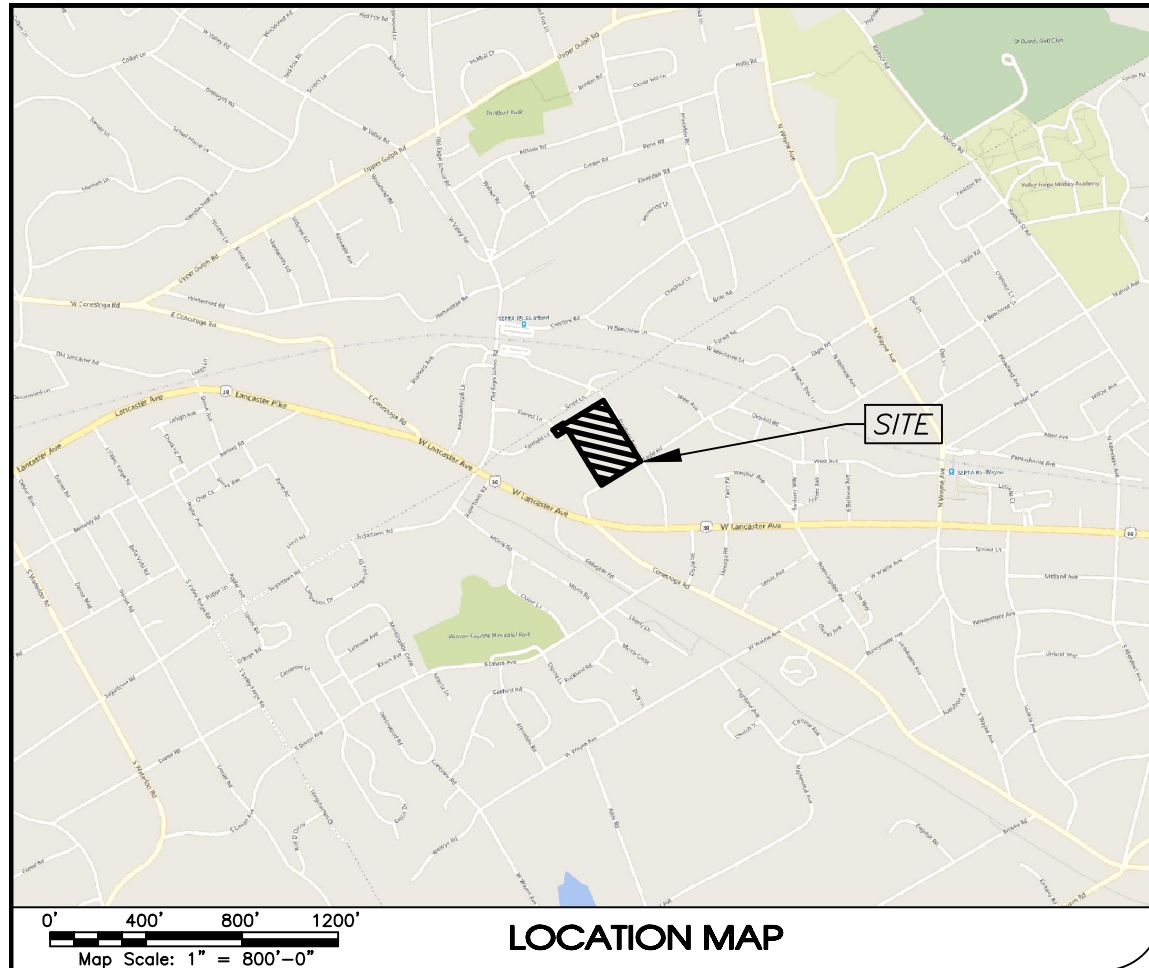
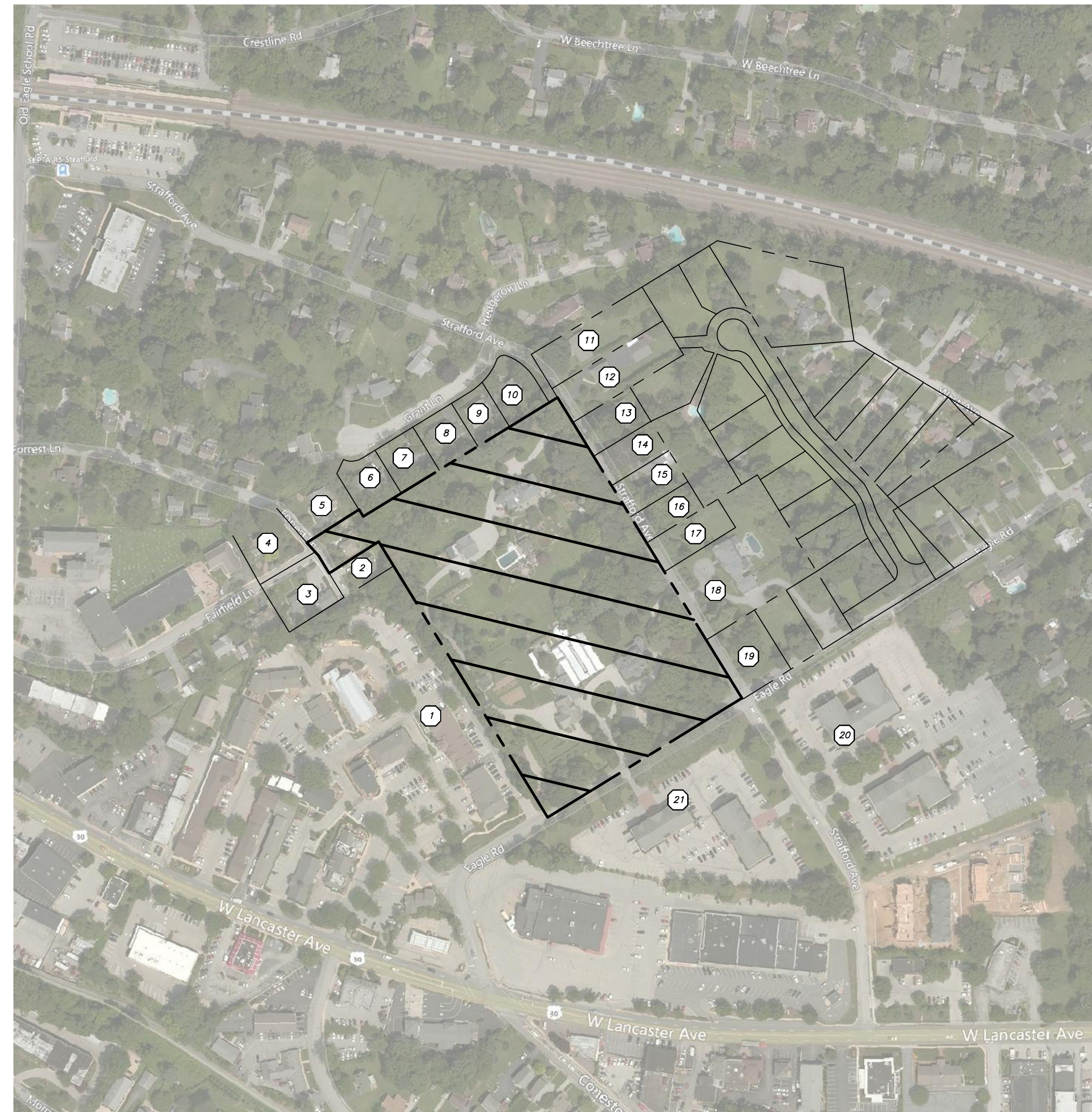


204 & 228 STRAFFORD AVENUE 18 FORREST LANE CONDITIONAL USE PLAN SET

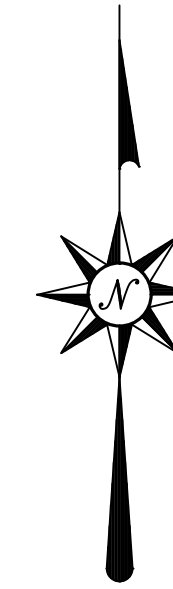
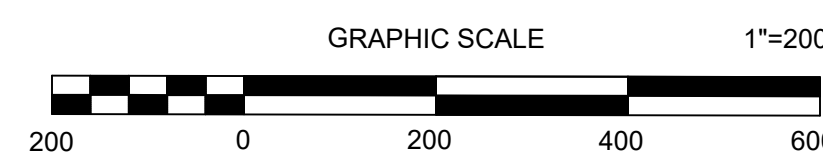


ADJOINING PROPERTIES (LANDS N/E)

1. VILLAGE ASSOCIATES,
503 W LANCASTER AVE, 36-11-316
2. HAMILTON S MATTHEWS V JR & MIRABELLO
FRACIS J & ETAL, 22 FORREST LANE,
36-11-339
3. HAMILTON S MATTHEWS V JR & MIRABELLO
FRACIS J & ETAL,
142 FAIRFIELD LANE, 36-11-338
4. OCONNOR CONSTANCE M & IZZO PETER J,
11 FAIRFIELD LANE, 36-11-337
5. SCHUDA JOSEPH M & FRANCES E,
14 FORREST LANE, 36-11-341
6. CHAWLA GAGAN & CHAWLA SANNU,
21 GRANT LANE, 36-11-342
7. JOHNSTON ALFRED J III & JOHNSTON GLORIA
ROMEIKA,
17 GRANT LANE, 36-11-343
8. MORRISSEY CAREN E, MORRISSEY WILLIAM L
JR, 13 GRANT LANE, 36-11-344
9. SCHERI STEVEN W & MEGAN G,
9 GRANT LANE, 36-11-345
10. MAHONEY JOHN J III & MARY ANN,
5 GRANT LANE, 36-11-346
11. RICHARD W JR & MARY B KUBACH,
235 STRAFFORD AVE, 36-11-353
12. GRAY JEREMY P & CONTRERAS TERESA PAOLA
ZARATE,
231 STRAFFORD AVE, 36-11-352
13. HONORE HOLDINGS LP,
227 STRAFFORD AVENUE, 36-11-349:015
14. HONORE HOLDINGS LP,
223 STRAFFORD AVENUE, 36-11-349:016
15. HONORE HOLDINGS LP,
219 STRAFFORD AVE, 36-11-349:017
16. HONORE HOLDINGS LP,
215 STRAFFORD AVE, 36-11-349:018
17. SATTERFIELD DAVID & MORRISSEY MARY ANNE,
207 STRAFFORD AVE, 36-11-349:002
18. ANUJEET & TARA SAREEN, 205 STRAFFORD
AVE, 36-11-349
19. ALAN J SILVER, 201 STRAFFORD AVE,
36-11-349:003
20. FUCHS JR JOHN O C/O THE STRAFFORD
OFFICE BLDG,
125 0175 STRAFFORD AVE, 36-12-263
21. FUCHS O JOHN,
200 EAGLE RD, 36-11-314



MAP SHOWING FEATURES WITHIN 500' OF PROPERTY LINE



DRAWING SCHEDULE

1. COVER SHEET
2. EXISTING CONDITIONS PLAN
3. DEMOLITION PLAN
4. RECORD PLAN
5. POST CONSTRUCTION STORMWATER PLAN
6. EROSION AND SEDIMENTATION CONTROL PLAN
7. PCSM DETAILS
8. CONSTRUCTION DETAILS
9. E&S DETAILS
10. PROFILE SHEET
11. PROFILE SHEET
12. TRUCK TURNING TEMPLATE PLAN
- ~~13. EX 1 TREE INVENTORY~~
- ~~14. LP 1 LANDSCAPE PLAN~~
- ~~15. LP 2 LANDSCAPE DETAILS~~
- ~~16. LI 1 LIGHTING PLANS~~
- ~~17. LI 2 LIGHTING DETAILS~~

CIVIL ENGINEER:
SITE ENGINEERING CONCEPTS, LLC

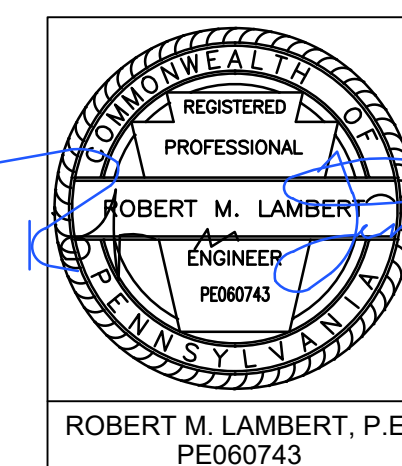
ATTN: ROBERT M. LAMBERT, P.E.
P.O. BOX 1992
SOUTHEASTERN, PA 19399
P: (610) 240-0450
E: RLAMBERT@SITE-ENGINEERS.COM

LANDSCAPE ARCHITECT:
GLACKIN THOMAS PANZAK, INC.

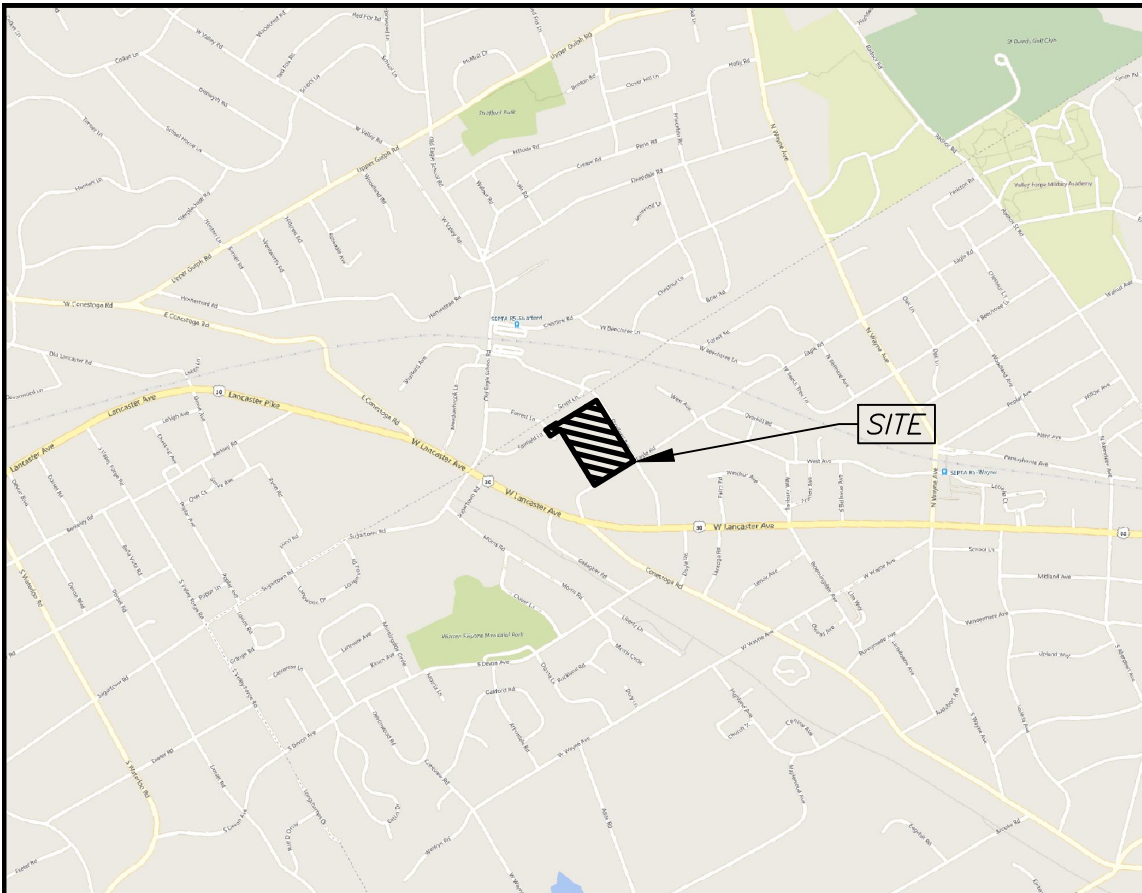
ATTN: BERNARD S. PANZAK, RLA
PAOLI EXECUTIVE GREEN 1, SUITE 300
PAOLI, PA 19301
P: (610) 408-9011
E: BPAZAK@GLACKINPLAN.COM

APPLICANT/OWNER:
THE TRUSTEES OF THE DORRANCE HAMILTON
3/15/1996 REVOCABLE AGREEMENT OF TRUST

ATTN: CHARLES HOUDER
551 W LANCASTER AVE, SUITE 307
HAVERFORD, PA 19041
P: (610) 389-0305
E: DCH@HAVERFORDPROPERTIES.COM



2.	1/29/24	REVISED PER TOWNSHIP REVIEW LETTERS & 1/4/24 PC MTG
1.	9/15/23	REVISED PER TOWNSHIP REVIEW LETTERS DATED 8/1/23
NUM.	DATE	REVISION
PLAN PREPARED BY: SITE ENGINEERING CONCEPTS, LLC P.O. BOX 1992 SOUTHEASTERN, PA 19399 P: 610-240-0450 F: 610-240-0451 E: INFO@SITE-ENGINEERS.COM		
PLAN PREPARED FOR: HAMILTON ESTATE 204 & 228 STRAFFORD AVE 18 FORREST LANE WAYNE, PA 19087		
RADNOR TOWNSHIP DELAWARE COUNTY PENNSYLVANIA		DATE: MAY 18, 2023
COVER SHEET		SHEET 1 of 17
SCALE: 1" = 200'		



LOCATION MAP
 0' 400' 800' 1200'
 Map Scale: 1" = 800'-0"

NOTE: THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES CANNOT BE GUARANTEED. ALL UTILITIES DEPICTED ON THIS PLAN HAVE BEEN DEVELOPED FROM ABOVE GROUND OBSERVATIONS AND/OR EXISTING RECORDS. CONTRACTOR MUST VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. PENNSYLVANIA STATE LAW REQUIRES NOTIFICATION TO 1-800-242-1776 3-10 BUSINESS DAYS PRIOR TO ANY EXCAVATION.

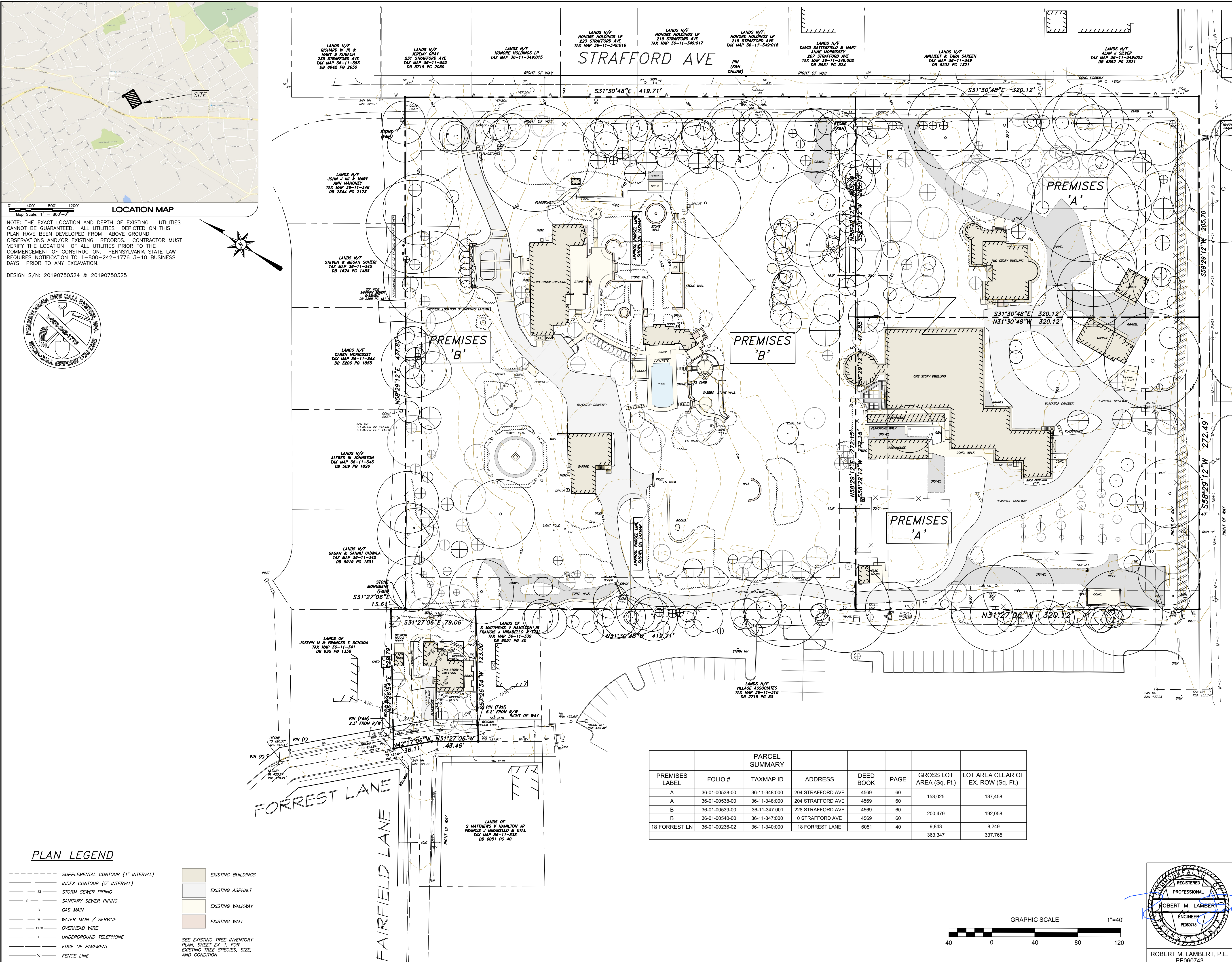
DESIGN S/N: 20190750324 & 20190750325



PLAN LEGEND

--- SUPPLEMENTAL CONTOUR (1' INTERVAL)	EXISTING BUILDINGS
- - - INDEX CONTOUR (5' INTERVAL)	EXISTING ASPHALT
--- ST --- STORM SEWER PIPING	EXISTING WALKWAY
--- S --- SANITARY SEWER PIPING	EXISTING WALL
--- G --- GAS MAIN	
--- W --- WATER MAIN / SERVICE	
--- OW --- OVERHEAD WIRE	
--- T --- UNDERGROUND TELEPHONE	
--- E --- EDGE OF PAVEMENT	
--- X --- FENCE LINE	

