

**SITE DATA**

OWNER/APPLICANT: FARRELL PROPERTIES, LP.  
C/O FARRELL CAROTA  
FARRELL CAROTA LANDSCAPING  
242 MEETING HOUSE LANE  
MERION, PA 19066  
(610) 667-4090

SOURCE OF TITLE: D.B. 5633 PG. 975

TAX MAP: BLOCK 61 UNIT 10

TAX PARCEL NO.: 58-00-14662-00-4

SINK HOLE POTENTIAL: ZONE 1  
HIGH PROBABILITY FOR SUBSIDENCE  
ACTIVITY AND SINKHOLE DEVELOPMENT

BUILDING COVERAGE: SHOP 10,800 S.F.  
BINS 2,700 S.F.  
TOTAL 13,500 S.F. (35%)

TRACT AREA: 38,995 S.F. - NET OF ULT. R/W  
41,250 S.F. - NET OF LEGAL R/W  
44,095 S.F. - GROSS

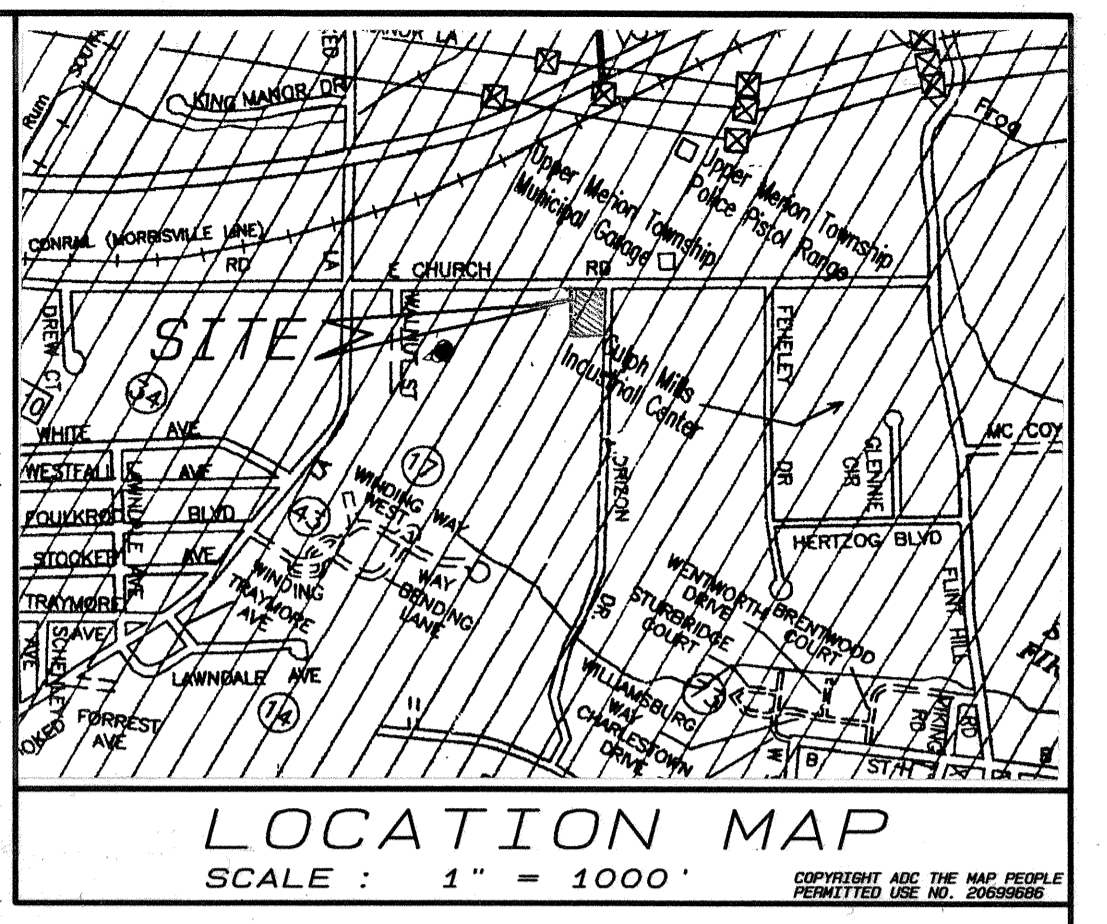
PARKING: 10,800 SF X 1 PS PER 1000 SF = 11 PS REQUIRED  
11 PS PROVIDED

**WAVIER REQUESTED**

SECTION 145-20.C(2): FROM PROVIDING SIDEWALK ALONG CHURCH ROAD.

**LEGEND**

---	CENTERLINE
---	TRACT BOUNDARY
---	PROPERTY LINE
---	LEGAL R.O.W. - EASEMENTS
---	REQUIRED R.O.W.
---	EXISTING CONTOUR
---	PROPOSED CONTOUR
---	EXISTING WATER LINE
---	EXISTING SAN. SEWER LINE
---	EXISTING TELEPHONE LINE
---	EXISTING GAS LINE
---	EXISTING ELECTRIC LINE
---	EXISTING STORM SEWER/INLET
---	PROPOSED WATER LINE
---	PROPOSED SAN. SEWER LINE
---	PROPOSED ELECTRIC LINE
---	PROPOSED TELEPHONE LINE
---	PROPOSED GAS LINE
---	EXISTING MANHOLE
---	PROPOSED MANHOLE
---	EXISTING CURBLINE
---	PROPOSED CURBLINE
---	UTILITY POLE
---	EXISTING VALVE, VENT. CO.



**ZONING: SM-1 - SUBURBAN METROPOLITAN (ZONING FOR ADJOINING PROPERTY TO THE REAR)**

LOT AREA	=	1,000	ACRES (MIN.)
LOT WIDTH	=	40	FEET (MIN.)
FRONT YARD	=	15	FEET (MIN.)
SIDE YARD	=	40	FEET (AGGR.)
REAR YARD	=	20	FEET (MIN.)
BUILDING COVERAGE	=	50	% (MAX.)
BUILDING HEIGHT	=	50	FEET (MAX.)
GREEN AREA	=	15	% (MIN.)
RESIDENTIAL DIST. SETBACK	=	150	FEET (MIN.)
PARKING SETBACK	=	40	FEET (MIN.)
FRONT LOT LINE	=	40	FEET (MIN.)
AGRICULTURAL DISTRICT	=	40	FEET (MIN.)
RESIDENTIAL DISTRICT	=	40	FEET (MIN.)

**ZONING: LI - LIMITED INDUSTRIAL (ZONING FOR SUBJECT PROPERTY)**

LOT AREA	=	(NONE)	REQUIREMENTS
LOT WIDTH	=	(NONE)	
FRONT YARD	=	40	FEET (MIN.)
SIDE YARD	=	15	FEET (MIN.)
REAR YARD	=	40	FEET (AGGR.)
BUILDING COVERAGE	=	20	FEET (MIN.)
BUILDING HEIGHT	=	75	FEET (MAX.)
GREEN AREA	=	15	% (MIN.)
SEWAGE DISPOSAL	=	CENTRAL SYSTEM	
BUFFERS	=		
FRONT LOT LINE	=	40	FEET (MIN.)
AGRICULTURAL DISTRICT	=	40	FEET (MIN.)
RESIDENTIAL DISTRICT	=	40	FEET (MIN.)
RESID/AGR. DIST. SETBACK	=	150	FEET (MIN.)
PARKING SETBACK	=	50	FEET (MIN.)
AGRICULTURAL DISTRICT	=	50	FEET (MIN.)
RESIDENTIAL DISTRICT	=	50	FEET (MIN.)

**PRINCIPAL BUILDING PROVIDED**

LEGAL R.O.W.	=	38,972	S.F.
FRONT YARD	=	170.00	FEET
SIDE YARD	=	40.50	FEET
REAR YARD	=	15.50	FEET
BUILDING COVERAGE	=	80.00	FEET
BUILDING HEIGHT	=	51.00	FEET
GREEN AREA	=	35	%
SEWAGE DISPOSAL	=	27	%
CENTRAL SYSTEM	=		

\* EXCEPT THAT SUCH HEIGHT MAY BE INCREASED TO A MAXIMUM OF 65 FEET, PROVIDED THAT FOR EVERY FOOT OF HEIGHT IN EXCESS OF 50 FEET, THERE SHALL BE ADDED TO EACH YARD REQUIREMENT ONE CORRESPONDING FOOT OF WIDTH OR DEPTH.

† A VARIANCE WAS GRANTED FOR THE ACCESSORY BUILDING'S ENCROACHMENTS INTO THE REQUIRED REAR AND SIDE YARDS.

- GENERAL NOTES**
- THIS PROPERTY IS LOCATED WITHIN ZONE 1 AS INDICATED ON THE UPPER MERION TOWNSHIP AREAS OF POTENTIAL SINKHOLE DEVELOPMENT MAP. THIS ZONE HAS BEEN IDENTIFIED AS HAVING A HIGH PROBABILITY FOR SUBSIDENCE ACTIVITY AND SINKHOLE DEVELOPMENT. SUBSURFACE SOIL AND GEOLOGIC TESTING AND/OR EVALUATIONS ARE BEYOND THE SCOPE OF THIS WORK AND NOT WITHIN THE SPECIFIC EXPERTISE OF JOSEPH M. ESTOCK, P.E., P.L.S. THE OWNER SHOULD ENGAGE THE SERVICES OF A SEPARATE CONSULTANT HAVING THE EXPERTISE IN THIS TYPE OF WORK IN ORDER TO EVALUATE THE LIMITATIONS, IF ANY, IN THE DEVELOPMENT OF THIS PROPERTY.
  - PURSUANT TO THE "ORDER OF THE UPPER MERION TOWNSHIP ZONING HEARING BOARD" FOR A HEARING HELD ON NOVEMBER 7, 2007, WITH A DECISION DATED NOVEMBER 20, 2007, FOR APPLICATION NUMBER 2007-28, A USE VARIANCE WAS GRANTED TO SECTION 145-146.B & C. IN ORDER TO CONSTRUCT SEVERAL COVERED MATERIAL BINS THAT WILL ENROACH INTO THE REQUIRED SIDE AND REAR YARD SETBACKS.
  - THE AREA BETWEEN THE TITLE LINE AND THE ULTIMATE RIGHT OF WAY LINE IS HEREBY OFFERED FOR DEDICATION TO THE AUTHORITY HAVING JURISDICTION AT THE TIME OF THE TAKING.
  - ALL LOT CORNERS SHALL BE PINNED BY A REGISTERED PROFESSIONAL LAND SURVEYOR WITH AT LEAST A 3/4 INCH STEEL ROD WITH A MINIMUM LENGTH OF 24 INCHES.
  - A DEED RESTRICTION PROHIBITING THE REMOVAL OR ALTERATION OF STORMWATER FACILITIES SHALL BE PROVIDED FOR ALL STORMWATER FACILITIES. THE DEED RESTRICTION SHALL ALLOW REMOVAL OR ALTERATION THAT IS APPROVED BY THE TOWNSHIP.
  - THE UNDERGROUND STORMWATER DETENTION SYSTEM SHALL BE INSPECTED ONCE A YEAR AND AFTER EACH STORM EVENT GREATER THAN 100 YEARS TO ENSURE THE ORIFICE IS NOT CLOGGED. DOCUMENTATION OF SAID INSPECTIONS MUST BE PROVIDED TO THE TOWNSHIP. THE UNDERGROUND STORMWATER DETENTION SYSTEM SHALL BE FLUSHED EVERY 2 YEARS TO PREVENT BUILDUP OF DEBRIS AND SEDIMENT. THIS SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE.
  - THE PROPERTY OWNER SHALL HAVE THE RESPONSIBILITY FOR THE PERPETUAL MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT FACILITIES. NO CHANGES SHALL BE MADE TO THE STORMWATER MANAGEMENT FACILITIES OF FINISH GRADING WITHOUT PRIOR WRITTEN APPROVAL FROM THE TOWNSHIP. THE TOWNSHIP HAS THE RIGHT, BUT NOT THE OBLIGATION, TO ENTER THE PROPERTY TO PERFORM ANY REQUIRED MAINTENANCE WHICH HAS NOT BEEN PROPERLY PERFORMED IN A TIMELY MANNER. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE COST OF ANY MAINTENANCE WHICH IS PERFORMED BY THE TOWNSHIP. THE TOWNSHIP SHALL LIEN THE PROPERTY FOR SAID COSTS UNTIL THE TOWNSHIP HAS BEEN REIMBURSED IN FULL.

COMMONWEALTH OF PENNSYLVANIA: \_\_\_\_\_

COUNTY OF MONTGOMERY: \_\_\_\_\_

ON THE \_\_\_\_\_ DAY OF \_\_\_\_\_ 20\_\_\_\_ BEFORE ME THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, RESIDING IN \_\_\_\_\_, PERSONALLY APPEARED \_\_\_\_\_ KNOWN TO ME (OR SATISFACTORILY PROVEN) TO BE THE PERSON(S) WHOSE NAME(S) IS(ARE) SUBSCRIBED TO THE FOREGOING PLAN AND ACKNOWLEDGE THAT HE/SHE/THEY EXECUTED THE FOREGOING PLAN OF \_\_\_\_\_ THAT HE/SHE/THEY IS/ARE THE OWNER(S) OF THE DESIGNATED LAND, THAT ALL NECESSARY APPROVALS OF THE PLAN HAS/HAVE BEEN OBTAINED AND IS/ARE ENDORSED THEREON, AND THAT HE/SHE/THEY DESIRE(S) THE FOREGOING PLAN TO BE DULY RECORDED.

MY COMMISSION EXPIRES: \_\_\_\_\_

APPROVED BY THE BOARD OF UPPER MERION TOWNSHIP SUPERVISORS THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 20\_\_\_\_

CHAIRMAN \_\_\_\_\_

SECRETARY \_\_\_\_\_

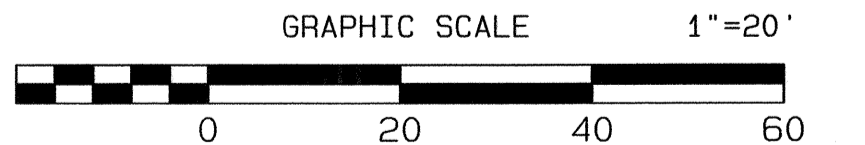
TOWNSHIP ENGINEER \_\_\_\_\_ (REVIEWED BY)

I/WE HEREBY CERTIFY THAT I/WE AM/ARE THE REGISTERED OWNER(S) OF THE LAND HEREIN SUBDIVIDED (OR DEVELOPED), AND THAT I/WE DO HEREBY ADOPT THIS PLAN AND DESIRE THE SAME TO BE RECORDED (OR DEVELOPED).

DATE \_\_\_\_\_ PROFESSIONAL LAND SURVEYOR \_\_\_\_\_

RECORDED IN THE OFFICE OF RECORDER OF DEEDS IN NORRISTOWN, PA, IN PLAN BOOK NO. \_\_\_\_\_ PAGE NO. \_\_\_\_\_ ON THE \_\_\_\_\_ DAY OF \_\_\_\_\_ 20\_\_\_\_

OWNERS \_\_\_\_\_



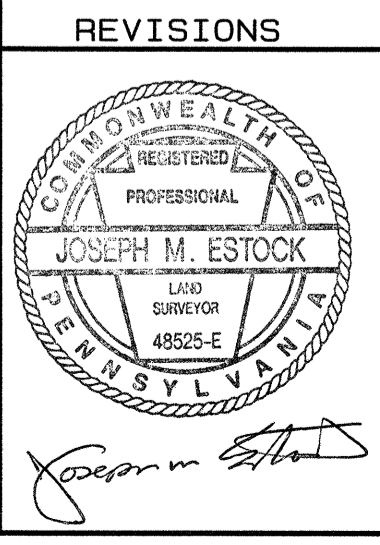
MCP NO.: \_\_\_\_\_ TOWNSHIP FILE NO.: \_\_\_\_\_

PROCESSED and REVIEWED. A report has been prepared by the Montgomery County Planning Commission in accordance with the Municipalities Planning Code.

Certified this date: \_\_\_\_\_

For the Director

Montgomery County Planning Commission



PROJECT TITLE: 449 E. CHURCH ROAD

UPPER MERION TOWNSHIP  
MONTGOMERY COUNTY  
PENNSYLVANIA

DRAWING TITLE: RECORD PLAN

PREPARED BY: JOSEPH M. ESTOCK, PE, PLS.

