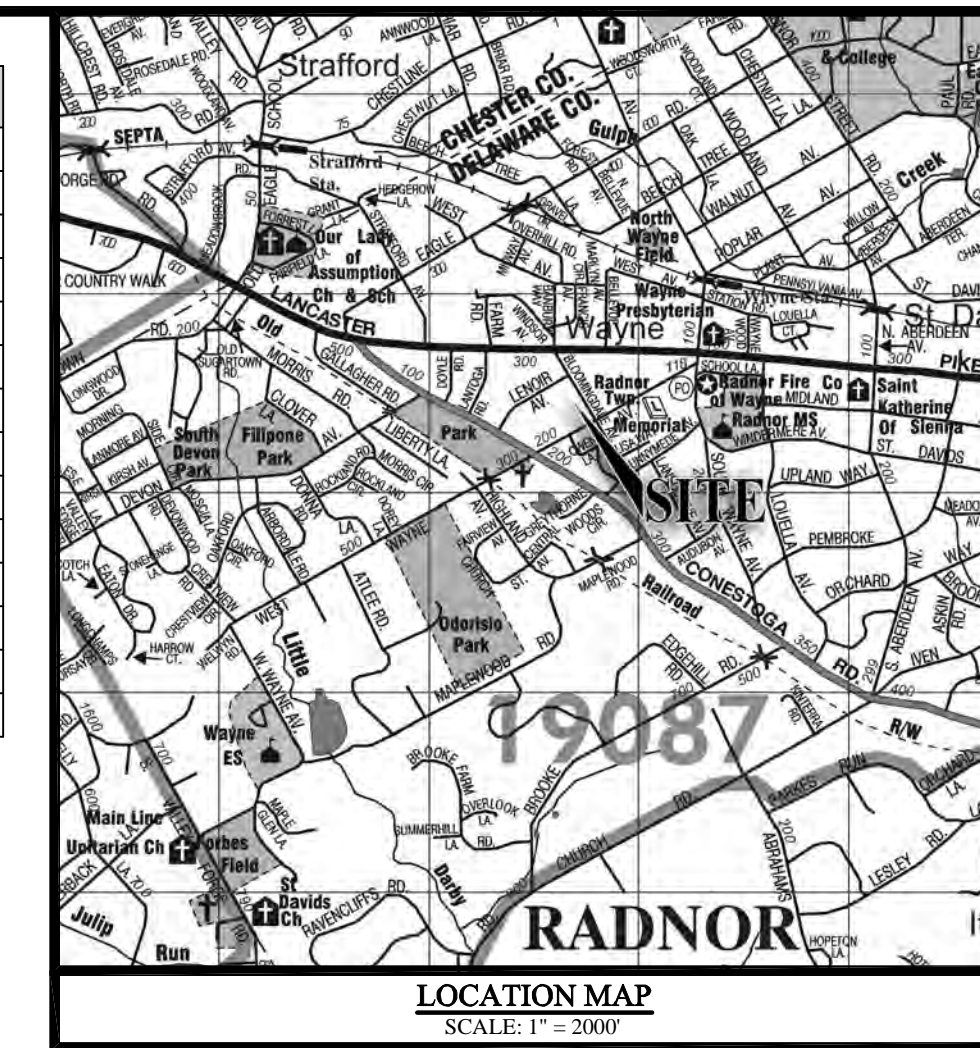


# PRELIMINARY / FINAL LAND DEVELOPMENT & LOT LINE CHANGE PLAN FOR 120 & 124 BLOOMINGDALE AVENUE RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA

SHEET INDEX	
SHEET 01	COVER SHEET
SHEET 02	TITLE PLAN
SHEET 03	EXISTING FEATURES AND NATURAL RESOURCE PLAN
SHEET 04	DEMOLITION PLAN
SHEET 05	LAYOUT & GEOMETRY PLAN
SHEET 06	GRADING & UTILITY PLAN
SHEET 07	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
SHEET 08	SEDIMENTATION & EROSION CONTROL PLAN
SHEET 09	SEDIMENTATION & EROSION CONTROL DETAILS & NOTES
SHEET 10	LANDSCAPING PLAN
SHEET 11	SEWER PROFILES & RECHARGE BED DETAILS
SHEET 12	VEHICLE TURNING TEMPLATE
SHEET 13	CONSTRUCTION DETAILS
SHEET 14	CONSTRUCTION DETAILS