SEE EXISTING TREE INVENTORY PLAN, SHEET EX-1, FOR EXISTING TREE SPECIES, SIZE, AND CONDITION



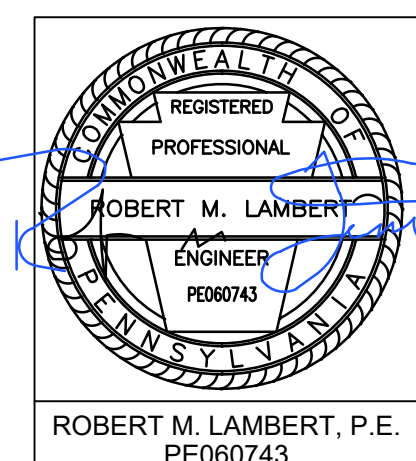
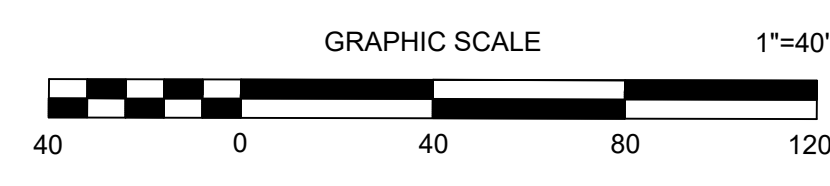
GENERAL NOTES

- BEARINGS SHOWN ARE BASED ON A MERIDIAN ESTABLISHED USING PA STATE PLANE COORDINATES. MERIDIAN DIFFERS FROM THE RECORDED DEED BY 6'35"48".
- CONTOURS PLOTTED FROM FIELD RUN SURVEY. GPS CONTROL PERFORMED ON SITE TO ESTABLISH BENCHMARK. DATUM NAD83/NAV88.
- THIS SURVEY WAS PERFORMED WITH THE BENEFIT OF A CURRENT TITLE REPORT.
- THIS SURVEY IS NOT TO BE USED FOR TREE REMOVAL ALONG PROPERTY LINES. TREE LOCATIONS ARE APPROXIMATE. FOR TREE REMOVAL PURPOSES, PROPERTY LINES MUST BE FIELD MARKED WITH STAKES SET TO ESTABLISH EXACT TREE OWNERSHIP.
- THERE IS NO IDENTIFIABLE FEMA FLOOD PLAN AREAS WITHIN THE PROJECT SITE AS ILLUSTRATED ON COMMUNITY PANEL NUMBER 420428 0017F OF THE FLOOD INSURANCE RATE MAP AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE TOWNSHIP OF RADNOR, PENNSYLVANIA.
- EXISTING SUBSURFACE UTILITY INFORMATION INDICATED IS BASED UPON VISUAL FIELD INSPECTION BY JEFFERY P. TURNER, PLS. SUCH INFORMATION CONCERNING THE SIZE, LOCATION, DEPTH, QUANTITY, ETC. OF SUBSURFACE UTILITIES IS APPROXIMATE IN NATURE AND HAS BEEN OBTAINED AS A SUPPLEMENT TO THE SITE SURVEY. THE INFORMATION PROVIDED IS REPRESENTATIVE OF SUBSURFACE CONDITIONS ONLY AT LOCATIONS AND DEPTHS WHERE SUCH INFORMATION WAS OBTAINED. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT UTILITY SIZE, LOCATION, DEPTH, QUANTITY, ETC. AS SHOWN EXISTS BETWEEN EXPLORED LOCATIONS. ACCORDINGLY, UTILITY INFORMATION SHOWN SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. IT IS INCUMBENT UPON THE CONTRACTOR TO VERIFY THE SIZE, LOCATION, DEPTH, QUANTITY, ETC. OF ALL UTILITIES BEFORE EXCAVATION. THE EXISTENCE AND/OR LOCATION OF ALL SUBSURFACE UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE FIELD VERIFIED BY ALL CONTRACTORS PRIOR TO ANY CONSTRUCTION. NO GUARANTEE IS MADE THAT UNDERGROUND UTILITIES ARE ACCURATELY OR COMPLETELY SHOWN HEREON.
- PLANS REFERENCED: LOT LINE CHANGE PLAN PREPARED BY YERKES ASSOCIATES, INC. FOR MRS. S.M.V HAMILTON DATED JULY 21, 2001.

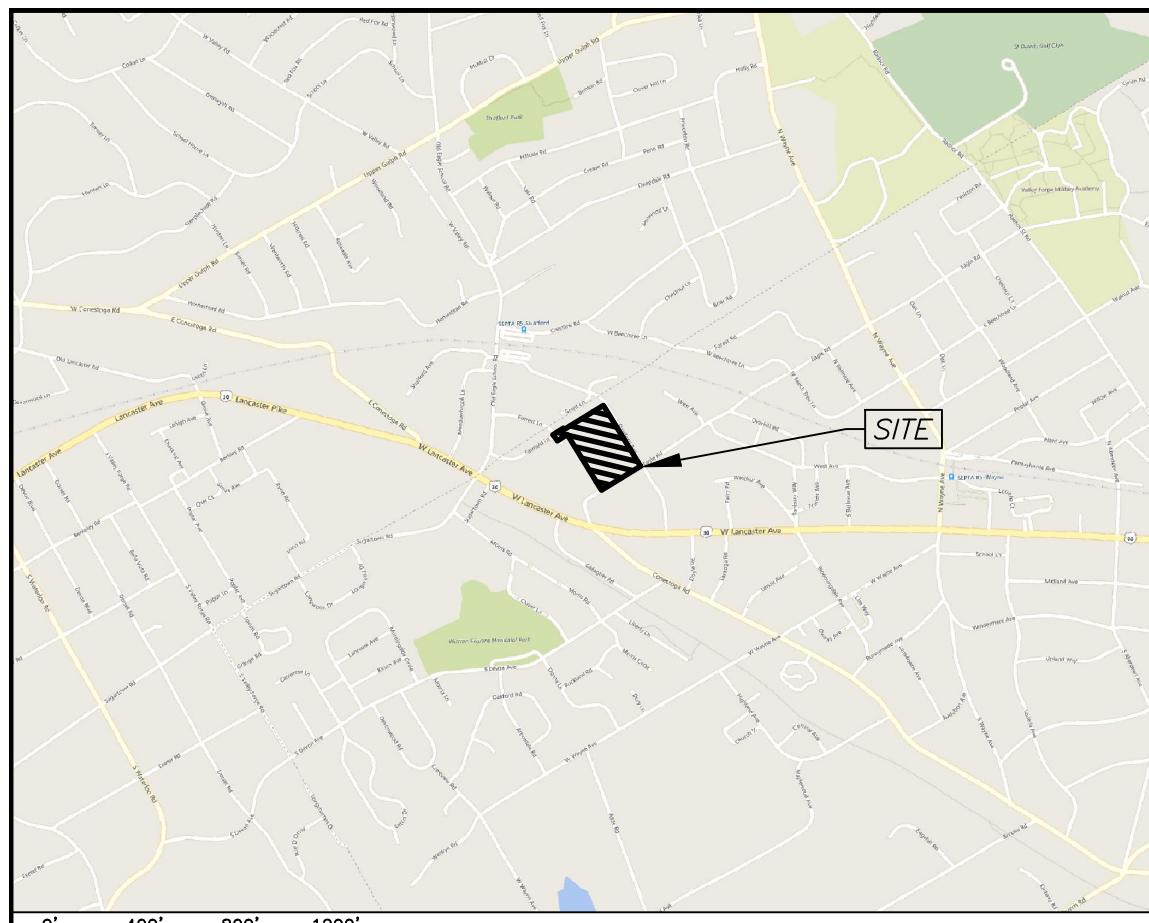
ZONING SUMMARY

R-4 - RESIDENTIAL DISTRICT	
ORDINANCE ITEM	REQUIREMENT
MIN. LOT AREA	7,000 SF
MIN. LOT WIDTH @ BLDG	55 FT
MIN. SETBACKS	
FRONT	30 FT
SIDE (INDIVIDUAL/AGGREGATE)	12 FT / 30 FT
REAR	30 FT
MAX. BUILDING HEIGHT	35 FT
MAX. BUILDING COVERAGE	30%
MAX. IMPERVIOUS COVERAGE	40%
RIPARIAN BUFFER SETBACK	25 FT

PREMISES LABEL	FOLIO #	TAXMAP ID	ADDRESS	DEED BOOK	PAGE	GROSS LOT AREA (Sq. Ft.)	LOT AREA CLEAR OF EX. ROW (Sq. Ft.)
A	36-01-00538-00	36-11-348.000	204 STRAFFORD AVE	4569	60	153,025	137,458
B	36-01-00538-00	36-11-348.000	204 STRAFFORD AVE	4569	60		
B	36-01-00539-00	36-11-347.001	228 STRAFFORD AVE	4569	60	200,479	192,058
B	36-01-00540-00	36-11-347.000	0 STRAFFORD AVE	4569	60		
18 FORREST LN	36-01-00236-02	36-11-340.000	18 FORREST LANE	6051	40	9,843	8,249
						363,347	337,765



2.	1/31/24	REVISED PER TOWNSHIP REVIEW LETTERS & 1/4/24 PC MTG
1.	9/15/23	REVISED PER TOWNSHIP REVIEW LETTERS DATED 8/1/23
REVISION		
PLAN PREPARED BY:		
SITE ENGINEERING CONCEPTS, LLC		
P.O. BOX 1992		
SOUTHEASTON, PA 19399		
P: 610-240-0450	F: 610-240-0451	E: INFO@SITE-ENGINEERS.COM
PLAN PREPARED FOR:		
HAMILTON ESTATE		
204 & 228 STRAFFORD AVE		
18 FORREST LANE		
WAYNE, PA 19087		
RADNOR TOWNSHIP DELAWARE COUNTY PENNSYLVANIA		
DATE: MAY 18, 2023		
EXISTING CONDITIONS PLAN		SHEET 2 of 17
		SCALE: 1" = 40'



LOCATION MAP

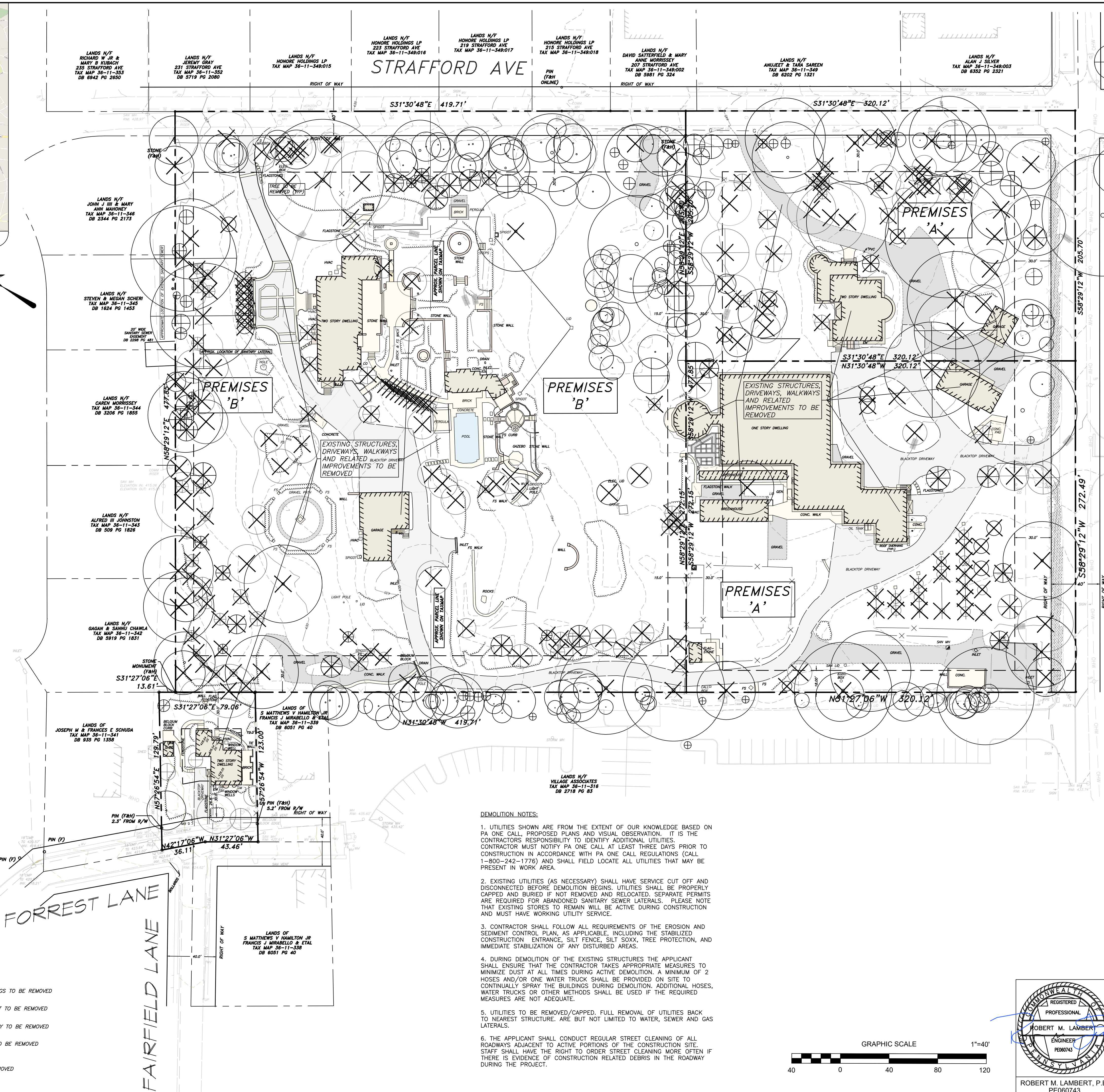
NOTE: THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES CANNOT BE GUARANTEED. ALL UTILITIES DEPICTED ON THIS PLAN HAVE BEEN DEVELOPED FROM ABOVE GROUND OBSERVATIONS AND/OR EXISTING RECORDS. CONTRACTOR MUST VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. PENNSYLVANIA STATE LAW REQUIRES NOTIFICATION TO 1-800-242-1776 3-10 BUSINESS DAYS PRIOR TO ANY EXCAVATION.

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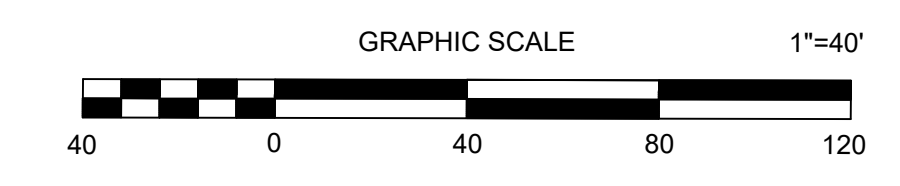
PLAN LEGEND

--- SUPPLEMENTAL CONTOUR (1' INTERVAL)	EXISTING BUILDINGS TO BE REMOVED
- - - INDEX CONTOUR (5' INTERVAL)	EXISTING ASPHALT TO BE REMOVED
--- ST --- STORM SEWER PIPING	EXISTING WALKWAY TO BE REMOVED
--- S --- SANITARY SEWER PIPING	EXISTING WALL TO BE REMOVED
--- G --- GAS MAIN	X TREE TO BE REMOVED
--- W --- WATER MAIN / SERVICE	
--- OW --- OVERHEAD WIRE	
--- T --- UNDERGROUND TELEPHONE	
--- E --- EDGE OF PAVEMENT	
--- F --- FENCE LINE	



DEMOLITION NOTES:

- UTILITIES SHOWN ARE FROM THE EXTENT OF OUR KNOWLEDGE BASED ON PA ONE CALL, PROPOSED PLANS AND VISUAL OBSERVATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY ADDITIONAL UTILITIES. CONTRACTOR MUST NOTIFY PA ONE CALL AT LEAST THREE DAYS PRIOR TO CONSTRUCTION IN ACCORDANCE WITH PA ONE CALL REGULATIONS (CALL 1-800-242-1776) AND SHALL FIELD LOCATE ALL UTILITIES THAT MAY BE PRESENT IN WORK AREA.
- EXISTING UTILITIES (AS NECESSARY) SHALL HAVE SERVICE CUT OFF AND DISCONNECTED BEFORE DEMOLITION BEGINS. UTILITIES SHALL BE PROPERLY CAPPED AND BURIED IF NOT REMOVED AND RELOCATED. SEPARATE PERMITS ARE REQUIRED FOR ABANDONED SANITARY SEWER LATERALS. PLEASE NOTE THAT EXISTING STORES TO REMAIN WILL BE ACTIVE DURING CONSTRUCTION AND MUST HAVE WORKING UTILITY SERVICE.
- CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS OF THE EROSION AND SEDIMENT CONTROL PLAN, AS APPLICABLE, INCLUDING THE STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SILT SOCK, TREE PROTECTION, AND IMMEDIATE STABILIZATION OF ANY DISTURBED AREAS.
- DURING DEMOLITION OF THE EXISTING STRUCTURES THE APPLICANT SHALL ENSURE THAT THE CONTRACTOR TAKES APPROPRIATE MEASURES TO MINIMIZE DUST AT ALL TIMES DURING ACTIVE DEMOLITION. A MINIMUM OF 2 HOSES AND/OR ONE WATER TRUCK SHALL BE PROVIDED ON SITE TO CONTINUALLY SPRAY THE BUILDINGS DURING DEMOLITION. ADDITIONAL HOSES, WATER TRUCKS OR OTHER METHODS SHALL BE USED IF THE REQUIRED MEASURES ARE NOT ADEQUATE.
- UTILITIES TO BE REMOVED/CAPPED. FULL REMOVAL OF UTILITIES BACK TO NEAREST STRUCTURE. ARE BUT NOT LIMITED TO WATER, SEWER AND GAS LATERALS.
- THE APPLICANT SHALL CONDUCT REGULAR STREET CLEANING OF ALL ROADWAYS ADJACENT TO ACTIVE PORTIONS OF THE CONSTRUCTION SITE. STAFF SHALL HAVE THE RIGHT TO ORDER STREET CLEANING MORE OFTEN IF THERE IS EVIDENCE OF CONSTRUCTION RELATED DEBRIS IN THE ROADWAY DURING THE PROJECT.



2.	1/31/24	REVISED PER TOWNSHIP REVIEW LETTERS & 1/4/24 PC MTG
1.	9/15/23	REVISED PER TOWNSHIP REVIEW LETTERS DATED 8/1/23
NUM.	DATE	REVISION

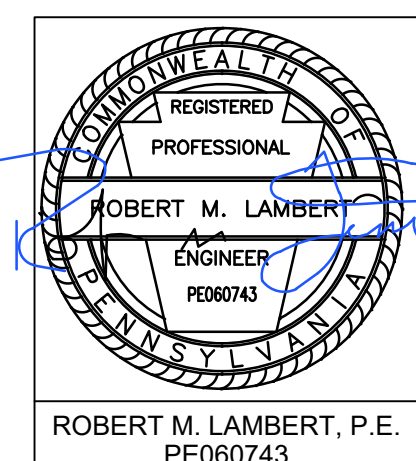
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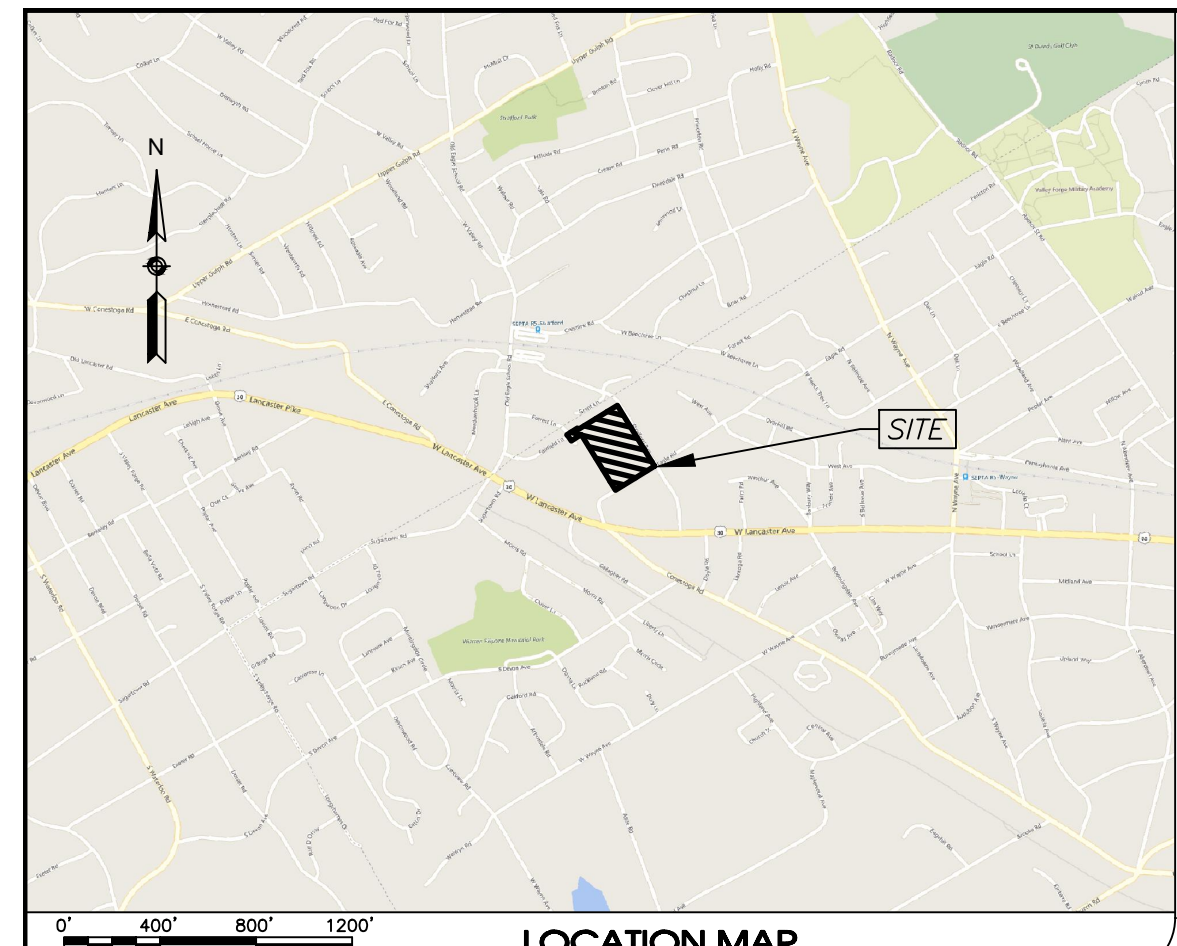
PLAN PREPARED FOR:
HAMILTON ESTATE
 204 & 228 STRAFFORD AVE
 18 FORREST LANE
 WAYNE, PA 19087

RADNOR TOWNSHIP DELAWARE COUNTY PENNSYLVANIA
 DATE: MAY 18, 2023

DEMOLITION PLAN

SHEET 3 of 17
 SCALE: 1" = 40'





NOTE: THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES CANNOT BE GUARANTEED. ALL UTILITIES DEPICTED ON THIS PLAN HAVE BEEN DEVELOPED FROM ABOVE GROUND OBSERVATIONS AND/OR EXISTING RECORDS. CONTRACTOR MUST VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. PENNSYLVANIA STATE LAW REQUIRES NOTIFICATION TO 1-800-242-1776 3-10 BUSINESS DAYS PRIOR TO ANY EXCAVATION.

