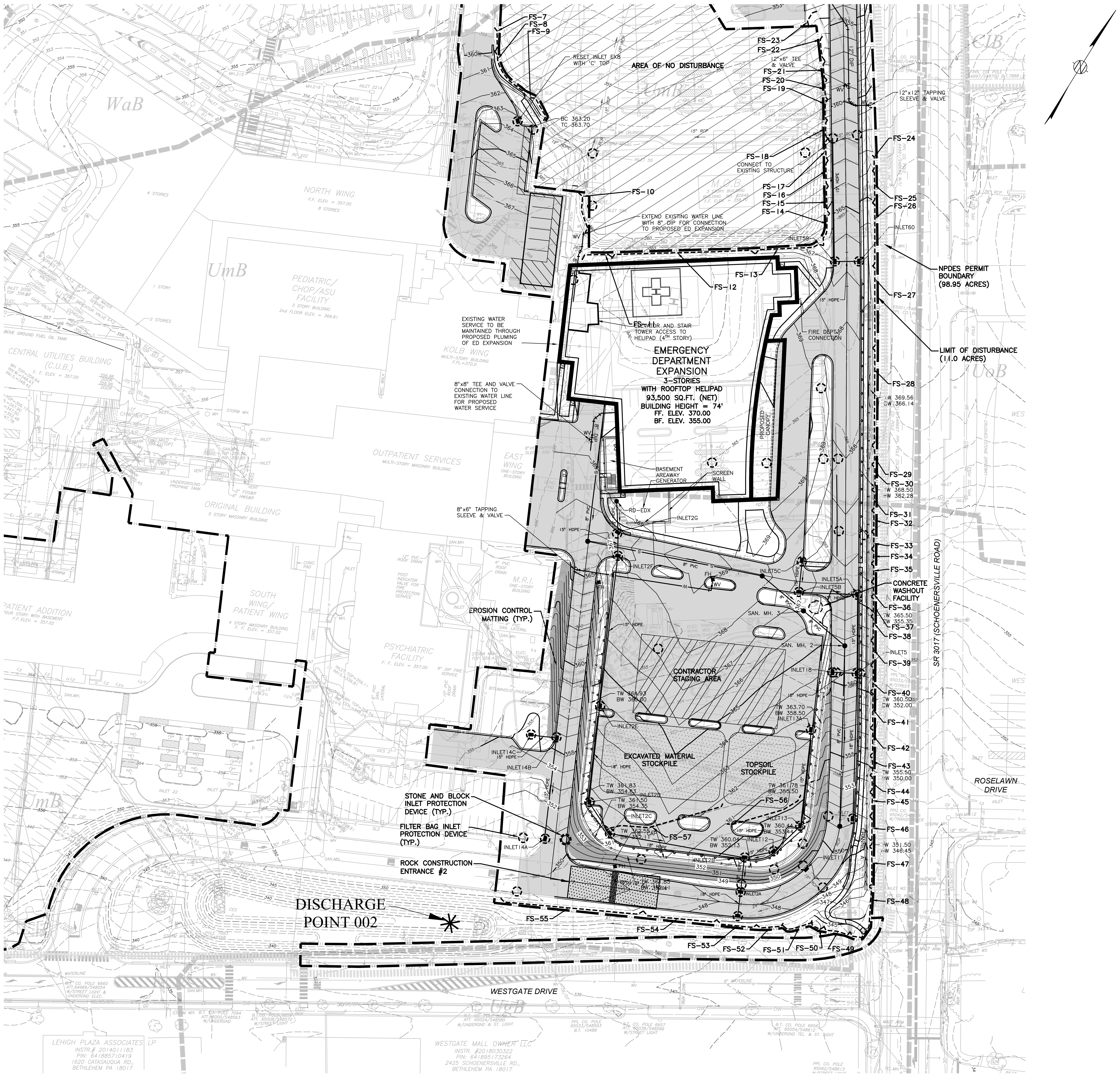
INDEX PLAN

FILE NUMBER
S-12396

SHEET NUMBER
1 OF 6

Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\E-S Submission\SE INDEX.dwg Printed: Jan 10, 2025 - 1:54pm

CONTINUED ON SOIL EROSION AND SEDIMENTATION CONTROL PLAN 2


AREA OF NO DISTURBANCE
RESET INLET EXB WITH 'C' TOP
BC 363.20
TC 363.70
FS-7
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FS-55
FS-56
FS-57
12"x6" TEE & VALVE
12"x12" TAPPING SLEEVE & VALVE
CONNECT TO EXISTING STRUCTURE
EXTEND EXISTING WATER LINE WITH 8" DIP FOR CONNECTION TO PROPOSED ED EXPANSION
NPDES PERMIT BOUNDARY (98.95 ACRES)
LIMIT OF DISTURBANCE (11.0 ACRES)
EXISTING WATER SERVICE TO BE MAINTAINED THROUGH PROPOSED PLUMING OF ED EXPANSION
ELEVATOR AND STAIR TOWER ACCESS TO HELIPAD (4TH STORY)
EMERGENCY DEPARTMENT EXPANSION
3-STORIES WITH ROOFTOP HELIPAD
93,500 SQ.FT. (NET)
BUILDING HEIGHT = 74'
FF. ELEV. 370.00
BF. ELEV. 355.00
FIRE DEPT. CONNECTION
PROPOSED CANOPY
8"x8" TEE AND VALVE CONNECTION TO EXISTING WATER LINE FOR PROPOSED WATER SERVICE
BASEMENT AREAWAY GENERATOR
SCREEN WALL
8"x6" TAPPING SLEEVE & VALVE
EROSION CONTROL MATTING (TYP.)
CONCRETE WASHOUT FACILITY
CONTRACTOR STAGING AREA
EXCAVATED MATERIAL STOCKPILE
TOPSOIL STOCKPILE
STONE AND BLOCK INLET PROTECTION DEVICE (TYP.)
FILTER BAG INLET PROTECTION DEVICE (TYP.)
ROCK CONSTRUCTION ENTRANCE #2
DISCHARGE POINT 002
SR 3017 (SCHOENERSVILLE ROAD)
ROSELAWN DRIVE
WESTGATE DRIVE
NORTH WING
PEDIATRIC/CHOP/ASU FACILITY
KOLB WING
CENTRAL UTILITIES BUILDING (C.U.B.)
OUTPATIENT SERVICES
EAST WING
ORIGINAL BUILDING
SOUTH WING/PATIENT WING
PSYCHIATRIC FACILITY
M.R.I.
PATIENT ADDITION
WaB
UmB
UoB
CIB
LEHIGH PLAZA ASSOCIATES LP
WESTGATE MALL OWNER LLC

SOIL EROSION AND SEDIMENTATION CONTROL LEGEND

LIMIT OF DISTURBANCE	▬ ▬
NPDES BOUNDARY	▥
FILTER FABRIC FENCE	–×––––×–
FILTER SOCK	– – – – – – –
FILTER BAG INLET PROTECTION DEVICE	◌
STONE INLET PROTECTION AND BERM	◎
STONE AND CONCRETE BLOCK INLET PROTECTION	▣
ROCK FILTER	⊠
ROCK FILTER BARRIER	◠
ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	▦
CONTRACTORS STAGING AREA	▨
TOPSOIL STOCKPILE AREA	▒
EROSION CONTROL BLANKET (NAG S75 UNLESS NOTED)	▬
CONCRETE WASH FACILITY	◌
SOILS BOUNDARY	▬ ▬
SOIL TYPE	MeA
TRIBUTARY AREA BOUNDARY	■■■■■■■

WEB SOIL SURVEY
SOIL DESCRIPTION TABLE

SYMBOL	NAME	SLOPE RANGE	CHARACTERISTICS	HYDROLOGIC SOILS GROUP
CIB	CLARKSBURG SILT LOAM	3-8%	MODERATELY WELL DRAINED, MODERATELY LOW TO MODERATLEY HIGH PERMEABILITY	C
UgB	URBAN LAND	0-8%	PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS	N/A
UmB	URBAN LAND-DUFFIELD COMPLEX	0-8%	PAVEMENT, BUILDINGS, AND OTHER ARTIFICIALLY COVERED AREAS	B
UoB	URBAN LAND-DUFFIELD COMPLEX	0-8%	PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS	B
WaA	WASHINGTON SILT LOAM	0-3%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B
WaB	WASHINGTON SILT LOAM	3-8%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B
WaC	WASHINGTON SILT LOAM	8-15%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B

NOTES:

THE SOIL TYPES AND LOCATIONS ARE BASED UPON THE U. S. DEPARTMENT OF AGRICULTURE-NATIONAL RESOURCES CONSERVATION SERVICE (USDA-NRCS) WEB SOIL SURVEY, AVAILABLE ONLINE AT HTTP://WEBSOILSURVEY.SC.EGOV.USDA.GOV/.

SOIL TYPE USE LIMITATIONS AND RESOLUTIONS

THE SOIL USE LIMITATIONS THAT EXIST FOR THE ABOVE-MENTIONED SOILS AND THEIR RESOLUTIONS ARE AS FOLLOWS:

1. ACCORDING TO THE AFOREMENTIONED SOIL SURVEY, WASHINGTON SILT LOAM HAS FEW LIMITATIONS TO MOST NON-FARM USES. ONE OF THESE LIMITATIONS IS THE POTENTIAL FOR SINKHOLES. THE POTENTIAL FOR THE FORMATIONS OF SINKHOLES WILL BE MINIMIZED THROUGH THE CONSTRUCTION OF A STORMWATER MANAGEMENT SYSTEM. HOWEVER, IN THE EVENT THAT A SINKHOLE DEVELOPS ON THE SITE, SURFACE WATER SHALL BE DIVERTED AWAY FROM THE AREA AND THE SINKHOLE SHALL BE REPAIRED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A PROFESSIONAL ENGINEER OR GEOLOGIST.
2. THE DUFFIELD SERIES IS LIMITED BY SLOW PERMEABILITY AND A SEASONABLY HIGH WATER TABLE. ALSO THESE SOILS EXHIBIT A MODERATE TO SEVERE EROSION HAZARD. A PUMPED WATER FILTER BAG HAS BEEN SPECIFIED TO ADEQUATELY FILTER ANY WATER THAT MAY BE ENCOUNTERED. FURTHER, STRUCTURAL EARTHWORK SHALL ONLY BE DONE WHEN THE SOIL IS AT THE OPTIMUM MOISTURE CONTENT FOR COMPACTION.

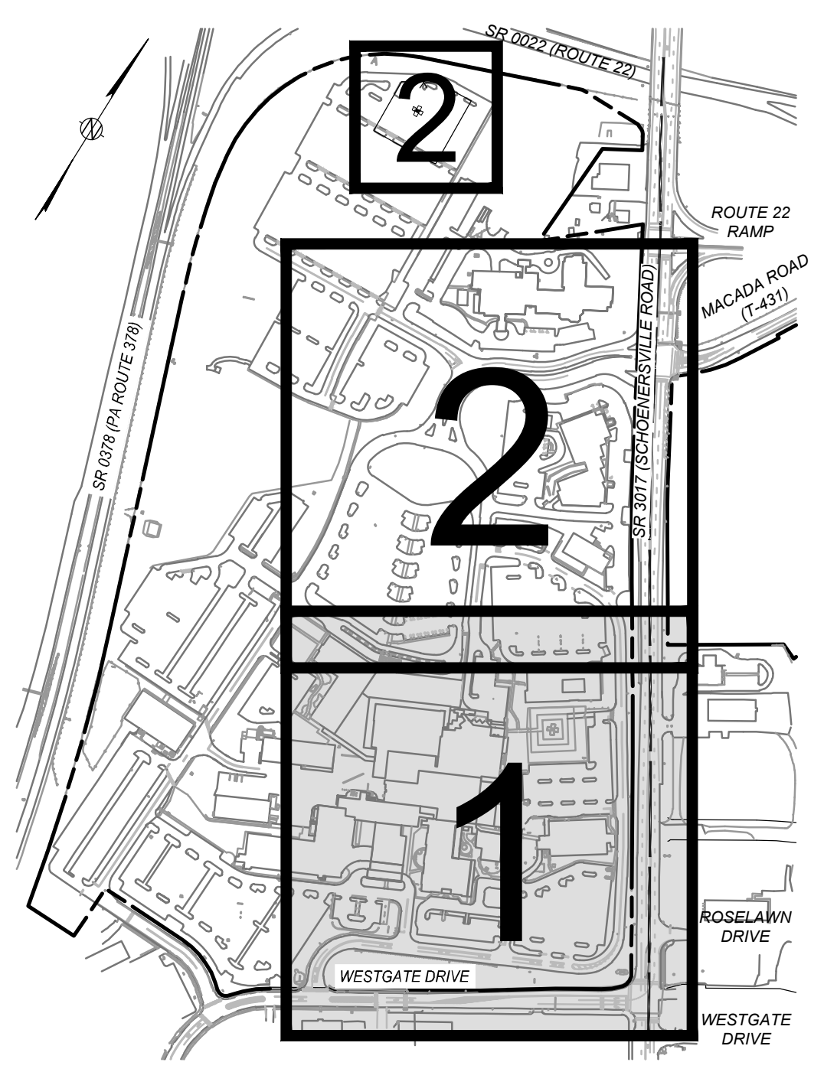
Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\E-S Submission\SE PLANS.dwg Printed: Jan 10, 2025 - 1:54pm

THE PIDCOCK COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL


2
2
1
ROUTE 22 RAMP
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

NOTES:

1. THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.

2. THESE DOCUMENTS ARE PROVIDED FOR MUNICIPAL REVIEW ONLY AND ARE NOT TO BE UTILIZED FOR ANY OTHER PURPOSE. THE DOCUMENTS ARE NOT ISSUED FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED AS SUCH BELOW.

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PLAN PREPARER:

BRENT C. TUCKER, P.E.

THE PIDCOCK COMPANY
2451 PARKWOOD DRIVE
ALLENTOWN, PA. 18103
TELEPHONE NO.: 610-791-2252

NOTICE

THIS PLAN IS INTENDED FOR SOIL EROSION AND SEDIMENTATION CONTROL PURPOSES ONLY

6		
5		
4		
3		
2	JANUARY 10, 2025	GENERAL REVISIONS
1	NOVEMBER 22, 2024	REVISED PER LCCD COMMENTS

REVISIONS

SOIL EROSION AND SEDIMENTATION CONTROL PLANS

SCALE: 1"=50'
DATE: SEPTEMBER 27, 2024
CHECKED BY: BCT
DRAWN BY: JGU
CAD FILE: SE PLANS.dwg
PROJECT NUMBER: 22005

811
Know what's below.
Call before you dig.
SEE SHEET 1

GRAPHIC SCALE: 50' 25' 0' 50' 100'

Lehigh Valley Health Network
MUHLENBERG

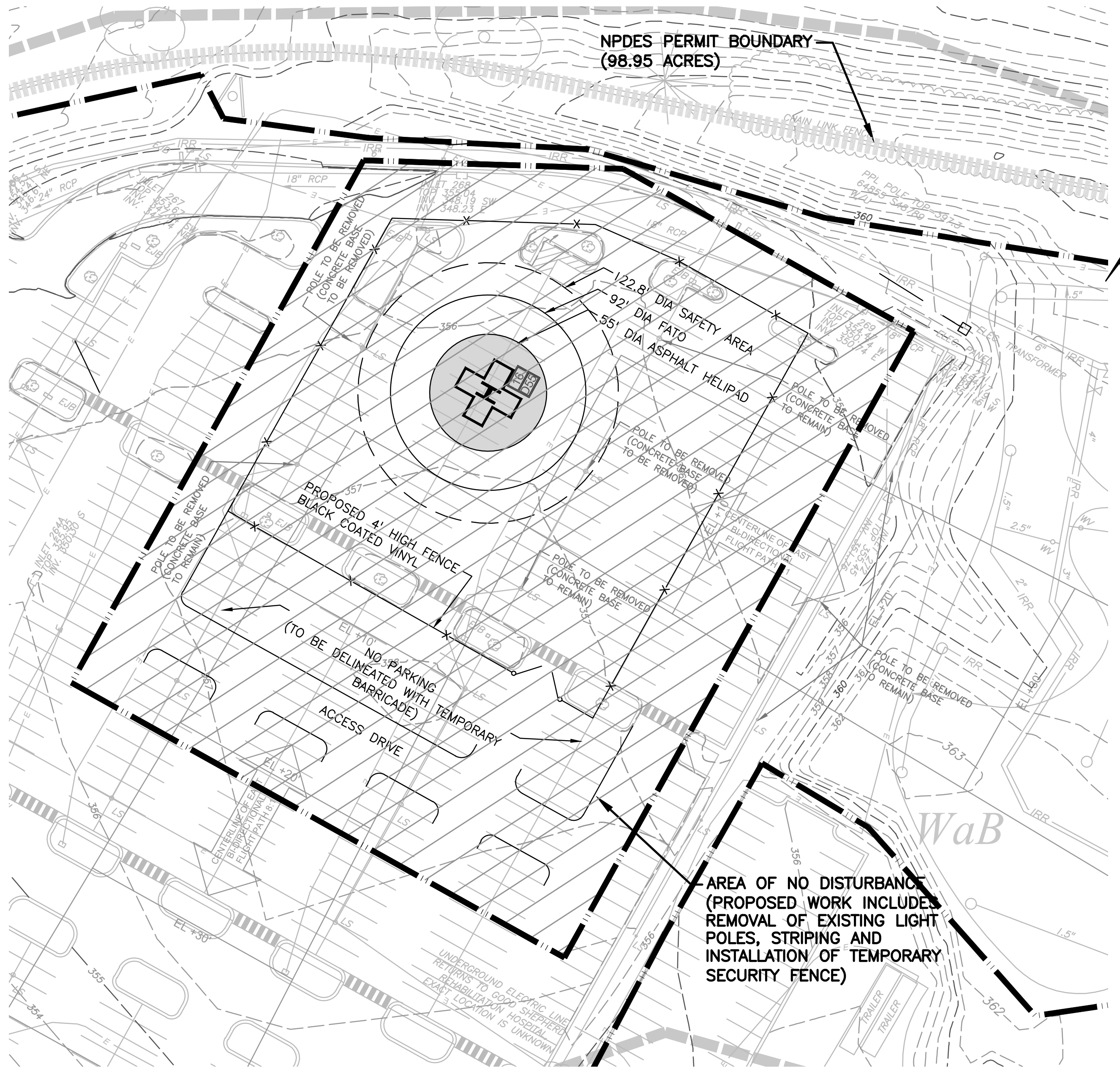
NEW SOUTH WING EMERGENCY DEPARTMENT EXPANSION MAJOR AMENDMENT

CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

SOIL EROSION AND SEDIMENTATION CONTROL PLAN 1

FILE NUMBER
S-12396

SHEET NUMBER
2 OF 6


NPDES PERMIT BOUNDARY (98.95 ACRES)
122.8' DIA SAFETY AREA
92' DIA FATO
55' DIA ASPHALT HELIPAD
POLE TO BE REMOVED (CONCRETE BASE TO BE REMOVED)
POLE TO BE REMOVED (CONCRETE BASE TO REMAIN)
PROPOSED 4' HIGH FENCE BLACK COATED VINYL
NO PARKING (TO BE DELINEATED WITH TEMPORARY BARRICADE)
ACCESS DRIVE
CENTERLINE OF EAST BI-DIRECTIONAL FLIGHT PATH
UNDERGROUND ELECTRIC LINE RETURNS TO GOOD SHEPHERD REHABILITATION HOSPITAL EXACT LOCATION IS UNKNOWN
AREA OF NO DISTURBANCE (PROPOSED WORK INCLUDES REMOVAL OF EXISTING LIGHT POLES, STRIPING AND INSTALLATION OF TEMPORARY SECURITY FENCE)
WaB

TEMPORARY HELIPAD LOCATION

SOIL EROSION AND SEDIMENTATION CONTROL LEGEND

LIMIT OF DISTURBANCE	▬ ▬
NPDES BOUNDARY	▥
FILTER FABRIC FENCE	—✕———✕—
FILTER SOCK	- - - - - -
FILTER BAG INLET PROTECTION DEVICE	◌
STONE INLET PROTECTION AND BERM	◎
STONE AND CONCRETE BLOCK INLET PROTECTION	▣
ROCK FILTER	☒
ROCK FILTER BARRIER	◠
ROCK CONSTRUCTION ENTRANCE WITH WASH RACK	▦
CONTRACTORS STAGING AREA	▨
TOPSOIL STOCKPILE AREA	░
EROSION CONTROL BLANKET (NAG S75 UNLESS NOTED)	▬
CONCRETE WASH FACILITY	◌
SOILS BOUNDARY	▬ ▬
SOIL TYPE	MeA
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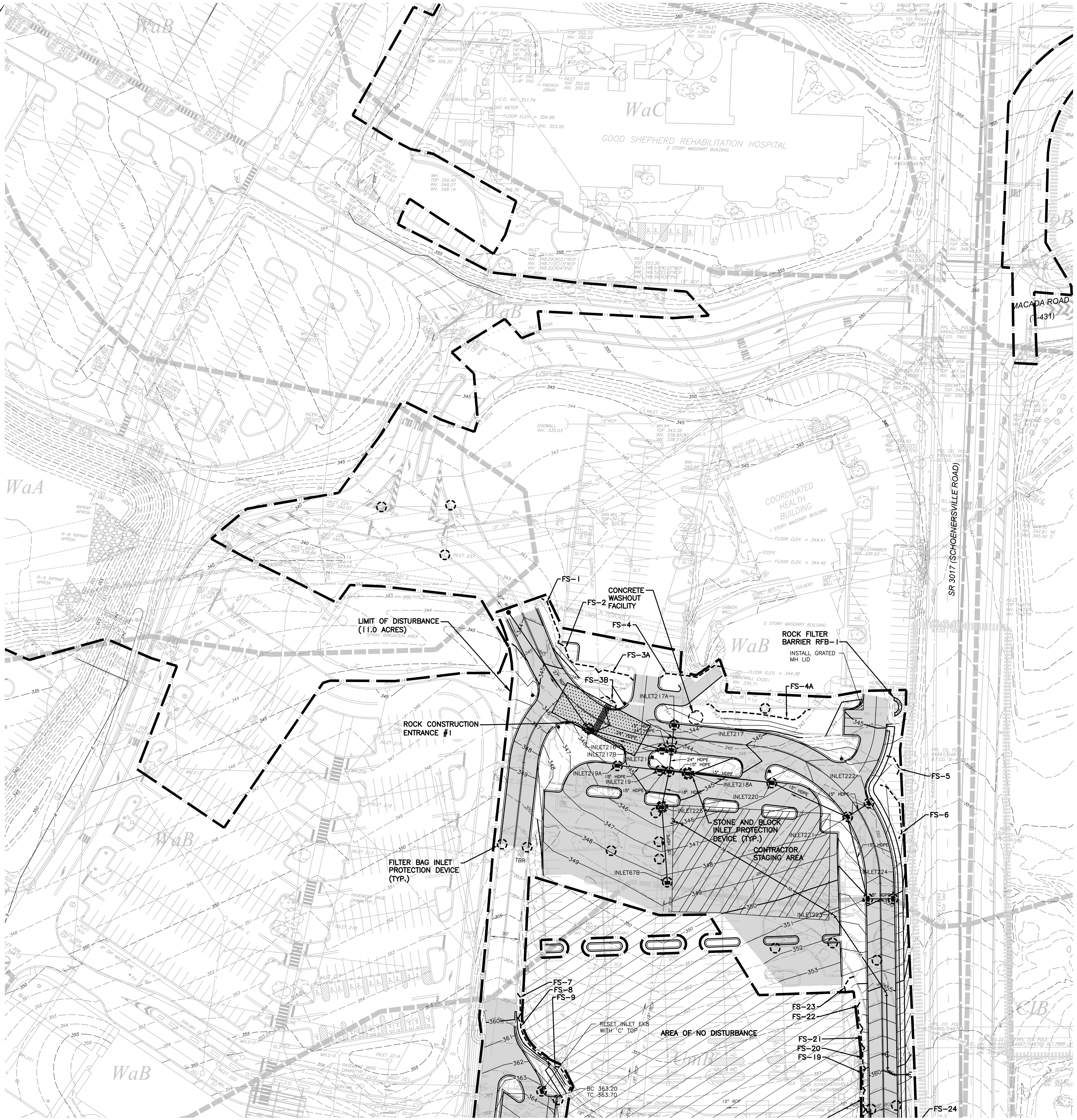

WaB
WaC
WaA
UmB
CIB
GOOD SHEPHERD REHABILITATION HOSPITAL
2 STORY MASONRY BUILDING
COORDINATED HEALTH BUILDING
1 STORY MASONRY BUILDING
MACADA ROAD (T-431)
SR 3017 (SCHOENERSVILLE ROAD)
LIMIT OF DISTURBANCE (11.0 ACRES)
FS-1
FS-2
FS-3A
FS-3B
FS-4
FS-4A
FS-5
FS-6
FS-7
FS-8
FS-9
FS-19
FS-20
FS-21
FS-22
FS-23
FS-24
CONCRETE WASHOUT FACILITY
ROCK FILTER BARRIER RFB-1
INSTALL GRATED MH LID
ROCK CONSTRUCTION ENTRANCE #1
INLET216
INLET217
INLET217A
INLET217B
INLET218
INLET218A
INLET219
INLET219A
INLET220
INLET221
INLET222
INLET223
INLET224
INLET225
INLET67B
STONE AND BLOCK INLET PROTECTION DEVICE (TYP.)
CONTRACTOR STAGING AREA
FILTER BAG INLET PROTECTION DEVICE (TYP.)
TBR
RESET INLET EX8 WITH 'C' TOP
BC 363.20
TC 363.70
AREA OF NO DISTURBANCE

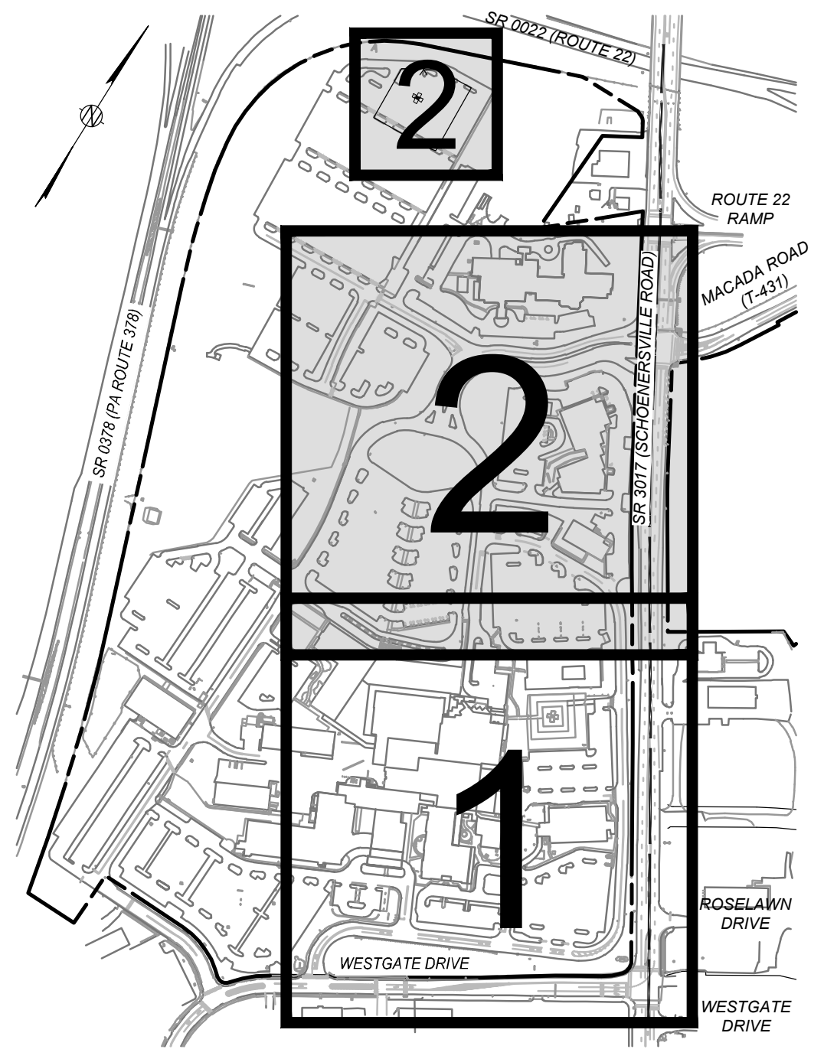
CONTINUED ON SOIL EROSION AND SEDIMENTATION CONTROL PLAN 1

THE PIDCOCK COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL


2
2
1
ROUTE 22 RAMP
MACADA ROAD (T-431)
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

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PLAN PREPARER:

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2451 PARKWOOD DRIVE
ALLENTOWN, PA. 18103
TELEPHONE NO.: 610-791-2252

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6		
5		
4		
3		
2	JANUARY 10, 2025	GENERAL REVISIONS
1	NOVEMBER 22, 2024	REVISED PER LCCD COMMENTS

REVISIONS

SOIL EROSION AND SEDIMENTATION CONTROL PLANS

SCALE: 1"=50'
DATE: SEPTEMBER 27, 2024
CHECKED BY: BCT
DRAWN BY: JGU
CAD FILE: SE PLANS.dwg
PROJECT NUMBER: 22005

811
Know what's below.
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SEE SHEET 1

GRAPHIC SCALE: 50' 25' 0' 50' 100'

Lehigh Valley Health Network
MUHLENBERG

NEW SOUTH WING EMERGENCY DEPARTMENT EXPANSION MAJOR AMENDMENT

CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

SOIL EROSION AND SEDIMENTATION CONTROL PLAN 2

FILE NUMBER
S-12396

SHEET NUMBER
3 OF 6

STANDARD EROSION AND SEDIMENT CONTROL PLAN NOTES

1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
2. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
3. AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
5. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
6. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
7. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
9. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
10. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THIS SITE.
11. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.
13. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS.
14. VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY FROM THE SITE ONTO AMERICAN PARKWAY. VEHICLES AND EQUIPMENT MAY ONLY ENTER AND EXIT THE CONSTRUCTION SITE VIA A STABILIZED ROCK CONSTRUCTION ENTRANCE.
15. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. THE OPERATOR WILL MAINTAIN AND MAKE AVAILABLE TO LEHIGH COUNTY CONSERVATION DISTRICT COMPLETE, WRITTEN INSPECTION LOGS OF ALL THOSE INSPECTIONS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
16. A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
17. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
18. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.
19. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES – 6 TO 12 INCHES ON COMPACTED SOILS – PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
20. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
21. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
22. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
23. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
24. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
25. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
26. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
27. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR OTHER PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
28. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR MOTHER MOVEMENTS.
29. EROSION AND SEDIMENT BMPS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPS. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
30. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPS.
31. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
32. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.
33. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO $10,000 PER DAY IN CIVIL PENALTIES, UP TO $10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO $25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.
34. IN THE EVENT OF SINKHOLE DISCOVERY A PROFESSIONAL GEOLOGIST OR ENGINEER WILL BE CONTACTED CONCERNING MITIGATION. ADDITIONALLY, THE LEHIGH COUNTY CONSERVATION DISTRICT WILL BE MADE AWARE OF THE SINKHOLE DISCOVERY IMMEDIATELY.
35. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
36. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.
37. THE E&S CONTROL PLAN MAPPING MUST DISPLAY A PA ONE CALL SYSTEM INCORPORATED SYMBOL INCLUDING THE SITE IDENTIFICATION NUMBER. (THIS IS A NUMBERED SYMBOL NOT A NOTE.)
38. AT STREAM CROSSINGS, 50' BUFFER AREAS SHOULD BE MAINTAINED. ON BUFFERS, CLEARING, SOD DISTURBANCES, EXCAVATION, AND EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITIES SUCH AS STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGING RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE ACCOMPLISHED OUTSIDE OF BUFFERS.
39. ALL WETLANDS MUST BE DELINEATED AND PROTECTED WITH ORANGE SAFETY FENCE PRIOR TO ANY EARTHMOVING ACTIVITY.
40. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN
41. CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.
42. ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIAL/WASTES.
43. UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS-SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE CONVEYED PAST THE WORK AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.
44. CHANNELS HAVING RIPRAP, RENO MATTRESS, OR GABION LININGS MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.
45. SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING POTENTIAL TO CLOG THE BASIN/TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS.
46. SEDIMENT BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES.
47. BAFFLES MUST BE INSTALLED TO ALLOW BASIN MAINTENANCE AND CLEAN OUT.
48. ANY DAMAGE THAT OCCURS IN WHOLE OR IN PART AS A RESULT OF BASIN OR TRAP DISCHARGE SHALL BE IMMEDIATELY REPAIRED BY THE PERMITTEE IN A PERMANENT MANNER SATISFACTORY TO THE MUNICIPALITY, LOCAL CONSERVATION DISTRICT, AND THE OWNER OF THE DAMAGED PROPERTY.
49. UPON REQUEST, THE APPLICANT OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT (RECORD DRAWING) FOR ANY SEDIMENT BASIN OR TRAP TO THE MUNICIPAL INSPECTOR, LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
50. EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER WITHIN 50 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.
51. FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS.

LAST UPDATED 11/1/12

GENERAL NOTES AND RECYCLING

1. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION.
2. SOIL EROSION CONTROL FACILITIES MUST BE PROTECTED FROM UNAUTHORIZED ACTS OF THIRD PARTIES.
3. FILTER FABRIC FENCING MUST BE INSTALLED PARALLEL TO EXISTING CONTOURS. ENDS OF FENCING MUST BE EXTENDED TEN FEET, TRAVELING UPSLOPE AT 45 DEGREES TO THE ALIGNMENT OF THE MAIN FENCING SECTIONS.
4. FILTER FABRIC FENCE, WHICH HAS BEEN UNDERMINED OR TOPPED, MUST BE REPLACED WITH ROCK FILTER OUTLETS IMMEDIATELY.
5. STOCKPILES SHALL BE GRADED TO PROVIDE POSITIVE RUNOFF AWAY FROM THE STOCKPILE AND SHALL NOT TRAP WATER. ALL STOCKPILES SHALL BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY SEEDING SCHEDULE.
6. EROSION CONTROL BLANKET, WHICH HAS BEEN ERODED, MUST BE REPLACED IMMEDIATELY OR STABILIZED WITH RIPRAP.
7. INLET "HANDLE-HOLES" SHALL BE SEALED IMMEDIATELY FOLLOWING INSTALLATION OF THE INLETS.
8. STORMWATER INLETS WITH INLET PROTECTION MUST BE PROTECTED UNTIL THE TRIBUTARY AREAS ARE STABILIZED.
9. USE OF CONSTRUCTION/DEMOLITION WASTE AS FILL MATERIAL IS PROHIBITED.
10. HYDROSEEDING MAY NOT BE APPLIED BETWEEN NOVEMBER 15 AND APRIL 15.
11. IF ANY SINKHOLES ARE ENCOUNTERED DURING CONSTRUCTION, THE LEHIGH COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED IMMEDIATELY. THE CONTRACTOR SHALL PREVENT ANY WATER FROM ENTERING THE SINKHOLE AND SHALL IMMEDIATELY REPAIR THE SINKHOLE IN ACCORDANCE WITH THE RECOMMENDATIONS OF A PROFESSIONAL ENGINEER OR GEOLOGIST.
12. ALL TOPSOIL STRIPPED FROM CONSTRUCTION AREAS SHALL BE STOCKPILED AS SHOWN ON THE PLAN. EXCESS TOPSOIL SHALL BE REMOVED FROM THE CONSTRUCTION SITE.
13. ALL CONSTRUCTION WASTE, INCLUDING EXCESS PAVEMENT MATERIAL, DEMOLITION MATERIAL WASTE, UNUSED UTILITIES BEING REMOVED, UNSUITABLE MATERIALS, ETC. MUST BE LEGALLY DISPOSED OF OFF-SITE BY THE CONTRACTOR. REFER TO STANDARD EROSION AND SEDIMENT CONTROL PLAN NOTES FOR RECYCLING AND DISPOSAL REQUIREMENTS.
14. IF FILL MATERIAL IS TO BE IMPORTED FROM AN OFF-SITE LOCATION, IT IS THE RESPONSIBILITY OF THE OPERATOR TO PERFORM ENVIRONMENTAL DUE DILIGENCE TO CERTIFY THE MATERIAL AS CLEAN FILL PRIOR TO PLACING ON-SITE. IF FILL WILL BE IMPORTED OR EXPORTED, PADEP FORM FP-001 (PADEP DOCUMENT #258-2182-773) MUST BE COMPLETED BY THE CONTRACTOR AND PROVIDED TO THE OWNER FOR ALL MATERIAL. IF FILL IS IMPORTED FROM MULTIPLE SOURCES, A SEPARATE CERTIFICATION FORM IS REQUIRED FOR EACH SOURCE. THE DEFINITIONS OF THE ABOVE-MENTIONED TERMS ARE AS FOLLOWS:
    A) CLEAN FILL – UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.)
    B) ENVIRONMENTAL DUE DILIGENCE – INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".
15. THE PLANS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION "EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL" TO:
    - MINIMIZE THE EXTENT AND DURATION OF EARTH DISTURBANCE
    - MAXIMIZE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION
    - MINIMIZE SOIL COMPACTION
    - UTILIZE OTHER MEASURES OR CONTROLS THAT PREVENT OR MINIMIZE GENERATION OF INCREASED STORMWATER RUNOFF.
16. ALL E&S BMPS SHOULD UTILIZE ABACT OPTIONS WHENEVER POSSIBLE.

STAGING OF EARTHMOVING ACTIVITIES

THE LEHIGH COUNTY CONSERVATION DISTRICT MUST BE NOTIFIED AS SPECIFIED IN THE STANDARD LCCD E&S NOTES TO SCHEDULE A PRECONSTRUCTION MEETING PRIOR TO ANY EARTHMOVING ACTIVITY.

PRIOR TO EARTHMOVING AND CONSTRUCTION OF STRUCTURES FOR SEDIMENT REMOVAL, THE EROSION AND SEDIMENTATION CONTROL MATERIALS MUST BE ONSITE.

AFTER EACH RUNOFF EVENT, ALL TEMPORARY EROSION CONTROL FACILITIES SHALL BE CLEANED. ALL SILT REMOVED DURING THE CLEANING OPERATIONS SHALL BE INCORPORATED INTO THE EARTHWORK AS FILL OR WASTE ON THE SITE AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE.

ALL INGRESS TO AND EGRESS FROM THE SITE DURING CONSTRUCTION SHALL BE LIMITED TO THE CONSTRUCTION ENTRANCES SHOWN ON THE PLANS. IF ADDITIONAL ACCESS POINTS TO THE CONSTRUCTION ARE REQUIRED, A TIRE CLEANING FACILITY MUST BE INSTALLED AND MAINTAINED.

CONTRACTOR IS TO REFERENCE THE CRITICAL STAGES AND THE POST-CONSTRUCTION BMP INSTALLATION AND STABILIZATION SCHEDULE LISTED ON THE POST-CONSTRUCTION STORMWATER MANAGEMENT PLANS FOR THE INSTALLATION AND INSPECTIONS REQUIRED FOR THE PROPOSED PCSM BMPS. THE CRITICAL STAGES ARE UNDERLINED IN THE FOLLOWING SEQUENCE OF CONSTRUCTION.

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. ALL UTILITY INSTALLATION SHALL PROCEED IN ACCORDANCE WITH THE UTILITY LINE INSTALLATION NOTES. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AT ALL TIMES AND KEEP DISTURBANCES TO A MINIMUM.

STAKE OUT LIMIT OF DISTURBANCE PRIOR TO GENERAL EARTHMOVING ACTIVITIES.

1. PRIOR TO GENERAL EARTHMOVING ACTIVITIES, INSTALL INTERIM HELIPORT IN LOCATION SHOWN ON THE PLANS. REMOVE EXISTING LIGHT POLES LOCATED WITHIN IDENTIFIED AREA, EXISTING CONCRETE BASES ARE TO REMAIN AND INSTALL TEMPORARY FENCING AS SHOWN ON THE PLANS. COMPLETE PROPOSED STRIPING FOR TEMPORARY HELIPAD. PROPOSED WORK WITHIN THIS STEP IS TO BE COMPLETED WITH NO EARTH DISTURBANCE.
2. CLEAR, GRUB, AND STRIP AND STOCKPILE TOPSOIL FROM ALL AREAS NEEDED TO IMPLEMENT THE EROSION CONTROL FACILITIES AS NEEDED FOR EACH STAGE AS THEY ARE CONSTRUCTED. KEEP ALL DISTURBANCES TO A MINIMUM AND STABILIZE ANY EXCESS DISTURBANCES.
3. INSTALL INLET PROTECTION IN EXISTING INLETS AS SHOWN ON THE PLANS.
4. CONSTRUCT ROCK CONSTRUCTION ENTRANCE #1 AND #2 WITH TIRE CLEANING FACILITIES AND INSTALL FILTER SOCK FS-1 THROUGH FS-55, CONTRACTOR STAGING AREA (AS REQUIRED), AND CONCRETE WASHOUT AREAS. INSTALL ROCK FILTER BARRIER RF-1 AS SHOWN ON THE PLANS. PLEASE NOTE THAT ACCESS TO THE EXISTING PARKING LOT COVERED IN THE AREA OF NO DISTURBANCE SHALL BE MAINTAINED DURING THE DURATION OF ALL PROPOSED CONSTRUCTION ACTIVITIES.
5. BEGIN UTILITY RELOCATION OF WATERLINE EXTENSION FROM SCHOENERSVILLE ROAD TO THE EXISTING WATERLINE NORTH OF THE AREA OF NO DISTURBANCE. BEGIN UTILITY RELOCATION OF SANITARY SEWER AT SOUTHEASTERN CORNER OF THE SITE FROM THE EXISTING SANITARY SEWER TO SANITARY MH. 2. REFER TO UTILITY LINE INSTALLATION NOTES DURING RELOCATION OF UTILITIES.
6. ENSURE FILTER SOCKS FS-11 TO FS-13 ARE INSTALLED AND FUNCTIONING AND BEGIN THE REMOVAL OF THE EXISTING HELIPAD AND ASSOCIATED PARKING LOT. REFER TO THE STANDARD EROSION AND SEDIMENT CONTROL PLAN NOTES FOR RECYCLING AND DISPOSAL REQUIREMENTS. FOLLOWING THE REMOVAL OF THE EXISTING HELIPAD AND PARKING FACILITIES CONSTRUCTION OF THE NORTHERN HALF OF THE EMERGENCY DEPARTMENT EXPANSION CAN COMMENCE.
7. DURING THE CONSTRUCTION OF THE NORTHERN HALF OF THE EMERGENCY DEPARTMENT EXPANSION, THE DEMOLITION OF THE EXISTING MEDICAL OFFICE BUILDING CAN COMMENCE. REFER TO THE STANDARD EROSION AND SEDIMENT CONTROL PLAN NOTES FOR RECYCLING AND DISPOSAL REQUIREMENTS.
8. FOLLOWING THE COMPLETE DEMOLITION OF THE EXISTING MEDICAL OFFICE BUILDING, THE REMAINING SECTION OF THE PROPOSED EMERGENCY DEPARTMENT EXPANSION CAN BEGIN. COMPLETE THE REMAINING INSTALLATION OF THE SANITARY SEWER EXTENSION FROM SANITARY MH. 2 TO THE SERVICE CONNECTION TO THE EMERGENCY DEPARTMENT EXPANSION. REFER TO UTILITY LINE INSTALLATION NOTES DURING RELOCATION OF UTILITIES.
9. DURING THE CONSTRUCTION OF THE PROPOSED EMERGENCY DEPARTMENT EXPANSION, BEGIN CONSTRUCTION OF THE PROPOSED LOOP ROAD IMPROVEMENTS WITH ASSOCIATED RETAINING WALL, PLACEMENT OF FILL FOR SOUTHERN PARKING LOT IMPROVEMENTS, EXPANSION OF NORTHER PARKING LOT AND STORM SEWER IMPROVEMENTS, INCLUDING THE INSTALLATION OF PROPOSED STORM SEWER AND REMOVAL OF EXISTING STORM SEWER. ENSURE INLET PROTECTION DEVICES ARE INSTALLED ON ALL EXISTING AND PROPOSED INLETS AS SHOWN ON THE PLANS. KEEP ALL DISTURBANCES TO A MINIMUM AND STABILIZE ANY EXCESS DISTURBANCE WITH SEEDING AND MULCHING AND INSTALL EROSION CONTROL MATTING AS SHOWN ON THE PLANS. REFER TO UTILITY LINE INSTALLATION NOTES DURING RELOCATION OF UTILITIES.
10. CONTINUE WITH SITE CONSTRUCTION, INCLUDING UTILITY CONNECTIONS FOR THE PROPOSED EMERGENCY DEPARTMENT EXPANSION, CURBING, PAVING, SIDEWALKS, LANDSCAPING, AND PROPOSED RETAINING WALLS. IMMEDIATELY INSTALL EROSION CONTROL MATTING ON ALL SLOPES GREATER THAN 3:1, AS SHOWN ON THE PLANS AND KEEP ALL DISTURBANCES TO A MINIMUM, AND STABILIZE ANY EXCESS DISTURBANCES WITH SEEDING AND MULCHING AND INSTALL EROSION CONTROL MATTING AS SHOWN ON THE PLANS. REFER TO STANDARD E&S CONTROL PLAN NOTE 19.
11. REFER TO STANDARD EROSION AND SEDIMENT CONTROL NOTE #19 FOR SOIL PREPARATION AND TOPSOIL REPLACEMENT. IF INSUFFICIENT TOPSOIL IS PRESENT TO MEET THE SOIL REQUIREMENTS OF NOTE #19, ADDITIONAL TOPSOIL MATERIAL MAY NEED TO BE IMPORTED.
12. THE STABILIZATION AND FINAL GRADE OF DRAINAGE AREAS MUST BE VERIFIED AND IS A CRITICAL STAGE OF CONSTRUCTION THAT REQUIRES PROFESSIONAL OVERSIGHT IN ACCORDANCE WITH THE PCSM PLANS.
13. AFTER THE ENTIRE SITE HAS ACHIEVED PERMANENT STABILIZATION OF A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION, REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL BMPS SHOULD BE REMOVED. THIS PROCESS WILL INVOLVE REMOVING ACCUMULATED SEDIMENT IN BMPS. SEDIMENT SHALL BE INCORPORATED INTO THE EARTHWORK AS FILL OR WASTE ON THE SITE AS DIRECTED BY THE OWNER OR THEIR REPRESENTATIVE. ALL AREAS DISTURBED DURING THE REMOVAL OF THE TEMPORARY EROSION CONTROL BMP FACILITIES SHALL BE IMMEDIATELY STABILIZED WITH SEEDING AND MULCHING. REFER TO THE POST-CONSTRUCTION STORMWATER MANAGEMENT PLANS FOR ADDITIONAL INFORMATION FOR INSTALLATION OF STRUCTURAL BMPS.

AFTER COMPLETING ALL ABOVE STAGES OF CONSTRUCTION, PERMITTEE SHALL FOLLOW PERMIT TERMINATION PROCEDURES AS REQUIRED BY THE LOCAL COUNTY CONSERVATION DISTRICT.

MAINTENANCE SCHEDULE

DURING CONSTRUCTION, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CLEAN AND MAINTAIN IN GOOD WORKING CONDITION ALL EROSION CONTROL DEVICES IN ACCORDANCE WITH THE FOLLOWING MAINTENANCE SCHEDULE:

1. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH ONE-HALF THE ABOVEGROUND HEIGHT OF THE FILTER SOCK OR SILT FENCE WHEN IT REACHES THE CLEANOUT ELEVATIONS OF THE SEDIMENTATION BASIN CLEANOUT STAKES.
2. SEDIMENT MUST BE REMOVED FROM AN INLET PROTECTION DEVICE WHEN IT IS ONE-HALF FULL. FILTER BAGS SHOULD TRAP ALL PARTICLES LARGER THAN 150 MICRONS AND SHOULD BE REPLACED WHEN DAMAGED.
3. ROCK CONSTRUCTION ENTRANCES MUST BE MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL MUST BE MAINTAINED ON THE SITE FOR THIS PURPOSE. AT THE END OF EACH CONSTRUCTION DAY, ALL SEDIMENT DEPOSITED ON PUBLIC ROADWAYS WILL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE.
4. SEDIMENT MUST BE REMOVED FROM SEDIMENTATION BASIN AND TRAP ONCE IT REACHES THE CLEANOUT STAKE ELEVATION. CHECK ALL OUTLETS FOR FUNCTIONALITY.
5. SEDIMENT REMOVED FROM THE FACILITIES MAY BE INCORPORATED BACK INTO THE EARTHWORK AS FILL OR WASTE ON THE SITE AS DIRECTED BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
6. CHANNELS SHOULD BE MAINTAINED TO ENSURE THAT THE SPECIFIED DESIGN DIMENSIONS AND PROTECTIVE LININGS ARE AVAILABLE AT ALL TIMES. A CHANNEL SHOULD BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. DAMAGED CHANNEL LININGS SHOULD BE REPAIRED OR REPLACED IMMEDIATELY.

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 RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING, MUST BE PERFORMED IMMEDIATELY.

TEMPORARY CONTROL MEASURES

TEMPORARY EROSION CONTROL MEASURES TO BE USED DURING EARTHMOVING ACTIVITIES INCLUDE:

1. PLACING FILTER SOCK TO PROVIDE FILTRATION OF SILT LADEN RUNOFF.
2. KEEPING DISTURBED AREAS TO A MINIMUM AND SEEDING, DURING GERMINATION PERIODS, IF THE OPERATIONS CEASE FOR MORE THAN 20 DAYS.
3. PLACING STONE SUBBASE MATERIAL AS SOON AS POSSIBLE AFTER THE COMPLETION OF SUBGRADE PREPARATION AND CONSTRUCTION OF THE UNDERGROUND UTILITIES.
4. KEEPING TOPSOIL STOCKPILES LESS THAN 35 FEET HIGH AND SIDE SLOPES OF THESE STOCKPILES AND EARTH BERMS LESS THAN 2:1.
5. IMMEDIATELY APPLYING TEMPORARY SEED AND MULCH TO STOCKPILES, BERMS, AND DISTURBED AREAS.
6. PLACING STONE RIPRAP AT THE STORM SEWER DISCHARGE POINTS TO ACT AS ENERGY DISSIPATERS, THEREBY PREVENTING EROSIVE FLOWS.
7. INSTALLING EROSION CONTROL BLANKETS AT SWALES AND AT SLOPES GREATER THAN 3:1 IN ORDER TO PREVENT EROSIVE FLOWS.
8. INSTALLATION OF INLET PROTECTION DEVICES FOR ALL INLETS.

REFER TO THE EROSION AND SEDIMENTATION CONTROL PLAN FOR FACILITY LOCATIONS AND DETAILS.

PERMANENT CONTROL MEASURES

AFTER THE COMPLETION OF EARTHMOVING ACTIVITIES, PERMANENT SEEDING AND GROUND COVER SHALL BE ESTABLISHED. WHEN THESE AREAS ARE STABILIZED, STAGING AREA, ROCK CONSTRUCTION ENTRANCE, ALL FILTER SOCKS, AND ANY ACCUMULATED SEDIMENT IN THE AREAS OF THE EROSION CONTROL DEVICES SHALL BE REMOVED FROM THE SITE.

UTILITY LINE INSTALLATION NOTES

1. INSTALL TEMPORARY EROSION CONTROL FACILITIES PRIOR TO TRENCH EXCAVATION.
2. CLEARING AND GRUBBING OPERATIONS SHALL BE LIMITED TO A DISTANCE EQUAL TO TWO (2) TIMES THE LENGTH OF PIPE EXCAVATION THAT CAN BE COMPLETED WITHIN THE SAME DAY.
3. DAILY TRENCH EXCAVATION SHALL BE LIMITED TO THE LENGTH OF PIPE PLACEMENT AND BACKFILLING THAT CAN BE COMPLETED WITHIN THE SAME DAY.
4. SEEPAGE WHICH ACCUMULATES DURING TRENCH EXCAVATION OPERATIONS SHALL BE PUMPED INTO A STONE FILTERING DEVICE PRIOR TO PIPE PLACEMENT AND/OR BACKFILLING.
5. ALL DISTURBED AREAS SHALL BE GRADED TO FINAL CONTOURS ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING. SEEDING AND MULCHING OF ALL DISTURBED AREAS SHALL BE DONE IMMEDIATELY FOLLOWING THE GRADING.
6. STORM SEWERS SHALL BE CONSTRUCTED IN AN UPSTREAM DIRECTION FROM THEIR DISCHARGE POINTS
7. TEMPORARY PAVEMENT RESTORATION IS TO BE USED AS NECESSARY TO MAINTAIN TRAVEL LANES.
8. INLET TOPS AND MANHOLE LIDS ARE TO BE SET AT EXISTING ROADWAY ELEVATION IF IN EXISTING TRAVEL WAY UNTIL FINAL PAVING OCCURS.
9. CONTRACTOR IS NOT TO REMOVE EXISTING STORM SEWER NETWORKS UNTIL PROPOSED STORM SEWER SYSTEMS HAS BEEN CONSTRUCTED AND FUNCTIONING AND ANY EXISTING STORM SEWER IS CONNECTED TO PROVIDE POSITIVE FLOW TO THE DOWNSTREAM STORM SEWER.
10. UPON INSTALLATION OF STORM SEWER, IMMEDIATELY INSTALL INLET PROTECTION DEVICES AS SHOWN ON THE PLANS. INLET TOPS SHALL BE SEALED TO INLET BOX DURING INSTALLATION

TEMPORARY SEEDING SCHEDULE

1. TEMPORARY SEEDING SHALL BE IN ACCORDANCE WITH THE PADEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL, LATEST EDITION, UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE PROJECT SPECIFICATIONS.
2. THE FOLLOWING MUST BE STABILIZED IMMEDIATELY:
    A. THE SURFACES OF ALL CHANNELS, SEDIMENTATION BASINS, STOCKPILES, AND TEMPORARY TOPSOIL BERMS.
    B. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED SHALL BE STABILIZED AS FOLLOWS: DURING GERMINATING PERIODS, AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE YEAR SHALL BE STABILIZED IN ACCORDANCE WITH TEMPORARY SEEDING SPECIFICATIONS. AREAS, WHICH EITHER ARE AT FINISHED GRADE OR WILL NOT BE RE-DISTURBED WITHIN ONE YEAR, SHALL BE STABILIZED IN ACCORDANCE WITH PERMANENT SEEDING SPECIFICATIONS. DURING NON-GERMINATING PERIODS, DISTURBED AREAS SHALL BE STABILIZED WITH MULCH.
3. SEEDING SHALL OCCUR IMMEDIATELY AFTER ESTABLISHMENT OF THE TOPSOIL STOCKPILES OR ROUGH GRADED AREAS. THE FOLLOWING SEED SHALL BE PLANTED:

TABLE 11.4
Recommended Seed Mixtures

Mixture Number	Species	Seeding Rate - Pure Live Seed[1]	
		Most Sites	Adverse Sites
1[2] (NURSE CROP)	Spring oats (spring), or	64	96
	Annual ryegrass (spring or fall), or	10	15
	Winter wheat (fall), or	90	120
	Winter rye (fall)	56	112

Penn State, "Erosion Control and Conservation Plantings on Noncropland"

1. PLS is the product of the percentage of pure seed times percentage germination divided by 100. For example, to secure the actual planting rate for switchgrass, divide 12 pounds PLS shown on the seed tag. Thus, if the PLS content of a given seed lot is 35%, divide 12 PLS by 0.35 to obtain 34.3 pounds of seed required to plant one acre. All mixtures in this table are shown in terms of PLS.
2. If high-quality seed is used, for most sites seed spring oats at a rate of 2 bushels per acre, winter wheat at 11.5 bushels per acre, and winter rye at 1 bushel per acre. If germination is below 90%, increase these suggested seeding rates by 0.5 bushel per acre.

4. PREPARE AREAS TO BE SEEDED AS FOLLOWS: REMOVE ALL DEBRIS, INCLUDING LARGE STONES. TILL SOIL TO A DEPTH OF FOUR INCHES TO SIX INCHES.
5. LIMING AND FERTILIZING SHALL BE IN ACCORDANCE WITH TABLE 11.2 AS FOLLOWS:

TABLE 11.2
Soil Amendment Application Rate Equivalents

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

Adapted from Penn State, "Erosion Control and Conservation Plantings on Noncropland"

NOTE: A compost blanket which meets the standards of this chapter may be substituted for the soil amendments shown in Table 11.2.

6. TIME OF SEEDING: FOR BEST RESULTS, GRASS AND LEGUME SEEDINGS SHOULD BE MADE IN SPRING (MARCH, APRIL, AND EARLY MAY). HOWEVER, THROUGH PROPER CHOICE OF SEED MIXTURES, SEED SPECIFICATIONS, AND ESTABLISHMENT TECHNIQUES, DISTURBED SITES CAN BE SEEDED ALMOST ANY TIME FROM SPRING TO FALL. LEGUME SEEDINGS NEED A GROWING PERIOD OF AT LEAST TEN TO TWELVE WEEKS TO PRODUCE SEEDLINGS SUFFICIENTLY LARGE AND HARDY TO SURVIVE THE WINTER. GRASSES GENERALLY REQUIRE AT LEAST FOUR TO SIX WEEKS OF GROWTH PRIOR TO HARD FROSTS. IT IS SUGGESTED THAT LEGUMES BE SEEDED BEFORE AUGUST 15. IF LEGUMES MUST BE SEEDED AFTER THE ABOVE DATES, SELECT LEGUME SEEDLOTS WITH A HIGH CONTENT (30% TO 35% OR MORE) OF HARD SEED. NORMALLY, SPRING OATS ARE SEEDED IN THE SPRING AND EARLY SUMMER, AND WINTER WHEAT OR WINTER RYE FROM EARLY AUGUST UNTIL EARLY OCTOBER. HOWEVER, OATS MAY ALSO BE SEEDED IN THE LATE SUMMER AND EARLY FALL. WHEAT OR RYE MAY BE SEEDED IN THE SPRING OR EARLY SUMMER IF NOT TO BE HARVESTED FOR GRAIN. SPRING SEEDING SHOULD BE COMPLETED MARCH 15 TO JUNE 15, SUMMER SEEDING (ANNUAL RYEGRASS) SHOULD BE COMPLETED FROM JUNE 16 TO AUGUST 15, AND FALL SEEDING SHALL BE COMPLETED AUGUST 16 TO NOVEMBER 1.
7. SOW SEED AT THE INDICATED RATE. DIVIDE SEED INTO TWO EQUAL LOTS. SOW ONE LOT IN ONE DIRECTION. SOW SECOND LOT AT A RIGHT ANGLE TO THE FIRST LOT. RAKE SEEDED AREA LIGHTLY. ROLL SURFACE LIGHTLY TO FIRM SOIL AROUND SEED.
8. MULCHES SHOULD BE APPLIED AT THE RATES SHOWN IN TABLE 11.6.

STRAW AND HAY MULCH SHOULD BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO "CRIMP" THE STRAW OR HAY INTO THE SOIL -- ABOUT 3 INCHES. THIS METHOD SHOULD BE LIMITED TO SLOPES NO STEEPER THAN 3H:1V. THE MACHINERY SHOULD BE OPERATED ON THE CONTOUR. NOTE: CRIMPING OF HAY OR STRAW BY RUNNING OVER IT WITH TRACKED MACHINERY IS NOT RECOMMENDED.

POLYMERIC AND GUM TACKIFIERS MIXED AND APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS MAY BE USED TO TACK MULCH. AVOID APPLICATION DURING RAIN AND ON WINDY DAYS. A 24-HOUR CURING PERIOD AND A SOIL TEMPERATURE HIGHER THAN 450 F ARE TYPICALLY REQUIRED. APPLICATION SHOULD GENERALLY BE HEAVIEST AT EDGES OF SEEDED AREAS AND AT CRESTS OF RIDGES AND BANKS TO PREVENT LOSS BY WIND. THE REMAINDER OF THE AREA SHOULD HAVE BINDER APPLIED UNIFORMLY. BINDERS MAY BE APPLIED AFTER MULCH IS SPREAD OR SPRAYED INTO THE MULCH AS IT IS BEING BLOWN ONTO THE SOIL. APPLYING STRAW AND BINDER TOGETHER IS GENERALLY MORE EFFECTIVE.

SYNTHETIC BINDERS, OR CHEMICAL BINDERS, MAY BE USED AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH PROVIDED SUFFICIENT DOCUMENTATION IS PROVIDED TO SHOW THEY ARE NON-TOXIC TO NATIVE PLANT AND ANIMAL SPECIES.

MULCH ON SLOPES OF 8% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING. LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETS MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

SHREDDED PAPER HYDROMULCH SHOULD NOT BE USED ON SLOPES STEEPER THAN 5%. WOOD FIBER HYDROMULCH MAY BE APPLIED ON STEEPER SLOPES PROVIDED A TACKIFIER IS USED. THE APPLICATION RATE FOR ANY HYDROMULCH SHOULD BE 2,000 LB/ACRE AT A MINIMUM.

TABLE 11.6
Mulch Application Rates

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

PERMANENT SEEDING SCHEDULE

1. PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH THE PADEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL, LATEST EDITION, UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE PROJECT SPECIFICATIONS.
2. PERMANENT SEEDING SHALL OCCUR IMMEDIATELY AFTER FINE GRADING IS COMPLETED. THE SCHEDULE OF SEEDING SHALL BE AS FOLLOWS, (IF APPLICABLE).

TABLE 11.4
Recommended Seed Mixtures

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

Penn State, "Erosion Control and Conservation Plantings on Noncropland"

1. PLS is the product of the percentage of pure seed times percentage germination divided by 100. For example, to secure the actual planting rate for switchgrass, divide 12 pounds PLS shown on the seed tag. Thus, if the PLS content of a given seed lot is 35%, divide 12 PLS by 0.35 to obtain 34.3 pounds of seed required to plant one acre. All mixtures in this table are shown in terms of PLS.
2. If high-quality seed is used, for most sites seed spring oats at a rate of 2 bushels per acre, winter wheat at 11.5 bushels per acre, and winter rye at 1 bushel per acre. If germination is below 90%, increase these suggested seeding rates by 0.5 bushel per acre.
3. This mixture is suitable for frequent mowing. Do not cut shorter than 4 inches.
4. Keep seeding rate to that recommended in table. These species have many seeds per pound and are very competitive. To seed small quantities of small seeds such as weeping lovegrass and redtop, dilute with dry sawdust, sand, rice hulls, buckwheat hulls, etc.
5. Use for highway slopes and similar sites where the desired species after establishment is crownvetch.
6. Use only in extreme southeastern or extreme southwestern Pennsylvania. *Serecia lespedeza* is not well adapted to most of PA.
7. Do not mow shorter than 9 to 10 inches.
8. Seed mixtures containing crown vetch should not be used in areas adjacent to wetlands or stream channels due to the invasive nature of this species.