356 S. HENDERSON ROAD  
KING OF PRUSSIA, PA 19406  
610-265-3030 (OFF.)  
610-962-9855 (FAX)

SCALE	DATE	FILE NO.	FIELD BOOK	SHT. NO.
1" = 20'	23 JAN. 2008	04049	306	1 of 8

E. CHURCH ROAD  
(60' R/W - Blacktop)

HORIZON DRIVE  
(60' R/W - Blacktop)

PINE STREET  
(40' R/W - Vacated)

N/F ANDREW C. & TINA M. BRANCA  
08 5417 PG 1871

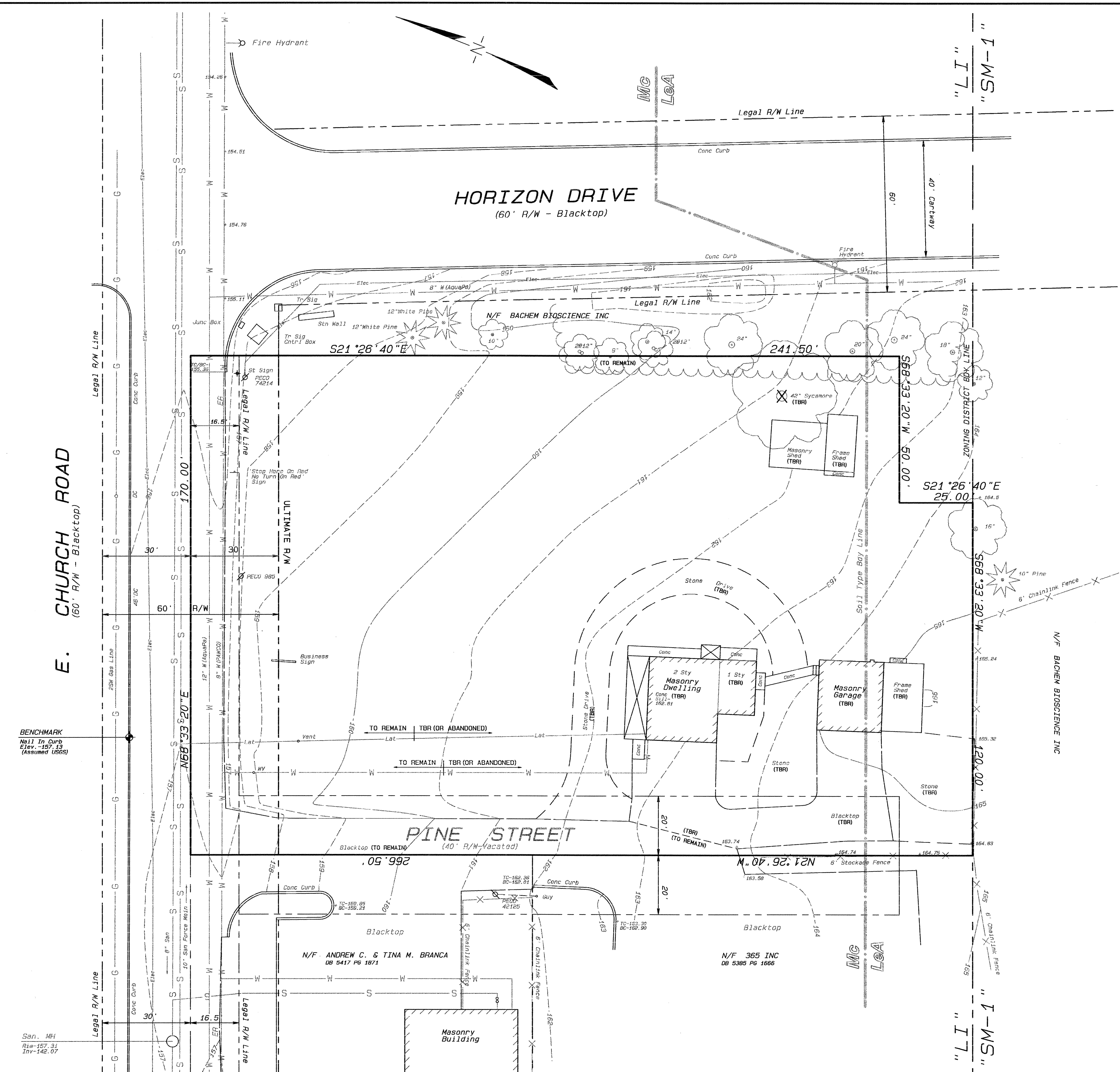
N/F 365 INC  
08 5385 PG 1666

"LI"  
"SM-1"

"LI"  
"SM-1"

- LEGEND**
- CENTERLINE
  - TRACT BOUNDARY
  - PROPERTY LINE
  - LEGAL R.O.W., EASEMENTS
  - REQUIRED R.O.W.
  - EXISTING CONTOUR
  - 100--- EXISTING WATER LINE
  - S --- EXISTING SAN. SEWER LINE
  - T --- EXISTING TELEPHONE LINE
  - G --- EXISTING GAS LINE
  - Elec --- EXISTING ELECTRIC LINE
  - EXISTING STORM SEWER/INLET
  - MH --- EXISTING MANHOLE
  - EXISTING CURBLINE
  - --- UTILITY POLE
  - --- EXISTING VALVE, VENT, CO.
  - X (TBR) --- TO BE REMOVED

- SOILS LEGEND**
- LoA Lawrenceville Silt Loam  
0-3% Slopes
  - MG Made Land, Limestone Materials
- Soil Type Boundary Line



PROJECT TITLE:  
**449 E. CHURCH ROAD**  
 UPPER MERION TOWNSHIP  
 MONTGOMERY COUNTY  
 PENNSYLVANIA

DRAWING TITLE:  
**EXISTING CONDITIONS AND  
 DEMOLITION PLAN**

PREPARED BY:  
**JOSEPH M. ESTOCK, PE, PLS**  
 355 S. HENDERSON ROAD  
 KING OF PRUSSIA, PA 19406  
 610-262-3035 (OFF.)  
 610-962-9895 (FAX)

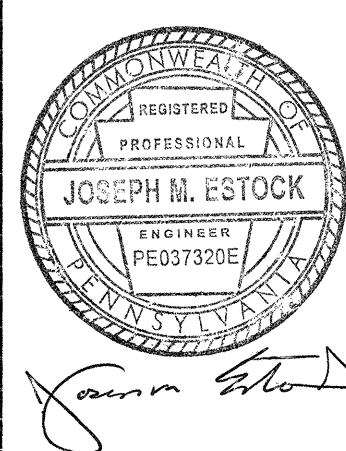
REVISIONS

GRAPHIC SCALE 1"=20'

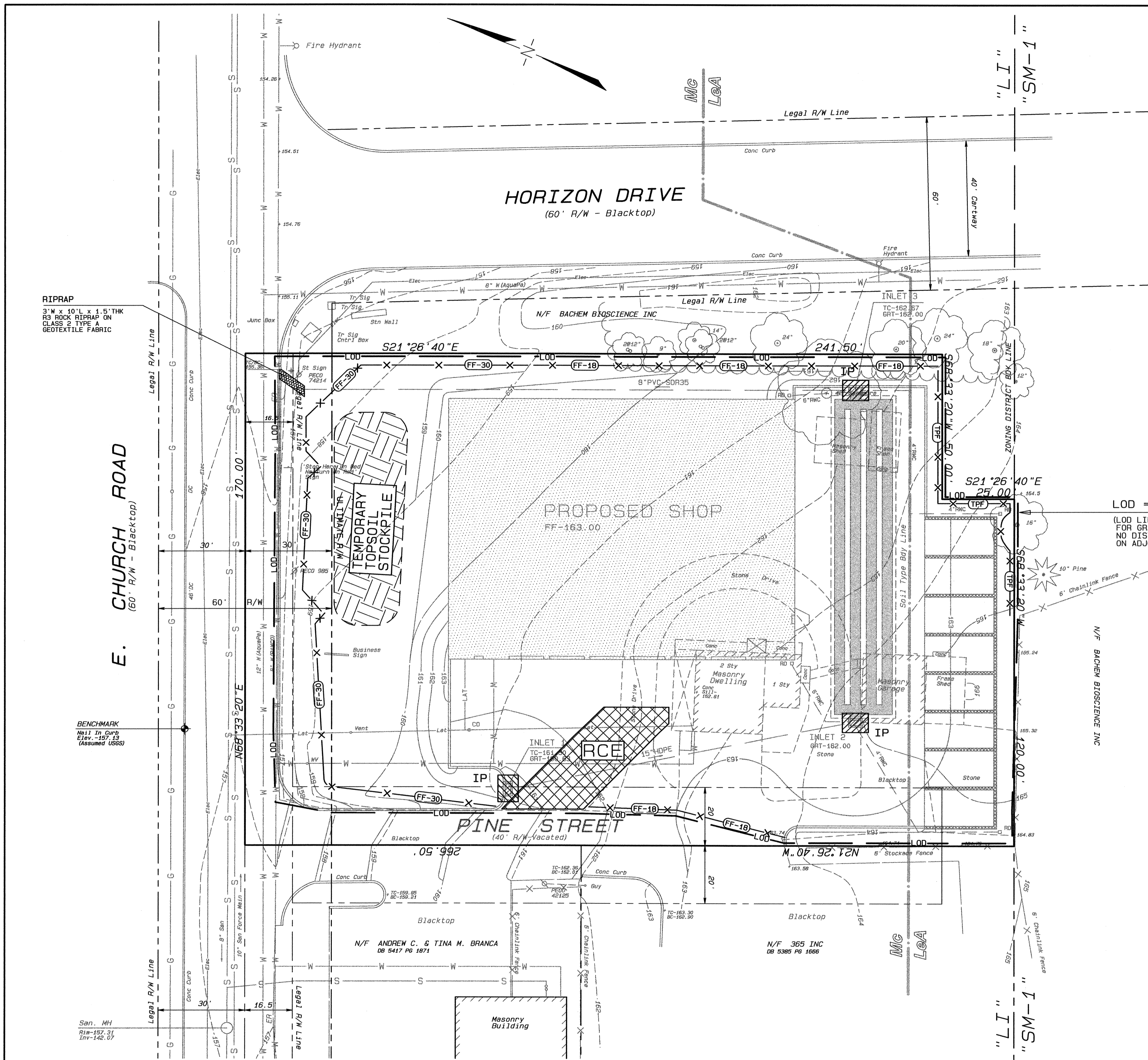
0 20 40 60

UNDERGROUND UTILITIES  
 PA. ACT 197 OF 1996-ONE CALL NOTIFICATION (1-800-242-1776)  
 DATE: 12-21-07 SERIAL NO.: 3956248

ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLAN HAVE BEEN DEVELOPED FROM EXISTING UTILITIES TO RECORD AND/OR MAKE BROAD EXAMINATION OF THE UTILITY OR STRUCTURES IS NOT GUARANTEED NOR IS IT GUARANTEED THAT ALL EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXISTENCE OF UTILITIES AND FOR NOTIFYING THE UTILITY COMPANIES AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION TO VERIFY LOCATION AND DEPTH OF SAME.



SCALE	DATE	FILE NO.	FIELD BOOK	SHT. NO.
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**EROSION & SEDIMENT CONTROL LEGEND**

- RCE ROCK CONSTRUCTION ENTRANCE
- IP INLET PROTECTION
- TOPSOIL STOCKPILE
- FILTER FABRIC FENCE (18" HIGH)
- FILTER FABRIC FENCE (30" HIGH)
- SUPER FILTER FABRIC FENCE
- TREE PROTECTION FENCE
- LOD LIMIT OF DISTURBANCE LINE
- X (TBR) TO BE REMOVED

**SOILS LEGEND**

- Lawrenceville Silt Loam  
0-3% Slopes
- Made Land, Limestone Materials
- Soil Type Boundary Line

**CONSTRUCTION SEQUENCE:**

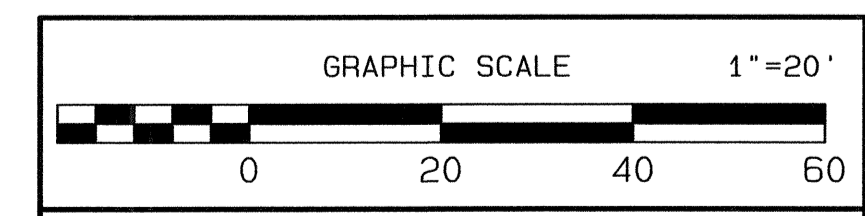
1. INSTALL ALL SILT FENCING AND ALL TREE PROTECTION FENCING; OTHER THAN THAT PORTION OF SILT FENCING ACROSS THE EXISTING STONE AND BLACKTOP DRIVEWAY.
2. INSTALL ROCK CONSTRUCTION ENTRANCE.
3. REMOVE EXISTING BUILDINGS AND OTHER STRUCTURES, BLACKTOP DRIVEWAY, CONCRETE, STONE DRIVEWAY AND ALL OTHER FEATURES CALLED TO BE REMOVED. CLEAR AND GRUB SITE OF 42 INCH SYCAMORE TREE AND OTHER VEGETATION IN CONFLICT WITH CONSTRUCTION ACTIVITY.
4. PLACE REMAINING PORTION OF SILT FENCING ACROSS THE EXISTING STONE AND BLACKTOP DRIVEWAY.
5. STRIP AND STOCKPILE TOPSOIL IN DESIGNATED LOCATION.
6. ROUGH GRADE ENTIRE SITE TO SUBGRADE ELEVATIONS.
7. COMMENCE WITH THE CONSTRUCTION OF BOTH THE PROPOSED SHOP AND THE COVERED MATERIALS STORAGE BINS.
8. INSTALL ALL RAINWATER CONDUCTORS, STORM SEWERS AND UNDERGROUND STORMWATER DETENTION FACILITY DETENTION SYSTEM. INSTALL INLET PROTECTION IMMEDIATELY AFTER THE PLACEMENT OF THE INLET TOP UNITS.
9. INSTALL AND MODIFY OTHER UTILITY CONNECTIONS, AS REQUIRED.
10. CONSTRUCT ALL CURBING.
11. COMPLETE ALL PAVING OPERATIONS, EXCEPT FINAL WEARING COURSE.
12. FINISH GRADE AND TOPSOIL ALL DISTURBED AREAS.
13. INSTALL ALL REQUIRE LANDSCAPING PLANTS AND OTHER MATERIALS.
14. SEED AND MULCH ALL DISTURBED AREAS AND ESTABLISH PERMANENT VEGETATIVE COVER. FOR AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY TO BE CONSIDERED PERMANENTLY STABILIZED, THE DISTURBED AREA SHALL BE COVERED BY A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION. DO NOT PROCEED TO THE NEXT ITEM IN THE SEQUENCE UNTIL PERMANENT STABILIZATION IS ACHIEVED.
15. REMOVE ALL REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.
16. PLACE WEARING COURSE IN ALL PAVED SURFACES.

LOD = 0.9 ACRES  
(LOD LINE SHOWN OFF-SITE FOR GRAPHICAL PURPOSES ONLY NO DISTURBANCE IS PERMITTED ON ADJOINING PROPERTIES)

PROJECT TITLE :  
**449 E. CHURCH ROAD**  
UPPER MERITON TOWNSHIP  
MONTGOMERY COUNTY  
PENNSYLVANIA

DRAWING TITLE :  
**EROSION AND SEDIMENT CONTROL PLAN**

PREPARED BY :  
**JOSEPH M. ESTOCK, PE, PLS**  
365 S. HENDERSON ROAD  
KING OF PRUSSIA, PA. 19406  
610-265-3035 (OFF.)  
610-962-9895 (FAX)



UNDERGROUND UTILITIES  
PA. ACT 187 OF 1996-ONE CALL NOTIFICATION (1-800-242-1776)  
DATE: 12-21-07 SERIAL NO.: 3056246



SCALE	DATE	FILE NO.	FIELD BOOK	SHT. NO.
1" = 20'	23 JAN. 2008	04049	306	3 of 8

**EROSION AND SEDIMENTATION CONTROL NOTES**

- A. GENERAL NOTES**
- EROSION AND SEDIMENT BMP'S MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE SITE DISTURBANCE WITHIN THE TRIBUTARY AREAS OF THOSE BMP'S.
  - STORMWATER INLETS WHICH DO NOT DISCHARGE TO SEDIMENT TRAPS OR BASINS, MUST BE PROTECTED UNTIL THE TRIBUTARY AREAS ARE STABILIZED.
  - STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
  - AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMP'S MUST BE STABILIZED IMMEDIATELY.
  - VEHICLES AND EQUIPMENT MUST ENTER DIRECTLY TO AND EXIT FROM THE SITE AT THE POINT WHERE THE ROCK CONSTRUCTION ENTRANCE HAS BEEN PLACED.
  - ONLY LIMITED DISTURBANCE WILL BE PERMITTED TO PROVIDE ACCESS TO THE CONTROLS FOR GRADING AND ACQUIRING BORROW TO CONSTRUCT THOSE CONTROLS.
  - AT LEAST SEVEN DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL NOTIFY ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LAND OWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, AND THE EROSION AND SEDIMENT CONTROL PLAN PREPARER TO AN ON-SITE MEETING.
  - AT LEAST THREE DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR BURIED UTILITY LOCATIONS.
  - 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 TO THOSE AREAS DESCRIBED IN EACH STAGE.
  - THE PROJECTS RECEIVING WATERCOURSE IS FROG RUN WITHIN THE SCHUYLKILL RIVER WATERSHED, AND THE CHAPTER 93 CLASSIFICATION IS WWF.
- B. FILTER FABRIC FENCING & STRAW BALE BARRIERS**
- FILTER FABRIC FENCING AND STRAW BALE BARRIERS MUST BE INSTALLED AT LEVEL GRADE, BOTH ENDS OF EACH FENCE OR BARRIER SECTION MUST EXTEND 8 FEET UP SLOPE AT 45 DEGREES TO THE ALIGNMENT OF THE MAIN FENCE OR BARRIER.
  - SEDIMENT MUST BE REMOVED WHERE ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF FILTER FABRIC FENCING OR 1/3 THE ABOVE GROUND HEIGHT OF STRAW BALE BARRIERS.
  - ANY FILTER FABRIC FENCING OR STRAW BALE BARRIER WHICH HAS BEEN UNDERMINED OR TOPPED MUST BE IMMEDIATELY REPLACED WITH ROCK FILTER OUTLETS.
  - STRAW BALE BARRIERS SHOULD NOT BE USED FOR MORE THAN 3 MONTHS.
- C. SEDIMENT REMOVAL**
- SEDIMENT MUST BE REMOVED FROM STORM WATER INLET PROTECTION AFTER EACH RUNOFF EVENT.
  - ALL SILT AND FOREIGN MATTER SHALL BE REMOVED FROM THE TOP OF THE BINDER COURSE AND PROPERLY DISPOSED OF BEFORE WEARING SURFACE IS INSTALLED.
  - SEDIMENT REMOVED FROM BMP'S SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN TOPSOIL STOCKPILES.
  - 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.
- D. CONTRACTOR'S RESPONSIBILITY**
- MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROL DEVICES IS THE RESPONSIBILITY OF THE CONTRACTOR DURING CONSTRUCTION.
  - THE DETENTION FACILITY WILL BE CONSTRUCTED AND MAINTAINED BY THE CONTRACTOR. THE MAINTENANCE OF THIS BASIN WILL BE TRANSFERRED TO THE OWNER UPON THE COMPLETION OF FINAL STABILIZATION.
  - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING DIVERSION TRENCHES, EROSION CHECKS, BERMS, ETC., OR OTHER MEANS OF ACCEPTED PRACTICE AS REQUIRED ON THE SITE TO PREVENT ACCELERATED RUNOFF AND EROSION, WHICH MAY NOT BE INDICATED, BUT IS WITHIN THE INTENT OF THIS PLAN.
  - THE CONTRACTOR MUST INSURE THE PROPER OPERATION OF THE DEVICES IS NOT HINDERED DUE TO EXCESSIVE SEDIMENT BUILDUP OR UNAUTHORIZED ACTS OF THIRD PARTIES.
  - SHOULD ANY MEASURES CONTAINED WITHIN THIS PLAN PROVE INCAPABLE OF ADEQUATELY REMOVING SEDIMENT FROM ON-SITE FLOWS PRIOR TO DISCHARGE OR OF STABILIZING THE SURFACES INVOLVED, ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED BY THE CONTRACTOR TO ELIMINATE ALL SUCH PROBLEMS.
  - UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMP'S MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMP'S AFTER EACH RUNOFF EVENT AND ON A DAILY BASIS. ALL PREVENTIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMP'S FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMP'S OR MODIFICATIONS TO THOSE INSTALLED WILL BE REQUIRED.
  - THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THIS SITE.
  - IT IS THE INTENT OF THIS PLAN TO MEET REQUIREMENTS OF SOIL EROSION CONTROL.
  - THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL RESOURCES, SUB-PART C, PROTECTION OF NATURAL RESOURCES, ARTICLE II, WATER RESOURCES, CHAPTER 102 EROSION CONTROL.
  - A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
  - AT ANY TIME PRIOR TO STABILIZATION SHOULD ANY E & S PROBLEMS OCCUR WHICH REQUIRE ADDITIONAL MEASURES, IMMEDIATE ACTION MUST BE TAKEN TO CORRECT THE PROBLEM.
  - THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
  - UNTIL THE SITE ACHIEVES FINAL STABILIZATION, THE CONTRACTOR SHALL ASSURE THAT BEST MANAGEMENT PRACTICES ARE IMPLEMENTED, OPERATED AND MAINTAINED PROPERLY AND COMPLETELY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL BEST MANAGEMENT PRACTICE FACILITIES AND MAINTAIN A COMPLETE WRITTEN INSPECTION LOGS OF ALL THOSE INSPECTIONS. ALL MAINTENANCE WORK, INCLUDING CLEANING, REPAIR, REPLACEMENT, REGRADING AND STABILIZATION SHALL BE PERFORMED IMMEDIATELY.
  - IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
  - BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED EAS CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISION FROM THE TOWNSHIP.
  - THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED AND APPROVED BY THE TOWNSHIP AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATION.
  - ONLY LIMITED DISTURBANCE WILL BE PERMITTED TO PROVIDE ACCESS TO BMP'S FOR GRADING AND ACQUIRING BORROW TO CONSTRUCT THOSE BMP'S.
- E. MULCHING**
- MULCHING OF DISTURBED OR SEEDED AREA SHALL BE FURNISHED, PLACED, ANCHORED AND MAINTAINED IN ACCORDANCE WITH PENNDOT PUBL. 408, SECTION 805.
  - MULCHING SHALL BE PLACED IMMEDIATELY AFTER SEEDING OR WITHIN 48 HOURS AFTER SEEDING IS COMPLETE.
  - HAY OR STRAW SHALL BE UNIFORMLY PLACED IN A CONTINUOUS BLANKET, AT A MINIMUM RATE OF 30 TONS PER ACRE.
  - MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS SHOULD BE INSTALLED ON ALL SLOPES 3:1 OR STEEPER.
  - STRAW MULCH SHOULD BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.