DESIGN S/N: 20190750324 & 20190750325



ZONING SUMMARY			
R-4 RESIDENTIAL DISTRICT - PROPOSED DENSITY MODIFICATION DEVELOPMENT (TOWNHOUSES)			
ORDINANCE ITEM	REQUIREMENT	EXISTING	PROPOSED
MIN NET TRACT AREA SIZE EXCLUDING PROPOSED RIGHT OF WAY	(280-92.4) 5 ACRES	N/A	7.487 ACRES
MIN RESIDENTIAL BUFFER	(280-91.0) 25 FT	N/A	25 FT
MIN SETBACKS			
FROM EXISTING STREET ROW	(280-92.4) 40 FT	N/A	51 FT
FROM ADJACENT PROPERTY LINE	(280-92.4) 25 FT	N/A	30 FT
MAX UNITS PER BUILDING	(280-93.8) 8	N/A	6
MIN SIDE TO SIDE DISTANCE	(280-97.0) 30 FT	N/A	31 FT
MAX DENSITY	(280-92.4) 5.5 DU/ACRE 41 UNITS ALLOWED	N/A	5.08 DU/ACRE 38 UNITS PROPOSED
MAX. BUILDING COVERAGE	(280-94.4) 35%	8.2%	23.5%
MAX. IMPERVIOUS COVERAGE	(280-94.4) 45%	25.6%	42.9%
MIN. COMMON OPEN SPACE	(280-91.4) 25%	N/A	84,807 SF 26.0% (SWM 6,654 SF, 7.9%)
MAX. BUILDING HEIGHT	(280-94, 280-31) 35 FT	≤ 35 FT	≤ 35 FT

PER CODE SECTION 280-93.8 NO MORE THAN TWO CONTIGUOUS TOWNHOUSES IN ANY GROUP MAY BE CONSTRUCTED IN LINE, AND EACH TOWNHOUSE SHALL HAVE AT LEAST ONE PLAN ELEMENT ON ANY FLOOR WHICH PROJECTS OR RECESSES WITHIN THE WALL PLANE OF THE FACADE A MINIMUM DIMENSION OF 2 FEET. THE PLANS COMPLY WITH THESE PROVISIONS.

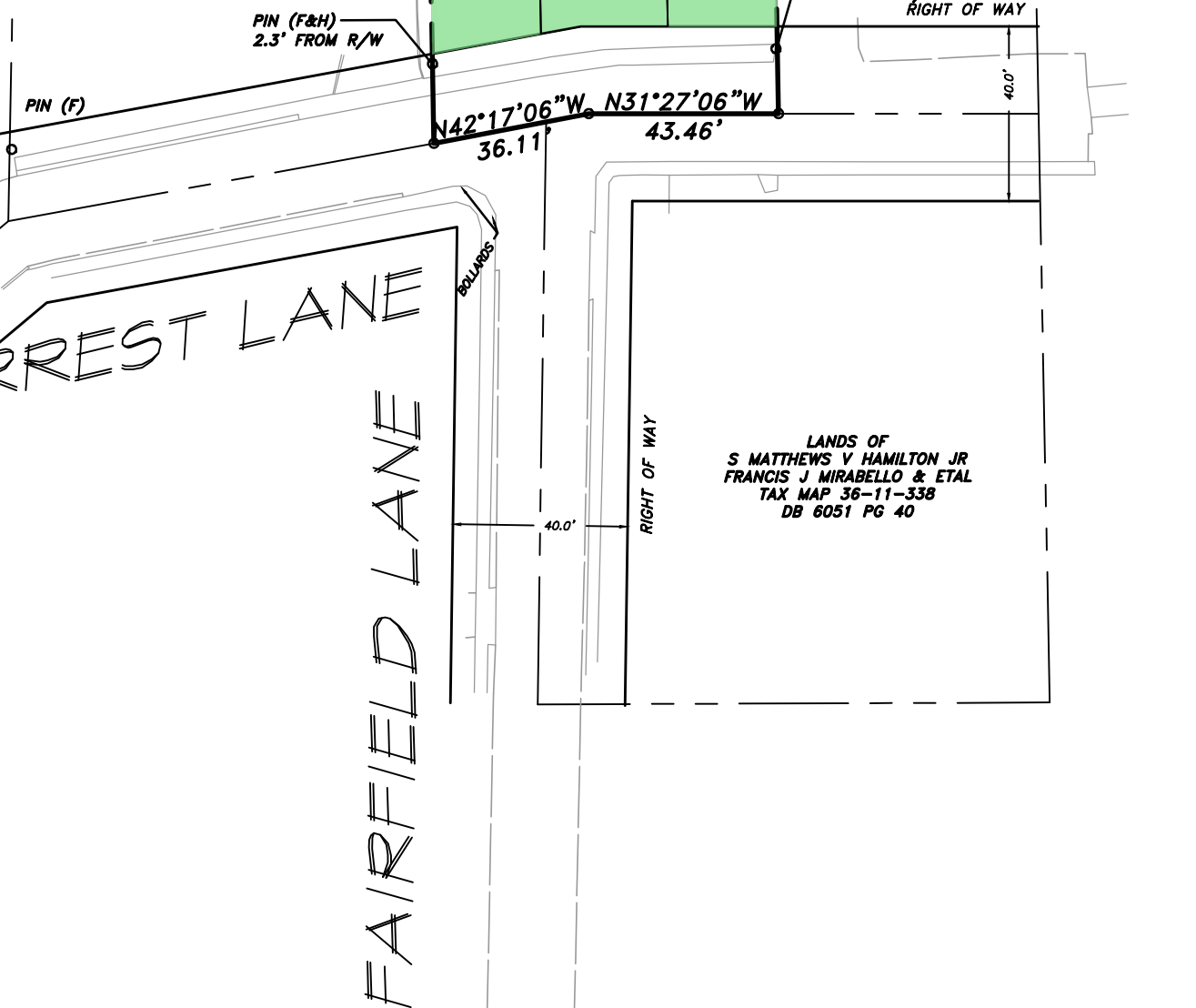
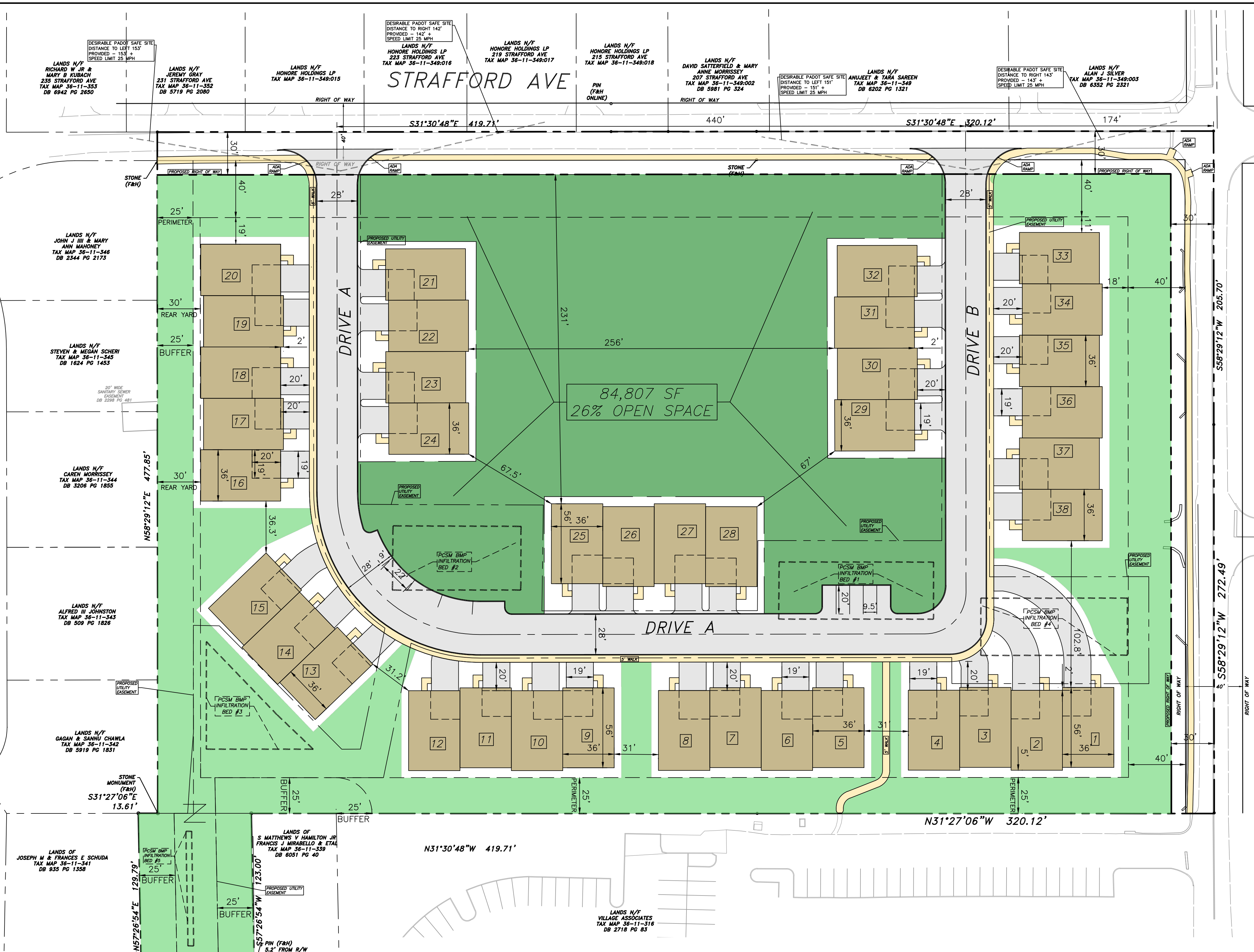
IMPERVIOUS SUMMARY (SQ. FT.)				
NET LOT AREA (EXCLUDING ROW)	EXISTING	TO BE REMOVED	TO BE ADDED	PROPOSED
BUILDINGS	26,844	26,844	76,608	76,608
ASPHALT	28,529	28,529	50,694	50,694
WALKS/CONC.	10,393	10,393	12,474	12,474
OTHER IMPERVIOUS	17,877	17,877	0	0
TOTAL BUILDING COVERAGE	26,844	26,844	76,608	76,608
TOTAL BUILDING PERCENTAGE	8.2%	8.2%	23.5%	23.5%
TOTAL IMPERVIOUS COVERAGE	83,643	83,643	139,776	139,776
TOTAL IMPERVIOUS PERCENTAGE	25.6%	25.6%	42.9%	42.9%
IMPERVIOUS REMAINING AVAILABLE				6,974

PLAN LEGEND

BOLD LINES: PROPOSED
FADED LINES: EXISTING

- SUPPLEMENTAL CONTOUR (1' INTERVAL)
- INDEX CONTOUR (5' INTERVAL)
- ST
- STORM SEWER PIPING
- S SANITARY SEWER PIPING
- G GAS MAIN
- W WATER MAIN / SERVICE
- OHV OVERHEAD WIRE
- T UNDERGROUND TELEPHONE
- E EDGE OF PAVEMENT
- X FENCE LINE

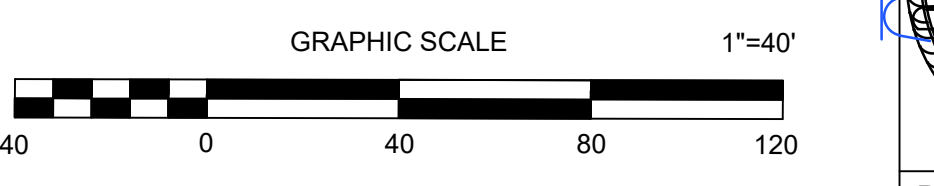
- PROPOSED BUILDINGS
- PROPOSED ASPHALT
- PROPOSED WALKWAY
- PROPOSED COMMON OPEN SPACE
- PROPOSED OPEN SPACE (NOT COUNTED TOWARDS MINIMUM REQUIREMENT)



PARKING SUMMARY			
DESCRIPTION	REQUIREMENT	PROPOSED	REQUIRED
DWELLING UNIT 280-130-B.(2)	2 SPACE PER UNIT	38 UNIT	76.0
EACH DWELLING UNIT WILL HAVE A TWO CAR GARAGE WITH 2 PARKING SPACES WITHIN THE GARAGES (2X9.5X20')			76
OVERFLOW OFF STREET 255-29-A.(20)	1 SPACE PER 4 UNITS	38 UNIT	9.5
			10

APPLICANT STATEMENT:
I, _____ ON THIS DATE _____ HEREBY ACKNOWLEDGE THAT ANY REVISION TO THE APPROVED PLAN MUST BE APPROVED BY THE MUNICIPALITY. IF MORE THAN ONE (1) ACRE OF LAND IS DISTURBED, THE CONSERVATION DISTRICT AND/OR DEP MUST APPROVE THE PLAN. ANY REVISION TO THE EROSION AND SEDIMENT CONTROL PLAN MUST BE SUBMITTED TO THE APPROVING AGENCY FOR A DETERMINATION OF ADEQUACY.

PROFESSIONAL ENGINEER'S CERTIFICATION:
I, _____ P. E. ON _____ HEREBY CERTIFY THAT THE SWM SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE RADNOR TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.



- ### GENERAL NOTES
1. THE TOWNHOUSE DEVELOPMENT SHALL BE CONSTRUCTED OWNED AND OPERATED UNDER SINGLE OWNERSHIP, OR UNDER THE PENNSYLVANIA UNIT PROPERTY ACT, OR SIMILAR STATUTE SUCH AS THE PLANNED COMMUNITY ACT.
 2. THE EXISTING TRACT, INCLUDING THE MULTIPLE DWELLING UNITS THEREON, AND THE ENTIRE SURROUNDING AREA ARE SERVED BY PUBLIC SANITARY SEWER SERVICE AND PUBLIC WATER SUPPLY. THE PROPOSED DEVELOPMENT WILL ALSO BE SERVED BY PUBLIC SANITARY SEWER SERVICE AND PUBLIC WATER SUPPLY.
 3. EACH TOWNHOUSE SHALL HAVE AT LEAST TWO FLOORS IN COMPLIANCE WITH APPLICABLE HEIGHT LIMITS AND SHALL BE OCCUPIED AS A SINGLE-FAMILY DWELLING. EACH TOWNHOUSE SHALL HAVE AT LEAST ONE PLAN ELEMENT ON ANY FLOOR WHICH PROJECTS OR RECESSES WITHIN THE WALL PLANE OF THE FACADE A MINIMUM DIMENSION OF TWO FEET.
 4. NO MORE THAN TWO CONTIGUOUS TOWNHOUSES IN ANY GROUP MAY BE CONSTRUCTED IN LINE AND EACH TOWNHOUSE SHALL HAVE AT LEAST ONE PLAN ELEMENT ON ANY FLOOR WHICH PROJECTS OR RECESSES WITHIN THE WALL PLANE OF THE FACADE A MINIMUM DIMENSION OF TWO FEET.
 5. THE DEVELOPMENT WILL BE SERVICED BY PECO ELECTRIC.
 6. TRASH REMOVAL AND SNOW REMOVAL WILL BE PROVIDED AS PART OF THE PLANNED COMMUNITY.
 7. THE REQUIRED COMMON OPEN SPACE WILL BE A COMMON ELEMENT OF THE PLANNED COMMUNITY AND WILL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.

PROPERTY OWNER
COMMONWEALTH OF PENNSYLVANIA
COUNTY OF DELAWARE

ON THE _____ DAY OF _____ 20____, BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, THE UNDERSIGNED OFFICER PERSONALLY APPEARED, _____ OF _____ WHO ACKNOWLEDGED HIM/HERSELF TO BE THE _____ OWNER OF THE PROPERTIES PROPOSED TO BE DEVELOPED IN THE SUBJECT PLAN, BEING AUTHORIZED TO DO SO, ACKNOWLEDGED THIS PLAN TO BE THE OFFICIAL PLAN OF THE PROPERTIES SHOWN THEREON, SITUATED IN THE TOWNSHIP OF RADNOR, DELAWARE COUNTY, PENNSYLVANIA, AND DESCRIBED THAT THIS PLAN IS MADE WITH THE OWNER'S FREE CONSENT AND INTENDED TO BE RECORDED ACCORDING TO LAW.

WITNESS MY HAND AND NOTARIAL SEAL THE DAY AND YEAR AFORESAID.

NOTARY _____
OWNER _____

RADNOR TOWNSHIP:
THIS IS TO CERTIFY THE BOARD OF COMMISSIONERS HAS APPROVED THIS LAND DEVELOPMENT PLAN FOR STRAFFORD AVENUE AND EAGLE ROAD, ON THE _____ DAY OF _____ 20____ FOR RECORDING AT THE RECORDER OF DEEDS OF DELAWARE COUNTY, MEDIA, PENNSYLVANIA. OFFERS OF DEDICATION HAVE BEEN ACCEPTED/REJECTED, BONDS, FUNDS OR SECURITIES IN ESCROW HAVE BEEN FILED WITH THE TOWNSHIP AND ACCEPTED TO COVER ALL IMPROVEMENTS SHOWN ON THE PLAN AND REQUIRED UNDER THE SUBDIVISION/LAND DEVELOPMENT AGREEMENT.

APPROVED THE _____ DAY OF _____ 20____
BOARD OF SUPERVISORS SIGNED THIS _____ DAY OF _____ 20____

CHAIRMAN _____
MEMBER _____
TOWNSHIP ENGINEER _____
ATTEST: _____
MANAGER _____

DELAWARE COUNTY PLANNING COMMISSION:
REVIEWED BY THE DELAWARE COUNTY PLANNING COMMISSION THIS _____ DAY OF _____ 20____
SECRETARY _____

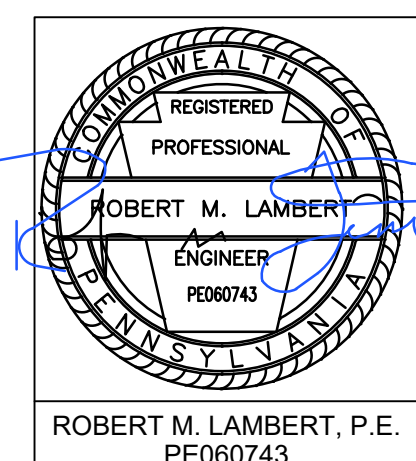
RECORDER OF DEEDS
RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF DELAWARE COUNTY AT MEDIA, PENNSYLVANIA IN THE
PLAN BOOK _____ PAGE _____ ON THE _____ DAY OF _____ 20____
RECORDER OF DEEDS _____

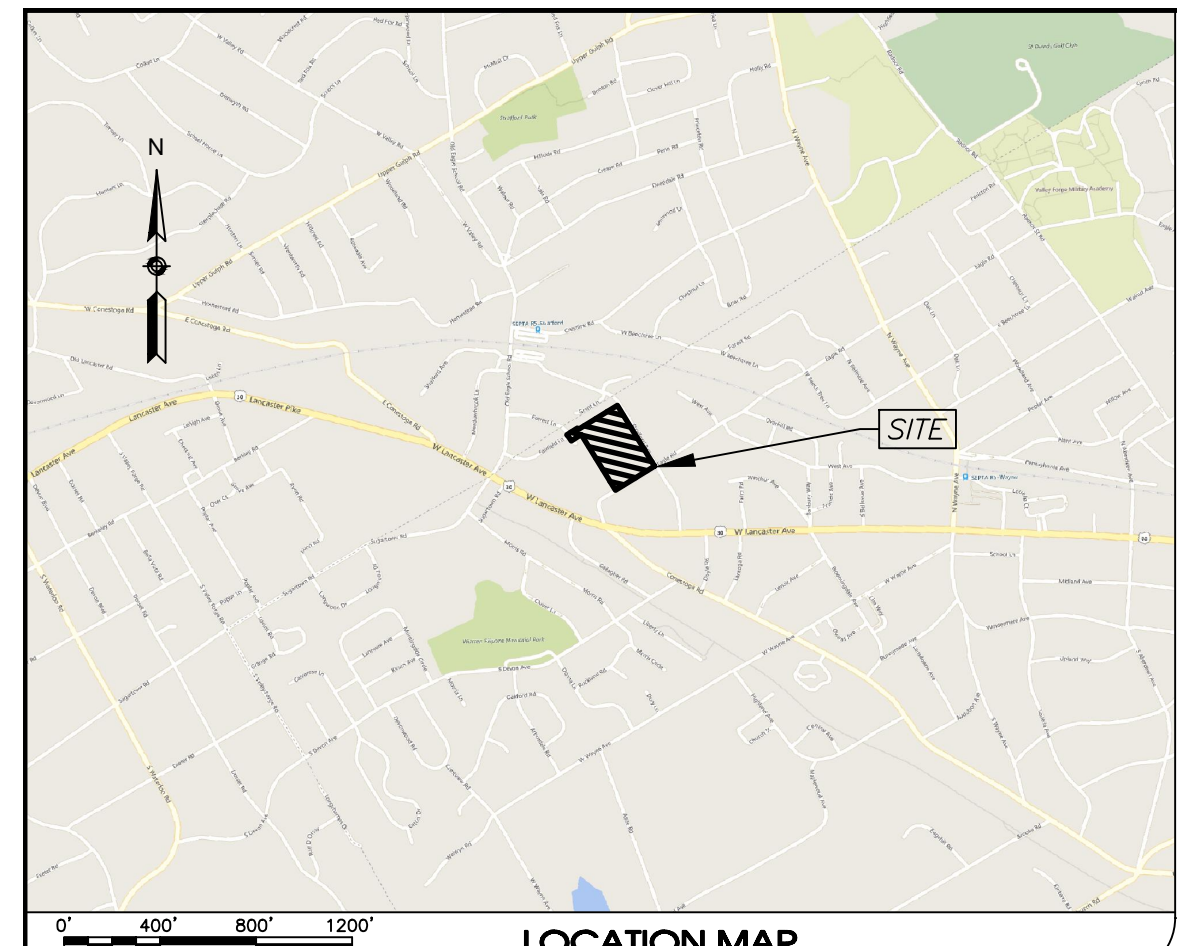
PLAN PREPARED BY:
SITE ENGINEERING CONCEPTS, LLC
P.O. BOX 1992
SOUTHEASTERN, PA 19399
P: 610-240-0450 F: 610-240-0451 E: INFO@SITE-ENGINEERS.COM

PLAN PREPARED FOR:
HAMILTON ESTATE
204 & 228 STRAFFORD AVE
WAYNE, PA 19087
RADNOR TOWNSHIP DELAWARE COUNTY PENNSYLVANIA
DATE: MAY 18, 2023

RECORD PLAN

SHEET 4 of 17
SCALE: 1" = 40'





NOTE: THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES CANNOT BE GUARANTEED. ALL UTILITIES DEPICTED ON THIS PLAN HAVE BEEN DEVELOPED FROM ABOVE GROUND OBSERVATIONS AND/OR EXISTING RECORDS. CONTRACTOR MUST VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. PENNSYLVANIA STATE LAW REQUIRES NOTIFICATION TO 1-800-242-1776 3-10 BUSINESS DAYS PRIOR TO ANY EXCAVATION.