TABLE 11.5
Recommended Seed Mixtures for Stabilizing Disturbed Areas

Site Condition	Nurse Crop	Seed Mixture (Select one mixture)
Slopes and Banks (not mowed)		
Well-drained	1 plus	3, ~~5~~, 8, or 12[1]
Variable drainage	1 plus	3 ~~or 7~~
Slopes and Banks (mowed)		
Well-drained	1 plus	2 or 10
Slopes and Banks (grazed/hay)		
Well-drained	1 plus	2, 3, or 13
Gullies and Eroded Areas	1 plus	3, ~~5, 7,~~ or 12[1]
Erosion Control Facilities (BMPs)		
Sod waterways, spillways, frequent water flow areas	1 plus	2, 3, or 4
Drainage ditches		
Shallow, less than 3 feet deep	1 plus	2, 3, or 4
Deep, not mowed	1 plus	~~5 or~~ 7
Pond banks, dikes, levees, dams, diversion channels, And occasional water flow areas		
Mowed areas	1 plus	2 or 3
Non-mowed areas	1 plus	~~5 or~~ 7
For hay or silage on diversion channels and occasional water flow areas	1 plus	3 or 13
Highways[2]		
Non-mowed areas		
~~Pure crownvetch[3]~~	~~1 plus~~	~~5 or 6~~
Well-drained	1 plus	~~5, 7~~, 8, 9, or 10
Variable drained	1 plus	3 ~~or 7~~
Poorly drained	1 plus	3 or 4
Areas mowed several times per year	1 plus	2, 3, or 10
Utility Right-of-way		
Well-drained	1 plus	~~5~~, 8, or 12[1]
Variable drained	1 plus	3 ~~or 7~~
Well-drained areas for grazing/hay	1 plus	2, 3, or 13
Effluent Disposal Areas	1 plus	3 or 4
Sanitary Landfills	1 plus	3, ~~5, 7~~, 11[1], or 12[1]
Surface mines		
Spoils, mine wastes, fly ash, slag, settling basin		
Residues and other severely disturbed areas (lime to soil test)	1 plus	3, 4, ~~5, 7~~, 8, 9, 11[1], or 12[1]
Severely disturbed areas for grazing/hay	1 plus	3 or 13

Penn State, "Erosion Control and Conservation Plantings on Noncropland"

1. For seed mixtures 11 and 12, only use spring oats or weeping lovegrass (included in mix) as nurse crop.
2. Contact the Pennsylvania Department of Transportation district roadside specialist for specific suggestions on treatment techniques and management practices.
3. Seed mixtures containing crown vetch should not be used in areas adjacent to wetlands or stream channels due to the invasive nature of this species.

3. REMOVE ALL DEBRIS, INCLUDING LARGE STONES. TILL SOIL TO A DEPTH OF FOUR INCHES TO SIX INCHES. A MINIMUM OF FOUR INCHES OF TOPSOIL SHOULD BE APPLIED, REFER TO STANDARD E&S CONTROL PLAN NOTE 19. APPLY LIME AND FERTILIZER AT THE RATES SPECIFIED BELOW. SOIL SUPPLEMENTS SHALL BE APPLIED IN ACCORDANCE WITH THE REQUIREMENTS DETERMINED BY AN ACTUAL SOIL TEST OR AS INDICATED BELOW. WORK FERTILIZER INTO TOP TWO INCHES OF SOIL.
4. LIMING AND FERTILIZING SHALL BE IN ACCORDANCE WITH TABLE 11.2 AS FOLLOWS:

TABLE 11.2
Soil Amendment Application Rate Equivalents

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

Adapted from Penn State, "Erosion Control and Conservation Plantings on Noncropland"

NOTE: A compost blanket which meets the standards of this chapter may be substituted for the soil amendments shown in Table 11.2.

5. TIME OF SEEDING: FOR BEST RESULTS, GRASS AND LEGUME SEEDINGS SHOULD BE MADE IN SPRING (MARCH, APRIL, AND EARLY MAY). HOWEVER, THROUGH PROPER CHOICE OF SEED MIXTURES, SEED SPECIFICATIONS, AND ESTABLISHMENT TECHNIQUES, DISTURBED SITES CAN BE SEEDED ALMOST ANY TIME FROM SPRING TO FALL. LEGUME SEEDINGS NEED A GROWING PERIOD OF AT LEAST TEN TO TWELVE WEEKS TO PRODUCE SEEDLINGS SUFFICIENTLY LARGE AND HARDY TO SURVIVE THE WINTER. GRASSES GENERALLY REQUIRE AT LEAST FOUR TO SIX WEEKS OF GROWTH PRIOR TO HARD FROSTS. IT IS SUGGESTED THAT LEGUMES BE SEEDED BEFORE AUGUST 15. IF LEGUMES MUST BE SEEDED AFTER THE ABOVE DATES, SELECT LEGUME SEEDLOTS WITH A HIGH CONTENT (30% TO 35% OR MORE) OF HARD SEED. NORMALLY, SPRING OATS ARE SEEDED IN THE SPRING AND EARLY SUMMER, AND WINTER WHEAT OR WINTER RYE FROM EARLY AUGUST UNTIL EARLY OCTOBER. HOWEVER, OATS MAY ALSO BE SEEDED IN THE LATE SUMMER AND EARLY FALL. WHEAT OR RYE MAY BE SEEDED IN THE SPRING OR EARLY SUMMER IF NOT TO BE HARVESTED FOR GRAIN. PENNDOT PUBLICATION 408 RECOMMENDS PLANTING DATES FROM MARCH 15 TO JUNE 1 AND AUGUST 1 TO OCTOBER 15.
6. APPLY SEED AT THE RATE SCHEDULED IN TABLE 11.4, FOR EACH PARTICULAR SEED TYPE. DIVIDE SEED INTO TWO EQUAL LOTS. SOW ONE LOT IN ONE DIRECTION, SOW SECOND LOT AT A RIGHT ANGLE TO THE FIRST LOT. RAKE SEEDED AREA LIGHTLY. ROLL SURFACE LIGHTLY TO FIRM SOIL AROUND SEED.
7. MULCHES SHOULD BE APPLIED AT THE RATES SHOWN IN TABLE 11.6.

STRAW AND HAY MULCH SHOULD BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO "CRIMP" THE STRAW OR HAY INTO THE SOIL -- ABOUT 3 INCHES. THIS METHOD SHOULD BE LIMITED TO SLOPES NO STEEPER THAN 3H:1V. THE MACHINERY SHOULD BE OPERATED ON THE CONTOUR. NOTE: CRIMPING OF HAY OR STRAW BY RUNNING OVER IT WITH TRACKED MACHINERY IS NOT RECOMMENDED.

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TABLE 11.6
Mulch Application Rates

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

THE
PIDCOCK
COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive   Allentown, Pennsylvania   18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL

KEY MAP

NOTES:

1. THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.
2. THESE DOCUMENTS ARE PROVIDED FOR MUNICIPAL REVIEW ONLY AND ARE NOT TO BE UTILIZED FOR ANY OTHER PURPOSE. THE DOCUMENTS ARE NOT ISSUED FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED AS SUCH BELOW.

CONTRACTOR'S OBLIGATION REGARDING COORDINATION OF DOCUMENTS AND FIELD CONDITIONS

THE CONTRACT DOCUMENTS PRESENT THE DESIGN INTENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL PLANS, SPECIFICATIONS, ADDENDA, CONSTRUCTION SKETCHES AND OTHER CONTRACT DOCUMENTS FOR CONSISTENCY. SIMILARLY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW FIELD CONDITIONS, INCLUDING COORDINATION WITH ALL UTILITIES. THE CONTRACTOR SHALL COMPLETE ANY TEST EXCAVATIONS IN ADVANCE OF ORDERING MATERIALS OR OF CONSTRUCTION IN AN AREA OF UTILITY CROSSINGS OR POTENTIAL INVOLVEMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING ANY INCONSISTENCIES IN THE DOCUMENTS OR ANY APPARENT CONFLICTS TO THE ATTENTION OF THE ENGINEER BEFORE ORDERING MATERIALS AND BEFORE PROCEEDING WITH CONSTRUCTION IN THE AREA SO THAT THE ENGINEER MAY REVIEW THE CONDITIONS AND RECOMMEND ANY ADJUSTMENTS TO THE DOCUMENTS THAT MAY BE NECESSARY, OR TO RECOMMEND RELOCATION OF A UTILITY OR OTHER REMEDIAL WORK THAT MAY BE REQUIRED.

PLAN PREPARER:

BRENT C. TUCKER, P.E.

THE PIDCOCK COMPANY
2451 PARKWOOD DRIVE
ALLENTOWN, PA. 18103
TELEPHONE NO.: 610-791-2252

NOTICE

THIS PLAN IS INTENDED FOR SOIL EROSION AND SEDIMENTATION CONTROL PURPOSES ONLY

6		
5		
4		
3		
2	JANUARY 10, 2025	GENERAL REVISIONS
1	NOVEMBER 22, 2024	REVISED PER LCCD COMMENTS

REVISIONS

SOIL EROSION AND SEDIMENTATION CONTROL PLANS

SCALE: NO SCALE
DATE: SEPTEMBER 27, 2024
CHECKED BY: BCT
DRAWN BY: JGU
CAD FILE: SE NOTES.dwg
PROJECT NUMBER: 22005

811
Know what's below.
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Lehigh Valley Health Network
MUHLENBERG

NEW SOUTH WING EMERGENCY DEPARTMENT EXPANSION MAJOR AMENDMENT

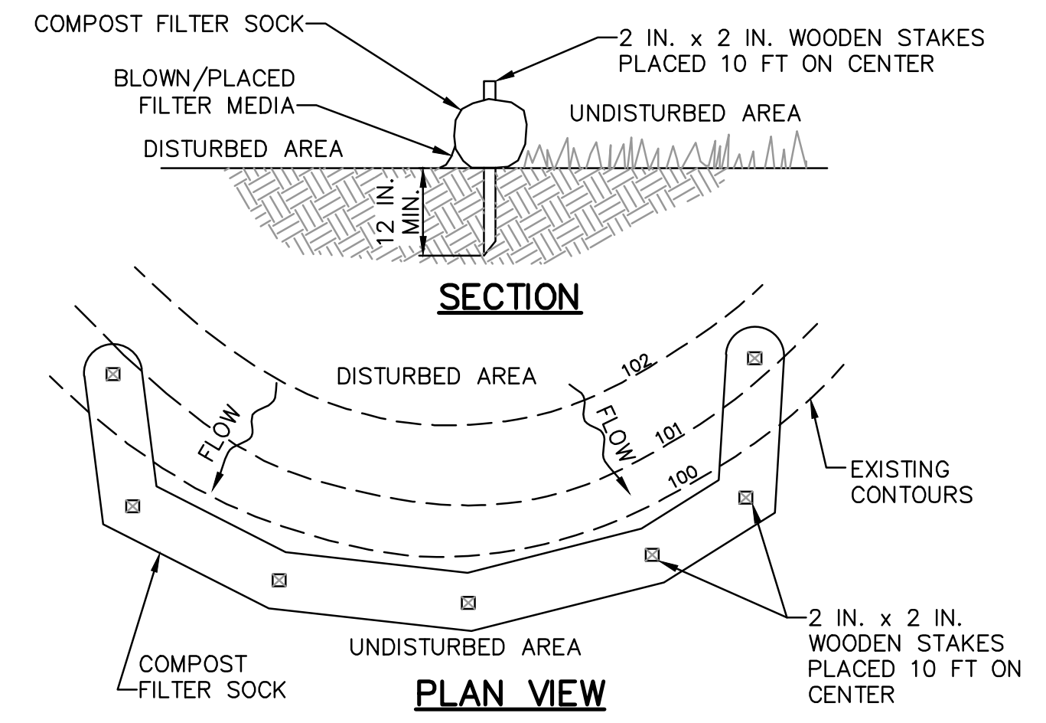
CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

FILE NUMBER
S-12396

SHEET NUMBER
4 OF 6

Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\E-S Submission\SE NOTES.dwg   Printed: Jan 10, 2025 - 1:55pm


COMPOST FILTER SOCK
BLOWN/PLACED FILTER MEDIA
DISTURBED AREA
2 IN. x 2 IN. WOODEN STAKES PLACED 10 FT ON CENTER
UNDISTURBED AREA
12 IN. MIN.
SECTION
DISTURBED AREA
FLOW
102
101
100
EXISTING CONTOURS
COMPOST FILTER SOCK
UNDISTURBED AREA
2 IN. x 2 IN. WOODEN STAKES PLACED 10 FT ON CENTER
PLAN VIEW

FILTER SOCK DETAIL		
FILTER SOCK	FILTER SOCK LOCATION	SOCK SIZE
FS-1 TO FS-3B	NORTH OF RCE #1	18
FS-4	NORTH OF RCE #1	18
FS-4A	NORTH OF PROPOSED ACCESS DRIVE	18
FS-5	NORTHEAST OF PROPOSED ACCESS DRIVE	18
FS-6	NORTHEAST OF PROPOSED ACCESS DRIVE	18
FS-7 TO FS-9	WESTERN EDGE OF NO DISTURBANCE AREA	18
FS-10	NORTH OF PROPOSED ED EXPANSION	18
FS-11 TO FS-13	NORTH OF PROPOSED ED EXPANSION	18
FS-14 TO FS-23	EASTERN EDGE OF NO DISTURBANCE AREA	18
FS-24 TO FS-48	EAST OF PROPOSED ACCESS DRIVE	18
FS-49 TO FS-55	SOUTH OF PROPOSED ACCESS DRIVE	18
FS-56 TO FS-57	AT EXCAVATED MATERIAL / TOPSOIL STOCKPILES	18

NOTES:

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

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

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

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

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

CONTRACTOR TO USE FILTREXX BRAND FILTER SOCK MEETING SPECIFICATION HIGHLIGHTED ABOVE. CONTRACTOR SHOULD PROVIDE TEST RESULTS OF THE COMPOST MATERIAL TO COUNTY CONSERVATION DISTRICT PRIOR TO PLACEMENT OF FILTER SOCKS IN THE FIELD.

LOCAL INSTALLER INFORMATION:
HILLTOP SERVICES, INC.
16403 POTTSVILLE PIKE
HAMBURG, PA. 19526
610-562-3124

TABLE 4.1 – COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

MATERIAL TYPE	3 MIL HDPE	5 MIL HDPE	5 MIL HDPE	MULTI-FILAMENT POLYPROPYLENE (MFPP)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (HDMFPP)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	BIO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH		26 PSI	26 PSI	44 PSI	202 PSI
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	23% AT 1000 HR.	23% AT 1000 HR.		100% AT 1000 HR.	100% AT 1000 HR.
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS

TWO-PLY SYSTEMS

INNER CONTAINMENT NETTING	HDPE BIAXIAL NET CONTINUOUSLY WOUND FUSION-WELDED JUNCTURES 3/4" X 3/4" MAX. APERTURE SIZE
OUTER FILTRATION MESH	COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER AND NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH) 3/16" MAX. APERTURE SIZE

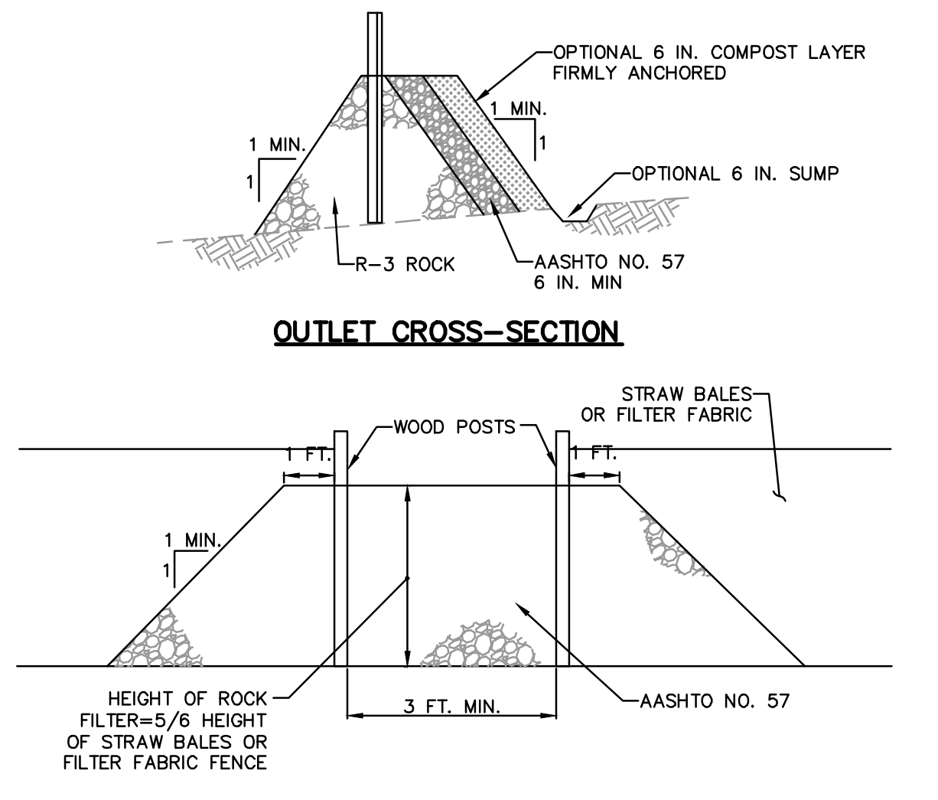
SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS.

TABLE 4.2 – COMPOST STANDARDS

ORGANIC MATTER CONTENT	25% – 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
PH	5.5 – 8.5
MOISTURE CONTENT	30% – 60%
PARTICLE SIZE	30% – 50% PASS THROUGH 3/8" SIEVE
SOLUBLE SALT CONCENTRATION	5.0 DS/M (MMHOS/CM) MAXIMUM

STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK

NOT TO SCALE


OPTIONAL 6 IN. COMPOST LAYER FIRMLY ANCHORED
1 MIN.
1
OPTIONAL 6 IN. SUMP
R-3 ROCK
AASHTO NO. 57 6 IN. MIN
OUTLET CROSS-SECTION
STRAW BALES OR FILTER FABRIC
WOOD POSTS
1 FT.
1 MIN.
HEIGHT OF ROCK FILTER=5/6 HEIGHT OF STRAW BALES OR FILTER FABRIC FENCE
3 FT. MIN.
AASHTO NO. 57
UP-SLOPE FACE

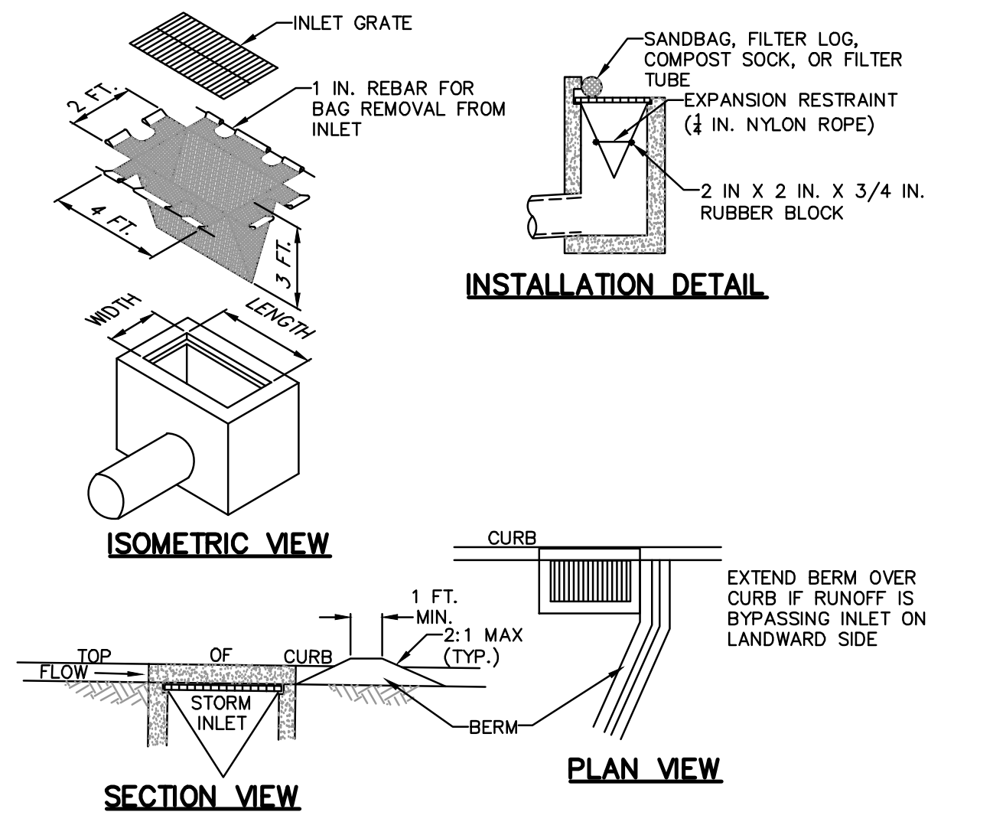
NOTES:

A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

STANDARD CONSTRUCTION DETAIL #4-6
ROCK FILTER OUTLET

NOT TO SCALE


INLET GRATE
1 IN. REBAR FOR BAG REMOVAL FROM INLET
2 FT.
4 FT.
3 FT.
WIDTH
LENGTH
SANDBAG, FILTER LOG, COMPOST SOCK, OR FILTER TUBE
EXPANSION RESTRAINT (¼ IN. NYLON ROPE)
2 IN X 2 IN. X 3/4 IN. RUBBER BLOCK
INSTALLATION DETAIL
ISOMETRIC VIEW
CURB
EXTEND BERM OVER CURB IF RUNOFF IS BYPASSING INLET ON LANDWARD SIDE
1 FT. MIN.
2:1 MAX (TYP.)
TOP OF CURB
FLOW
STORM INLET
BERM
SECTION VIEW
PLAN VIEW

NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

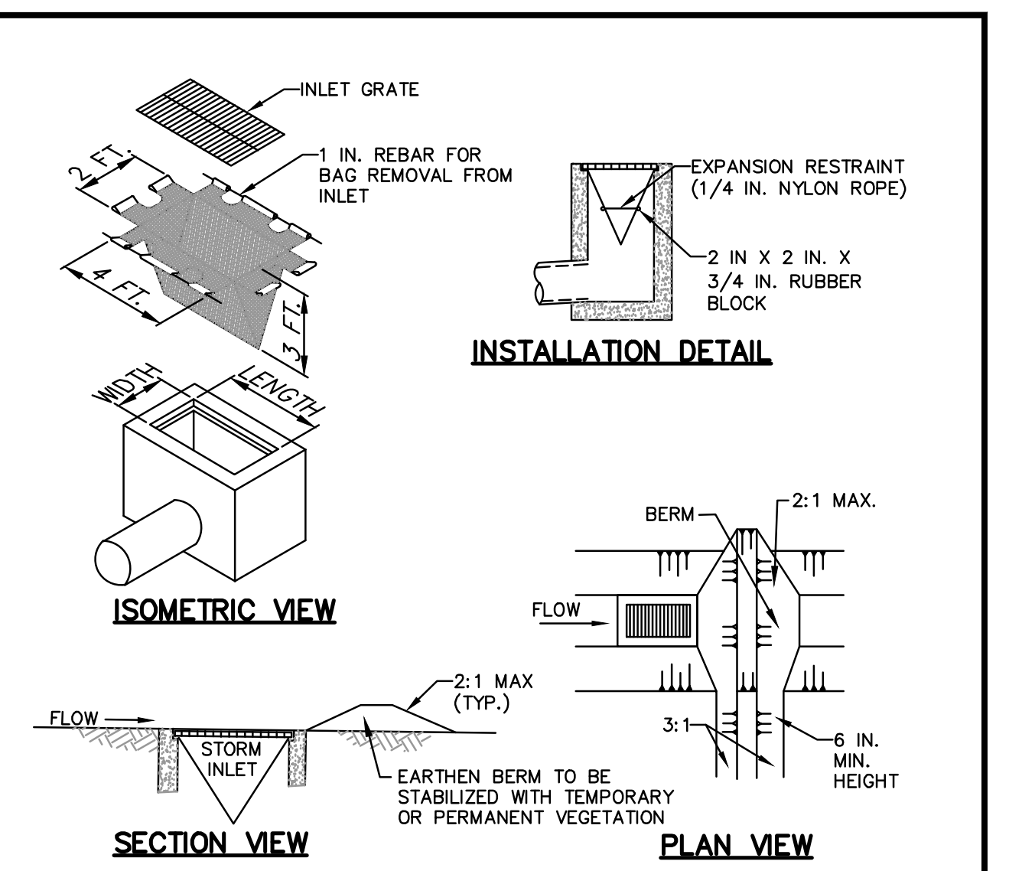
ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-15
FILTER BAG INLET PROTECTION - TYPE C INLET

NOT TO SCALE


INLET GRATE
1 IN. REBAR FOR BAG REMOVAL FROM INLET
2 FT.
4 FT.
3 FT.
WIDTH
LENGTH
EXPANSION RESTRAINT (1/4 IN. NYLON ROPE)
2 IN X 2 IN. X 3/4 IN. RUBBER BLOCK
INSTALLATION DETAIL
ISOMETRIC VIEW
BERM
2:1 MAX.
FLOW
2:1 MAX (TYP.)
3:1
6 IN. MIN. HEIGHT
STORM INLET
EARTHEN BERM TO BE STABILIZED WITH TEMPORARY OR PERMANENT VEGETATION
SECTION VIEW
PLAN VIEW

NOTE: FILTER BAG INLET PROTECTION SHALL BE INSTALLED ON ALL PROPOSED INLETS. ADDITIONALLY, CONTRACTOR SHALL INSTALL A FILTER FABRIC WRAP ON EACH STRUCTURE TO PREVENT ANY SILT LADEN RUNOFF FROM ENTERING THE STRUCTURE. IN LIEU OF AN INLET FILTER BAG AND FILTER FABRIC, STONE AND CONCRETE BLOCK INLET PROTECTION MAY BE INSTALLED AT THE CONTRACTOR'S DISCRETION.

NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.

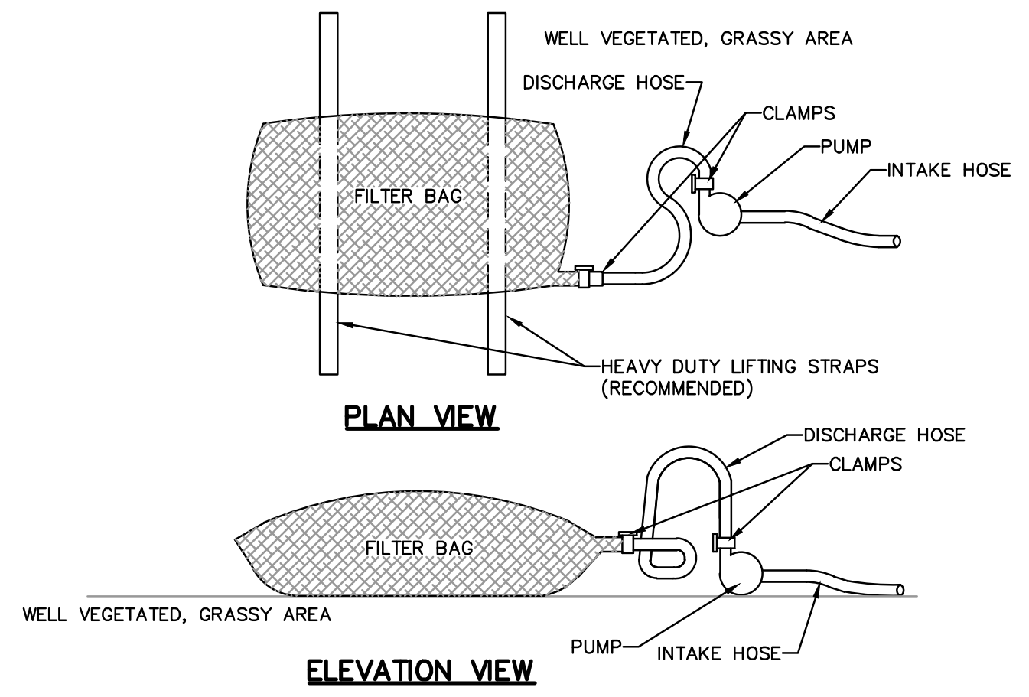
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-16
FILTER BAG INLET PROTECTION - TYPE M INLET

NOT TO SCALE


WELL VEGETATED, GRASSY AREA
DISCHARGE HOSE
CLAMPS
PUMP
INTAKE HOSE
FILTER BAG
HEAVY DUTY LIFTING STRAPS (RECOMMENDED)
PLAN VIEW
DISCHARGE HOSE
CLAMPS
FILTER BAG
WELL VEGETATED, GRASSY AREA
PUMP
INTAKE HOSE
ELEVATION VIEW

NOTES:

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

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

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

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

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

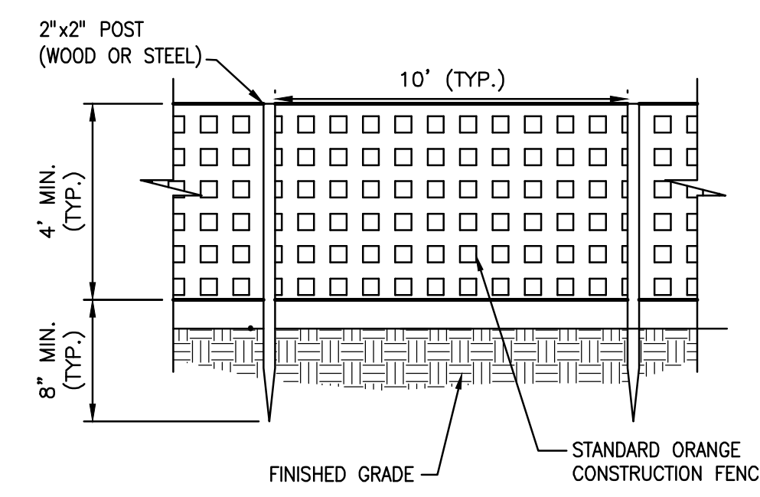
THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

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

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

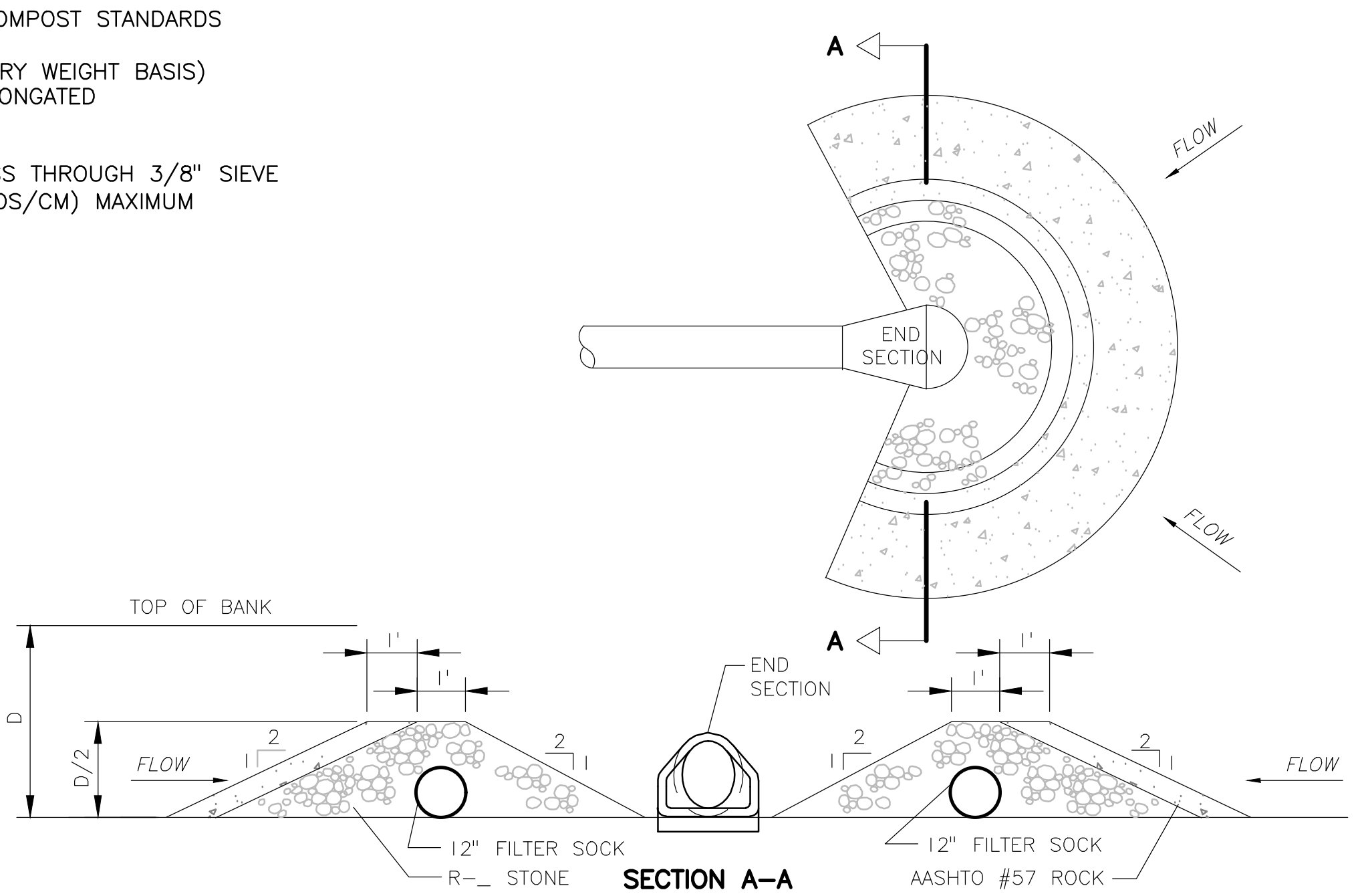
STANDARD CONSTRUCTION DETAIL #3-16
PUMPED WATER FILTER BAG

NOT TO SCALE


2"x2" POST (WOOD OR STEEL)
10' (TYP.)
4' MIN. (TYP.)
6" MIN. (TYP.)
FINISHED GRADE
STANDARD ORANGE CONSTRUCTION FENCE

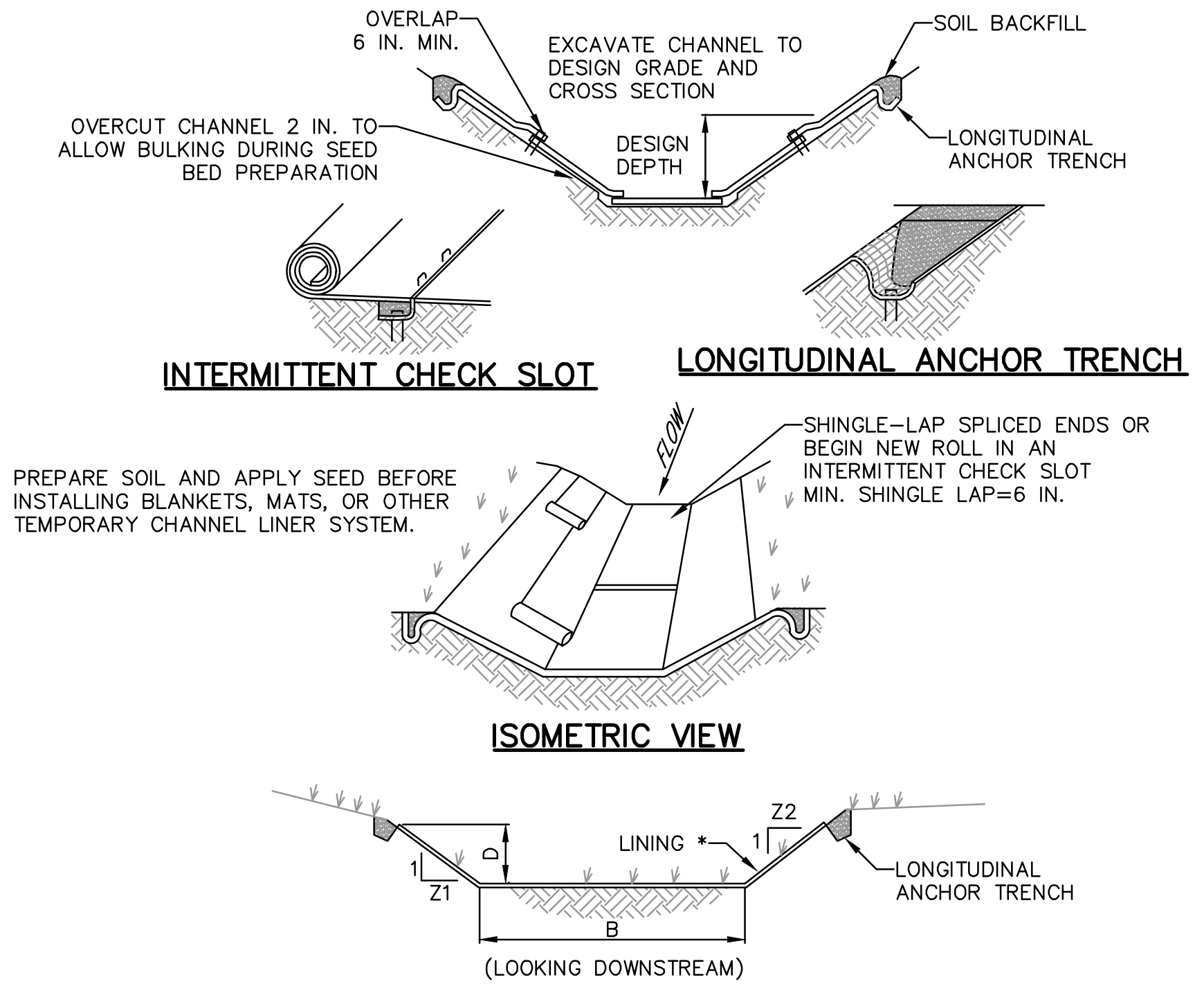
TEMPORARY CONSTRUCTION FENCE

NO SCALE


A
FLOW
END SECTION
A
TOP OF BANK
D
D/2
FLOW
1
2
1'
12" FILTER SOCK
R-_ STONE
END SECTION
12" FILTER SOCK
AASHTO #57 ROCK
SECTION A-A

ROCK FILTER BARRIER DATA			
ROCK FILTER NO.	LOCATION	D (FT.)	RIPRAP SIZE
RFB-1	NORTHEAST OF PROPOSED ACCESS DRIVE	2.0	R-4

ROCK FILTER BARRIER DETAIL


OVERLAP 6 IN. MIN.
EXCAVATE CHANNEL TO DESIGN GRADE AND CROSS SECTION
SOIL BACKFILL
OVERCUT CHANNEL 2 IN. TO ALLOW BULKING DURING SEED BED PREPARATION
DESIGN DEPTH
LONGITUDINAL ANCHOR TRENCH
INTERMITTENT CHECK SLOT
LONGITUDINAL ANCHOR TRENCH
PREPARE SOIL AND APPLY SEED BEFORE INSTALLING BLANKETS, MATS, OR OTHER TEMPORARY CHANNEL LINER SYSTEM.
FLOW
SHINGLE-LAP SPLICED ENDS OR BEGIN NEW ROLL IN AN INTERMITTENT CHECK SLOT MIN. SHINGLE LAP=6 IN.
ISOMETRIC VIEW
LINING *
D
Z1
Z2
1
B
LONGITUDINAL ANCHOR TRENCH
(LOOKING DOWNSTREAM)
CHANNEL CROSS-SECTION

* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION

CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)	LINING *
A	ALL	0	0.5	3	3	3	NAG S75

NOTES:

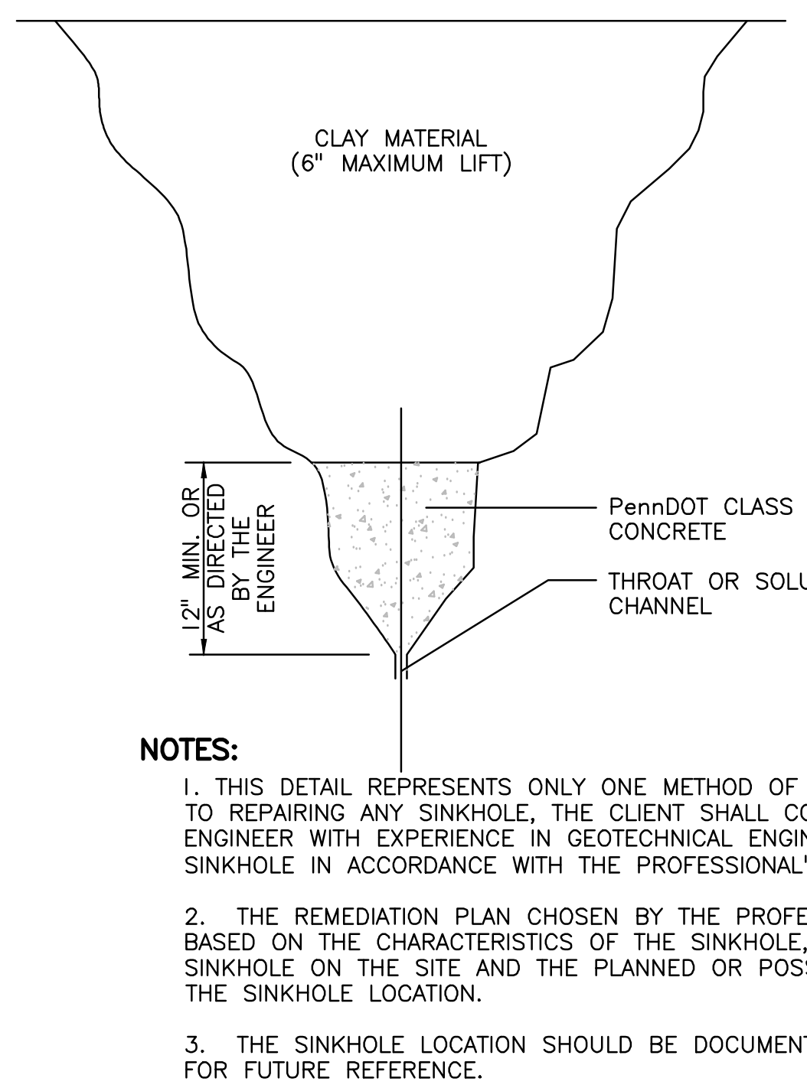
ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION.
SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

STANDARD CONSTRUCTION DETAIL #6-1
VEGETATED CHANNEL

NOT TO SCALE


CLAY MATERIAL (6" MAXIMUM LIFT)
12" MIN. OR AS DIRECTED BY THE ENGINEER
PennDOT CLASS "C" CONCRETE
THROAT OR SOLUTION CHANNEL

NOTES FOR POSSIBLE APPROACH TO SINKHOLE REPAIR

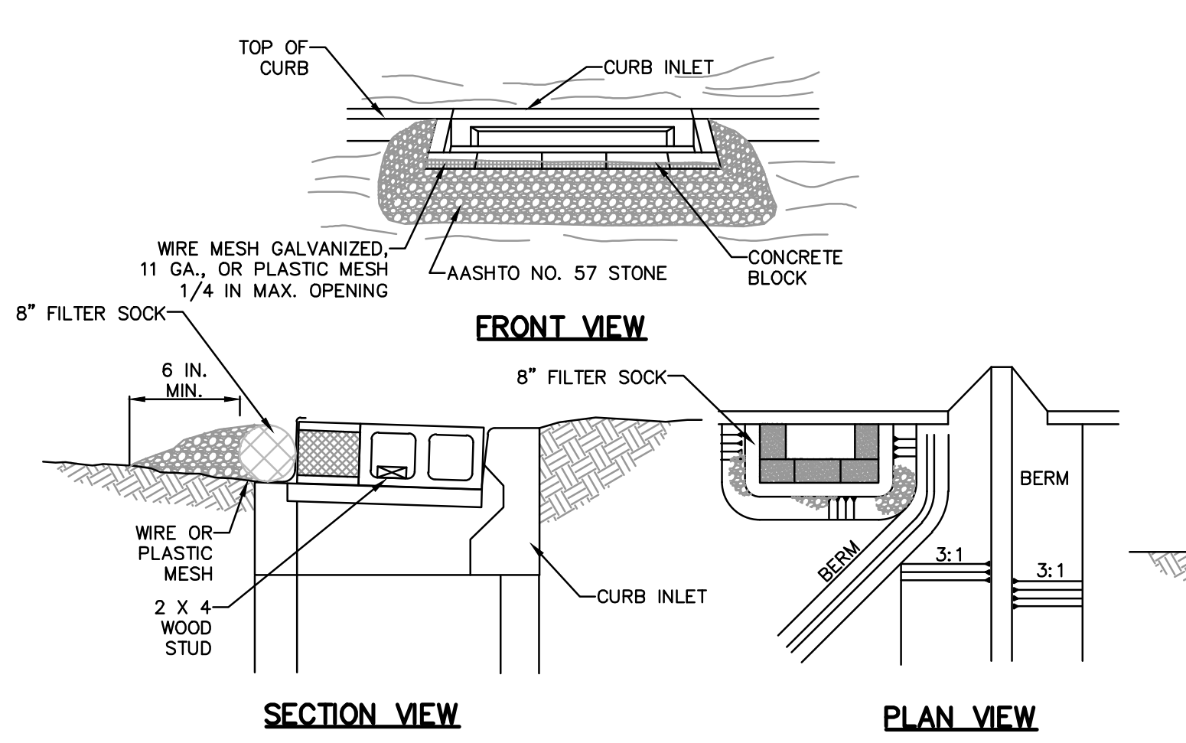
1. REMOVE ALL EARTH NECESSARY TO EXPOSE THE ROCK WITHIN THE IMMEDIATE AREA OF THE SINKHOLE.
2. EXCAVATION OF ALL EARTH ABOVE AND AT THE IMMEDIATE PERIMETER OF THE SINKHOLE SHALL CONTINUE UNTIL THE EXPOSED ROCK SURFACES ARE CLEAN.
3. PREPARE "THROATS" OR SOLUTION CHANNELS OF THE SINKHOLE TO THE SATISFACTION OF THE PROFESSIONAL ENGINEER.
4. WHEN THE PROFESSIONAL ENGINEER HAS APPROVED THE SINKHOLE PREPARATION, THE CONTRACTOR SHALL PLUG ALL 'THROATS" OR SOLUTION CHANNELS WITH PennDOT CLASS "C" CONCRETE.
5. AFTER THE CONCRETE HAS SET, THE CONTRACTOR SHALL BACKFILL THE AREA WITH CLAY MATERIAL. MAXIMUM LIFTS OF 6 INCHES IN DEPTH SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST WITH THE PRECISE SCOPE AS DETERMINED BY THE SUPERVISING PROFESSIONAL.
6. COMPACTED LIFTS OF CLAY SHALL BE PLACED UNTIL SUBGRADE ELEVATION IS REACHED.

NOTES:

1. THIS DETAIL REPRESENTS ONLY ONE METHOD OF SINKHOLE REMEDIATION. PRIOR TO REPAIRING ANY SINKHOLE, THE CLIENT SHALL CONTACT A PROFESSIONAL ENGINEER WITH EXPERIENCE IN GEOTECHNICAL ENGINEERING SO AS TO REPAIR THE SINKHOLE IN ACCORDANCE WITH THE PROFESSIONAL'S SPECIFIC RECOMMENDATIONS.
2. THE REMEDIATION PLAN CHOSEN BY THE PROFESSIONAL ENGINEER SHOULD BE BASED ON THE CHARACTERISTICS OF THE SINKHOLE, THE LOCATION OF THE SINKHOLE ON THE SITE AND THE PLANNED OR POSSIBLE FUTURE DEVELOPMENT AT THE SINKHOLE LOCATION.
3. THE SINKHOLE LOCATION SHOULD BE DOCUMENTED ON THE AS-BUILT PLANS FOR FUTURE REFERENCE.

SINKHOLE REPAIR DETAIL

NO SCALE


TOP OF CURB
CURB INLET
WIRE MESH GALVANIZED, 11 GA., OR PLASTIC MESH, 1/4 IN MAX. OPENING
AASHTO NO. 57 STONE
CONCRETE BLOCK
8" FILTER SOCK
FRONT VIEW
8" FILTER SOCK
6 IN. MIN.
WIRE OR PLASTIC MESH
2 X 4 WOOD STUD
CURB INLET
BERM
3:1
SECTION VIEW
PLAN VIEW

NOTES:

MAXIMUM DRAINAGE AREA = 1 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.

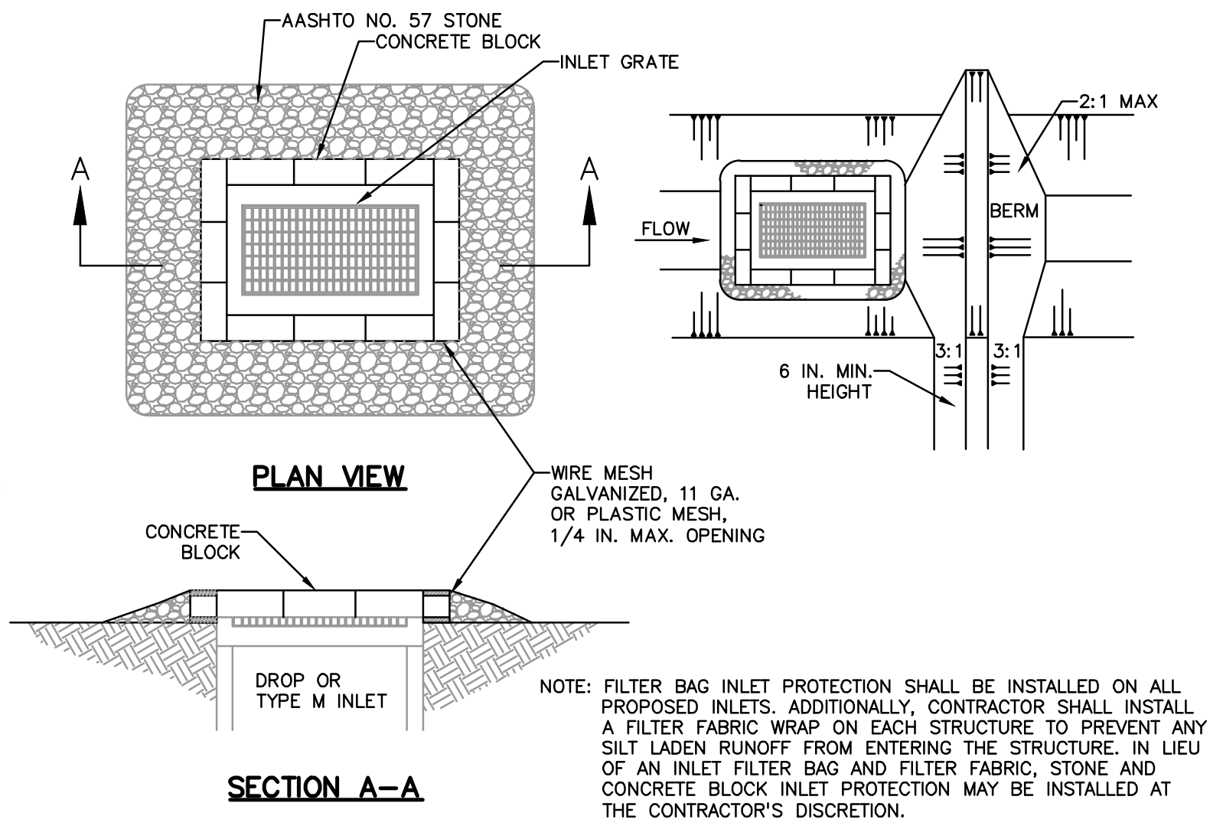
SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

MODIFIED CONSTRUCTION DETAIL #4-17
STONE AND CONCRETE BLOCK INLET PROTECTION - TYPE C INLET

NOT TO SCALE


AASHTO NO. 57 STONE
CONCRETE BLOCK
INLET GRATE
2:1 MAX
A
A
FLOW
BERM
6 IN. MIN. HEIGHT
PLAN VIEW
WIRE MESH GALVANIZED, 11 GA. OR PLASTIC MESH, 1/4 IN. MAX. OPENING
CONCRETE BLOCK
DROP OR TYPE M INLET
SECTION A-A

NOTE: FILTER BAG INLET PROTECTION SHALL BE INSTALLED ON ALL PROPOSED INLETS. ADDITIONALLY, CONTRACTOR SHALL INSTALL A FILTER FABRIC WRAP ON EACH STRUCTURE TO PREVENT ANY SILT LADEN RUNOFF FROM ENTERING THE STRUCTURE. IN LIEU OF AN INLET FILTER BAG AND FILTER FABRIC, STONE AND CONCRETE BLOCK INLET PROTECTION MAY BE INSTALLED AT THE CONTRACTOR'S DISCRETION.

NOTES:

MAXIMUM DRAINAGE AREA =1 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT A LOW POINT.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR TO REMAIN PERMANENTLY.

TOP OF BLOCK SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADS IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.

SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

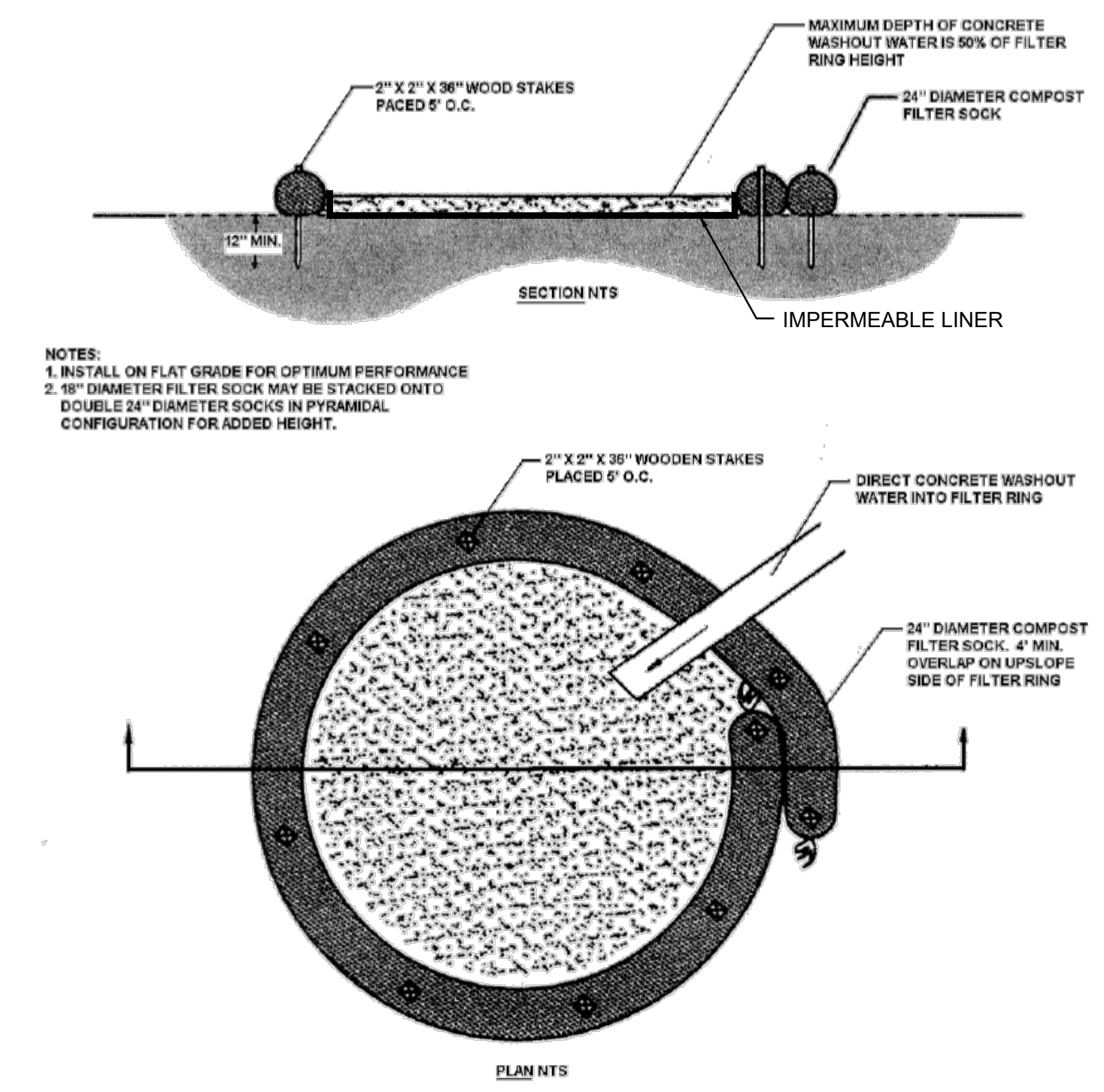
FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

STANDARD CONSTRUCTION DETAIL #4-18
STONE AND CONCRETE BLOCK INLET PROTECTION - TYPE M INLET

NOT TO SCALE

Filtrexx

FIGURE 3.18
Typical Compost Sock Washout Installation

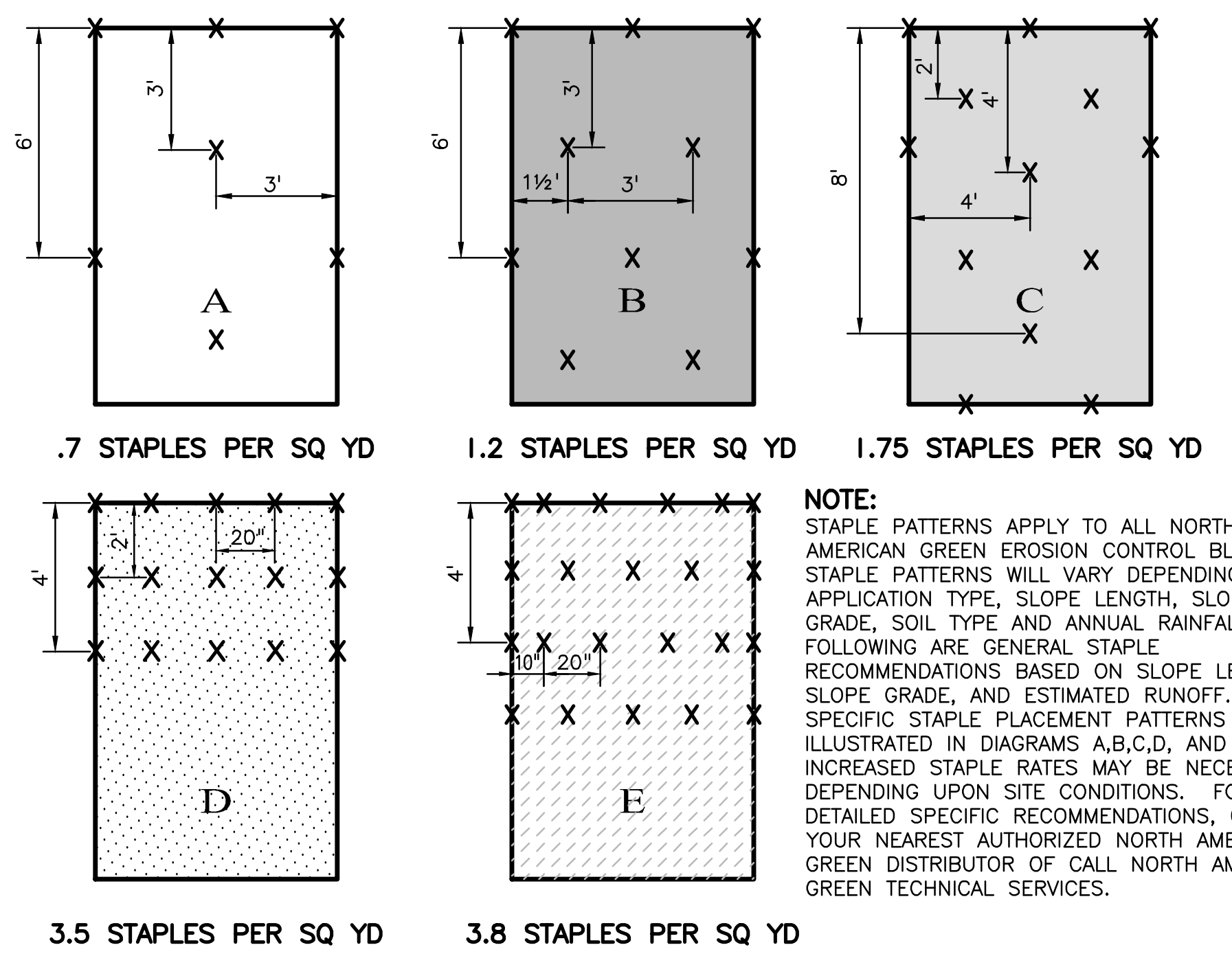

MAXIMUM DEPTH OF CONCRETE WASHOUT WATER IS 50% OF FILTER RING HEIGHT
2" X 2" X 36" WOOD STAKES PACED 5' O.C.
24" DIAMETER COMPOST FILTER SOCK
12" MIN.
SECTION NTS
IMPERMEABLE LINER
2" X 2" X 36" WOODEN STAKES PLACED 5' O.C.
DIRECT CONCRETE WASHOUT WATER INTO FILTER RING
24" DIAMETER COMPOST FILTER SOCK. 4' MIN. OVERLAP ON UPSLOPE SIDE OF FILTER RING
PLAN NTS

NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.