**GENERAL NOTES:**

- PROPOSED USE: (6) SIX RESIDENTIAL DWELLING UNITS (5 NEW, 1 EXISTING). EXISTING UNIT IS CURRENTLY A COMMERCIAL USE, WHICH IS AN EXISTING NON-CONFORMING USE.
- SITE INFORMATION:  
ZONING: R-5, RESIDENTIAL  
UPTS: 36-6-327.8, BLOCK 12, UNIT 350 (26,912.3 S.F., 0.618 ACRES)  
36-6-327.9, BLOCK 12, UNIT 351 (30,523 S.F., 0.700 ACRES)  
BEING: 120 & 124 BLOOMINGDALE AVE., WAYNE, PA 19087
- EXISTING BOUNDARY & TOPO INFORMATION TAKEN FROM EXISTING DEEDS AND ACTUAL FIELD SURVEY PERFORMED SEPTEMBER, 2014 BY INLAND DESIGN, LLC, EXTON, PA.
- BLOCK 36-12, UNIT 350 AND BLOCK 36-12, UNIT 351 SHALL BE CONSOLIDATED INTO A SINGLE LOT FOR THE LAND DEVELOPMENT PLAN.
- PROPERTY TO BE SERVED BY PUBLIC WATER AND SEWER.
- ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR DELAWARE COUNTY, PENNSYLVANIA, MAP NUMBER 4204SC0017F, THERE IS NO 100-YEAR FLOOD PLAIN LOCATED ON THIS PROPERTY.
- ACCORDING TO THE THE PENNSYLVANIA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES, THE GEOLOGY OF THE SITE IS CHARACTERIZED AS PRECAMBRIAN (MGP), THIS PYROXENE-BEARING MAFIC GNEISS IS A DARK-COLORED, MEDIUM- TO FINE-GRAINED METAMORPHIC ROCK.
- THE SITE IS TRIBUTARY TO DARBY CREEK, WHICH IS DESIGNATED AS COLD WATER FISHES (CWF) & MIGRATORY FISHES (MF) BY CHAPTER 93.
- ACCORDING TO THE NATIONAL WETLAND INVENTORY MAP, THERE ARE NO WETLANDS LOCATED WITHIN THE AREA OF THE SITE.
- LOCATION OF ALL UNDERGROUND UTILITIES ARE APPROXIMATE. ALL LOCATIONS AND SIZES ARE BASED ON FIELD SURVEY OF ABOVE-GROUND, VISIBLE STRUCTURES, AND PLOTTING OF UTILITY INFORMATION CONTAINED IN PLANS AVAILABLE AT THE TIME OF SURVEY, AS LISTED IN THE UTILITY REFERENCE PLANS. AVAILABLE AS-BUILT PLANS AND UTILITY MARK-OUTS DOES NOT ENSURE MAPPING OF ALL UNDERGROUND UTILITIES AND STRUCTURES. BEFORE ANY EXCAVATION IS TO BEGIN, ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, DEPTH, SIZE AND TYPE BY THE PROPER UTILITY COMPANIES.
- COMMON DRIVE, STORMWATER MANAGEMENT SYSTEM, AND OPEN SPACE SHALL BE MAINTAINED BY THE HOME OWNERS ASSOCIATION.
- MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH PENNDOT PUBLICATION 213, LATEST EDITION. IF A LANE CLOSURE OR PARTIAL LANE CLOSURE IS NECESSARY FOR CONSTRUCTION, THE APPLICANT SHALL NOTIFY THE TOWNSHIP (3) THREE DAYS IN ADVANCE PRIOR TO THE LANE CLOSURE.
- BLOOMINGDALE AVENUE IS CLASSIFIED AS A LOCAL STREET WHICH REQUIRES A 60 FOOT RIGHT-OF-WAY. A 60 FOOT RIGHT-OF-WAY ALONG BLOOMINGDALE AVENUE IS PROVIDED.
- GRADING PLANS AND EROSION & SEDIMENTATION CONTROL PLANS SHALL BE SUBMITTED AND APPROVED PRIOR TO ISSUING ANY BUILDING PERMITS.
- TWO (2) PARKING SPACES ARE PROVIDED FOR EACH PROPOSED DWELLING WITHIN THE GARAGES SHOWN ON THE PLAN.
- THE ROOMS IN THE PROPOSED NEW UNITS WILL MEET OR EXCEED THE SIZE REQUIREMENTS INDICATED IN ZONING CODE SECTION §280-35.B(6).
- GARAGE PARKING SPACES SHALL MEASURE NO LESS THAN 9'6" X 20' AND BE SURFACED WITH A TOWNSHIP APPROVED DURABLE, DUST PROOF ALL WEATHER SURFACE.
- WHERE SIDEWALK GRADES EXCEED 5%, A NON-SLIP SURFACE SHALL BE USED AS REQUIRED BY RADNOR TOWNSHIP.