DESIGN S/N: 20190750324 & 20190750325



SOIL DATA

ENTIRE PROJECT AREA COMPOSED OF UrmB SOILS ACCORDING TO THE PENN STATE SOIL MAP WEBSITE.

UrmB - URBAN LAND-GLENELG COMPLEX
0 TO 8 PERCENT SLOPES
DEPTH TO SEASONAL HIGH WATER TABLE: MORE THAN 80"
DEPTH TO BEDROCK: 80" TO 120"
HYDROLOGICAL CLASSIFICATION TYPE B

TABLE E.1 LIMITATIONS OF PENNSYLVANIA SOILS PERTAINING TO EARTHMOVING PROJECTS (ABSENCE OF AN X DOES NOT MEAN "NO POTENTIAL LIMITATION")

SOIL NAME	CUTBANKS CAVE	CONCRETE TO CONCRETE	CONCRETE TO STEEL	DEPTHS TO SATURATED ZONE/SEASONAL HIGH WATER TABLE	CONCRETE/STEEL	CONCRETE/STEEL	POOR SOURCE OF	TOPSOIL	LOOSE SOIL	POTENTIAL SINKHOLES	WEAPONS
URBAN					X						

SOIL RESOLUTIONS

HIGH WATER TABLE - THE GEOTECHNICAL REPORT INDICATED THAT THERE WAS NO GROUNDWATER ENCOUNTERED AT THE EXCAVATION DEPTHS. IF GROUND WATER IS ENCOUNTERED WATER TIGHT STORM WATER PIPES AND CLAY CHECK DAMS USED IN SANITARY SEWER TRENCHING.

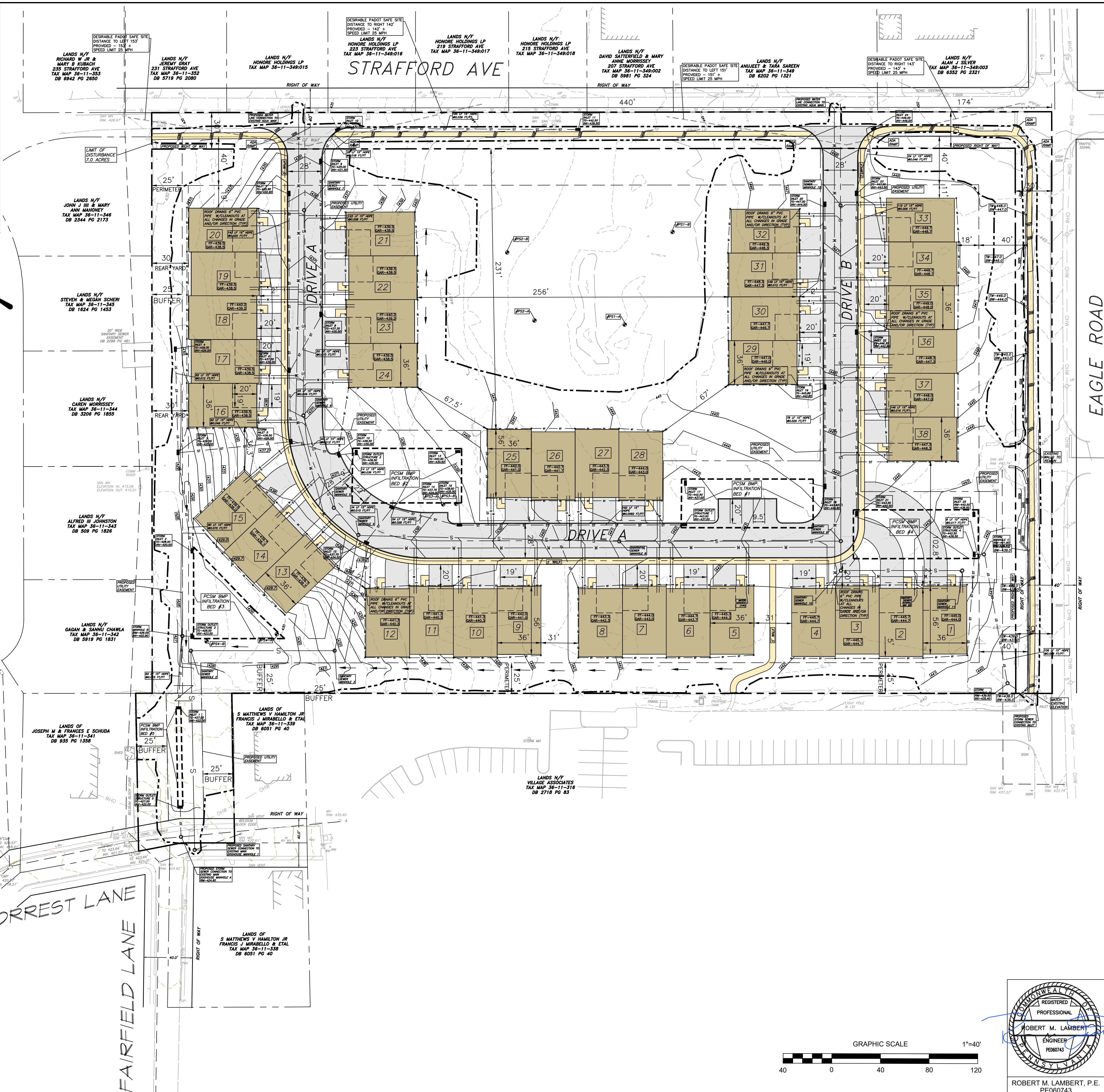
FROST PROTECTION - AVOID WINTER GRADING

PLAN LEGEND

--- (2' INTERVAL)	SUPPLEMENTAL CONTOUR (2' INTERVAL)
--- (10' INTERVAL)	INDEX CONTOUR (10' INTERVAL)
---	EXISTING STORM SEWER PIPING
---	EXISTING SANITARY SEWER PIPING
---	EXISTING GAS MAIN
---	EXISTING WATER MAIN / SERVICE
---	EXISTING UNDERGROUND TELEPHONE
---	EXISTING EDGE OF WOODS
---	EXISTING EDGE OF PAVEMENT
---	EXISTING CURB
---	EXISTING FENCE LINE
---	EXISTING STORMWATER INLET
---	PROPERTY LINE
---	BUILDING SETBACK LINE
---	PROPOSED CONTOUR
---	PROPOSED STORM WATER
---	PROPOSED CURB
---	PROPOSED STORMWATER INLET

■	PROPOSED BUILDINGS
■	PROPOSED ASPHALT
■	PROPOSED WALKWAY

HALF TONE EXISTING
FULL TONE PROPOSED



- PROJECT NOTES**
- SHOULD ANY TREES NOT SCHEDULED OR PERMITTED TO BE REMOVED BE IRREPARABLY DAMAGED DURING CONSTRUCTION AND DIE WITHIN EIGHTEEN (18) MONTHS OF THE CONCLUSION OF CONSTRUCTION ACTIVITIES, THOSE TREES WILL BE REQUIRED TO BE REPLACED.
 - GRADING AND EARTH-MOVING OPERATIONS SHALL BE MINIMIZED DURING THE PERIOD NOVEMBER 15 TO APRIL 1 WHEN RE-VEGETATION OF EXPOSED GROUND SURFACE IS DIFFICULT. MULCH, STRAW, STONE AND/OR SOD SHALL BE USED TO STABILIZE ALL AREAS DENuded DURING THIS TIME PERIOD.
 - ROOF DRAIN COLLECTION PIPING SHALL BE 6" PVC @ 0.02 FT/FT MIN. CLEANOUTS SHALL BE PROVIDED AT ALL CHANGES IN GRADE AND/OR DIRECTION.
 - THE MAXIMUM TIME OF EXPOSURE FOR BARE SOIL AREAS SHALL BE TWENTY (20) DAYS BEFORE STABILIZATION MEASURES ARE IMPLEMENTED.
 - ROUTINE END-OF-DAY CHECKS AND FOLLOWING STORMS SHALL BE REQUIRED DURING THE CONSTRUCTION TO ENSURE THE MEASURES ARE WORKING PROPERLY.
 - NEWLY GRADED SLOPES OF OVER 25% MUST BE STABILIZED WITH SOO OR JUTE NETTING AND SEED.
 - UTILITY LINES PER ONE CALL INFORMATION HAVE BEEN SHOWN. CONTRACTOR MUST VERIFY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - GAS, ELECTRIC, WATER OR ANY OTHER UTILITY TO BE ABANDONED SHALL BE PROPERLY SEALED/REMOVED.
 - HIGH DURABILITY PAVEMENT MARKING MATERIAL SHALL BE USED FOR ALL PAVEMENT STRIPPING.
 - THE RESPONSIBILITY FOR THE CONTINUED MAINTENANCE AND OPERATION OF THE SEEPAGE BED AND STORM PIPING SHALL BE THE OBLIGATION OF THE HOMEOWNERS ASSOCIATION.

2.	1/31/24	REVISED PER TOWNSHIP REVIEW LETTERS & 1/4/24 PC MTG
1.	9/15/23	REVISED PER TOWNSHIP REVIEW LETTERS DATED 8/1/23
NUM.	DATE	REVISION

PLAN PREPARED BY:
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SOUTHEASTERN, PA 19399

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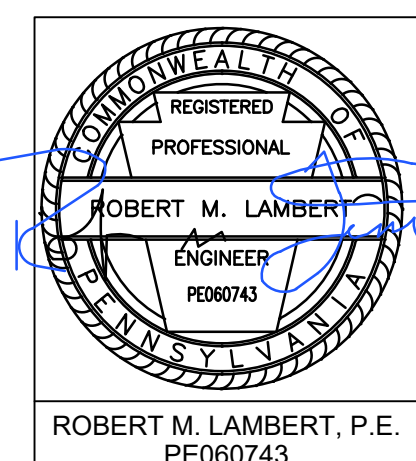
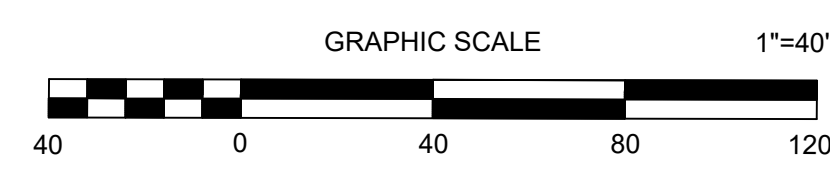
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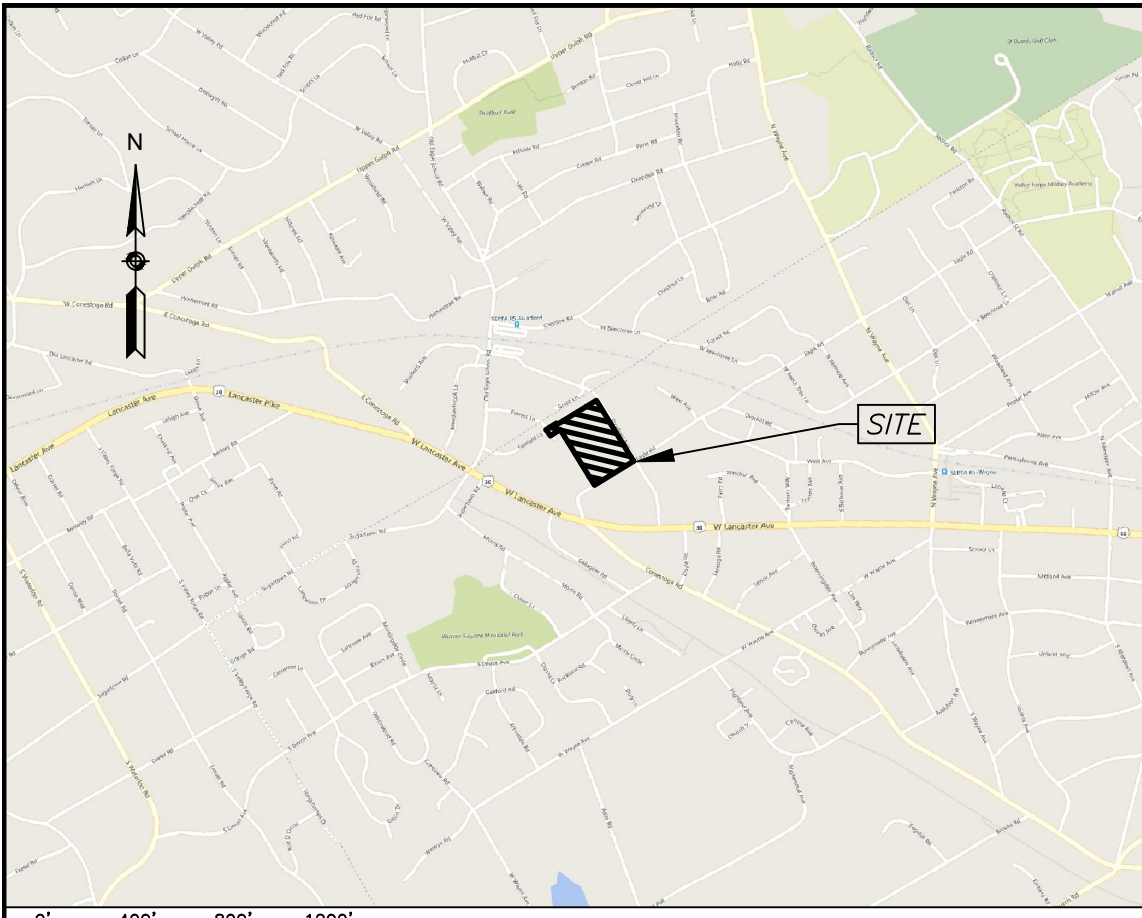
RADNOR TOWNSHIP DELAWARE COUNTY PENNSYLVANIA
DATE: MAY 18, 2023

POST CONSTRUCTION STORMWATER PLAN

SHEET 5 of 17

SCALE: 1" = 40'





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DESIGN S/N: 20190750324 & 20190750325



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SOIL NAME	CUTBANKS CAVE	CONGLOSIVE TO DISGLOSIVE SILT	EASILY ERODIBLE	DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE	WORKSAPABLE	CONCRETE/STEEL	SLOW PERCOLATION	POOR SOURCE OF TOPSOIL	LOOSELY CONSOLIDATED	POTENTIAL SHINKING	POTENTIAL SLINKHOLES	WEAPINESS
URBAN												

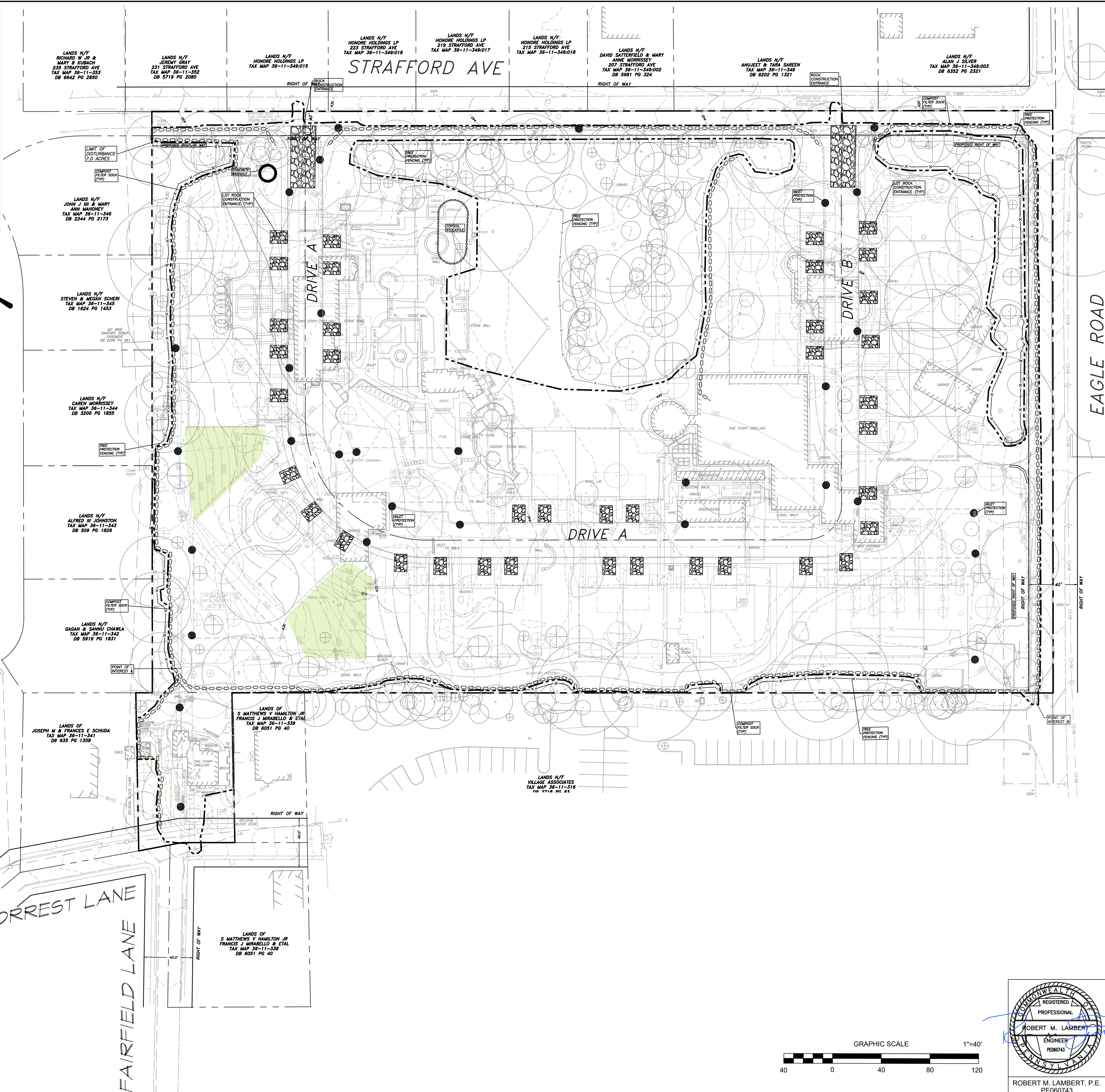
SOIL RESOLUTIONS
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 FROST PROTECTION - AVOID WINTER GRADING

PLAN LEGEND

- SUPPLEMENTAL CONTOUR (2' INTERVAL)
- - - INDEX CONTOUR (10' INTERVAL)
- ST --- EXISTING STORM SEWER PIPING
- EXISTING SANITARY SEWER PIPING
- EXISTING GAS MAIN
- EXISTING WATER MAIN / SERVICE
- EXISTING UNDERGROUND TELEPHONE
- EXISTING EDGE OF WOODS
- EXISTING EDGE OF PAVEMENT
- EXISTING CURB
- EXISTING FENCE LINE
- PROPERTY LINE
- BUILDING SETBACK LINE
- PROPOSED CONTOUR
- PROPOSED STORM WATER
- PROPOSED CURB
- PROPOSED STORMWATER INLET

EROSION AND SEDIMENTATION CONTROL LEGEND

- 24" COMPOST FILTER SOCK
- TREE PROTECTION
- ROCK CONSTRUCTION ENTRANCE
- LIMIT OF DISTURBANCE/NPDES BOUNDARY
- INLET PROTECTION WITH FILTER BAG
- EROSION CONTROL BLANKET
- CONCRETE WASHOUT



CONSTRUCTION STAGING

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.

AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES INCLUDING BUT NOT LIMITED TO: THE LANDOWNER AND ALL APPROPRIATE MUNICIPAL OFFICIALS FOR AN ON-SITE PRE-CONSTRUCTION MEETING.

NOTE: ALL MATERIALS ASSOCIATED WITH SEDIMENT REMOVAL MUST BE ON-SITE PRIOR TO EARTH DISTURBANCE.

STAGE 1. INSTALL TREE PROTECTION FENCING, SILT FENCE, INLET PROTECTION AND ROCK CONSTRUCTION ENTRANCE. ONCE INSTALLATION OF THESE ITEMS ARE COMPLETE, THE TOWNSHIP ENGINEER SHALL BE NOTIFIED PRIOR TO ANY DEMOLITION OR OTHER EARTH DISTURBANCE.

STAGE 2. ONCE AUTHORIZATION FROM THE TOWNSHIP ENGINEER IS GIVEN, STRIP TOPSOIL. STOCKPILES ARE TO BE LIMITED TO 35 FEET WITH A MAXIMUM SIDE SLOPE OF 2:1. IMMEDIATELY STABILIZE STOCKPILE.

STAGE 3. CONSTRUCT UTILITY MANS.

STAGE 4. CONSTRUCT ROAD

STAGE 5. EXCAVATE FOR BUILDING CONSTRUCTION.

STAGE 6. CONSTRUCT BUILDING.

STAGE 7. NOTIFY TOWNSHIP ENGINEER 48 HOURS PRIOR TO THE INSTALLATION OF THE INFILTRATION BASIN.

STAGE 8. CRITICAL STAGE - INSTALL INFILTRATION BASINS, COLLECTION AND CONVEYANCE SYSTEM. INSTALL INLET PROTECTION ON NEW INLETS, MUST REMAIN UNTIL AREA STABILIZED. SEEPAGE BED SHALL NOT RECEIVE RUNOFF UNTIL THE ENTIRE CONTRIBUTORY AREA HAS BEEN STABILIZED.

STAGE 9. CONSTRUCT WALK IMPROVEMENTS.

STAGE 10. SPREAD TOPSOIL, FINE GRADE, STABILIZE.

STAGE 11. UPON THE COMPLETION OF GRADING IN ANY AREA, IMMEDIATELY STABILIZE DORMANT DISTURBED AREAS WITH THE PERMANENT SEED MIXTURE, MULCH AT 3 TONS PER ACRE, AND LIME AS PRESCRIBED.

STAGE 12. REMOVE ALL EROSION AND SEDIMENT CONTROL MEASURES ONCE TRIBUTARY AREAS ARE FULLY STABILIZED. IMMEDIATELY STABILIZE ANY REMAINING DISTURBED AREAS AND AREAS DISTURBED BY THE REMOVAL OF EROSION CONTROL FACILITIES WITH THE PERMANENT SEED MIXTURE, MULCH AT 3 TONS/ACRE, AND LIME AS PRESCRIBED.