A suitable impervious geomembrane shall be placed at the location of the washout prior to installing the socks.
Adapted from Filtrexx

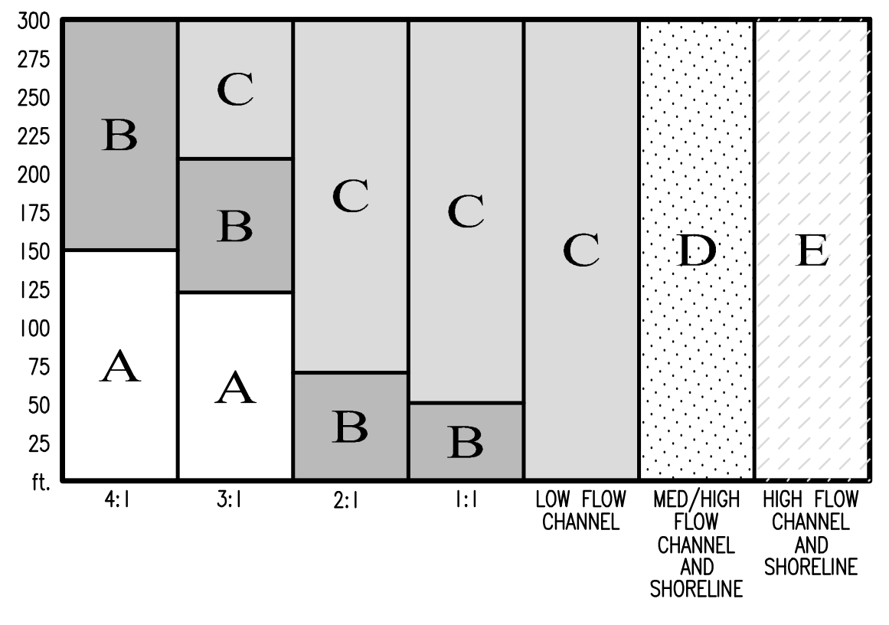
363-2134-008 / March 31, 2012 / Page 58

CONCRETE WASH FACILITY


6'
3'
3'
A
6'
3'
1½'
3'
B
8'
2'
4'
4'
C
4'
2'
20"
D
4'
10"
20"
E

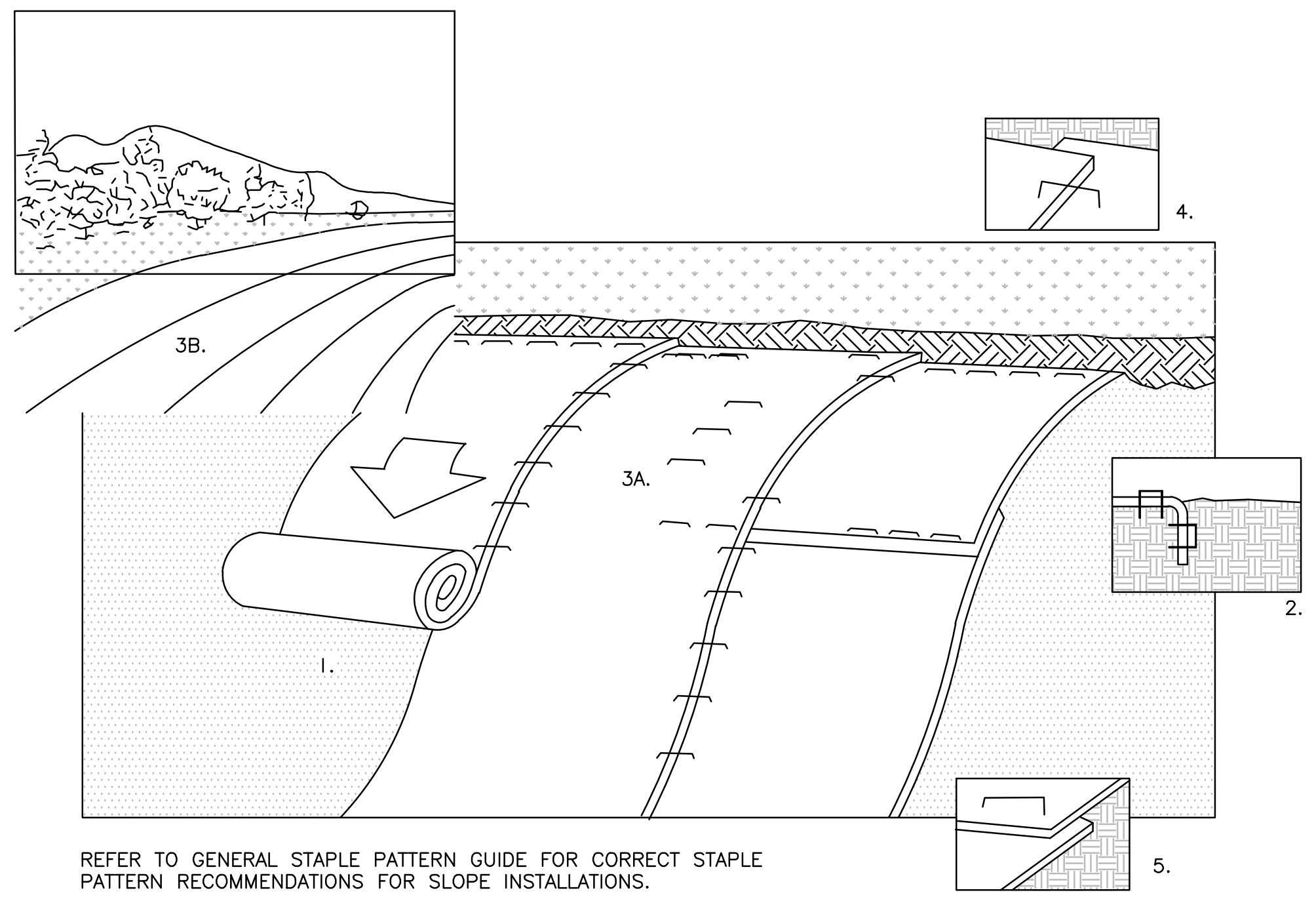
.7 STAPLES PER SQ YD
1.2 STAPLES PER SQ YD
1.75 STAPLES PER SQ YD
3.5 STAPLES PER SQ YD
3.8 STAPLES PER SQ YD

NOTE:
STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN GREEN EROSION CONTROL BLANKETS. STAPLE PATTERNS WILL VARY DEPENDING UPON APPLICATION TYPE, SLOPE LENGTH, SLOPE GRADE, SOIL TYPE AND ANNUAL RAINFALL. THE FOLLOWING ARE GENERAL STAPLE RECOMMENDATIONS BASED ON SLOPE LENGTH, SLOPE GRADE, AND ESTIMATED RUNOFF. SPECIFIC STAPLE PLACEMENT PATTERNS ARE ILLUSTRATED IN DIAGRAMS A,B,C,D, AND E. INCREASED STAPLE RATES MAY BE NECESSARY DEPENDING UPON SITE CONDITIONS. FOR DETAILED SPECIFIC RECOMMENDATIONS, CONTACT YOUR NEAREST AUTHORIZED NORTH AMERICAN GREEN DISTRIBUTOR OF CALL NORTH AMERICAN GREEN TECHNICAL SERVICES.



EROSION CONTROL BLANKET STAPLE PATTERN GUIDE

NO SCALE



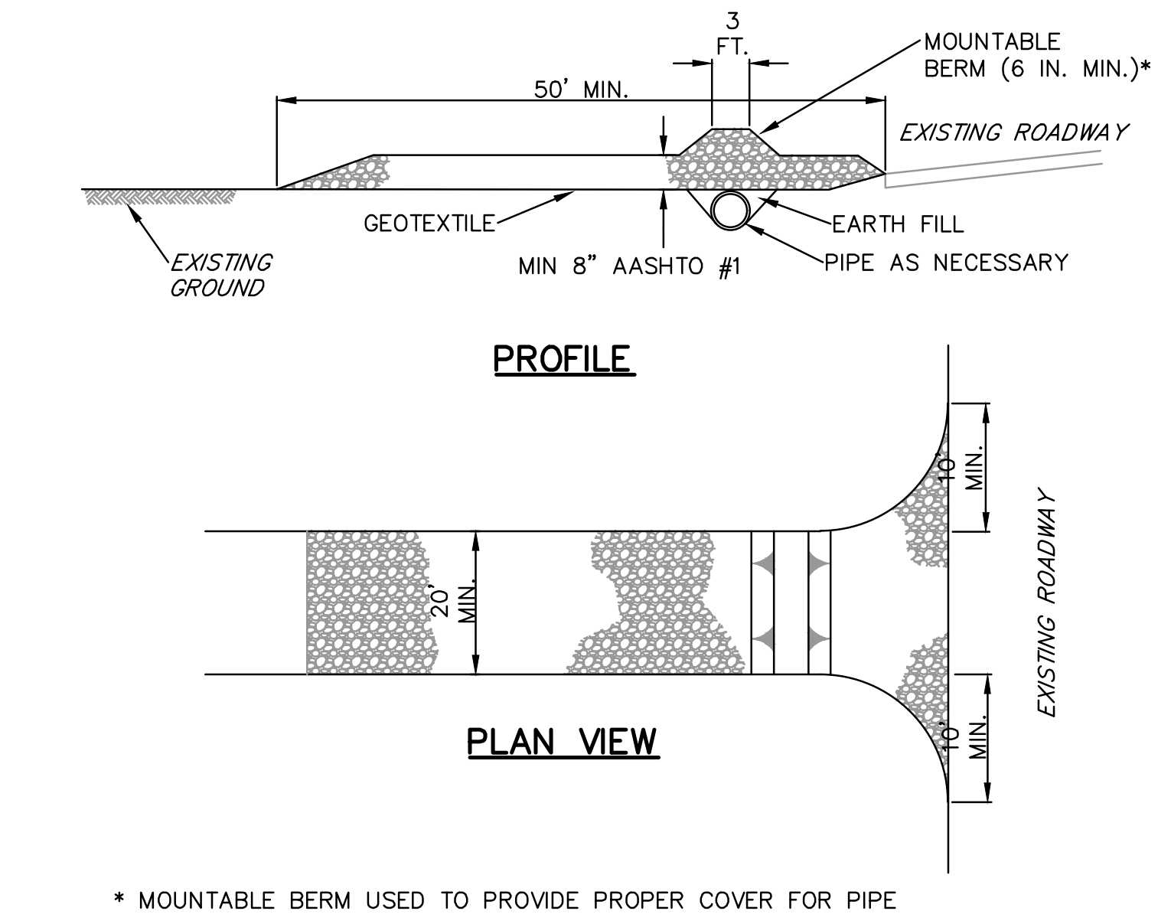
REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS.

INSTALLATION INSTRUCTIONS

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP x 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL CENTER BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE. PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 4" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.

SLOPE INSTALLATION DETAIL FOR EROSION CONTROL BLANKET

NO SCALE


3 FT.
MOUNTABLE BERM (6 IN. MIN.)*
50' MIN.
EXISTING ROADWAY
GEOTEXTILE
EARTH FILL
PIPE AS NECESSARY
EXISTING GROUND
MIN 8" AASHTO #1
PROFILE
20' MIN.
EXISTING ROADWAY
10' MIN.
PLAN VIEW

* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

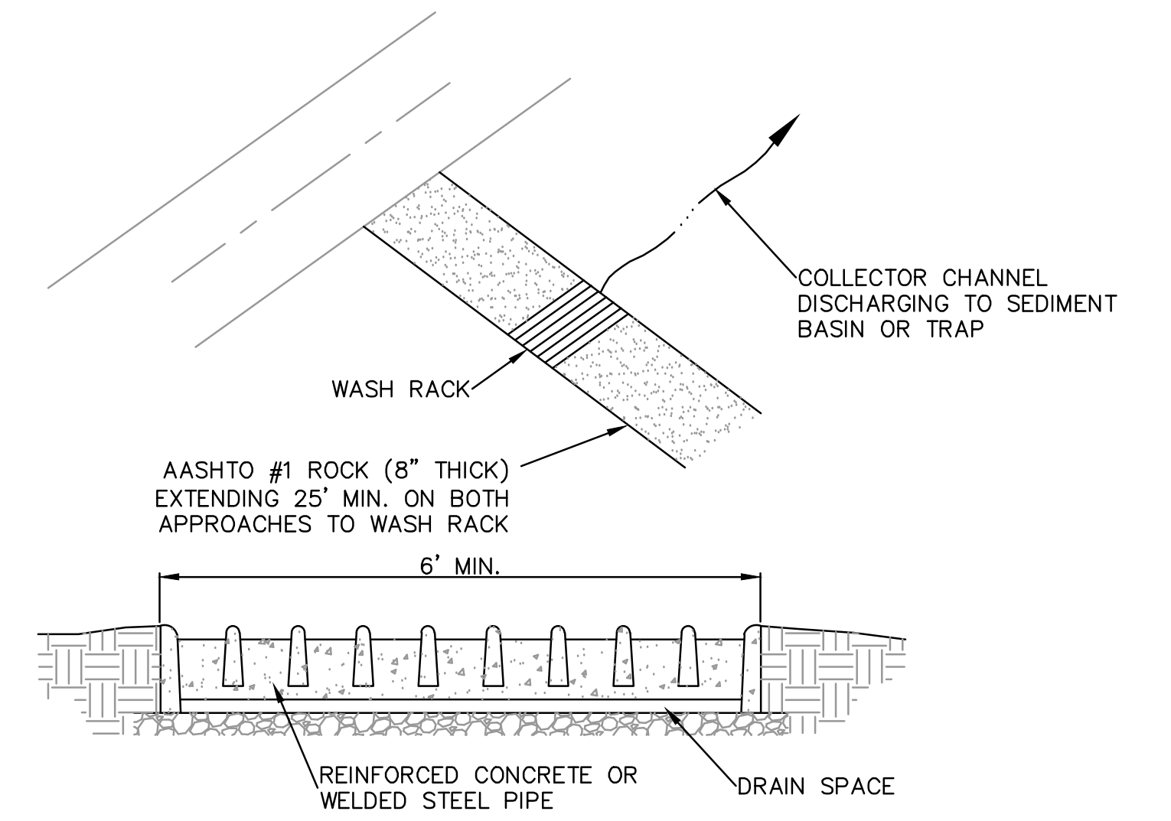
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

STANDARD CONSTRUCTION DETAIL #3-1
ROCK CONSTRUCTION ENTRANCE

NOT TO SCALE


COLLECTOR CHANNEL DISCHARGING TO SEDIMENT BASIN OR TRAP
WASH RACK
AASHTO #1 ROCK (8" THICK) EXTENDING 25' MIN. ON BOTH APPROACHES TO WASH RACK
6' MIN.
REINFORCED CONCRETE OR WELDED STEEL PIPE
DRAIN SPACE

NOTES:

WASH RACK SHALL BE 20 FEET (MIN.) WIDE OR TOTAL WIDTH OF ACCESS.

WASH RACK SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE ANTICIPATED CONSTRUCTION VEHICULAR TRAFFIC.

A WATER SUPPLY SHALL BE MADE AVAILABLE TO WASH THE WHEELS OF ALL VEHICLES EXITING THE SITE.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. DRAIN SPACE UNDER WASH RACK SHALL BE KEPT OPEN AT ALL TIMES. DAMAGE TO THE WASH RACK SHALL BE REPAIRED PRIOR TO FURTHER USE OF THE RACK. ALL SEDIMENT DEPOSITED ON ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

STANDARD CONSTRUCTION DETAIL #3-2
ROCK CONSTRUCTION ACCESS WITH WASH RACK

NOT TO SCALE

Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\E-S Submission\SE DETAILS.dwg Printed: Jan 10, 2025 - 1:55pm

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THE
PIDCOCK
COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL

KEY MAP

NOTES:
1. THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.
2. THESE DOCUMENTS ARE PROVIDED FOR MUNICIPAL REVIEW ONLY AND ARE NOT TO BE UTILIZED FOR ANY OTHER PURPOSE. THE DOCUMENTS ARE NOT ISSUED FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED AS SUCH BELOW.

CONTRACTOR'S OBLIGATION REGARDING COORDINATION OF DOCUMENTS AND FIELD CONDITIONS

THE CONTRACT DOCUMENTS PRESENT THE DESIGN INTENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL PLANS, SPECIFICATIONS, ADDENDA, CONSTRUCTION SKETCHES AND OTHER CONTRACT DOCUMENTS FOR CONSISTENCY. SIMILARLY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW FIELD CONDITIONS, INCLUDING COORDINATION WITH ALL UTILITIES. THE CONTRACTOR SHALL COMPLETE ANY TEST EXCAVATIONS IN ADVANCE OF ORDERING MATERIALS OR OF CONSTRUCTION IN AN AREA OF UTILITY CROSSINGS OR POTENTIAL INVOLVEMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING ANY INCONSISTENCIES IN THE DOCUMENTS OR ANY APPARENT CONFLICTS TO THE ATTENTION OF THE ENGINEER BEFORE ORDERING MATERIALS AND BEFORE PROCEEDING WITH CONSTRUCTION IN THE AREA SO THAT THE ENGINEER MAY REVIEW THE CONDITIONS AND RECOMMEND ANY ADJUSTMENTS TO THE DOCUMENTS THAT MAY BE NECESSARY, OR TO RECOMMEND RELOCATION OF A UTILITY OR OTHER REMEDIAL WORK THAT MAY BE REQUIRED.

PLAN PREPARER:
BRENT C. TUCKER, P.E.
THE PIDCOCK COMPANY
2451 PARKWOOD DRIVE
ALLENTOWN, PA. 18103
TELEPHONE NO.: 610-791-2252

NOTICE
THIS PLAN IS INTENDED FOR SOIL EROSION AND SEDIMENTATION CONTROL PURPOSES ONLY

6		
5		
4		
3		
2	JANUARY 10, 2025	GENERAL REVISIONS
1	NOVEMBER 22, 2024	REVISED PER LCCD COMMENTS

REVISIONS

SOIL EROSION AND SEDIMENTATION CONTROL PLANS

SCALE: NO SCALE
DATE: SEPTEMBER 27, 2024
CHECKED BY: BCT
DRAWN BY: JGU
CAD FILE: SE DETAILS.dwg
PROJECT NUMBER: 22005

811
Know what's below.
Call before you dig.
SEE SHEET 1

Lehigh Valley Health Network
MUHLENBERG

NEW SOUTH WING EMERGENCY DEPARTMENT EXPANSION MAJOR AMENDMENT

CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

SOIL EROSION AND SEDIMENTATION CONTROL DETAILS

FILE NUMBER
S-12396

SHEET NUMBER
5 OF 6

WEB SOIL SURVEY

SOIL DESCRIPTION TABLE

SYMBOL	NAME	SLOPE RANGE	CHARACTERISTICS	HYDROLOGIC SOILS GROUP
CIB	CLARKSBURG SILT LOAM	3–8%	MODERATELY WELL DRAINED, MODERATELY LOW TO MODERATLEY HIGH PERMEABILITY	C
UgB	URBAN LAND	0–8%	PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS	N/A
UmB	URBAN LAND–DUFFIELD COMPLEX	0–8%	PAVEMENT, BUILDINGS, AND OTHER ARTIFICIALLY COVERED AREAS	B
UoB	URBAN LAND–DUFFIELD COMPLEX	0–8%	PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS	B
WaA	WASHINGTON SILT LOAM	0–3%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B
WaB	WASHINGTON SILT LOAM	3–8%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B
WaC	WASHINGTON SILT LOAM	8–15%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B

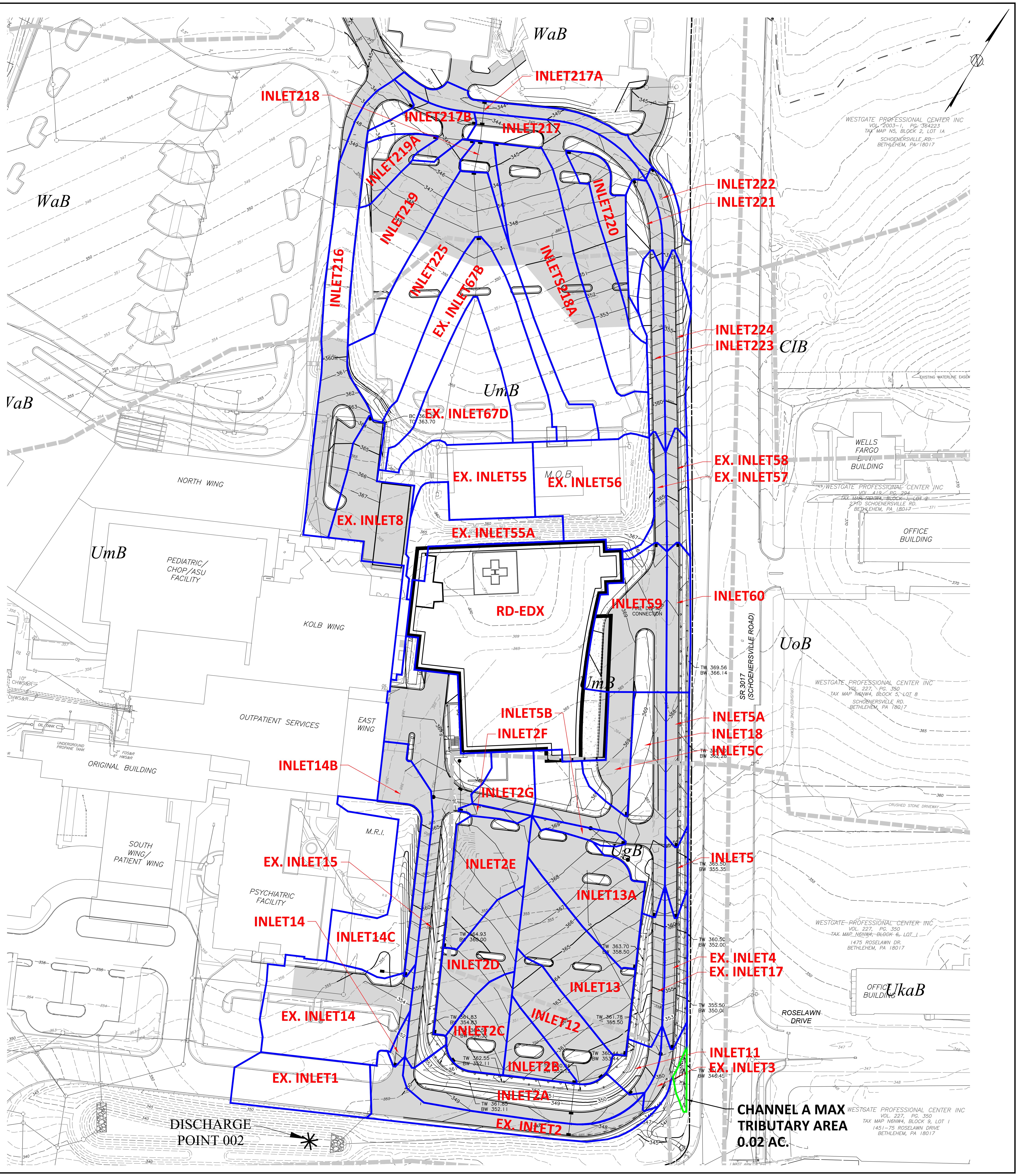
NOTES:

THE SOIL TYPES AND LOCATIONS ARE BASED UPON THE U. S. DEPARTMENT OF AGRICULTURE–NATIONAL RESOURCES CONSERVATION SERVICE (USDA–NRCS) WEB SOIL SURVEY, AVAILABLE ONLINE AT HTTP://WEBSOILSURVEY.SC.EGOV.USDA.GOV/.

SOIL TYPE USE LIMITATIONS AND RESOLUTIONS

THE SOIL USE LIMITATIONS THAT EXIST FOR THE ABOVE–MENTIONED SOILS AND THEIR RESOLUTIONS ARE AS FOLLOWS:

1. ACCORDING TO THE AFOREMENTIONED SOIL SURVEY, WASHINGTON SILT LOAM HAS FEW LIMITATIONS TO MOST NON–FARM USES. ONE OF THESE LIMITATIONS IS THE POTENTIAL FOR SINKHOLES. THE POTENTIAL FOR THE FORMATIONS OF SINKHOLES WILL BE MINIMIZED THROUGH THE CONSTRUCTION OF A STORMWATER MANAGEMENT SYSTEM. HOWEVER, IN THE EVENT THAT A SINKHOLE DEVELOPS ON THE SITE, SURFACE WATER SHALL BE DIVERTED AWAY FROM THE AREA AND THE SINKHOLE SHALL BE REPAIRED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A PROFESSIONAL ENGINEER OR GEOLOGIST.
2. THE DUFFIELD SERIES IS LIMITED BY SLOW PERMEABILITY AND A SEASONABLY HIGH WATER TABLE. ALSO THESE SOILS EXHIBIT A MODERATE TO SEVERE EROSION HAZARD. A PUMPED WATER FILTER BAG HAS BEEN SPECIFIED TO ADEQUATELY FILTER ANY WATER THAT MAY BE ENCOUNTERED. FURTHER, STRUCTURAL EARTHWORK SHALL ONLY BE DONE WHEN THE SOIL IS AT THE OPTIMUM MOISTURE CONTENT FOR COMPACTION.


WaB
WaB
VaB
UmB
UmB
CIB
UoB
UgB
UkaB
INLET218
INLET217A
INLET217B
INLET217
INLET219A
INLET219
INLET216
INLET225
INLET220
INLETS218A
EX. INLET67B
INLET222
INLET221
INLET224
INLET223
EX. INLET67D
EX. INLET58
EX. INLET57
EX. INLET55
EX. INLET56
EX. INLET8
EX. INLET55A
M.O.B.
RD-EDX
INLET59
INLET60
NORTH WING
PEDIATRIC/ CHOP/ASU FACILITY
KOLB WING
OUTPATIENT SERVICES
EAST WING
ORIGINAL BUILDING
SOUTH WING/ PATIENT WING
M.R.I.
PSYCHIATRIC FACILITY
INLET5B
INLET2F
INLET5A
INLET18
INLET5C
INLET14B
INLET2G
INLET5
INLET2E
INLET13A
EX. INLET15
INLET14
INLET14C
INLET2D
INLET13
EX. INLET4
EX. INLET17
EX. INLET14
INLET12
INLET2C
INLET2B
INLET11
EX. INLET3
EX. INLET1
INLET2A
EX. INLET2
CHANNEL A MAX TRIBUTARY AREA 0.02 AC.
DISCHARGE POINT 002
SR 3017 (SCHOENERSVILLE ROAD)
ROSELAWN DRIVE
WELLS FARGO BUILDING
OFFICE BUILDING
WESTGATE PROFESSIONAL CENTER INC
SCHOENERSVILLE RD. BETHLEHEM, PA 18017
1475 ROSELAWN DR. BETHLEHEM, PA 18017
1451–75 ROSELAWN DRIVE BETHLEHEM, PA 18017

THE PIDCOCK COMPANY

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6		
5		
4		
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2	JANUARY 10, 2025	GENERAL REVISIONS
1	NOVEMBER 22, 2024	REVISED PER LCCD COMMENTS

REVISIONS

SOIL EROSION AND SEDIMENTATION CONTROL PLANS

SCALE: 1"=50'
DATE: SEPTEMBER 27, 2024
CHECKED BY: BCT
DRAWN BY: JGU
CAD FILE: SE TRIB.dwg
PROJECT NUMBER: 22005

811 Know what's **below.** **Call** before you dig.
SEE SHEET 1

GRAPHIC SCALE: 50' 25' 0' 50' 100'

Lehigh Valley Health Network
MUHLENBERG

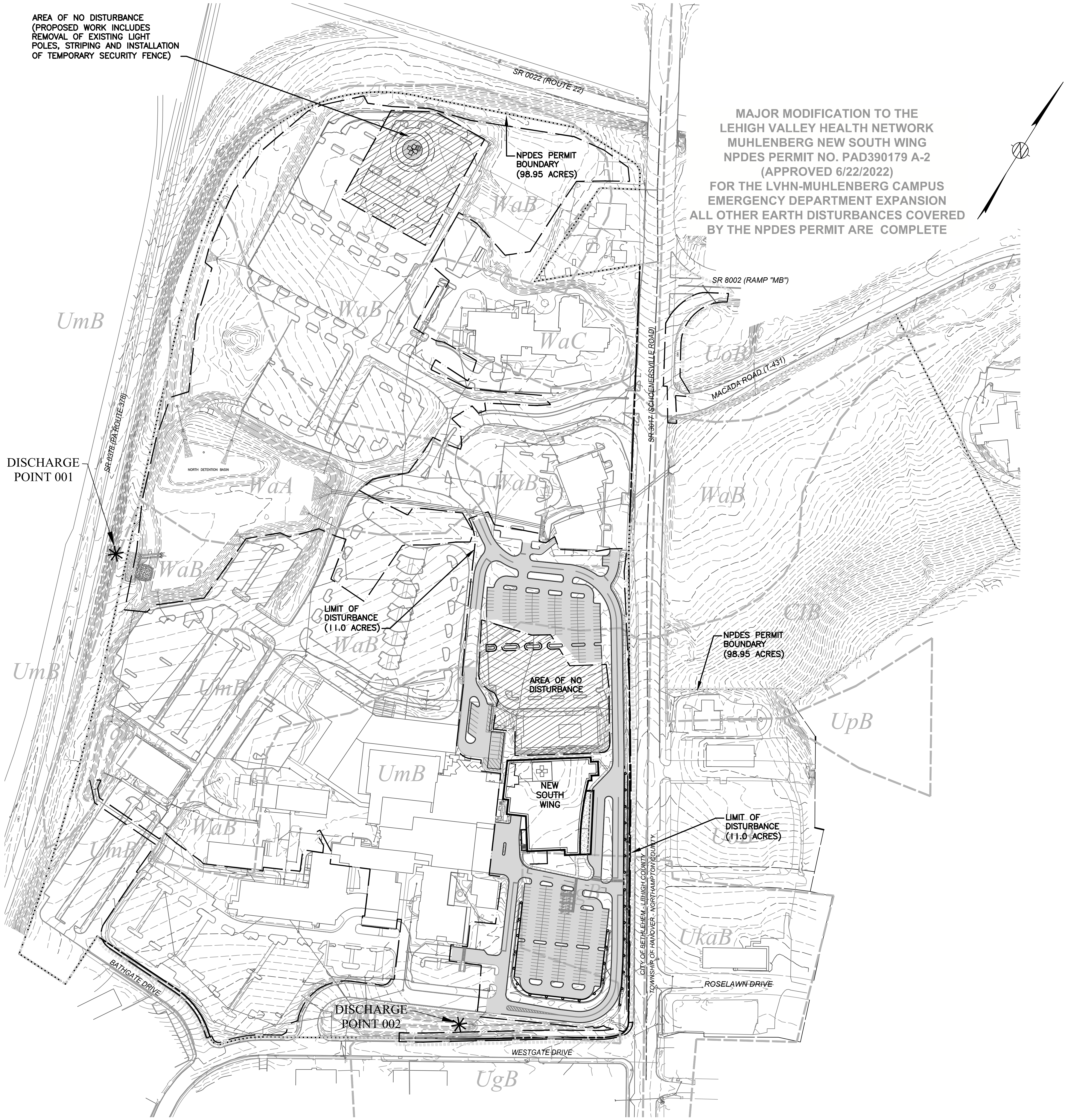
NEW SOUTH WING EMERGENCY DEPARTMENT EXPANSION MAJOR AMENDMENT

CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

MAXIMUM DURING CONSTRUCTION TRIBUTARY AREA PLAN

FILE NUMBER
S-12396

SHEET NUMBER
6 OF 6


AREA OF NO DISTURBANCE (PROPOSED WORK INCLUDES REMOVAL OF EXISTING LIGHT POLES, STRIPING AND INSTALLATION OF TEMPORARY SECURITY FENCE)
SR 0022 (ROUTE 22)
NPDES PERMIT BOUNDARY (98.95 ACRES)
WaB
UmB
SR 8002 (RAMP "MB")
WaC
UoB
MACADA ROAD (T-431)
SR 3017 (SCHOENERSVILLE ROAD)
DISCHARGE POINT 001
SR 0378 (PA ROUTE 378)
NORTH DETENTION BASIN
WaA
ClB
LIMIT OF DISTURBANCE (11.0 ACRES)
NPDES PERMIT BOUNDARY (98.95 ACRES)
AREA OF NO DISTURBANCE
UpB
NEW SOUTH WING
LIMIT OF DISTURBANCE (11.0 ACRES)
CITY OF BETHLEHEM, LEHIGH COUNTY
TOWNSHIP OF HANOVER, NORTHAMPTON COUNTY
UkaB
ROSELAWN DRIVE
BATHGATE DRIVE
DISCHARGE POINT 002
WESTGATE DRIVE
UgB

MAJOR MODIFICATION TO THE LEHIGH VALLEY HEALTH NETWORK MUHLENBERG NEW SOUTH WING NPDES PERMIT NO. PAD390179 A-2 (APPROVED 6/22/2022) FOR THE LVHN-MUHLENBERG CAMPUS EMERGENCY DEPARTMENT EXPANSION ALL OTHER EARTH DISTURBANCES COVERED BY THE NPDES PERMIT ARE COMPLETE

KEY PLAN

SCALE: 1"=150'

150 0 150 300

1963 SOIL SURVEY

SOIL DESCRIPTION TABLE

SYMBOL	NAME	SLOPE RANGE	CHARACTERISTICS	HYDROLOGIC SOILS GROUP
WgA2	WASHINGTON SILT LOAM	0–3%	VERY DEEP, WELL DRAINED. MODERATELY ERODED	B
WgB2	WASHINGTON SILT LOAM	3–8%	VERY DEEP, WELL DRAINED, MODERATE PERMEABILITY, MODERATELY ERODED	B
WgC2	WASHINGTON SILT LOAM	8–15%	VERY DEEP, WELL DRAINED, MODERATE PERMEABILITY, MODERATELY ERODED	B
WgC3	WASHINGTON SILT LOAM	8–15%	SEVERELY ERODED. VERY DEEP, WELL DRAINED. MEDIUM SURFACE ERODIBILITY	B

NOTES:

THE SOIL TYPES AND LOCATIONS ARE BASED UPON THE U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE SOIL SURVEY OF LEHIGH COUNTY, PENNYSLVANIA, ISSUED NOVEMBER 1963, AND IS SHOWN FOR GENERAL COMPARISONS ONLY, TO THE CURRENT WEB SOIL SURVEY DATA. NRCS IMPLEMENTED THE ONLINE WEB SOIL SURVEY IN 2005 AS THE NRCS SOIL SCIENCE DIVISION TRANSITIONED FROM ITS TRADITIONAL, STATIC SOIL SURVEY PUBLISHED IN BOUND HARD COPIES, TO A MORE FLUID ONLINE FORMAT THAT ALLOWS NRCS TO CONTINUALLY UPDATE SOIL SURVEY DATA AS NEEDED.

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WEB SOIL SURVEY

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ClB	CLARKSBURG SILT LOAM	3–8%	MODERATELY WELL DRAINED, MODERATELY LOW TO MODERATLEY HIGH PERMEABILITY	C
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LEGEND

	EXISTING	PROPOSED
BUILDING		
BITUMINOUS PAVEMENT		
STONE AREA		
CONCRETE SIDEWALKS, APRONS, PADS, ETC.		
CONCRETE CURB		
BITUMINOUS CURB		
DEPRESSED CURB		
PROPERTY LINE	IRON PIPE (FND) ℙ	PROP.COR. ℙ
LOT LINE		
CENTERLINE	℄	℄
RIGHT–OF–WAY LINE		
ULTIMATE RIGHT–OF–WAY LINE	ULTIMATE R/W LINE	ULTIMATE R/W LINE
BUILDING RESTRICTION LINE	BRL	BRL
UTILITY EASEMENT		
CONTOUR	476	476
SPOT ELEVATIONS	x 449.1	449.1
FLOODPLAIN 100–YEARS		
FLOODPLAIN 500–YEARS		
SWALE, EDGES OF RIVER, CREEKS, WETLANDS, ETC.		
STORM SEWER, MANHOLE, INLET AND ROOF DRAIN	RD MH. INLET	MH. INLET
OUTLET CONTROL STRUCTURE	OCS	OCS
END SECTION	CES	CES
ENDWALL	ENDWALL	ENDWALL
WATERLINE, FIRE HYDRANT, VALVE, REDUCER, TEE, PLUG AND SERVICE	WV W FH PLUG	W FH PLUG
SANITARY SEWER, MANHOLE, CLEANOUT AND LATERAL	CO S SAN.MH.	CO S SAN.MH.
FORCE MAIN WITH DIRECTION OF FLOW	F	F
GAS LINE AND VALVE	G GV	G GV
UNDERGROUND ELECTRIC LINES	E	E
UNDERGROUND TELEVISION CABLE	TV	TV
UNDERGROUND TELEPHONE LINES	T	T
UNDERGROUND FIBER OPTIC LINE	FOL	FOL
OVERHEAD WIRES	OW	OW
LIGHT STANDARD	LS	LS
ELECTRIC POLE	PPL CO. POLE 123	PPL CO. POLE 123
TELEPHONE POLE	B.T. CO. POLE 456	B.T. CO. POLE 456
FENCE	X	X
GUIDERAIL		
RAILROAD		
SIGN		
EVERGREEN TREE		
DECIDUOUS TREE		
ZONING BOUNDARY	R-1 R-2	
RIPRAP		
SOILS DELINEATION		
SOILS TYPE	MeA	

NOTE:

THE LEGEND AND ABBREVIATIONS APPLY TO ALL SHEETS IN THE PLAN SET. THEY CONTAIN A COMPREHENSIVE LIST OF DRAWING SYMBOLS AND ABBREVIATIONS THAT MAY BE DEPICTED ON A PLAN SHEET. ALL OF THE SYMBOLS OR ABBREVIATIONS MAY NOT OCCUR ON A PLAN SHEET OR IN THE DRAWING SET. IN SOME INSTANCES PROPOSED OR EXISTING FEATURES MAY BE DEPICTED DIFFERENTLY ON A PLAN THAN IN THE LEGEND TO IMPROVE OVERALL PLAN CLARITY.

ABBREVIATIONS

BC	BOTTOM OF CURB
BCCMP	BITUMINOUS COATED CORRUGATED METAL PIPE
ℬ	BASELINE
B.M.	BENCH MARK
BRL	BUILDING RESTRICTION LINE
BT	BELL TELEPHONE
BW	BOTTOM OF WALL
CES	CONCRETE END SECTION
CIP	CAST IRON PIPE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
DIP	DUCTILE IRON PIPE
EW	ENDWALL
ELEV.	ELEVATION
FH	FIRE HYDRANT
GV	GAS VALVE
HDW	HEADWALL
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE
HSD	HEADLIGHT SIGHT DISTANCE
INV.	INVERT
LS	LIGHT STANDARD
MES	METAL END SECTION
ME	METROPOLITAN EDISON
MH.	MANHOLE
MO	MIDDLE ORDINATE
OCS	OUTLET CONTROL STRUCTURE
PGL	PROFILE GRADE LINE
PLCC CURB	PLAIN CEMENT CONCRETE CURB
PL CONC MTBLE CURB	PLAIN CONCRETE MOUNTABLE CURB
PPL	PENNSYLVANIA POWER LIGHT
PVC	POLYVINYL CHLORIDE
PC	HORIZONTAL POINT OF CURVATURE
PT	HORIZONTAL POINT OF TANGENCY
PVCC	POINT OF VERTICAL COMPOUND CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
R/W	RIGHT–OF–WAY LINE
SAN.MH.	SANITARY MANHOLE
SSD	SIGHT STOPPING DISTANCE
STA.	STATION
TBR	TO BE REMOVED
TC	TOP OF CURB
T/F	TOP OF FOUNDATION
TW	TOP OF WALL
VCP	VITRIFIED CLAY PIPE
WV	WATER VALVE

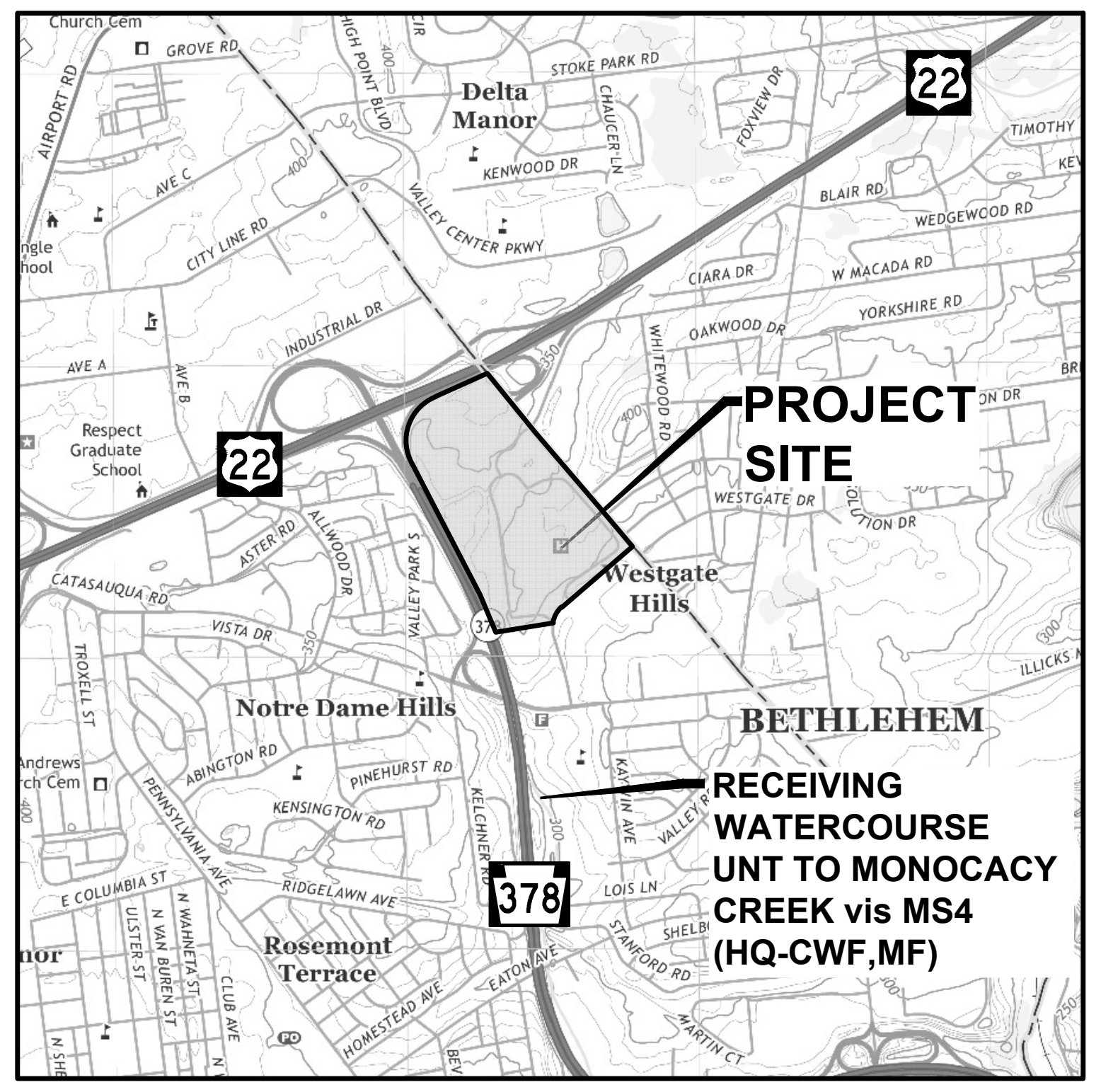
POST–CONSTRUCTION STORMWATER MANAGEMENT LEGEND

	PROPOSED
LIMIT OF DISTURBANCE	
NPDES BOUNDARY	
SOILS DELINEATION	
SOILS TYPE	MeA
AREA OF NO DISTURBANCE	▨

INDEX TO DRAWINGS

SHEET NO.	TITLE	PLAN DATE OR LAST REVISION
1 *	INDEX PLAN	JANUARY 10, 2025
2 *	POST–CONSTRUCTION STORMWATER MANAGEMENT PLAN 1	JANUARY 10, 2025
3 *	POST–CONSTRUCTION STORMWATER MANAGEMENT PLAN 2	JANUARY 10, 2025
4 *	POST–CONSTRUCTION STORMWATER MANAGEMENT NOTES AND DETAILS	JANUARY 10, 2025
SUPPLEMENTAL PLANS – IRRIGATION SYSTEM PLANS – PREPARED BY AQUA MIST IRRIGATION		
I–01 *	OVERALL SITE PLAN	NOVEMBER 22, 2024
I–02 *	DATA & DETAILS	SEPTEMBER 25, 2024
I–03 *	PUMP & DETAILS	SEPTEMBER 25, 2024
I–04 *	O & M SCHEDULE	SEPTEMBER 25, 2024

* DENOTES PLANS TO BE RECORDED



SOURCE:
CATASAUQUA, PA (2019)
USGS QUADRANGLE MAP

LOCATION MAP

Scale: 1" = 2,000'

2000 0 2000 4000

RECEIVING WATER (SEE LOCATION MAP):
UNT TO MONOCACY CREEK (HQ–CWF, MF)

IMPAIRMENTS:
SOURCE UNKNOWN – PATHOGENS

PENNSYLVANIA ONE CALL SYSTEM, INC. UNDERGROUND UTILITY NOTIFICATION

THE PIDCOCK COMPANY CALLED THE PENNSYLVANIA ONE–CALL SYSTEM, INC. ON JULY 18, 2024 AND REQUESTED THAT ALL UNDERGROUND UTILITIES BE LOCATED AT THIS SITE LOCATED IN the CITY OF BETHLEHEM, LEHIGH COUNTY, PENNSYLVANIA INCLUDING UNDERGROUND UTILITIES IN THE ADJACENT PUBLIC ROAD RIGHTS–OF–WAY. SERIAL NUMBER 2024003247, WAS ASSIGNED TO THIS PROJECT LOCATION AND THE FOLLOWING UTILITY OPERATORS WERE CONTACTED:

FRONTIER COMMUNICATIONS
300E LAIRD ST.
WILKES BARRE, PA. 18702
CONTACT: MICHAEL NAVICH
EMAIL: MICHAEL.NAVICH@FTR.COM
PHONE: 570–208–3375

PPL ELECTRIC UTILITIES CORPORATION
437 BLUE CHURCH ROAD
PAXINOS, PA. 17860
CONTACT: DOUG HAUPT
EMAIL: dlhaupt@pplweb.com
PHONE: 610–297–2461

CITY OF BETHLEHEM
1630 CROSS LANE
BETHLEHEM, PA. 18015
CONTACT: ROBERT TAYLOR
EMAIL: rtaylor@bethlehem–pa.gov
PHONE: 610–428–0211

SERVICE ELECTRIC CABLE TV INC
2260 ANENUE A
LVIP 1
BETHLEHEM, PA. 18017
CONTACT: RICH PERICH
EMAIL: rperich@sectv.com
PHONE: 610–625–8502

CROWN CASTLE
1500 CORPORATE DRIVE
CANONSBURG, PA 15317
CONTACT: FIBER DIG TEAM PERSONNEL
EMAIL: fiber.dig@crowncastle.com
PHONE: 1–800–654–3110

ZAYO BANDWIDTH FORMERLY PPL TELCOM LLC
170 ROBBINS ROAD
DOWNINGTOWN, PA 19335
CONTACT: JOHN HOWELLS
EMAIL:JOHN. HOWELLS@ZAYO.COM
PHONE: 610–764–1634

LUMEN FORMERLY LEVEL 3
1025 ELDORADO BOULEVARD
BROOMFIELD, CO. 80021
CONTACT: LUMEN OPERATOR PERSONNEL
EMAIL: RELOCATIONS@LUMEN.COM
PHONE: 877–366–8344 EXT. 3

COMMUNITY UTILITIES OF PENNSYLVANIA
570 HALLET ROAD
EAST STROUDSBURG, PA 18301
CONTACT:VINCENT VARUOLO
EMAIL: vincent.varuolo@uiwater.com
PHONE: 570–517–9884

ASTOUND BROADBAND POWERED BY RCN
5508 NOR BATH BOULEVARD
NORTHAMPTON, PA. 18067
CONTACT: ERIC BEERS
EMAIL: ERIC.BEERS@ASTOUND.COM
PHONE: 610–972–0597

UGI UTILITIES INC.
2121 CITY LINE ROAD
BETHLEHEM, PA. 18017
CONTACT: TIMOTHY STEWARD
EMAIL: tsteward@ugi.com
PHONE: 610–807–3162

VERIZON BUSINESS FORMERLY MCI
7000 WESTON PARKWAY
CARY, NC. 27513
CONTACT: VICTOR WOOD
EMAIL: victor.s.wood@verizon.com
PHONE: 919–414–2782

THE PIDCOCK COMPANY DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE OR GUARANTY THAT THE INFORMATION RECEIVED PURSUANT TO THE SAID REQUESTS UNDER PENNSYLVANIA ONE CALL SYSTEM, INC. AND AS REFLECTED ON THE PLAN IS CORRECT, ACCURATE OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF ANYONE PERFORMING WORK ON THE SITE TO ARRANGE FOR THE FIELD LOCATION AND PROTECTION OF ALL OVERHEAD AND SUBSURFACE UTILITIES WHICH MAY BE ENCOUNTERED DURING THE COURSE OF THEIR WORK.

PRIVATE AND PUBLIC UNDERGROUND LINES AND FACILITIES SUCH AS TELEPHONE, TELEVISION, GENERAL LIGHTING, ELECTRICAL, UNDERDRAINS, PLUMBING, SEWER LINES, STORAGE TANKS, ETC., SERVING THE SITE MAY EXIST ON THE SITE. THE PIDCOCK COMPANY DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE OR GUARANTY THAT THE PRIVATE AND PUBLIC UNDERGROUND LINES AND FACILITIES HAVE BEEN IDENTIFIED, LOCATED AND SHOWN ON THIS PLAN. IT SHALL BE THE RESPONSIBILITY OF ANYONE PERFORMING WORK, BE IT DESIGN WORK FOR FUTURE DEVELOPMENT OR ACTUAL CONSTRUCTION OR DEMOLITION ON THE PROPERTY SHOWN ON THIS PLAN TO ARRANGE FOR THE LOCATION AND PROTECTION OF ALL OVERHEAD, SURFACE AND SUBSURFACE UTILITIES WHICH COULD BE ENCOUNTERED AS THE RESULT OF WORK PERFORMED ON THIS SITE. DESIGN STAGE WORK SHOULD INCLUDE CALLING THE PENNSYLVANIA ONE CALL SYSTEM AT 1–800–242–1776.

LATERAL AND SERVICE LINE NOTES

UNDERGROUND LATERALS AND SERVICE LINES, INCLUDING BUT NOT LIMITED TO GAS AND ELECTRIC, MAY EXIST IN THE VICINITY OF THE PROJECT CONSTRUCTION AND MAY NOT BE SHOWN ON THE PLAN. TO THE EXTENT THAT INFORMATION WAS PROVIDED, TO US, SUCH LATERALS AND LINES HAVE BEEN INDICATED ON THE PLAN, BUT THEIR DEPICTION AND LOCATIONS SHOULD BE CONSIDERED AS ONLY APPROXIMATE, AND NOT AS COMPREHENSIVE OR ALL–INCLUSIVE.

BY SHOWING SOME LATERALS AND LINES OF THIS KIND, THE PIDCOCK COMPANY DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE, OR GUARANTY THAT ALL SUCH UNDERGROUND LATERALS AND LINES HAVE BEEN IDENTIFIED, LOCATED, AND SHOWN ON THIS PLAN.

CONTRACTORS AND ANY OTHER PERSONS DESIGNING OR PERFORMING SUBSURFACE WORK IN THE VICINITY ARE RESPONSIBLE FOR GIVING APPROPRIATE ADVANCE NOTICE BY CALLING THE PENNSYLVANIA ONE CALL SYSTEM, INC. AT 1–800–242–1776 OR BY OPENING TICKET ON THEIR WEBSITE AT https://www.pa1call.org/, AND FOR CONTACTING THE APPROPRIATE PUBLIC AND PRIVATE ENTITIES AND ARRANGING FOR THE FIELD LOCATION AND PROTECTION OF ALL SUCH UNDERGROUND LATERALS AND SERVICE LINES THAT COULD BE ENCOUNTERED AS A RESULT OF THE WORK TO BE PERFORMED ON THE SITE.

THREE BUSINESS DAYS BEFORE
YOU DIG - DRILL - BLAST

DIAL 8-1-1 or 1-800-242-1776

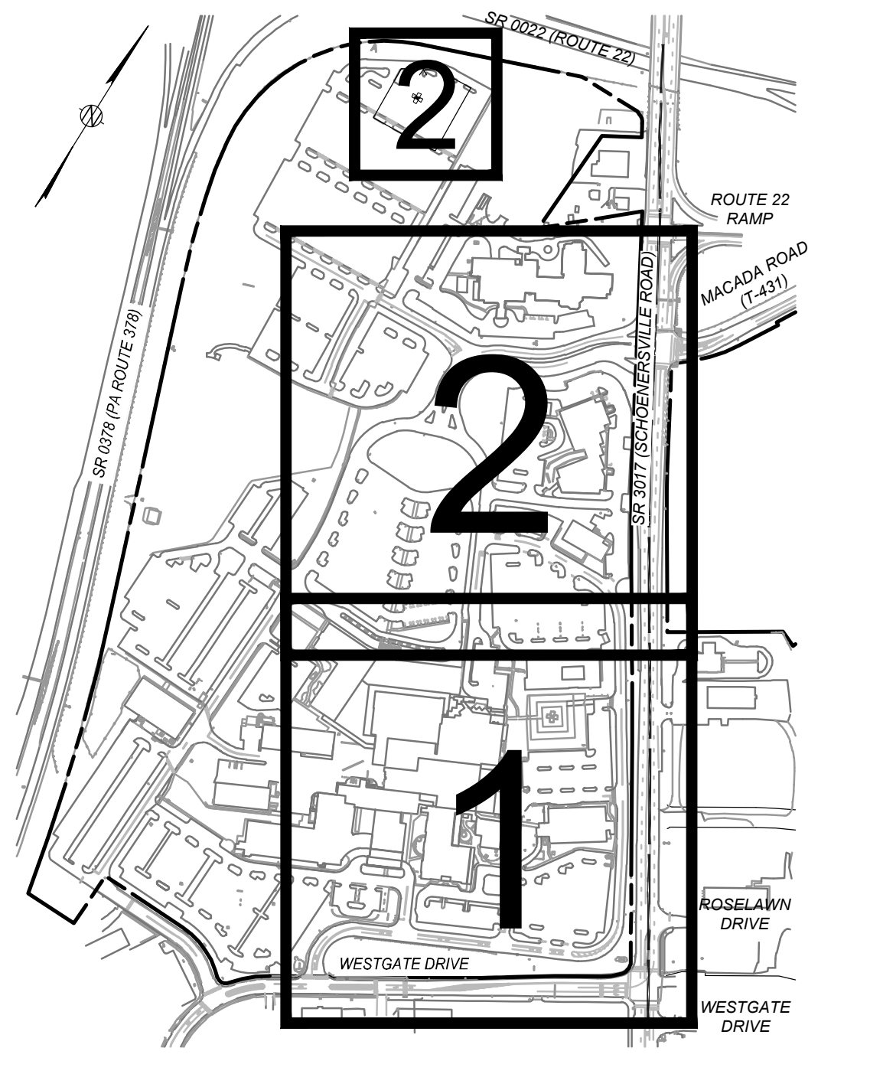
www.paonecall.org

THE PIDCOCK COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL



NOTES:

1. THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.
2. THESE DOCUMENTS ARE PROVIDED FOR MUNICIPAL REVIEW ONLY AND ARE NOT TO BE UTILIZED FOR ANY OTHER PURPOSE. THE DOCUMENTS ARE NOT ISSUED FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED AS SUCH BELOW.

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PLAN PREPARER:
BRENT C. TUCKER, P.E.
THE PIDCOCK COMPANY
2451 PARKWOOD DRIVE
ALLENTOWN, PA. 18103
TELEPHONE NO.: 610-791-2252

NOTICE
THIS PLAN IS INTENDED FOR POST-CONSTRUCTION STORMWATER MANAGEMENT PURPOSES ONLY

6		
5		
4		
3		
2	JANUARY 10, 2025	GENERAL REVISIONS
1	NOVEMBER 22, 2024	REVISED PER LCCD COMMENTS

REVISIONS

POST-CONSTRUCTION STORMWATER MANAGEMENT PLANS

SCALE: AS NOTED
DATE: SEPTEMBER 27, 2024
CHECKED BY: BCT
DRAWN BY: JGU
CAD FILE: PCSM INDEX - Layout1.dwg
PROJECT NUMBER: 22005

Lehigh Valley Health Network
MUHLENBERG

NEW SOUTH WING EMERGENCY DEPARTMENT EXPANSION MAJOR AMENDMENT

CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

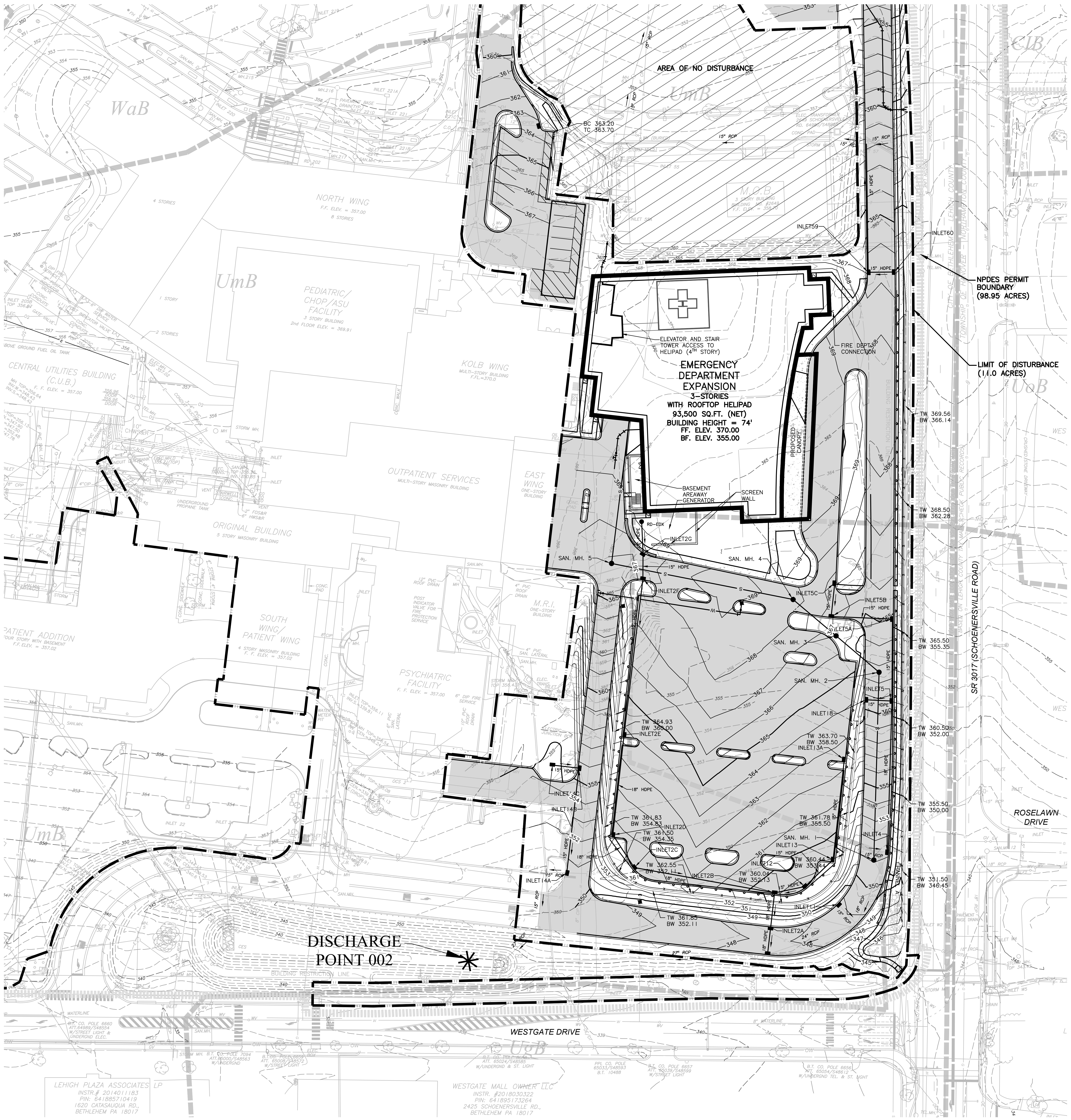
INDEX PLAN

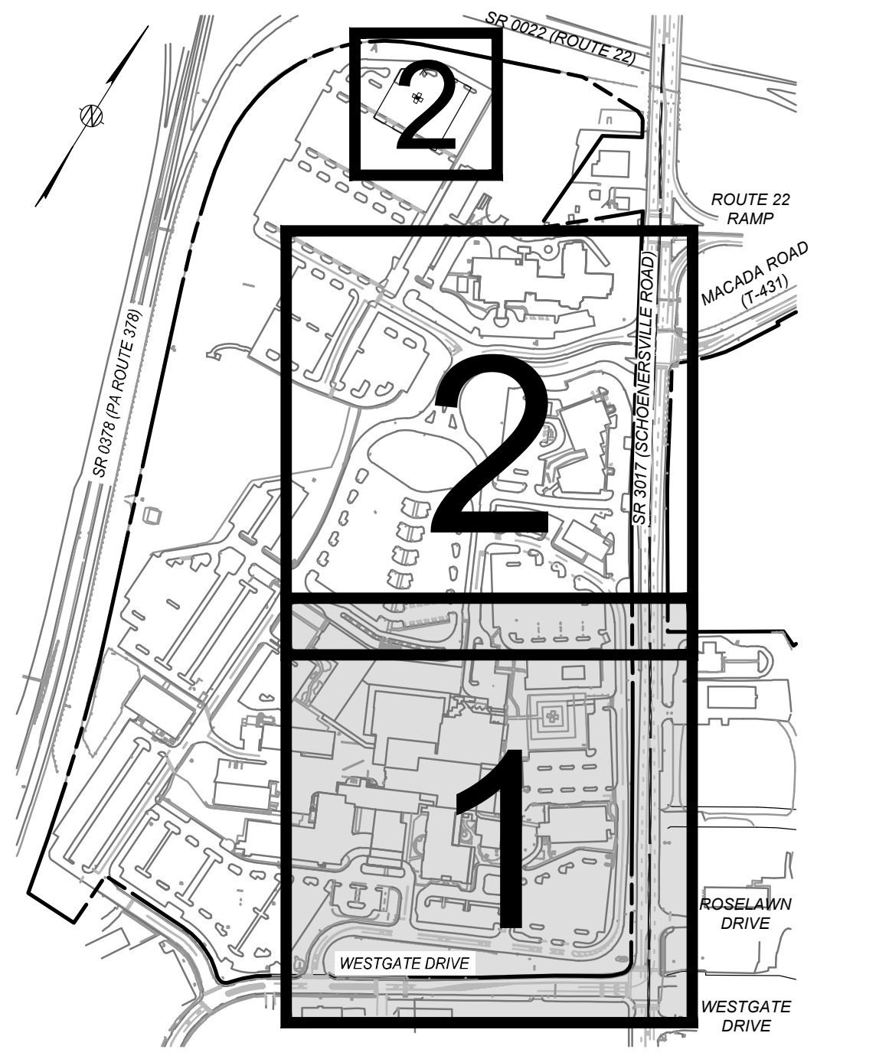
FILE NUMBER
S-12397

SHEET NUMBER
1 OF 4

Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\PCSM\PCSM INDEX - Layout1.dwg Printed: Jan 10, 2025 - 2:00pm

CONTINUED ON POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN 2


AREA OF NO DISTURBANCE
WaB
UmB
UoB
ClB
NORTH WING
PEDIATRIC/ CHOP/ASU FACILITY
KOLB WING
CENTRAL UTILITIES BUILDING (C.U.B.)
OUTPATIENT SERVICES
EAST WING
ORIGINAL BUILDING
SOUTH WING/ PATIENT WING
M.R.I.
PSYCHIATRIC FACILITY
PATIENT ADDITION
M.O.B.
ELEVATOR AND STAIR TOWER ACCESS TO HELIPAD (4TH STORY)
EMERGENCY DEPARTMENT EXPANSION
3-STORIES
WITH ROOFTOP HELIPAD
93,500 SQ.FT. (NET)
BUILDING HEIGHT = 74'
FF. ELEV. 370.00
BF. ELEV. 355.00
PROPOSED CANOPY
FIRE DEPT CONNECTION
BASEMENT AREAWAY GENERATOR
SCREEN WALL
BUILDING RESTRICTION LINE
NPDES PERMIT BOUNDARY (98.95 ACRES)
LIMIT OF DISTURBANCE (11.0 ACRES)
BC 363.20
TC 363.70
INLET59
INLET60
INLET2G
INLET2F
INLET2E
INLET2D
INLET2C
INLET2B
INLET2A
INLET5C
INLET5B
INLET5A
INLET18
INLET13A
INLET13
INLET14
INLET14A
INLET12
INLET11
INLET4
RD-EDX
SAN. MH. 5
SAN. MH. 4
SAN. MH. 3
SAN. MH. 2
SAN. MH. 1
15" HDPE
18" HDPE
TW 369.56
BW 366.14
TW 368.50
BW 362.28
TW 365.50
BW 355.35
TW 360.50
BW 352.00
TW 355.50
BW 350.00
TW 351.50
BW 346.45
TW 364.93
BW 360.00
TW 363.70
BW 358.50
TW 361.83
BW 354.83
TW 361.50
BW 354.35
TW 361.78
BW 355.50
TW 362.55
BW 352.11
TW 360.04
BW 350.13
TW 360.43
BW 353.84
TW 361.85
BW 352.11
SR 3017 (SCHOENERSVILLE ROAD)
ROSELAWN DRIVE
WESTGATE DRIVE
DISCHARGE POINT 002
LEHIGH PLAZA ASSOCIATES LP
WESTGATE MALL OWNER LLC


2
2
1
ROUTE 22 RAMP
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

POST–CONSTRUCTION STORMWATER MANAGEMENT LEGEND

	PROPOSED
LIMIT OF DISTURBANCE	▬ ▬
NPDES BOUNDARY	▥
SOILS DELINEATION	▬ ▬
SOILS TYPE	MeA
AREA OF NO DISTURBANCE	▨

WEB SOIL SURVEY
SOIL DESCRIPTION TABLE

SYMBOL	NAME	SLOPE RANGE	CHARACTERISTICS	HYDROLOGIC SOILS GROUP
ClB	CLARKSBURG SILT LOAM	3–8%	MODERATELY WELL DRAINED, MODERATELY LOW TO MODERATLEY HIGH PERMEABILITY	C
UgB	URBAN LAND	0–8%	PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS	N/A
UmB	URBAN LAND–DUFFIELD COMPLEX	0–8%	PAVEMENT, BUILDINGS, AND OTHER ARTIFICIALLY COVERED AREAS	B
UoB	URBAN LAND–DUFFIELD COMPLEX	0–8%	PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS	B
WaA	WASHINGTON SILT LOAM	0–3%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B
WaB	WASHINGTON SILT LOAM	3–8%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B
WaC	WASHINGTON SILT LOAM	8–15%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B

NOTES:

THE SOIL TYPES AND LOCATIONS ARE BASED UPON THE U. S. DEPARTMENT OF AGRICULTURE–NATIONAL RESOURCES CONSERVATION SERVICE (USDA–NRCS) WEB SOIL SURVEY, AVAILABLE ONLINE AT HTTP://WEBSOILSURVEY.SC.EGOV.USDA.GOV/.