**F. SEEDING**

- SEEDING SHALL BE PLACED IN ACCORDANCE WITH PENNDOT PUBL. 408, SECTION 804.
- SEED FORMULAS:

FORMULA & SPECIES	WT.	MINIMUM %			MAX. % WEED SEED	SEEDING RATE PER 1000 SY (LBS)
		PURITY	GERMINATION			
FORMULA A *CROWN VETCH	100	99	70	0.10	4.0	21.0
FORMULA B *RYEGRASS, PERENNIAL *FESCUE, PENN. LAWN RED *BLUEGRASS, KENTUCKY (A COMBINATION OF CERTIFIED-BLUEGRASS VARIETIES WITH ANY ONE VARIETY NOT EXCEEDING 25% OF TOTAL)	20 30 50	98 98 90	90 85 80	0.15 0.15 0.20		
FORMULA C *CROWN VETCH *RYEGRASS, ANNUAL	45 55	99 95	70 90	0.10 0.15	9.0	21.0
FORMULA D *FESCUE, KENTUCKY, 31 TALL *FESCUE, PENN. LAWN RED *WHEEDING ALKALI GRASS	70 20 10	98 98 98	85 85 90	0.15 0.15 0.15		
FORMULA E *RYEGRASS, ANNUAL	100	98	90	0.15	10.0	

**3. APPLICATION DATES:**

FORMULA A & C	- ANYTIME EXCEPT SEPTEMBER & OCTOBER*
FORMULA B & D	- MARCH 1 TO JUNE 1 AUGUST 1 TO OCTOBER 1
FORMULA E	- ANYTIME

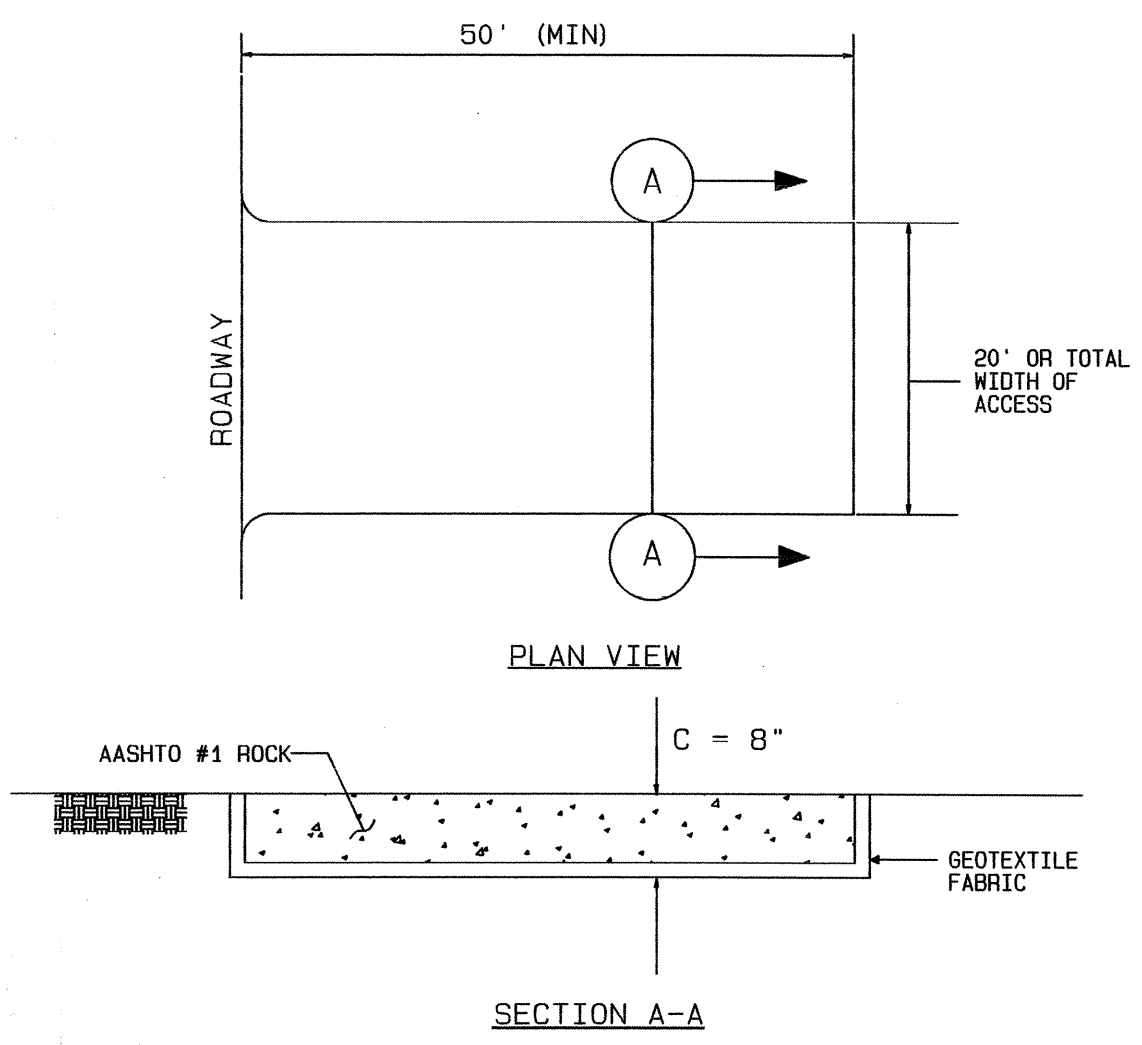
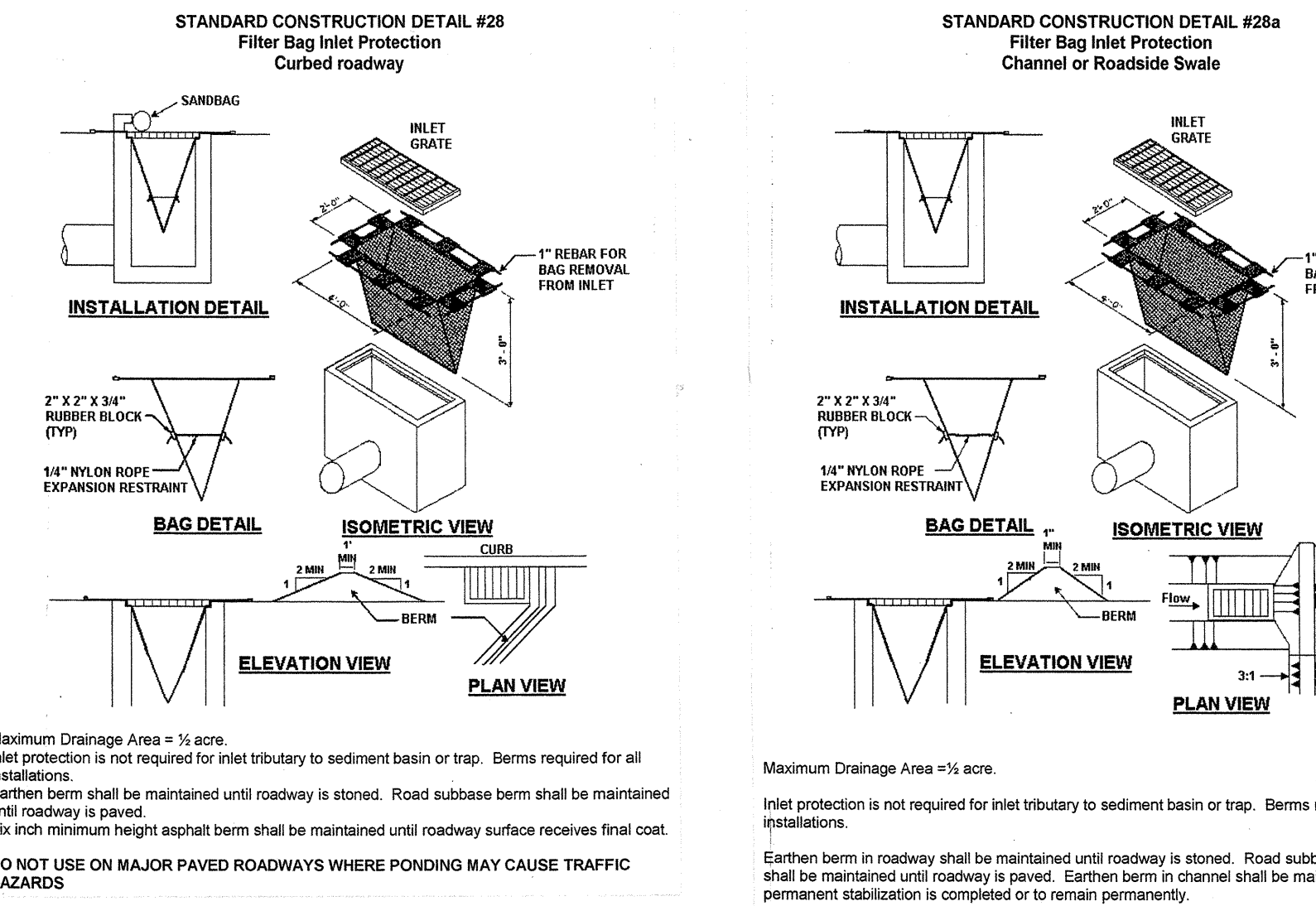
\*APPLY ONLY THE RYE GRASS PORTION OF FORMULA C DURING SEPTEMBER AND OCTOBER; APPLY THE CROWN VETCH PORTION AFTER OCTOBER 31.

**4. SOIL SUPPLEMENTS MAY BE ADDED IN ACCORDANCE WITH SECTION 804 OR AS FOLLOWS:**

FERTILIZER - STANDARD QUALITY 0-20-20 BASIC FERTILIZER	200 LBS. PER 1000 S.Y.
10-10-10 STARTER FERTILIZER	100 LBS. PER 1000 S.Y.
LIME - AGRICULTURAL LIMESTONE 90% MINIMUM OF CARBONATES	500 LBS. PER 1000 S.Y.

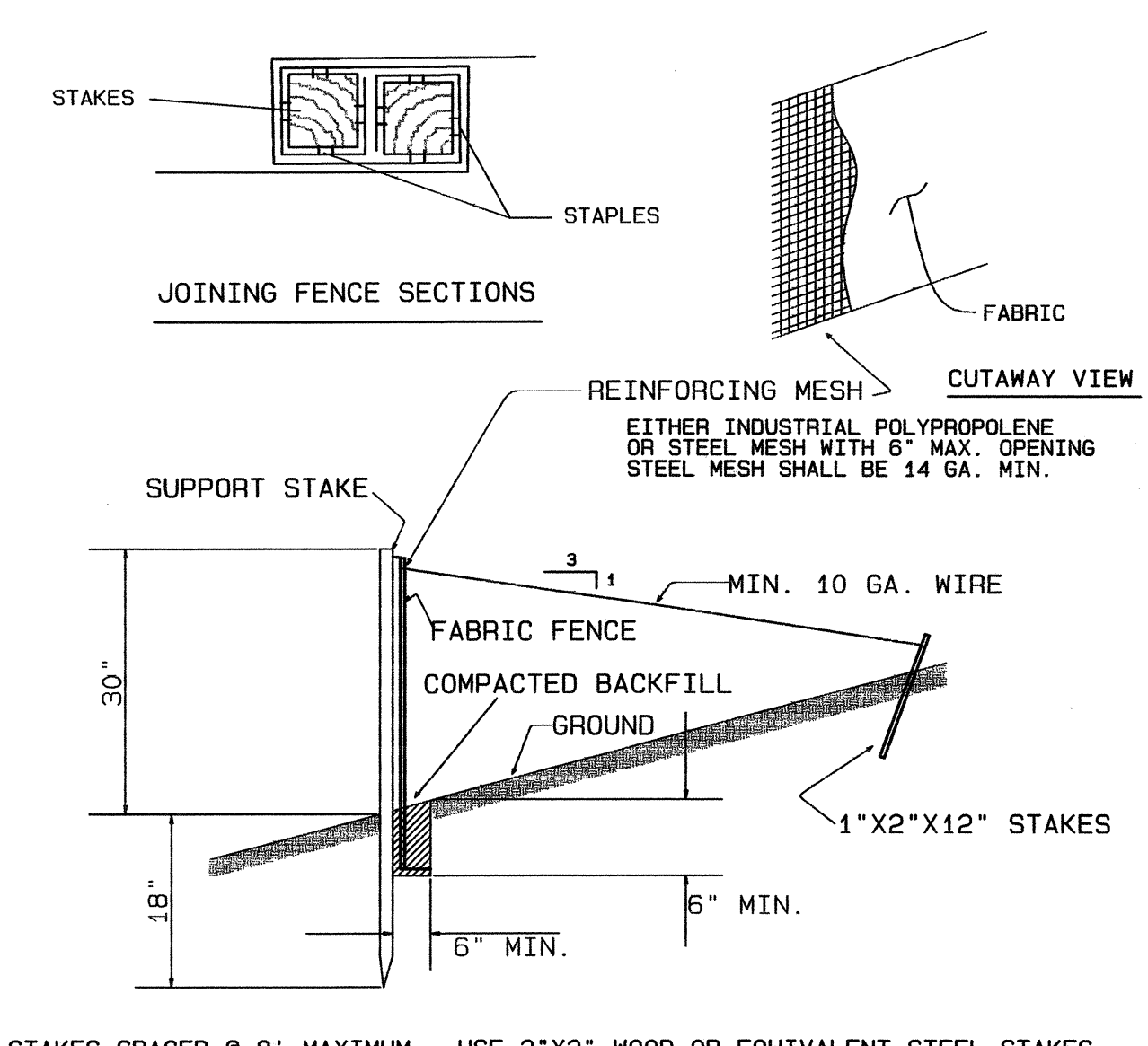
**5. FORMULA B SHALL BE USED TO ESTABLISH FINAL VEGETATION IN ROUGH AREAS, AND FORMULA E SHALL BE USED TO ESTABLISH TEMPORARY VEGETATION. FORMULAS A AND C SHALL BE USED AS SPECIFICALLY INDICATED ON THE PLAN.**

- 6. SEEDING AND MULCHING SCHEDULE**
- THE DIVERSIONS, CHANNELS, SEDIMENT BASINS, SEDIMENT TRAPS, AND STOCKPILES, WHEN USED, MUST BE STABILIZED IMMEDIATELY.
  - IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES, DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
  - AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
- H. UTILITY LINE TRENCH EXCAVATION**
- CONSTRUCTION REQUIREMENTS
    - LIMIT ADVANCE CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
    - WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF CONTAINED AND SEPARATE FROM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.
    - LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUS INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED IN THE SAME DAY.
    - TRENCH PLUGS WILL BE SPACED IN ACCORDANCE WITH AND BE CONSTRUCTED OF THE MATERIALS AS INDICATED ON THE TRENCH PLUG DETAIL.
      - AT ALL CROSSINGS OF WATERS OF THE COMMONWEALTH, TRENCH PLUGS WILL BE INSTALLED AT THE BANKS AFTER TRENCH EXCAVATION. THE PLUGS MAY BE TEMPORARILY REMOVED WHEN PLACING THE PIPE, BUT THEN REPLACED.
      - CONSTRUCTION OF THE CROSSINGS WILL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE "PIPELINES AND UTILITY LINE PROJECTS" SECTION OF THE EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL.
    - WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING BEFORE PIPE PLACEMENT AND/OR BACKFILLING BEGINS. WATER REMOVED FROM THE TRENCH SHALL BE PUMPED THROUGH A FILTRATION DEVICE.
    - ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND IMMEDIATELY STABILIZED.
    - ALL SOIL EXCAVATED FROM THE TRENCH WILL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
  - EXCEPTIONS
    - DAILY BACKFILLING OF THE TRENCH MAY BE DELAYED FOR SIX DAYS. ALL PRESSURE TESTING AND WORKING DAY.
    - IF DAILY BACKFILLING IS DELAYED, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS, APPROPRIATE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES/FACILITIES WILL BE INSTALLED, AND THE AREAS SEEDED AND MULCHED WITHIN THE NEXT TWO CALENDAR DAYS.



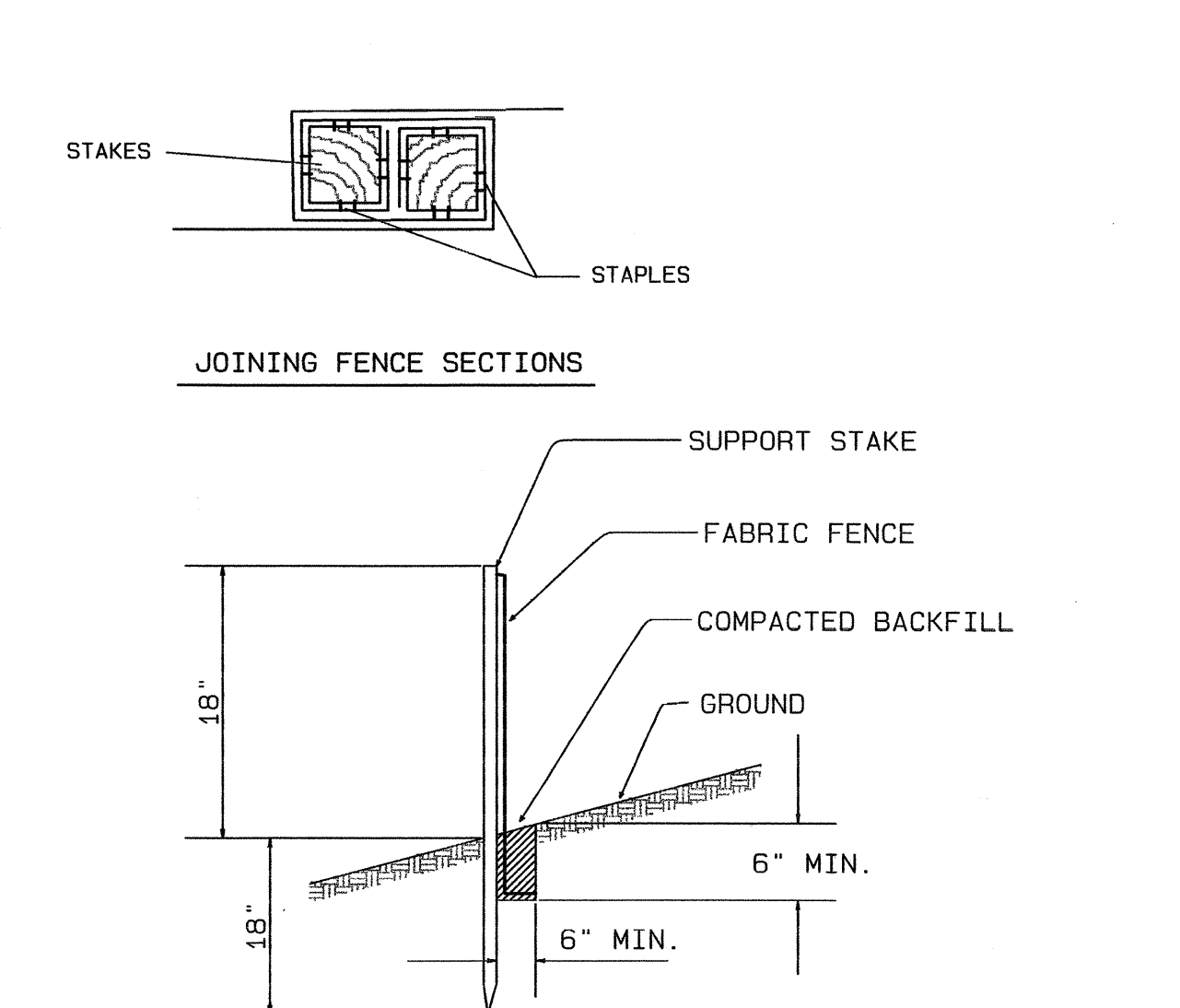
**MAINTENANCE:**  
ROCK CONSTRUCTION ENTRANCE THICKNESS WILL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL WILL BE MAINTAINED ON THE SITE FOR THIS PURPOSE. AT THE END OF EACH CONSTRUCTION DAY, ALL SEDIMENT DEPOSITED ON PUBLIC ROADWAYS WILL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE.