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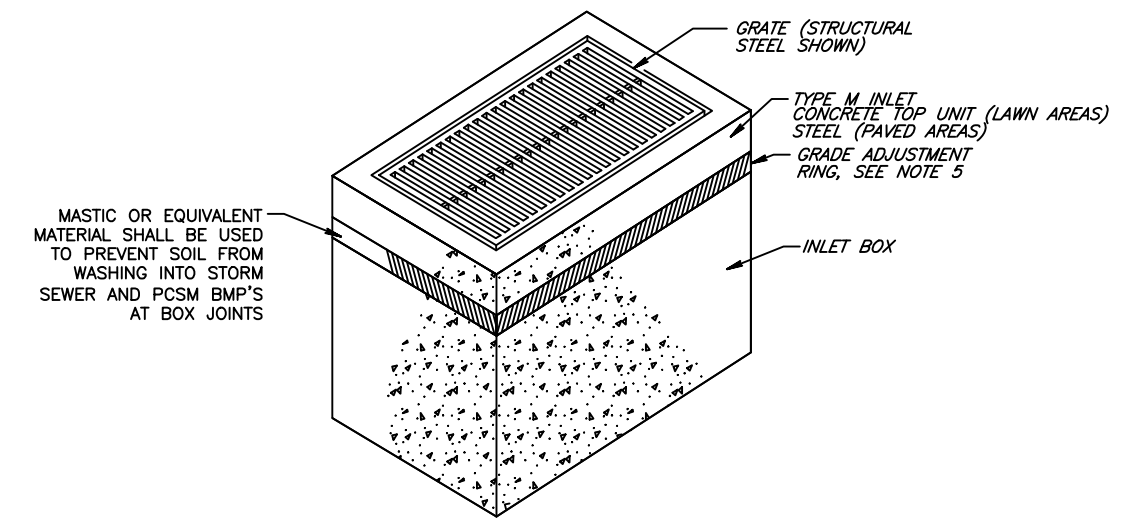
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 WAYNE, PA 19087

ROBERT M. LAMBERT, P.E.
 PE060743

EROSION AND SEDIMENTATION CONTROL PLAN

SHEET 6 of 17
 SCALE: 1" = 40'



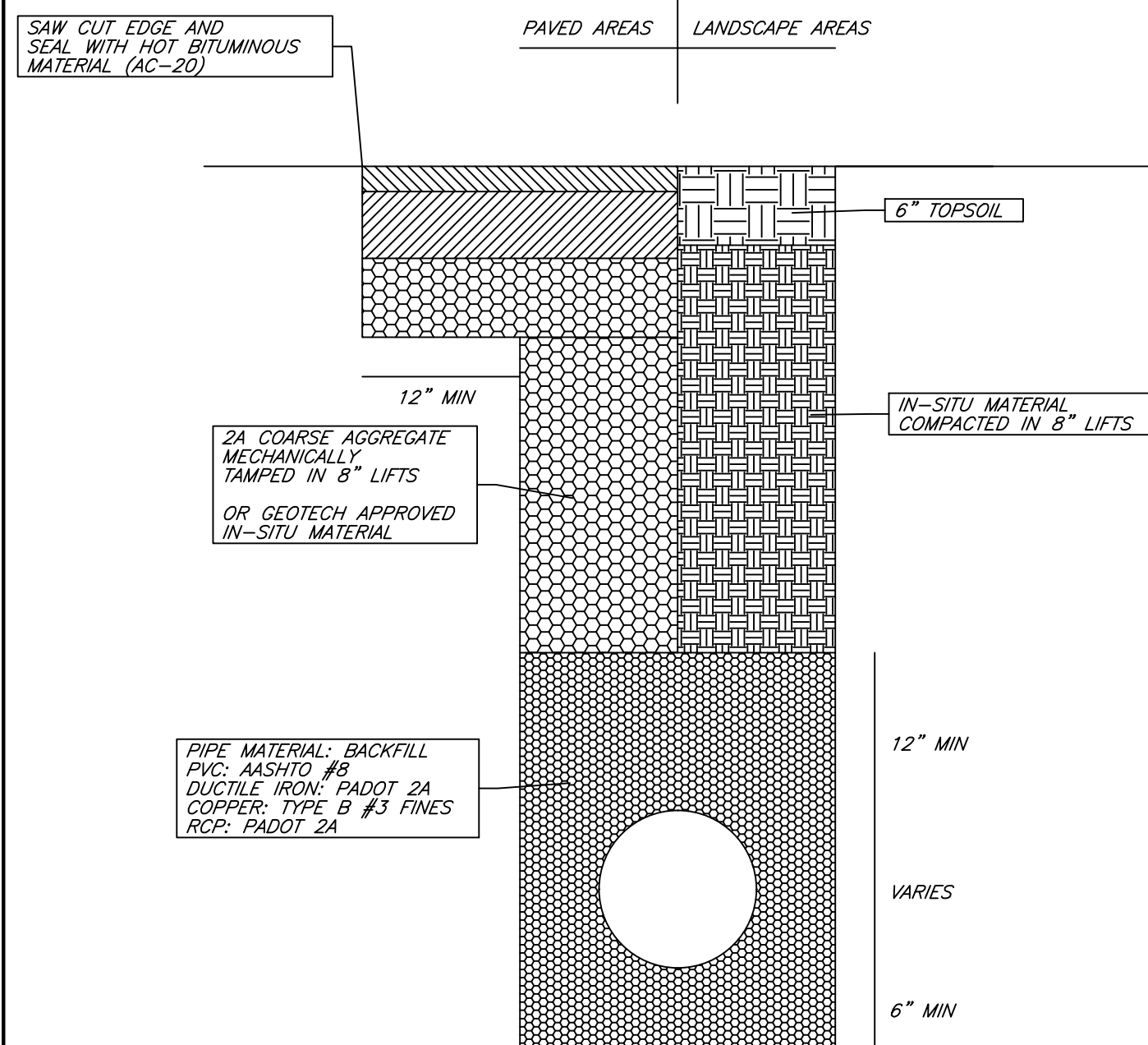
TYPE M INLET 2'x4'

NOTES

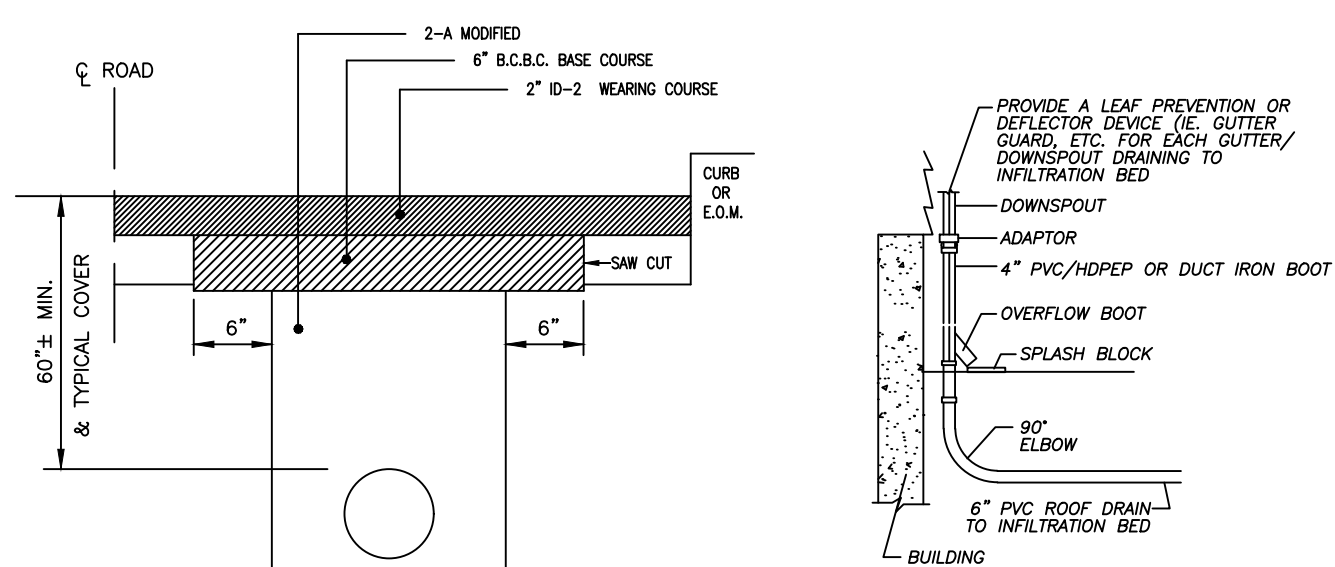
- CONSTRUCTION REQUIREMENTS**
- CONSTRUCT IN ACCORDANCE WITH: PENNDOT PUBLICATION 408 SPECIFICATIONS, SECTIONS 602, 606, 714, AND AS MODIFIED HEREIN.
 - MINIMUM CONCRETE CLASS: CAST-IN-PLACE CLASS A PRECAST CLASS AA
 - PROVIDE STEEL REINFORCEMENT IN ACCORDANCE WITH SEC. 709. PROVIDE MINIMUM YIELD STRENGTH OF 60,000 P.S.I.
 - CLEAR COVER FOR STEEL:
 - WALLS: CAST-IN PLACE 2" PRECAST
 - FOOTINGS: CAST-IN PLACE 2" (TOP BARS) 1" (SIDE COVER) 2" (TOP BARS) 1" (BOTTOM BARS)
 - SLABS: CAST-IN PLACE 2" (SIDE COVER) 1" (TOP & BOTTOM BARS)
 - THE SELECTION OF COMPONENTS TO ACHIEVE A SPECIFIED INLET ASSEMBLY IS THE CONTRACTOR'S RESPONSIBILITY.
 - USE PRECAST CONCRETE OR STEEL GRADE ADJUSTMENT RINGS WHEN REQUIRED (CONSTRUCTION PRODUCTS).
 - FOR WALL REINFORCEMENT, BOTH DIRECTIONS, USE 0.12 IN./FT. MIN. EACH WAY, EACH FACE.
 - FOR FOOTING REINFORCEMENT, TOP AND BOTTOM, USE #4 BARS AT 12" CENTERS EACH WAY OR 0.20 IN./FT.2 W.W.F.(6" MAX.SPACING).
 - ALL CONNECTIONS SHALL BE WATERTIGHT

INLETS

PAVED AREAS LANDSCAPE AREAS

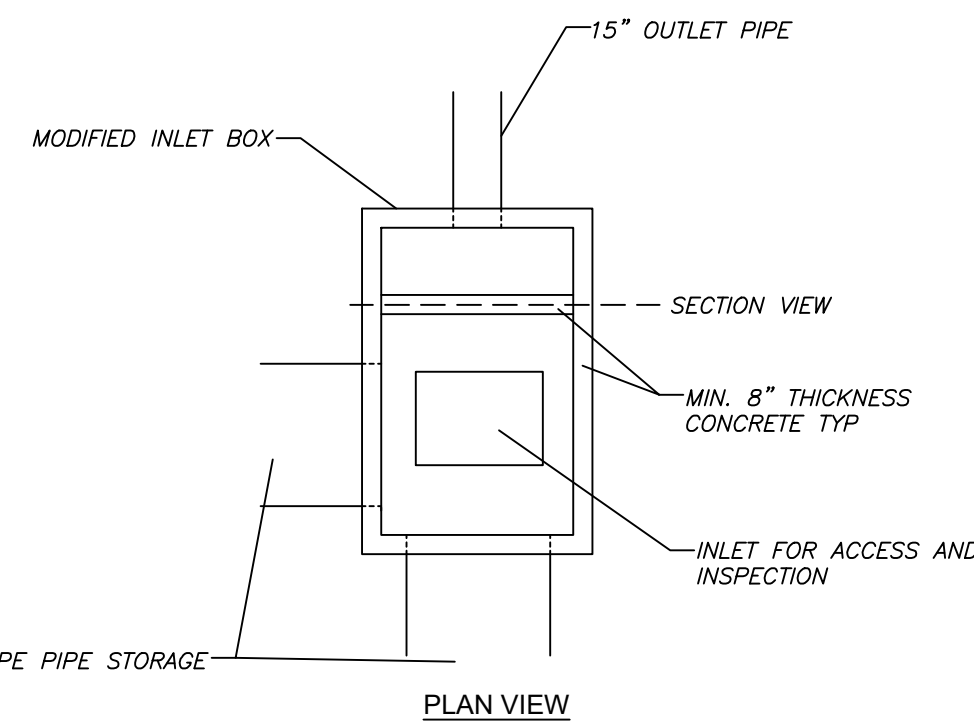


TYPICAL UTILITY TRENCH

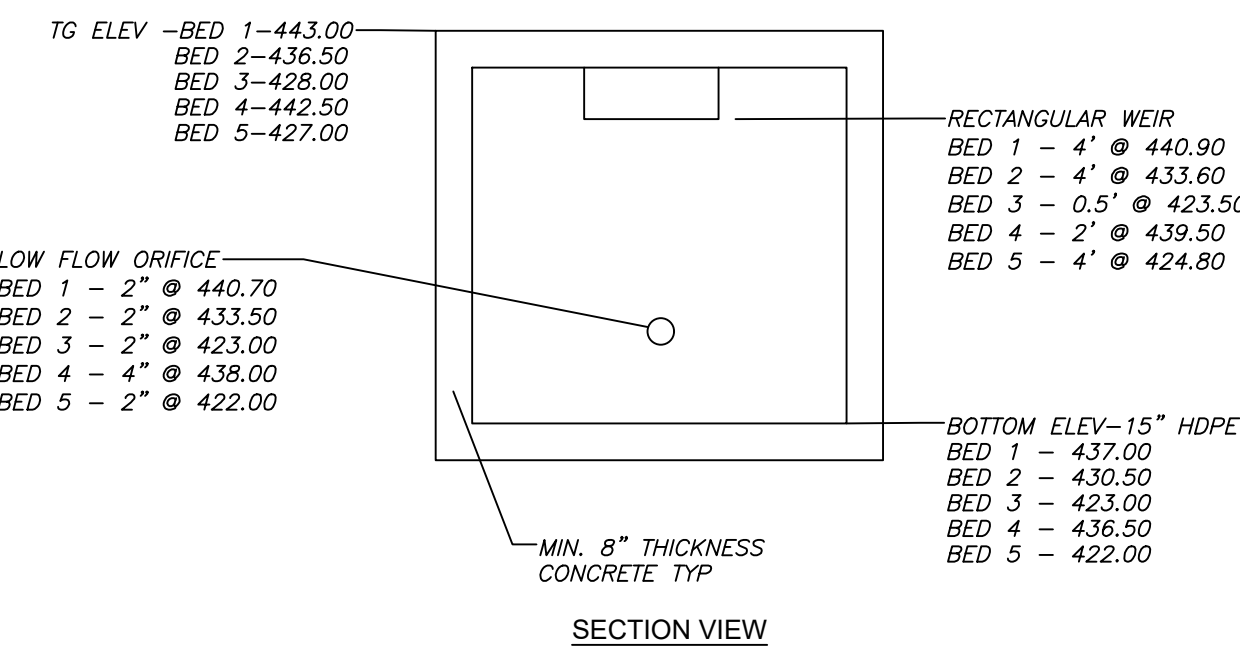


FLEXIBLE PAVEMENT RESTORATION

PROVIDE OVERFLOW PIPE AT DOWNSPOUTS DRAINING TO INFILTRATION BED



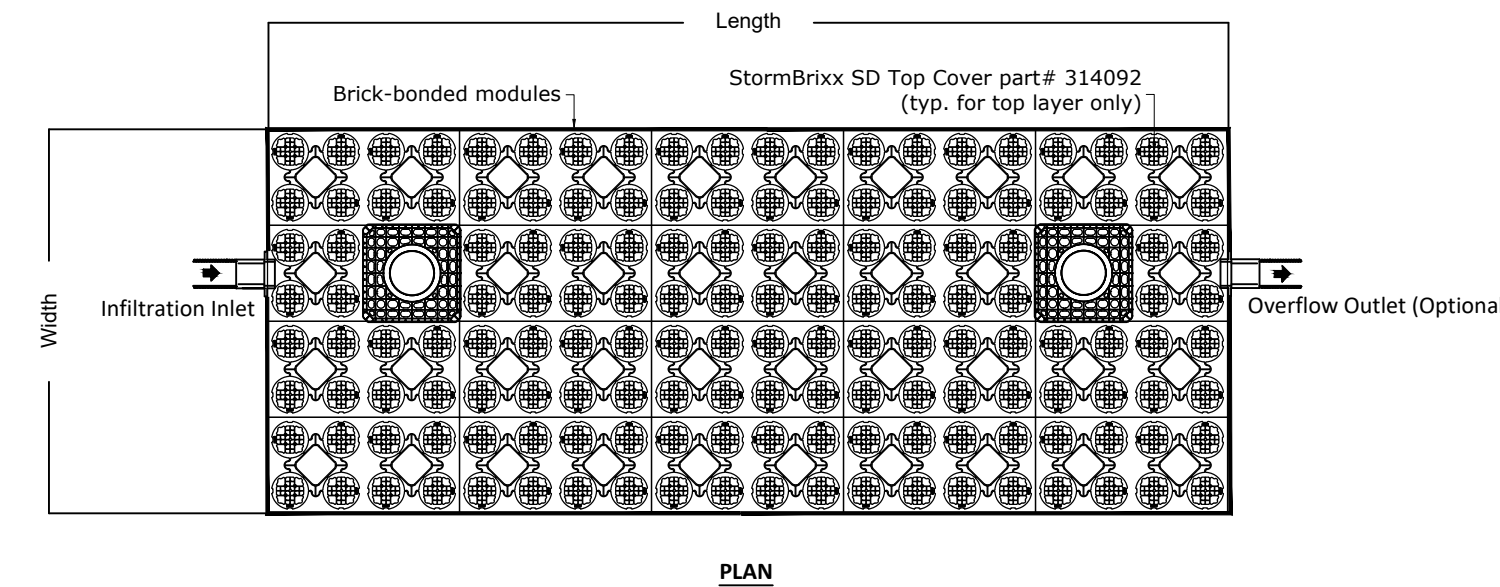
48" HDPE PIPE STORAGE



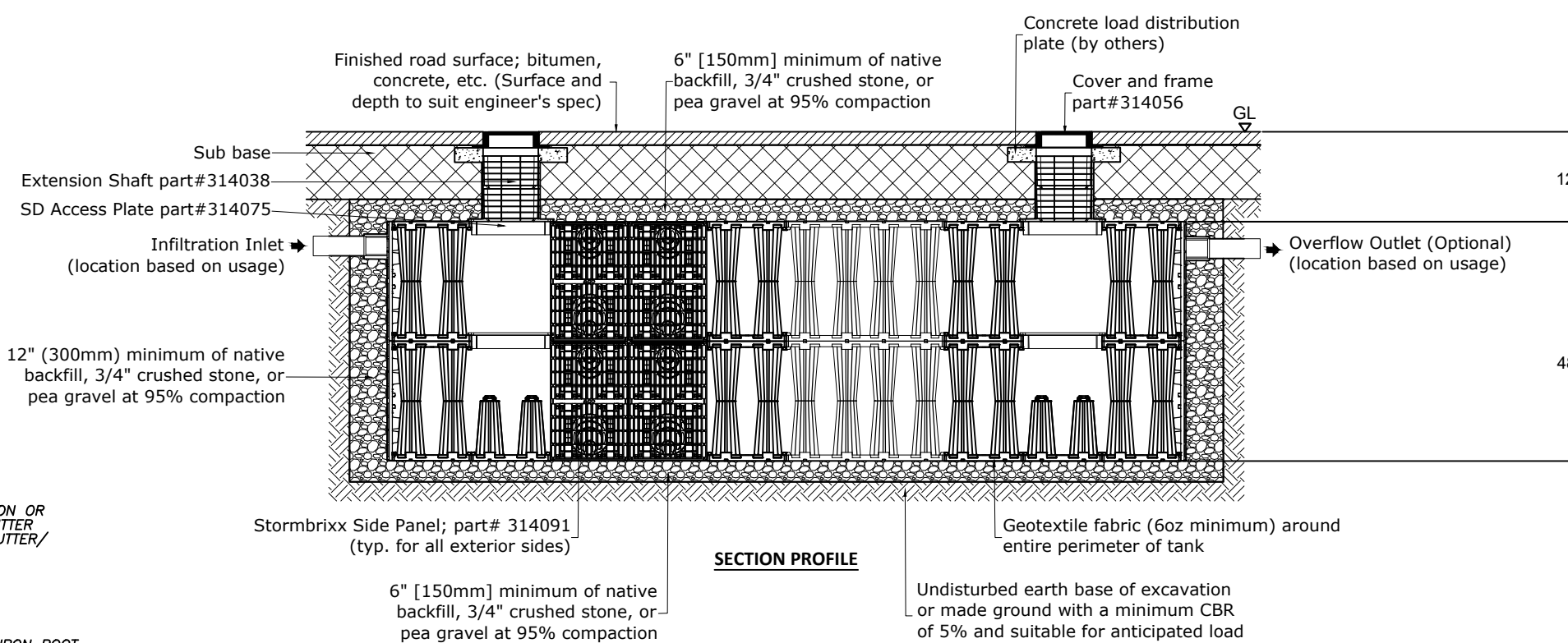
SECTION VIEW

OUTLET STRUCTURE DETAIL

- NOTE:
- ALL CONNECTIONS SHALL BE WATERTIGHT.
 - OUTLET STRUCTURES ARE TO BE HS-20 RATING.