SOIL TYPE USE LIMITATIONS AND RESOLUTIONS

THE SOIL USE LIMITATIONS THAT EXIST FOR THE ABOVE–MENTIONED SOILS AND THEIR RESOLUTIONS ARE AS FOLLOWS:

1. ACCORDING TO THE AFOREMENTIONED SOIL SURVEY, WASHINGTON SILT LOAM HAS FEW LIMITATIONS TO MOST NON–FARM USES. ONE OF THESE LIMITATIONS IS THE POTENTIAL FOR SINKHOLES. THE POTENTIAL FOR THE FORMATIONS OF SINKHOLES WILL BE MINIMIZED THROUGH THE CONSTRUCTION OF A STORMWATER MANAGEMENT SYSTEM. HOWEVER, IN THE EVENT THAT A SINKHOLE DEVELOPS ON THE SITE, SURFACE WATER SHALL BE DIVERTED AWAY FROM THE AREA AND THE SINKHOLE SHALL BE REPAIRED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A PROFESSIONAL ENGINEER OR GEOLOGIST.
2. THE DUFFIELD SERIES IS LIMITED BY SLOW PERMEABILITY AND A SEASONABLY HIGH WATER TABLE. ALSO THESE SOILS EXHIBIT A MODERATE TO SEVERE EROSION HAZARD. A PUMPED WATER FILTER BAG HAS BEEN SPECIFIED TO ADEQUATELY FILTER ANY WATER THAT MAY BE ENCOUNTERED. FURTHER, STRUCTURAL EARTHWORK SHALL ONLY BE DONE WHEN THE SOIL IS AT THE OPTIMUM MOISTURE CONTENT FOR COMPACTION.

Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\PCSM\PCSM PLANS.dwg   Printed: Jan 10, 2025 - 2:01pm

THE
PIDCOCK
COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive   Allentown, Pennsylvania   18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL

NOTES:

1. THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.

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PLAN PREPARER:

BRENT C. TUCKER, P.E.

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ALLENTOWN, PA. 18103
TELEPHONE NO.: 610-791-2252

NOTICE

THIS PLAN IS INTENDED FOR
POST-CONSTRUCTION STORMWATER
MANAGEMENT PURPOSES ONLY

6		
5		
4		
3		
2	JANUARY 10, 2025	GENERAL REVISIONS
1	NOVEMBER 22, 2024	REVISED PER LCCD COMMENTS

REVISIONS

POST-CONSTRUCTION STORMWATER MANAGEMENT PLANS

SCALE: 1"=50'
DATE: SEPTEMBER 27, 2024
CHECKED BY: BCT
DRAWN BY: JGU
CAD FILE: PCSM PLANS.dwg
PROJECT NUMBER: 22005

811
Know what's below.
Call before you dig.
SEE SHEET 1

GRAPHIC SCALE: 50' 25' 0' 50' 100'

Lehigh Valley Health Network
MUHLENBERG

NEW SOUTH WING EMERGENCY DEPARTMENT EXPANSION MAJOR AMENDMENT

CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN 1

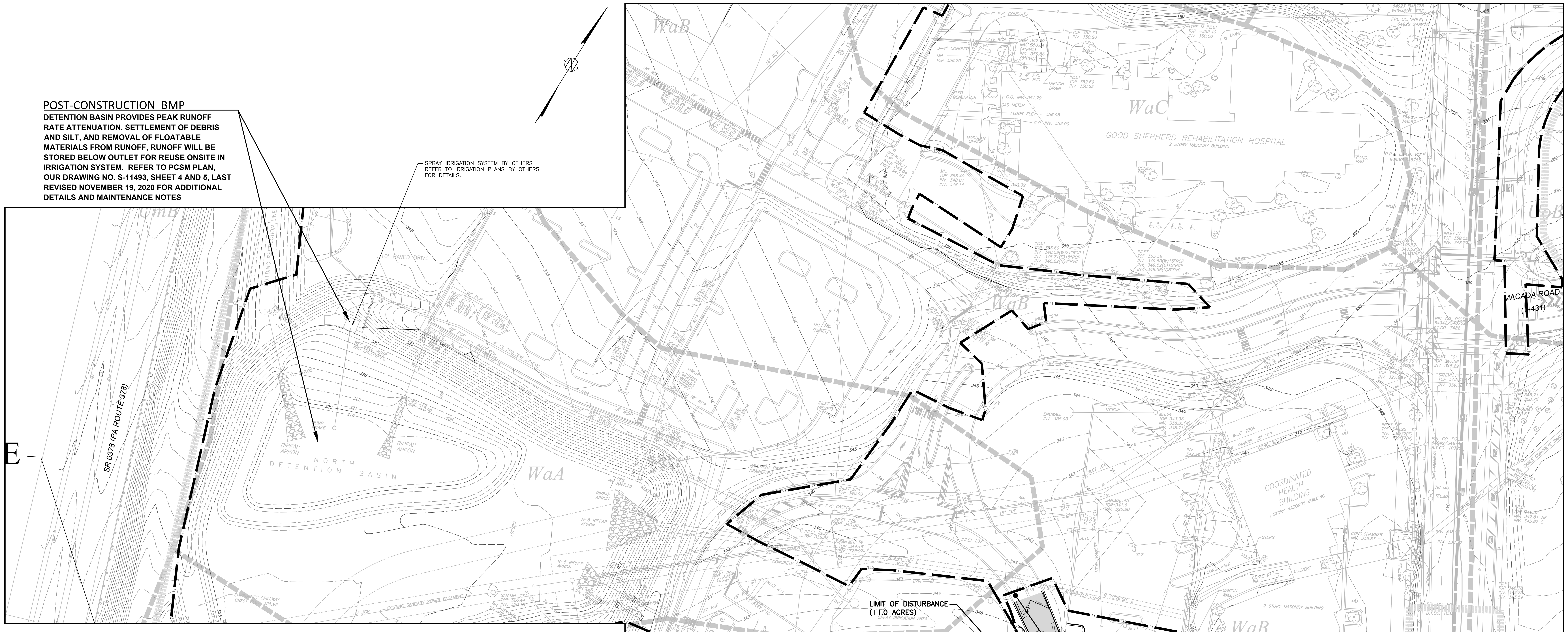
FILE NUMBER
S-12397

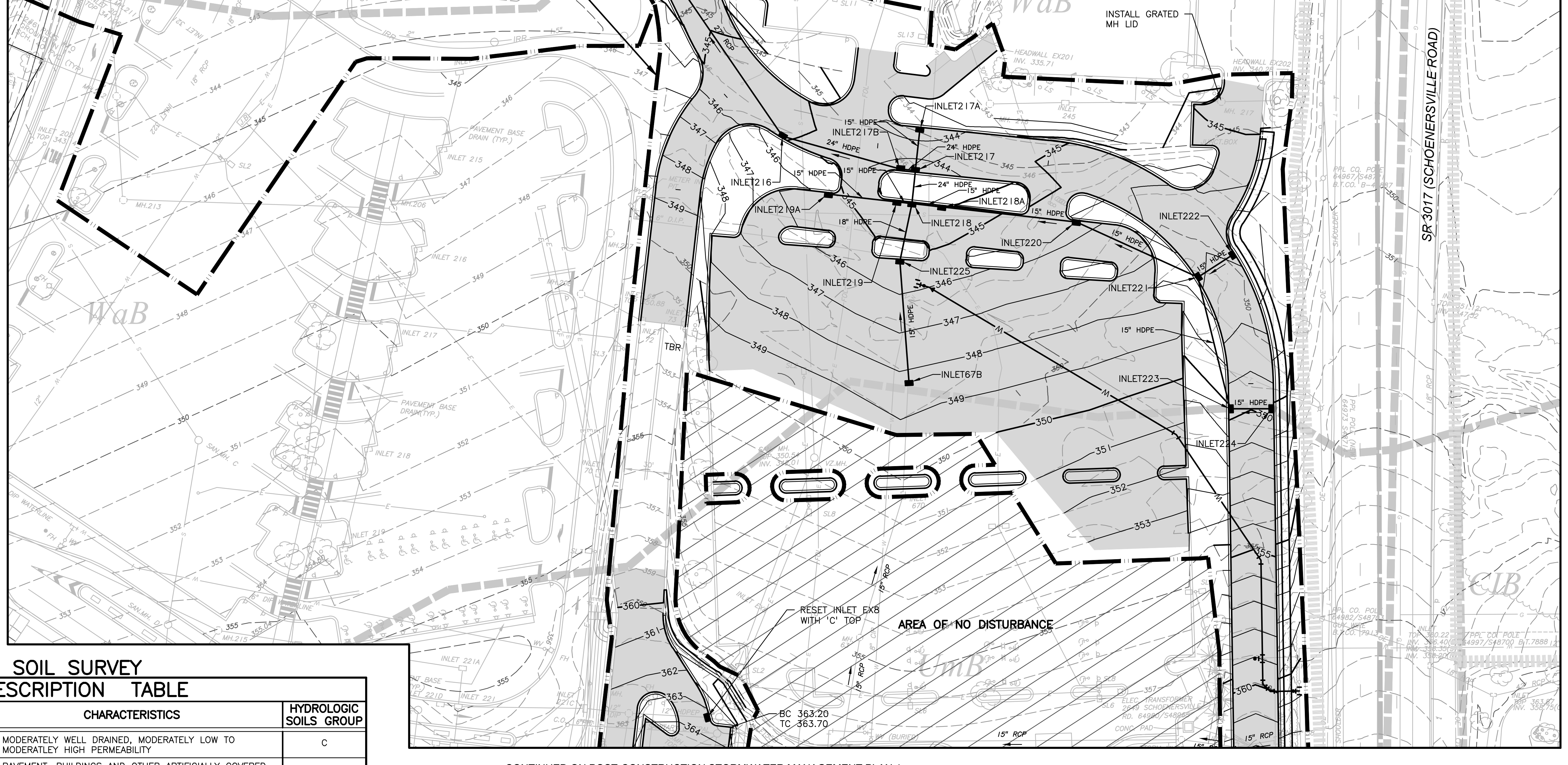
SHEET NUMBER
2 OF 4

POST-CONSTRUCTION BMP

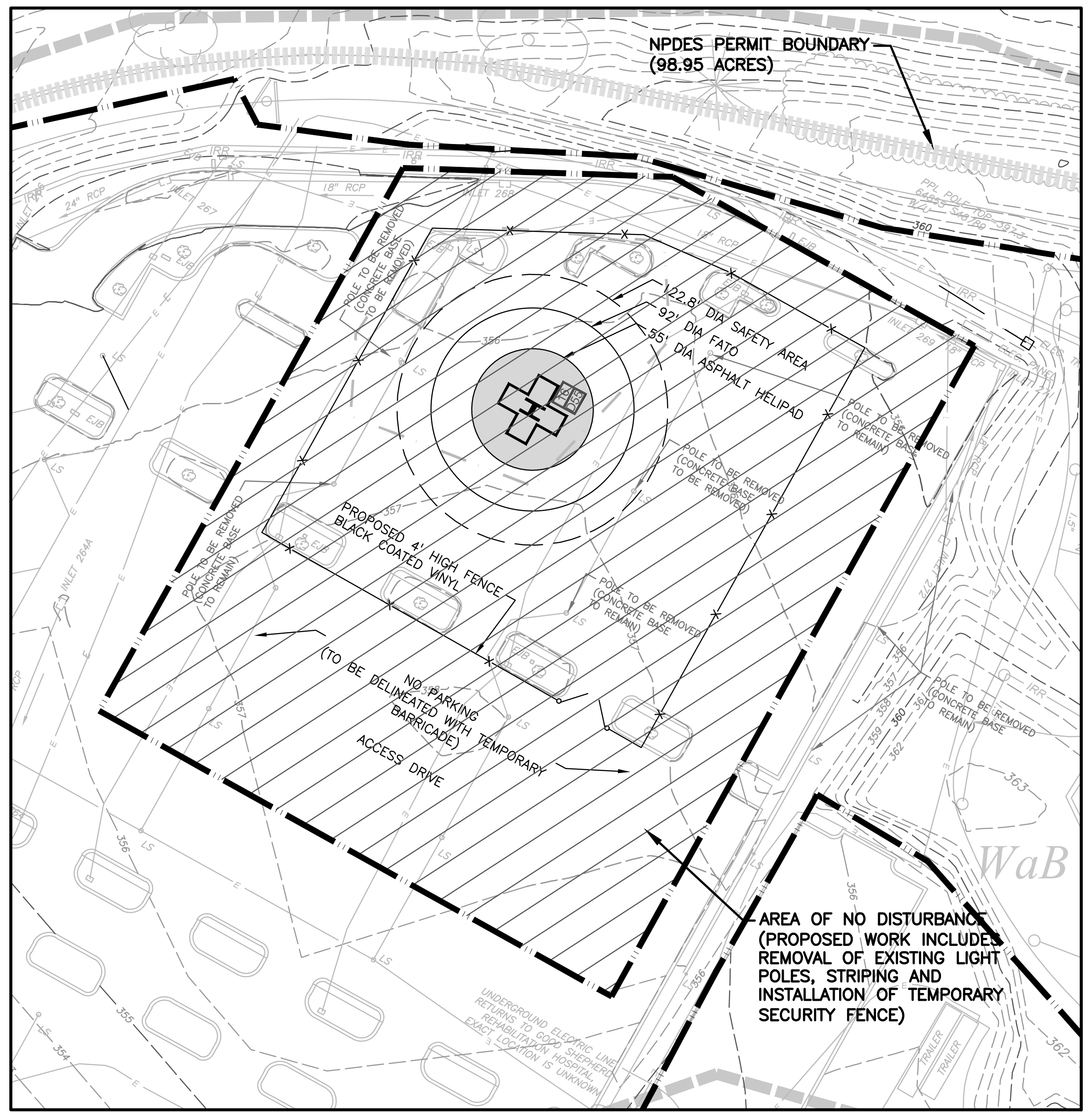
DETENTION BASIN PROVIDES PEAK RUNOFF RATE ATTENUATION, SETTLEMENT OF DEBRIS AND SILT, AND REMOVAL OF FLOATABLE MATERIALS FROM RUNOFF, RUNOFF WILL BE STORED BELOW OUTLET FOR REUSE ONSITE IN IRRIGATION SYSTEM. REFER TO PCSM PLAN, OUR DRAWING NO. S-11493, SHEET 4 AND 5, LAST REVISED NOVEMBER 19, 2020 FOR ADDITIONAL DETAILS AND MAINTENANCE NOTES

SPRAY IRRIGATION SYSTEM BY OTHERS
REFER TO IRRIGATION PLANS BY OTHERS
FOR DETAILS.


E
SR 0378 (PA ROUTE 378)
NORTH DETENTION BASIN
RIPRAP APRON
WaA
WaB
WaC
UmB
UoB
GOOD SHEPHERD REHABILITATION HOSPITAL
2 STORY MASONRY BUILDING
COORDINATED HEALTH BUILDING
1 STORY MASONRY BUILDING
MACADA ROAD (T-431)
10' PAVED DRIVE
LIMIT OF DISTURBANCE (11.0 ACRES)


INSTALL GRATED MH LID
SR 3017 (SCHOENERSVILLE ROAD)
INLET217A
INLET217B
INLET217
INLET216
INLET218
INLET218A
INLET219A
INLET219
INLET220
INLET225
INLET221
INLET222
INLET223
INLET224
INLET67B
15" HDPE
18" HDPE
24" HDPE
RESET INLET EXB WITH "C" TOP
AREA OF NO DISTURBANCE
BC 363.20
TC 363.70
CIB
UmB
WaB

CONTINUED ON POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN 1


NPDES PERMIT BOUNDARY (98.95 ACRES)
122.8' DIA SAFETY AREA
92' DIA FATO
55' DIA ASPHALT HELIPAD
PROPOSED 4' HIGH FENCE BLACK COATED VINYL
NO PARKING (TO BE DELINEATED WITH TEMPORARY BARRICADE)
ACCESS DRIVE
POLE TO BE REMOVED (CONCRETE BASE TO BE REMOVED)
POLE TO BE REMOVED (CONCRETE BASE TO REMAIN)
UNDERGROUND ELECTRIC LINE RETURNS TO GOOD SHEPHERD REHABILITATION HOSPITAL. EXACT LOCATION IS UNKNOWN
TRAILER
WaB

AREA OF NO DISTURBANCE (PROPOSED WORK INCLUDES REMOVAL OF EXISTING LIGHT POLES, STRIPING AND INSTALLATION OF TEMPORARY SECURITY FENCE)

TEMPORARY HELIPAD LOCATION

WEB SOIL SURVEY
SOIL DESCRIPTION TABLE

SYMBOL	NAME	SLOPE RANGE	CHARACTERISTICS	HYDROLOGIC SOILS GROUP
CIB	CLARKSBURG SILT LOAM	3–8%	MODERATELY WELL DRAINED, MODERATELY LOW TO MODERATLEY HIGH PERMEABILITY	C
UgB	URBAN LAND	0–8%	PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS	N/A
UmB	URBAN LAND–DUFFIELD COMPLEX	0–8%	PAVEMENT, BUILDINGS, AND OTHER ARTIFICIALLY COVERED AREAS	B
UoB	URBAN LAND–DUFFIELD COMPLEX	0–8%	PAVEMENT, BUILDINGS AND OTHER ARTIFICIALLY COVERED AREAS	B
WaA	WASHINGTON SILT LOAM	0–3%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B
WaB	WASHINGTON SILT LOAM	3–8%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B
WaC	WASHINGTON SILT LOAM	8–15%	WELL DRAINED, MODERATELY HIGH TO HIGH PERMEABILITY	B

NOTES:

THE SOIL TYPES AND LOCATIONS ARE BASED UPON THE U. S. DEPARTMENT OF AGRICULTURE–NATIONAL RESOURCES CONSERVATION SERVICE (USDA–NRCS) WEB SOIL SURVEY, AVAILABLE ONLINE AT HTTP://WEBSOILSURVEY.SC.EGOV.USDA.GOV/.

SOIL TYPE USE LIMITATIONS AND RESOLUTIONS

THE SOIL USE LIMITATIONS THAT EXIST FOR THE ABOVE–MENTIONED SOILS AND THEIR RESOLUTIONS ARE AS FOLLOWS:

1. ACCORDING TO THE AFOREMENTIONED SOIL SURVEY, WASHINGTON SILT LOAM HAS FEW LIMITATIONS TO MOST NON–FARM USES. ONE OF THESE LIMITATIONS IS THE POTENTIAL FOR SINKHOLES. THE POTENTIAL FOR THE FORMATIONS OF SINKHOLES WILL BE MINIMIZED THROUGH THE CONSTRUCTION OF A STORMWATER MANAGEMENT SYSTEM. HOWEVER, IN THE EVENT THAT A SINKHOLE DEVELOPS ON THE SITE, SURFACE WATER SHALL BE DIVERTED AWAY FROM THE AREA AND THE SINKHOLE SHALL BE REPAIRED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A PROFESSIONAL ENGINEER OR GEOLOGIST.
2. THE DUFFIELD SERIES IS LIMITED BY SLOW PERMEABILITY AND A SEASONABLY HIGH WATER TABLE. ALSO THESE SOILS EXHIBIT A MODERATE TO SEVERE EROSION HAZARD. A PUMPED WATER FILTER BAG HAS BEEN SPECIFIED TO ADEQUATELY FILTER ANY WATER THAT MAY BE ENCOUNTERED. FURTHER, STRUCTURAL EARTHWORK SHALL ONLY BE DONE WHEN THE SOIL IS AT THE OPTIMUM MOISTURE CONTENT FOR COMPACTION.

POST–CONSTRUCTION STORMWATER MANAGEMENT LEGEND

	PROPOSED
LIMIT OF DISTURBANCE	▬ ▬
NPDES BOUNDARY	▥
SOILS DELINEATION	▬ ▬
SOILS TYPE	MeA
AREA OF NO DISTURBANCE	▨

Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\PCSM\PCSM PLANS.dwg Printed: Jan 10, 2025 - 2:01pm

THE PIDCOCK COMPANY

CIVIL ENGINEERING AND LAND PLANNING
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LAND SURVEYING

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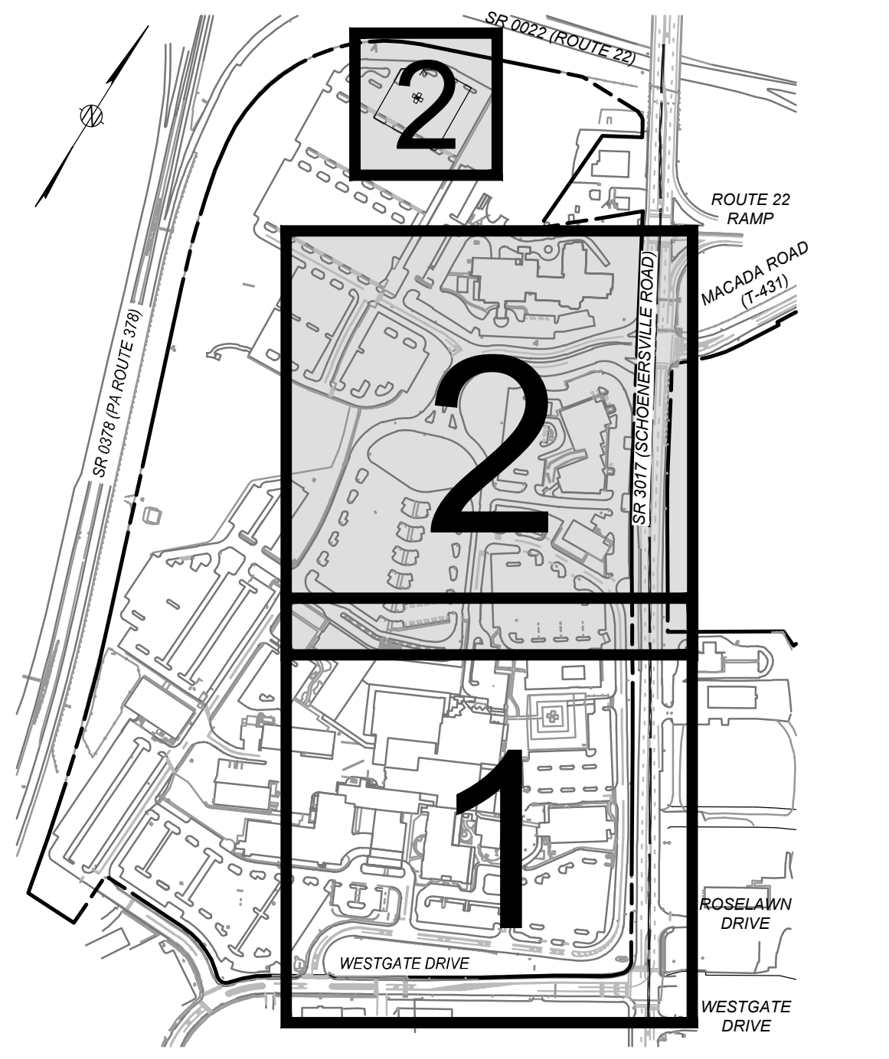
PROFESSIONAL SEAL


2
2
1
ROUTE 22 RAMP
MACADA ROAD (T-431)
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

NOTES:

1. THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.
2. THESE DOCUMENTS ARE PROVIDED FOR MUNICIPAL REVIEW ONLY AND ARE NOT TO BE UTILIZED FOR ANY OTHER PURPOSE. THE DOCUMENTS ARE NOT ISSUED FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED AS SUCH BELOW.

CONTRACTOR'S OBLIGATION REGARDING COORDINATION OF DOCUMENTS AND FIELD CONDITIONS

THE CONTRACT DOCUMENTS PRESENT THE DESIGN INTENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL PLANS, SPECIFICATIONS, ADDENDA, CONSTRUCTION SKETCHES AND OTHER CONTRACT DOCUMENTS FOR CONSISTENCY. SIMILARLY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW FIELD CONDITIONS, INCLUDING COORDINATION WITH ALL UTILITIES. THE CONTRACTOR SHALL COMPLETE ANY TEST EXCAVATIONS IN ADVANCE OF ORDERING MATERIALS OR OF CONSTRUCTION IN AN AREA OF UTILITY CROSSINGS OR POTENTIAL INVOLVEMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING ANY INCONSISTENCIES IN THE DOCUMENTS OR ANY APPARENT CONFLICTS TO THE ATTENTION OF THE ENGINEER BEFORE ORDERING MATERIALS AND BEFORE PROCEEDING WITH CONSTRUCTION IN THE AREA SO THAT THE ENGINEER MAY REVIEW THE CONDITIONS AND RECOMMEND ANY ADJUSTMENTS TO THE DOCUMENTS THAT MAY BE NECESSARY, OR TO RECOMMEND RELOCATION OF A UTILITY OR OTHER REMEDIAL WORK THAT MAY BE REQUIRED.

PLAN PREPARER:

BRENT C. TUCKER, P.E.

THE PIDCOCK COMPANY
2451 PARKWOOD DRIVE
ALLENTOWN, PA. 18103
TELEPHONE NO.: 610-791-2252

NOTICE

THIS PLAN IS INTENDED FOR
POST-CONSTRUCTION STORMWATER
MANAGEMENT PURPOSES ONLY

6		
5		
4		
3		
2	JANUARY 10, 2025	GENERAL REVISIONS
1	NOVEMBER 22, 2024	REVISED PER LCCD COMMENTS

REVISIONS

POST-CONSTRUCTION STORMWATER MANAGEMENT PLANS

SCALE: 1"=50'
DATE: SEPTEMBER 27, 2024
CHECKED BY: BCT
DRAWN BY: JGU
CAD FILE: PCSM PLANS.dwg
PROJECT NUMBER: 22005

811
Know what's below.
Call before you dig.
SEE SHEET 1

GRAPHIC SCALE: 50' 25' 0' 50' 100'

Lehigh Valley Health Network
MUHLENBERG

NEW SOUTH WING EMERGENCY DEPARTMENT EXPANSION MAJOR AMENDMENT

CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN 2

FILE NUMBER
S-12397

SHEET NUMBER
3 OF 4

PERMANENT SEEDING SCHEDULE

1. PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH THE PADEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL, LATEST EDITION, UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE PROJECT SPECIFICATIONS.
2. PERMANENT SEEDING SHALL OCCUR IMMEDIATELY AFTER FINE GRADING IS COMPLETED. THE SCHEDULE OF SEEDING SHALL BE AS FOLLOWS, (IF APPLICABLE).

TABLE 11.4
Recommended Seed Mixtures

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

Penn State, "Erosion Control and Conservation Plantings on Noncropland"

1. PLS is the product of the percentage of pure seed times percentage germination divided by 100. For example, to secure the actual planting rate for switchgrass, divide 12 pounds PLS shown on the seed tag. Thus, if the PLS content of a given seed lot is 35%, divide 12 PLS by 0.35 to obtain 34.3 pounds of seed required to plant one acre. All mixtures in this table are shown in terms of PLS.
2. If high-quality seed is used, for most sites seed spring oats at a rate of 2 bushels per acre, winter wheat at 11.5 bushels per acre, and winter rye at 1 bushel per acre. If germination is below 90%, increase these suggested seeding rates by 0.5 bushel per acre.
3. This mixture is suitable for frequent mowing. Do not cut shorter than 4 inches.
4. Keep seeding rate to that recommended in table. These species have many seeds per pound and are very competitive. To seed small quantities of small seeds such as weeping lovegrass and redtop, dilute with dry sawdust, sand, rice hulls, buckwheat hulls, etc.
5. Use for highway slopes and similar sites where the desired species after establishment is crownvetch.
6. Use only in extreme southeastern or extreme southwestern Pennsylvania. *Serecia lespedeza* is not well adapted to most of PA.
7. Do not mow shorter than 9 to 10 inches.
8. Seed mixtures containing crown vetch should not be used in areas adjacent to wetlands or stream channels due to the invasive nature of this species.

TABLE 11.5
Recommended Seed Mixtures for Stabilizing Disturbed Areas

Site Condition	Nurse Crop	Seed Mixture (Select one mixture)
Slopes and Banks (not mowed)		
Well-drained	1 plus	3, ~~5~~, 8, or 12[1]
Variable drainage	1 plus	3 ~~or 7~~
Slopes and Banks (mowed)		
Well-drained	1 plus	2 or 10
Slopes and Banks (grazed/hay)		
Well-drained	1 plus	2, 3, or 13
Gullies and Eroded Areas	1 plus	3, ~~5, 7,~~ or 12[1]
Erosion Control Facilities (BMPs)		
Sod waterways, spillways, frequent water flow areas	1 plus	2, 3, or 4
Drainage ditches		
Shallow, less than 3 feet deep	1 plus	2, 3, or 4
Deep, not mowed	1 plus	~~5 or~~ 7
Pond banks, dikes, levees, dams, diversion channels, And occasional water flow areas		
Mowed areas	1 plus	2 or 3
Non-mowed areas	1 plus	~~5 or~~ 7
For hay or silage on diversion channels and occasional water flow areas	1 plus	3 or 13
Highways[2]		
Non-mowed areas		
~~Pure crownvetch[3]~~	~~1 plus~~	~~5 or 6~~
Well-drained	1 plus	~~5, 7,~~ 8, 9, or 10
Variable drained	1 plus	3 ~~or 7~~
Poorly drained	1 plus	3 or 4
Areas mowed several times per year	1 plus	2, 3, or 10
Utility Right-of-way		
Well-drained	1 plus	~~5~~, 8, or 12[1]
Variable drained	1 plus	3 ~~or 7~~
Well-drained areas for grazing/hay	1 plus	2, 3, or 13
Effluent Disposal Areas	1 plus	3 or 4
Sanitary Landfills	1 plus	3, ~~5, 7,~~ 11[1], or 12[1]
Surface mines		
Spoils, mine wastes, fly ash, slag, settling basin Residues and other severely disturbed areas (lime to soil test)	1 plus	3, 4, ~~5, 7,~~ 8, 9, 11[1], or 12[1]
Severely disturbed areas for grazing/hay	1 plus	3 or 13

Penn State, "Erosion Control and Conservation Plantings on Noncropland"

1. For seed mixtures 11 and 12, only use spring oats or weeping lovegrass (included in mix) as nurse crop.
2. Contact the Pennsylvania Department of Transportation district roadside specialist for specific suggestions on treatment techniques and management practices.
3. Seed mixtures containing crown vetch should not be used in areas adjacent to wetlands or stream channels due to the invasive nature of this species.

3. REMOVE ALL DEBRIS, INCLUDING LARGE STONES. TILL SOIL TO A DEPTH OF FOUR INCHES TO SIX INCHES. A MINIMUM OF FOUR INCHES OF TOPSOIL SHOULD BE APPLIED, REFER TO STANDARD E&S CONTROL PLAN NOTE 19. APPLY LIME AND FERTILIZER AT THE RATES SPECIFIED BELOW. SOIL SUPPLEMENTS SHALL BE APPLIED IN ACCORDANCE WITH THE REQUIREMENTS DETERMINED BY AN ACTUAL SOIL TEST OR AS INDICATED BELOW. WORK FERTILIZER INTO TOP TWO INCHES OF SOIL.
4. LIMING AND FERTILIZING SHALL BE IN ACCORDANCE WITH TABLE 11.2 AS FOLLOWS:

TABLE 11.2
Soil Amendment Application Rate Equivalents

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

Adapted from Penn State, "Erosion Control and Conservation Plantings on Noncropland"

NOTE: A compost blanket which meets the standards of this chapter may be substituted for the soil amendments shown in Table 11.2.

5. TIME OF SEEDING: FOR BEST RESULTS, GRASS AND LEGUME SEEDINGS SHOULD BE MADE IN SPRING (MARCH, APRIL, AND EARLY MAY). HOWEVER, THROUGH PROPER CHOICE OF SEED MIXTURES, SEED SPECIFICATIONS, AND ESTABLISHMENT TECHNIQUES, DISTURBED SITES CAN BE SEEDED ALMOST ANY TIME FROM SPRING TO FALL. LEGUME SEEDINGS NEED A GROWING PERIOD OF AT LEAST TEN TO TWELVE WEEKS TO PRODUCE SEEDLINGS SUFFICIENTLY LARGE AND HARDY TO SURVIVE THE WINTER. GRASSES GENERALLY REQUIRE AT LEAST FOUR TO SIX WEEKS OF GROWTH PRIOR TO HARD FROSTS. IT IS SUGGESTED THAT LEGUMES BE SEEDED BEFORE AUGUST 15. IF LEGUMES MUST BE SEEDED AFTER THE ABOVE DATES, SELECT LEGUME SEEDLOTS WITH A HIGH CONTENT (30% TO 35% OR MORE) OF HARD SEED. NORMALLY, SPRING OATS ARE SEEDED IN THE SPRING AND EARLY SUMMER, AND WINTER WHEAT OR WINTER RYE FROM EARLY AUGUST UNTIL EARLY OCTOBER. HOWEVER, OATS MAY ALSO BE SEEDED IN THE LATE SUMMER AND EARLY FALL. WHEAT OR RYE MAY BE SEEDED IN THE SPRING OR EARLY SUMMER IF NOT TO BE HARVESTED FOR GRAIN. PENNDOT PUBLICATION 408 RECOMMENDS PLANTING DATES FROM MARCH 15 TO JUNE 1 AND AUGUST 1 TO OCTOBER 15.
6. APPLY SEED AT THE RATE SCHEDULED IN TABLE 11.4, FOR EACH PARTICULAR SEED TYPE. DIVIDE SEED INTO TWO EQUAL LOTS. SOW ONE LOT IN ONE DIRECTION, SOW SECOND LOT AT A RIGHT ANGLE TO THE FIRST LOT. RAKE SEEDED AREA LIGHTLY. ROLL SURFACE LIGHTLY TO FIRM SOIL AROUND SEED.
7. MULCHES SHOULD BE APPLIED AT THE RATES SHOWN IN TABLE 11.6.

STRAW AND HAY MULCH SHOULD BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR–DRAWN IMPLEMENT MAY BE USED TO "CRIMP" THE STRAW OR HAY INTO THE SOIL –– ABOUT 3 INCHES. THIS METHOD SHOULD BE LIMITED TO SLOPES NO STEEPER THAN 3H:1V. THE MACHINERY SHOULD BE OPERATED ON THE CONTOUR. NOTE: CRIMPING OF HAY OR STRAW BY RUNNING OVER IT WITH TRACKED MACHINERY IS NOT RECOMMENDED.

POLYMERIC AND GUM TACKIFIERS MIXED AND APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS MAY BE USED TO TACK MULCH. AVOID APPLICATION DURING RAIN AND ON WINDY DAYS. A 24–HOUR CURING PERIOD AND A SOIL TEMPERATURE HIGHER THAN 450 F ARE TYPICALLY REQUIRED. APPLICATION SHOULD GENERALLY BE HEAVIEST AT EDGES OF SEEDED AREAS AND AT CRESTS OF RIDGES AND BANKS TO PREVENT LOSS BY WIND. THE REMAINDER OF THE AREA SHOULD HAVE BINDER APPLIED UNIFORMLY. BINDERS MAY BE APPLIED AFTER MULCH IS SPREAD OR SPRAYED INTO THE MULCH AS IT IS BEING BLOWN ONTO THE SOIL. APPLYING STRAW AND BINDER TOGETHER IS GENERALLY MORE EFFECTIVE.

SYNTHETIC BINDERS, OR CHEMICAL BINDERS, MAY BE USED AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH PROVIDED SUFFICIENT DOCUMENTATION IS PROVIDED TO SHOW THEY ARE NON–TOXIC TO NATIVE PLANT AND ANIMAL SPECIES.

MULCH ON SLOPES OF 8% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING. LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETS MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

SHREDDED PAPER HYDROMULCH SHOULD NOT BE USED ON SLOPES STEEPER THAN 5%. WOOD FIBER HYDROMULCH MAY BE APPLIED ON STEEPER SLOPES PROVIDED A TACKIFIER IS USED. THE APPLICATION RATE FOR ANY HYDROMULCH SHOULD BE 2,000 LB/ACRE AT A MINIMUM.

TABLE 11.6
Mulch Application Rates

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

PCSM STANDARD NOTES

PERMIT TERMINATION

1. UPON PERMANENT STABILIZATION OF THE EARTH DISTURBANCE ACTIVITY UNDER § 102.22(A)(2) (RELATING TO PERMANENT STABILIZATION), AND INSTALLATION OF BMPS IN ACCORDANCE WITH AN APPROVED PLAN PREPARED AND IMPLEMENTED IN ACCORDANCE WITH §§ 102.4 AND 102.8 (RELATING TO EROSION AND SEDIMENT CONTROL REQUIREMENTS; AND PCSM REQUIREMENTS), THE PERMITTEE OR CO–PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION TO THE DEPARTMENT OR CONSERVATION DISTRICT.
2. THE NOTICE OF TERMINATION MUST INCLUDE:
   (1) THE FACILITY NAME, ADDRESS AND LOCATION.
   (2) THE OPERATOR NAME AND ADDRESS.
   (3) THE PERMIT NUMBER.
   (4) THE REASON FOR PERMIT TERMINATION.
   (5) IDENTIFICATION OF THE PERSONS WHO HAVE AGREED TO AND WILL BE RESPONSIBLE FOR LONG–TERM OPERATION AND MAINTENANCE OF THE PCSM BMPS IN ACCORDANCE WITH § 102.8(M) AND PROOF OF COMPLIANCE WITH § 102.8(M)(2).

PCSM REQUIREMENTS

1. PCSM REPORTING AND RECORD KEEPING. THE PCSM PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE DEPARTMENT OR THE CONSERVATION DISTRICT.
2. LICENSED PROFESSIONAL OVERSIGHT OF CRITICAL STAGES. A LICENSED PROFESSIONAL OR A DESIGNEE SHALL BE PRESENT ONSITE AND BE RESPONSIBLE DURING CRITICAL STAGES OF IMPLEMENTATION OF THE APPROVED PCSM PLAN. THE CRITICAL STAGES MAY INCLUDE THE INSTALLATION OF UNDERGROUND TREATMENT OR STORAGE BMPS, STRUCTURALLY ENGINEERED BMPS, OR OTHER BMPS AS DEEMED APPROPRIATE BY THE DEPARTMENT OR THE CONSERVATION DISTRICT.
3. FINAL CERTIFICATION. THE PERMITTEE SHALL INCLUDE WITH THE NOTICE OF TERMINATION "RECORD DRAWINGS" WITH A FINAL CERTIFICATION STATEMENT FROM A LICENSED PROFESSIONAL, WHICH READS AS FOLLOWS:

   > "I (NAME) DO HEREBY CERTIFY PURSUANT TO THE PENALTIES OF 18 PA.C.S.A. § 4904 TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE ACCOMPANYING RECORD DRAWINGS ACCURATELY REFLECT THE AS–BUILT CONDITIONS, ARE TRUE AND CORRECT, AND ARE IN CONFORMANCE WITH CHAPTER 102 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE PROJECT SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN, ALL APPROVED PLAN CHANGES AND ACCEPTED CONSTRUCTION PRACTICES."

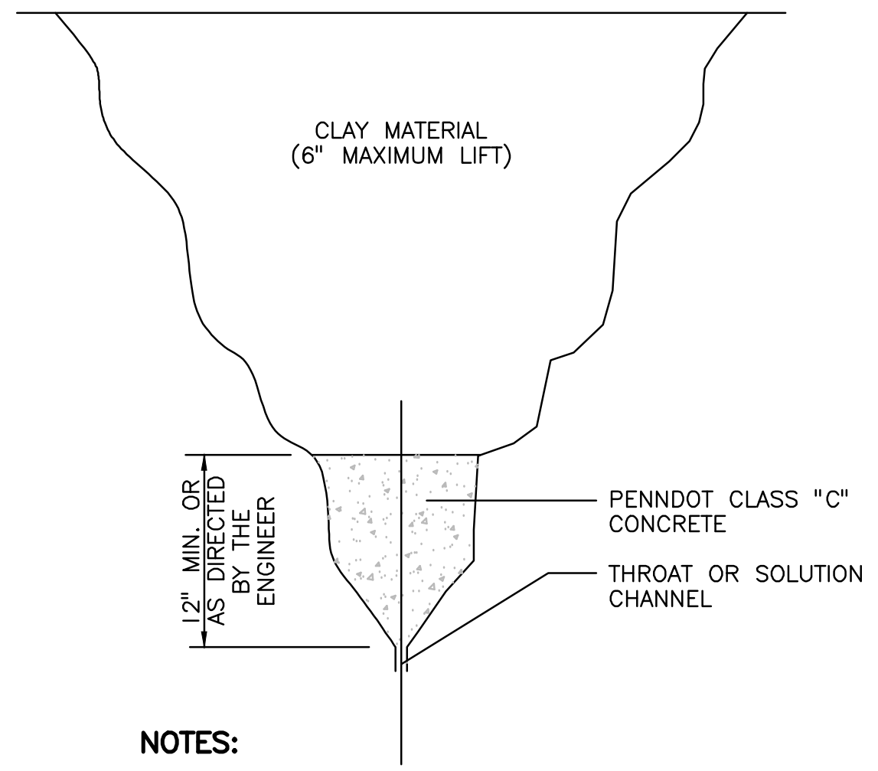
4. THE PERMITTEE SHALL RETAIN A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN.
5. THE PERMITTEE SHALL PROVIDE A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN TO THE PERSON IDENTIFIED IN THIS SECTION AS BEING RESPONSIBLE FOR THE LONG–TERM OPERATION AND MAINTENANCE OF THE PCSM BMPS.

PCSM LONG TERM OPERATIONS AND MAINTENANCE REQUIREMENTS

1. UNTIL THE PERMITTEE OR CO–PERMITTEE HAS RECEIVED WRITTEN APPROVAL OF A NOTICE OF TERMINATION, THE PERMITTEE OR CO–PERMITTEE WILL REMAIN RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT TERMS AND CONDITIONS INCLUDING LONG–TERM OPERATION AND MAINTENANCE OF ALL PCSM BMPS ON THE PROJECT SITE AND IS RESPONSIBLE FOR VIOLATIONS OCCURRING ON THE PROJECT SITE. THE DEPARTMENT OR CONSERVATION DISTRICT WILL CONDUCT A FINAL INSPECTION AND APPROVE OR DENY THE NOTICE OF TERMINATION WITHIN 30 DAYS.
2. THE PERMITTEE OR CO–PERMITTEE SHALL BE RESPONSIBLE FOR LONG–TERM OPERATION AND MAINTENANCE OF PCSM BMPS UNLESS A DIFFERENT PERSON IS IDENTIFIED IN THE NOTICE OF TERMINATION AND HAS AGREED TO LONG–TERM OPERATION AND MAINTENANCE OF PCSM BMPS.
3. FOR ANY PROPERTY CONTAINING A PCSM BMP, THE PERMITTEE OR CO–PERMITTEE SHALL RECORD AN INSTRUMENT WITH THE RECORDER OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE PCSM BMP AND THE RELATED OBLIGATIONS IN THE ORDINARY COURSE OF A TITLE SEARCH OF THE SUBJECT PROPERTY. THE RECORDED INSTRUMENT MUST IDENTIFY THE PCSM BMP, PROVIDE FOR NECESSARY ACCESS RELATED TO LONG–TERM OPERATION AND MAINTENANCE FOR PCSM BMPS AND PROVIDE NOTICE THAT THE RESPONSIBILITY FOR LONG–TERM OPERATION AND MAINTENANCE OF THE PCSM BMP IS A COVENANT THAT RUNS WITH THE LAND THAT IS BINDING UPON AND ENFORCEABLE BY SUBSEQUENT GRANTEES, AND PROVIDE PROOF OF FILING WITH THE NOTICE OF TERMINATION UNDER § 102.7(B)(5) (RELATING TO PERMIT TERMINATION
4. THE PERSON RESPONSIBLE FOR PERFORMING LONG–TERM OPERATION AND MAINTENANCE MAY ENTER INTO AN AGREEMENT WITH ANOTHER PERSON INCLUDING A CONSERVATION DISTRICT, NONPROFIT ORGANIZATION, MUNICIPALITY, AUTHORITY, PRIVATE CORPORATION OR OTHER PERSON, TO TRANSFER THE RESPONSIBILITY FOR PCSM BMPS OR TO PERFORM LONG–TERM OPERATION AND MAINTENANCE AND PROVIDE NOTICE THEREOF TO THE DEPARTMENT.
5. A PERMITTEE OR CO–PERMITTEE THAT FAILS TO TRANSFER LONG–TERM OPERATION AND MAINTENANCE OF THE PCSM BMP OR OTHERWISE FAILS TO COMPLY WITH THIS REQUIREMENT SHALL REMAIN JOINTLY AND SEVERALLY RESPONSIBLE WITH THE LANDOWNER FOR LONG–TERM OPERATION AND MAINTENANCE OF THE PCSM BMPS LOCATED ON THE PROPERTY.

POST–CONSTRUCTION GENERAL NOTES

1. IF FILL MATERIAL IS TO BE IMPORTED FROM AN OFF–SITE LOCATION, IT IS THE RESPONSIBILITY OF THE OPERATOR TO PERFORM ENVIRONMENTAL DUE DILIGENCE TO CERTIFY THE MATERIAL AS CLEAN FILL PRIOR TO PLACING ON–SITE. THE DEFINITIONS OF THE ABOVE–MENTIONED TERMS ARE AS FOLLOWS:
   a) CLEAN FILL – UNCONTAMINATED, NON–WATER SOLUBLE, NON–DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE–USE.)
   b) ENVIRONMENTAL DUE DILIGENCE – INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".
2. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.
3. THE PLANS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION "PENNSYLVANIA STORMWATER BEST MANAGEMENT PRACTICES MANUAL" TO:
   - MINIMIZE THE IMPERVIOUS AREAS;
   - MAXIMIZE THE PROTECTION OF EXISTING DRAINAGE AND EXISTING VEGETATION;
   - TO MINIMIZE LAND CLEARING AND GRADING;
   - TO MINIMIZE SOIL COMPACTION; AND
   - TO UTILIZE OTHER STRUCTURAL OR NONSTRUCTURAL BMPS THAT PREVENT OR MINIMIZE CHANGES IN STORMWATER RUNOFF.
4. ANTICIPATED CONSTRUCTION WASTE INCLUDES REMOVED CONCRETE, BUILDING MATERIALS, AND PAVEMENT, EXCESS CONCRETE, AND EXCESS PAVING MATERIAL. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THIS SITE.


CLAY MATERIAL
(6" MAXIMUM LIFT)
12" MIN. OR AS DIRECTED BY THE ENGINEER
PENNDOT CLASS "C" CONCRETE
THROAT OR SOLUTION CHANNEL

NOTES FOR POSSIBLE APPROACH TO SINKHOLE REPAIR

1. REMOVE ALL EARTH NECESSARY TO EXPOSE THE ROCK WITHIN THE IMMEDIATE AREA OF THE SINKHOLE.
2. EXCAVATION OF ALL EARTH ABOVE AND AT THE IMMEDIATE PERIMETER OF THE SINKHOLE SHALL CONTINUE UNTIL THE EXPOSED ROCK SURFACES ARE CLEAN.
3. PREPARE "THROATS" OR SOLUTION CHANNELS OF THE SINKHOLE TO THE SATISFACTION OF THE PROFESSIONAL ENGINEER.
4. WHEN THE PROFESSIONAL ENGINEER HAS APPROVED THE SINKHOLE PREPARATION, THE CONTRACTOR SHALL PLUG ALL 'THROATS" OR SOLUTION CHANNELS WITH PENNDOT CLASS "C" CONCRETE.
5. AFTER THE CONCRETE HAS SET, THE CONTRACTOR SHALL BACKFILL THE AREA WITH CLAY MATERIAL. MAXIMUM LIFTS OF 6 INCHES IN DEPTH SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST WITH THE PRECISE SCOPE AS DETERMINED BY THE SUPERVISING PROFESSIONAL.
6. COMPACTED LIFTS OF CLAY SHALL BE PLACED UNTIL SUBGRADE ELEVATION IS REACHED.

NOTES:

1. THIS DETAIL REPRESENTS ONLY ONE METHOD OF SINKHOLE REMEDIATION. PRIOR TO REPAIRING ANY SINKHOLE, THE CLIENT SHALL CONTACT A PROFESSIONAL ENGINEER WITH EXPERIENCE IN GEOTECHNICAL ENGINEERING SO AS TO REPAIR THE SINKHOLE IN ACCORDANCE WITH THE PROFESSIONAL'S SPECIFIC RECOMMENDATIONS.

2. THE REMEDIATION PLAN CHOSEN BY THE PROFESSIONAL ENGINEER SHOULD BE BASED ON THE CHARACTERISTICS OF THE SINKHOLE, THE LOCATION OF THE SINKHOLE ON THE SITE AND THE PLANNED OR POSSIBLE FUTURE DEVELOPMENT AT THE SINKHOLE LOCATION.

3. THE SINKHOLE LOCATION SHOULD BE DOCUMENTED ON THE AS–BUILT PLANS FOR FUTURE REFERENCE.

SINKHOLE REPAIR DETAIL

NO SCALE

POST–CONSTRUCTION BMP'S

THE FOLLOWING STRUCTURAL POST–CONSTRUCTION BMP'S WILL BE UTILIZED ON THE SITE:

1. DETENTION BASIN: PROVIDES PEAK RUNOFF RATE ATTENUATION, SETTLEMENT OF DEBRIS AND SILT, AND REMOVAL OF FLOATABLE MATERIALS FROM RUNOFF, AND RUNOFF WILL BE STORED BELOW OUTLET FOR REUSE ONSITE IN IRRIGATION SYSTEM.
2. SPRAY IRRIGATION (CAPTURE AND REUSE): USED TO WATER LAWN AREAS AND RECHARGE GROUND WATER FROM RUNOFF STORED IN THE DETENTION BASIN THAT HAS BEEN COLLECTED FROM IMPERVIOUS SURFACES.

THERE ARE NO CHANGES TO THE DETENTION BASIN AND WATER QUALITY STRUCTURES FROM THE ORIGINAL NPDES PERMIT APPROVAL. REFER TO THE PCSM PLAN, OUR DRAWING NO. S–11493, SHEETS 4 AND 5, LAST REVISED NOVEMBER 19, 2020 FOR ADDITIONAL INFORMATION REGARDING THE DETENTION BASIN AND WATER QUALITY STRUCTURES DETAILS AND MAINTENANCE NOTES.

POST–CONSTRUCTION BMP INSTALLATION AND STABILIZATION SCHEDULE

POST–CONSTRUCTION STORMWATER MANAGEMENT BMPS ARE TO BE CONSTRUCTED AND STABILIZED IN ACCORDANCE WITH THE SOIL EROSION AND SEDIMENTATION CONTROL PLAN STAGING OF EARTHMOVING ACTIVITIES AND GENERAL NOTES.

SPRAY IRRIGATION (CAPTURE AND REUSE)

1. MINOR ADJUSTMENTS TO THE THE SPRAY IRRIGATION SYSTEM ARE REQUIRED AND SHALL BE ADJUSTED BY OTHERS IN ACCORDANCE WITH THE PLANS PREPARED BY AQUAMIST IRRIGATION AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

POST–CONSTRUCTION MAINTENANCE SCHEDULE

THE MAINTENANCE OF THE BMP'S SHOWN ON THIS PLAN SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY. SUCH MAINTENANCE RESPONSIBILITY SHALL BE A COVENANT RUNNING WITH THE LAND.

SPRAY IRRIGATION (CAPTURE AND REUSE) (RESPONSIBLE PARTY: PROPERTY OWNER):

THE SPRAY IRRIGATION SHALL BE MAINTAINED IN ACCORDANCE WITH THE PLANS PREPARED BY AQUA MIST IRRIGATION AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

CURRENT PROPERTY OWNER
LEHIGH VALLEY HEALTH NETWORK
ATTN: DESIGN & CONSTRUCTION DEPT, 5TH FLOOR,
2100 MACK BOULEVARD, PO BOX 4000
ALLENTOWN, PA 18105
(484)–884–7565

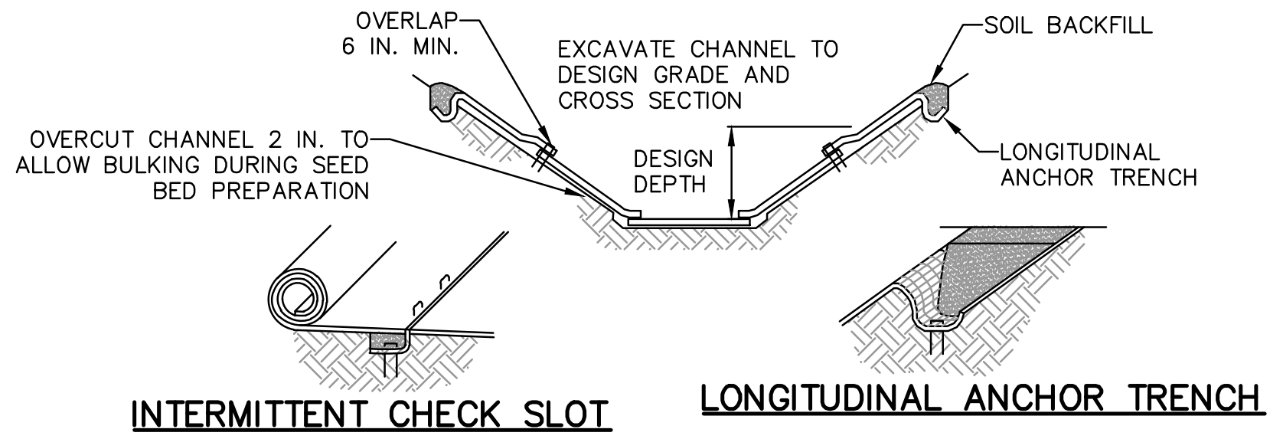
POST–CONSTRUCTION SCHEDULE OF CRITICAL INSPECTIONS

THE FOLLOWING CRITICAL STAGES ARE TO BE INSPECTED BY A LICENSED PROFESSIONAL OR DESIGNEE:

SPRAY IRRIGATION (CAPTURE AND REUSE):
- A MANUFACTURER'S REPRESENTATIVE WILL BE PRESENT DURING CONSTRUCTION AND DURING THE INITIAL SYSTEM ACTIVATION FOR INSPECTIONS.
- CONFIRMATION THE SYSTEM IS INSTALLED BY OWNER'S REPRESENTATIVE.

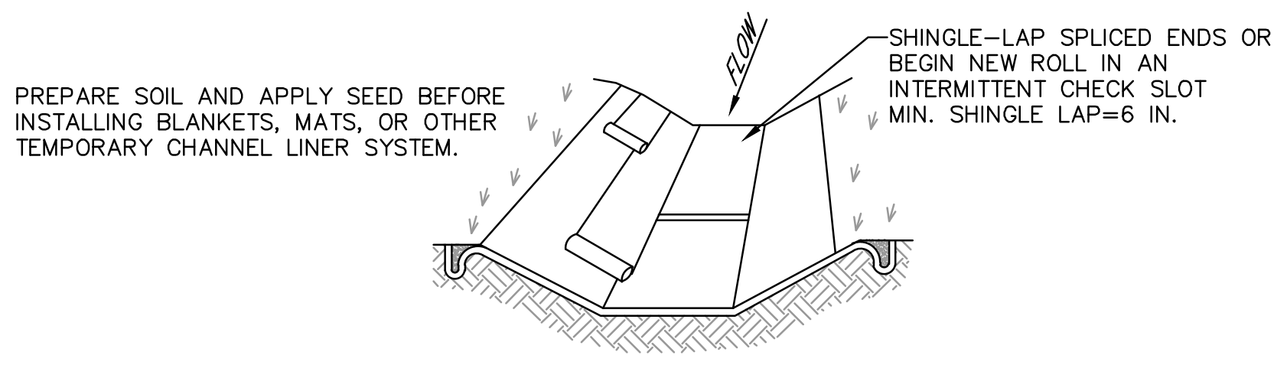
FINAL GRADE VERIFICATION
- INSPECTION AND CONFIRMATION OF FINAL SITE GRADING OF AREAS TRIBUTARY TO PCSM BMPs.

BUILDING DOWNSPOUT VERIFICATION
- VERIFICATION OF DOWNSPOUT LOCATIONS AND CONNECTION TO STORM SEWER CONVEYANCE SYSTEM TO CONFIRM DRAINAGE PATTERNS

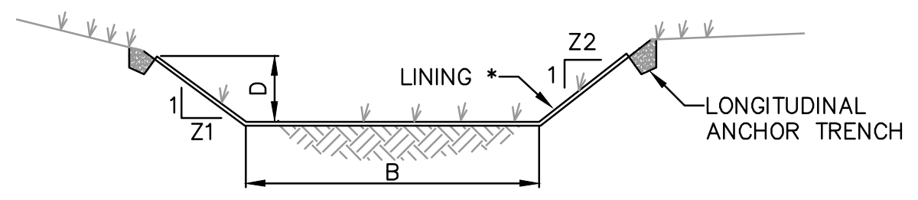

OVERLAP 6 IN. MIN.
EXCAVATE CHANNEL TO DESIGN GRADE AND CROSS SECTION
SOIL BACKFILL
OVERCUT CHANNEL 2 IN. TO ALLOW BULKING DURING SEED BED PREPARATION
DESIGN DEPTH
LONGITUDINAL ANCHOR TRENCH

INTERMITTENT CHECK SLOT

LONGITUDINAL ANCHOR TRENCH


PREPARE SOIL AND APPLY SEED BEFORE INSTALLING BLANKETS, MATS, OR OTHER TEMPORARY CHANNEL LINER SYSTEM.
FLOW
SHINGLE–LAP SPLICED ENDS OR BEGIN NEW ROLL IN AN INTERMITTENT CHECK SLOT MIN. SHINGLE LAP=6 IN.