**INLET PROTECTION DETAILS**  
(NTS)

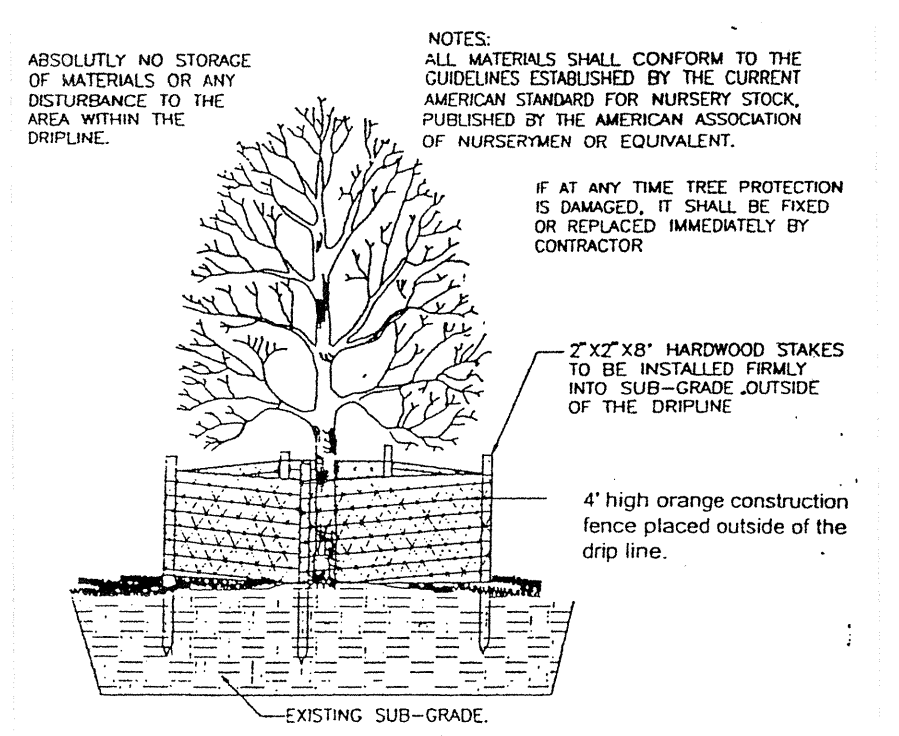


**STANDARD FILTER FABRIC FENCE (30" HIGH)**  
(NTS) (FF-30)

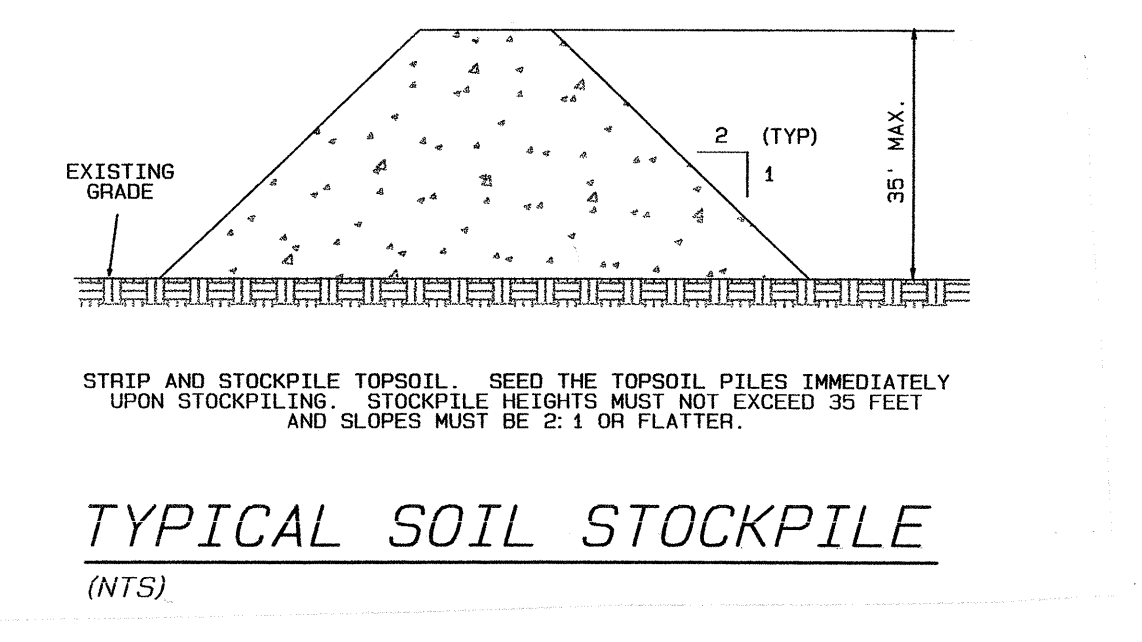
**ROCK CONSTRUCTION ENTRANCE**  
(NTS) (RCE)



**STANDARD FILTER FABRIC FENCE (18" HIGH)**  
(NTS) (FF-18)



PROTECTION BARRIER SHALL BE ERECTED A MINIMUM OF ONE (1) FOOT OUTSIDE THE DRIP LINE OF A MINIMUM OF TWENTY (20) FEET FROM THE TREE'S TRUNK, WHICHEVER IS GREATER, ON ALL SIDES OF THE TREES OR TREE MASSES PRIOR TO MAJOR CLEARING OR CONSTRUCTION.



PROJECT TITLE :  
**449 E. CHURCH ROAD**  
UPPER MERION TOWNSHIP  
MONTGOMERY COUNTY  
PENNSYLVANIA

DRAWING TITLE :  
**EROSION AND SEDIMENT CONTROL NARRATIVE AND DETAILS**

PREPARED BY :  
**JOSEPH M. ESTOCK, PE, PLS**  
395 S. HENDERSON ROAD  
KING OF PRUSSIA, PA 19406  
610-265-3035 (OFF.)  
610-962-9855 (FAX)

SCALE : AS NOTED

DATE : 23 JAN. 2008

FILE NO. : 04049

FIELD BOOK : 306

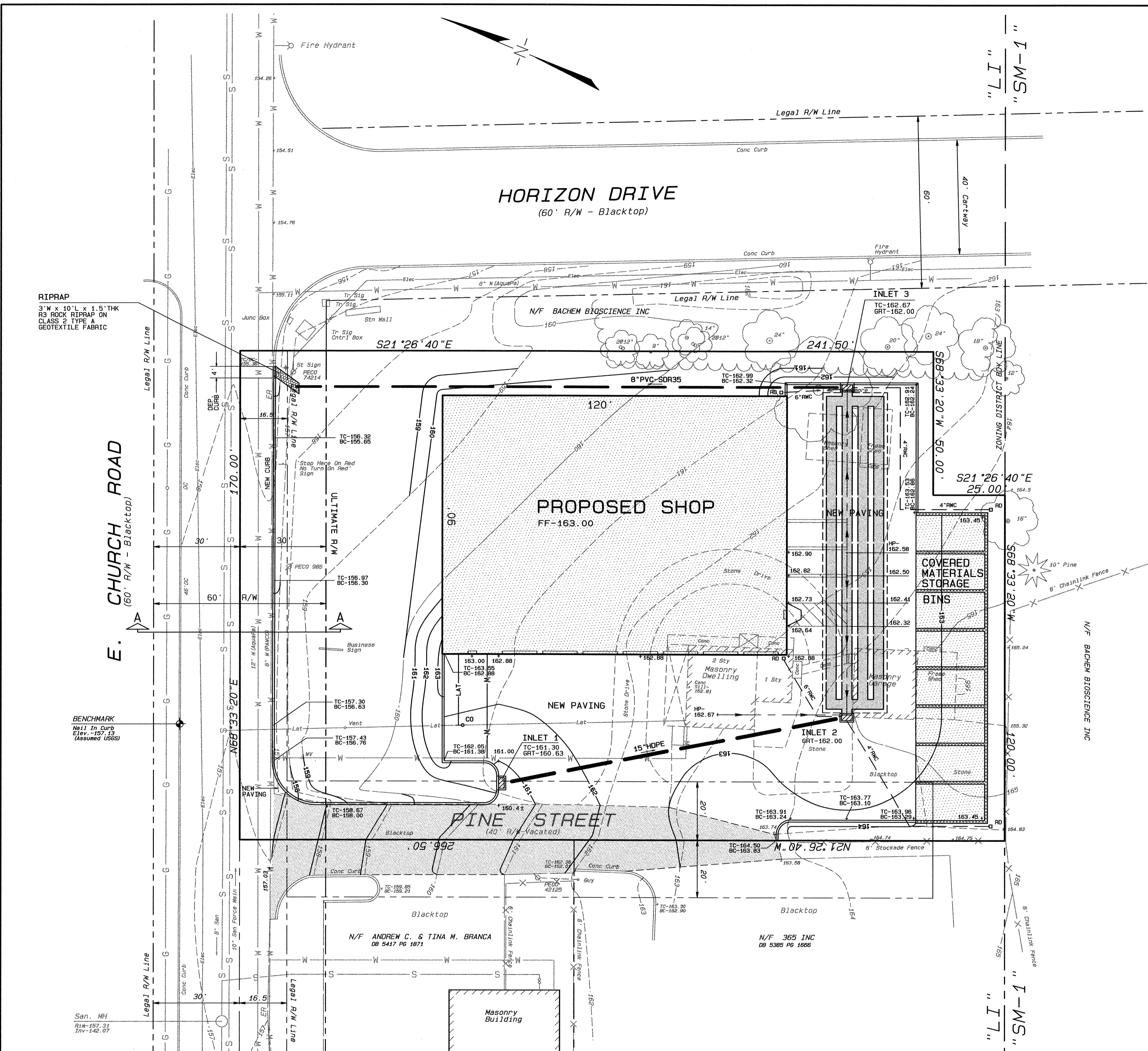
SHT. NO. : 4 of 8

REVISIONS

UNDERGROUND UTILITIES  
PA. ACT 187 OF 1996-ONE CALL NOTIFICATION (1-800-242-1776)  
DATE: 12-21-07 SERIAL NO.: 3956246

ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLAN HAVE BEEN DEVELOPED FROM EXISTING UTILITY LOCATIONS AND/OR RECORD DRAWINGS AND FIELD SURVEY. THE LOCATION AND DEPTH OF UNDERGROUND UTILITIES ON STRUCTURES IS NOT GUARANTEED NOR IS IT GUARANTEED THAT ALL UTILITIES ARE SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPANIES AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION TO VERIFY LOCATION AND DEPTH OF SAME.

PROFESSIONAL ENGINEER  
**JOSEPH M. ESTOCK**  
PEOST020E

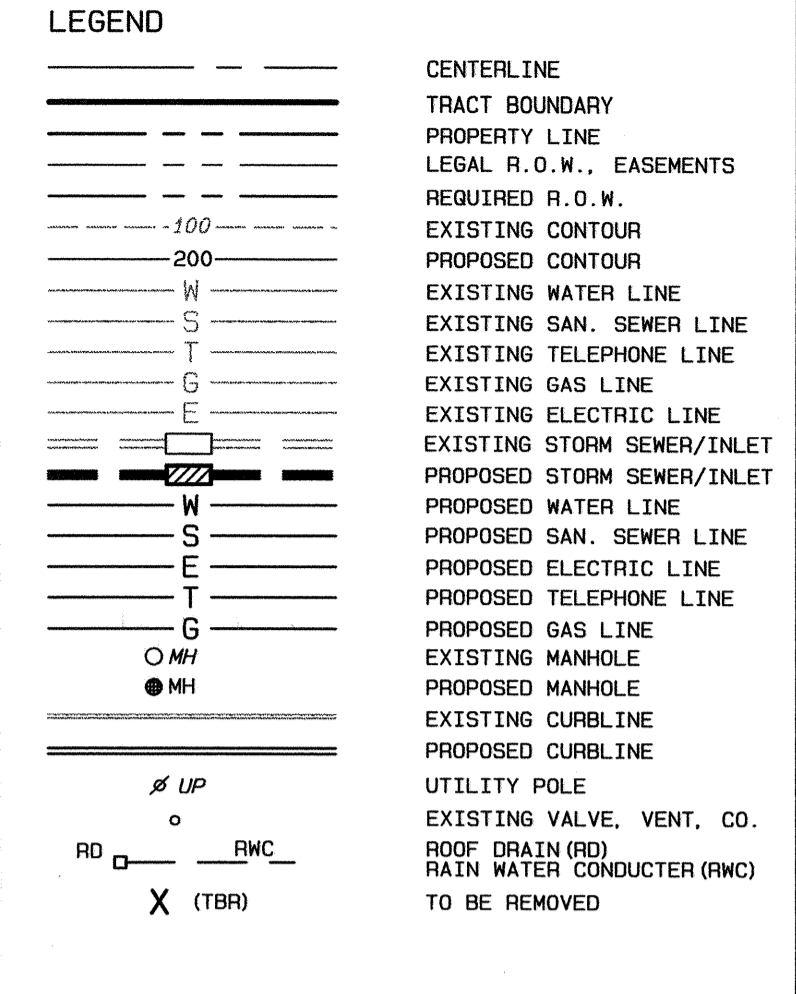


**CONSTRUCTION NOTES:**

- BENCHMARK - TOP OF A MASONRY NAIL SET IN THE TOP OF THE CURB ON THE OPPOSITE SIDE OF CHURCH ROAD FROM THIS SITE. ELEVATION = 157.13 FEET. THIS DATUM IS EQUAL TO THE DATUM USED IN THE PREVIOUSLY SUBMITTED LAND DEVELOPMENT PLANS WITHIN THIS AREA; NAMELY THE "FOSTER FLEX BUILDING" AT 449 E. CHURCH ROAD AND "BRANCA'S AUTO SERVICE" AT 439 E. CHURCH ROAD.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPROPRIATE PA DOT PUB. 408 - SPECIFICATIONS, PA DOT PUB. 72 - STANDARDS FOR ROADWAY CONSTRUCTION AND THE UPPER MERION TOWNSHIP STANDARD SPECIFICATIONS.
- THE STORM SEWER DESIGNATED AS "HDPE" SHALL BE HIGH DENSITY POLYETHYLENE PIPE WITH AN ESSENTIALLY SMOOTH INTERIOR WALL (E.G. HDPE N-12). THIS PIPE SHALL HAVE A FULL CIRCULAR CROSS SECTION WITH AN ANNULARLY CORRUGATED OUTER WALL MEETING THE REQUIREMENTS OF AASHTO M294 TYPE 5. ALL PIPE CONNECTIONS MUST BE COMPLETELY WATERTIGHT.
- ALL RAIN WATER CONDUCTORS (RWC) TO BE PVC SCHEDULE 40 OR SDR-35 HAVING A MINIMUM SLOPE OF 2%.
- ALL INLETS MUST HAVE STRUCTURAL STEEL BICYCLE SAFE GRATES.
- ALL ROOF DRAINAGE MUST BE CONNECTED TO THE UNDERGROUND DETENTION FACILITY.
- UNDER GROUND STORMWATER DETENTION FACILITY NOTES
  - ALL PIPE CONNECTIONS MUST BE COMPLETELY WATERTIGHT. THIS INCLUDES BOTH PIPE JOINTS AND PIPE CONNECTIONS TO THE INLETS. THIS SYSTEM MUST BE INSTALLED IN A MANNER WHICH DOES NOT PROMOTE THE INFILTRATION OF WATER FROM THIS SYSTEM INTO THE GROUND.
  - CUT SHEETS/SHOP DRAWINGS FOR THE PVC LINER, GEOTEXTILE FABRIC, ALL STORM STRUCTURES AND PIPING ARE TO BE SUBMITTED TO THE TOWNSHIP FOR REVIEW PRIOR TO INSTALLATION. A MANUFACTURER'S REPRESENTATIVE MUST BE PRESENT DURING THE INSTALLATION TO CERTIFY INSTALLATION OF THE LINER AND THE SEALING OF THE SEAMS.
  - THE UNDER GROUND STORMWATER DETENTION PIPE DESIGNATED AS "HDPE" SHALL BE HIGH DENSITY POLYETHYLENE PIPE WITH AN ESSENTIALLY SMOOTH INTERIOR WALL (E.G. HDPE N-12). THIS PIPE SHALL HAVE A FULL CIRCULAR CROSS SECTION WITH AN ANNULARLY CORRUGATED OUTER WALL MEETING THE REQUIREMENTS OF AASHTO M294 TYPE 5.
  - ALL SADDLE CONNECTIONS AND ELBOWS TO BE SHOP FABRICATED.
  - HDPE TO BE INSTALLED PER ADS PRODUCT NOTE 3.115.