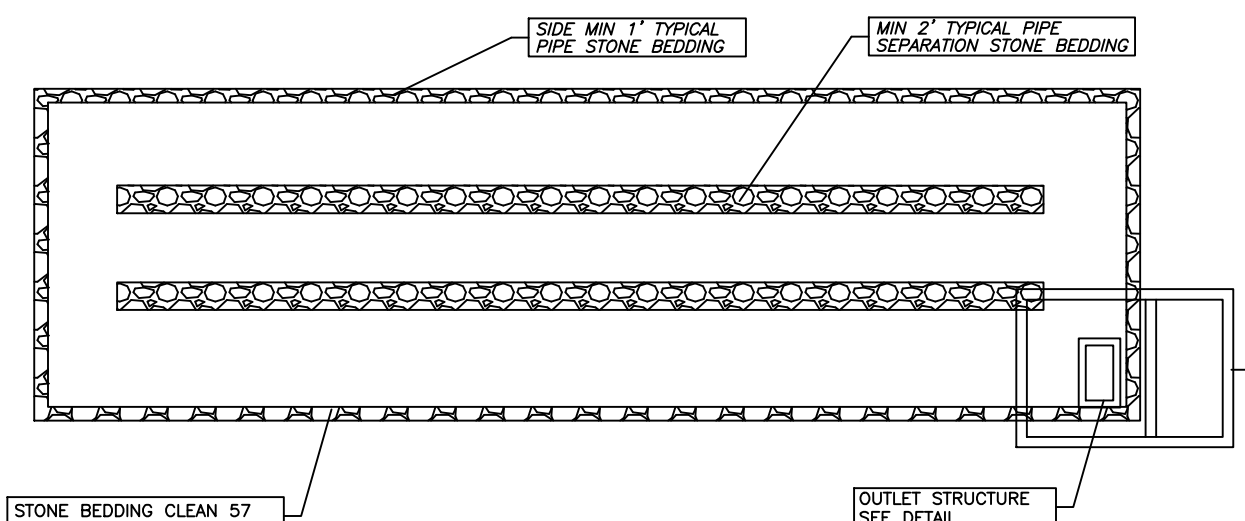
PLAN



SECTION PROFILE

STORMBRIXX SD TWO LAYERS DETAIL- BEDS 1,2,3 & 5

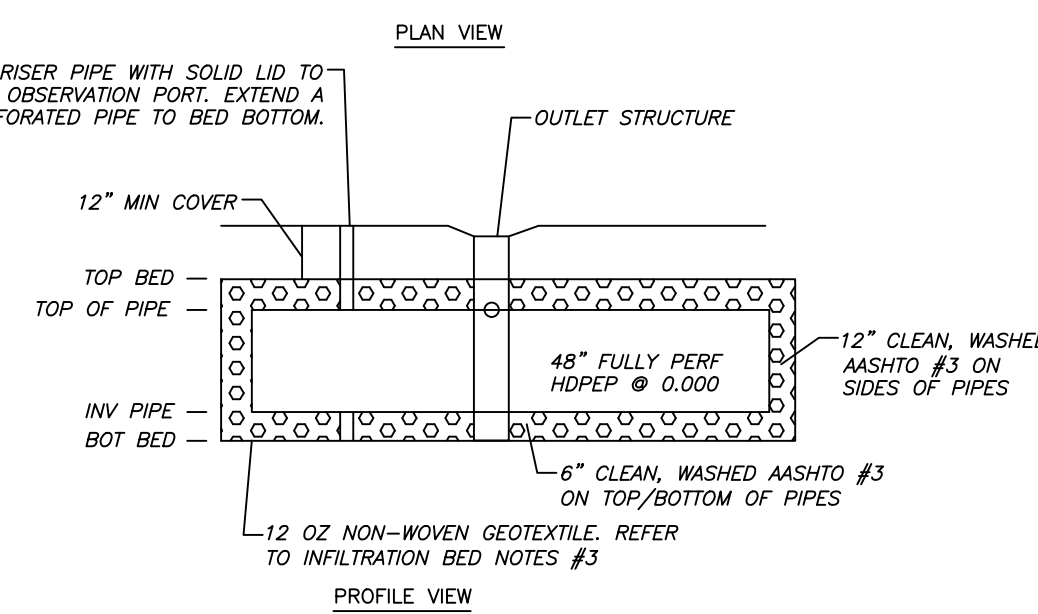
- BEDS 1, 2, 3, 5
- 6" STONE BEDDING BELOW PIPE
- 6" STONE COVERAGE ABOVE PIPE.



STORMWATER PIPE STORAGE NOTES

- BED 4 48" PIPE STORAGES SHALL BE FULLY PERFORATED HDPE.
- ALL CONVEYANCE PIPING SHALL BE SOLID HDPE WITH WATERTIGHT JOINTS.
- 6" STONE BEDDING BELOW PIPE.
- 6" STONE COVERAGE ABOVE PIPE.

PIPE STORAGE DETAIL



STORMWATER INFILTRATION BED 4 DETAIL

PIPE STORAGE CONSTRUCTION SEQUENCE

- EXCAVATE AREA TO PROPOSED UNCOMPACTED SUBGRADE.
- PLACE LINER PER MANUFACTURER SPECIFICATIONS ON ALL SIDES OF BED.
- CAREFULLY PLACE STONE BEDDING TO NOT DAMAGE LINER.
- CONSTRUCT PIPE SYSTEM AND OUTLET STRUCTURES.
- PLACE REMAINING STONE AROUND PIPES.
- PLACE TOP PORTION OF LINER.

SHORT TERM/ROUTINE MAINTENANCE OF PIPE STORAGE:

- MAINTENANCE ACTIVITIES TO BE DONE ANNUALLY AND WITHIN 48 HRS AFTER EVERY MAJOR STORM EVENT (>1 INCH RAINFALL DEPTH).
- KEEPING ALL DEBRIS, INCLUDING GRASS CLIPPINGS, LEAVES, AND MOTOR OIL CLEAR OF INLET AND OUTLET STRUCTURES.
- REMOVING ANY ACCUMULATED DEBRIS.
- IF STORM WATER FACILITIES DO NOT DRAIN WITHIN 48 HOURS AFTER THE LAST STORM EVENT, THEY SHALL BE INSPECTED AND THEN FIXED OR REPLACED AS DETERMINED NECESSARY.

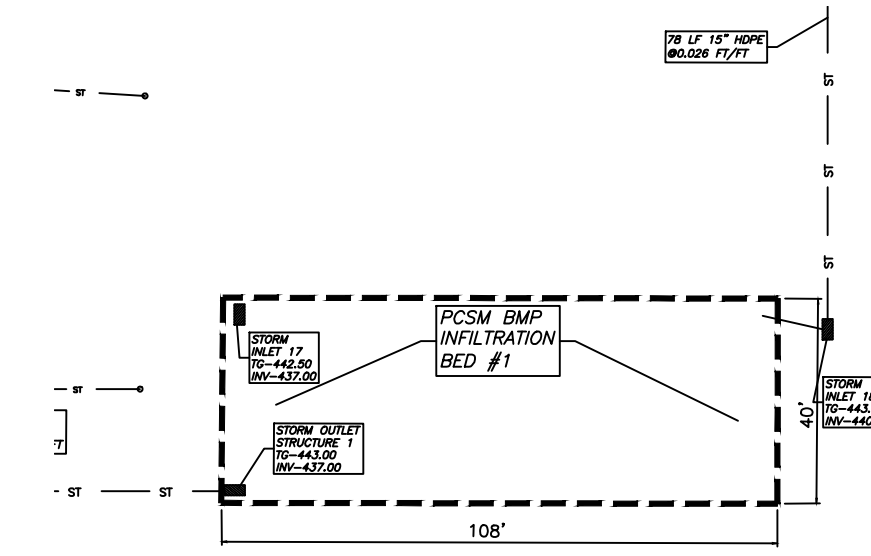
LONGTERM/ANON-ROUTINE MAINTENANCE OF PIPE STORAGE:

- INSECTS AND/OR ODOR BECOME PROBLEMS
 - STANDING WATER LASTING LONGER THAN 72 HRS
 - VISIBLE SIGNS OF SEDIMENT ACCUMULATION
- CLEAR INLETS/PIPES/STONE/PAVING OF DEBRIS, VACUUM, RECONSTRUCT AS NECESSARY.
 - REMOVE ACCUMULATED SEDIMENT/POLLUTANTS.
 - RECONSTRUCT.
 - PROVIDE FOR COMPLETION OF A WRITTEN REPORT DOCUMENTATION EACH INSPECTION AND ALL BMP REPAIR AND MAINTENANCE ACTIVITY.
 - CATCH BASINS AND INLETS SHOULD BE INSPECTED AND CLEANED AT LEAST TWO TIMES PER YEAR AND AFTER SIGNIFICANT STORM EVENTS.
 - IF STORM WATER FACILITIES DO NOT DRAIN AFTER STORM EVENTS, THEY SHALL BE INSPECTED AND THEN FIXED OR REPLACED AS DETERMINED NECESSARY. IN THE EVENT THE PIPE STORAGE FAILS THE SYSTEM WILL NEED TO BE COMPLETELY REMOVED AND REPLACED.

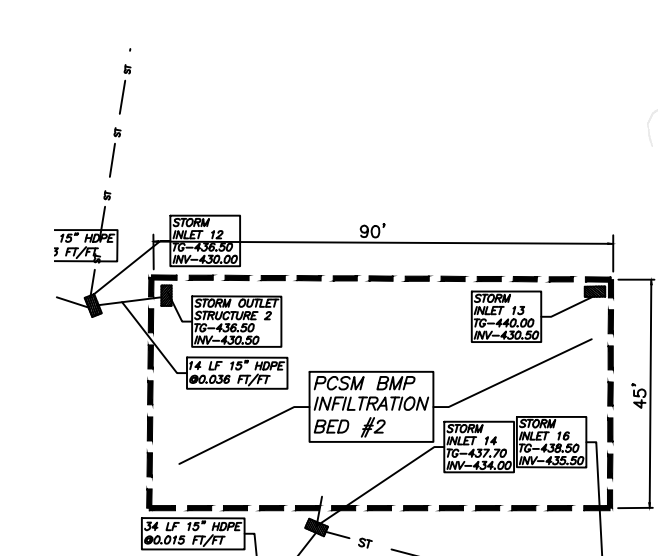
- SCARIFY BOTTOM AND SIDES OF BASIN, TAKING CARE NOT TO COMPACT SOIL.
- PIPE MUST HAVE PERFORATIONS NO LESS THAN 5/16" DIAMETER AND PROVIDE AN OPEN AREA OF NOT LESS THAN 3.31 SQUARE INCHES PER SQUARE FOOT OF PIPE SURFACE. THE FOLLOWING FORMULA DETERMINES THE # OF HOLES/LINEAR FOOT OF PIPE: $(13.24 * (\text{DIA OF PIPE IN FEET}) / (\text{HOLE SIZE IN INCHES}))^2$, SO FOR A 8" DIA PIPE THERE MUST BE AT LEAST 90 HOLES / LINEAR FOOT
- ENTIRE BED, SIDES TOP AND BOTTOM, SHALL BE WRAPPED IN SYNTHETIC INDUSTRIES NON-WOVEN #1201 OR ENGINEER APPROVED EQUAL. PROVIDE A MINIMUM 1" OVERLAP AT ALL SEAMS AND JOINTS. WHERE PROTRUSIONS OR PENETRATIONS OCCUR, GEOTEXTILE SHALL BE PERMANENTLY AFFIXED TO OBJECT.
- CARE SHOULD BE TAKEN IN THE PLACING OF STONE ATOP THE GEOTEXTILE SO AS TO AVOID TEARING OR RIPPING OF THE FABRIC. STONE SHOULD NOT BE DUMPED UNTIL A 6" LAYER OF STONE IS IN PLACE.
- PIPES CONNECTING INTO BEDS AT POINTS OTHER THAN DRAIN BASINS SHALL HAVE A STUB CONNECTION.

INFILTRATION BED NOTES

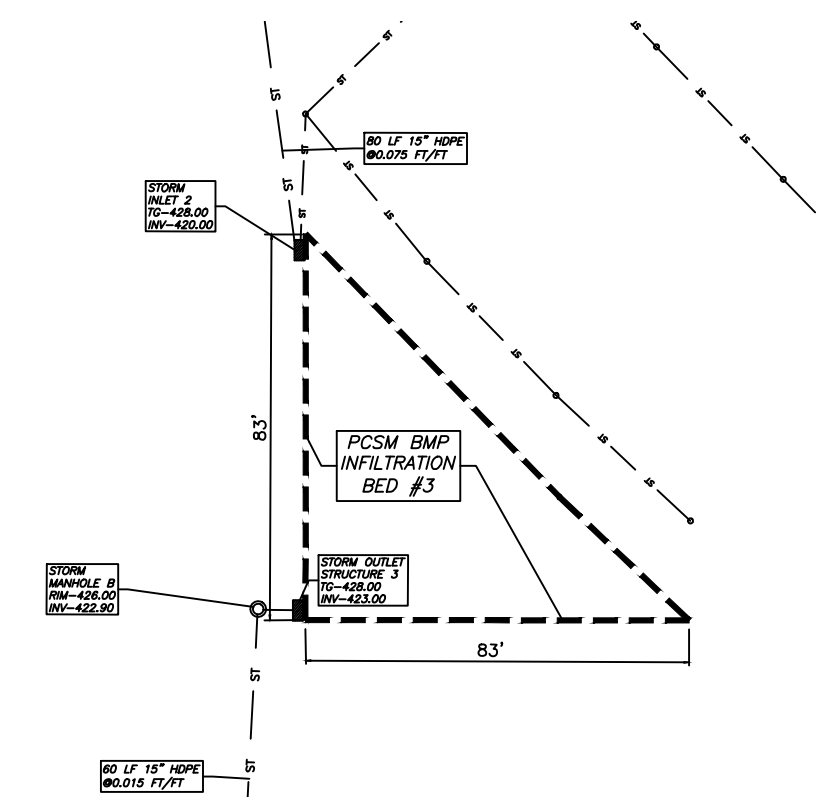
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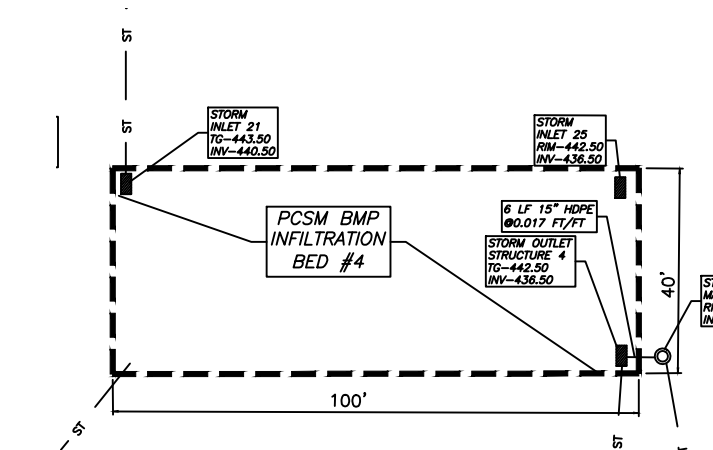
INFILTRATION BED #1 DETAIL



INFILTRATION BED #2 DETAIL



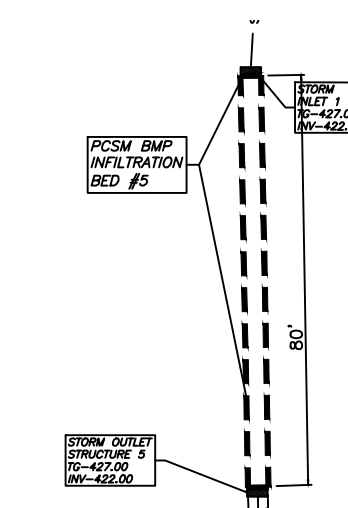
INFILTRATION BED #3 DETAIL



INFILTRATION BED #4 DETAIL

STORMBRIXX SYSTEM 108" x 40" x 4" VOLUME-16,416 CF

STORMBRIXX SYSTEM 90" x 45" x 5" VOLUME-19,237 CF



INFILTRATION BED #5 DETAIL

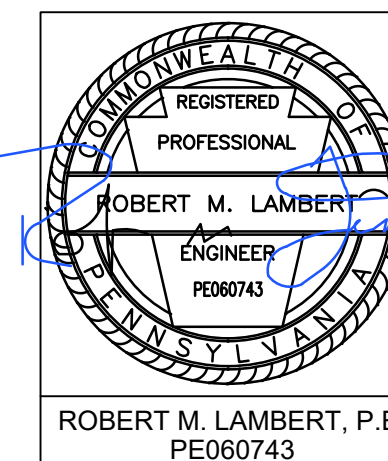
STORMBRIXX SYSTEM 4" x 80" x 4" VOLUME-1,216 CF

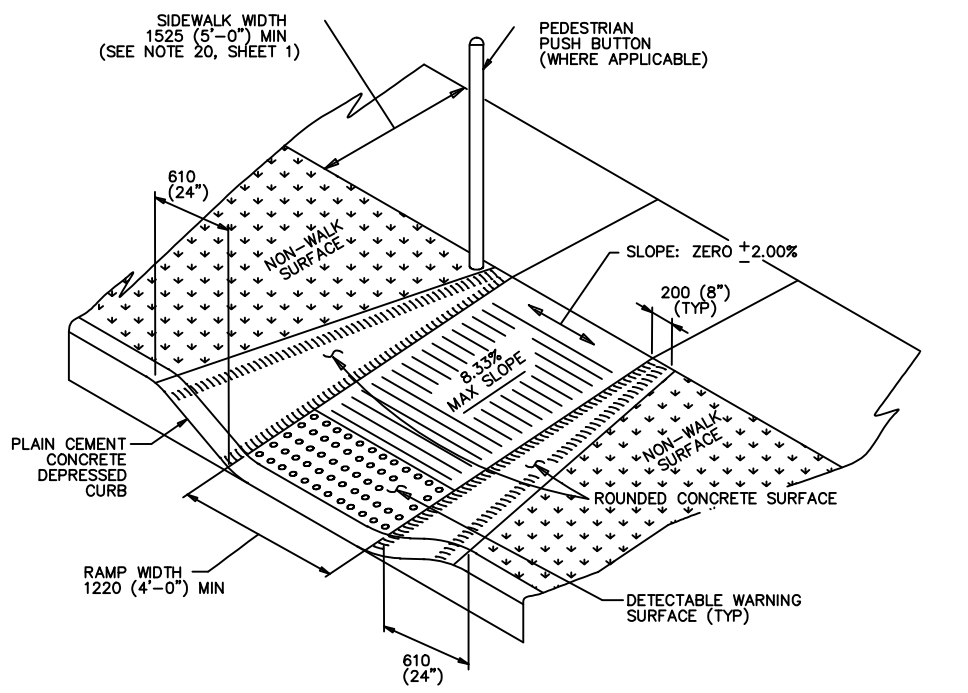
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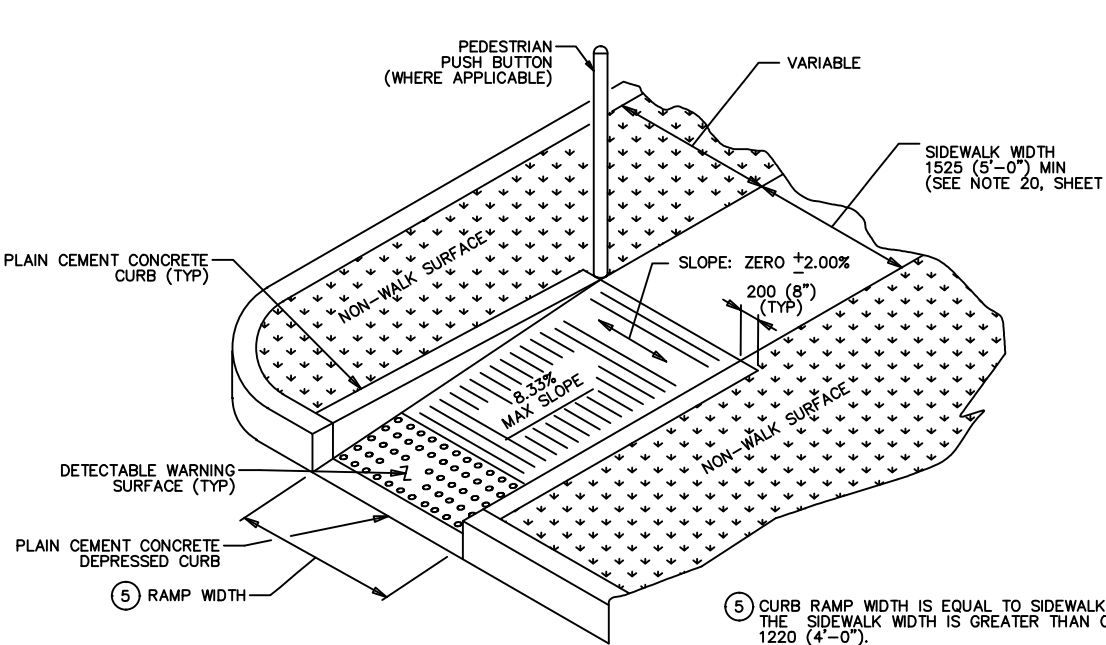
PLAN PREPARED FOR:
HAMILTON ESTATE
 204 & 228 STRAFFORD AVE
 18 FORREST LANE
 WAYNE, PA 19087
 RADNOR TOWNSHIP DELAWARE COUNTY PENNSYLVANIA

POST CONSTRUCTION STORMWATER DETAILS
 SHEET 7 of 17
 NO SCALE





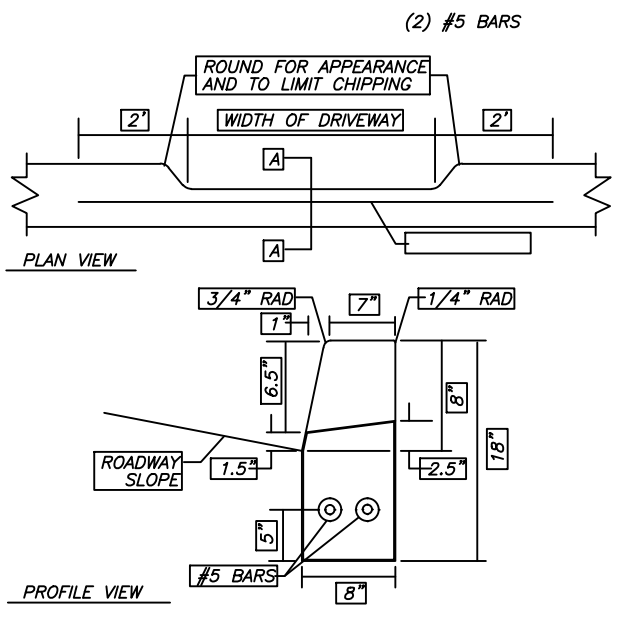
ALTERNATE TYPE 4A CURB RAMP (PERPENDICULAR)



TYPE 4 CURB RAMP (PARALLEL)