ISOMETRIC VIEW



(LOOKING DOWNSTREAM)

CHANNEL CROSS–SECTION

* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION

CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)	LINING *
A	ALL	0	0.5	3	3	3	NAG S75

NOTES:

ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION.
SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

STANDARD CONSTRUCTION DETAIL #6-1
VEGETATED CHANNEL

NOT TO SCALE

STORM SEWER DRAINAGE TABULATION

DOWNSTREAM STRUCTURE ID	DOWNSTREAM STRUCTURE TOP	DOWNSTREAM STRUCTURE INV.	PIPE INFORMATION SIZE	PIPE INFORMATION LENGTH (FT)	PIPE INFORMATION SLOPE (%)	UPSTREAM STRUCTURE INV.	UPSTREAM STRUCTURE TOP	UPSTREAM STRUCTURE ID
XCES1	342.60	340.00	27	47	1.45	340.69	349.27	XINLET1
XINLET1	349.27	343.67	15	61	0.55	344.00	349.52	XINLET14
XINLET14	349.52	344.16	15	25	1.04	344.42	350.40	INLET14A
INLET14A	350.40	346.90	15	113	2.30	349.50	355.50	INLET14B
INLET14B	355.50	349.71	15	29	1.01	350.00	354.00	INLET14C
INLET14A	350.40	344.42	15	24	1.01	344.66	350.43	XINLET15
XCES1A	343.60	341.00	27	275	0.51	342.40	347.49	XINLET2
XINLET2	347.49	342.43	18	28	4.00	343.55	347.49	INLET2A
INLET2A	347.49	343.70	18	38	5.24	345.68	359.01	INLET2B
INLET2B	359.01	353.48	18	153	1.50	355.78	360.16	INLET2C
INLET2C	360.16	355.98	18	42	1.00	356.40	360.33	INLET2D
INLET2D	360.33	356.60	18	108	3.00	359.84	363.57	INLET2E
INLET2E	363.57	360.10	15	169	1.75	363.05	367.20	INLET2F
INLET2F	367.20	363.25	15	25	1.77	363.70	367.59	INLET2G
INLET2G	367.59	363.90	15	47	2.00	364.83	369.94	RD-EDX
XINLET2	347.49	342.43	24	100	0.57	343.00	348.54	XINLET3
XINLET3	348.54	343.04	18	84	1.14	344.00	351.03	XINLET4
XINLET4	351.03	347.30	18	162	4.50	354.61	360.41	INLET5
INLET5	360.41	357.00	15	88	4.50	360.96	364.66	INLET5A
INLET5A	364.66	361.20	15	66	1.90	362.45	366.45	INLET5B
INLET5B	366.45	362.65	15	36	1.00	363.01	366.50	INLET5C
INLET2B	359.01	354.34	15	34	1.01	354.68	358.39	INLET12
INLET12	358.39	354.88	15	42	1.01	355.30	358.94	INLET13
INLET13	358.94	355.50	15	108	3.00	358.74	362.18	INLET13A
INLET5	360.41	356.72	15	28	1.00	357.00	360.48	INLET18
XINLET4	351.03	344.18	15	28	0.64	344.36	351.10	XINLET17
XINLET3	348.54	343.11	15	28	0.57	343.27	348.57	INLET11
XJUNC201	340.00	333.86	27	21	2.67	334.42	343.46	XMH215
XMH215	343.46	334.92	24	152	2.00	337.95	344.91	INLET216
INLET216	344.91	338.00	24	82	1.27	339.04	343.69	INLET217B
INLET217B	343.69	339.09	24	10	1.30	339.22	343.67	INLET217
INLET217	343.67	339.27	24	22	2.22	339.76	343.93	INLET218
INLET218	343.93	340.23	18	39	3.16	341.46	344.96	INLET225
INLET225	344.96	341.56	15	81	4.29	345.04	348.33	XINLET67B
XINLET67B	348.33	345.04	15	76	2.83	347.18	350.33	XINLET67D
XINLET67D	350.33	347.38	15	99	3.97	351.30	354.55	XMH63
XMH63	354.55	351.52	15	70	1.14	352.32	357.50	XMH51
XMH51	357.50	352.57	15	225	0.46	353.60	358.40	XMH52
XMH52	358.40	353.72	15	36	6.12	355.94	361.59	XINLET57
XINLET57	361.59	358.19	15	138	3.30	362.73	366.32	INLET59
INLET59	366.32	362.78	15	28	0.50	362.92	366.32	INLET60
XINLET57	361.59	356.10	15	28	3.75	357.15	361.41	XINLET58
INLET218	343.93	340.53	15	20	1.10	340.75	344.23	INLET218A
INLET218A	344.23	340.80	15	90	1.36	342.02	345.47	INLET220
INLET220	345.47	342.07	15	89	1.18	343.12	346.71	INLET221
INLET221	346.71	343.30	15	90	2.92	345.94	349.52	INLET223
INLET223	349.52	345.99	15	28	0.50	346.13	349.53	INLET224
INLET221	346.71	343.17	15	28	0.50	343.31	346.71	INLET222
INLET218	343.93	340.53	15	10	1.30	340.66	344.11	INLET219
INLET219	344.11	340.71	15	46	2.09	341.67	345.07	INLET219A
INLET217	343.67	340.13	15	28	0.50	340.27	343.67	INLET217A

THE
PIDCOCK
COMPANY

CIVIL ENGINEERING AND LAND PLANNING
ARCHITECTURE
LAND SURVEYING

Oxford Drive at Fish Hatchery Road
2451 Parkwood Drive Allentown, Pennsylvania 18103-9608
Telephone: 610-791-2252
Telefacsimile: 610-791-1256
E-mail: info@pidcockcompany.com

PROFESSIONAL SEAL

KEY MAP

NOTES:
1. THIS PLAN HAS BEEN PREPARED IN CONJUNCTION WITH MUNICIPAL REGULATIONS AND ORDINANCES RELATING TO LAND USAGE AND DIMENSIONAL REQUIREMENTS OF ZONING AND RELATED PERMITS. HOWEVER, NOT CONSIDERED ARE PERIPHERAL ISSUES SUCH AS CLARITY OF TITLE, SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO SOIL AND WATER CONTAMINATION, SINKHOLE ACTIVITY AND HISTORICAL AND ARCHAEOLOGICAL ISSUES, OR OTHER SUCH ISSUES AS MAY AFFECT THE MERCHANTABILITY OF THE LAND. THE PIDCOCK COMPANY MAKES NO REPRESENTATION OR WARRANTY CONCERNING THESE ISSUES WHICH SHOULD BE ADDRESSED BY QUALIFIED PROFESSIONALS ENGAGED IN THE APPROPRIATE FIELDS OF PRACTICE.
2. THESE DOCUMENTS ARE PROVIDED FOR MUNICIPAL REVIEW ONLY AND ARE NOT TO BE UTILIZED FOR ANY OTHER PURPOSE. THE DOCUMENTS ARE NOT ISSUED FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED AS SUCH BELOW.

CONTRACTOR'S OBLIGATION REGARDING COORDINATION OF DOCUMENTS AND FIELD CONDITIONS

THE CONTRACT DOCUMENTS PRESENT THE DESIGN INTENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL PLANS, SPECIFICATIONS, ADDENDA, CONSTRUCTION SKETCHES AND OTHER CONTRACT DOCUMENTS FOR CONSISTENCY. SIMILARLY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW FIELD CONDITIONS, INCLUDING COORDINATION WITH ALL UTILITIES. THE CONTRACTOR SHALL COMPLETE ANY TEST EXCAVATIONS IN ADVANCE OF ORDERING MATERIALS OR OF CONSTRUCTION IN AN AREA OF UTILITY CROSSINGS OR POTENTIAL INVOLVEMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING ANY INCONSISTENCIES IN THE DOCUMENTS OR ANY APPARENT CONFLICTS TO THE ATTENTION OF THE ENGINEER BEFORE ORDERING MATERIALS AND BEFORE PROCEEDING WITH CONSTRUCTION IN THE AREA SO THAT THE ENGINEER MAY REVIEW THE CONDITIONS AND RECOMMEND ANY ADJUSTMENTS TO THE DOCUMENTS THAT MAY BE NECESSARY, OR TO RECOMMEND RELOCATION OF A UTILITY OR OTHER REMEDIAL WORK THAT MAY BE REQUIRED.

PLAN PREPARER:
BRENT C. TUCKER, P.E.
THE PIDCOCK COMPANY
2451 PARKWOOD DRIVE
ALLENTOWN, PA. 18103
TELEPHONE NO.: 610-791-2252

NOTICE
THIS PLAN IS INTENDED FOR
POST-CONSTRUCTION STORMWATER
MANAGEMENT PURPOSES ONLY

6		
5		
4		
3		
2	JANUARY 10, 2025	GENERAL REVISIONS
1	NOVEMBER 22, 2024	REVISED PER LCCD COMMENTS

REVISIONS

POST-CONSTRUCTION STORMWATER
MANAGEMENT PLANS

SCALE: NO SCALE
DATE: SEPTEMBER 27, 2024
CHECKED BY: BCT
DRAWN BY: JGU
CAD FILE: PCSM NOTES.dwg
PROJECT NUMBER: 22005

811
Know what's below.
Call before you dig.
SEE SHEET 1

Lehigh Valley
Health Network
MUHLENBERG

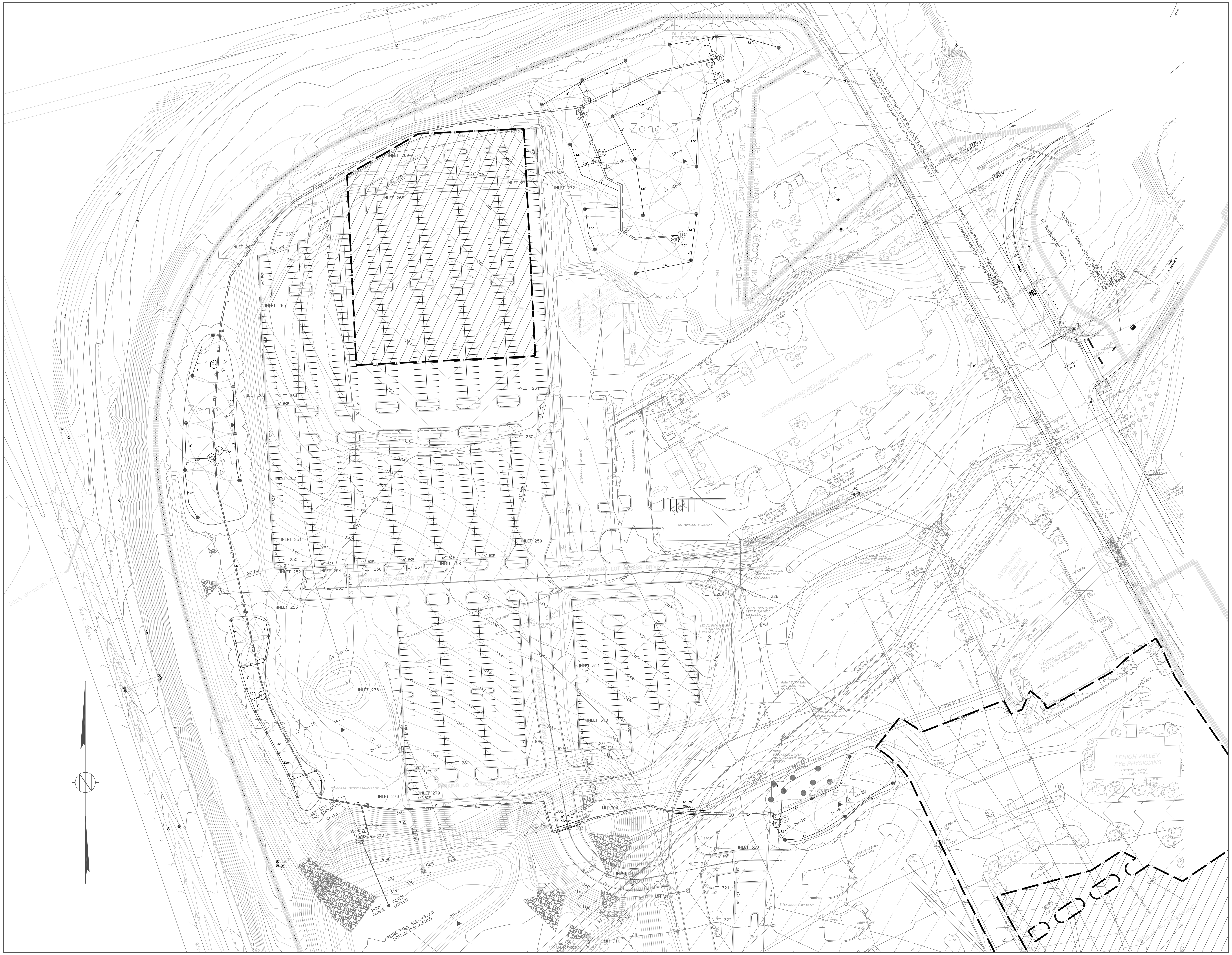
NEW SOUTH WING
EMERGENCY DEPARTMENT
EXPANSION
MAJOR AMENDMENT
CITY OF BETHLEHEM
LEHIGH COUNTY, PENNSYLVANIA

POST-CONSTRUCTION STORMWATER
MANAGEMENT NOTES AND DETAILS

FILE NUMBER
S-12397

SHEET NUMBER
4 OF 4

Plan Information: S:\LVHN\22005-Muhlenberg ED Expansion\Civil Plans\PCSM\PCSM NOTES.dwg   Printed: Jan 10, 2025 - 2:01pm


PA ROUTE 22
BUILDING RESTRICTION
Zone 3
Zone 1
Zone 4
IN-7
IN-8
IN-9
IN-10
IN-11
IN-13
IN-14
IN-15
IN-16
IN-17
IN-18
IN-19
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INLET 306
INLET 302
INLET 320
INLET 318
INLET 319
INLET 321
INLET 322
MH 304
MH 316
PARKING LOT ACCESS DRIVE
PARKING LOT ACCESS DRIVE 2
GOOD SHEPHERD REHABILITATION HOSPITAL
COORDINATED HEALTH
LEHIGH VALLEY EYE PHYSICIANS
LAWN
BITUMINOUS PAVEMENT
INSTITUTIONAL (PRIVATE) ZONING DISTRICT
LIMITED COMMERCIAL ZONING DISTRICT
CITY OF BETHLEHEM - LEHIGH COUNTY
TOWNSHIP OF HANOVER - NORTHAMPTON COUNTY
SUBSURFACE DRAIN
WET WELL AND ENCLOSURE
PUMP INTAKE
FILTER SCREEN
PERM. POOL ELEV.=322.5
BOTTOM ELEV.=318.5
6" PVC Sleeve
EU
CES
SOILS BOUNDARY
PA ROUTE 22
N

AQUA MIST
IRRIGATION

AQUA-MIST

759 N Fenwick Street
Allentown, PA 18109

484-460-2690 LIC # 15036

Project Title:

LEHIGH VALLEY
HOSPITAL NETWORK

Muhlenberg Campus
City of Bethlehem

Lehigh County Pennsylvania

Legend:

●	Rainbird 8005 Rotary Head 13.2 GPM
⬡1	Rainbird PGA Electric Valve
P	Rainbird Vertical Turbine Pump
SC	Rainbird Site Control
Ⓡ	Rainbird Rain Sensor
Ⓕ	Rainbird Flow Meter
—	Communication Cable in 1"conduit
— —	Class 200, SDR21 PVC Main Line size as noted
—	Class 220, SDR21 PVC Lateral 1.5" unless noted
⧓	Line Size Isolation Valve
Ⓓ	Drain port

Revisions:

03-25-15 Add Zone 4
03-31-15 Add Test Pits
07-28-15 Modification Zone 4
09-25-24 Volume Modification
11-22-24 LOD

Project:

LEHIGH VALLEY
HOSPITAL NETWORK

POST CONSTRUCTION
STORMWATER MANAGEMENT
SYSTEM

Overall Site Plan

Date: 03-17-15	Design By: WJM
Drawn By: WJM	Checked By:
Scale: 1" = 50'	Sheet #: I-01

Chart # 1

Station #	Zone	Sprinkler	GPM	Quantity	Flow	Run Time	Gals/Cycle
R1	1	5004 Rotary	3.47	14	48.58	10	485.80
R2	2	8005 Rotary	23.2	3	69.6	10	696.00
R3	2	8005 Rotary	23.2	3	69.6	10	696.00
R4	2	8005 Rotary	23.2	2	46.4	5	232.00
R11	4	8005 Rotary	23.2	3	69.6	5	348.00
R12	4	8005 Rotary	23.2	3	69.6	5	348.00
TOTAL				28	373.38		2,805.80

Station #	Zone	Sprinkler	GPM	Quantity	Flow	Run Time	Gals/Cycle
R5	3	8005 Rotary	23.2	3	69.6	30	2,088.00
R6	3	8005 Rotary	23.2	3	69.6	30	2,088.00
R7	3	8005 Rotary	23.2	3	69.6	30	2,088.00
R8	3	8005 Rotary	23.2	4	92.8	30	2,784.00
R9	3	8005 Rotary	23.2	3	69.6	30	2,088.00
R10	3	8005 Rotary	23.2	3	69.6	30	2,088.00
				19	440.8		13,224.00

Chart # 2

SPRAY IRRGATION DESIGN							
		Muhlenberg Campus				Zones 1,2 & 4	
STORM INFORMATION							
		ACRE FT		CUBIC FT		GALLONS	
VOLUME TO BE IRRIGATED:	REQUIRED	1.768		77,037.00		576,236.76	
6 Days	PROVIDED	0.181		7,877.25		58,922	
	1 ACRE FT=	325,900 Gallons		1 CUBIC FT =	7.48 GALLONS		
DOSAGE INFORMATION				Cycle & Soak			
NO. OF DOSES =		1		3.5			
VOLUME PER CYCLE =		2,805.80		9,820.30			
PROVIDED RATE OF IRRIGATION =		18,000	GAL / HR	18,000	GAL / HR		
TOTAL REQUIRED HOURS OF IRRIGATION =		0.16		0.55			
MAX RATE OF IRRIGATION (TURF) =	IN/HOUR			SQ FT /ACRE		GAL / SF / HR	
	0.25	27,154		43,560		0.16	
SEASONAL SCHEDULE	MARCH 15TH TO NOVEMBER 15TH						

	LENGTH OF DOSE		TIME OF DAY FOR DOSING		CYCLE & SOAK WAIT TIME
ZONE	HOUR	MINUTES			
1,2,4		15	11:00 PM	11:10 PM	2 Hours
1,2,4		15	1:00 AM	1:10 AM	2 Hours
1,2,4		15	3:00 AM	3:10 AM	2 Hours
1,2,4		7	5:00 AM	5:07 AM	

DAILY DOSAGE: 9,820.30 GALLONS — DAILY RUN TIME: 6.11 HOURS

MAXIMUM RATE OF IRRIGATION:

ZONE	ABSORPTION AREA PROVIDED FOR IRRIGATION SQ FT	MAX ALLOWABLE RATE OF IRRIGATION BASED ON ABSRPTION AREA PROVIDED GAL / HOUR
1,2,4	46,730.00	7,282.52
PROVIDED	46,730.00	7,282.52

ZONE	TOTAL # OF Sprinklers	REQUIRED FLOW GPM	PROVIDED IRRIGATION RATE BASED ON SPRINKLER DESIGN GAL / HOUR	PERCENT OF MAXIMUM ALLOWABLE IRRIGATION RATE
1,2,4	28	300	2,805.80	38.5%
			SLOPE REDUCTION AVAILABILITY:	61.5%

PROVIDED			PER DOSE		
Total Square Feet:	46,730.00	Total Gallons Per Day:	9,820.30	Inches Per Day:	0.337
		Cu Ft per Day:	1,312.87		

Chart # 3

SPRAY IRRGATION DESIGN							
		Muhlenberg Campus				Zone 3	
STORM INFORMATION							
		ACRE FT		CUBIC FT		GALLONS	
VOLUME TO BE IRRIGATED:	REQUIRED	1.768		77,037.00		576,236.76	
6 Days	PROVIDED	1.595		69,479.04		519,703	
	1 ACRE FT=	325,900 Gallons		1 CUBIC FT =	7.48 GALLONS		
DOSAGE INFORMATION				Cycle & Soak			
NO. OF DOSES =		1		6.55			
VOLUME PER CYCLE =		13,224.00		86,617.20			
PROVIDED RATE OF IRRIGATION =		18,000	GAL / HR	18,000	GAL / HR		
TOTAL REQUIRED HOURS OF IRRIGATION =		0.73		4.81			
MAX RATE OF IRRIGATION (TURF) =	IN/HOUR			SQ FT /ACRE		GAL / SF / HR	
	1.625	27,154		43,560		1.01	
SEASONAL SCHEDULE	MARCH 15TH TO NOVEMBER 15TH						

	LENGTH OF DOSE		TIME OF DAY FOR DOSING		CYCLE & SOAK WAIT TIME
ZONE	HOUR	MINUTES			
3		30	8:00 PM	8:30 PM	1.5 Hours
3		30	10:00 PM	10:30 PM	1.5 Hours
3		30	12:00 AM	12:30 AM	1.5 Hours
3		30	2:00 AM	2:30 AM	1.5 Hours
3		30	4:00 AM	4:30 AM	1.5 Hours
3		30	6:00 AM	6:30 AM	1.5 Hours
3		16	8:00 AM	8:16 AM	

DAILY DOSAGE: 86,617.20 GALLONS — DAILY RUN TIME: 12.26 HOURS

MAXIMUM RATE OF IRRIGATION:

ZONE	ABSORPTION AREA PROVIDED FOR IRRIGATION SQ FT	MAX ALLOWABLE RATE OF IRRIGATION BASED ON ABSRPTION AREA PROVIDED GAL / HOUR
3	65,340.00	66,187.88
PROVIDED	65,340.00	66,187.88

ZONE	TOTAL # OF Sprinklers	REQUIRED FLOW GPM	PROVIDED IRRIGATION RATE BASED ON SPRINKLER DESIGN GAL / HOUR	PERCENT OF MAXIMUM ALLOWABLE IRRIGATION RATE
3	19	300	13,224.00	20.0%
			SLOPE REDUCTION AVAILABILITY:	80.0%

PROVIDED			PER DOSE		
Total Square Feet:	65,340.00	Total Gallons Per Day:	86,617.20	Inches Per Day:	2.127
		Cu Ft per Day:	11,579.84		

Chart # 4

SPRAY IRRGATION DESIGN							
		Muhlenberg Campus				Zones 1-4 Summary	
STORM INFORMATION							
		ACRE FT		CUBIC FT		GALLONS	
VOLUME TO BE IRRIGATED:	REQUIRED	1.768		77,037.00		576,236.76	
6 Days	PROVIDED	1.775		77,356.28		578,625.00	
	1 ACRE FT=	325,900 Gallons		1 CUBIC FT =	7.48 GALLONS		
DOSAGE INFORMATION				Cycle & Soak			
NO. OF DOSES =		1		3.5		1	
VOLUME PER CYCLE =		16,029.80		56,104.30		40,333.20	
PROVIDED RATE OF IRRIGATION =		18,000	GAL / HR	18,000	GAL / HR		
TOTAL REQUIRED HOURS OF IRRIGATION =		0.89		3.12			
MAX RATE OF IRRIGATION =	IN/HOUR	ACRE INCH		SQ FT /ACRE		GAL / SF / HR	
	0.93	27,154		43,560		0.58	
SEASONAL SCHEDULE	MARCH 15TH TO NOVEMBER 15TH						

	LENGTH OF DOSE		TIME OF DAY FOR DOSING		CYCLE & SOAK WAIT TIME
ZONE	HOUR	MINUTE			
			See Individual Design Sheets		

DAILY DOSAGE: 56,104.30 GALLONS — DAILY RUN TIME: 12.26 HOURS

MAXIMUM RATE OF IRRIGATION:

ZONE	ABSORPTION AREA PROVIDED FOR IRRIGATION SQ FT	MAX ALLOWABLE RATE OF IRRIGATION BASED ON ABSRPTION AREA PROVIDED GAL / HOUR
1,2,3,4	112,070.00	64,970.81
TOTAL	112,070.00	64,970.81

ZONE	Total # Sprinklers	REQUIRED FLOW GPM	PROVIDED IRRIGATION RATE BASED ON SPRINKLER DESIGN GAL / HOUR	PERCENT OF MAXIMUM ALLOWABLE IRRIGATION RATE
1,2,3,4	47	250	18,000.00	27.7%

PROVIDED					
Total Square Feet:	112,070.00	Total Gallons Per Day:	96,437.50	Inches Per Day:	1.380
		Cu Ft per Day:	12,892.71		

Chart # 5

Hydraulic Datasheet

Customer: Lehigh Valley Hospital Network : Rain BIrd Corporation
Customer: Aqua Mist Irrigation : Default
Item number : -
Service :
Pump / Stages : 10ELM / 6
Based on curve no. : EC-2357
Flowserve reference : Default 0.1
Date : October 14, 2012

Operating Conditions

Capacity : 300.0 USgpm
Water capacity (CQ=1.00) : -
Normal capacity : -
Total Developed Head : 300.00 ft
Water head (CH=1.00) : -
NPSH available (NPSHa) : Ample
NPSHa less NPSH margin : -
Maximum suction pressure : Not applicable
Rated suction pressure : Not applicable

Materials / Specification

Material column code : B30

Other Requirements

Hydraulic selection : No specification
Construction : No specification
Test tolerance : Hydraulic Institute Level A
Driver Sizing : Max Power(MCSF to EOC)with SF

Liquid

Liquid type : Other
Liquid description :
Temperature / Spec. Gravity : 60 F / 1.000
Viscosity / Vapor pressure : 1.0 cSt / -

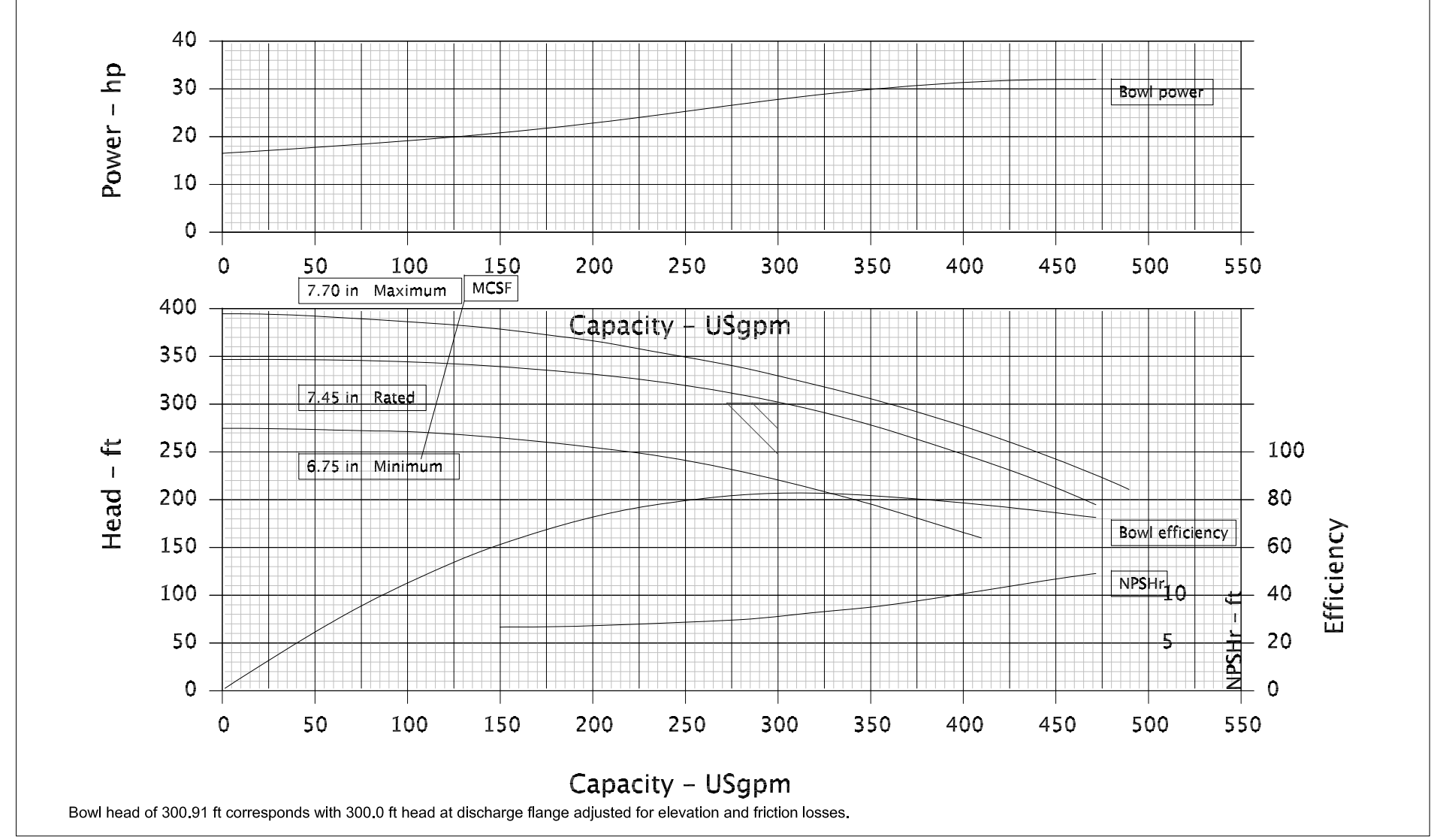
Performance

Pump speed : 1775 rpm
NPSH required (NPSHr) : 7.1 ft
Minimum submergence : 21.00 in
Hydraulic power : 22.8 hp
Efficiency (CE=1.00) : 82.2 %
Power: (Rated / Max) : 27.7 hp / 32.8 hp
Driver power : 40.0 hp / 29.8 kW
Bowl Pressure : 150.6 psig
(based on shut off and Rated specific gravity @ Cut dia)
Maximum allowable : 175.0 psig
Bowl & column hydrotest : 195.4 psig
Dischg Head Dischg Region MAWP : 175.0 psig

Impeller diameter : Rated / Maximum / Minimum
: 7.45 in 7.70 in 6.75 in
Impeller dia ratio (rated/max) : 96.8 %
Maximum head @ rated dia : 347.90 ft
Head rise to shut off : 15.6 %
Total head ratio (rated/max) : 91.3 %
Flow at BEP : 313.6 USgpm
Flow as % of BEP : 95.7 %
Minimum continuous flow : 122.4 USgpm
Suction specific speed : 7050 US units
Rated thrust (at Rated flow) : 921.5 lbf
Maximum thrust (at Shut off flow) : 1046.1 lbf
Minimum thrust (at Runout flow) : 633.3 lbf
(A negative thrust value indicates an upthrust condition)

CURVES ARE APPROXIMATE, PUMP IS GUARANTEED FOR ONE SET OF CONDITIONS; CAPACITY, HEAD, AND EFFICIENCY.

Bowl performance shown below is corrected for materials, viscosity and construction.



Bowl head of 300.91 ft corresponds with 300.0 ft head at discharge flange adjusted for elevation and friction losses.

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FlowSelex v2.2

2 of 5

Chart # 6

Pressure Loss Chart				Static Pressure		70
	Flow/GPM	Size	Length/ft	Multiplier	Loss/100'	Press Loss
Pump	300					
Main Line	300	6"	907	9	0.27	2.43
Main Line	231	6"	603	6	0.16	0.96
Main Line	162	4"	73	0.7	0.51	0.36
Main Line	69.6	3"	230	2.3	0.41	0.94
Loss						2.26
Dynamic Pressure at Station # 10						67.74

Chart # 7

PUMP 1 REQUIREMENTS		
FLOW	300 GPM	
PRESSURE	70 PSI	= 196 Feet of Head
HENCE THE RAINBIRD VM1N0N0500480 PUMP. 480v 3 phase		
THE PUMP IS DESIGNED TO FACILITATE 300 GPM,THEREFORE, MULTIPLE STATIONS WILL BE IN OPERATION AT ANY GIVEN TIME		

The applicant/owner is responsible to monitor and record the flow through the spray irrigation system to ensure the required volume is being applied

The entire volume of 77,037 Cubic Feet should be utilized within 7 days of the beginning of each storm event.

The Spray Irrigation System shall not be activated until Approximately 24 hours after any significant precipitation storm event.

The Spray Irrigation System should be designed to completely drain when it is shut off.

GENERAL PCSM / IRRIGATION:

System will be active from March 15th to November 15th

WARRANTY & MAINTENANCE:

1. CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM IN GOOD OPERATING CONDITION AND COORDINATE THE OPERATION OF THE SYSTEM WITH THE ON SITE MANAGER THROUGH MONTHLY INSPECTIONS OF SYSTEM COMPONENTS AND MAKE REPAIRS OR REPLACEMENTS OF PARTS AS NECESSARY. THIS INCLUDES CHECKING AND VERIFYING OPERATION IN EACH STATION, ALIGNMENT OF HEADS, RAIN SENSORS, FREEZE SENSOR AND CENTRAL CONTROL.

WINTERIZATION:

WHEN COLD WEATHER APPROACHES AND CHANCE FOR FREEZING CONDITIONS EXIST, THE IRRIGATION SYSTEM SHALL BE DRAINED AFTER EACH USE

WINTERIZATION PROCEDURE SHALL INCLUDE THE FOLLOWING:

1. OPERATE SYSTEM TO DRAIN BASINS TO LOWEST POSSIBLE LEVEL
2. BLOW OUT EACH STATION TWICE WITH COMPRESSED AIR.
3. CLOSE DISCHARGE VALVE AT PUMP
4. OPEN WINTER BYPASS VALVE TO OUTFLOW STRUCTURE
5. SET INTERNAL HEATER FOR PUMP ENCLOSURE
6. ACTIVATE WINTER PROGRAM ON SITE CONTROL

SPRING START UP:

1. OPEN SPRING GATE VALVES
2. CHECK POND LEVEL SENSORS
3. SLOWLY FILL MAIN LINE
4. CHECK FOR LEAKS AND PROPER ALIGNMENT OF HEADS
5. REPAIR AND ADJUST SYSTEM AS REQUIRED FOR PROPER OPERATION

NO FAULT REPAIR AND CORRECTION:

NO FAULT REPAIR AND CORRECTION WORK SHALL CONSIST OF WORK TO CORRECT FAULTS OR REPAIR DAMAGE EXISTING THROUGH NO FAULT OF THE CONTRACTOR BUT WHICH IS NECESSARY FOR THE CONTINUED PROPER MAINTENANCE AND OPERATION OF THE IRRIGATION SYSTEM INCLUDING CORRECTION OF SPRINKLER SYSTEM. NO FAULT REPAIR AND CORRECTION SHALL NOT INCLUDE WORK AS OTHERWISE DEFINED WITHIN THE SCOPE OF WARRANTY. THE OWNER WILL AGREE TO PAY FOR THESE REPAIRS.THE SYSTEM AND ALL IT'S COMPONENTS ARE GUARANTEED FOR ONE (1) YEAR FROM INSTALLATION.

RAINBIRD SITE CONTROL:

THE INTERACTIVE CENTRAL CONTROL SYSTEM FOR LANDSCAPE VIA A 2 WIRE PATH AND DECODERS.

SMART SENSORS:

ALLOWS USE OF PULSE (FLOW) AND STATIC/SWITCH SENSORS TO MONITOR, ALARM AND TAKE ACTION ON MEASURED CONDITIONS

RAIN WATCH:

USES TIPPING BUCKET RAIN CAN TO DETECT AND SUSPEND IRRIGATION WHILE MEASURING RAINFALL.

FREEZE SENSOR:

WILL ACTIVATE OR DEACTIVATE SYSTEM AS PER SPECIFIED BY USER

DECODER HARDWARE:

LARGE DECODER INTERFACE (LDI) OR APPROVED EQUAL, SHALL SERVE AS AN INTERFACE BETWEEN THE CENTRAL CONTROLLER AND THE FIELD AND SENSOR DECODERS.
LDI CAN INTERFACE WITH UP TO 500 DECODER ADDRESSES AND CAN ACTIVATE UP TO 1000 SOLENOIDS.

LDI COMES WITH STANDARD TERMINALS FOR 4 WIRE PATHS

LDI SHALL BE GROUNDED TO LESS THAN 5 OHMS

WINTER PROGRAM:
CENTRAL CONTROL SYSTEM SHALL BE CAPABLE OF OPERATING DURING WINTER MONTHS
WINTER PROGRAM SHALL CONSIST OF THE FOLLOWING:
DEACTIVATE RAIN SENSOR
IF THE CONDITION EXISTS THAT THE LEVEL OF THE BASIN HAS RISEN TO ABOVE PERMANENT POOL LEVEL, THE PUMP WILL ACTIVATE AND UTILIZING THE WINTER BYPASS VALVE AND LINE TO DISBURSE THE EXCESS WATER TO THE OUTFLOW STRUCTURE ASSOCIATED WITH EACH PUMP STATION
THIS ACTION WILL BE ACTIVATED BY THE TRANSDUCER IN THE WET WELL MONITORING THE PERMANENT POOL LEVEL

General Notes:

Contractor to provide 110v electric supply and Internet access to the Central Computer.

The Site Control Central Computer is installed in Pump House

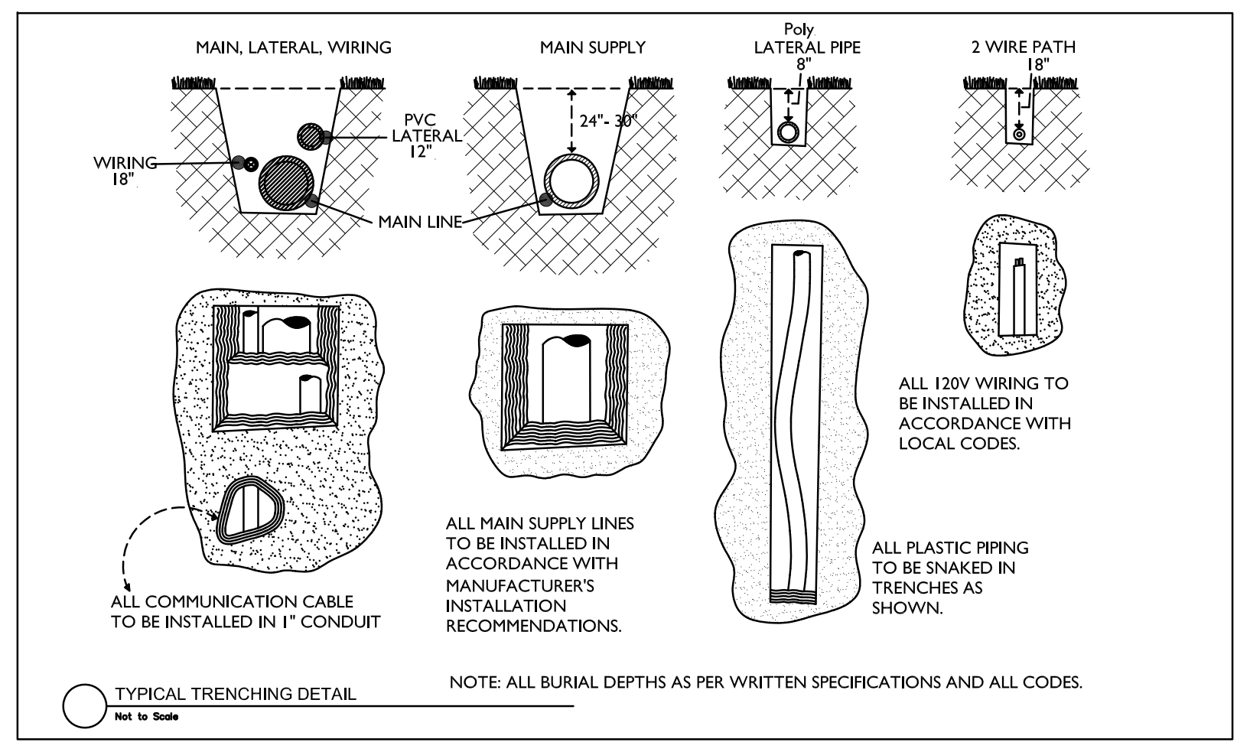
Rainbird Site Control to be installed in order to complete the necessary communication and interaction between the pump station, pond level, and seasonal water schedule, or approved equal.
All Communication cable shall be installed in 1" PVC Conduit

All irrigation equipment to have Purple covers (non potable) Heads,Valve box covers, etc...

When required, Pressure Regulated Electric Valves will be installed to insure that the stations operate at the desired pressure

All Rotary stations to operate at 65psi

Chart # 8



MAIN, LATERAL, WIRING
MAIN SUPPLY
Poly LATERAL PIPE 8"
2 WIRE PATH 18"
WIRING 18"
PVC LATERAL 12"
24"- 30"
MAIN LINE
ALL COMMUNICATION CABLE TO BE INSTALLED IN 1" CONDUIT
ALL MAIN SUPPLY LINES TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS.
ALL PLASTIC PIPING TO BE SNAKED IN TRENCHES AS SHOWN.
ALL 120V WIRING TO BE INSTALLED IN ACCORDANCE WITH LOCAL CODES.
TYPICAL TRENCHING DETAIL
Not to Scale
NOTE: ALL BURIAL DEPTHS AS PER WRITTEN SPECIFICATIONS AND ALL CODES.

Chart # 9

PIPE SIZE CHART	
GPM	MINIMUM SIZE
1-16	1"
17-26	1.25"
27-39	1.50"
40-60	2"
61-80	2.5"
81-99	3"
100-190	4"
190-400	6"
400-600	8"
600-1000	10"

PCSM/Irrigation Spray Construction Sequence:

Contractor Shall make themselves familiar with all aspects of the construction of the PCSM system.
Prior to any trenching construction or installation, the Contractor shall flag out area to ensure the best location of pipe, sprinkler heads, valves, etc.
Any deviations in layout shall be brought to the Owners representative before proceeding.
The Contractor is expected to make minor adjustments of wire, pipe and valve locations as to not conflict with existing or future utilities.
Irrigation Sequence:
Installation of wet well and intake pipe and Screen
Installation of Pump Station
Installation of Road and Parking lot Sleeves
Installation of Main line, Valves and Communication Cable
Installation of Central Control System and Sensors
Installation of Lateral Lines
Installation of Sprinkler Heads
Testing of System
Adjustment of all sprinkler heads
Decoder Test
Flow Sensor Test
Completion of As-Built Drawings
Contact the Lehigh County Conservation District as to any changes in the Spray System and supply the LCCD with As-Built and impact of changes.

Main Line & Lateral Notes:

10" PVC Main Line Depth of Burial:36"
8" PVC Main Line Depth of Burial: 36"
6" PVC Main Line Depth of Burial: 30"
4" PVC Main Line Depth of Burial: 28"
3" PVC Main Line Depth of Burial: 24"
2" - 2.5" PVC Main Line Depth of Burial: 24"
1.5" PVC Lateral Line Depth of Burial: 12"
All Polyethylene Lateral Lines Depth of Burial: 8"

AQUA MIST
IRRIGATION

AQUA-MIST

759 N Fenwick Street
Allentown, PA 18109

484-460-2690 LIC # 15036

Project Title:

LEHIGH VALLEY
HOSPITAL NETWORK

Muhlenberg Campus
City of Bethlehem

Lehigh County Pennsylvania

Legend:

●	Rainbird 8005 Rotary Head 13.2 GPM
1	Rainbird PGA Electric Valve
P	Rainbird Vertical Turbine Pump
SC	Rainbird Site Control
Ⓡ	Rainbird Rain Sensor
Ⓕ	Rainbird Flow Meter
—	Communication Cable in 1"conduit
—	Class 200, SDR21 PVC Main Line size as noted
—	Class 220, SDR21 PVC Lateral 1.5" unless noted
⋈	Line Size Isolation Valve
Ⓓ	Drain port

Revisions:

03-25-15 Add Zone 4
03-31-15 Add Test Pits
07-28-15 Modification Zone 4
09-25-24 Volume Modification

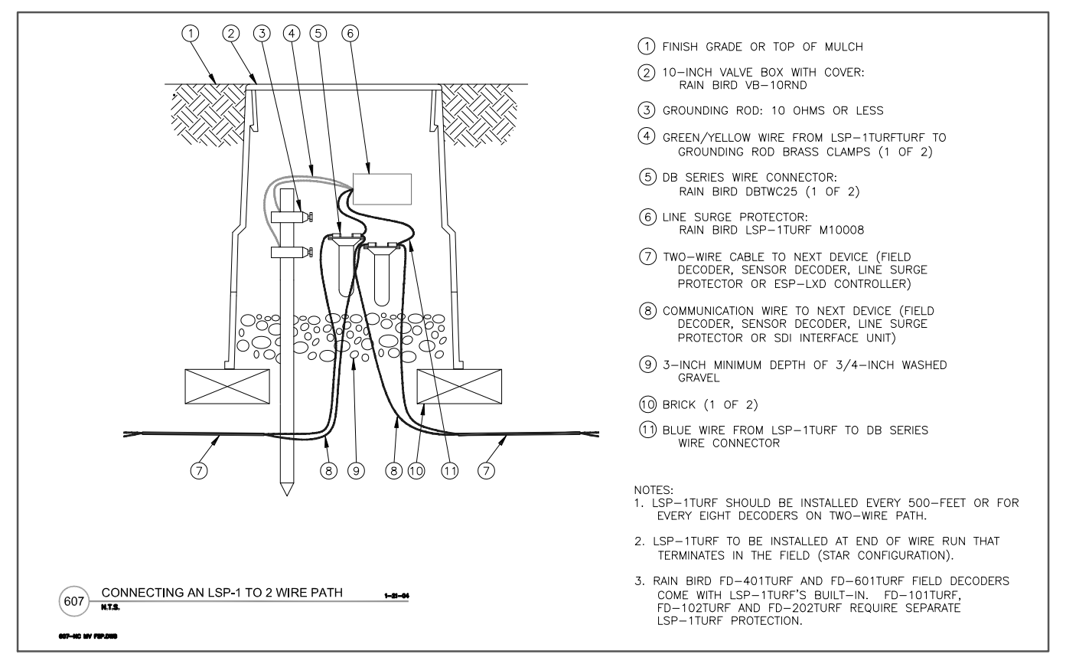
Project:

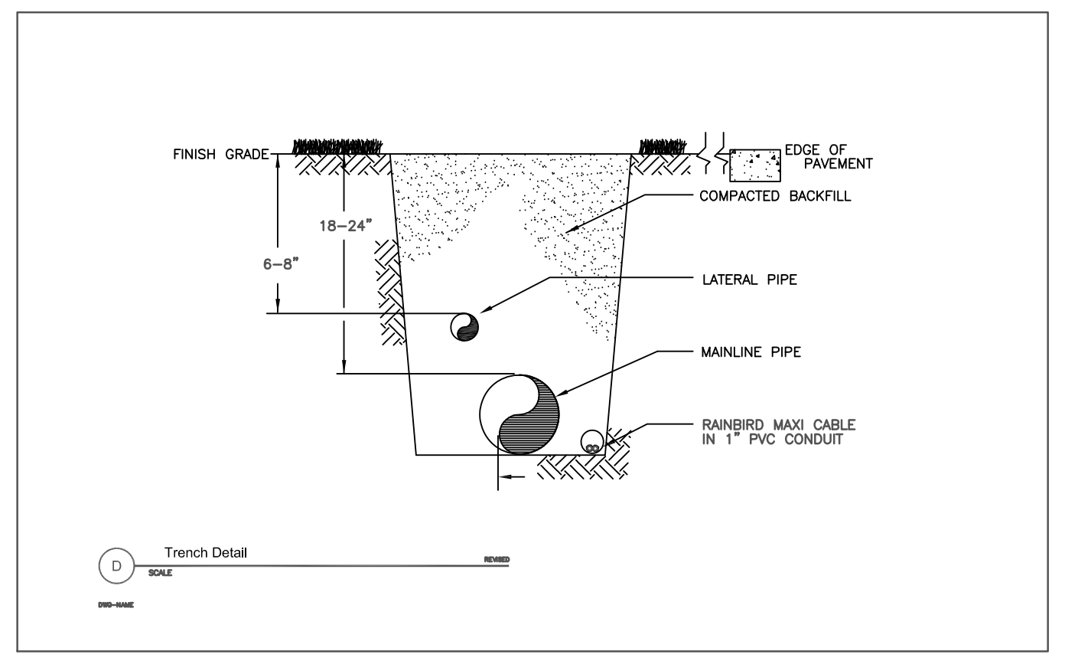
LEHIGH VALLEY
HOSPITAL NETWORK

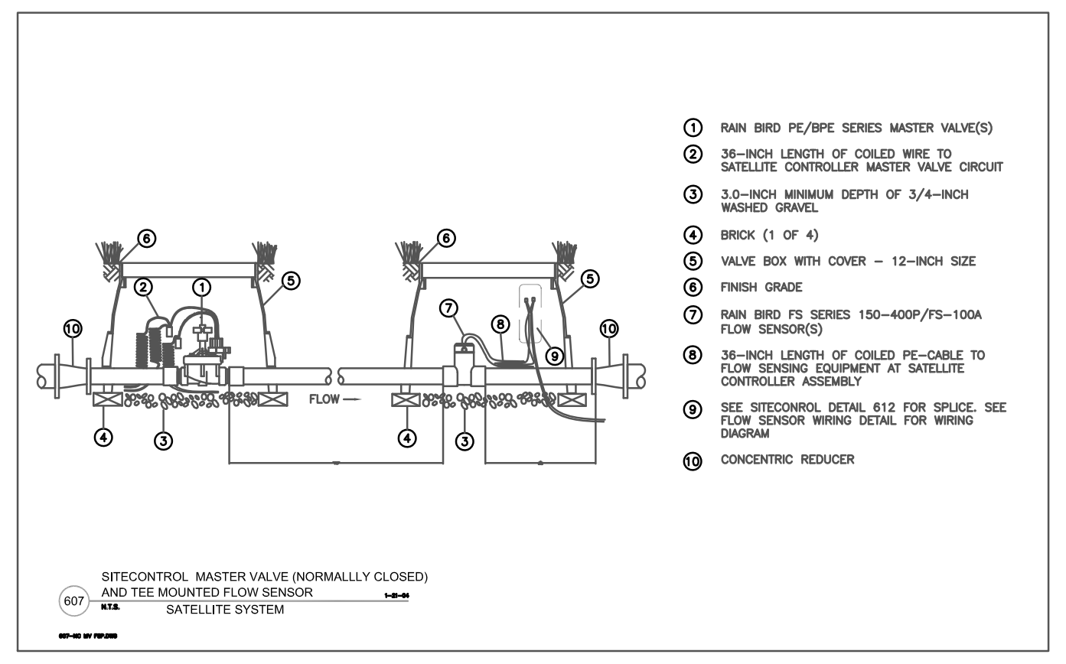
POST CONSTRUCTION
STORMWATER MANAGEMENT
SYSTEM

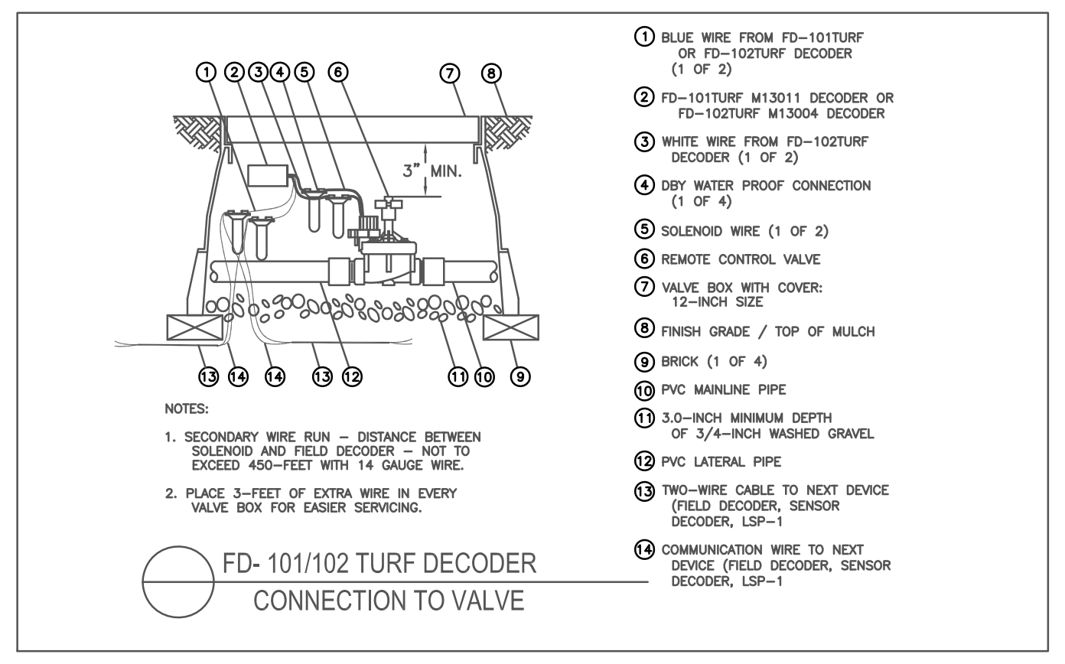
Data & Details

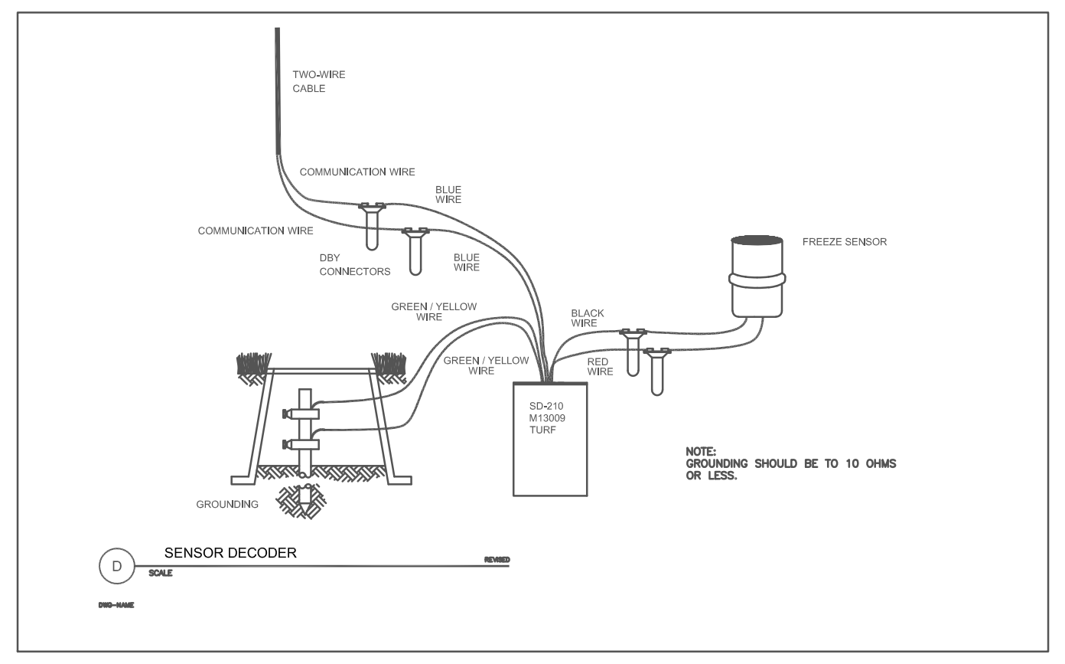
Date: 03-17-15	Design By: WJM
Drawn By: WJM	Checked By:
Scale: NTS	Sheet #: I-02

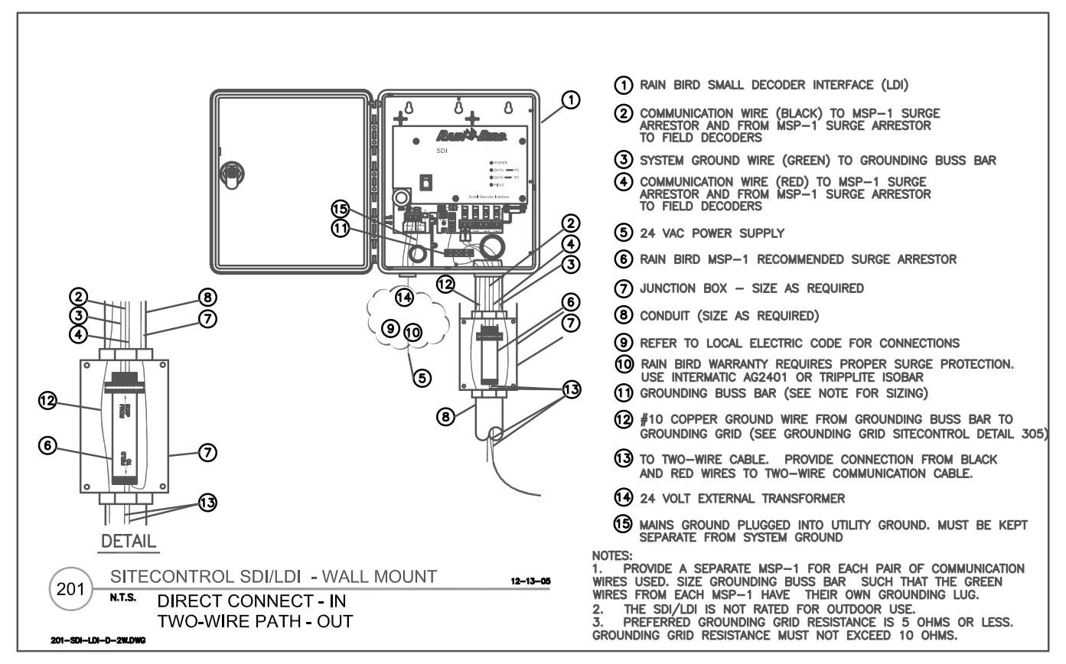

1 FINISH GRADE OR TOP OF MULCH
2 10-INCH VALVE BOX WITH COVER: RAIN BIRD VB-10RND
3 GROUNDING ROD: 10 OHMS OR LESS
4 GREEN/YELLOW WIRE FROM LSP-1TURFTURF TO GROUNDING ROD BRASS CLAMPS (1 OF 2)
5 DB SERIES WIRE CONNECTOR: RAIN BIRD DBTWC25 (1 OF 2)
6 LINE SURGE PROTECTOR: RAIN BIRD LSP-1TURF M10008
7 TWO-WIRE CABLE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LINE SURGE PROTECTOR OR ESP-LXD CONTROLLER)
8 COMMUNICATION WIRE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LINE SURGE PROTECTOR OR SDI INTERFACE UNIT)
9 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
10 BRICK (1 OF 2)
11 BLUE WIRE FROM LSP-1TURF TO DB SERIES WIRE CONNECTOR
NOTES:
1. LSP-1TURF SHOULD BE INSTALLED EVERY 500-FEET OR FOR EVERY EIGHT DECODERS ON TWO-WIRE PATH.
2. LSP-1TURF TO BE INSTALLED AT END OF WIRE RUN THAT TERMINATES IN THE FIELD (STAR CONFIGURATION).
3. RAIN BIRD FD-401TURF AND FD-601TURF FIELD DECODERS COME WITH LSP-1TURF'S BUILT-IN. FD-101TURF, FD-102TURF AND FD-202TURF REQUIRE SEPARATE LSP-1TURF PROTECTION.
607
CONNECTING AN LSP-1 TO 2 WIRE PATH
N.T.S.