**LIST OF UNDERGROUND UTILITY USERS:**

UTILITY	COMPANY	ADDRESS	PHONE
WATER:	AQUA PENNSYLVANIA, INC.	762 WEST LANCASTER AVENUE BRYN MAWR, PA 19010	(610) 645-4230
	PENNSYLVANIA-AMERICAN WATER COMPANY	196 WEST JOHNSON HIGHWAY NORRISTOWN, PA 19401	(610) 292-3576
SEWER:	UPPER MERION TWP MUNICIPAL AUTHORITY	175 WEST VALLEY FORGE ROAD KING OF PRUSSIA, PA 19406	(610) 275-1534
GAS:	PECO ENERGY CO.	680 RIDGE PIKE PLYMOUTH MEETING, PA 19462-1945	(610) 941-1768
ELECTRIC:	PECO ENERGY CO.	2301 MARKET STREET P.O. BOX 8699 PHILADELPHIA, PA 19101-8699	(215) 841-4000
TELEPHONE:	VERIZON PENNSYLVANIA, INC.	SUITE 401, BUILDING 8 WAYNE, PA 19087	(610) 964-6132



PROJECT TITLE :		<b>449 E. CHURCH ROAD</b>			
		UPPER MERION TOWNSHIP MONTGOMERY COUNTY PENNSYLVANIA			
DRAWING TITLE :		<b>GRADING PLAN</b>			
PREPARED BY :		<b>JOSEPH M. ESTOCK, PE, PLS</b>			
		355 S. HENDERSON ROAD KING OF PRUSSIA, PA 19406 610-365-3636 (OFF.) 610-962-9855 (FAX)			
SCALE	DATE	FILE NO.	FIELD BOOK	SHT. NO.	
1" = 20'	23 JAN. 2008	04049	306	5 of 8	

**REVISIONS**

GRAPHIC SCALE 1"=20'

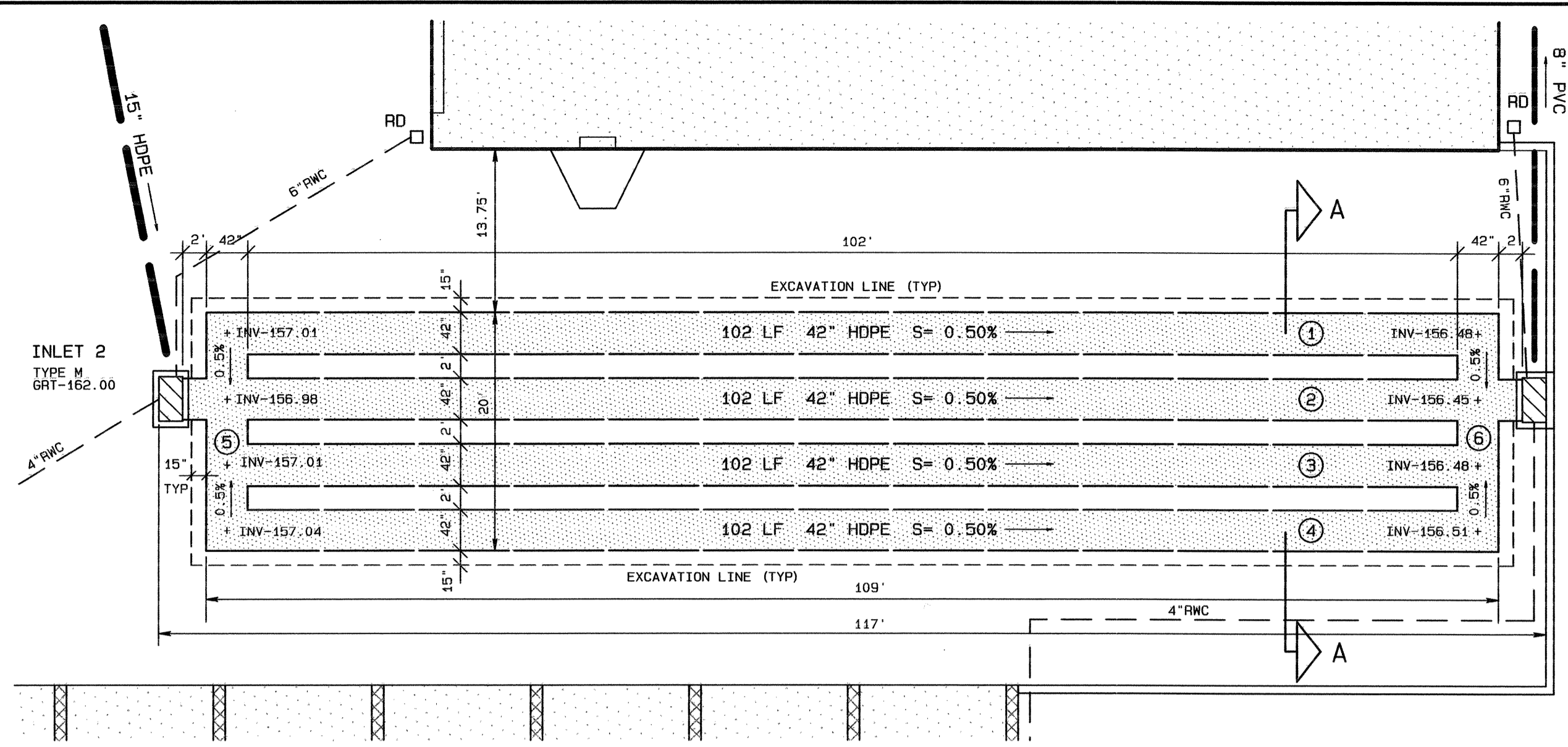
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**UNDERGROUND UTILITIES**

PA ACT 187 OF 1998-ONE CALL NOTIFICATION (1-800-242-1176)  
DATE: 12-21-07 SERIAL NO.: 3556246

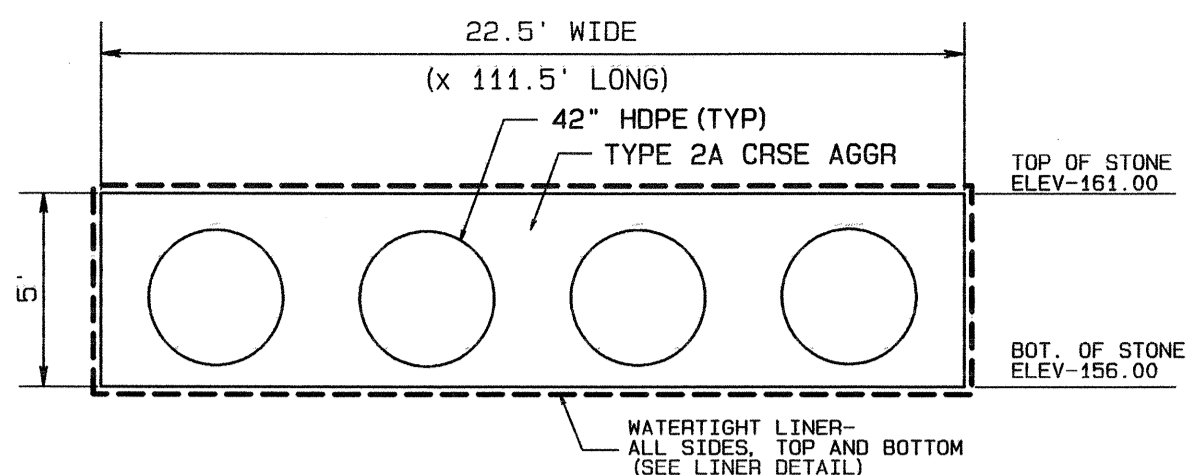
ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLAN HAVE BEEN DEVELOPED FROM EXISTING UTILITY CO. RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE SITE. COMPLETELY ON ACCURACY OF LOCATION AND DEPTH OF EXISTING UTILITIES IS NOT GUARANTEED. THE ENGINEER HAS CONDUCTED VISUAL SURVEYS AND/OR GROUND PENETRATING RADAR (GPR) TO DETERMINE THE EXISTENCE OF UTILITIES AND FOR NOTIFYING THE UTILITIES PROVIDER AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION TO VERIFY LOCATION AND DEPTH OF SAME.

**JOSEPH M. ESTOCK**  
PROFESSIONAL ENGINEER  
PERMIT NO. 12020E

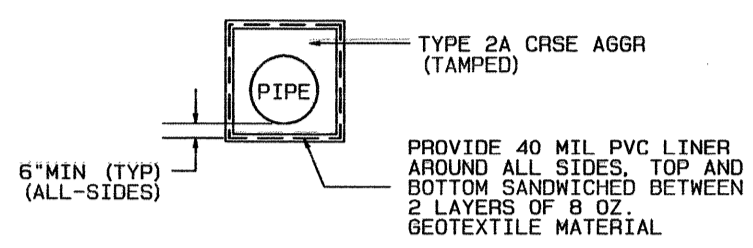


**UNDERGROUND STORMWATER DETENTION FACILITY PIPE LAYOUT DETAIL**

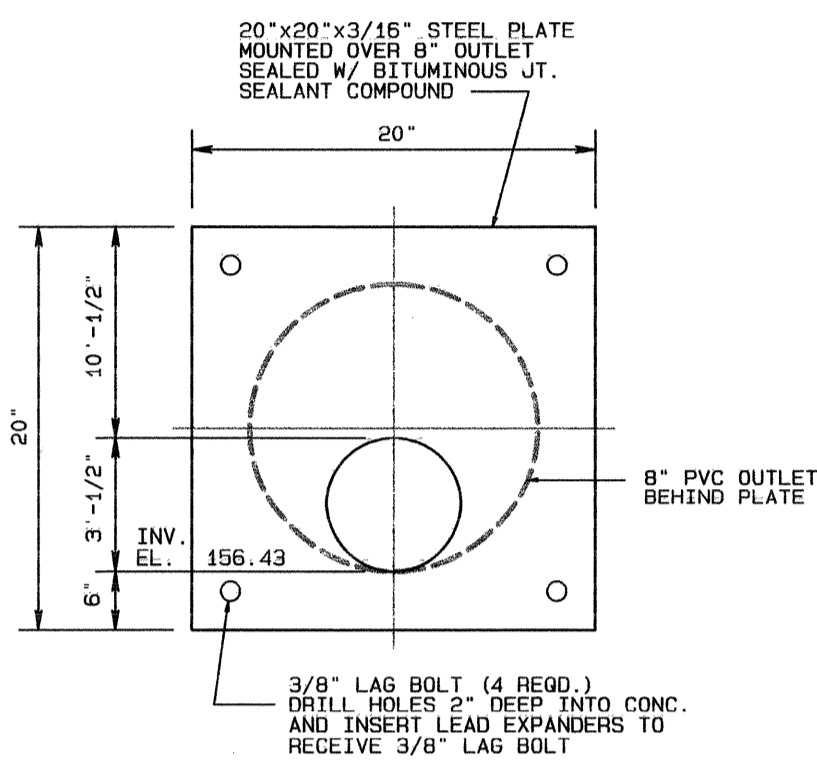
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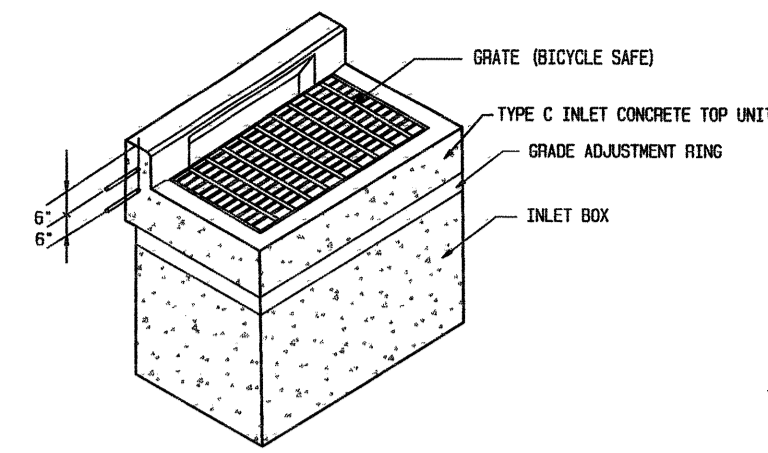
**SECTION A-A**  
SCALE: 1" = 5'



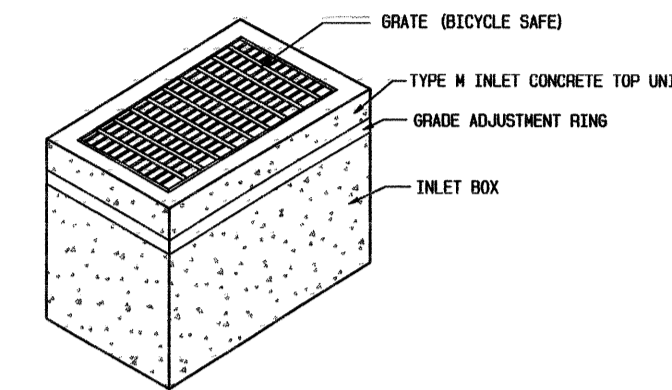
**LINER DETAIL**  
(NTS)



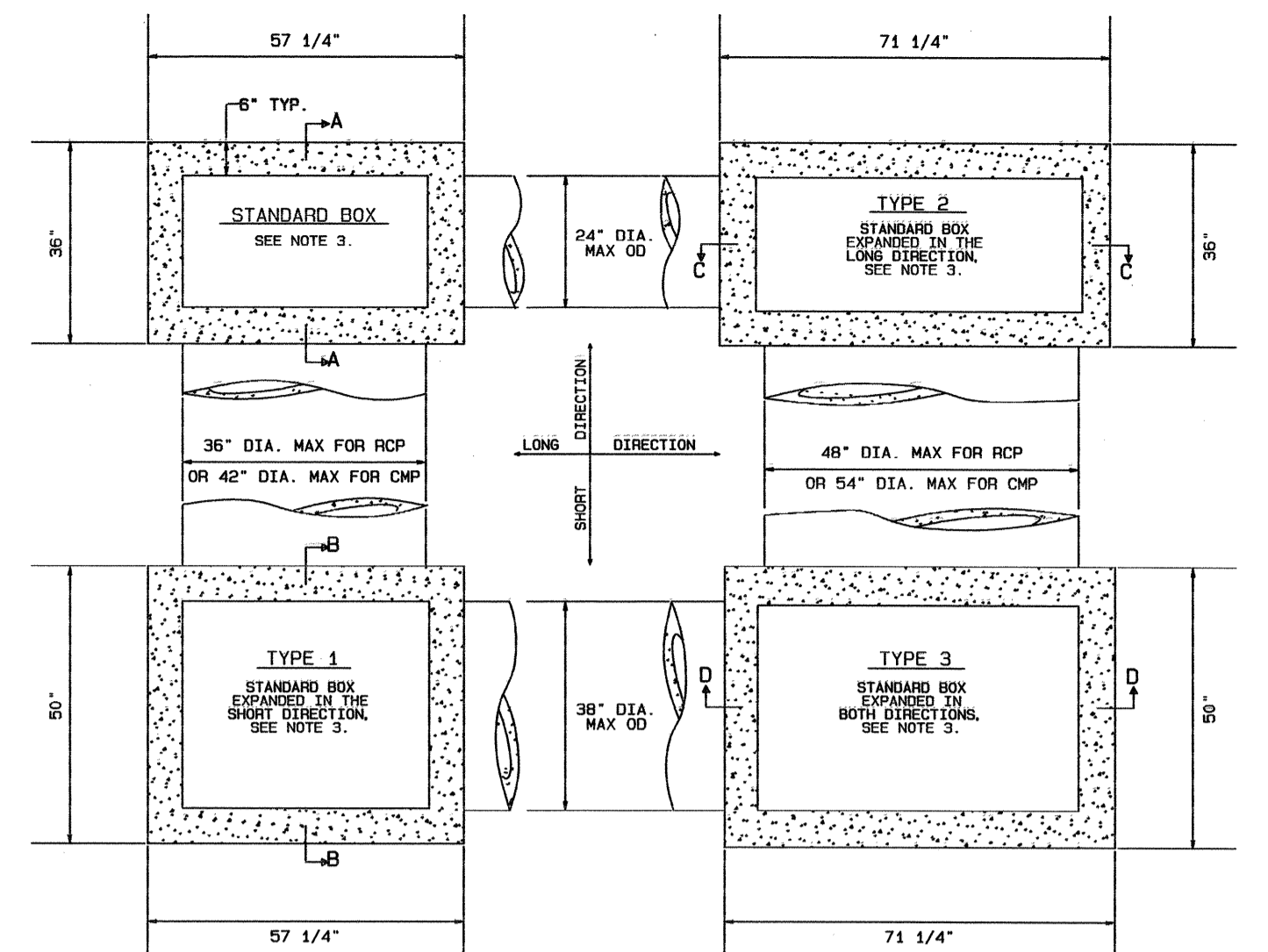
**ORIFICE PLATE DETAIL**  
(NTS)