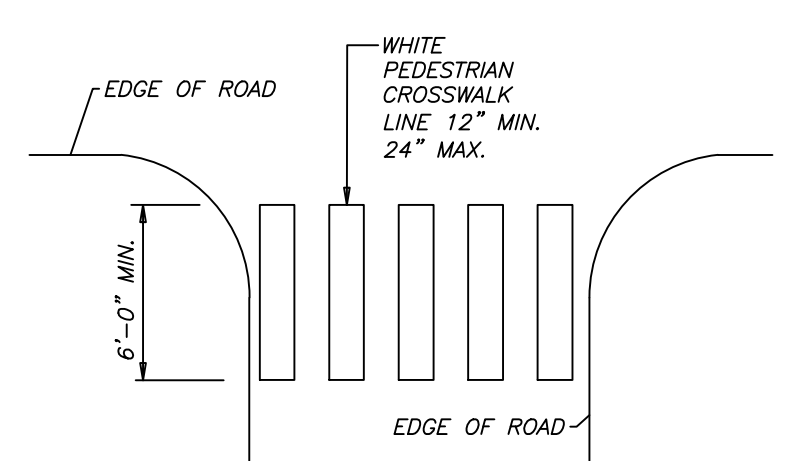
ADA HANDICAP ACCESSIBLE RAMPS

- NOTES**
1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION NOS. SECTIONS 305, 409, 430, 676 AND 694.
 2. PROVIDE EXPANSION JOINT MATERIAL 13 (1/2)" THICK WHERE CURB RAMP ADJOINS ANY RIGID PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF CURB.
 3. CONSTRUCT DIAGONAL CURB RAMPS WITH A 1220 (4'-0") CLEARSPACE OUTSIDE OR TRANSVERSE AT THE BOTTOM OF THE RAMP. A DIAGONAL CURB RAMP IS PROVIDED AT MARKED CROSSINGS AT 1220 (4'-0") CLEARSPACE IS LOCATED BETWEEN THE MARKINGS AND OUTSIDE OF THE TRAVEL LANES.
 4. PROVIDE SLIP RESISTANT TEXTURE ON CURB RAMP BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP. EXTEND TEXTURE THE FULL WIDTH AND LENGTH OF THE CURB RAMP INCLUDING FLARED SIDE RAMPS.
 5. MODIFY CONSTRUCTION DETAILS TO ADAPT DIMENSIONS TO EXISTING CURB HEIGHTS WHERE THE CURB IS LESS THAN THE STANDARD.
 6. CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON:
 7. IT MAY BE NECESSARY TO LIMIT THE RUN OF A PARALLEL OR PERPENDICULAR CURB RAMP IN ORDER TO AVOID CHASING GRADE INDEFINITELY WHEN TRAVELING THE HEIGHT OF CURB RAMP LENGTH NOT TO EXCEED 4000 (131-7"). ADJUST RAMP SLOPE AS NEEDED TO PROVIDE ACCESS TO THE MAXIMUM EXTENT POSSIBLE.
 8. THE DETAILS DEPICT PEDESTRIAN PUSH BUTTON POLES TO ILLUSTRATE THE PREFERRED PLACEMENT OF PEDESTRIAN PUSH BUTTONS. PEDESTRIAN PUSH BUTTONS ARE TO BE INSTALLED WHERE APPLICABLE.
 9. CONSTRUCT BUILT-UP CURB RAMP OF BITUMINOUS MATERIAL AS INDICATED.
 10. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. US CUSTOMARY UNITS IN () PARENTHESES.
 11. ALIGN DETECTABLE WARNING DOMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF THE RAMP AND PERPENDICULAR TO CURB.
 12. PROVIDE DETECTABLE WARNING SURFACES (DWS) 610 (24") MINIMUM (IN THE DIRECTION OF PEDESTRIAN TRAVEL) ACROSS FULL WIDTH OF RAMP AT THE GRADE BREAK NEAR STREET EDGE. PROVIDE DWS THAT CONTRAST VISUALLY WITH ADJACENT WALKWAY SURFACES. EITHER LIGHT-OR-GRADE OR DARK-OR-LIGHT FOR THE FULL WIDTH OF RAMP.
 13. FOR NEW CONSTRUCTION, DO NOT EXCEED 2.00% CROSS SLOPE ON THE CURB RAMP OR ACCESSIBLE ROUTE.
 14. FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARE SLOPES WITH THE FLATTEST SLOPE POSSIBLE. THE SLOPES INDICATED IN THE DETAILS SHOW THE MAX SLOPE ALLOWED. SLOPES SHALL NOT BE ADJUSTED UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS AS APPLICABLE. SHALL NOT BE ADJUSTED UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS AS APPLICABLE.
 15. THE IMMEDIATE ADJOINING SURFACE AT THE BOTTOM AND TOP OF CURB RAMPS IS NOT TO EXCEED ROADWAY PROFILE SLOPE WHEN LOCATED ADJACENT TO THE ROADWAY. IN AREAS WHERE THE ADJOINING SURFACE IS NOT ADJACENT TO THE ROADWAY, THE LONGITUDINAL SLOPE SHALL NOT EXCEED 1.00% TO THE ROADWAY. THE MAXIMUM SLOPE IS 2.00% FOR LOCATIONS THAT REQUIRE A TURNING MANUEVER. THE BOTTOM OF THE CURB RAMP AND ADJOINING ROAD SURFACE IS NOT TO EXCEED AN ALGEBRAIC DIFFERENCE OF FLOOR. SEE SHEET 8 FOR DETAILS.
 16. THE CONSTRUCTION STANDARDS DEPICTED ARE MOST APPROPRIATE FOR NEW CONSTRUCTION. ALL CONSTRUCTION MUST MEET THE STANDARDS CONTAINED HEREIN UNLESS OTHERWISE NOTED OR DIRECTED.
 17. ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE. THEREFORE, THE LENGTH OF RAMP IS NOT SOLELY DEPENDANT ON THE HEIGHT OF CURB. (FOR EXAMPLE, A 100 (6") CURB DOES NOT NECESSARILY MEAN A RAMP LENGTH OF 1000 (30-0") FOR A 12:1 (1:5.3) SLOPE.
 18. SIDEWALK WIDTH MAY BE REDUCED TO 1220 (4'-0") WHEN PASSING AREAS 1525 X 1525 (10'-0" X 5'-0") ARE PROVIDED EVERY 15 METERS (50 FEET) FOR A 12:1 (1:5.3) SLOPE.
 19. THE TRAVEL LANE IS DEFINED BY THE OUTSIDE EDGE OF THE WHITE PAVEMENT MARKING LINE. IF A WHITE PAVEMENT MARKING LINE DOES NOT EXIST, THE TRAVEL LANE IS DEFINED BY THE CONTRACT DOCUMENTS.
 20. DEPRESSED CURB FOR CURB RAMPS MUST BE FLUSH TO ADJACENT ROADWAY. TOP OF ROAD ELEVATIONS AT THE FLUM LINE SHALL BE GRADED TO ENSURE POSITIVE DRAINAGE AND PREVENT POONDING.

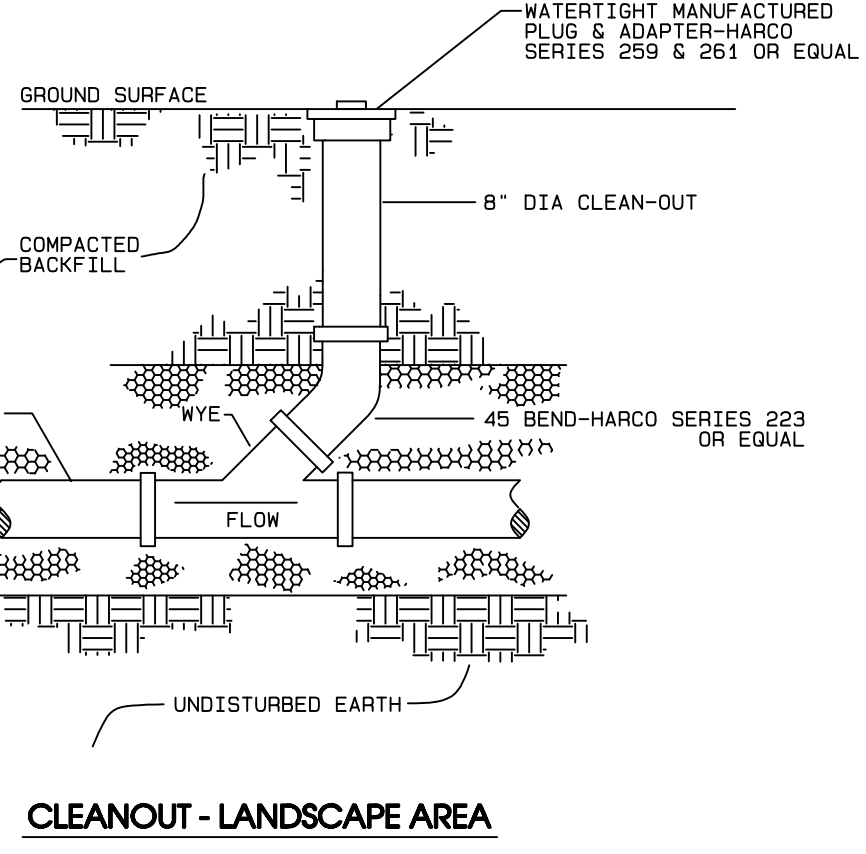


DEPRESSED CURB FOR DRIVES

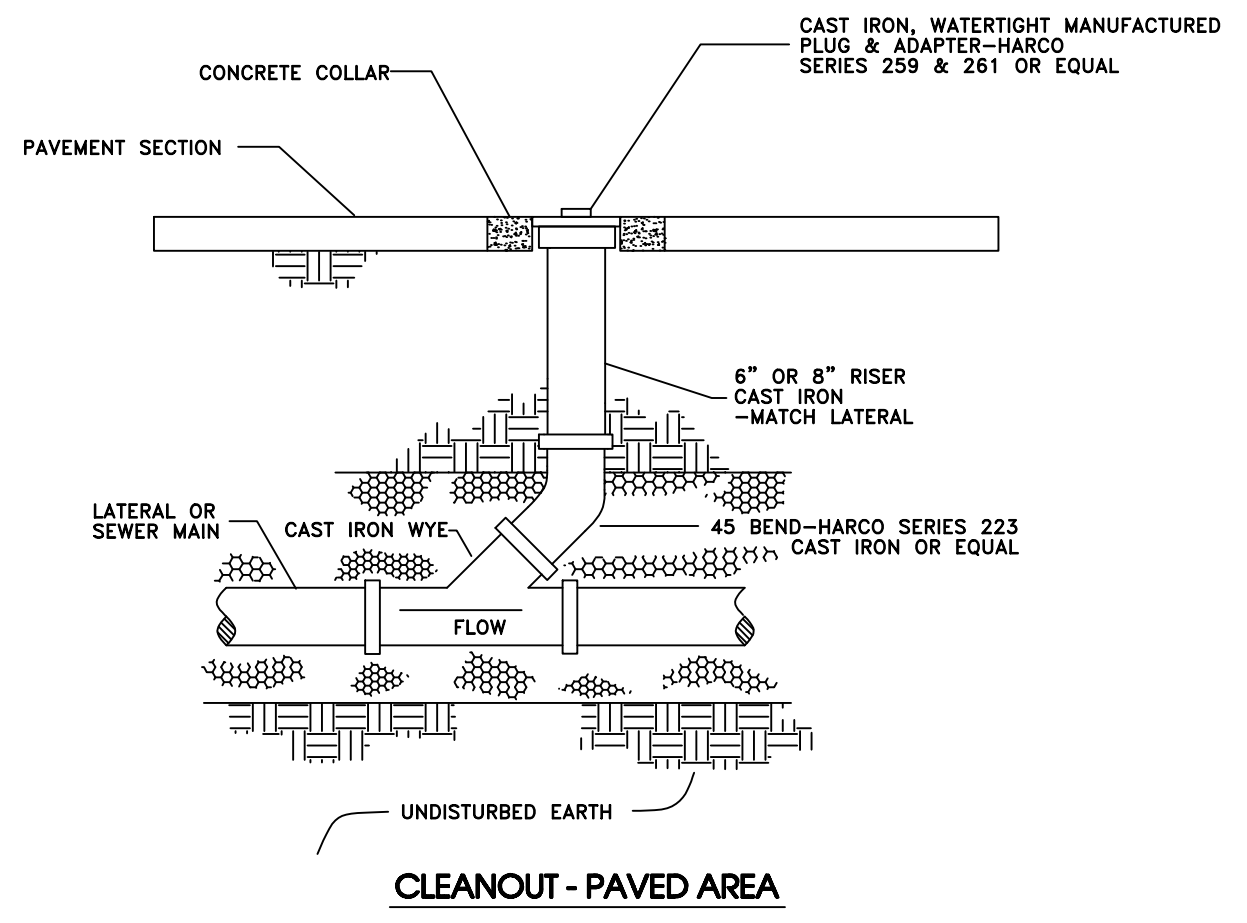
TYPICAL CURB DETAIL



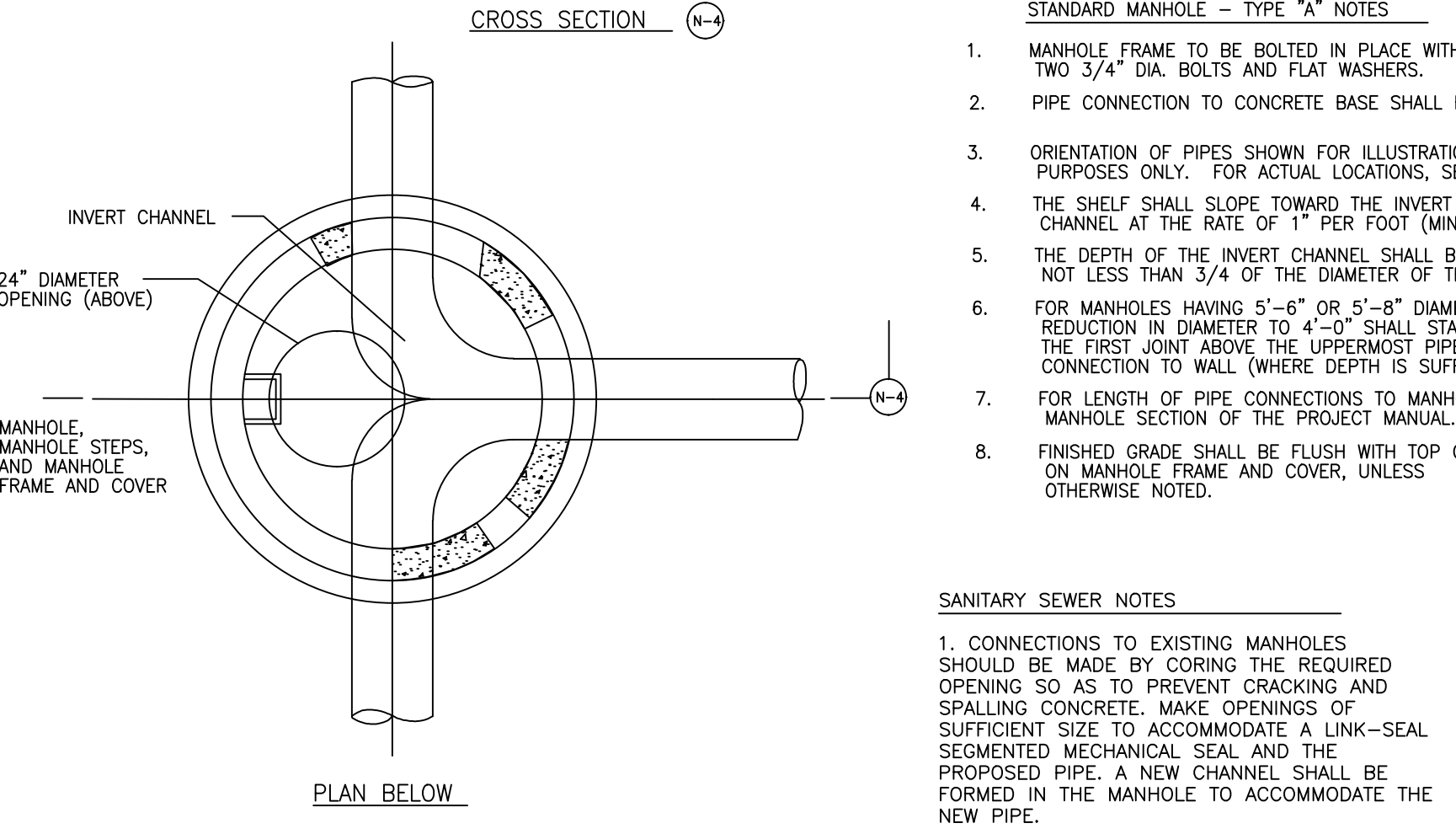
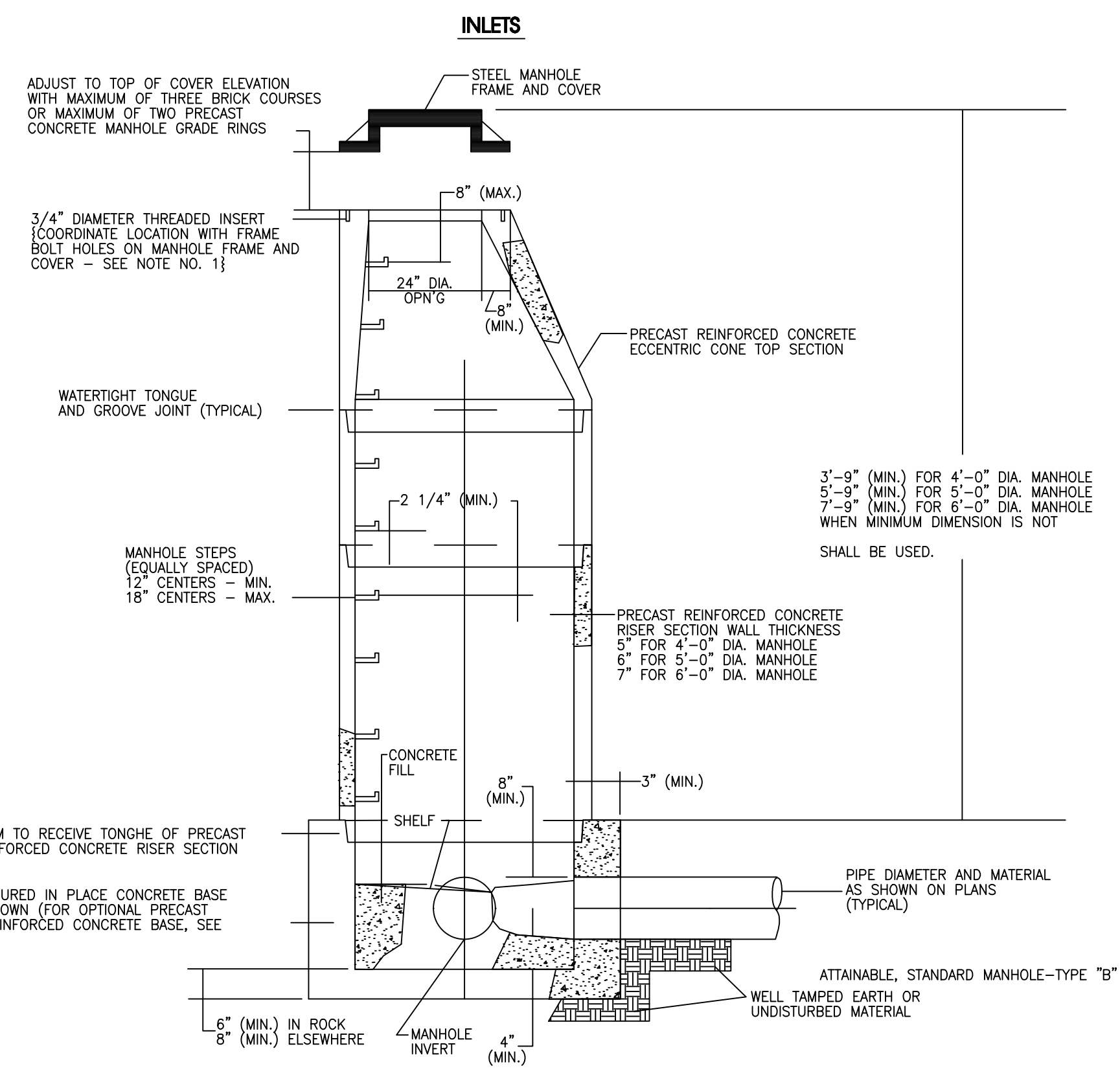
CROSSWALK DETAIL