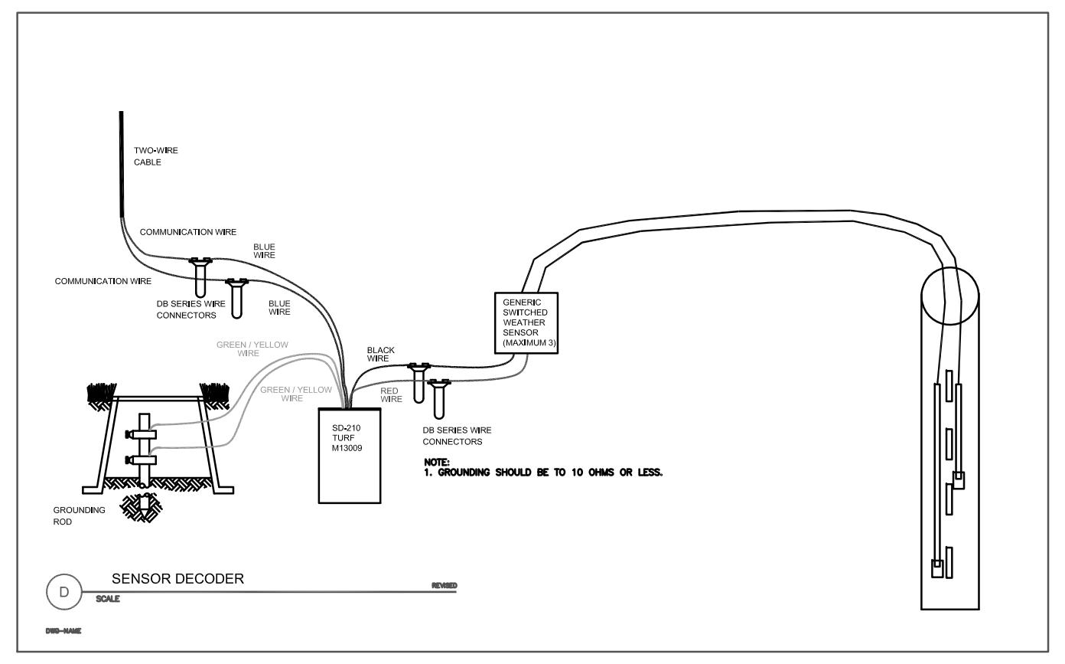

FINISH GRADE
EDGE OF PAVEMENT
COMPACTED BACKFILL
18-24"
6-8"
LATERAL PIPE
MAINLINE PIPE
RAINBIRD MAXI CABLE IN 1" PVC CONDUIT
D
Trench Detail

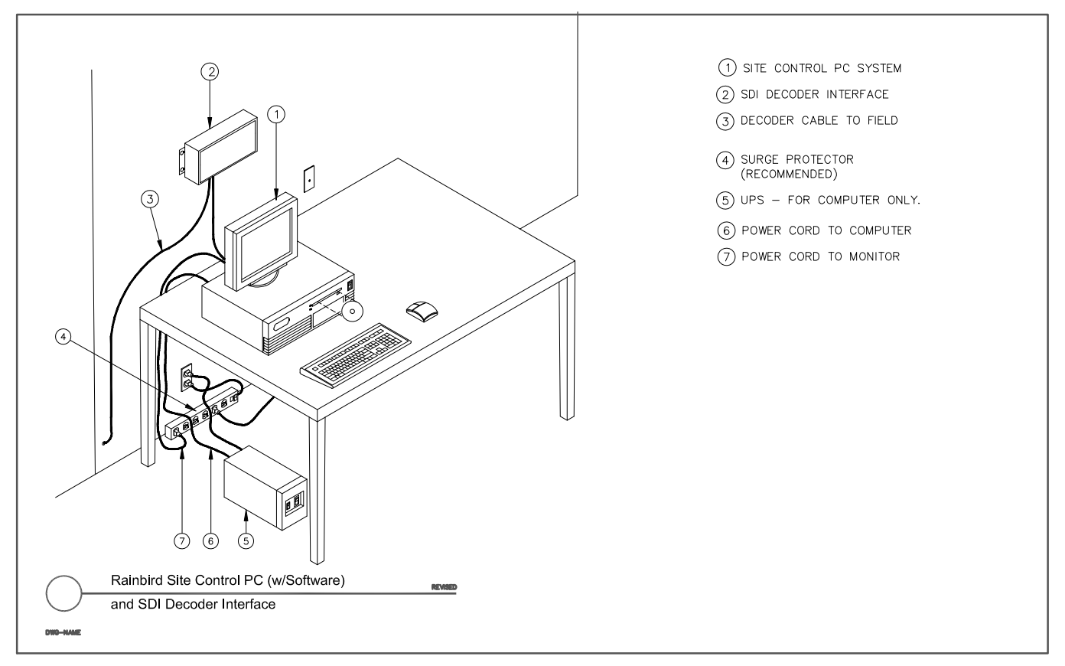

1 RAIN BIRD PE/BPE SERIES MASTER VALVE(S)
2 36-INCH LENGTH OF COILED WIRE TO SATELLITE CONTROLLER MASTER VALVE CIRCUIT
3 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
4 BRICK (1 OF 4)
5 VALVE BOX WITH COVER - 12-INCH SIZE
6 FINISH GRADE
7 RAIN BIRD FS SERIES 150-400P/FS-100A FLOW SENSOR(S)
8 36-INCH LENGTH OF COILED PE-CABLE TO FLOW SENSING EQUIPMENT AT SATELLITE CONTROLLER ASSEMBLY
9 SEE SITECONROL DETAIL 612 FOR SPLICE. SEE FLOW SENSOR WIRING DETAIL FOR WIRING DIAGRAM
10 CONCENTRIC REDUCER
FLOW
607
SITECONTROL MASTER VALVE (NORMALLLY CLOSED) AND TEE MOUNTED FLOW SENSOR
N.T.S.
SATELLITE SYSTEM

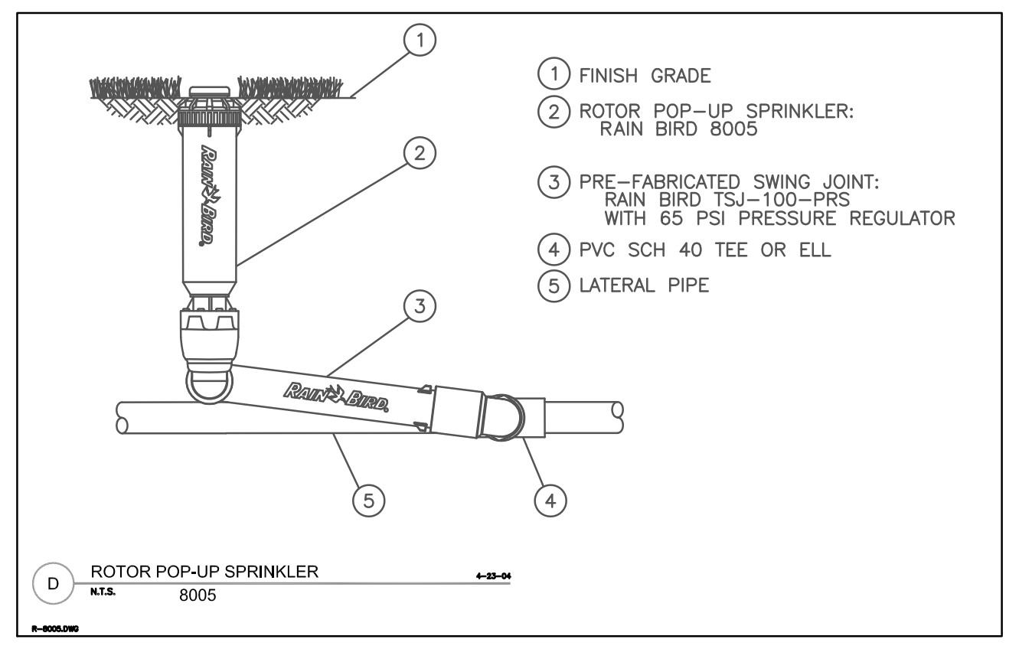

3" MIN.
1 BLUE WIRE FROM FD-101TURF OR FD-102TURF DECODER (1 OF 2)
2 FD-101TURF M13011 DECODER OR FD-102TURF M13004 DECODER
3 WHITE WIRE FROM FD-102TURF DECODER (1 OF 2)
4 DBY WATER PROOF CONNECTION (1 OF 4)
5 SOLENOID WIRE (1 OF 2)
6 REMOTE CONTROL VALVE
7 VALVE BOX WITH COVER: 12-INCH SIZE
8 FINISH GRADE / TOP OF MULCH
9 BRICK (1 OF 4)
10 PVC MAINLINE PIPE
11 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
12 PVC LATERAL PIPE
13 TWO-WIRE CABLE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LSP-1
14 COMMUNICATION WIRE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LSP-1
NOTES:
1. SECONDARY WIRE RUN - DISTANCE BETWEEN SOLENOID AND FIELD DECODER - NOT TO EXCEED 450-FEET WITH 14 GAUGE WIRE.
2. PLACE 3-FEET OF EXTRA WIRE IN EVERY VALVE BOX FOR EASIER SERVICING.
FD- 101/102 TURF DECODER
CONNECTION TO VALVE


TWO-WIRE CABLE
COMMUNICATION WIRE
BLUE WIRE
DBY CONNECTORS
GREEN / YELLOW WIRE
BLACK WIRE
RED WIRE
FREEZE SENSOR
SD-210 M13009 TURF
GROUNDING
NOTE: GROUNDING SHOULD BE TO 10 OHMS OR LESS.
D
SENSOR DECODER


1 RAIN BIRD SMALL DECODER INTERFACE (LDI)
2 COMMUNICATION WIRE (BLACK) TO MSP-1 SURGE ARRESTOR AND FROM MSP-1 SURGE ARRESTOR TO FIELD DECODERS
3 SYSTEM GROUND WIRE (GREEN) TO GROUNDING BUSS BAR
4 COMMUNICATION WIRE (RED) TO MSP-1 SURGE ARRESTOR AND FROM MSP-1 SURGE ARRESTOR TO FIELD DECODERS
5 24 VAC POWER SUPPLY
6 RAIN BIRD MSP-1 RECOMMENDED SURGE ARRESTOR
7 JUNCTION BOX - SIZE AS REQUIRED
8 CONDUIT (SIZE AS REQUIRED)
9 REFER TO LOCAL ELECTRIC CODE FOR CONNECTIONS
10 RAIN BIRD WARRANTY REQUIRES PROPER SURGE PROTECTION. USE INTERMATIC AG2401 OR TRIPPLITE ISOBAR
11 GROUNDING BUSS BAR (SEE NOTE FOR SIZING)
12 #10 COPPER GROUND WIRE FROM GROUNDING BUSS BAR TO GROUNDING GRID (SEE GROUNDING GRID SITECONTROL DETAIL 305)
13 TO TWO-WIRE CABLE. PROVIDE CONNECTION FROM BLACK AND RED WIRES TO TWO-WIRE COMMUNICATION CABLE.
14 24 VOLT EXTERNAL TRANSFORMER
15 MAINS GROUND PLUGGED INTO UTILITY GROUND. MUST BE KEPT SEPARATE FROM SYSTEM GROUND
NOTES:
1. PROVIDE A SEPARATE MSP-1 FOR EACH PAIR OF COMMUNICATION WIRES USED. SIZE GROUNDING BUSS BAR SUCH THAT THE GREEN WIRES FROM EACH MSP-1 HAVE THEIR OWN GROUNDING LUG.
2. THE SDI/LDI IS NOT RATED FOR OUTDOOR USE.
3. PREFERRED GROUNDING GRID RESISTANCE IS 5 OHMS OR LESS. GROUNDING GRID RESISTANCE MUST NOT EXCEED 10 OHMS.
DETAIL
201
SITECONTROL SDI/LDI - WALL MOUNT
12-13-05
N.T.S.
DIRECT CONNECT - IN
TWO-WIRE PATH - OUT


TWO-WIRE CABLE
COMMUNICATION WIRE
BLUE WIRE
DB SERIES WIRE CONNECTORS
GREEN / YELLOW WIRE
BLACK WIRE
RED WIRE
GENERIC SWITCHED WEATHER SENSOR (MAXIMUM 3)
SD-210 TURF M13009
GROUNDING ROD
NOTE: 1. GROUNDING SHOULD BE TO 10 OHMS OR LESS.
D
SENSOR DECODER


1 SITE CONTROL PC SYSTEM
2 SDI DECODER INTERFACE
3 DECODER CABLE TO FIELD
4 SURGE PROTECTOR (RECOMMENDED)
5 UPS - FOR COMPUTER ONLY.
6 POWER CORD TO COMPUTER
7 POWER CORD TO MONITOR
Rainbird Site Control PC (w/Software)
and SDI Decoder Interface

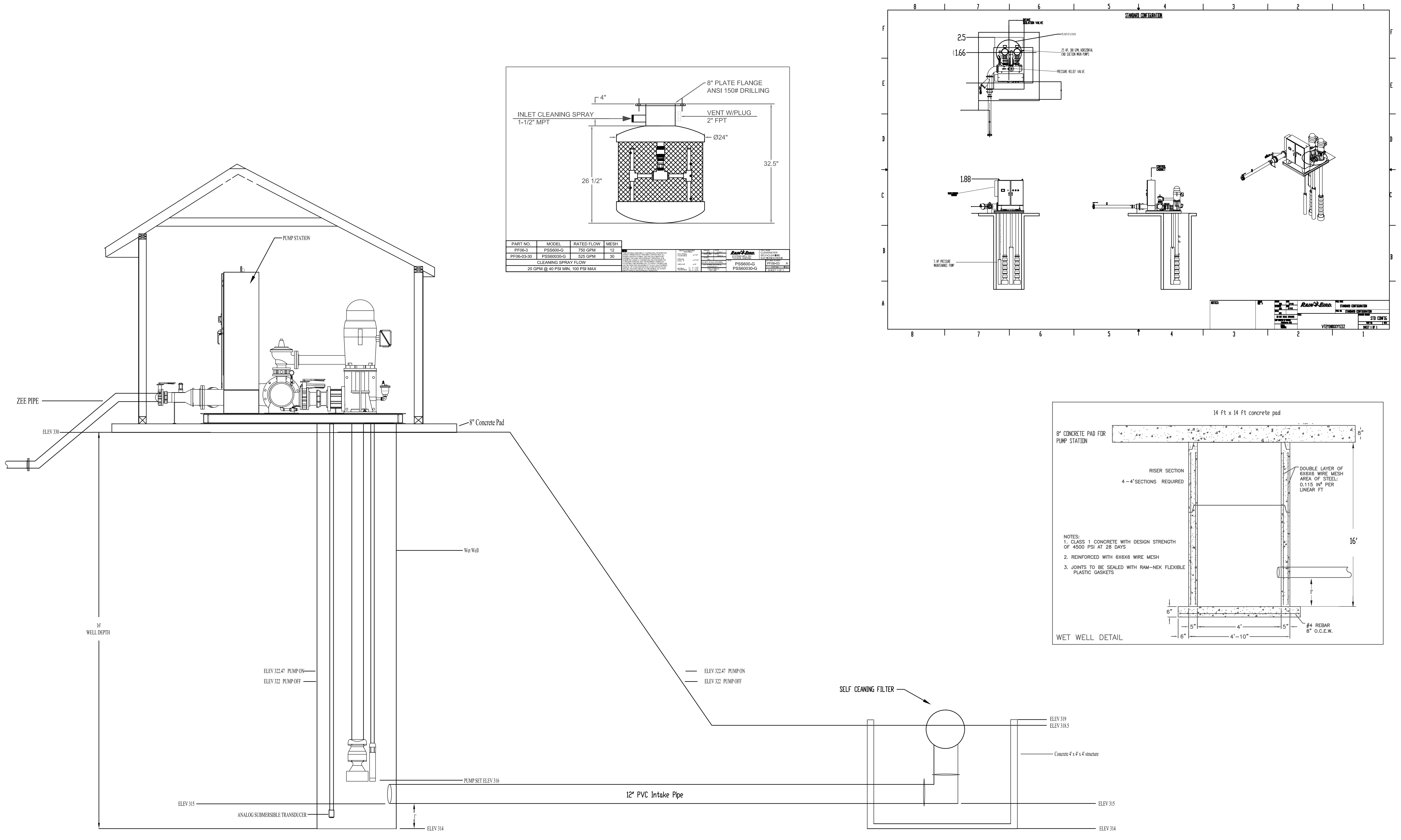

1 FINISH GRADE
2 ROTOR POP-UP SPRINKLER: RAIN BIRD 8005
3 PRE-FABRICATED SWING JOINT: RAIN BIRD TSJ-100-PRS WITH 65 PSI PRESSURE REGULATOR
4 PVC SCH 40 TEE OR ELL
5 LATERAL PIPE
D
ROTOR POP-UP SPRINKLER
N.T.S.
8005
4-23-04

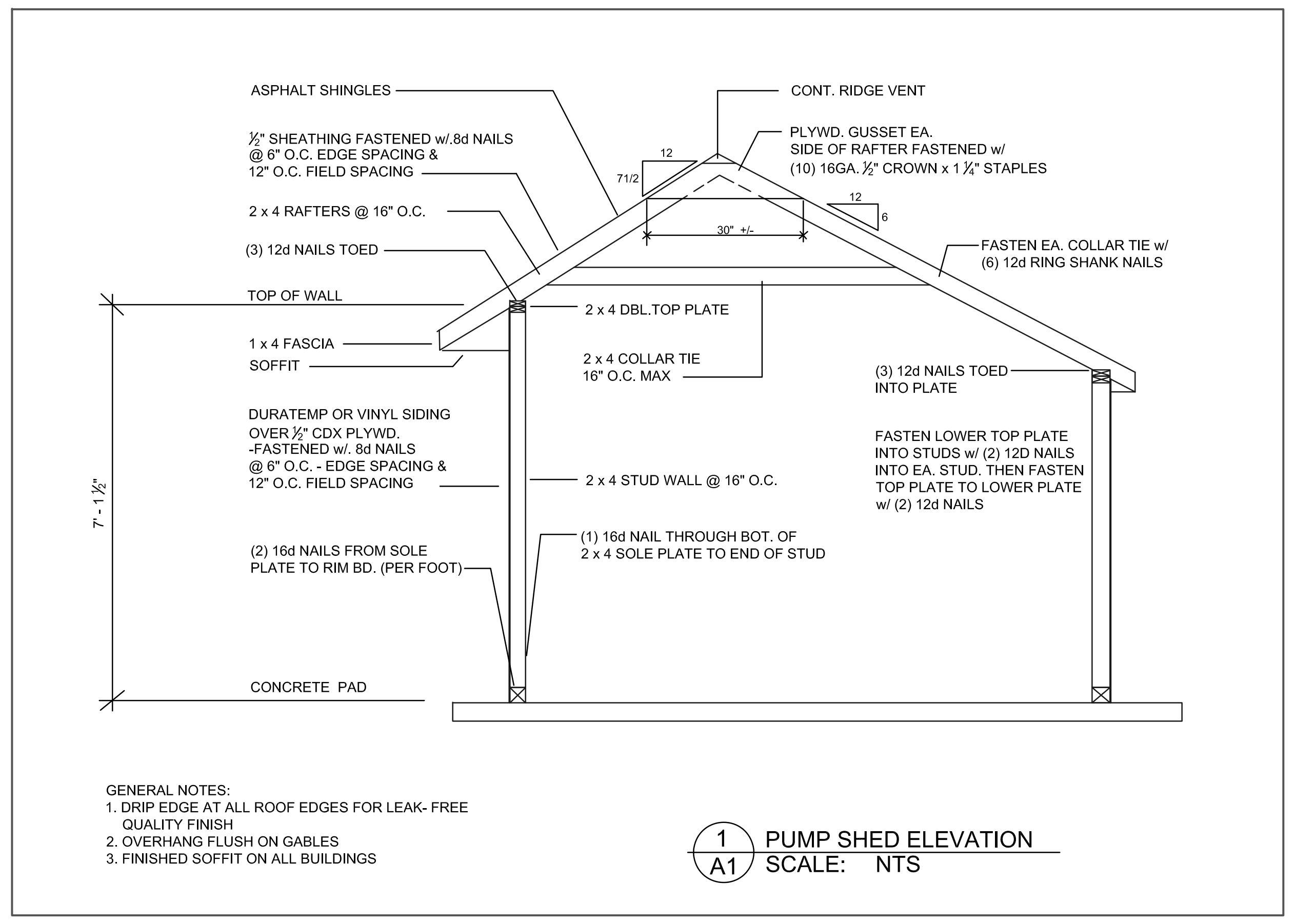
The applicant/owner is responsible to monitor and record the flow through the spray irrigation system to ensure the required volume is being applied

The entire volume of 77,037 Cubic Feet should be utilized within 7 days of the beginning of each storm event.

The Spray Irrigation System shall not be activated until Approximately 24 hours after any significant precipitation storm event.

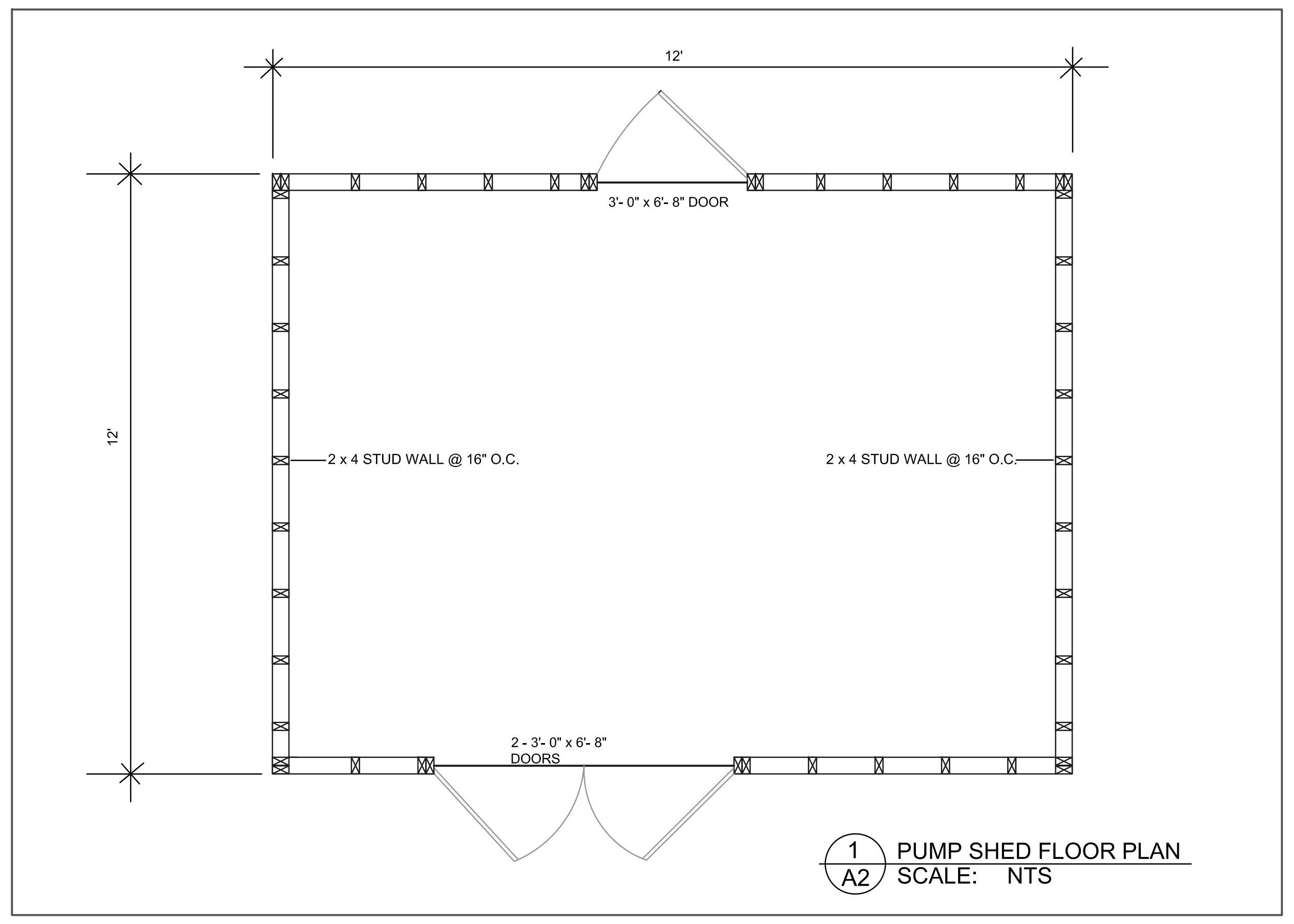
The Spray Irrigation System should be designed to completely drain when it is shut off.


PUMP STATION
ZEE PIPE
ELEV 330
8" Concrete Pad
Wet Well
16' WELL DEPTH
ELEV 322.47 PUMP ON
ELEV 322 PUMP OFF
PUMP SET ELEV 316
ELEV 315
ANALOG SUBMERSIBLE TRANSDUCER
ELEV 314
1'
12" PVC Intake Pipe
SELF CEANING FILTER
ELEV 319
ELEV 318.5
Concrete 4' x 4' x 4' structure
8" PLATE FLANGE ANSI 150# DRILLING
4"
INLET CLEANING SPRAY 1-1/2" MPT
VENT W/PLUG 2" FPT
Ø24"
26 1/2"
32.5"
PART NO. | MODEL | RATED FLOW | MESH
PF06-3 | PSS600-G | 750 GPM | 12
PF06-03-30 | PSS60030-G | 525 GPM | 30
CLEANING SPRAY FLOW
20 GPM @ 40 PSI MIN, 100 PSI MAX
PSS600-G
PSS60030-G
PF06-03
SHEET 1 OF 1
STANDARD CONFIGURATION
2.5
1.66
1.88
PRESSURE RELIEF VALVE
5 HP PRESSURE MAINTENANCE PUMP
STD CONFIG
VT2Y1N0XXYYZZZ
SHEET 1 OF 1
14 ft x 14 ft concrete pad
8" CONCRETE PAD FOR PUMP STATION
8"
RISER SECTION
4 - 4' SECTIONS REQUIRED
DOUBLE LAYER OF 6X6X6 WIRE MESH AREA OF STEEL: 0.115 IN² PER LINEAR FT
16'
1'
6"
5"
4'
4'-10"
#4 REBAR 8" O.C.E.W.
NOTES:
1. CLASS 1 CONCRETE WITH DESIGN STRENGTH OF 4500 PSI AT 28 DAYS
2. REINFORCED WITH 6X6X6 WIRE MESH
3. JOINTS TO BE SEALED WITH RAM-NEK FLEXIBLE PLASTIC GASKETS
WET WELL DETAIL


ASPHALT SHINGLES
½" SHEATHING FASTENED w/.8d NAILS @ 6" O.C. EDGE SPACING & 12" O.C. FIELD SPACING
2 x 4 RAFTERS @ 16" O.C.
(3) 12d NAILS TOED
TOP OF WALL
1 x 4 FASCIA
SOFFIT
DURATEMP OR VINYL SIDING OVER ½" CDX PLYWD. -FASTENED w/. 8d NAILS @ 6" O.C. - EDGE SPACING & 12" O.C. FIELD SPACING
(2) 16d NAILS FROM SOLE PLATE TO RIM BD. (PER FOOT)
CONCRETE PAD
7' - 1½"
CONT. RIDGE VENT
PLYWD. GUSSET EA. SIDE OF RAFTER FASTENED w/ (10) 16GA. ½" CROWN x 1¼" STAPLES
12
71/2
12
6
30" +/-
FASTEN EA. COLLAR TIE w/ (6) 12d RING SHANK NAILS
2 x 4 DBL.TOP PLATE
2 x 4 COLLAR TIE 16" O.C. MAX
(3) 12d NAILS TOED INTO PLATE
FASTEN LOWER TOP PLATE INTO STUDS w/ (2) 12D NAILS INTO EA. STUD. THEN FASTEN TOP PLATE TO LOWER PLATE w/ (2) 12d NAILS
2 x 4 STUD WALL @ 16" O.C.
(1) 16d NAIL THROUGH BOT. OF 2 x 4 SOLE PLATE TO END OF STUD

GENERAL NOTES:
1. DRIP EDGE AT ALL ROOF EDGES FOR LEAK- FREE QUALITY FINISH
2. OVERHANG FLUSH ON GABLES
3. FINISHED SOFFIT ON ALL BUILDINGS

1/A1 PUMP SHED ELEVATION
SCALE: NTS


12'
3'- 0" x 6'- 8" DOOR
12'
2 x 4 STUD WALL @ 16" O.C.
2 x 4 STUD WALL @ 16" O.C.
2 - 3'- 0" x 6'- 8" DOORS

1/A2 PUMP SHED FLOOR PLAN
SCALE: NTS

AQUA MIST
IRRIGATION

759 N Fenwick Street
Allentown, PA 18109

484-460-2690 LIC # 15036

Project Title:

LEHIGH VALLEY
HOSPITAL NETWORK

Muhlenberg Campus
City of Bethlehem

Lehigh County Pennsylvania

Legend:

●	Rainbird 8005 Rotary Head 13.2 GPM
⬡1	Rainbird PGA Electric Valve
P	Rainbird Vertical Turbine Pump
SC	Rainbird Site Control
Ⓡ	Rainbird Rain Sensor
Ⓕ	Rainbird Flow Meter
—	Communication Cable in 1"conduit
—	Class 200, SDR21 PVC Main Line size as noted
—	Class 220, SDR21 PVC Lateral 1.5" unless noted
⋈	Line Size Isolation Valve
Ⓓ	Drain port

Revisions:
03-25-15 Add Zone 4
03-31-15 Add Test Pits
07-28-15 Modification Zone 4
09-25-24 Volume Modification

Project:

LEHIGH VALLEY
HOSPITAL NETWORK

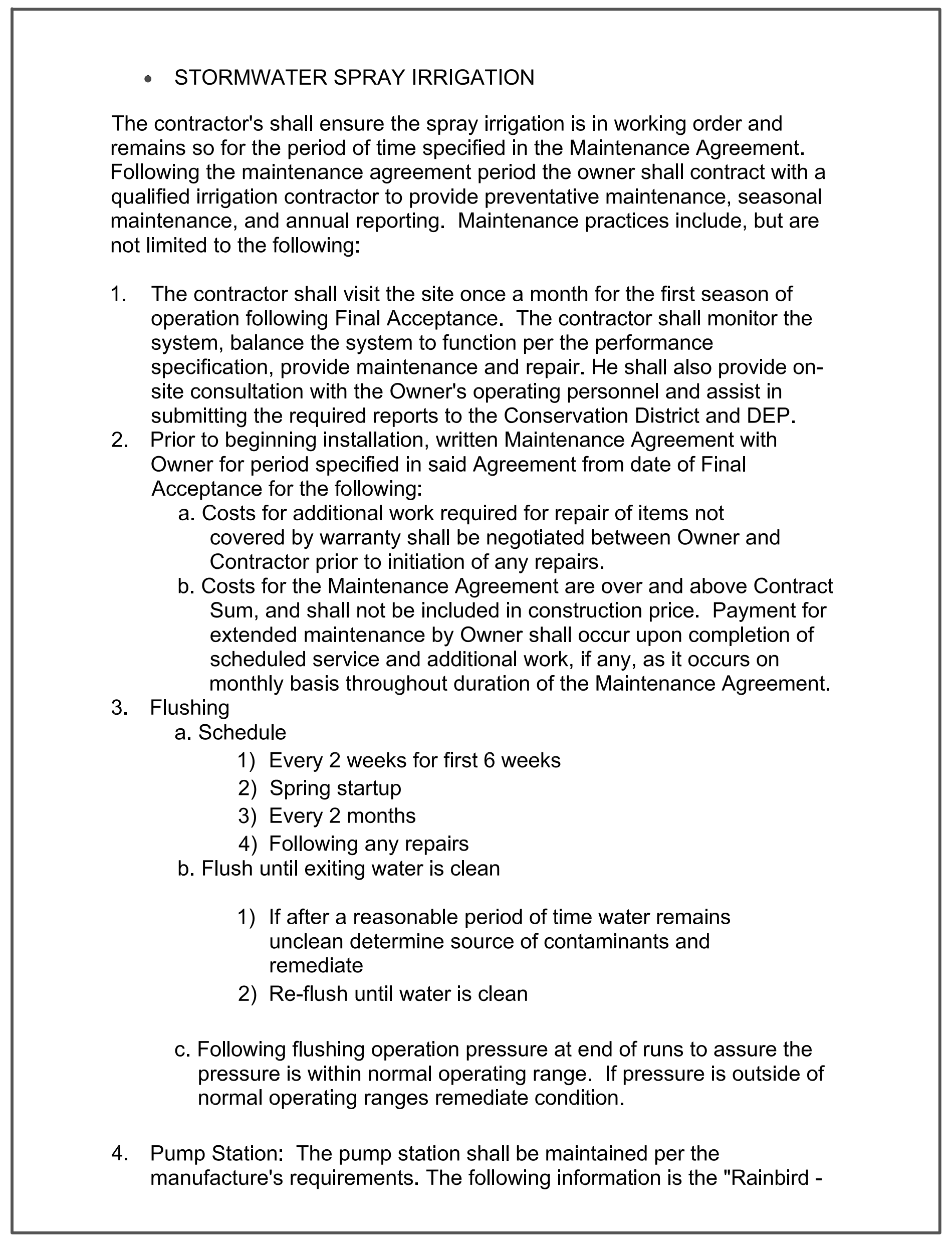
POST CONSTRUCTION
STORMWATER MANAGEMENT
SYSTEM

Pump & Details

Date: 03-17-15	Design By: WJM
Drawn By: WJM	Checked By:
Scale: NTS	Sheet #: I-03

OPERATIONS AND MAINTENANCE SCHEDULE:

Page 1

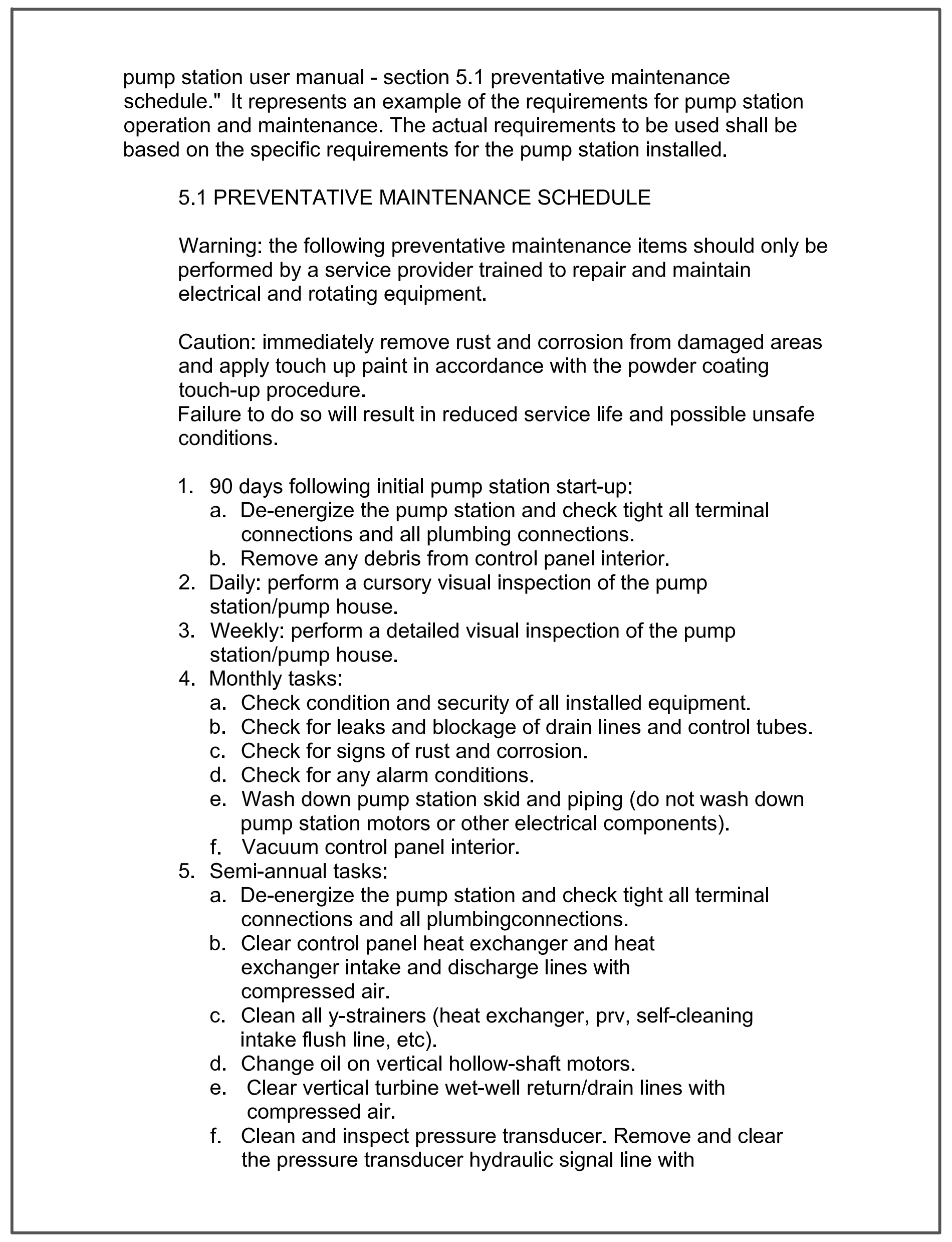


- STORMWATER SPRAY IRRIGATION

The contractor's shall ensure the spray irrigation is in working order and remains so for the period of time specified in the Maintenance Agreement. Following the maintenance agreement period the owner shall contract with a qualified irrigation contractor to provide preventative maintenance, seasonal maintenance, and annual reporting. Maintenance practices include, but are not limited to the following:

1. The contractor shall visit the site once a month for the first season of operation following Final Acceptance. The contractor shall monitor the system, balance the system to function per the performance specification, provide maintenance and repair. He shall also provide on-site consultation with the Owner's operating personnel and assist in submitting the required reports to the Conservation District and DEP.
2. Prior to beginning installation, written Maintenance Agreement with Owner for period specified in said Agreement from date of Final Acceptance for the following:
   - a. Costs for additional work required for repair of items not covered by warranty shall be negotiated between Owner and Contractor prior to initiation of any repairs.
   - b. Costs for the Maintenance Agreement are over and above Contract Sum, and shall not be included in construction price. Payment for extended maintenance by Owner shall occur upon completion of scheduled service and additional work, if any, as it occurs on monthly basis throughout duration of the Maintenance Agreement.
3. Flushing
   - a. Schedule
     - 1) Every 2 weeks for first 6 weeks
     - 2) Spring startup
     - 3) Every 2 months
     - 4) Following any repairs
   - b. Flush until exiting water is clean
     - 1) If after a reasonable period of time water remains unclean determine source of contaminants and remediate
     - 2) Re-flush until water is clean
   - c. Following flushing operation pressure at end of runs to assure the pressure is within normal operating range. If pressure is outside of normal operating ranges remediate condition.
4. Pump Station: The pump station shall be maintained per the manufacture's requirements. The following information is the "Rainbird -

Page 2



pump station user manual - section 5.1 preventative maintenance schedule." It represents an example of the requirements for pump station operation and maintenance. The actual requirements to be used shall be based on the specific requirements for the pump station installed.

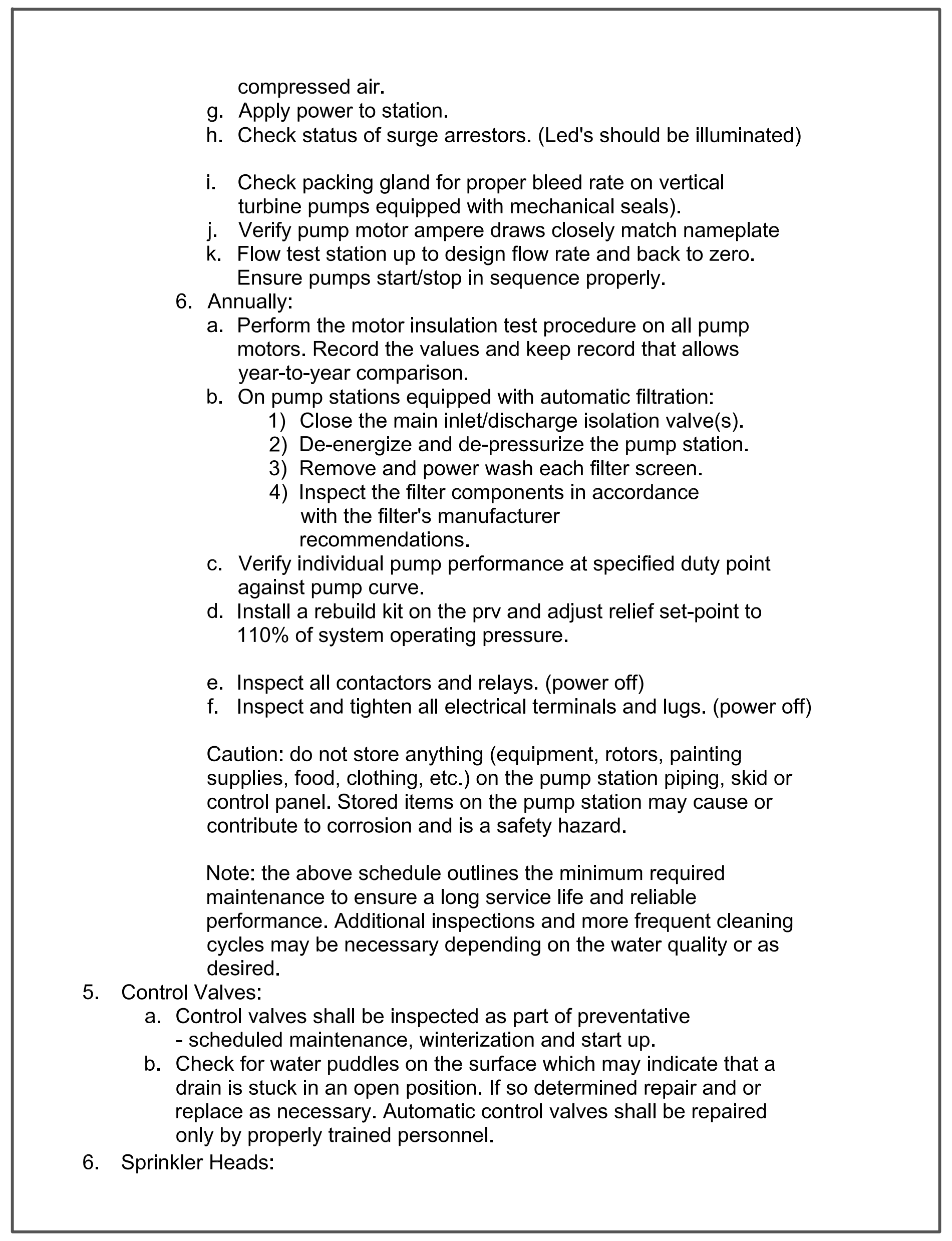
5.1 PREVENTATIVE MAINTENANCE SCHEDULE

Warning: the following preventative maintenance items should only be performed by a service provider trained to repair and maintain electrical and rotating equipment.

Caution: immediately remove rust and corrosion from damaged areas and apply touch up paint in accordance with the powder coating touch-up procedure.
Failure to do so will result in reduced service life and possible unsafe conditions.

1. 90 days following initial pump station start-up:
   - a. De-energize the pump station and check tight all terminal connections and all plumbing connections.
   - b. Remove any debris from control panel interior.
2. Daily: perform a cursory visual inspection of the pump station/pump house.
3. Weekly: perform a detailed visual inspection of the pump station/pump house.
4. Monthly tasks:
   - a. Check condition and security of all installed equipment.
   - b. Check for leaks and blockage of drain lines and control tubes.
   - c. Check for signs of rust and corrosion.
   - d. Check for any alarm conditions.
   - e. Wash down pump station skid and piping (do not wash down pump station motors or other electrical components).
   - f. Vacuum control panel interior.
5. Semi-annual tasks:
   - a. De-energize the pump station and check tight all terminal connections and all plumbingconnections.
   - b. Clear control panel heat exchanger and heat exchanger intake and discharge lines with compressed air.
   - c. Clean all y-strainers (heat exchanger, prv, self-cleaning intake flush line, etc).
   - d. Change oil on vertical hollow-shaft motors.
   - e. Clear vertical turbine wet-well return/drain lines with compressed air.
   - f. Clean and inspect pressure transducer. Remove and clear the pressure transducer hydraulic signal line with

Page 3



compressed air.

- g. Apply power to station.
- h. Check status of surge arrestors. (Led's should be illuminated)
- i. Check packing gland for proper bleed rate on vertical turbine pumps equipped with mechanical seals).
- j. Verify pump motor ampere draws closely match nameplate
- k. Flow test station up to design flow rate and back to zero. Ensure pumps start/stop in sequence properly.

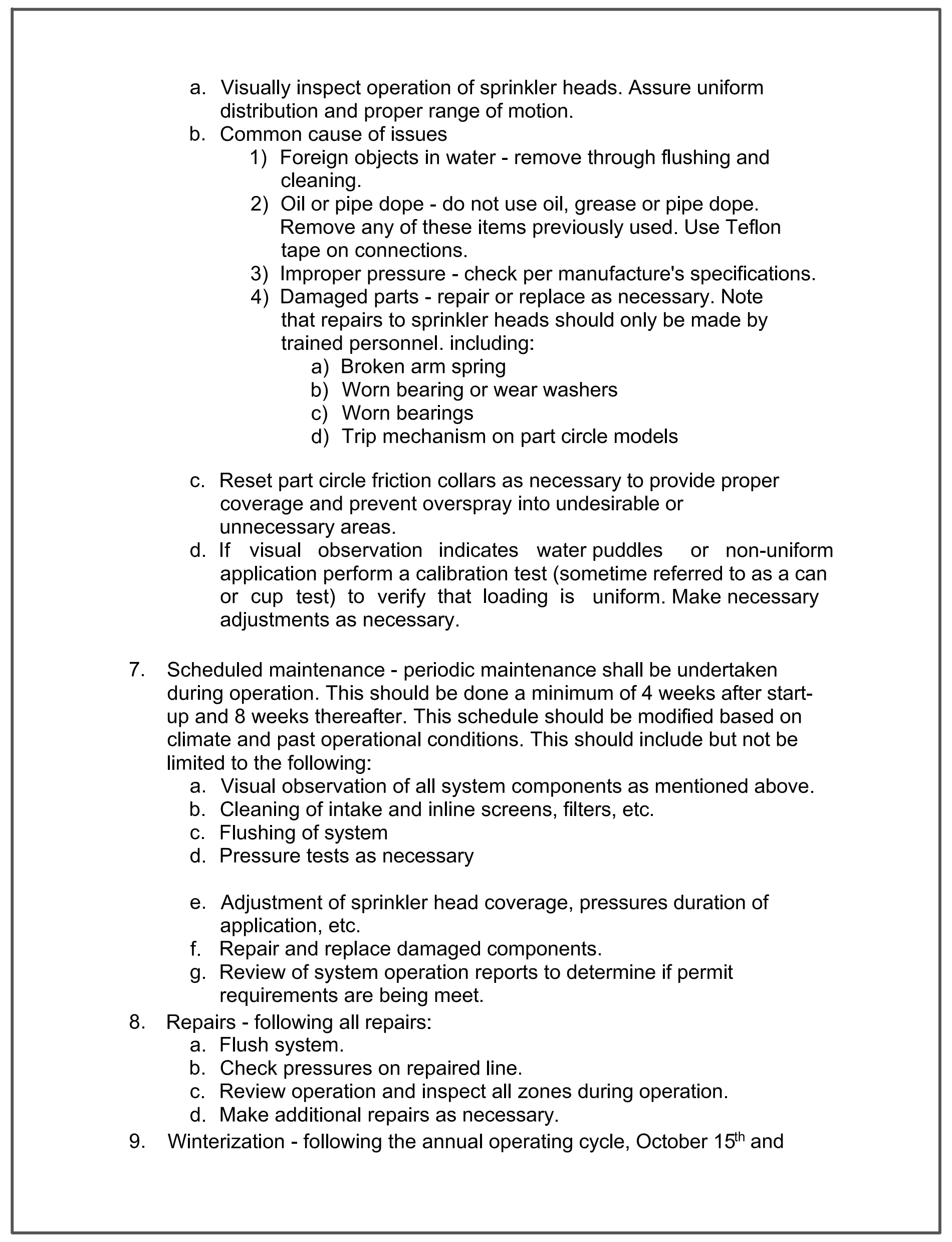
6. Annually:
   - a. Perform the motor insulation test procedure on all pump motors. Record the values and keep record that allows year-to-year comparison.
   - b. On pump stations equipped with automatic filtration:
     - 1) Close the main inlet/discharge isolation valve(s).
     - 2) De-energize and de-pressurize the pump station.
     - 3) Remove and power wash each filter screen.
     - 4) Inspect the filter components in accordance with the filter's manufacturer recommendations.
   - c. Verify individual pump performance at specified duty point against pump curve.
   - d. Install a rebuild kit on the prv and adjust relief set-point to 110% of system operating pressure.
   - e. Inspect all contactors and relays. (power off)
   - f. Inspect and tighten all electrical terminals and lugs. (power off)

Caution: do not store anything (equipment, rotors, painting supplies, food, clothing, etc.) on the pump station piping, skid or control panel. Stored items on the pump station may cause or contribute to corrosion and is a safety hazard.

Note: the above schedule outlines the minimum required maintenance to ensure a long service life and reliable performance. Additional inspections and more frequent cleaning cycles may be necessary depending on the water quality or as desired.

5. Control Valves:
   - a. Control valves shall be inspected as part of preventative - scheduled maintenance, winterization and start up.
   - b. Check for water puddles on the surface which may indicate that a drain is stuck in an open position. If so determined repair and or replace as necessary. Automatic control valves shall be repaired only by properly trained personnel.
6. Sprinkler Heads:

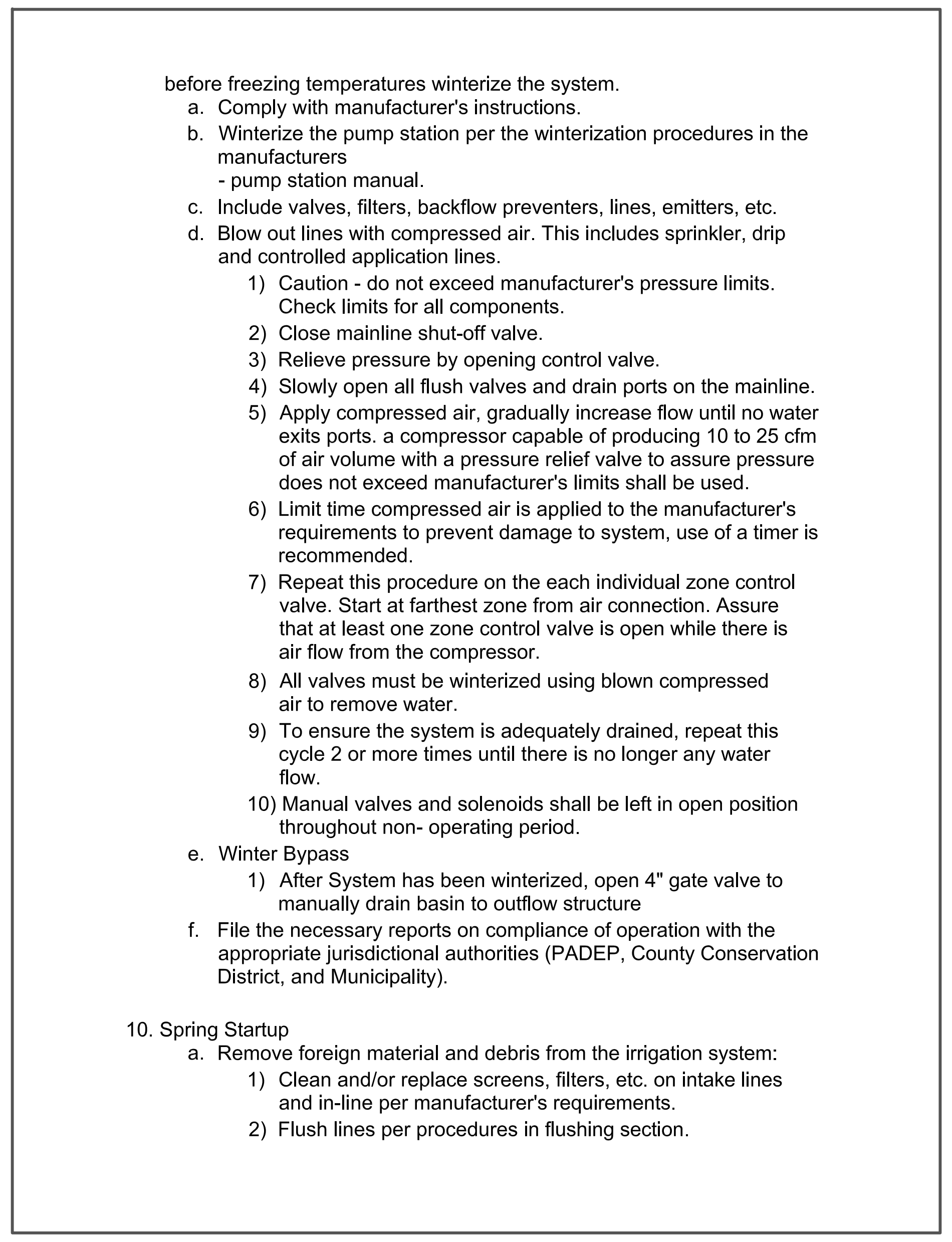
Page 4



- a. Visually inspect operation of sprinkler heads. Assure uniform distribution and proper range of motion.
- b. Common cause of issues
  - 1) Foreign objects in water - remove through flushing and cleaning.
  - 2) Oil or pipe dope - do not use oil, grease or pipe dope. Remove any of these items previously used. Use Teflon tape on connections.
  - 3) Improper pressure - check per manufacture's specifications.
  - 4) Damaged parts - repair or replace as necessary. Note that repairs to sprinkler heads should only be made by trained personnel. including:
    - a) Broken arm spring
    - b) Worn bearing or wear washers
    - c) Worn bearings
    - d) Trip mechanism on part circle models
- c. Reset part circle friction collars as necessary to provide proper coverage and prevent overspray into undesirable or unnecessary areas.
- d. If visual observation indicates water puddles or non-uniform application perform a calibration test (sometime referred to as a can or cup test) to verify that loading is uniform. Make necessary adjustments as necessary.

7. Scheduled maintenance - periodic maintenance shall be undertaken during operation. This should be done a minimum of 4 weeks after start-up and 8 weeks thereafter. This schedule should be modified based on climate and past operational conditions. This should include but not be limited to the following:
   - a. Visual observation of all system components as mentioned above.
   - b. Cleaning of intake and inline screens, filters, etc.
   - c. Flushing of system
   - d. Pressure tests as necessary
   - e. Adjustment of sprinkler head coverage, pressures duration of application, etc.
   - f. Repair and replace damaged components.
   - g. Review of system operation reports to determine if permit requirements are being meet.
8. Repairs - following all repairs:
   - a. Flush system.
   - b. Check pressures on repaired line.
   - c. Review operation and inspect all zones during operation.
   - d. Make additional repairs as necessary.
9. Winterization - following the annual operating cycle, October 15th and

Page 5

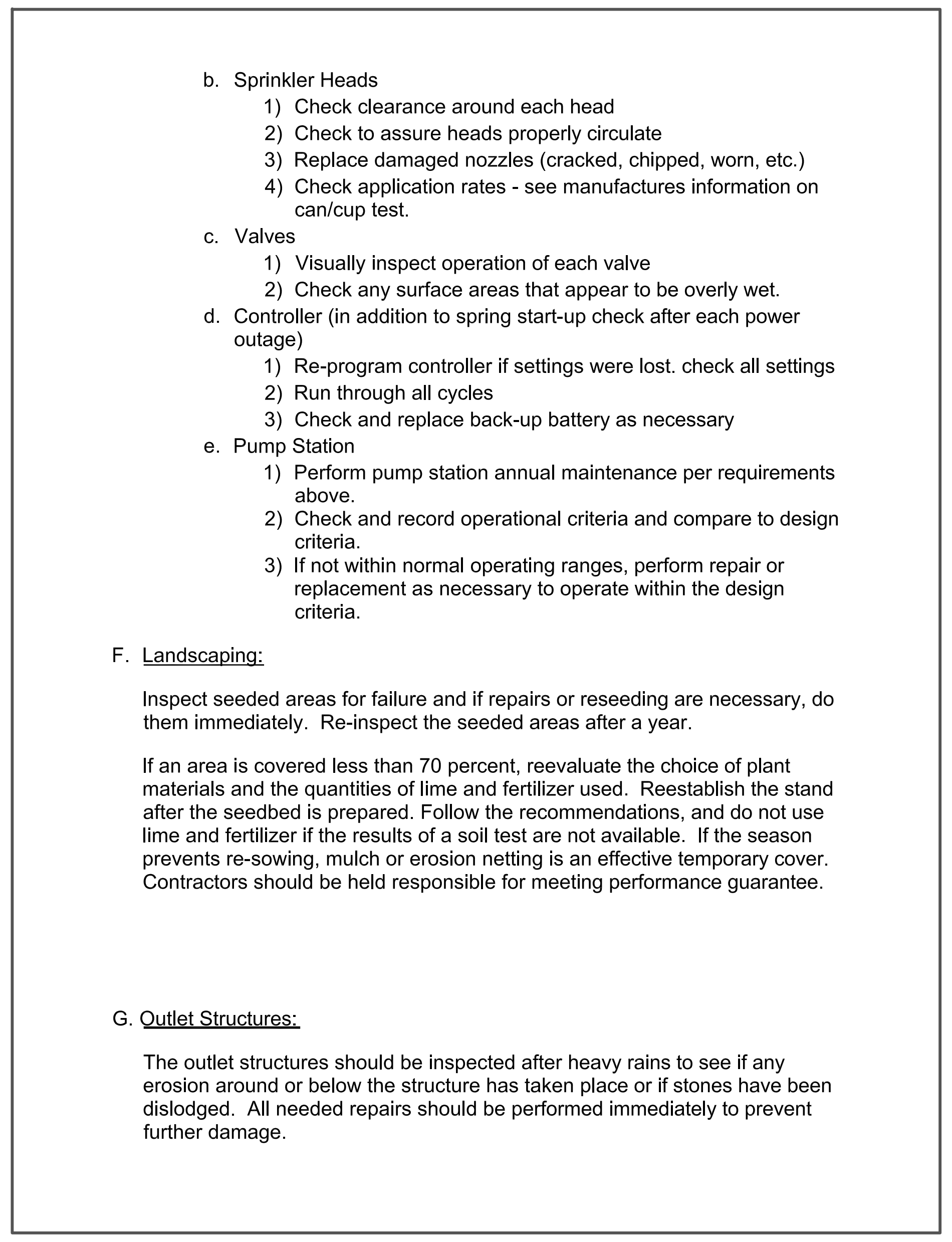


before freezing temperatures winterize the system.

- a. Comply with manufacturer's instructions.
- b. Winterize the pump station per the winterization procedures in the manufacturers - pump station manual.
- c. Include valves, filters, backflow preventers, lines, emitters, etc.
- d. Blow out lines with compressed air. This includes sprinkler, drip and controlled application lines.
  - 1) Caution - do not exceed manufacturer's pressure limits. Check limits for all components.
  - 2) Close mainline shut-off valve.
  - 3) Relieve pressure by opening control valve.
  - 4) Slowly open all flush valves and drain ports on the mainline.
  - 5) Apply compressed air, gradually increase flow until no water exits ports. a compressor capable of producing 10 to 25 cfm of air volume with a pressure relief valve to assure pressure does not exceed manufacturer's limits shall be used.
  - 6) Limit time compressed air is applied to the manufacturer's requirements to prevent damage to system, use of a timer is recommended.
  - 7) Repeat this procedure on the each individual zone control valve. Start at farthest zone from air connection. Assure that at least one zone control valve is open while there is air flow from the compressor.
  - 8) All valves must be winterized using blown compressed air to remove water.
  - 9) To ensure the system is adequately drained, repeat this cycle 2 or more times until there is no longer any water flow.
  - 10) Manual valves and solenoids shall be left in open position throughout non- operating period.
- e. Winter Bypass
  - 1) After System has been winterized, open 4" gate valve to manually drain basin to outflow structure
- f. File the necessary reports on compliance of operation with the appropriate jurisdictional authorities (PADEP, County Conservation District, and Municipality).

10. Spring Startup
    - a. Remove foreign material and debris from the irrigation system:
      - 1) Clean and/or replace screens, filters, etc. on intake lines and in-line per manufacturer's requirements.
      - 2) Flush lines per procedures in flushing section.

Page 6



- b. Sprinkler Heads
  - 1) Check clearance around each head
  - 2) Check to assure heads properly circulate
  - 3) Replace damaged nozzles (cracked, chipped, worn, etc.)
  - 4) Check application rates - see manufactures information on can/cup test.
- c. Valves
  - 1) Visually inspect operation of each valve
  - 2) Check any surface areas that appear to be overly wet.
- d. Controller (in addition to spring start-up check after each power outage)
  - 1) Re-program controller if settings were lost. check all settings
  - 2) Run through all cycles
  - 3) Check and replace back-up battery as necessary
- e. Pump Station
  - 1) Perform pump station annual maintenance per requirements above.
  - 2) Check and record operational criteria and compare to design criteria.
  - 3) If not within normal operating ranges, perform repair or replacement as necessary to operate within the design criteria.

F. Landscaping:

Inspect seeded areas for failure and if repairs or reseeding are necessary, do them immediately. Re-inspect the seeded areas after a year.

If an area is covered less than 70 percent, reevaluate the choice of plant materials and the quantities of lime and fertilizer used. Reestablish the stand after the seedbed is prepared. Follow the recommendations, and do not use lime and fertilizer if the results of a soil test are not available. If the season prevents re-sowing, mulch or erosion netting is an effective temporary cover. Contractors should be held responsible for meeting performance guarantee.

G. Outlet Structures:

The outlet structures should be inspected after heavy rains to see if any erosion around or below the structure has taken place or if stones have been dislodged. All needed repairs should be performed immediately to prevent further damage.