**TYPE C INLET**

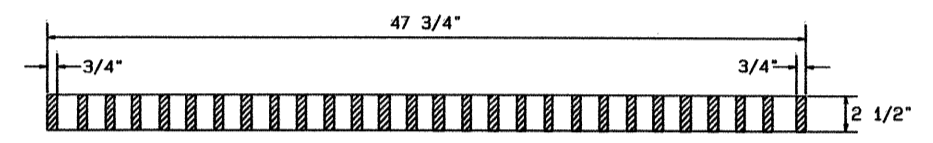


**TYPE M INLET**

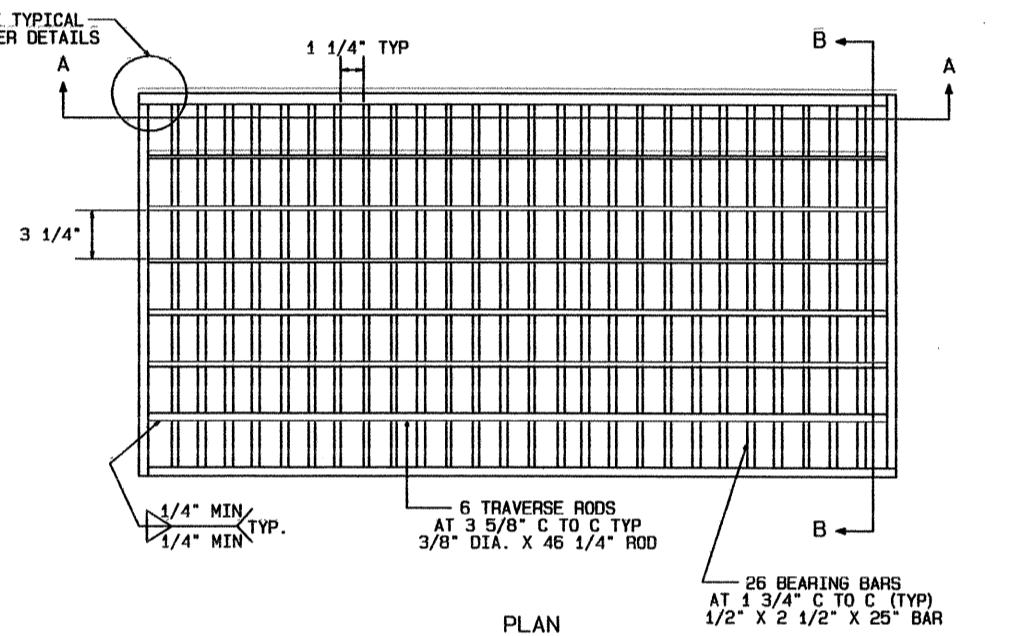


**INLET BOXES - PLAN VIEW**  
(NTS)

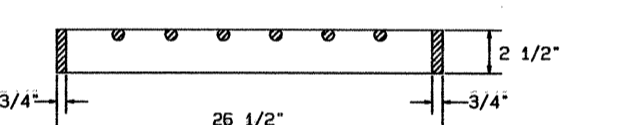
- INLET BOX NOTES**
- CONSTRUCT INLET BOXES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408/2000, SECTION 114.
  - PERMIT ONLY PRECAST INLET BOXES SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15. USE CLASS AA CEMENT CONC FOR PRECAST BOXES.
  - PROVIDE STANDARD INLET BOXES AND COVER ADJUSTMENT SLABS WITH A 24" X 48" OPENING TO ACCOMMODATE STANDARD TOP COMPONENTS.
  - FOR INLETS THAT DEVIATE FROM THE STANDARD SUBMIT SPECIAL DETAILS AND DESIGN FOR THE INLET WALLS AND BASE TO THE BUREAU OF CONSTRUCTION FOR REVIEW AND APPROVAL. CONSTRUCT INLETS THAT EXCEED 5' IN HEIGHT WITH STEPS SIMILAR TO MANHOLES (SEE RC-390). FOR INLETS OTHER THAN AS SHOWN ON THE STANDARDS, PROVIDE REINFORCEMENT BASED ON PUB. 28 (MS 25) LOADING AND IN ACCORDANCE WITH PUBLICATION 408M.
  - LOCATE PIPE OR PIPES AS INDICATED. WITH THE INLET BOTTOM SHAPED TO CHANNEL THE FLOW TOWARD THE OUTLET PIPE. WHEN PROJECT CONDITIONS REQUIRE PIPE BLOCKOUTS TO BE FORMED WITHIN 4" FROM THE TOP OF THE INLET BOX, PROVIDE AN ADDITIONAL #10 (#3) REINFORCEMENT BAR LOCATED 1" FROM THE TOP OF THE INLET SIDE WALL WITH ALONG THE INLET FACE. REMOVE ANY VISIBLE PORTION OF THE BAR IF REQUIRED DURING INSTALLATION AND PRIOR TO JOINING THE PIPE TO THE INLET. IF REINFORCED CONCRETE PIPE IS USED, THE PIPE BLOCKOUT MAY BE FORMED "FLUSH" WITH THE INLET BASE. LIMIT PIPE BLOCKOUT OF WALL TO 1".
  - PLACE SUBBASE MATERIAL MEETING THE REQUIREMENTS OF PUBLICATION 408/2000, SECTION 250.2, IN LAYERS 4" THICK, COMPACTED TO A BENEFIT SATISFACTORY TO THE ENGINEER AND INCIDENTAL TO THE INLET PAT ITEM.
  - FOR PIPE DIAMETERS LARGER THAN 48" RCP OR 54" CMP, USE A MODIFIED INLET BOX, SHEET 9.
  - PROVIDE CONSTRUCTION JOINTS AS REQUIRED FOR INLET BOXES THAT ARE NOT MONOLITHIC. SEE DETAILS A & B SHEET 7.
  - TAPERS MAY BE PROVIDED ON VERTICAL FACES OF PRECAST INLET BOX BASE UNITS TO FACILITATE FORM STRIPPING. HOWEVER, BOTTOM DIMENSIONS MUST NOT BE REDUCED.
  - PROVIDE SUITABLE LIFTING DEVICES FOR HANDLING AND INSTALLATION. GALVANIZE METAL DEVICES AS SPECIFIED IN PUB. 408/2000 SECTION 1105.



**SECTION A-A**

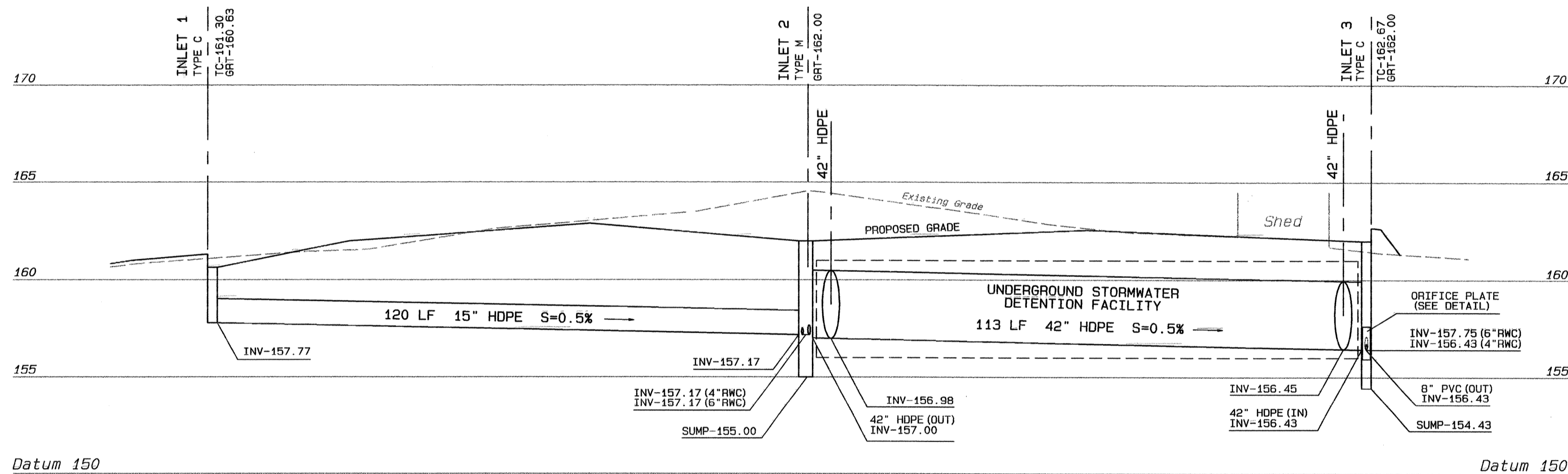


**PLAN**



**SECTION B-B**

**BICYCLE SAFE STRUCTURAL STEEL GRATE**  
(NTS)

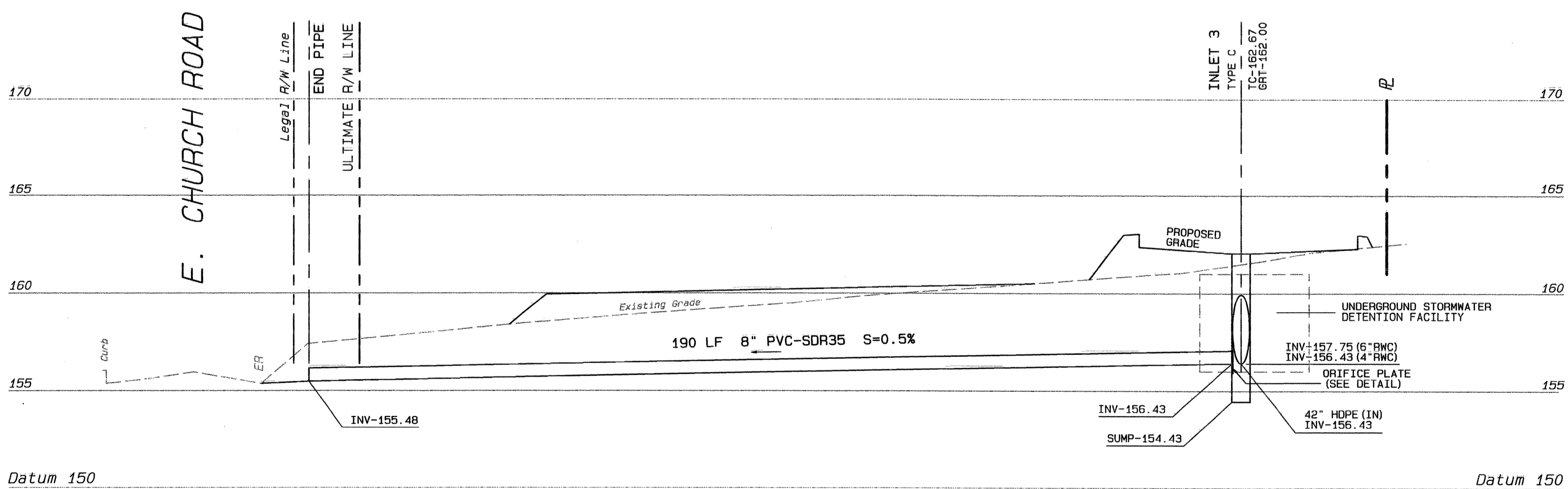


**STORM SEWER PROFILE**

SCALE: 1" = 5' VERT  
1" = 20' HORZ

NOTE:  
IF UNSUITABLE MATERIAL IS FOUND, UNDERCUT AS DIRECTED AND BACKFILL WITH SUITABLE MATERIAL TO BOTTOM OF BEDDING ELEVATION.

**HDPE PIPE BEDDING DETAIL**  
(NTS)

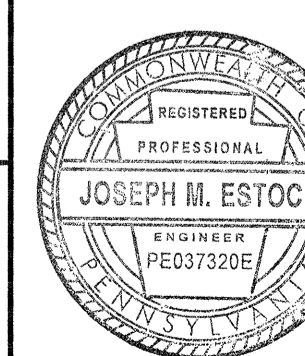


**STORM SEWER PROFILE**

SCALE: 1" = 5' VERT  
1" = 20' HORZ

**UNDERGROUND UTILITIES**  
PA. ACT 187 OF 1996-ONE CALL NOTIFICATION (1-800-242-1776)  
DATE: 12-21-07 SERIAL NO.: 3556246

**REVISIONS**

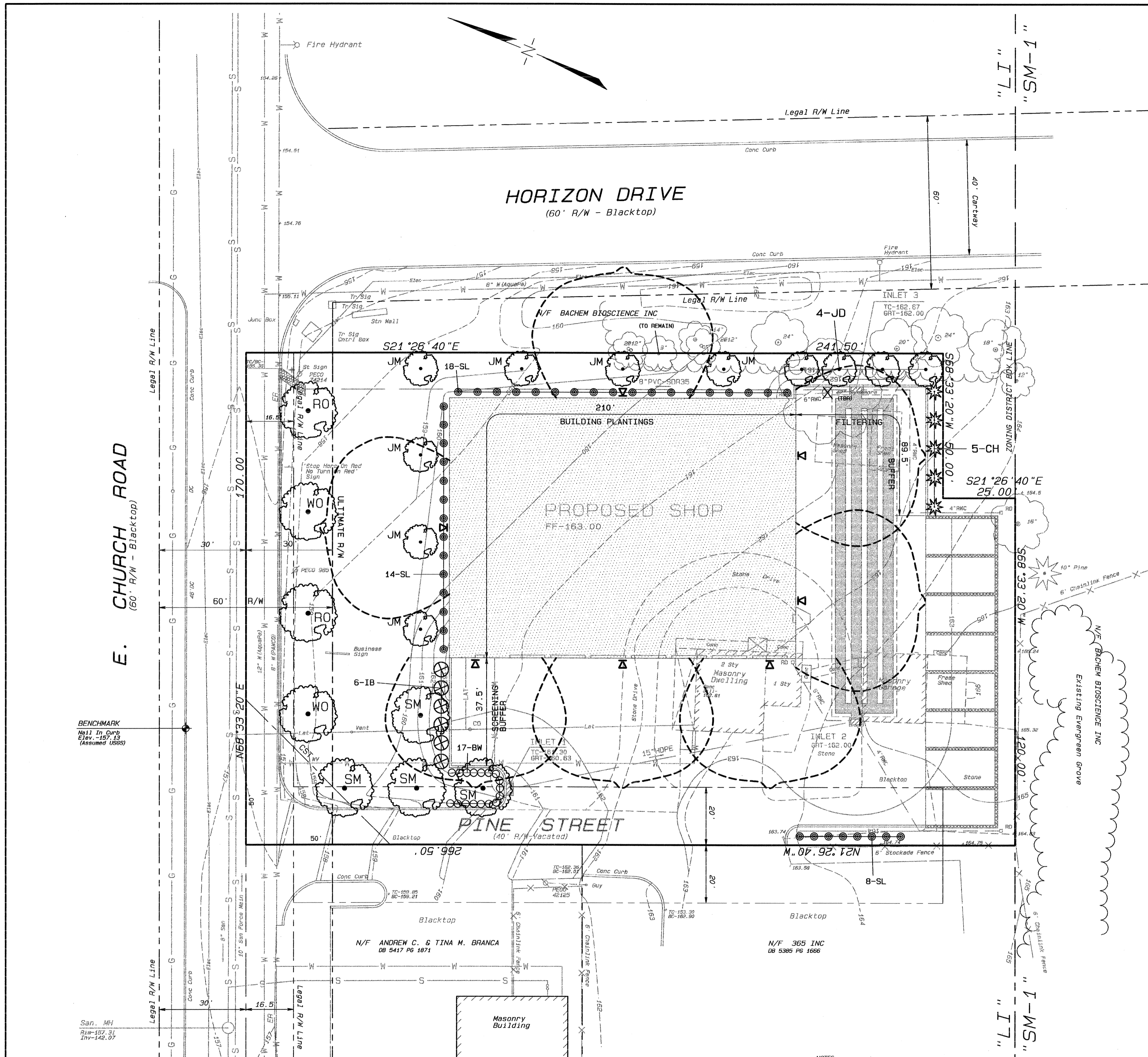


**PROJECT TITLE :**  
**449 E. CHURCH ROAD**  
UPPER MERION TOWNSHIP  
MONTGOMERY COUNTY  
PENNSYLVANIA

**DRAWING TITLE :**  
**STORM SEWER DETAILS  
PROFILES**

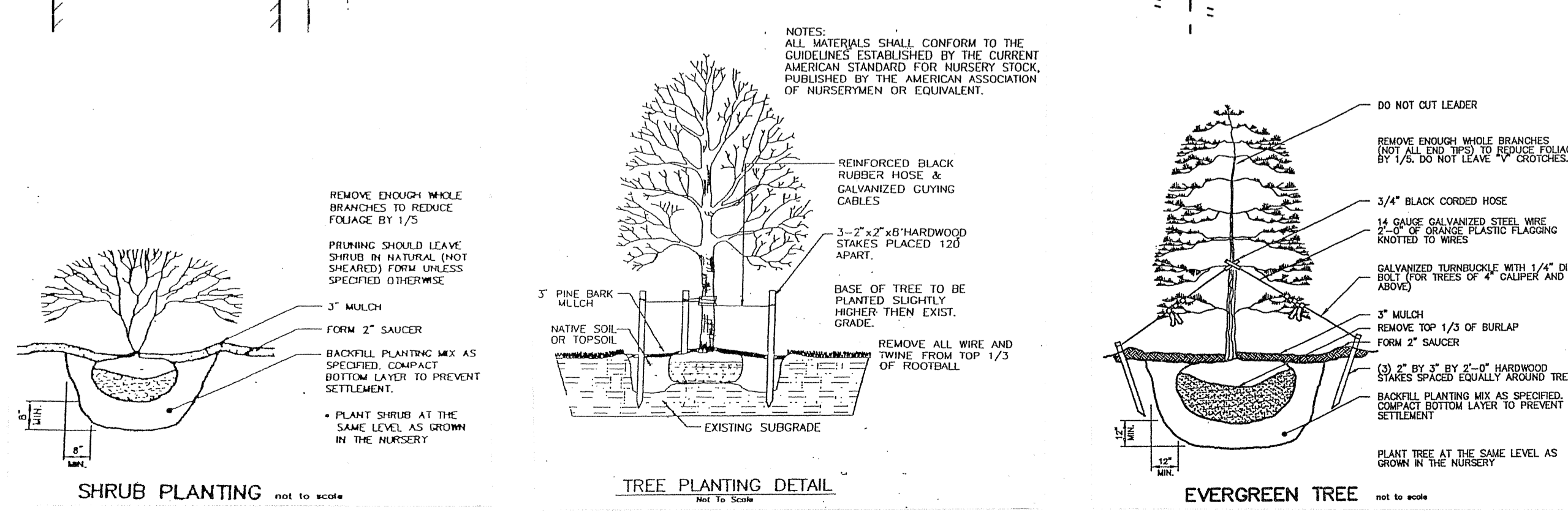
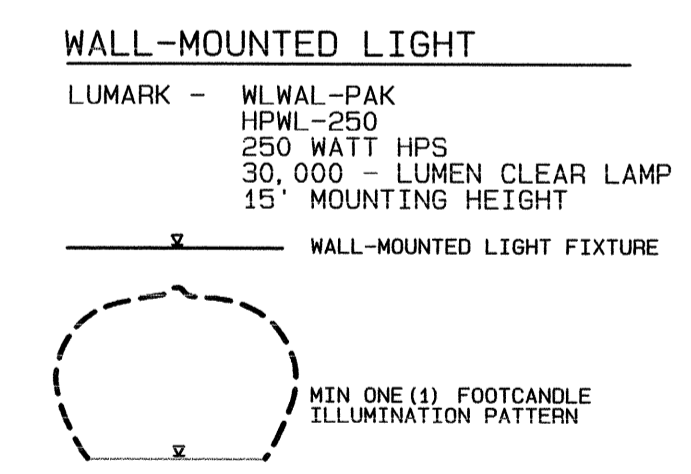
**PREPARED BY :**  
**JOSEPH M. ESTOCK, PE, PLS**

SCALE	DATE	FILE NO.	FIELD BOOK	SHT. NO.
AS NOTED	23 JAN. 2008	04049	306	6 of 8



## LANDSCAPING CHART

ORDINANCE SECTION	LANDSCAPING REQUIREMENT	PROPOSED CONDITION	LANDSCAPING REQUIRED				
			CANOPY TREES	UNDERSTORY TREES	EVERGREEN TREES	UPLIGHT EVERGREEN SHRUBS (LARGE)	DECIDUOUS OR EVERGREEN SHRUBS (SMALL)
<b>SIZE REQUIRED</b>			2'-2.5' MIN CAL	1.5' MIN CAL 8' MIN HGT	8' MIN HGT	4' MIN HGT	24' MIN HGT
TREE CREDITS SECTION 145-24.1.C.3	PRESERVED TREE NO. OF TREE CREDITS 36" (DBH) 8 TREES 18"-35" 2 12"-17" 2 8"-11" 2	9" CANOPY TREE PRESERVED	(-2)				
REPLACEMENT TREES SECTION 145-24.1.C.4	REPLACE EACH TREE REMOVED IN KIND (12" DIA. OR GREATER)	42" CANOPY TREE REMOVED	1				
PARKING LOTS SECTION 145-24.1.D	1 CANOPY TREE PER 10 PARKING SPACES	NO. OF PARKING SPACES= 11 PS	1.1				
STREET TREES SECTION 145-24.1.E	1 CANOPY TREE PER 40 FEET OF FRONTAGE	FRONTAGE= 170 FEET	4.3				
FILTERING BUFFER SECTION 145-24.1.G	COMMERCIAL/INDUSTRIAL TO OFFICE/INSTITUTIONAL 2 CANOPY TREES PER 100 FEET 2 UNDERSTORY TREES PER 100 FEET 5 EVERGREEN TREES PER 100 FEET 5 SHRUBS PER 100 FEET	PROPERTY LINE= 89.5 FEET	1.8	1.8	4.5		4.5
SCREENING BUFFER SECTION 145-24.1.G	15 UPLIGHT EVERGREEN SHRUBS PER 100 FEET 3 CANOPY TREES PER 100 FEET	FRONT PARKING LOT= 37.5 FEET	1.1				5.6
BUILDING PLANTING SECTION 145-24.1.H	2 UNDERSTORY TREES PER 50 FEET 5 SHRUBS PER 20 FEET	BUILDING PERIMETER= 210 FEET		8.4			52.5
<b>TOTAL PLANTS REQUIRED</b>			<b>8</b>	<b>11</b>	<b>5</b>	<b>6</b>	<b>57</b>
SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY PROVIDED				
RO	QUERCUS RUBRA	RED OAK (NATIVE)	2				
WO	QUERCUS PHELLOS	WILLOW OAK (NATIVE)	2				
SM	ACER SACCHARUM	SUGAR MAPLE (NATIVE)	4				
JM	ACER PALMATUM	JAPANESE MAPLE - BLOODGOOD	7				
JD	CORNUS KOUSA	JAPANESE DOGWOOD	4				
CH	TSUGA CANADENSIS	CANADIAN HEMLOCK (NATIVE)			5		
IB	ILEX GLABRA	INKBERRY (NATIVE)				6	
SL	PRUNUS LAUROCERASUS	SKIP LAUREL					40
BW	BUXUS SEMPERVIRENS	BOXWOOD					17
<b>TOTAL PLANTS PROVIDED</b>			<b>8</b>	<b>11</b>	<b>5</b>	<b>6</b>	<b>57</b>
<b>SIZE PROVIDED</b>			2'-2.5' MIN CAL	1.5' MIN CAL 8' MIN HGT	8' MIN HGT	4' MIN HGT	24' MIN HGT