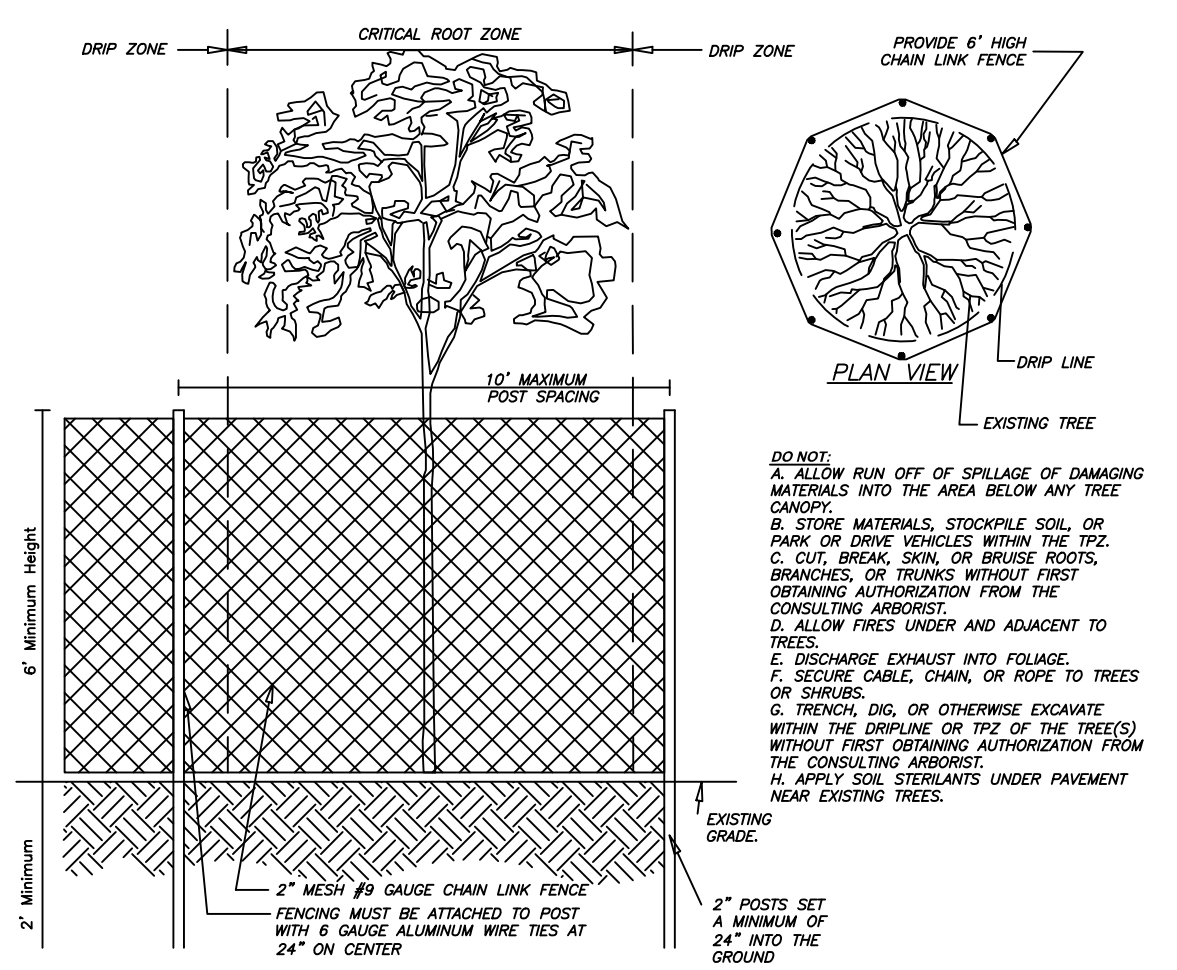
CLEANOUT - LANDSCAPE AREA



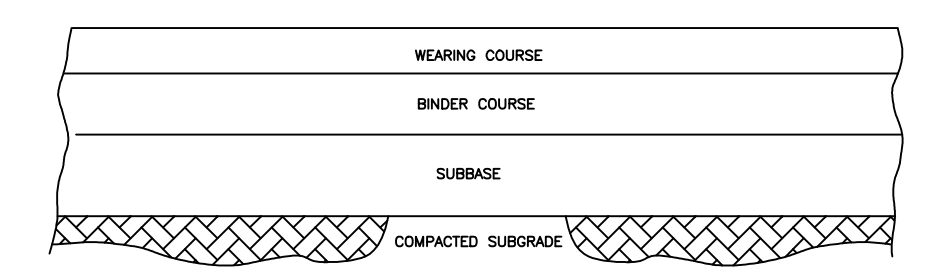
CLEANOUT - PAVED AREA



STORM AND SANITARY PRE-CAST MANHOLE



TREE PROTECTION FENCING



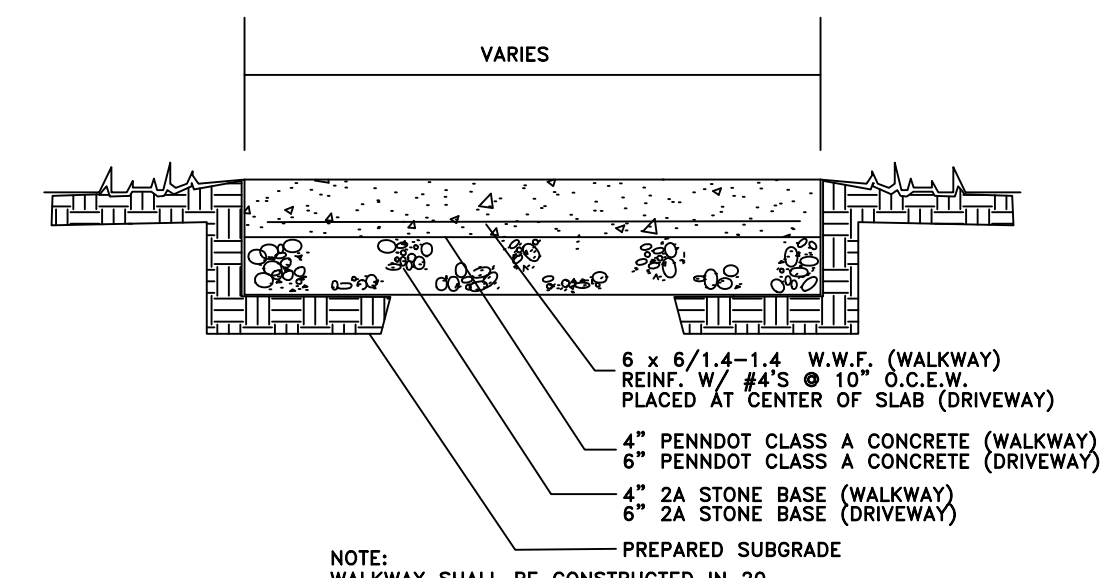
REQUIRED BITUMINOUS PAVEMENT SECTION

DEPTH	LOCATION	
	DRIVE A AND B	UNIT DRIVEWAYS
WEARING:	2"	2"
BINDER:	2" (10-2 OR FB-1)	2" (10-2 OR FB-1)
SUBBASE:	6" PA 4A 2" SCREENINGS -VIBRATORY COMPACTED TO FILL VOIDS	6" PA 4A

BITUMINOUS PAVEMENT SPECIFICATIONS, ALL SECTIONS, APPLICABLE

WEARING COURSE	SUPERPAVE, ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, 3 TO <10 MILLION ESALS, 9.5 MM MIX, SRL-H
BINDER COURSE	SUPERPAVE, ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, 10 TO <30 MILLION ESALS, 25.0 MM MIX, SRL-H

NOTE: CONSTRUCT COURSE AGGREGATE SUBBASE AND BITUMINOUS PAVEMENT IN ACCORDANCE WITH APPLICABLE SECTIONS OF PDOT PUB. 408.



CONCRETE PAVEMENT (WALKWAY AND DRIVEWAY)

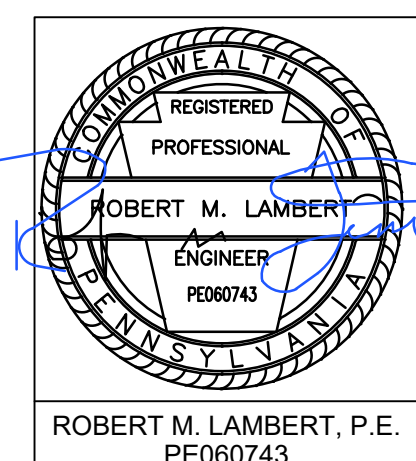
- STANDARD MANHOLE - TYPE "A" NOTES**
1. MANHOLE FRAME TO BE BOLTED IN PLACE WITH TWO 3/4" DIA. BOLTS AND FLAT WASHERS.
 2. PIPE CONNECTION TO CONCRETE BASE SHALL BE WATERTIGHT.
 3. ORIENTATION OF PIPES SHOWN FOR ILLUSTRATION PURPOSES ONLY. FOR ACTUAL LOCATIONS, SEE PLANS.
 4. THE SHELF SHALL SLOPE TOWARD THE INVERT CHANNEL AT THE RATE OF 1" PER FOOT (MINIMUM).
 5. THE DEPTH OF THE INVERT CHANNEL SHALL BE NOT LESS THAN 3/4 OF THE DIAMETER OF THE PIPE.
 6. FOR MANHOLES HAVING 5'-6" OR 5'-8" DIAMETER BASE, REDUCTION IN DIAMETER TO 4'-0" SHALL START AT THE FIRST JOINT ABOVE THE UPPERMOST PIPE CONNECTION TO WALL (WHERE DEPTH IS SUFFICIENT).
 7. FOR LENGTH OF PIPE CONNECTIONS TO MANHOLES, SEE MANHOLE SECTION OF THE PROJECT MANUAL.
 8. FINISHED GRADE SHALL BE FLUSH WITH TOP OF COVER ON MANHOLE FRAME AND COVER, UNLESS OTHERWISE NOTED.

- SANITARY SEWER NOTES**
1. CONNECTIONS TO EXISTING MANHOLES SHOULD BE MADE BY CORING THE REQUIRED OPENING SO AS TO PREVENT CRACKING AND SPALLING CONCRETE. MAKE OPENINGS OF SUFFICIENT SIZE TO ACCOMMODATE A LINK-SEAL SEGMENTED MECHANICAL SEAL AND THE PROPOSED PIPE. A NEW CHANNEL SHALL BE FORMED IN THE MANHOLE TO ACCOMMODATE THE NEW PIPE.

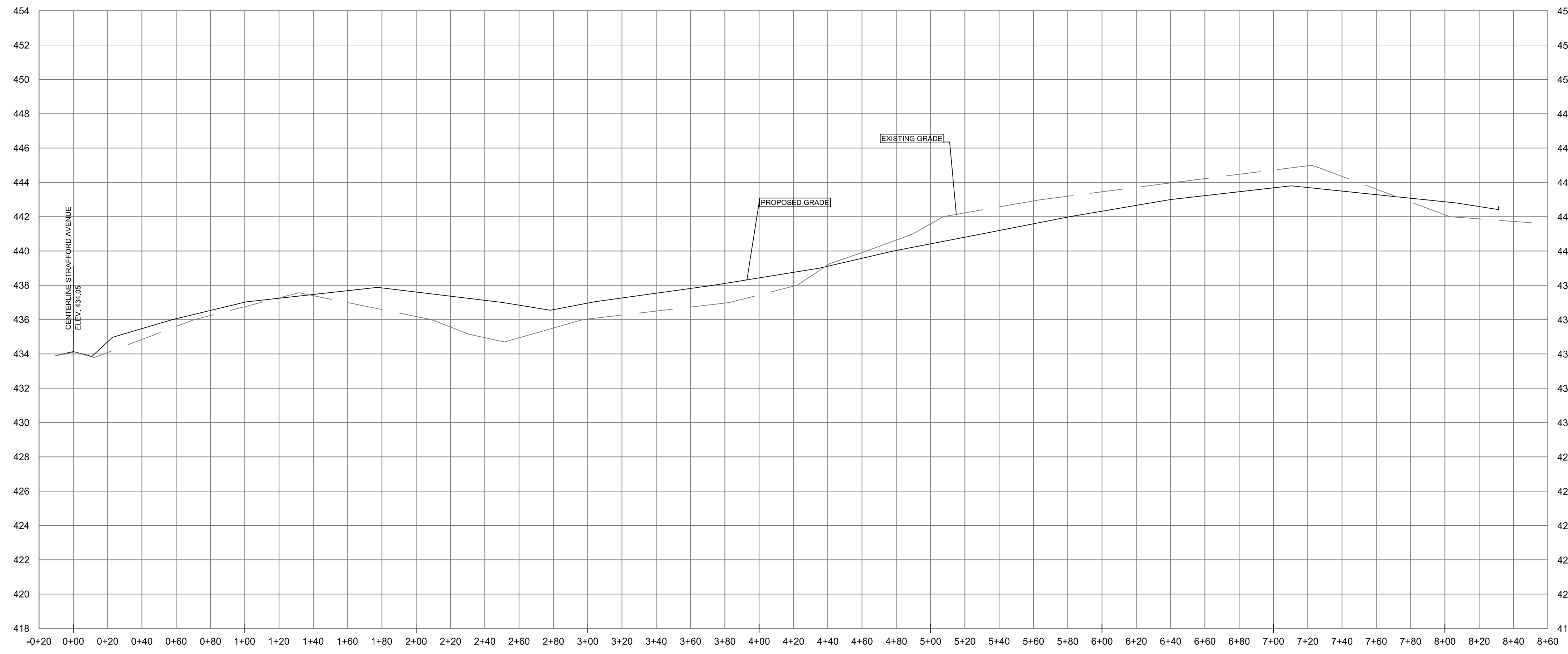
2.	1/31/24	REVISED PER TOWNSHIP REVIEW LETTERS & 1/4/24 PC MTG
1.	9/15/23	REVISED PER TOWNSHIP REVIEW LETTERS DATED 8/1/23
NUM.	DATE	REVISION

PLAN PREPARED BY:
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DATE: MAY 18, 2023



CONSTRUCTION DETAILS
SHEET 8 of 17
NO SCALE

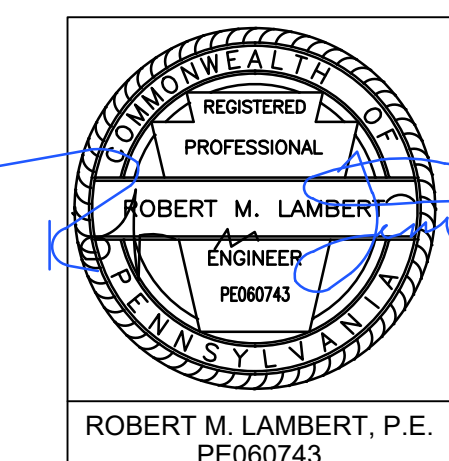


DRIVE A PROFILE

NUM.	DATE	REVISION
2.	1/31/24	REVISED PER TOWNSHIP REVIEW LETTERS & 1/4/24 PC MTG
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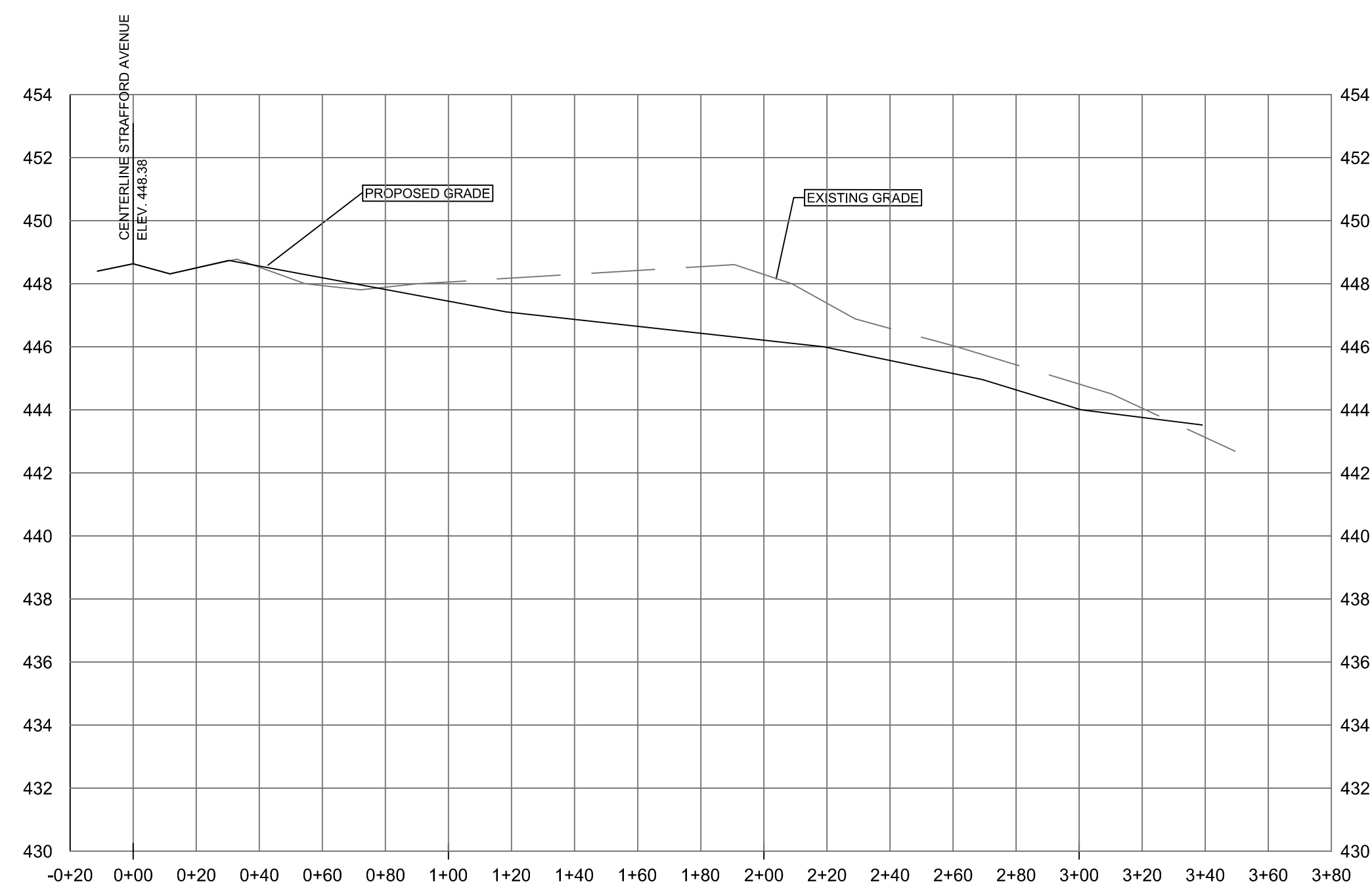
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PROFILE SHEET

SHEET 10 of 17

SCALE: 1" = 40'

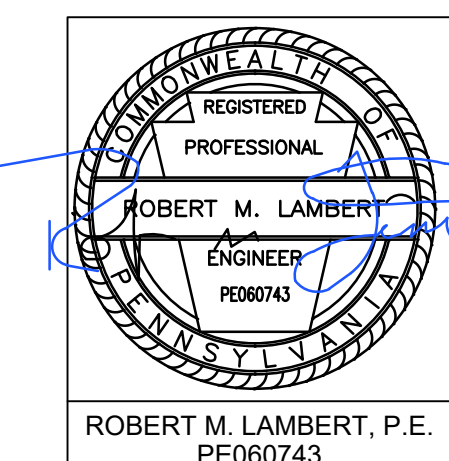


DRIVE B PROFILE

2.	1/31/24	REVISED PER TOWNSHIP REVIEW LETTERS & 1/4/24 PC MTG
1.	9/15/23	REVISED PER TOWNSHIP REVIEW LETTERS DATED 8/1/23
NUM.	DATE	REVISION

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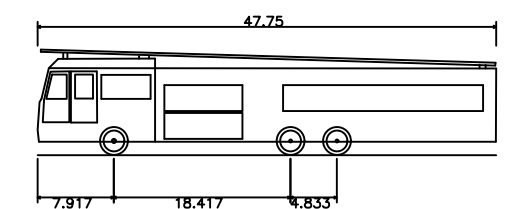
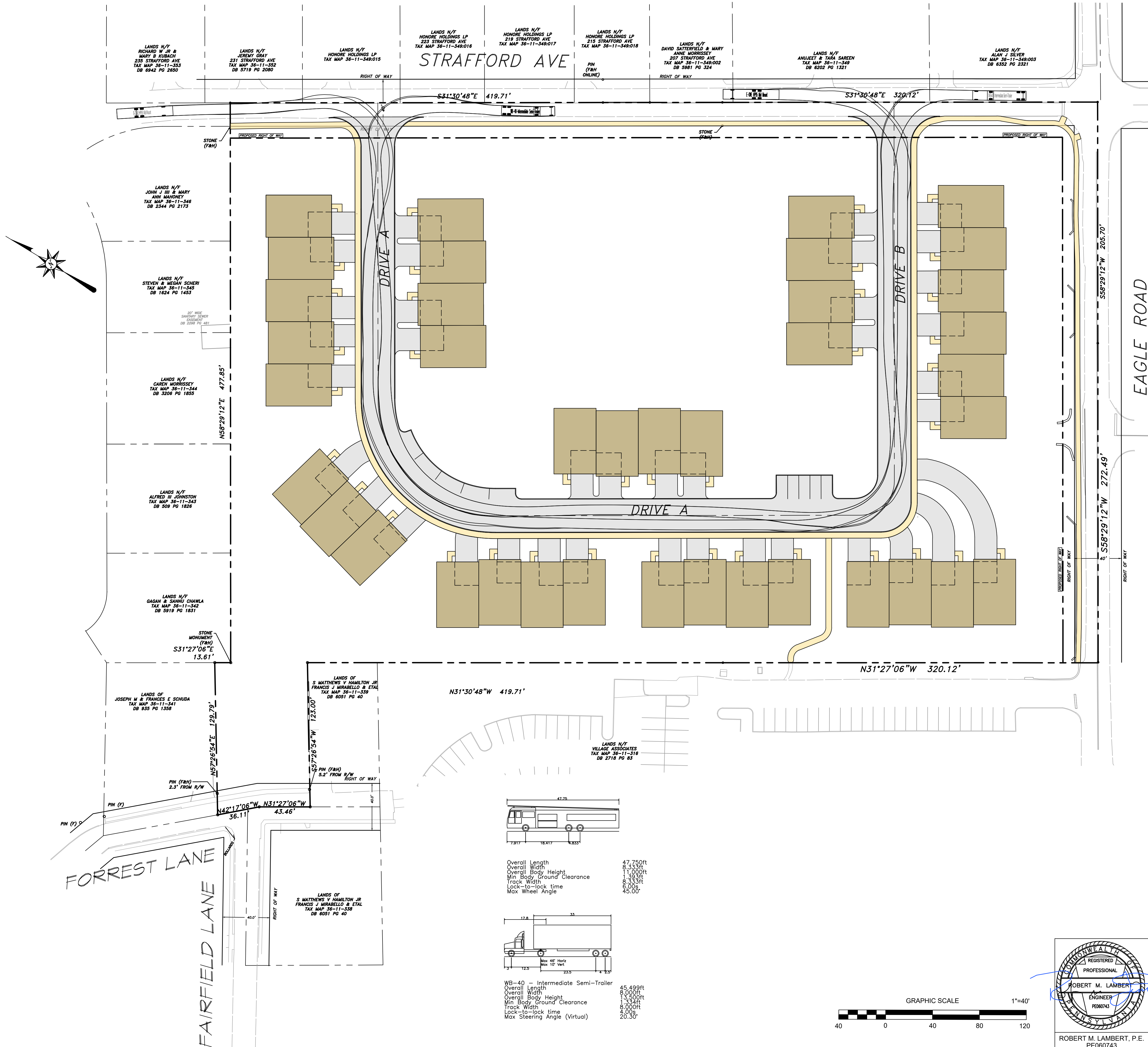
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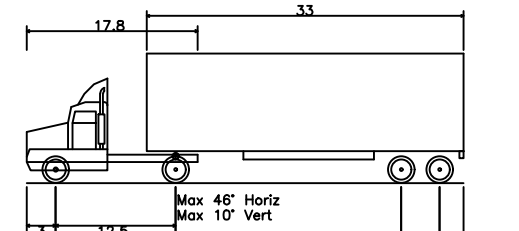
PROFILE SHEET

SHEET 11 of 17

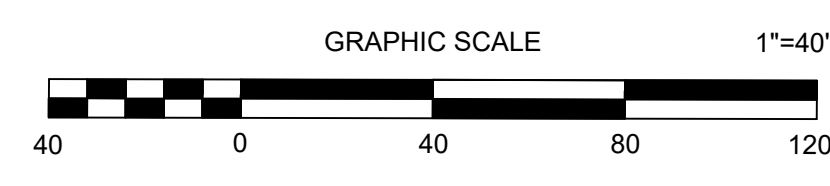
SCALE: 1" = 40'



Overall Length 47.750ft
 Overall Width 7.917ft
 Overall Body Height 16.417ft
 Min Body Ground Clearance 6.333ft
 Track Width 6.333ft
 Lock-to-lock time 6.00s
 Max Wheel Angle 45.00°



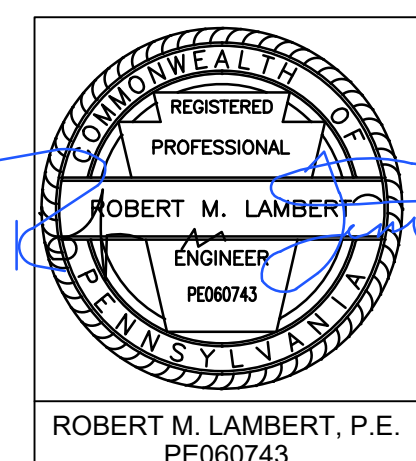
WB-40 - Intermediate Semi-Trailer
 Overall Length 45.499ft
 Overall Width 8.000ft
 Overall Body Height 13.500ft
 Min Body Ground Clearance 1.334ft
 Track Width 8.000ft
 Lock-to-lock time 4.00s
 Max Steering Angle (Virtual) 20.30°



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**TRUCK TURNING
 TEMPLATE PLAN**

**SHEET
 12 of 17**
 SCALE: 1" = 40'