The applicant/owner is responsible to monitor and record the flow through the spray irrigation system to ensure the required volume is being applied

AQUA MIST
IRRIGATION

AQUA-MIST

759 N Fenwick Street
Allentown, PA 18109

484-460-2690 LIC # 15036

Project Title:

LEHIGH VALLEY
HOSPITAL NETWORK

Muhlenberg Campus
City of Bethlehem

Lehigh County Pennsylvania

Legend:

●	Rainbird 8005 Rotary Head 13.2 GPM
1	Rainbird PGA Electric Valve
P	Rainbird Vertical Turbine Pump
SC	Rainbird Site Control
Ⓡ	Rainbird Rain Sensor
Ⓕ	Rainbird Flow Meter
—	Communication Cable in 1"conduit
—	Class 200, SDR21 PVC Main Line size as noted
—	Class 220, SDR21 PVC Lateral 1.5" unless noted
⋈	Line Size Isolation Valve
Ⓓ	Drain port

Revisions:

03-25-15 Add Zone 4
03-31-15 Add Test Pits
07-28-15 Modification Zone 4
09-25-24 Volume Modification

Project:

LEHIGH VALLEY
HOSPITAL NETWORK

POST CONSTRUCTION
STORMWATER MANAGEMENT
SYSTEM

O & M Schedule

Date: 03-17-15	Design By: WJM
Drawn By: WJM	Checked By:
Scale: NTS	Sheet #: I-04

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EXISTING TREE INVENTORY

🟩 = TREE TO REMAIN (QTY. = 40)
▨ = TREE UNDER 8" DBH TO BE REMOVED AND NOT REPLACED (QTY. = 12)
🟦 = STREET TREE TO BE REMOVED AND REPLACED (QTY. = 5)
🟧 = PARKING TREE TO BE REMOVED AND REPLACED (QTY. = 16)
🟨 = SQUARE FOOT AREA TREE TO BE REMOVED AND REPLACED (QTY. = 17)

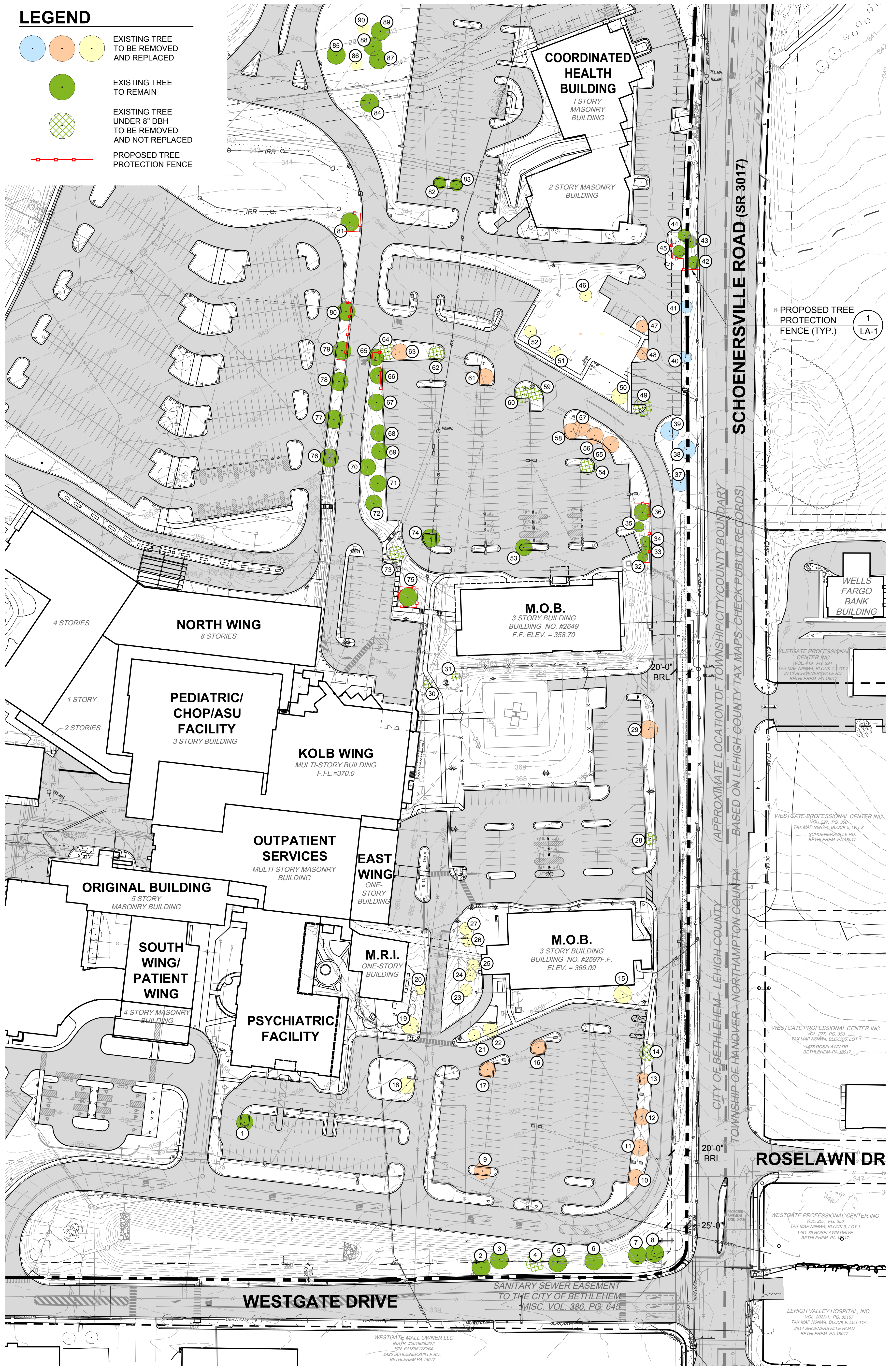
PLAN #	COMMON NAME	CALIPER (DBH)	PLAN #	COMMON NAME	CALIPER (DBH)	PLAN #	COMMON NAME	CALIPER (DBH)	PLAN #	COMMON NAME	CALIPER (DBH)
1	OAK	6"	26	CRAB APPLE	10"	51	HONEY LOCUST	14"	76	ZELKOVA	3"
2	CRAB APPLE	10"	27	CRAB APPLE	10"	52	PINE	13"	77	ZELKOVA	3"
3	CRAB APPLE	10"	28	OAK	4"	53	RED MAPLE	5"	78	ZELKOVA	3"
4	STUMP	-	29	OAK	8"	54	OAK	4"	79	OAK	8"
5	OAK	13"	30	ZELKOVA	2"	55	RED MAPLE	10"	80	PAGODA	3"
6	OAK	20"	31	ZELKOVA	2"	56	OAK	10"	81	OAK	6"
7	CRAB APPLE	12"	32	SPRUCE	9"	57	RED MAPLE	11"	82	RED MAPLE	7"
8	CRAB APPLE	12"	33	SPRUCE	13"	58	TRIPLE OAK	9"	83	RED MAPLE	2"
9	OAK	9"	34	SPRUCE	8"	59	RED MAPLE	5"	84	OAK	10"
10	RED MAPLE	8"	35	SPRUCE	8"	60	OAK	7"	85	CHERRY	6"
11	RED MAPLE	9"	36	RED MAPLE	8"	61	OAK	8"	86	DEAD	-
12	OAK	15"	37	NORWAY MAPLE	16"	62	RED MAPLE	4"	87	OAK	8"
13	CRAB APPLE	13"	38	NORWAY MAPLE	18"	63	OAK	9"	88	SPRUCE	5"
14	RED MAPLE	6"	39	OAK	13"	64	RED MAPLE	4"	89	OAK	9"
15	CRAB APPLE	8"	40	NORWAY MAPLE	18"	65	OAK	5"	90	DEAD	-
16	OAK	10"	41	NORWAY MAPLE (BAD)	16"	66	OAK	5"			
17	OAK	9"	42	PINE	6"	67	RED MAPLE	4"			
18	RED MAPLE	9"	43	GINGKO	8"	68	OAK	9"			
19	HONEY LOCUST	22"	44	SPRUCE	5"	69	OAK	6"			
20	OAK	12"	45	PINE	10"	70	RD MAPLE	3"			
21	CRAB APPLE	10"	46	PINE	12"	71	OAK	10"			
22	CRAB APPLE	12"	47	HONEY LOCUST	9"	72	RED MAPLE	6"			
23	PINE	9"	48	HONEY LOCUST	8"	73	RED MAPLE	7"			
24	PINE	15"	49	OAK	5"	74	RED MAPLE	7"			
25	CHERRY	12"	50	HONEY LOCUST	18"	75	SPRUCE	4"			

1318.28 TREE CONSERVATION

a) Where any existing healthy tree(s) that has a trunk diameter of 8 inches or greater (measured 4.5 feet above the ground level) are removed from a site as part of or in preparation for a development project, 1 new tree shall be planted for each such tree that is removed. The new trees shall have a minimum trunk diameter of 2.5 inches measured 6 inches above the ground level and shall meet the City species requirements that would apply to street trees, unless other species are approved by the City Forester. If there is mutual consent by the applicant and the City, some or all of the replacement trees may be planted on City owned land as an in lieu of requirement. In the RR (Rural Residential) and CM (Office Research Center) Districts, all of the above provisions shall apply, except that 2 new trees shall be planted for each such tree that is removed.

LEGEND

EXISTING TREE TO BE REMOVED AND REPLACED
EXISTING TREE TO REMAIN
EXISTING TREE UNDER 8" DBH TO BE REMOVED AND NOT REPLACED
PROPOSED TREE PROTECTION FENCE


COORDINATED HEALTH BUILDING
1 STORY MASONRY BUILDING
2 STORY MASONRY BUILDING
SCHOENERSVILLE ROAD (SR 3017)
PROPOSED TREE PROTECTION FENCE (TYP.)
1 LA-1
NORTH WING
8 STORIES
4 STORIES
M.O.B.
3 STORY BUILDING BUILDING NO. #2649 F.F. ELEV. = 358.70
WELLS FARGO BANK BUILDING
PEDIATRIC/ CHOP/ASU FACILITY
3 STORY BUILDING
1 STORY
2 STORIES
KOLB WING
MULTI-STORY BUILDING F.FL.=370.0
OUTPATIENT SERVICES
MULTI-STORY MASONRY BUILDING
EAST WING
ONE-STORY BUILDING
ORIGINAL BUILDING
5 STORY MASONRY BUILDING
SOUTH WING/ PATIENT WING
4 STORY MASONRY BUILDING
M.R.I.
ONE-STORY BUILDING
M.O.B.
3 STORY BUILDING BUILDING NO. #2597F.F. ELEV. = 366.09
PSYCHIATRIC FACILITY
20'-0" BRL
25'-0"
ROSELAWN DR
WESTGATE DRIVE
SANITARY SEWER EASEMENT TO THE CITY OF BETHLEHEM MISC. VOL. 386, PG. 643
(APPROXIMATE LOCATION OF TOWNSHIP/CITY/COUNTY BOUNDARY BASED ON LEHIGH COUNTY TAX MAPS. CHECK PUBLIC RECORDS)
CITY OF BETHLEHEM - LEHIGH COUNTY
TOWNSHIP OF HANOVER - NORTHAMPTON COUNTY
WESTGATE PROFESSIONAL CENTER INC.
WESTGATE MALL OWNER LLC
LEHIGH VALLEY HOSPITAL, INC.

TREE INVENTORY PLAN - EXISTING CONDITIONS

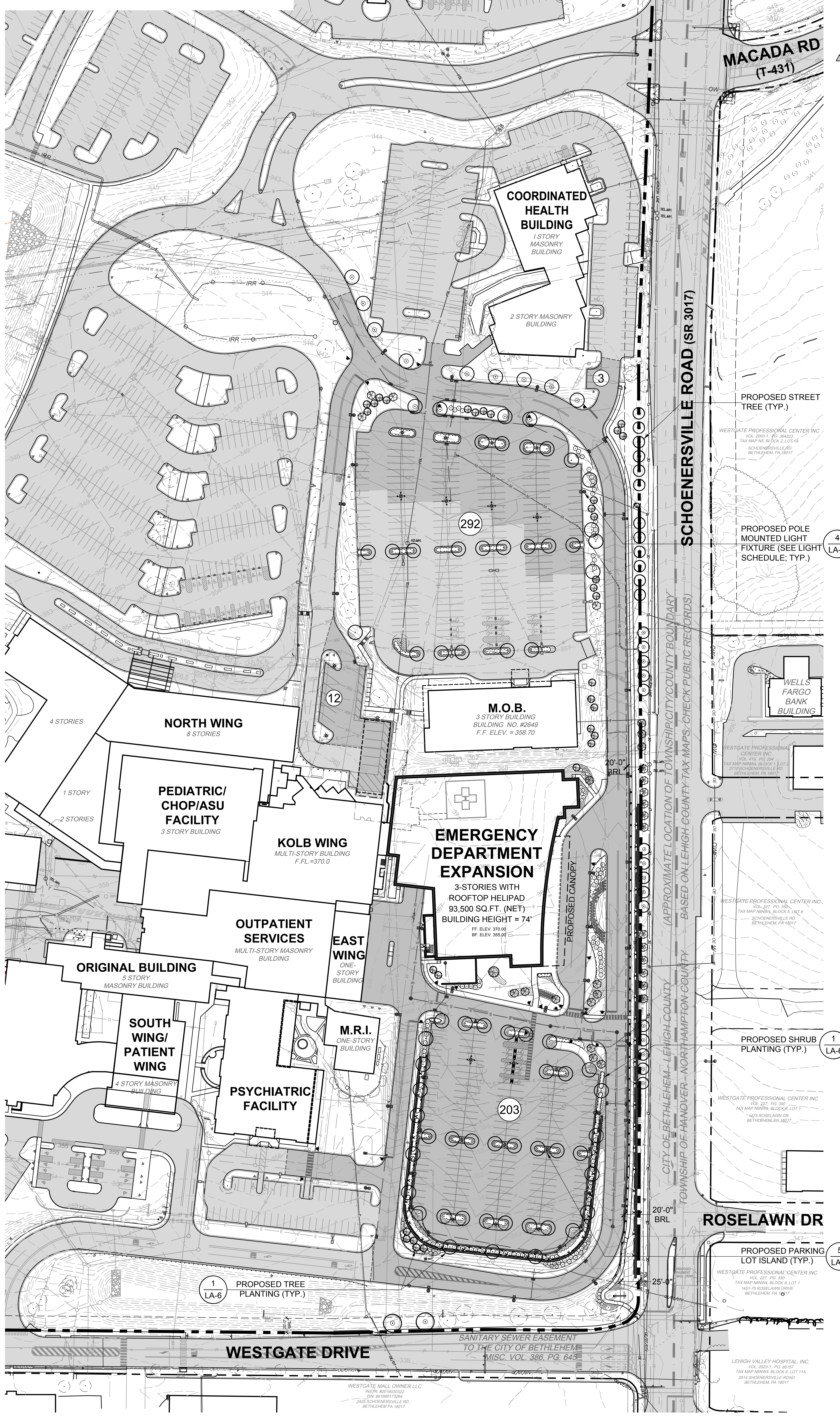
0 80
SCALE 1" = 80'-0"

LANDSCAPE LEGEND

EXISTING TREES
PROPOSED EVERGREEN TREE
PROPOSED DECIDUOUS TREE
PROPOSED SHRUBS
PROPOSED SITE LIGHT FIXTURE

NOTES:

1.) THIS PLAN IS FOR LANDSCAPE & LIGHTING PURPOSES ONLY. REFER TO ENGINEER'S PLANS FOR ALL OTHER PROJECT RELATEDINFORMATION.
2.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SPACING AND OFFSET OF PROPOSED TREES FROM EXISTING AND PROPOSED UNDERGROUND UTILITIES NECESSARY AND/OR REQUIRED BY CURRENT CODE OR PUBLIC AND PRIVATE REGULATIONS.


MACADA RD
(T-431)
COORDINATED HEALTH BUILDING
1 STORY MASONRY BUILDING
2 STORY MASONRY BUILDING
SCHOENERSVILLE ROAD (SR 3017)
PROPOSED STREET TREE (TYP.)
292
3
PROPOSED POLE MOUNTED LIGHT FIXTURE (SEE LIGHT FIXTURE SCHEDULE; TYP.)
4 LA-6
12
NORTH WING
M.O.B.
WELLS FARGO BANK BUILDING
PEDIATRIC/ CHOP/ASU FACILITY
KOLB WING
EMERGENCY DEPARTMENT EXPANSION
3-STORIES WITH ROOFTOP HELIPAD
93,500 SQ.FT. (NET)
BUILDING HEIGHT = 74'
PROPOSED CANOPY
OUTPATIENT SERVICES
EAST WING
ORIGINAL BUILDING
SOUTH WING/ PATIENT WING
M.R.I.
PSYCHIATRIC FACILITY
203
PROPOSED SHRUB PLANTING (TYP.)
1 LA-6
ROSELAWN DR
PROPOSED PARKING LOT ISLAND (TYP.)
5 LA-6
PROPOSED TREE PLANTING (TYP.)
1 LA-6
WESTGATE DRIVE
SANITARY SEWER EASEMENT TO THE CITY OF BETHLEHEM MISC. VOL. 386, PG. 643

OVERALL LANDSCAPE & LIGHTING PLAN

80 0 80 160 240
Scale 1" = 80'

LANDSCAPE REQUIREMENTS

ZONING DISTRICT: I - INSTITUTIONAL

○ STREET TREES - ARTICLE 1319.02(j)(1)

REQUIREMENT - 1 TREE FOR EVERY 30 FEET (SMALL TREES)
1 TREE FOR EVERY 50 FEET (LARGE TREES)

	FRONTAGE	REQUIRED	PROPOSED
SCHOENERSVILLE RD.	1,298 FT.	43 TREES	42 TREES
WESTGATE DR.	354 FT.	7 TREES	2 TREES
		- 6 EXISTING	
		44 TREES	44 TREES*

*5 of which are replacement trees

□ PARKING TREES - ARTICLE 1319.02(j)(2)

REQUIREMENT - 1 TREE FOR EVERY 15 PARKING SPACES
REQUIRED TREES = 510 SPACES / 15 = 34 (- 2 EX.) = **32 TREES**
TOTAL TREES PROPOSED = **33 TREES***
*16 of which are replacement trees

△ SQUARE FOOT LANDSCAPE

OFF STREET PARKING AND LOADING - SALDO 1349.08(f)(1)
TOTAL PARKING & LOADING AREA = 218,171 S.F.
REQUIRED LANDSCAPE AREA (10%) = **21,817 S.F.**

BUILDING AREA LANDSCAPE - SALDO 1349.08(f)(3)
TOTAL BUILDING AREA = 53,389 S.F.
REQUIRED LANDSCAPE AREA (1/3) = **17,796 S.F.**

TOTAL SQUARE FOOT LANDSCAPE REQUIRED = 39,613 S.F.

LARGE TREES = 200 S.F. CREDIT
MEDIUM TREES = 150 S.F. CREDIT
SMALL TREES = 100 S.F. CREDIT
SHRUBS = 1 S.F. CREDIT

EXISTING LANDSCAPE
10 LARGE TREES = 2,000 S.F. CREDIT
4 SMALL TREES = 400 S.F. CREDIT

PROPOSED LANDSCAPE
43 LARGE TREES* = 8,600 S.F. CREDIT
*17 of which are replacement trees
46 SMALL TREES = 4,600 S.F CREDIT
24,305 SHRUBS/BED = 24,305 S.F. CREDIT
TOTAL SQUARE FOOT PROVIDED = 39,905 S.F.

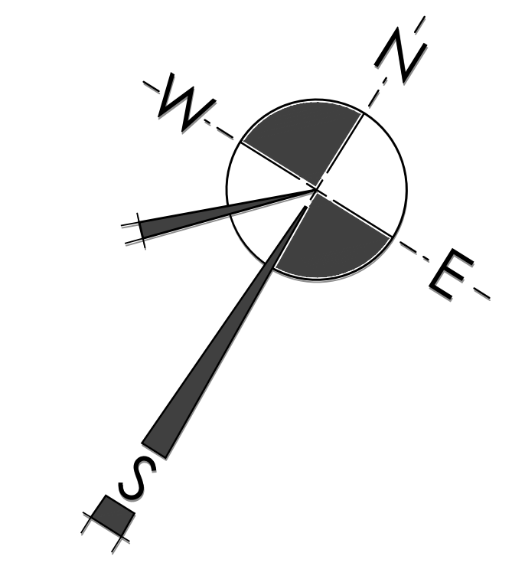
REPLACEMENT TREES - ARTICLE 1318.28(a)

IN THE I ZONING DISTRICT, 1 REPLACEMENT TREE IS REQUIRED FOR EACH EXISTING REGULATED TREE (8-IN. TRUNK CALIPER OR GREATER) THAT WILL BE REMOVED AS A RESULT OF THE PROPOSED LAND DEVELOPMENT.

REPLACEMENT TREES REQUIRED = 38 TREES
REPLACEMENT TREES PROPOSED = 38 TREES*
* within the respective categories:
5 Street Trees
16 Parking Trees
17 Square Foot Landscape Trees

SHEET INDEX:

LA-1 - OVERALL LANDSCAPE PLAN
LA-2 - LANDSCAPE PLAN ENLARGEMENT 1
LA-3 - LANDSCAPE PLAN ENLARGEMENT 2
LA-4 - LIGHTING PLAN ENLARGEMENT 1
LA-5 - LIGHTING PLAN ENLARGEMENT 2
LA-6 - DETAILS/ NOTES/ SCHEDULES



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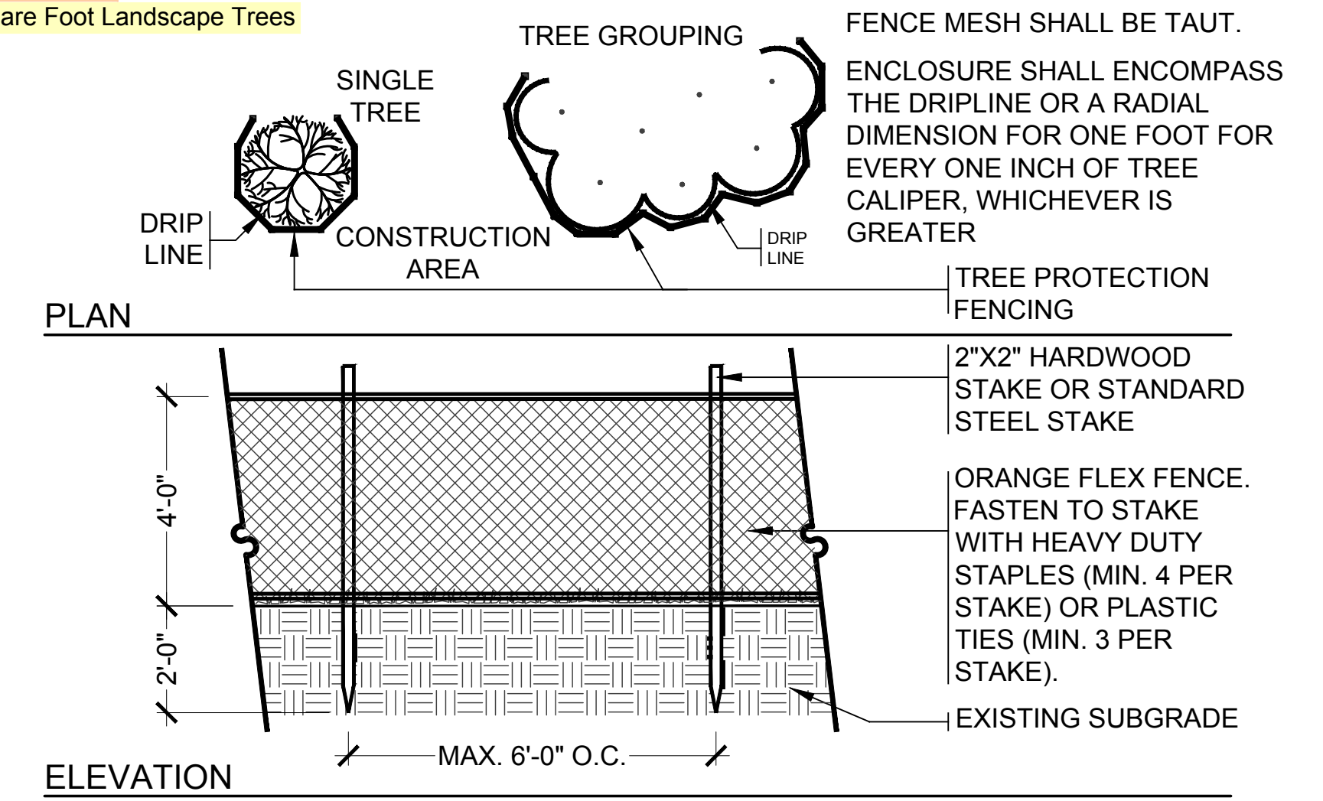

TREE GROUPING
SINGLE TREE
DRIP LINE
CONSTRUCTION AREA
DRIP LINE
PLAN
FENCE MESH SHALL BE TAUT.
ENCLOSURE SHALL ENCOMPASS THE DRIPLINE OR A RADIAL DIMENSION FOR ONE FOOT FOR EVERY ONE INCH OF TREE CALIPER, WHICHEVER IS GREATER
TREE PROTECTION FENCING
2"X2" HARDWOOD STAKE OR STANDARD STEEL STAKE
ORANGE FLEX FENCE. FASTEN TO STAKE WITH HEAVY DUTY STAPLES (MIN. 4 PER STAKE) OR PLASTIC TIES (MIN. 3 PER STAKE).
4'-0"
2'-0"
EXISTING SUBGRADE
MAX. 6'-0" O.C.
ELEVATION

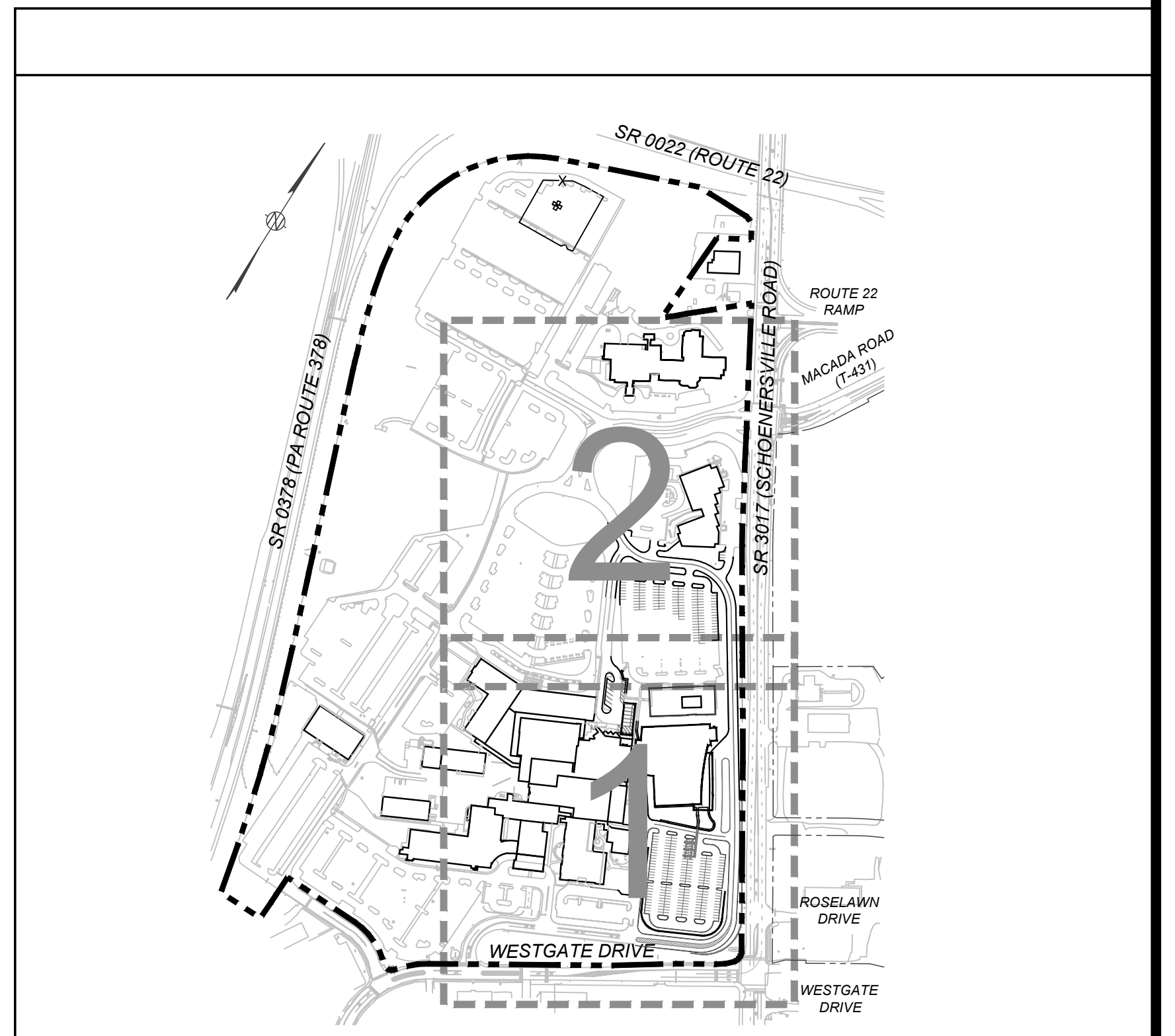
NOTE:
ADJUST TREE PROTECTION AS NEEDED TO ACCOMMODATE UTILITIES, DRAINAGE, AND RESTORATION WORK DEPICTED.

1 TREE PROTECTION FENCE

NOT TO SCALE

TREE PROTECTION NOTES:

1. During construction, all trees scheduled to remain shall be protected to insure that there is no unnecessary encroachment within the area of their drip line by changing grade, trenching, stockpiling of building materials or topsoil, of the compaction of the soil and roots by any motor vehicle, equipment, tools, material etc.
2. All areas of trenching and grade reduction shall be done with the utmost care and consideration of the existing trees. Any tree root 3" in diameter or greater encountered during such activities shall be cut with a clean arborist saw and immediately covered with damp burlap and shall remain damp and covered until area is backfilled. All other roots disturbed by trenching or grading shall be clipped back or cut to the limit of excavation as soon as activity is completed. Clawing, ripping and breaking of tree roots with equipment does far more damage than is visible at the time of injury. Landscape Architect will be monitoring construction activities closely for tree protection measures.
3. The contractor shall be aware of the heights of all equipment and vehicles during construction activities to avoid conflict with tree branches.
4. To the greatest extent possible, track mounted equipment shall be used within the drip lines of existing trees to remain in order to distribute weight and reduce compaction.


SR 0022 (ROUTE 22)
ROUTE 22 RAMP
MACADA ROAD (T-431)
SR 3017 (SCHOENERSVILLE ROAD)
SR 0378 (PA ROUTE 378)
2
1
ROSELAWN DRIVE
WESTGATE DRIVE

Lehigh Valley Health Network
MUHLENBERG

REVISION BLOCK

REVISION DATE	DESCRIPTION	REVISION DATE	DESCRIPTION
1-9-25	PER CITY OF BETHLEHEM REVIEW LETTER DATED 10-23-24		

browndesigncorp
land architects and planners
347 north ninth street
old allentown pa, 18102
phone: 610.821.4252
www.browndesigncorp.com

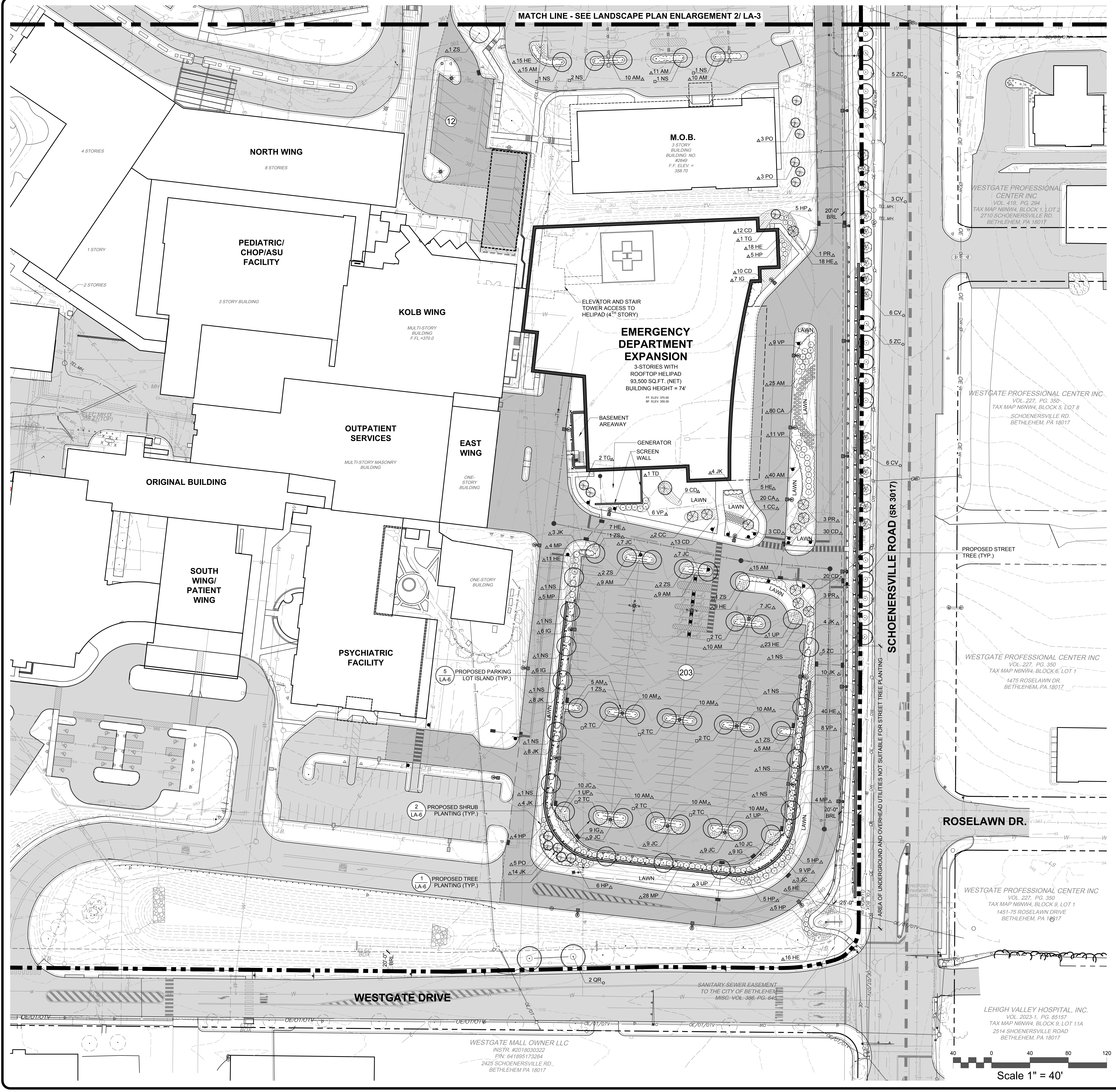
CHRISTIAN JEROME BROWN
REGISTRATION NUMBER 001523-L
Christian J. Brown

LOCATED IN:
CITY OF BETHLEHEM
LEHIGH COUNTY
COMMONWEALTH OF PENNSYLVANIA

LEHIGH VALLEY HEALTH NETWORK
MUHLENBERG
EMERGENCY DEPARTMENT EXPANSION
OVERALL LANDSCAPE PLAN

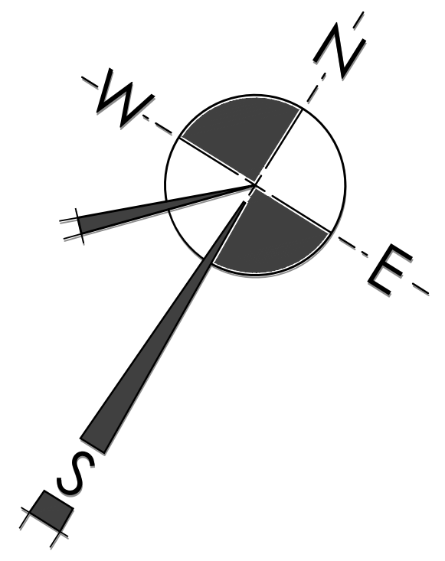
LA-1 OF 6

DATE : 9-6-24
SCALE : AS NOTED
DRAWN BY : BDC
JOB : 2435


MATCH LINE - SEE LANDSCAPE PLAN ENLARGEMENT 2/ LA-3
1 ZS
15 HE
15 AM
1 NS
2 NS
10 AM
11 AM
1 NS
1 NS
10 AM
12
M.O.B.
3 STORY BUILDING BUILDING NO. #2649 F.F. ELEV. = 358.70
3 PO
3 PO
5 ZC
3 CV
TEL.MH.
5 HP
20'-0" BRL
WESTGATE PROFESSIONAL CENTER INC
VOL. 419, PG. 294
TAX MAP N6NW4, BLOCK 1, LOT 2
2710 SCHOENERSVILLE RD.
BETHLEHEM, PA 18017
4 STORIES
NORTH WING
8 STORIES
1 STORY
2 STORIES
PEDIATRIC/ CHOP/ASU FACILITY
3 STORY BUILDING
KOLB WING
MULTI-STORY BUILDING F.FL.=370.0
12 CD
1 TG
18 HE
5 HP
1 PR
18 HE
10 CD
7 IG
ELEVATOR AND STAIR TOWER ACCESS TO HELIPAD (4TH STORY)
EMERGENCY DEPARTMENT EXPANSION
3-STORIES WITH ROOFTOP HELIPAD
93,500 SQ.FT. (NET)
BUILDING HEIGHT = 74'
FF. ELEV. 370.00
BF. ELEV. 355.00
6 CV
5 ZC
9 VP
25 AM
80 CA
11 VP
40 AM
5 HE
20 CA
1 CC
3 PR
30 CD
3 CD
LAWN
BASEMENT AREAWAY
GENERATOR
SCREEN WALL
2 TG
1 TD
4 JK
9 CD
6 VP
OUTPATIENT SERVICES
MULTI-STORY MASONRY BUILDING
EAST WING
ONE-STORY BUILDING
ORIGINAL BUILDING
SOUTH WING/ PATIENT WING
PSYCHIATRIC FACILITY
ONE-STORY BUILDING
7 HE
1 ZS
2 CC
13 CD
7 JC
7 JC
3 JK
4 MP
11 HE
2 ZS
9 AM
2 ZS
9 AM
1 ZS
9 HE
15 AM
20 CD
3 PR
PROPOSED STREET TREE (TYP.)
1 NS
5 MP
1 NS
6 IG
7 JC
1 UP
2 TC
10 AM
23 HE
4 JK
5 ZC
1 NS
1 NS
6 IG
203
10 JK
5 LA-6 PROPOSED PARKING LOT ISLAND (TYP.)
1 NS
8 JK
5 AM
1 ZS
10 AM
10 AM
10 AM
1 NS
40 HE
2 TC
2 TC
2 TC
8 VP
1 ZS
5 AM
1 NS
8 JK
1 NS
8 VP
10 JC
1 UP
2 TC
10 AM
10 AM
10 AM
1 NS
1 NS
4 JK
2 TC
2 TC
1 UP
4 MP
20'-0" BRL
2 LA-6 PROPOSED SHRUB PLANTING (TYP.)
4 HP
9 IG
9 JC
9 JC
9 JC
10 JC
9 IG
5 PO
14 JK
5 HP
9 VP
3 JC
6 HE
1 LA-6 PROPOSED TREE PLANTING (TYP.)
6 HP
28 MP
3 UP
5 HP
5 HP
25'-0"
16 HE
20'-0" BRL
2 QR
SCHOENERSVILLE ROAD (SR 3017)
AREA OF UNDERGROUND AND OVERHEAD UTILITIES NOT SUITABLE FOR STREET TREE PLANTING
WESTGATE PROFESSIONAL CENTER INC
VOL. 227, PG. 350
TAX MAP N6NW4, BLOCK 5, LOT 8
SCHOENERSVILLE RD.
BETHLEHEM, PA 18017
WESTGATE PROFESSIONAL CENTER INC
VOL. 227, PG. 350
TAX MAP N6NW4, BLOCK 6, LOT 1
1475 ROSELAWN DR.
BETHLEHEM, PA 18017
ROSELAWN DR.
PROPOSED PAVEMENT BASE DRAIN
WESTGATE PROFESSIONAL CENTER INC
VOL. 227, PG. 350
TAX MAP N6NW4, BLOCK 9, LOT 1
1451-75 ROSELAWN DRIVE
BETHLEHEM, PA 18017
WESTGATE DRIVE
SANITARY SEWER EASEMENT TO THE CITY OF BETHLEHEM MISC. VOL. 386, PG. 645
WESTGATE MALL OWNER LLC
INSTR. #2018030322
PIN: 641895173264
2425 SCHOENERSVILLE RD.,
BETHLEHEM PA 18017
LEHIGH VALLEY HOSPITAL, INC.
VOL. 2023-1, PG. 85157
TAX MAP N6NW4, BLOCK 9, LOT 11A
2514 SHOENERSVILLE ROAD
BETHLEHEM, PA 18017
40 0 40 80 120
Scale 1" = 40'

SHEET INDEX:

- LA-1 - OVERALL LANDSCAPE PLAN
- **LA-2 - LANDSCAPE PLAN ENLARGEMENT 1**
- LA-3 - LANDSCAPE PLAN ENLARGEMENT 2
- LA-4 - LIGHTING PLAN ENLARGEMENT 1
- LA-5 - LIGHTING PLAN ENLARGEMENT 2
- LA-6 - DETAILS/ NOTES/ SCHEDULES



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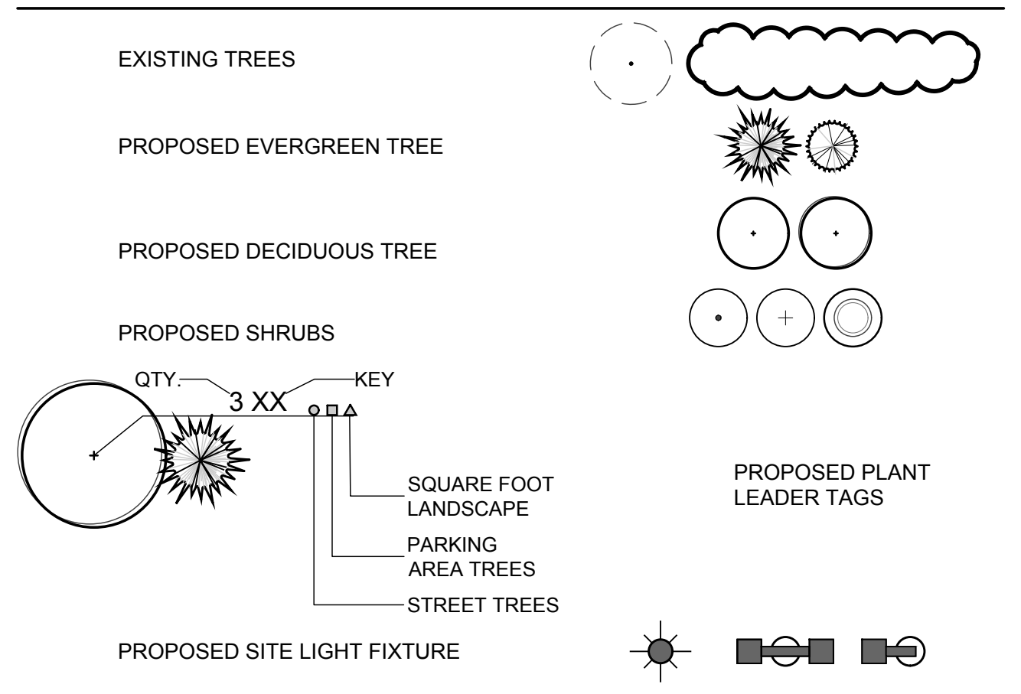
LANDSCAPE LEGEND


EXISTING TREES
PROPOSED EVERGREEN TREE
PROPOSED DECIDUOUS TREE
PROPOSED SHRUBS
QTY.
3 XX
KEY
SQUARE FOOT LANDSCAPE
PARKING AREA TREES
STREET TREES
PROPOSED PLANT LEADER TAGS
PROPOSED SITE LIGHT FIXTURE

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SR 0022 (ROUTE 22)
ROUTE 22 RAMP
MACADA ROAD (T-431)
SR 0378 (PA ROUTE 378)
SR 3017 (SCHOENERSVILLE ROAD)
2
1
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

Lehigh Valley Health Network
MUHLENBERG

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CHRISTIAN JEROME BROWN
REGISTRATION NUMBER 001623-L
Christian J. Brown

LOCATED IN:
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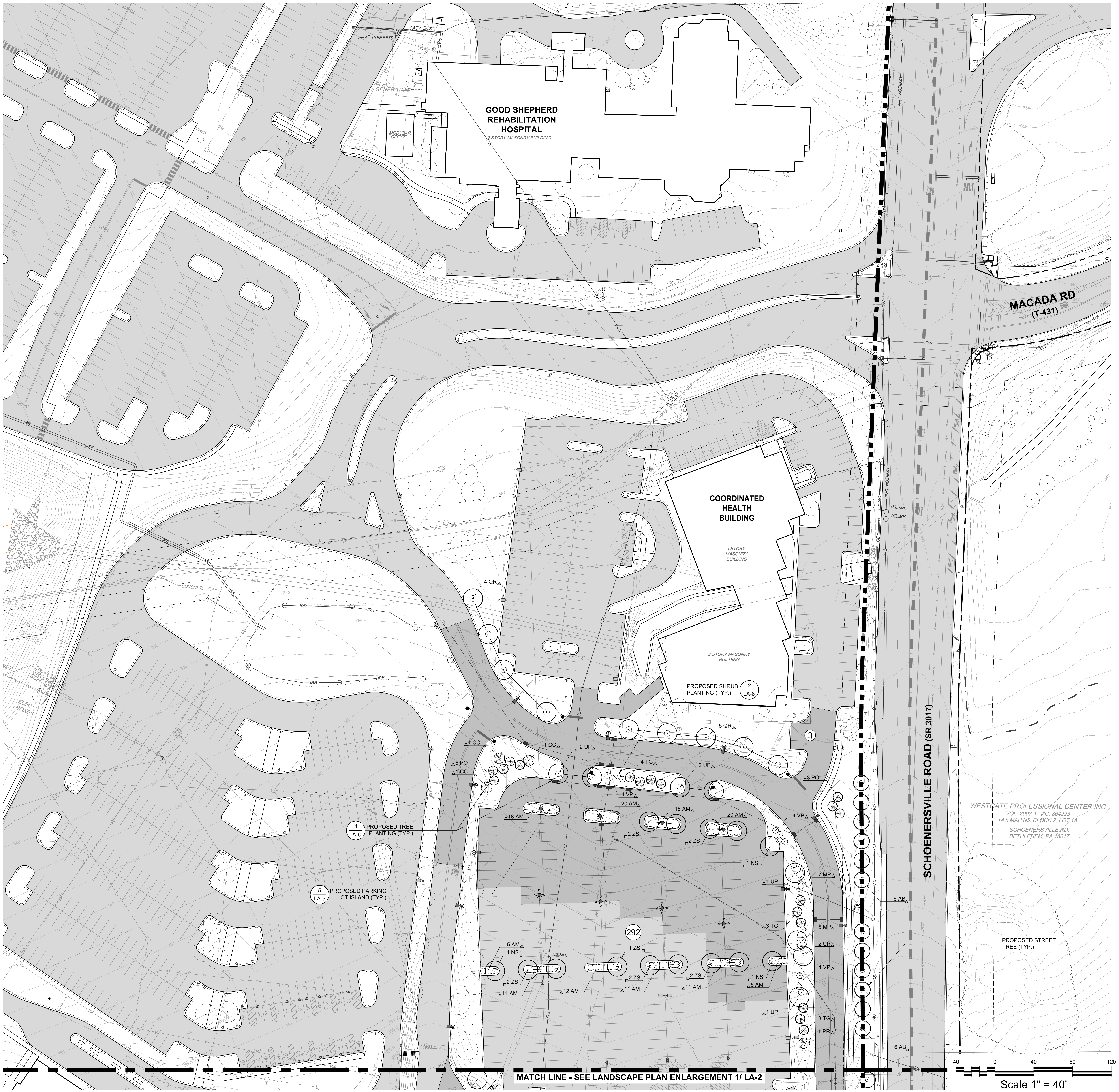
LEHIGH COUNTY
COMMONWEALTH OF
PENNSYLVANIA

LEHIGH VALLEY HEALTH NETWORK
MUHLENBERG
EMERGENCY DEPARTMENT EXPANSION
LANDSCAPE PLAN ENLARGEMENT 1

LA-2 OF 6

DATE : 9-6-24
SCALE : AS NOTED
DRAWN BY : BDC
JOB : 2435

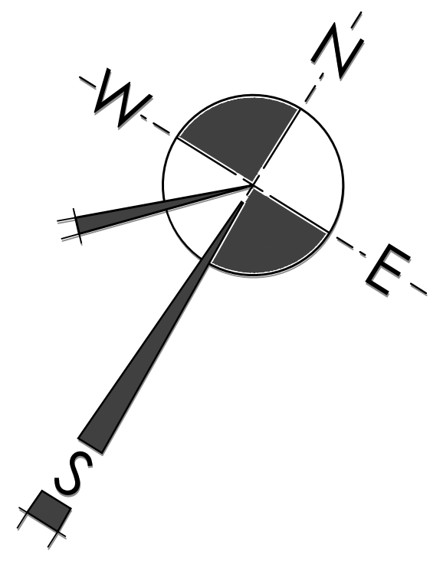

GOOD SHEPHERD REHABILITATION HOSPITAL
2 STORY MASONRY BUILDING
MODULAR OFFICE
ELEC. GENERATOR
CATV BOX
3-4" CONDUITS
COORDINATED HEALTH BUILDING
1 STORY MASONRY BUILDING
2 STORY MASONRY BUILDING
MACADA RD
(T-431)
SCHOENERSVILLE ROAD (SR 3017)
WESTGATE PROFESSIONAL CENTER INC
VOL. 2003-1, PG. 364223
TAX MAP N5, BLOCK 2, LOT 1A
SCHOENERSVILLE RD.
BETHLEHEM, PA 18017
CONCRETE SLAB
ELEC. BOXES
TEL.MH.
PROPOSED SHRUB PLANTING (TYP.) 2 LA-6
PROPOSED TREE PLANTING (TYP.) 1 LA-6
PROPOSED PARKING LOT ISLAND (TYP.) 5 LA-6
PROPOSED STREET TREE (TYP.)
4 QR
5 QR
1 CC
1 CC
5 PO
1 CC
2 UP
4 TG
2 UP
3 PO
4 VP
20 AM
18 AM
18 AM
20 AM
2 ZS
2 ZS
4 VP
1 NS
1 UP
7 MP
6 AB
3 TG
5 MP
2 UP
4 VP
5 AM
1 NS
2 ZS
11 AM
12 AM
1 ZS
2 ZS
11 AM
2 ZS
11 AM
1 NS
5 AM
1 UP
3 TG
1 PR
6 AB
292
3
MATCH LINE - SEE LANDSCAPE PLAN ENLARGEMENT 1/ LA-2

40 0 40 80 120

Scale 1" = 40'

SHEET INDEX:

- LA-1 - OVERALL LANDSCAPE PLAN
- LA-2 - LANDSCAPE PLAN ENLARGEMENT 1
- **LA-3 - LANDSCAPE PLAN ENLARGEMENT 2**
- LA-4 - LIGHTING PLAN ENLARGEMENT 1
- LA-5 - LIGHTING PLAN ENLARGEMENT 2
- LA-6 - DETAILS/ NOTES/ SCHEDULES



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LANDSCAPE LEGEND

EXISTING TREES	◌
PROPOSED EVERGREEN TREE	✹
PROPOSED DECIDUOUS TREE	○
PROPOSED SHRUBS	⊙ ⊕ ◎
QTY. 3 XX KEY SQUARE FOOT LANDSCAPE △ PARKING AREA TREES □ STREET TREES ○	PROPOSED PLANT LEADER TAGS
PROPOSED SITE LIGHT FIXTURE	●

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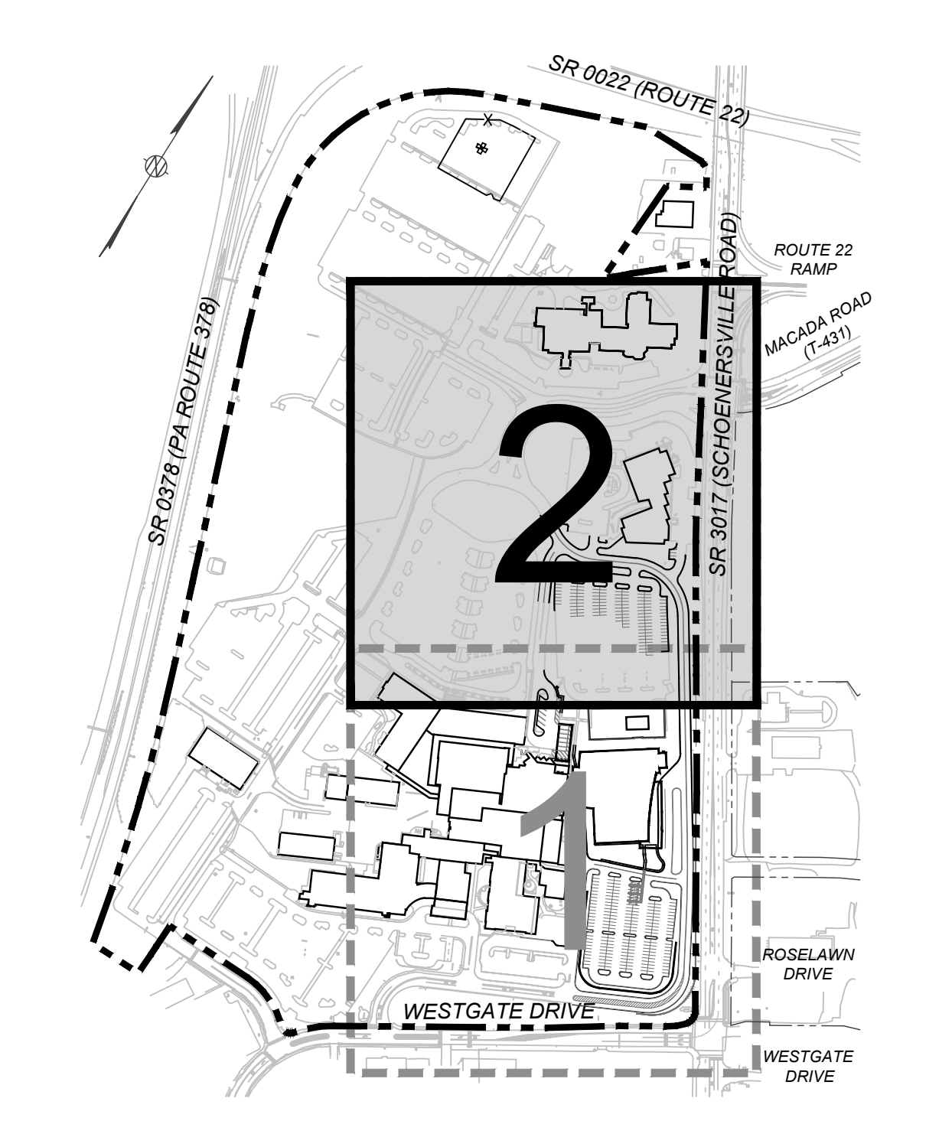
SR 0022 (ROUTE 22)
ROUTE 22 RAMP
MACADA ROAD (T-431)
SR 0378 (PA ROUTE 378)
SR 3017 (SCHOENERSVILLE ROAD)
2
ROSELAWN DRIVE
WESTGATE DRIVE
WESTGATE DRIVE

Lehigh Valley Health Network
MUHLENBERG

REVISION BLOCK

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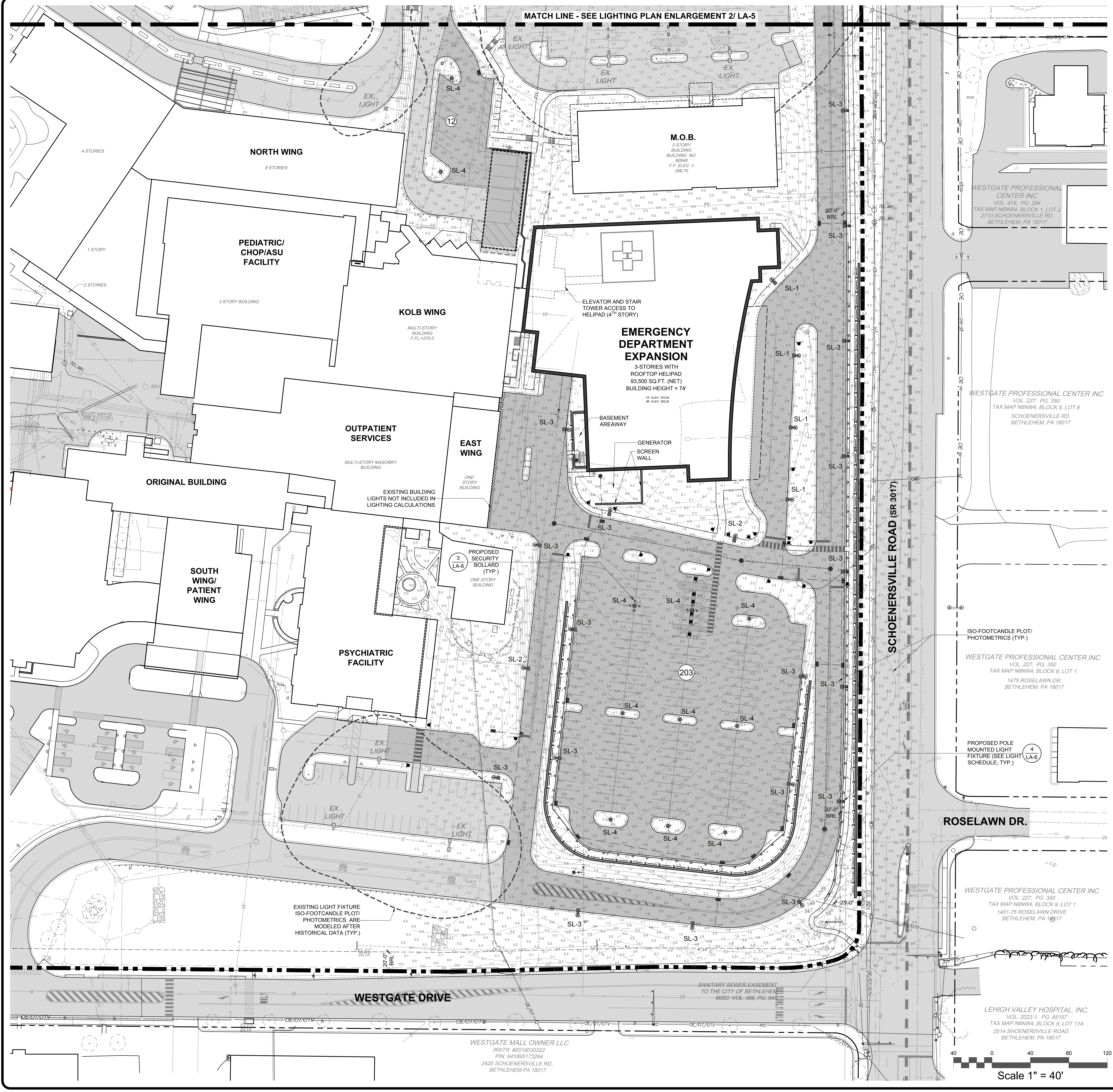
PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT
CHRISTIAN JEROME BROWN
Christian J. Brown

LOCATED IN:
CITY OF BETHLEHEM
LEHIGH COUNTY
COMMONWEALTH OF PENNSYLVANIA

LEHIGH VALLEY HEALTH NETWORK
MUHLENBERG
EMERGENCY DEPARTMENT EXPANSION
LANDSCAPE PLAN ENLARGEMENT 2

LA-3 OF 6

DATE : 9-6-24
SCALE : AS NOTED
DRAWN BY : BDC
JOB : 2435


MATCH LINE - SEE LIGHTING PLAN ENLARGEMENT 2/ LA-5
NORTH WING
8 STORIES
4 STORIES
M.O.B.
3 STORY BUILDING BUILDING NO. #2649 F.F. ELEV. = 358.70
PEDIATRIC/ CHOP/ASU FACILITY
1 STORY
2 STORIES
3 STORY BUILDING
KOLB WING
MULTI-STORY BUILDING F.FL.=370.0
EMERGENCY DEPARTMENT EXPANSION
3-STORIES WITH ROOFTOP HELIPAD
93,500 SQ.FT. (NET)
BUILDING HEIGHT = 74'
ELEVATOR AND STAIR TOWER ACCESS TO HELIPAD (4TH STORY)
BASEMENT AREAWAY
GENERATOR SCREEN WALL
OUTPATIENT SERVICES
MULTI-STORY MASONRY BUILDING
EAST WING
ONE-STORY BUILDING
ORIGINAL BUILDING
EXISTING BUILDING LIGHTS NOT INCLUDED IN LIGHTING CALCULATIONS
SOUTH WING/ PATIENT WING
PSYCHIATRIC FACILITY
PROPOSED SECURITY BOLLARD (TYP.)
3 LA-6
ONE-STORY BUILDING
EX. LIGHT
SL-1
SL-2
SL-3
SL-4
12
203
20'-0" BRL
25'-0"
SCHOENERSVILLE ROAD (SR 3017)
ROSELAWN DR.
WESTGATE DRIVE
ISO-FOOTCANDLE PLOT/ PHOTOMETRICS (TYP.)
PROPOSED POLE MOUNTED LIGHT FIXTURE (SEE LIGHT SCHEDULE; TYP.)
4 LA-6
EXISTING LIGHT FIXTURE ISO-FOOTCANDLE PLOT/ PHOTOMETRICS ARE MODELED AFTER HISTORICAL DATA (TYP.)
WESTGATE PROFESSIONAL CENTER INC VOL. 419, PG. 294 TAX MAP N6NW4, BLOCK 1, LOT 2 2710 SCHOENERSVILLE RD. BETHLEHEM, PA 18017
WESTGATE PROFESSIONAL CENTER INC VOL. 227, PG. 350 TAX MAP N6NW4, BLOCK 5, LOT 8 SCHOENERSVILLE RD. BETHLEHEM, PA 18017
WESTGATE PROFESSIONAL CENTER INC VOL. 227, PG. 350 TAX MAP N6NW4, BLOCK 6, LOT 1 1475 ROSELAWN DR. BETHLEHEM, PA 18017
WESTGATE PROFESSIONAL CENTER INC VOL. 227, PG. 350 TAX MAP N6NW4, BLOCK 9, LOT 1 1451-75 ROSELAWN DRIVE BETHLEHEM, PA 18017
LEHIGH VALLEY HOSPITAL, INC. VOL. 2023-1, PG. 85157 TAX MAP N6NW4, BLOCK 9, LOT 11A 2514 SHOENERSVILLE ROAD BETHLEHEM, PA 18017
WESTGATE MALL OWNER LLC INSTR. #2018030322 PIN: 641895173264 2425 SCHOENERSVILLE RD., BETHLEHEM PA 18017
SANITARY SEWER EASEMENT TO THE CITY OF BETHLEHEM MISC. VOL. 388, PG. 645
40 0 40 80 120
Scale 1" = 40'

SHEET INDEX:

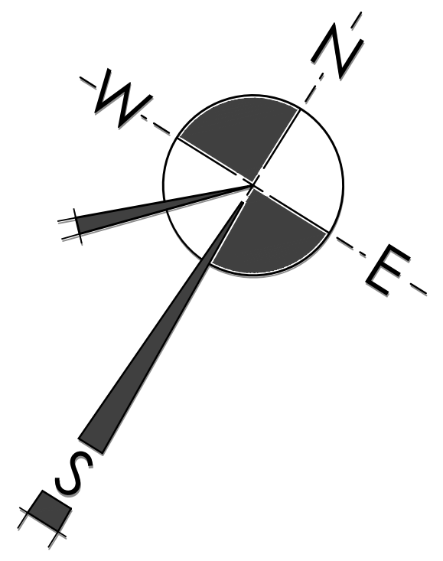
LA-1	- OVERALL LANDSCAPE PLAN
LA-2	- LANDSCAPE PLAN ENLARGEMENT 1
LA-3	- LANDSCAPE PLAN ENLARGEMENT 2
LA-4	**- LIGHTING PLAN ENLARGEMENT 1**
LA-5	- LIGHTING PLAN ENLARGEMENT 2
LA-6	- DETAILS/ NOTES/ SCHEDULES

A PHONE CALL
CAN BE YOUR INSURANCE POLICY

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

WHAT YOU DON'T KNOW CAN HURT YOU.

PENNSYLVANIA ACT 187 REQUIRES NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE COMMONWEALTH.