**PROJECT TITLE :**  
**449 E. CHURCH ROAD**  
 UPPER MERTON TOWNSHIP  
 MONTGOMERY COUNTY  
 PENNSYLVANIA

**DRAWING TITLE :**  
**LANDSCAPE AND SITE LIGHTING PLAN**

**PREPARED BY :**  
**JOSEPH M. ESTOCK, PE, PLS**  
 355 S. HENDERSON ROAD  
 KING OF PRUSSIA, PA. 19406  
 610-265-3035 (OFF.)  
 610-962-9855 (FAX)

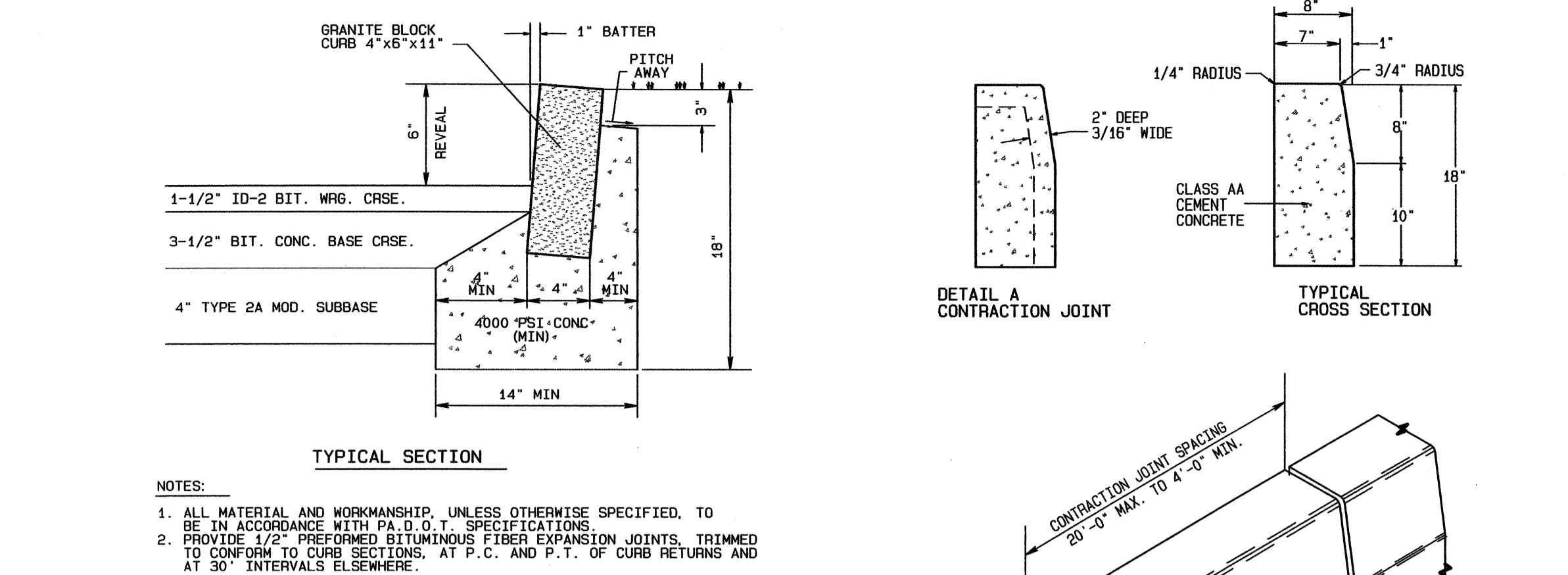
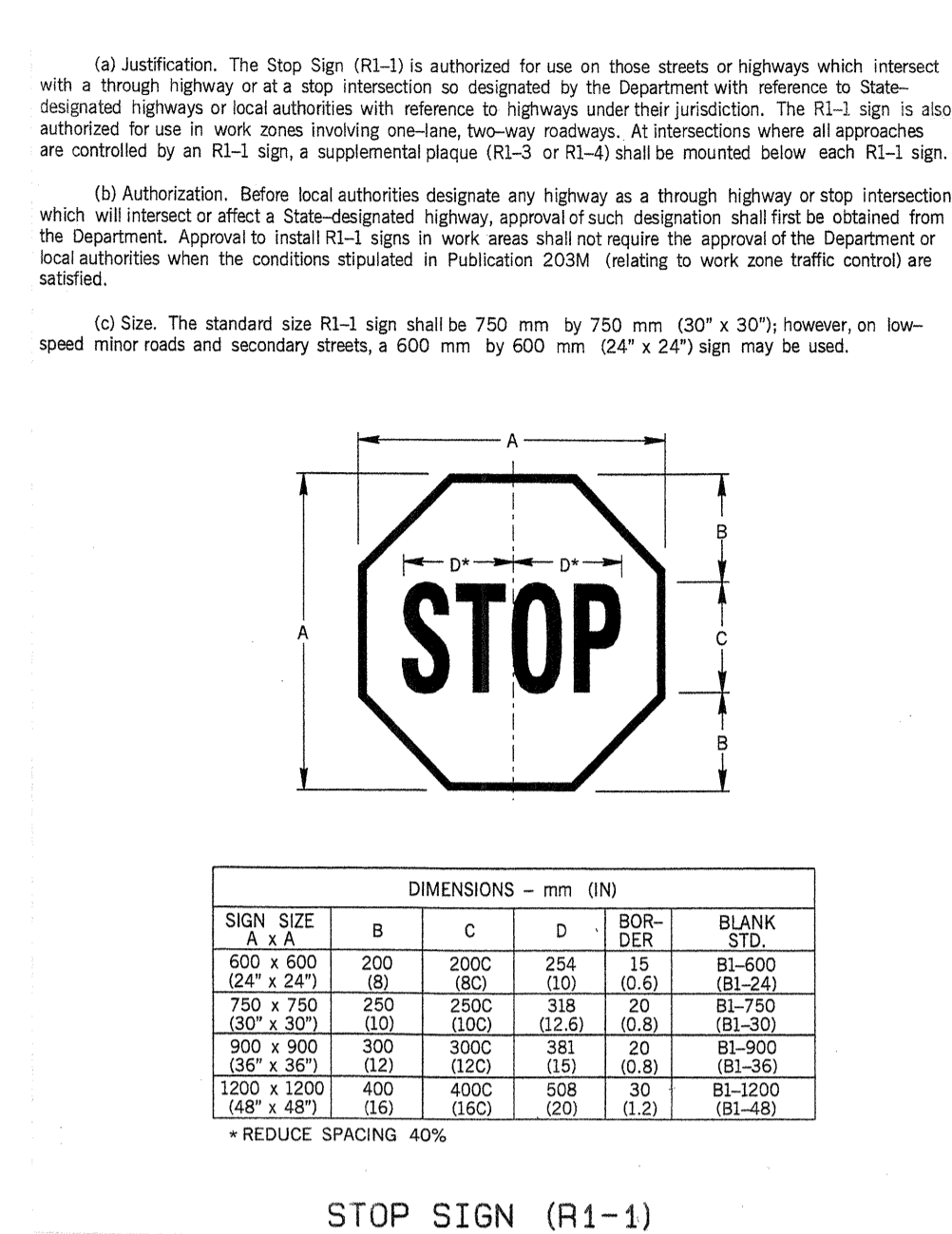
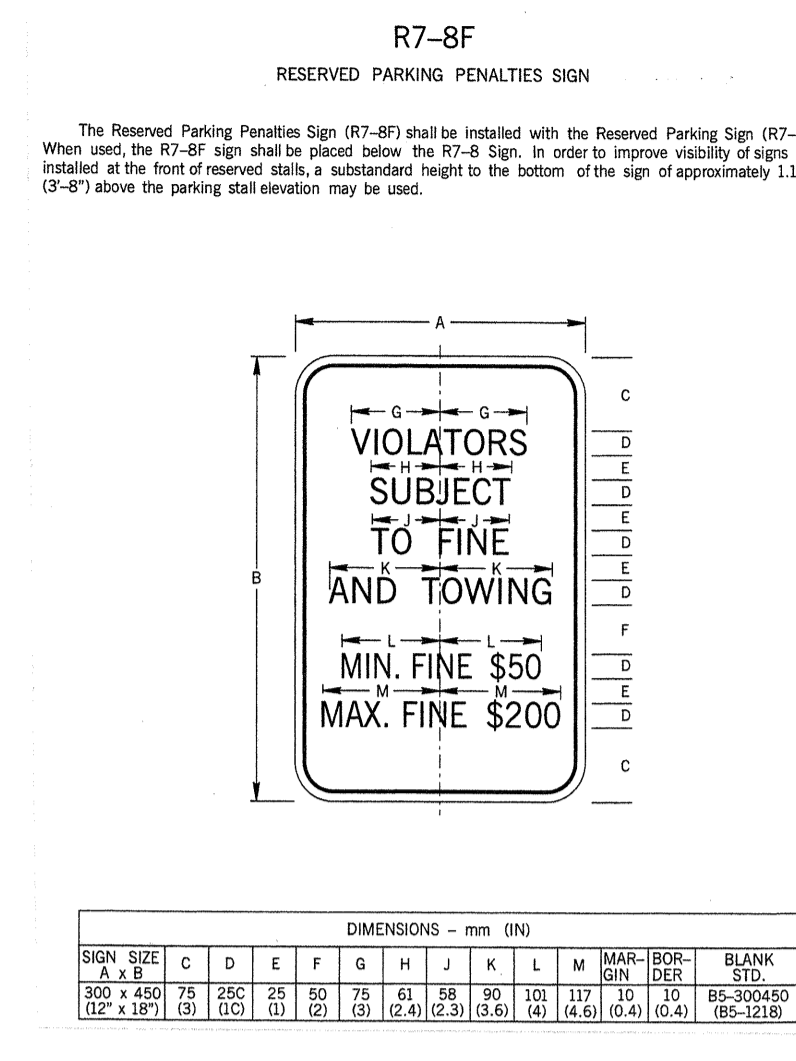
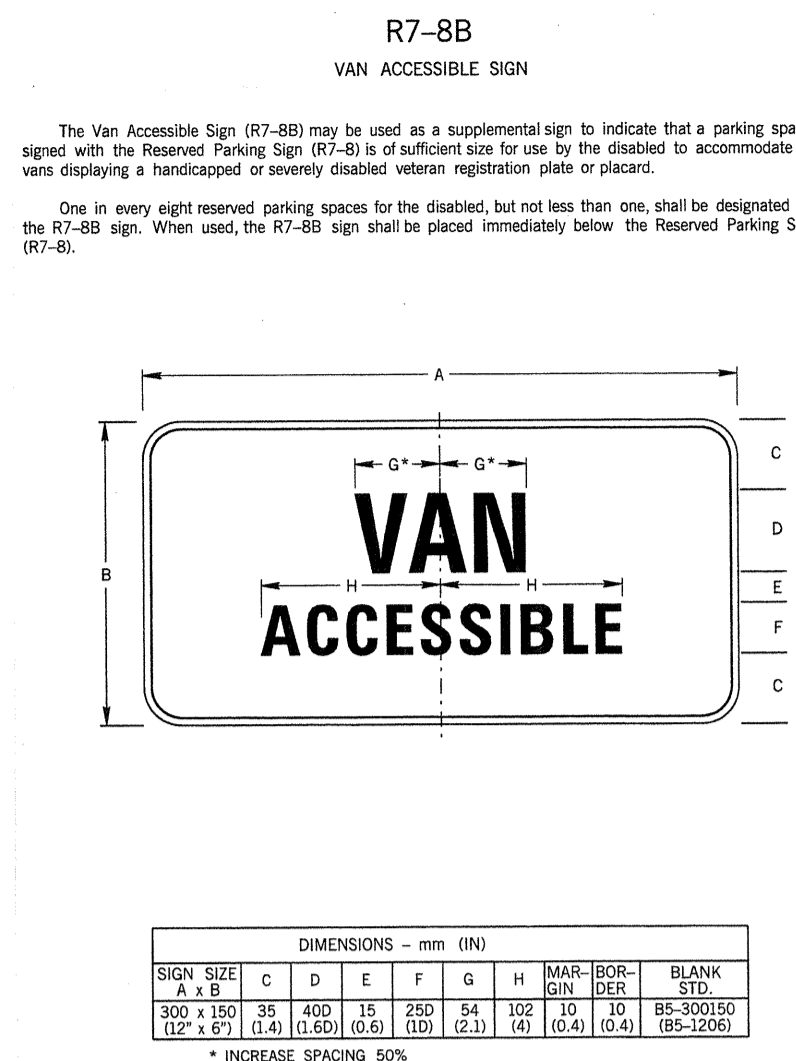
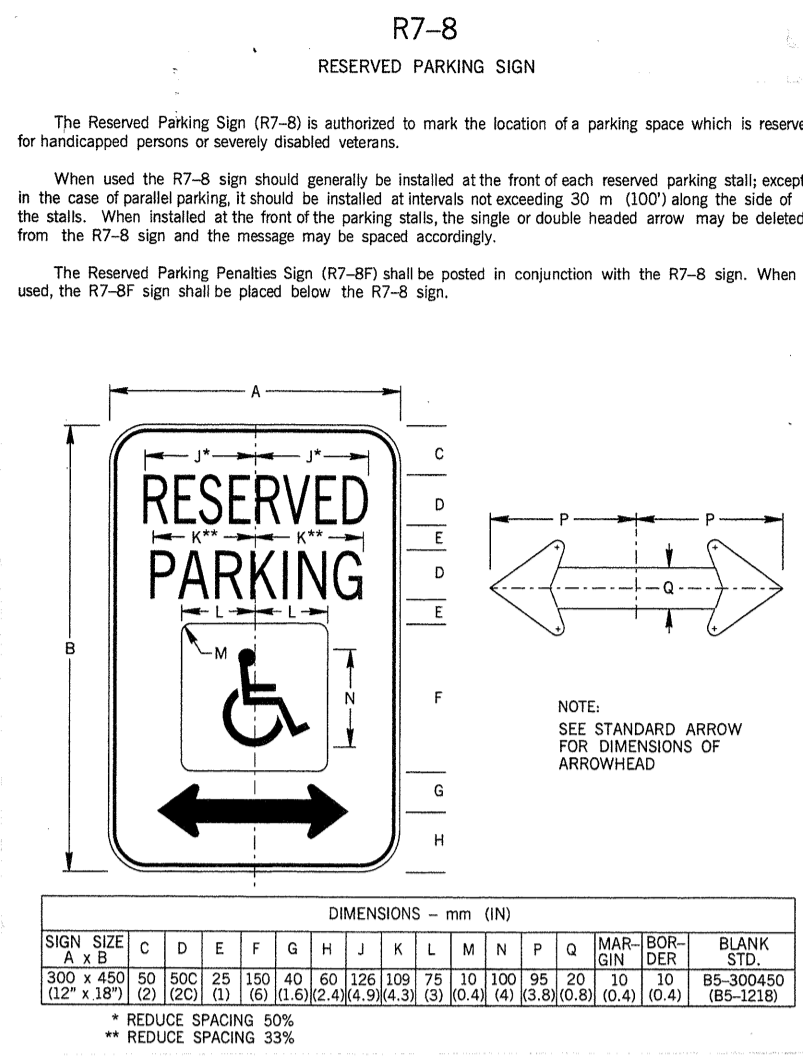
**REVISIONS**

**GRAPHIC SCALE** 1"=20'  
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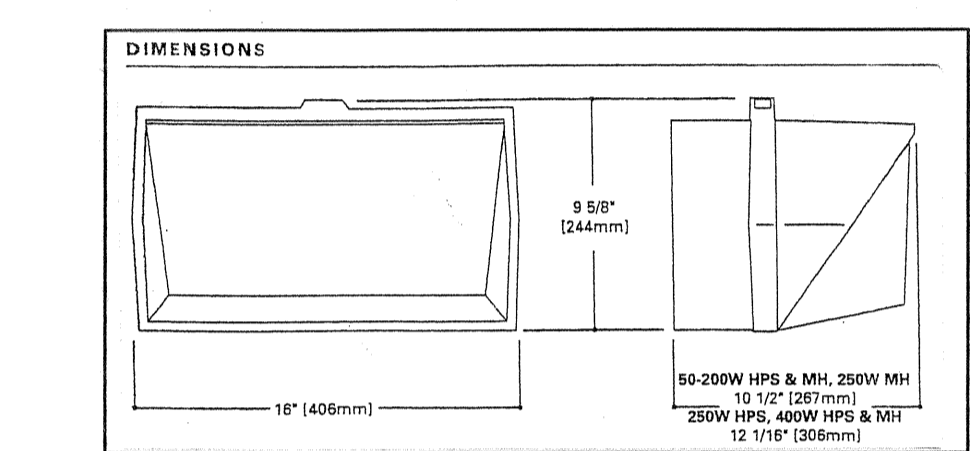
**UNDERGROUND UTILITIES**  
 PA. ACT 187 OF 1996-ONE CALL NOTIFICATION (1-800-242-1776)  
 DATE: 12-21-07 SERIAL NO.: 3559246