FOR REVIEW PURPOSES ONLY - NOT FOR CONSTRUCTION

NOTES:

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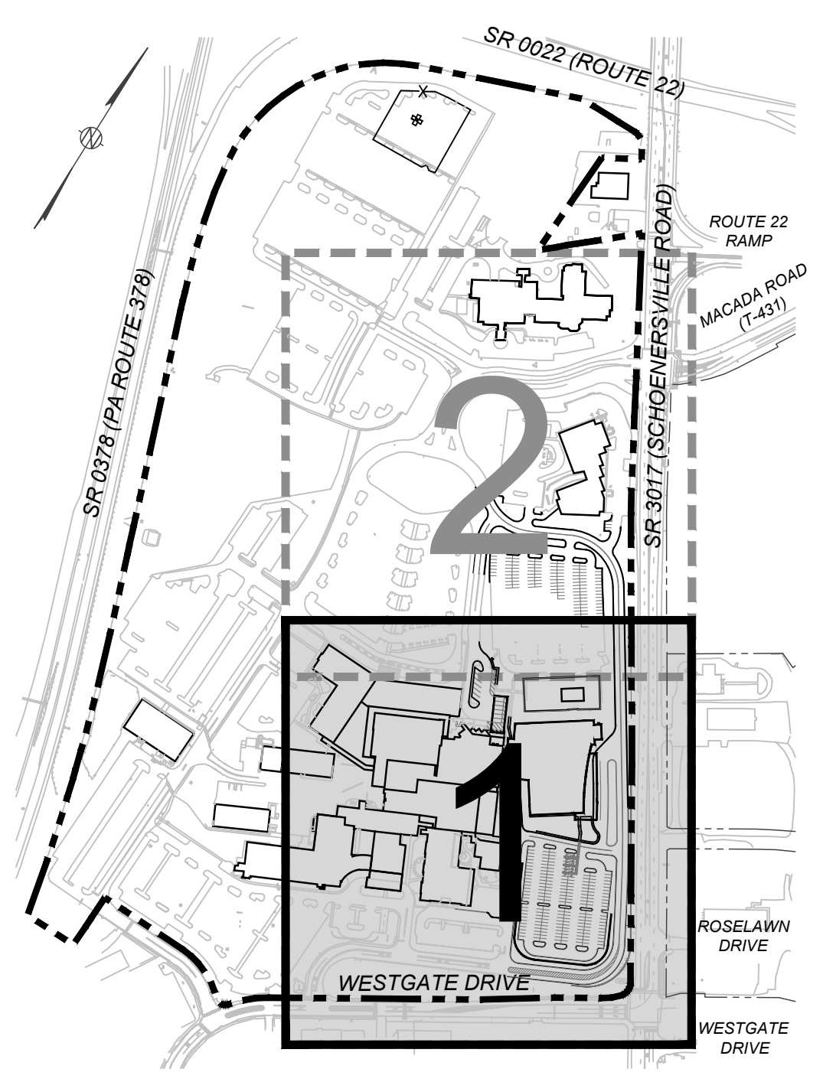
2.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SPACING AND OFFSET OF PROPOSED TREES FROM EXISTING AND PROPOSED UNDERGROUND UTILITIES NECESSARY AND/OR REQUIRED BY CURRENT CODE OR PUBLIC AND PRIVATE REGULATIONS.


SR 0022 (ROUTE 22)
ROUTE 22 RAMP
MACADA ROAD (T-431)
SR 0378 (PA ROUTE 378)
SR 3017 (SCHOENERSVILLE ROAD)
2
1
ROSELAWN DRIVE
WESTGATE DRIVE

Lehigh Valley Health Network
MUHLENBERG

REVISION BLOCK

REVISION DATE	DESCRIPTION	REVISION DATE	DESCRIPTION
1-9-25	PER CITY OF BETHLEHEM REVIEW LETTER DATED 10-23-24		

browndesigncorp
land architects and planners
347 north ninth street
old allentown pa. 18102
phone: 610.821.4252
www.browndesigncorp.com

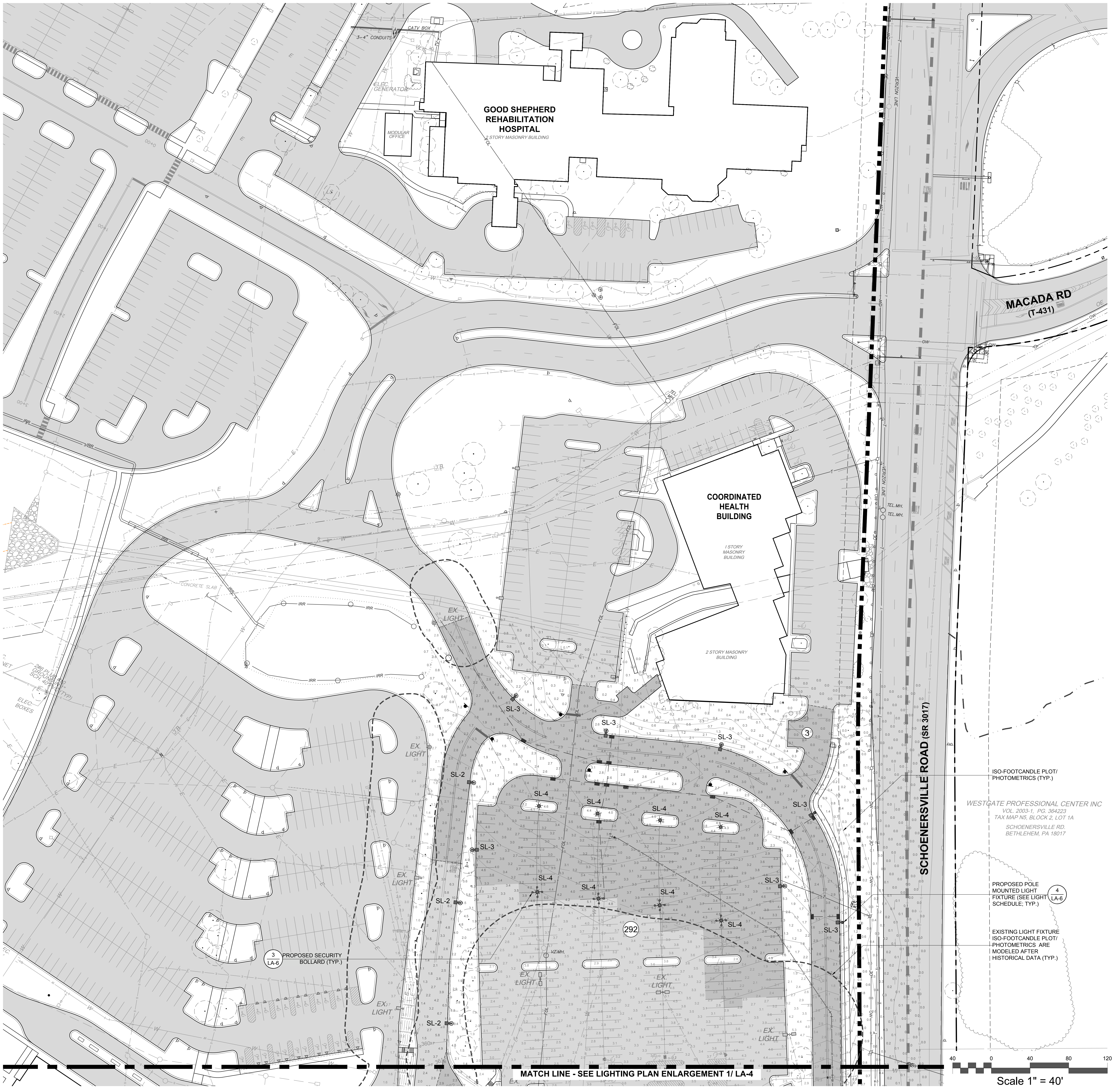
PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT CHRISTIAN JEROME BROWN
Christian J. Brown

LOCATED IN:
CITY OF BETHLEHEM
LEHIGH COUNTY
COMMONWEALTH OF PENNSYLVANIA

LEHIGH VALLEY HEALTH NETWORK
MUHLENBERG
EMERGENCY DEPARTMENT EXPANSION
LIGHTING PLAN ENLARGEMENT 1

LA-4 OF 6

DATE : 9-6-24
SCALE : AS NOTED
DRAWN BY : BDC
JOB : 2435


GOOD SHEPHERD REHABILITATION HOSPITAL
2 STORY MASONRY BUILDING
COORDINATED HEALTH BUILDING
1 STORY MASONRY BUILDING
2 STORY MASONRY BUILDING
MACADA RD (T-431)
SCHOENERSVILLE ROAD (SR 3017)
ELEC. GENERATOR
MODULAR OFFICE
CATV BOX
3-4" CONDUITS
CONCRETE SLAB
ELEC. BOXES
EX. LIGHT
SL-2
SL-3
SL-4
292
TEL.MH.
ONLY
MATCH LINE - SEE LIGHTING PLAN ENLARGEMENT 1/ LA-4
40 0 40 80 120
Scale 1" = 40'

ISO-FOOTCANDLE PLOT/ PHOTOMETRICS (TYP.)

WESTGATE PROFESSIONAL CENTER INC
VOL. 2003-1, PG. 364223
TAX MAP N5, BLOCK 2, LOT 1A
SCHOENERSVILLE RD.
BETHLEHEM, PA 18017

PROPOSED POLE MOUNTED LIGHT FIXTURE (SEE LIGHT SCHEDULE; TYP.) 4/LA-6

EXISTING LIGHT FIXTURE ISO-FOOTCANDLE PLOT/ PHOTOMETRICS ARE MODELED AFTER HISTORICAL DATA (TYP.)

3/LA-6 PROPOSED SECURITY BOLLARD (TYP.)

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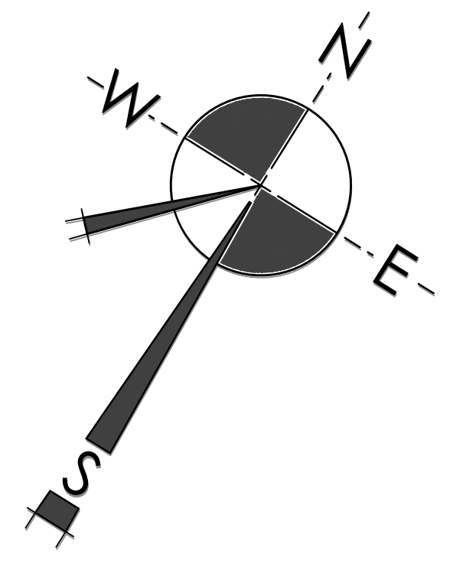

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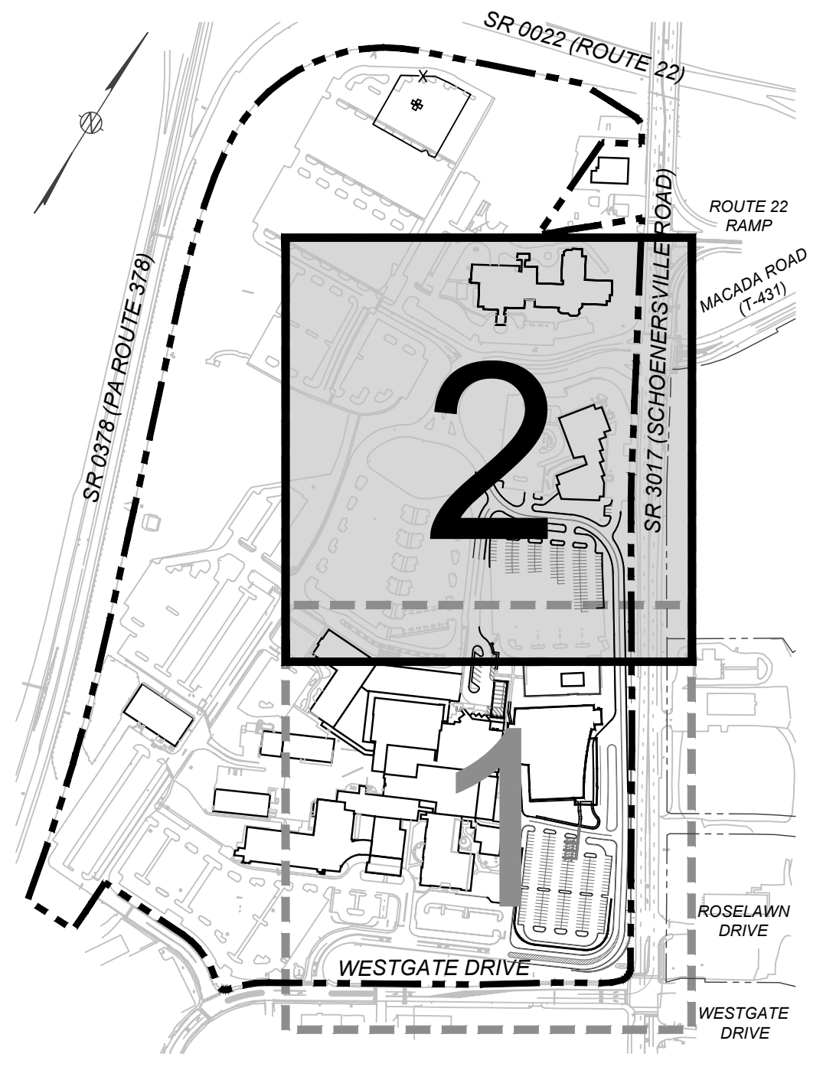
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CHRISTIAN JEROME BROWN
REGISTRATION NUMBER 001523-L

Christian J. Brown

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LEHIGH VALLEY HEALTH NETWORK
MUHLENBERG
EMERGENCY DEPARTMENT EXPANSION
LIGHTING PLAN ENLARGEMENT 2

LA-5 OF 6

DATE : 9-6-24
SCALE : AS NOTED
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PLANT SCHEDULE

STREET TREE SCHEDULE ○

DECIDUOUS TREES

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPEC.	NOTES
AB	12	Acer buergerianum	Trident Maple	Min. 2½" cal.	B&B	7' Clear branch ht.
CV	15	Crataegus viridis 'Winter King'	Winter King Hawthorn	Min. 2½" cal.	B&B	7' Clear branch ht.
QR	2	Quercus rubra	Northern Red Oak	Min. 2½" cal.	B&B	7' Clear branch ht.
ZC	15	Zelkova serrata 'JFS-KW1'	City Sprite Zelkova	Min. 2½" cal.	B&B	7' Clear branch ht.

REQUIRED TREES SHALL HAVE A MIN. HT. OF 10' ABOVE GRADE WHEN PLANTED AND CALIPER SHALL BE MEASURED 6" ABOVE GRADE

PARKING TREE SCHEDULE □

DECIDUOUS TREES

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPEC.	NOTES
NS	8	Nyssa sylvatica 'Green Gable'	Green Gable Tupelo	Min. 2½" cal.	B&B	7' Clear branch ht.
TC	14	Tilia cordata 'Halka'	Summer Sprite Linden	Min. 2½" cal.	B&B	7' Clear branch ht.
ZS	11	Zelkova serrata 'Halka'	Halka Zelkova	Min. 2½" cal.	B&B	7' Clear branch ht.

REQUIRED TREES SHALL HAVE A MIN. HT. OF 10' ABOVE GRADE WHEN PLANTED AND CALIPER SHALL BE MEASURED 6" ABOVE GRADE

SQUARE FOOT AREA LANDSCAPE SCHEDULE △

DECIDUOUS TREES

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPEC.	NOTES
CC	6	Cercis canadensis	Eastern Redbud	Min. 2½" cal.	B&B	
NS	10	Nyssa sylvatica 'Green Gable'	Green Gable Tupelo	Min. 2½" cal.	B&B	7' Clear branch ht.
PR	8	Prunus 'First Blush'	First Blush Cherry	Min. 2½" cal.	B&B	
QR	9	Quercus rubra	Northern Red Oak	Min. 2½" cal.	B&B	7' Clear branch ht.
TD	1	Taxodium distichum	Bald Cypress	Min. 2½" cal.	B&B	
UP	14	Ulmus parvifolia 'Emer II'	Allee Elm	Min. 2½" cal.	B&B	7' Clear branch ht.
ZS	9	Zelkova serrata 'Halka'	Halka Zelkova	Min. 2½" cal.	B&B	7' Clear branch ht.

REQUIRED TREES SHALL HAVE A MIN. HT. OF 10' ABOVE GRADE WHEN PLANTED AND CALIPER SHALL BE MEASURED 6" ABOVE GRADE

EVERGREEN TREES

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPEC.	NOTES
PO	19	Picea omorika	Serbian Spruce	Min. 6' ht.	B&B	
TG	13	Thuja 'Green Giant'	Green Giant Arborvitae	Min. 6' ht.	B&B	

SHRUBS

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPEC.	NOTES
HP	35	Hydrangea paniculata 'Quick Fire'	Quick Fire Hydrangea	Min. 3' ht.	Min. #5 Cont.	
IG	37	Ilex glabra 'Compacta'	Compact Inkberry	Min. 2' ht.	Min. #3 Cont.	
JK	55	Juniperus × pfitzeriana 'Kallay's Compact'	Kallay's Compact Juniper	Min. 2' ht.	Min. #3 Cont.	
MP	55	Myrica pensylvanica	Northern Bayberry	Min. 3' ht.	Min. #5 Cont.	
VP	63	Viburnum x pragense	Prague Viburnum	Min. 3' ht.	Min. #5 Cont.	

PERENNIALS/GROUNDCOVERS/GRASSES

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPEC.	NOTES
AM	355	Aronia melanocarpa 'Low Scape Mound'	Brilliant Red Chokeberry	clump	Min. #3 Cont.	
CA	100	Calamagrostis acutiflora 'Karl Foerster'	Foerster's Feather Reed Grass	clump	Min. #1 Cont.	
CD	97	Cotoneaster dammeri 'Coral Beauty'	Coral Beauty Cotoneaster	clump	Min. #1 Cont.	
HE	168	Hemerocallis 'Stella D'Oro'	Stella D'Oro Daylily	clump	Min. #1 Cont.	
JC	71	Juniperus chinensis var. sargentii	Sargent's Juniper	clump	Min. #1 Cont.	

GENERAL PLANTING NOTES:

1. The contractor must verify location and depth of all underground utilities and facilities prior to beginning construction. Call Pennsylvania One Call 1-800-242-1776.
2. The contractor shall layout and review all plant material and plant locations with landscape architect or owner prior to installation.
3. All plantings shall be located to avoid placement within swale centerlines.
4. All evergreen tree/shrub groupings and hedges shall be completely encompassed within one large mulch bed at each plant grouping location. Breaks in the mulch beds shall only occur as indicated on the plans.
5. All plants shall be in accordance with the American Standard for Nursery Stock, latest edition.
6. Substitutions: When plants of a specified type or size are not available within a reasonable distance, the contractor may make substitutions upon request, and only if approved by the landscape architect, owner or his representative. The contractor shall notify the landscape architect in writing of any plant materials, which he feels, will not be available, prior to submitting a bid on this project. If a bid is received without such qualification, it will be assumed no such substitutions will be proposed.
7. Field conditions may dictate minor adjustments to the location of plant material. Before major adjustments of plant locations occur, the contractor shall notify the owner or the landscape architect.
8. Plants with broken or loose root balls, damage to the crown, or cut leaders shall be rejected.
9. Trees in leaf when planted shall be treated with anti-desiccant such as wilt-proof.
10. The contractor is responsible for any adjustments to soil pH, fertility, and/or drainage conditions necessary to ensure proper growing conditions for proposed plantings. Planting soil for trees, shrubs and groundcover shall be amended as directed by an independent soil test analysis of the existing soil prior to planting. Test results shall be submitted to the landscape architect.
11. Before mixing, clean topsoil of roots, vegetation, stones, clay lumps, and other extraneous materials harmful to plant growth.
12. Planting beds shall be edged with a power blade edge r or hand spade at time of planting. All completed edges shall have a perpendicular appearance between turf and bedlines. Any angels or beveled appearance is unacceptable. (Weed eaters shall not be used in edging).
    Contractor is responsible for re-edging and re-mulching beds in new lawn area after substantial turf establishment.
13. The contractor shall apply a pre-emergent weed preventative, Treflan (or approved equal), to topsoil prior to mulching activities.
14. Mulch for trees and shrubs shall be double shredded, hardwood bark mulch; dark brown in color; aged at least one year, and clean and free of weeds.
15. The contractor will be responsible for the permanent lawn establishment of all non-paved areas disturbed by construction activities.
    PERMANENT LAWN SEED MIX:
    40%-Kentucky Bluegrass 40%-Chewings Fescue 20%-Perennial Ryegrass
    %= equals proportion by weight; * apply at a rate of 4 lbs/1,000 S.F.
    The contractor shall perform a soil test of the existing topsoil for proper lime and fertilizer application. Permanent lawn establishment shall include fine grading of topsoil, removal of all rocks and debris larger than 1" in any direction, seeding, fertilizer and mulch.
16. The contractor is responsible for watering and maintaining all newly planted plantings for a period of thirty (30) days after planting; sixty (60) days for newly seeded lawns (includes mowing). A water source is available on site.
17. All required plantings shall be guaranteed for a period of twelve (12) months from the date of final acceptance and shall be alive and healthy as determined by the landscape architect, owner or owner's representative at the end of the guaranteed period. Should a disagreement arise as to whether the planting is alive and healthy, a qualified nurseryman may be retained by the Project Owner to make a final determination.
18. The contractor shall promptly correct or replace all defective work without any additional cost to the owner, which may occur within one (1) year after the date of final acceptance by the landscape architect and the owner. The contractor will be responsible for a maximum of one replacement planting for each newly installed planting, unless the reason for the plants unhealthy growth is due to the method of planting by the contractor.
19. Plant material to be relocated must be moved in accordance with the specifications set forth by the American Association of Nurserymen.
20. **Per the City of Bethlehem:** Street and parking lot trees should be a minimum of 14' in height and have a single straight trunk with the first lateral branch at 7' above the root ball. Trees with an upright branching habit, such as Zelkova, may have the first lateral branch at 6' above the root ball.
21. **Per the City of Bethlehem:** All landscaping shall conform to the current edition of the Arboricultural Specifications and Standards of Practice of the City of Bethlehem.
22. **Per the City of Bethlehem:** A root control system is required when installing street trees. The root barrier shall be of the bio-barrier type and a minimum of eighteen (18") inches wide. Any substitution shall be approved by the City Forester. The root-control system is to be installed per manufacturer's recommendations. Tree openings in the sidewalk shall have the bio-barrier installed along the face of the tree opening which is parallel to the street and closest to the property line, overlapping the nearest two corners by approximately four (4") inches. Where trees are to be planted in a parkway or planting strip between curb and sidewalk, the barrier shall be installed along the sidewalk edge closest to the curb and centered on the root source. The length of the barrier shall be a minimum length equal to the spread of the tree canopy at maturity plus ten (10') feet.

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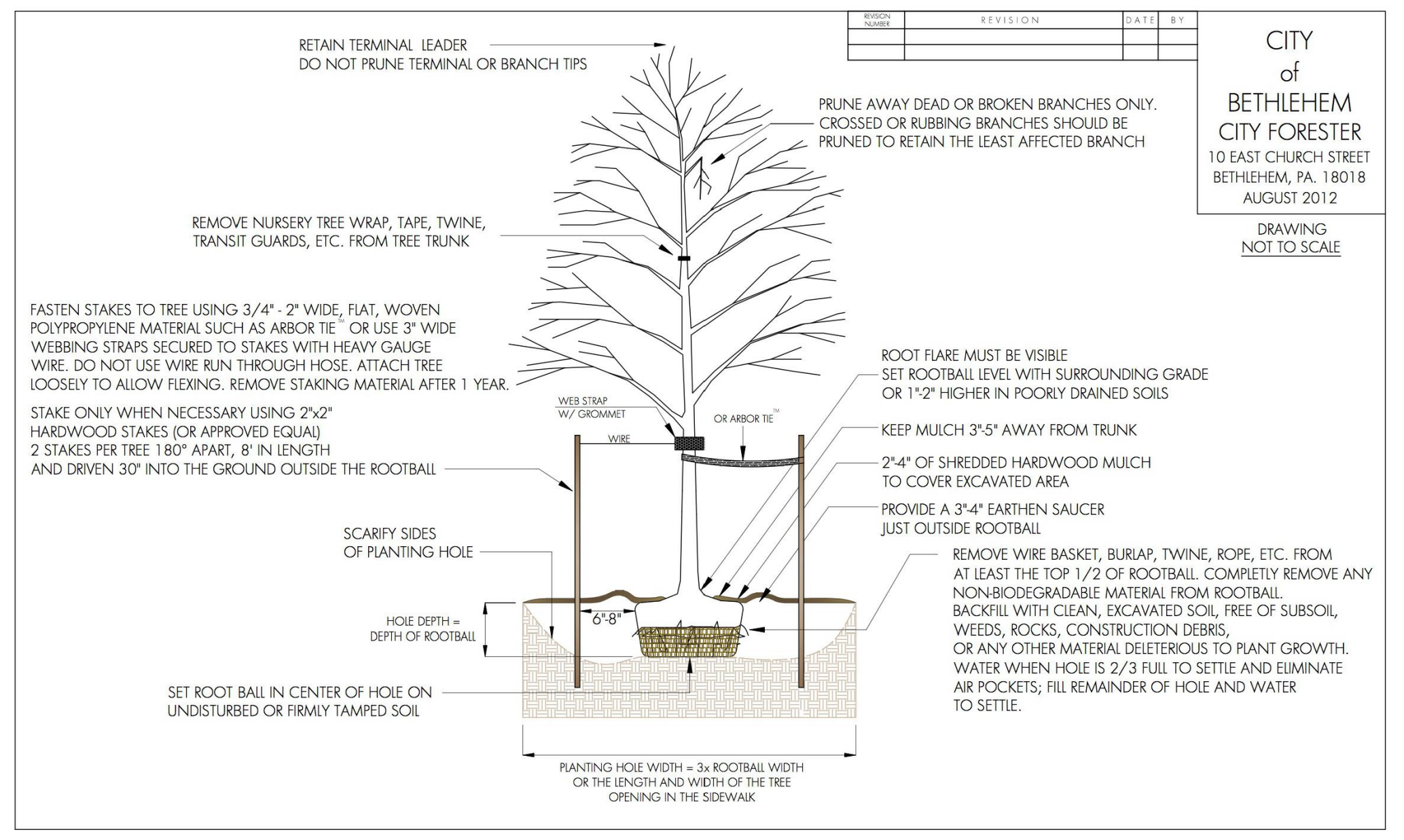
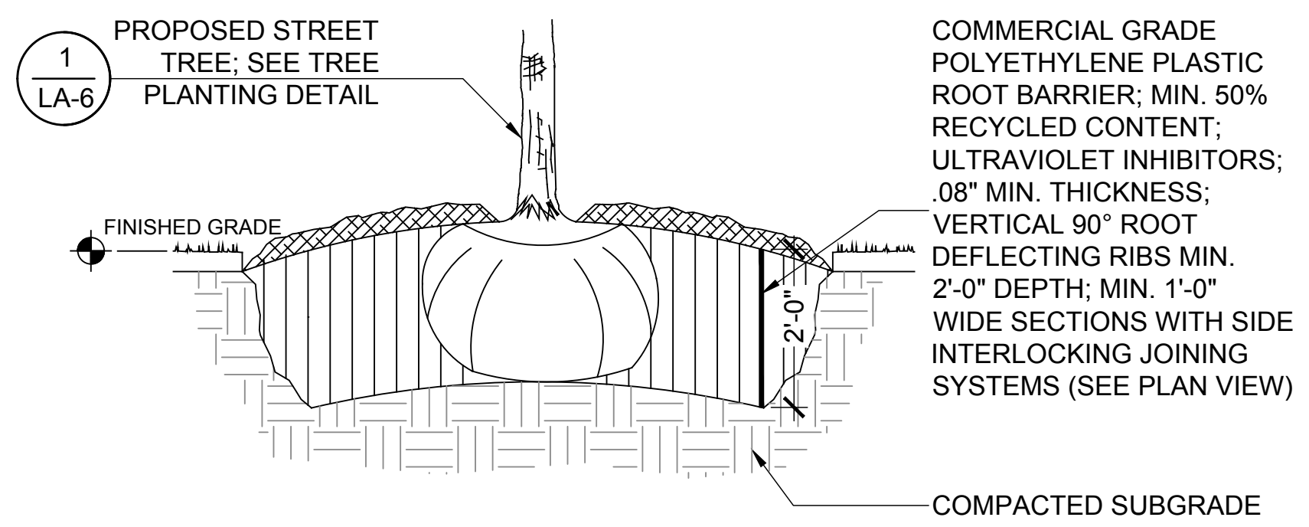

RETAIN TERMINAL LEADER
DO NOT PRUNE TERMINAL OR BRANCH TIPS
PRUNE AWAY DEAD OR BROKEN BRANCHES ONLY. CROSSED OR RUBBING BRANCHES SHOULD BE PRUNED TO RETAIN THE LEAST AFFECTED BRANCH
REMOVE NURSERY TREE WRAP, TAPE, TWINE, TRANSIT GUARDS, ETC. FROM TREE TRUNK
FASTEN STAKES TO TREE USING 3/4" - 2" WIDE, FLAT, WOVEN POLYPROPYLENE MATERIAL SUCH AS ARBOR TIE™ OR USE 3" WIDE WEBBING STRAPS SECURED TO STAKES WITH HEAVY GAUGE WIRE. DO NOT USE WIRE RUN THROUGH HOSE. ATTACH TREE LOOSELY TO ALLOW FLEXING. REMOVE STAKING MATERIAL AFTER 1 YEAR.
STAKE ONLY WHEN NECESSARY USING 2"x2" HARDWOOD STAKES (OR APPROVED EQUAL) 2 STAKES PER TREE 180° APART, 8' IN LENGTH AND DRIVEN 30" INTO THE GROUND OUTSIDE THE ROOTBALL
WEB STRAP W/ GROMMET
WIRE
OR ARBOR TIE™
ROOT FLARE MUST BE VISIBLE SET ROOTBALL LEVEL WITH SURROUNDING GRADE OR 1"-2" HIGHER IN POORLY DRAINED SOILS
KEEP MULCH 3"-5" AWAY FROM TRUNK
2"-4" OF SHREDDED HARDWOOD MULCH TO COVER EXCAVATED AREA
PROVIDE A 3"-4" EARTHEN SAUCER JUST OUTSIDE ROOTBALL
SCARIFY SIDES OF PLANTING HOLE
REMOVE WIRE BASKET, BURLAP, TWINE, ROPE, ETC. FROM AT LEAST THE TOP 1/2 OF ROOTBALL. COMPLETLY REMOVE ANY NON-BIODEGRADABLE MATERIAL FROM ROOTBALL. BACKFILL WITH CLEAN, EXCAVATED SOIL, FREE OF SUBSOIL, WEEDS, ROCKS, CONSTRUCTION DEBRIS, OR ANY OTHER MATERIAL DELETERIOUS TO PLANT GROWTH. WATER WHEN HOLE IS 2/3 FULL TO SETTLE AND ELIMINATE AIR POCKETS; FILL REMAINDER OF HOLE AND WATER TO SETTLE.
HOLE DEPTH = DEPTH OF ROOTBALL
6"-8"
SET ROOT BALL IN CENTER OF HOLE ON UNDISTURBED OR FIRMLY TAMPED SOIL
PLANTING HOLE WIDTH = 3x ROOTBALL WIDTH OR THE LENGTH AND WIDTH OF THE TREE OPENING IN THE SIDEWALK
REVISION NUMBER
REVISION
DATE
BY
CITY of BETHLEHEM CITY FORESTER
10 EAST CHURCH STREET
BETHLEHEM, PA. 18018
AUGUST 2012
DRAWING NOT TO SCALE

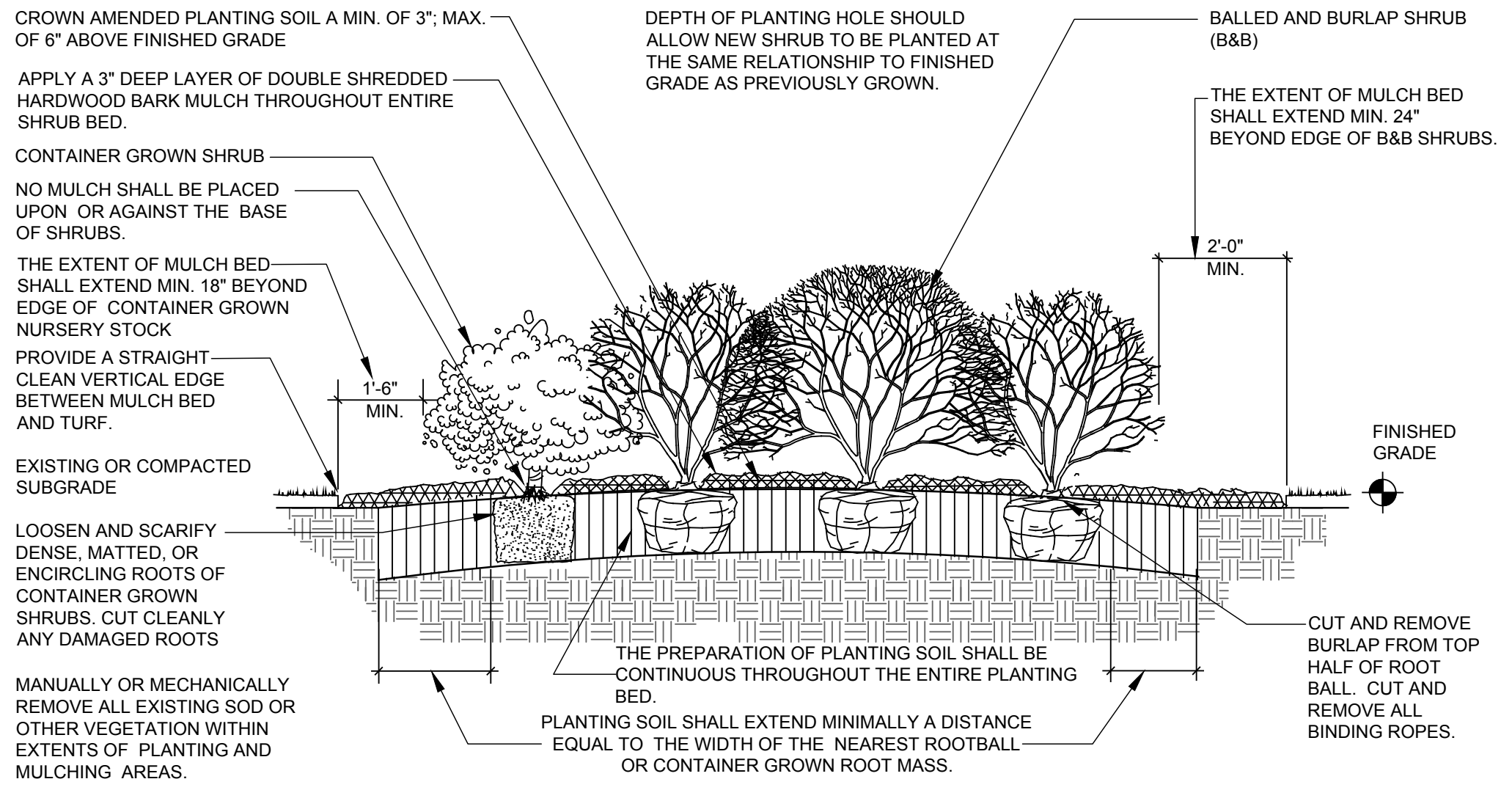
1 TREE PLANTING

NOT TO SCALE


1
LA-6
PROPOSED STREET TREE; SEE TREE PLANTING DETAIL
FINISHED GRADE
2'-0"
COMMERCIAL GRADE POLYETHYLENE PLASTIC ROOT BARRIER; MIN. 50% RECYCLED CONTENT; ULTRAVIOLET INHIBITORS; .08" MIN. THICKNESS; VERTICAL 90° ROOT DEFLECTING RIBS MIN. 2'-0" DEPTH; MIN. 1'-0" WIDE SECTIONS WITH SIDE INTERLOCKING JOINING SYSTEMS (SEE PLAN VIEW)
COMPACTED SUBGRADE

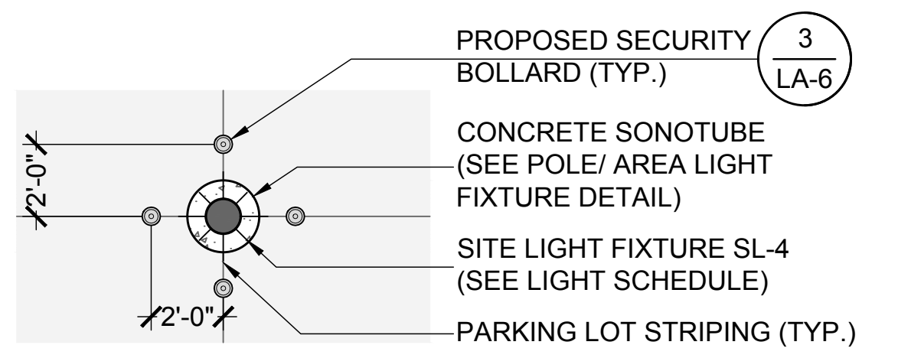
ROOT BARRIER DETAIL

NOT TO SCALE

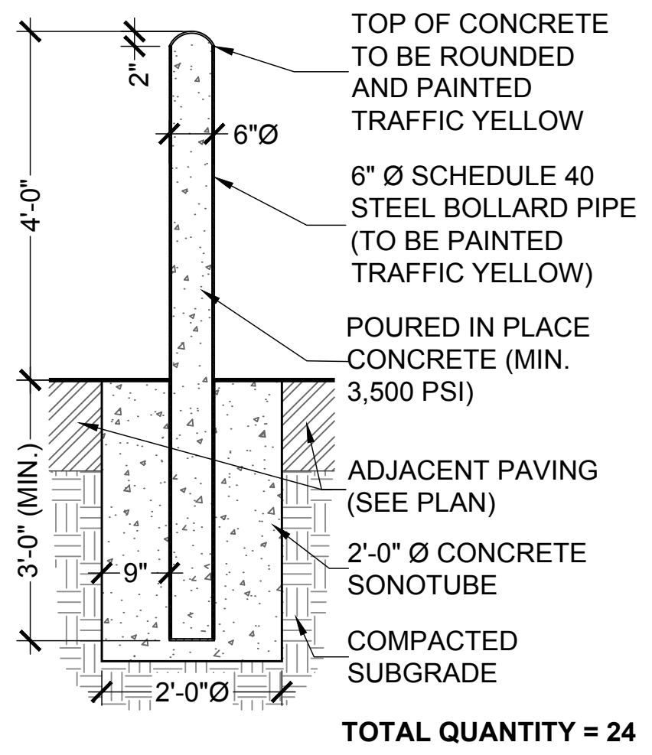

CROWN AMENDED PLANTING SOIL A MIN. OF 3"; MAX. OF 6" ABOVE FINISHED GRADE
APPLY A 3" DEEP LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH THROUGHOUT ENTIRE SHRUB BED.
CONTAINER GROWN SHRUB
NO MULCH SHALL BE PLACED UPON OR AGAINST THE BASE OF SHRUBS.
THE EXTENT OF MULCH BED SHALL EXTEND MIN. 18" BEYOND EDGE OF CONTAINER GROWN NURSERY STOCK
PROVIDE A STRAIGHT CLEAN VERTICAL EDGE BETWEEN MULCH BED AND TURF.
1'-6" MIN.
EXISTING OR COMPACTED SUBGRADE
LOOSEN AND SCARIFY DENSE, MATTED, OR ENCIRCLING ROOTS OF CONTAINER GROWN SHRUBS. CUT CLEANLY ANY DAMAGED ROOTS
MANUALLY OR MECHANICALLY REMOVE ALL EXISTING SOD OR OTHER VEGETATION WITHIN EXTENTS OF PLANTING AND MULCHING AREAS.
DEPTH OF PLANTING HOLE SHOULD ALLOW NEW SHRUB TO BE PLANTED AT THE SAME RELATIONSHIP TO FINISHED GRADE AS PREVIOUSLY GROWN.
BALLED AND BURLAP SHRUB (B&B)
THE EXTENT OF MULCH BED SHALL EXTEND MIN. 24" BEYOND EDGE OF B&B SHRUBS.
2'-0" MIN.
FINISHED GRADE
THE PREPARATION OF PLANTING SOIL SHALL BE CONTINUOUS THROUGHOUT THE ENTIRE PLANTING BED.
PLANTING SOIL SHALL EXTEND MINIMALLY A DISTANCE EQUAL TO THE WIDTH OF THE NEAREST ROOTBALL OR CONTAINER GROWN ROOT MASS.
CUT AND REMOVE BURLAP FROM TOP HALF OF ROOT BALL. CUT AND REMOVE ALL BINDING ROPES.

2 SHRUB PLANTING

NOT TO SCALE


PROPOSED SECURITY BOLLARD (TYP.)
3
LA-6
2'-0"
2'-0"
CONCRETE SONOTUBE (SEE POLE/ AREA LIGHT FIXTURE DETAIL)
SITE LIGHT FIXTURE SL-4 (SEE LIGHT SCHEDULE)
PARKING LOT STRIPING (TYP.)

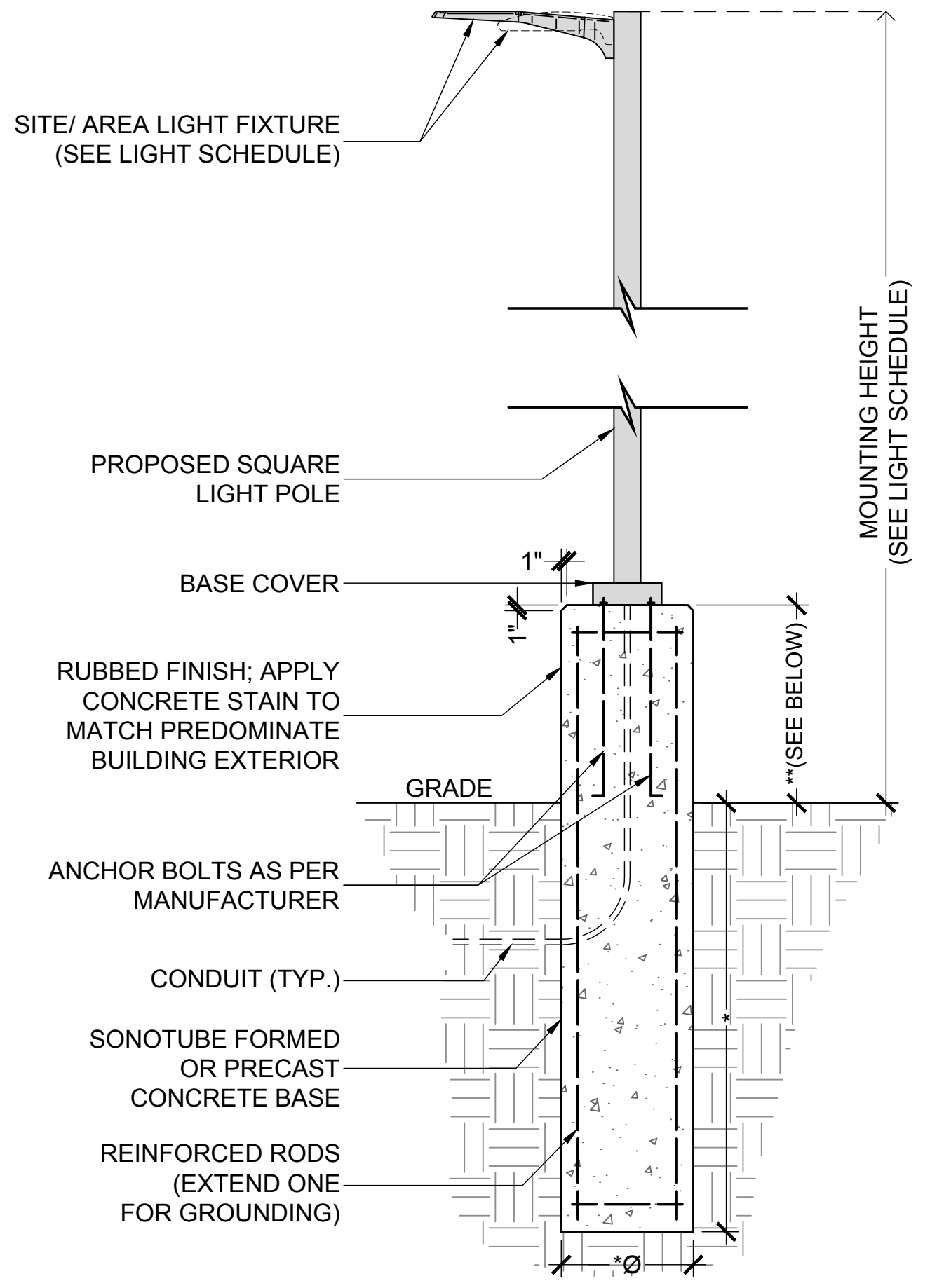
STEEL SECURITY BOLLARD/
SITE LIGHT ENLARGEMENT


2"
6"Ø
4'-0"
3'-0" (MIN.)
9"
2'-0"Ø
TOP OF CONCRETE TO BE ROUNDED AND PAINTED TRAFFIC YELLOW
6" Ø SCHEDULE 40 STEEL BOLLARD PIPE (TO BE PAINTED TRAFFIC YELLOW)
POURED IN PLACE CONCRETE (MIN. 3,500 PSI)
ADJACENT PAVING (SEE PLAN)
2'-0" Ø CONCRETE SONOTUBE
COMPACTED SUBGRADE

TOTAL QUANTITY = 24

3 SECURITY BOLLARD

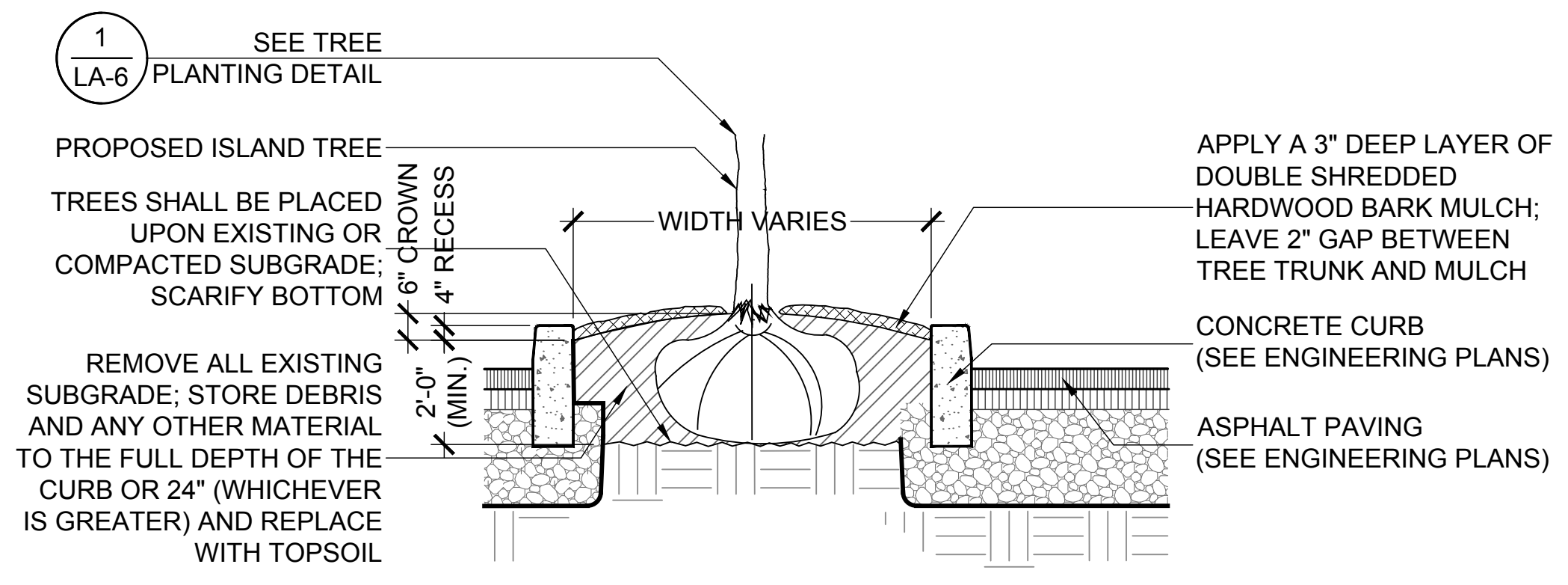
NOT TO SCALE


SITE/ AREA LIGHT FIXTURE (SEE LIGHT SCHEDULE)
PROPOSED SQUARE LIGHT POLE
MOUNTING HEIGHT (SEE LIGHT SCHEDULE)
BASE COVER
1"
1"
RUBBED FINISH; APPLY CONCRETE STAIN TO MATCH PREDOMINATE BUILDING EXTERIOR
GRADE
**(SEE BELOW)
ANCHOR BOLTS AS PER MANUFACTURER
CONDUIT (TYP.)
SONOTUBE FORMED OR PRECAST CONCRETE BASE
REINFORCED RODS (EXTEND ONE FOR GROUNDING)
*
*Ø

* CONCRETE BASE & REINFORCEMENT SUBJECT TO DESIGN BY STRUCTURAL ENGINEER.
** 6" HEIGHT FOR ALL SL-1 LIGHT FIXTURES.
3'-0" HEIGHT FOR ALL SL-2, SL-3, & SL-4 LIGHT FIXTURES.

4 POLE/ AREA LIGHT FIXTURE

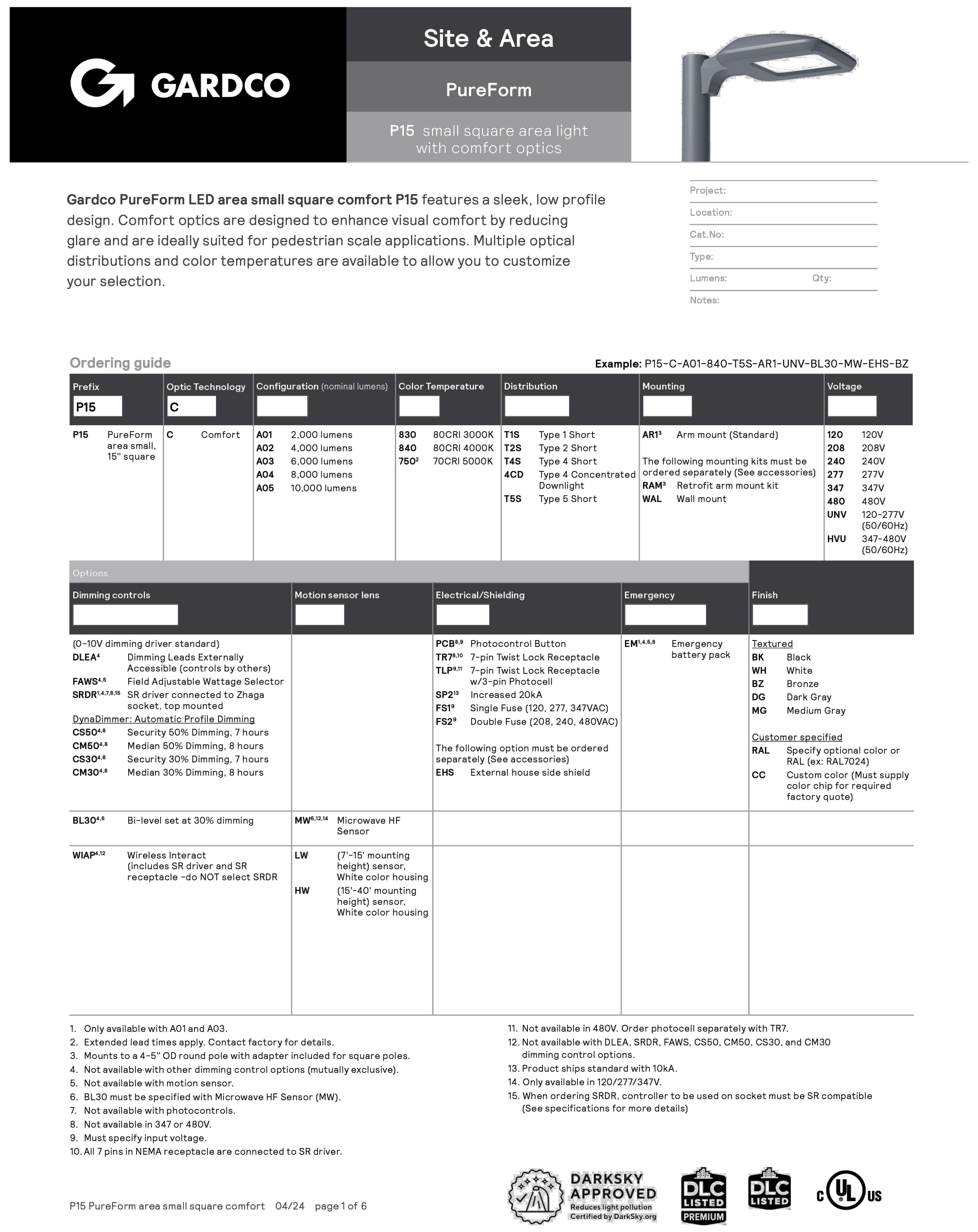
NOT TO SCALE


1
LA-6
SEE TREE PLANTING DETAIL
PROPOSED ISLAND TREE
TREES SHALL BE PLACED UPON EXISTING OR COMPACTED SUBGRADE; SCARIFY BOTTOM
6" CROWN
4" RECESS
2'-0" (MIN.)
WIDTH VARIES
REMOVE ALL EXISTING SUBGRADE; STORE DEBRIS AND ANY OTHER MATERIAL TO THE FULL DEPTH OF THE CURB OR 24" (WHICHEVER IS GREATER) AND REPLACE WITH TOPSOIL
APPLY A 3" DEEP LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH; LEAVE 2" GAP BETWEEN TREE TRUNK AND MULCH
CONCRETE CURB (SEE ENGINEERING PLANS)
ASPHALT PAVING (SEE ENGINEERING PLANS)

NOTE: LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE PLANTING ISLAND DETAIL WITH THE SITE CONTRACTOR OR CONSTRUCTION MANAGER, PRIOR TO PLANTING, TO CO-ORDINATE THE PLACEMENT AND PROPER GRADE OF TOPSOIL IN PLANTING ISLANDS.

5 PARKING LOT ISLAND DETAIL

NOT TO SCALE



GARDCO

Site & Area

PureForm

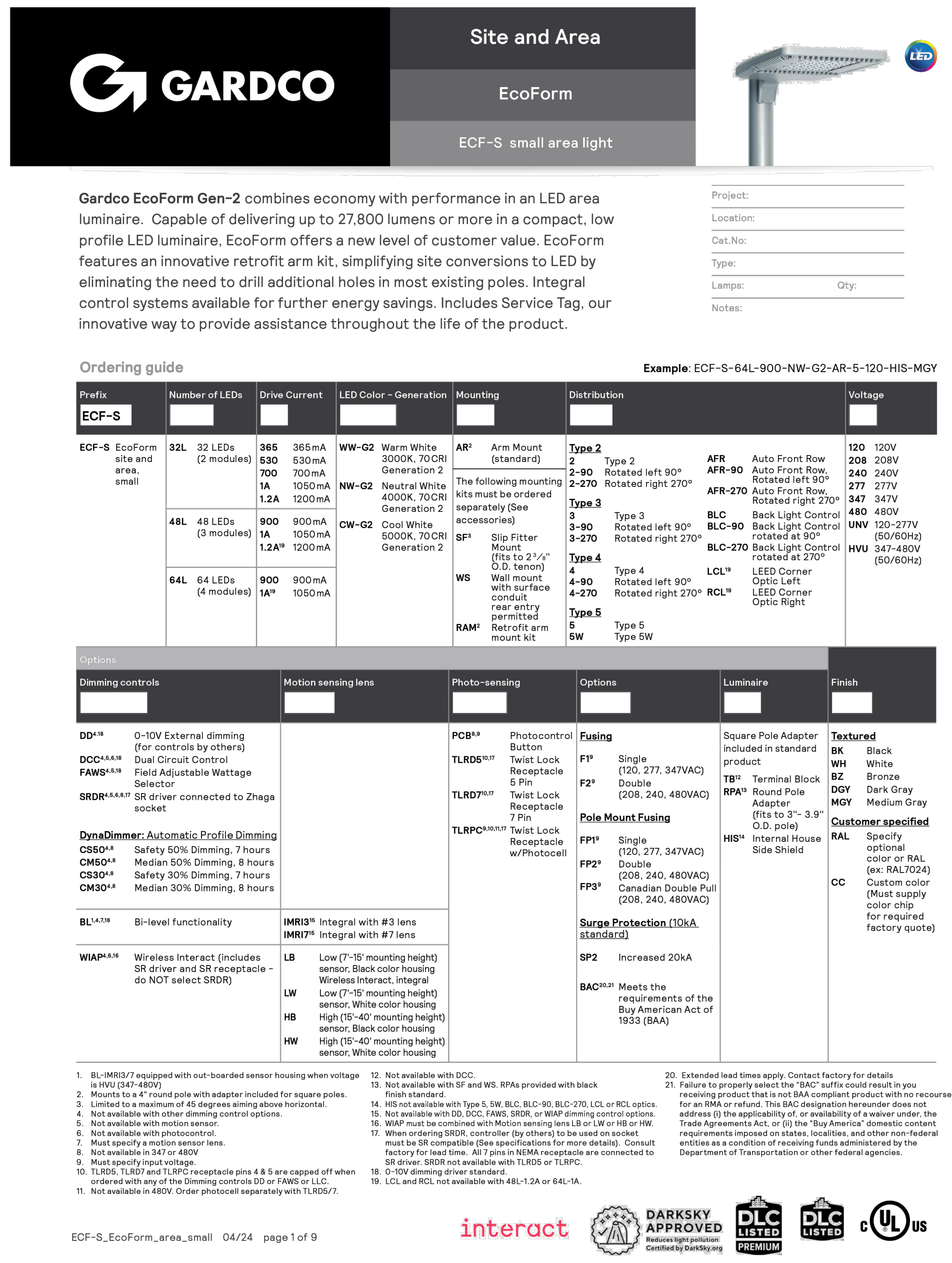
P15 small square area light with comfort options

Gardco PureForm LED area small square comfort P15 features a sleek, low profile design. Comfort optics are designed to enhance visual comfort by reducing glare and are ideally suited for pedestrian scale applications. Multiple optical distributions and color temperatures are available to allow you to customize your selection.

Ordering guide

Example: P15-C-A01-840-T5S-AR1-UNV-BL30-MW-EHS-BZ

P15 PureForm area small square comfort 04/24 page 1 of 6



GARDCO

Site and Area

EcoForm

ECF-S small area light

Gardco EcoForm Gen-2 combines economy with performance in an LED area luminaire. Capable of delivering up to 27,800 lumens or more in a compact, low profile LED luminaire, EcoForm offers a new level of customer value. EcoForm features an innovative retrofit arm kit, simplifying site conversions to LED by eliminating the need to drill additional holes in existing poles. Integral control systems enable further energy savings. Includes Service Tag, our innovative way to get support for the life of the product.

Ordering guide

Example: ECF-S-64L-900-NW-G2-AR-5-120-HIS-MGY

ECF-S_EcoForm_area_small 04/24 page 1 of 9

Luminaire Schedule - Site Lighting

Symbol	Qty	Label	Arrangement	Description	Mounting Height	Tilt
■⊖	4	SL-1	SINGLE	**MANUFACTURER:** GARDCO **MODEL #:** P15-C-A05-840-T4S-AR1^3-FINISH TBD **POLE W/ BASE:** SQUARE POST; FINAL SELECTION TBD	15'-0"	N/A
■⊖	5	SL-2	SINGLE	**MANUFACTURER:** GARDCO **MODEL #:** ECF-S-48L-900-NW-G2-AR^2-2-FINISH TBD **POLE W/ BASE:** SQUARE POST; FINAL SELECTION TBD	20'-0"	N/A
■⊖	25	SL-3	SINGLE	**MANUFACTURER:** GARDCO **MODEL #:** ECF-S-48L-900-NW-G2-AR^2-3-FINISH TBD **POLE W/ BASE:** SQUARE POST; FINAL SELECTION TBD	20'-0"	N/A
✹	19	SL-4	SINGLE	**MANUFACTURER:** GARDCO **MODEL #:** ECF-S-48L-900-NW-G2-AR^2-5-FINISH TBD **POLE W/ BASE:** SQUARE POST; FINAL SELECTION TBD	20'-0"	N/A

** REFER TO POLE/ AREA LIGHT FIXTURE DETAIL FOR POLE HEIGHT COORDINATION.

LIGHTING NOTES

1. Contractor shall supply all ballasts, lamps, poles, mounting accessories and hardware necessary for proper installation andoperation of the fixture.
2. Provide dimming capabilities to comply w/ latest codes and requirements.
3. All light standards shall be installed a minimum of 48" off edge of pavement to face of concrete base.
4. Color/finish of fixtures to be determined; contractor shall submit color samples for all light fixtures as part of submittal process.

NOTES:
1.) THIS PLAN IS FOR LANDSCAPE & LIGHTING PURPOSES ONLY. REFER TO ENGINEER'S PLANS FOR ALL OTHER PROJECT RELATEDINFORMATION.
2.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SPACING AND OFFSET OF PROPOSED TREES FROM EXISTING AND PROPOSED UNDERGROUND UTILITIES NECESSARY AND/OR REQUIRED BY CURRENT CODE OR PUBLIC AND PRIVATE REGULATIONS.

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Lehigh Valley Health Network
MUHLENBERG

FOR REVIEW PURPOSES ONLY - NOT FOR CONSTRUCTION

REVISION BLOCK

REVISION DATE	DESCRIPTION	REVISION DATE	DESCRIPTION
1-9-25	PER CITY OF BETHLEHEM REVIEW LETTER DATED 10-23-24		

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land architects and planners
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old allentown pa, 18102
phone: 610.821.4252
www.browndesigncorp.com

Christian Jerome Brown
Registration Number 001523-L

Christian J. Brown

LOCATED IN:
CITY OF BETHLEHEM
LEHIGH COUNTY
COMMONWEALTH OF
PENNSYLVANIA

LEHIGH VALLEY HEALTH NETWORK
MUHLENBERG
EMERGENCY DEPARTMENT EXPANSION
DETAILS/ NOTES/ SCHEDULES

LA-6 OF 6

DATE : 9-6-24
SCALE : AS NOTED
DRAWN BY : BDC
JOB : 2435