**SCALE** 1" = 20'  
**DATE** 23 JAN. 2008  
**FILE NO.** 04049  
**FIELD BOOK** 306  
**SHT. NO.** 7 of 8

**JOSEPH M. ESTOCK**  
 REGISTERED PROFESSIONAL ENGINEER  
 PECS7302E

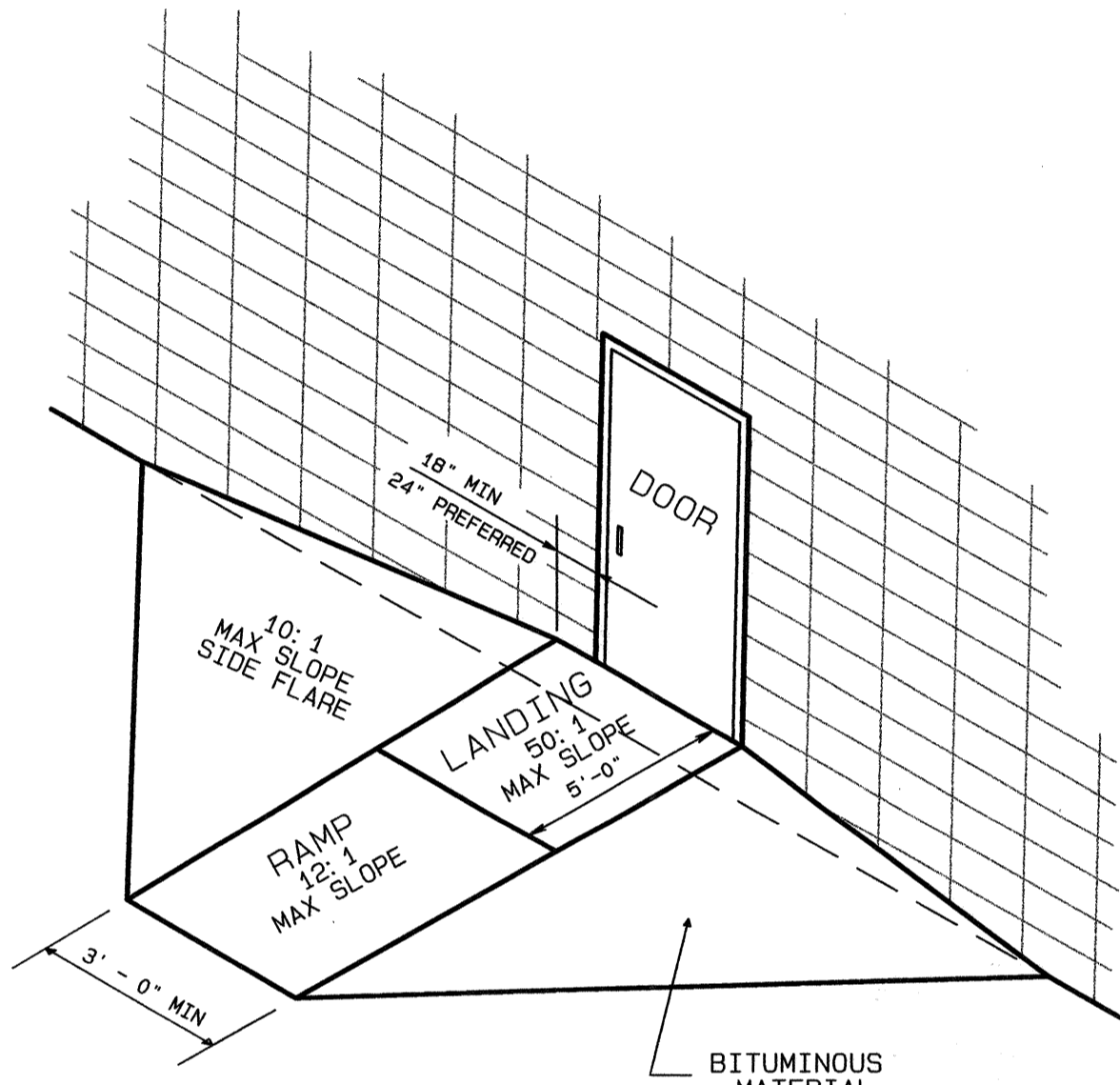


**ACCESSIBLE PARKING SIGN DETAILS**  
NO SCALE

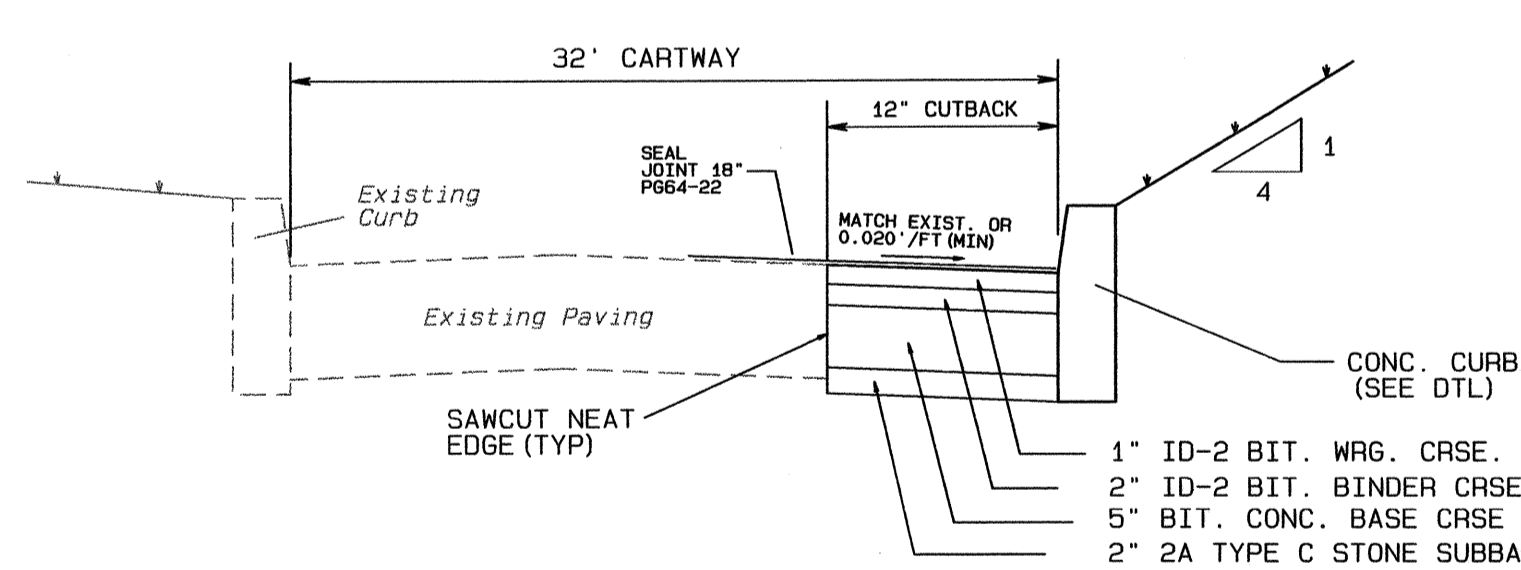


**STOP SIGN (R1-1)**

**GRANITE BLOCK CURB DETAIL**  
(NTS)  
CURB ALTERNATE (ON-SITE ONLY)

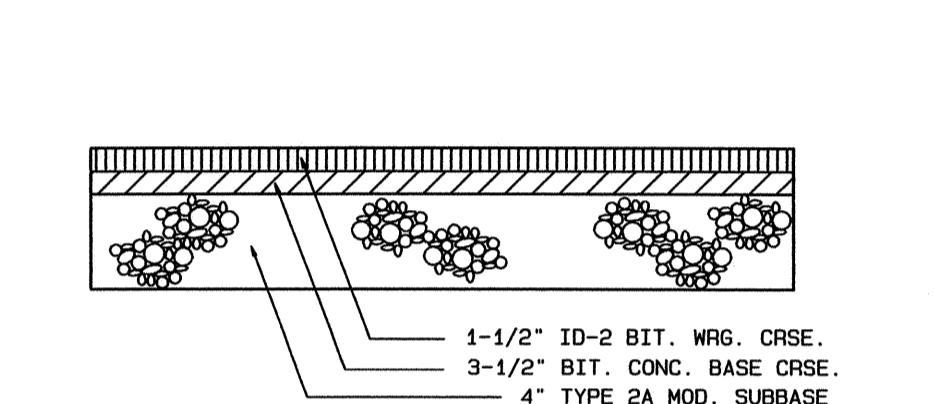


**TYPE 3 BUILT-UP CURB RAMP**  
(NTS)

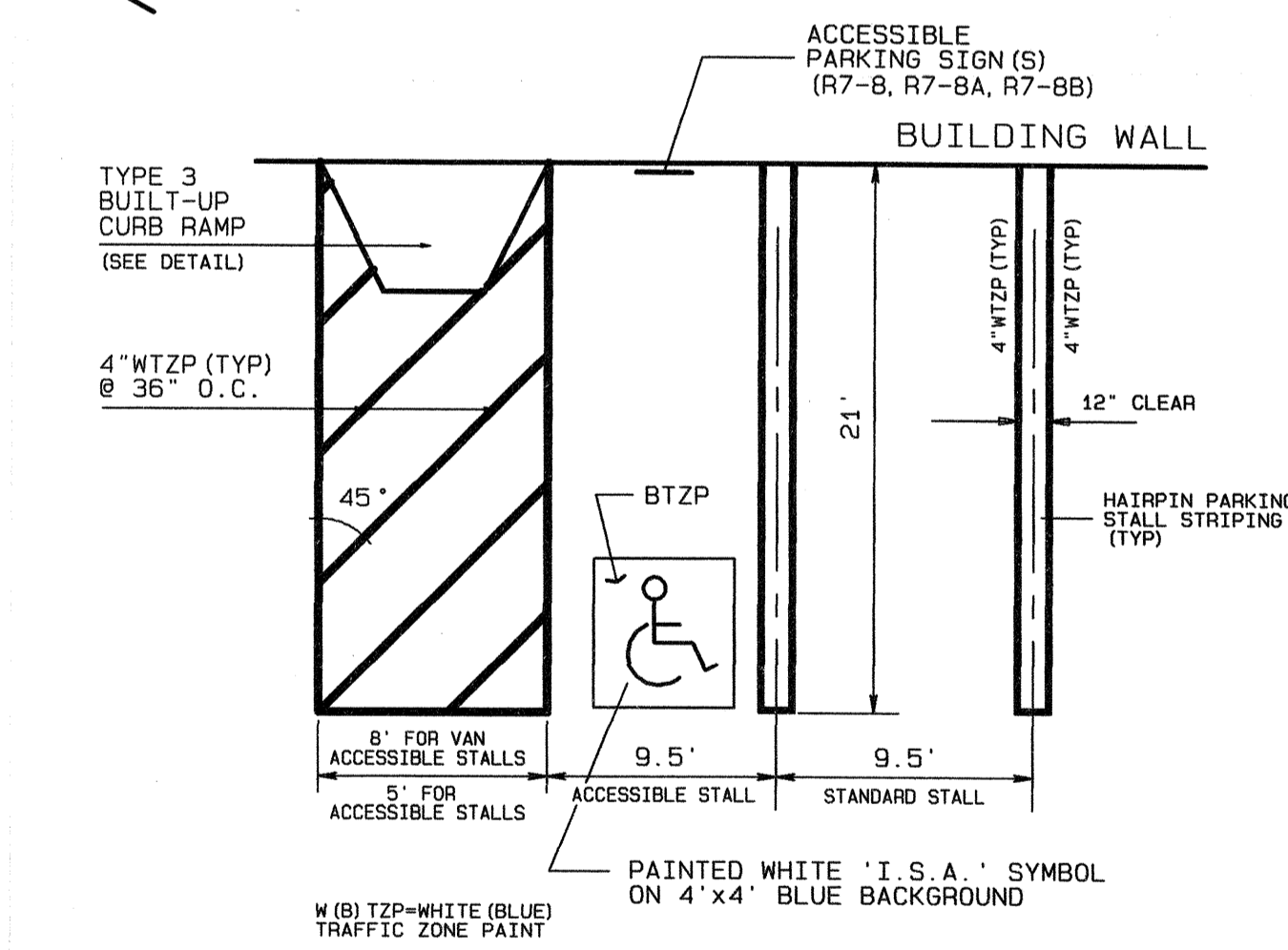


**E. CHURCH ROAD WIDENING SECTION A-A**  
(NTS)

**PLAIN CEMENT CONCRETE CURB**  
(NTS)



**BITUMINOUS PAVING**  
(NTS)



**ACCESSIBLE SPACE STRIPING DETAIL**  
(NTS)

PROJECT TITLE:  
**449 E. CHURCH ROAD**  
UPPER MERION TOWNSHIP  
MONTGOMERY COUNTY  
PENNSYLVANIA

DRAWING TITLE:  
**DETAILS**

PREPARED BY:  
**JOSEPH M. ESTOCK, PE, PLS**  
355 S. HENDERSON ROAD  
KING OF PRUSSIA, PA 19406  
610-265-3035 (OFF.)  
610-962-9895 (FAX)

SCALE	DATE	FILE NO.	FIELD BOOK	SHT. NO.
AS NOTED	23 JAN. 2008	04049	306	8 of 8

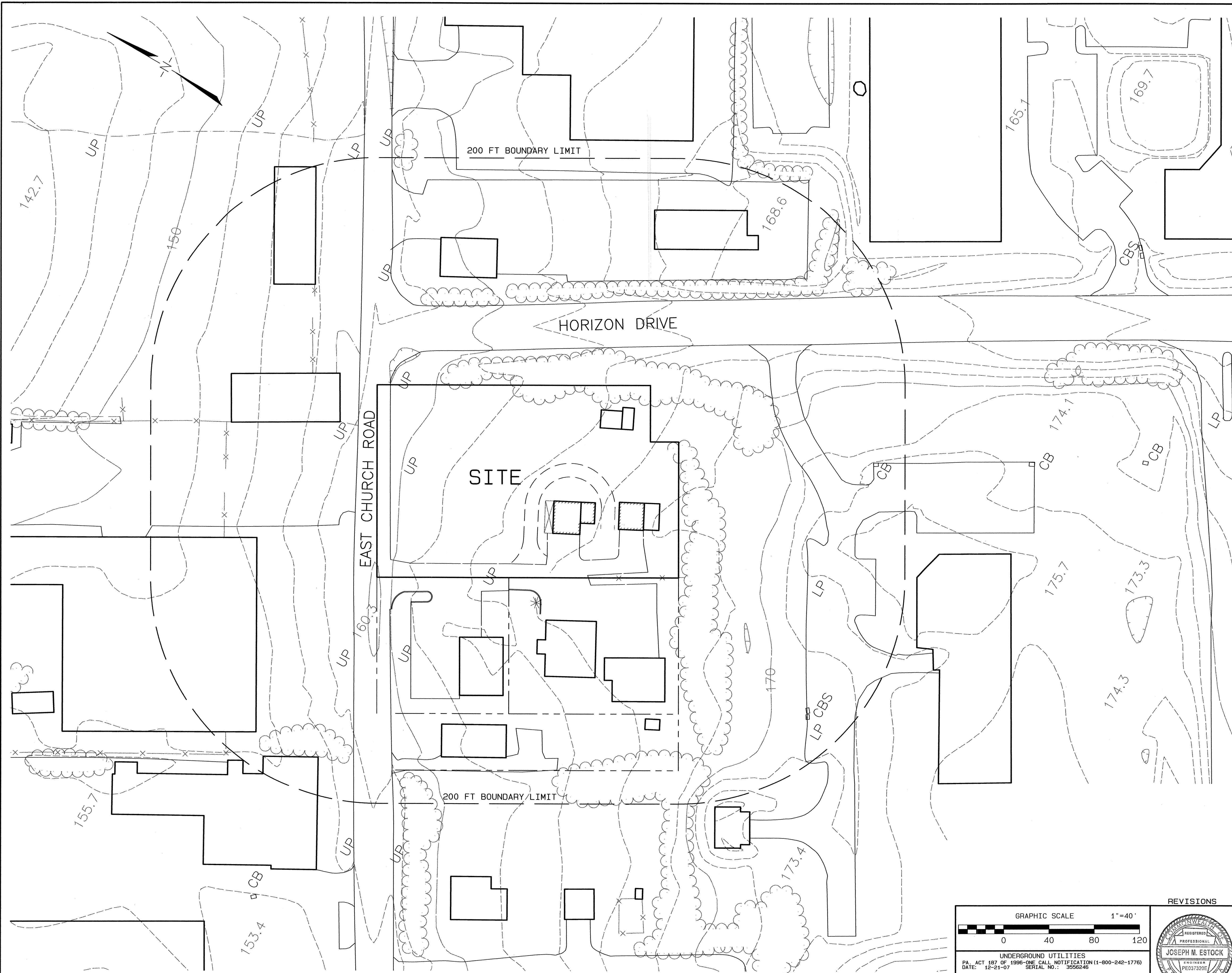
REVISIONS

UNDERGROUND UTILITIES  
PA, ACT 187 OF 1996-ONE CALL NOTIFICATION (1-800-242-1776)  
DATE: 12-21-07 SERIAL NO.: 3556246

REGISTERED PROFESSIONAL ENGINEER  
**JOSEPH M. ESTOCK**  
NO. 007320E

ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLAN HAVE BEEN DEVELOPED FROM EXISTING UTILITY CO. RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE UTILITY LOCATIONS. THE LOCATION AND DEPTH OF UNDERGROUND UTILITIES ARE NOT GUARANTEED NOR IS IT GUARANTEED THAT ALL EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR AND ENGINEER SHALL DETERMINE THE EXISTENCE OF UTILITIES AND FOR NOTIFYING THE UTILITY COMPANIES AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION TO VERIFY LOCATION AND DEPTH OF SAME.

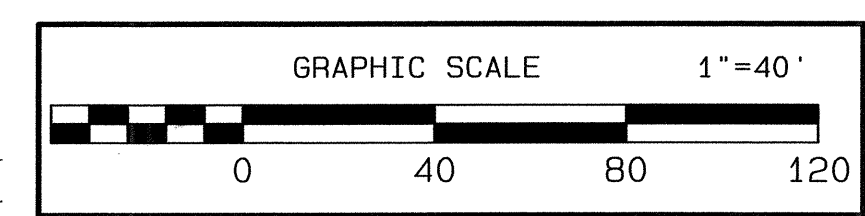




PROJECT TITLE :  
**449 E. CHURCH ROAD**  
 UPPER MERION TOWNSHIP  
 MONTGOMERY COUNTY  
 PENNSYLVANIA

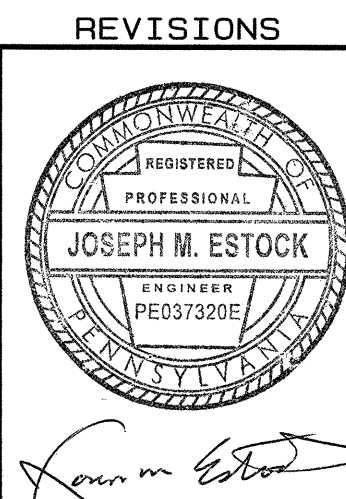
DRAWING TITLE :  
**EXISTING FEATURES PLAN**

PREPARED BY :  
**JOSEPH M. ESTOCK, PE, PLS**  
 355 S. HENDERSON ROAD  
 KING OF PRUSSIA, PA. 19406  
 610-265-3036 (OFF.)  
 610-962-9955 (FAX)



UNDERGROUND UTILITIES  
 PA. ACT 187 OF 1996-ONE CALL NOTIFICATION (1-800-242-1776)  
 DATE: 12-21-07 SERIAL NO.: 3956246

ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLAN HAVE BEEN DEVELOPED FROM EXISTING UTILITY CO. RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE SITE. CONSULT WITH UTILITY COMPANIES TO VERIFY LOCATION AND DEPTH OF UTILITIES. CONSULT WITH UTILITY COMPANIES TO VERIFY LOCATION AND DEPTH OF UTILITIES. CONSULT WITH UTILITY COMPANIES TO VERIFY LOCATION AND DEPTH OF UTILITIES. CONSULT WITH UTILITY COMPANIES TO VERIFY LOCATION AND DEPTH OF UTILITIES.



SCALE	DATE	FILE NO.	FIELD BOOK	SHT. NO.
1" = 40'	23 JAN. 2008	04049	306	1 of 1