**WAIVER NOTE:**

- THE APPLICANT ASSERTS THAT CODE 255-29.A.12 IS NOT APPLICABLE TO THE PROPOSED DRIVEWAY ENTRANCE/EXIT TO BLOOMINGDALE AVENUE, AND THAT CODE 255-40.E GOVERNING DRIVEWAYS FOR MULTI-FAMILY AND ATTACHED DWELLINGS CONTROLS. ALTERNATIVELY, AND TO THE EXTENT REQUIRED APPLICANT REQUESTED A MODIFICATION OF THE 25 FEET MINIMUM WIDTH REQUIREMENT OF CODE 255-29.A.12.
- SECTION 255-14.A - THE APPLICANT REQUESTS A WAIVER FROM SECTION 255-14.A REQUIRING SUBMISSION OF A PRELIMINARY PLAN BEFORE A FINAL PLAN IS SUBMITTED. DUE TO THE LIMITED SCOPE OF THE APPLICATION A PRELIMINARY / FINAL PLAN SUBMISSION IS PROPOSED.

**ZONING VARIANCE NOTE:**

APPLICANT REQUESTS, TO THE EXTENT REQUIRED, VARIANCES FROM CODE §§ 280-112.D & E FOR DISTURBANCE TO AND IMPROVEMENTS WITHIN STEEP SLOPES AND § 280-35.B(3)(C) TO PERMIT A REAR YARD OF EIGHTEEN (18) FEET (±) WHERE THIRTY (30) FEET IS REQUIRED, AND ANY OTHER RELIEF NECESSARY FOR THE REDEVELOPMENT PROJECT. ALTERNATIVELY, APPLICANT REQUESTS INTERPRETATIONS OF CODE §§ 280-112.D & E THAT: (i) DISTURBANCE TO MANMADE STEEP SLOPES IS NOT PROHIBITED BY CODE; AND/OR (ii) THAT A PROPOSED RETAINING WALL, PORTIONS OF THE PROPOSED DRIVEWAY, STORMWATER FACILITIES, AND RELATED GRADING AND IMPROVEMENTS ARE PERMITTED UNDER CODE §§ 280-112.D(8) AND 280-112.E AS BEING ASSOCIATED WITH PERMITTED ACTIVITIES ON STEEP SLOPES.

**R-5 RESIDENTIAL:**

AREA AND BULK REGULATIONS (MULTIPLE DWELLINGS)  
TOTAL LOT AREA = 57,433 S.F. (1.318 ACRES)

DESCRIPTION	R-5 REQUIRED	PROPOSED
MIN. LOT AREA	LOT AREA PER DWELLING UNIT: 5,445 S.F.	9,572 S.F. PER UNIT
MAX. DENSITY	1 UNIT/5,445 S.F. (10 PERMITTED)	6 UNITS
MIN. LOT WIDTH @ BUILDING LINE	100 FT.	249.7 FT.
BUILDING AREA (MAX.)	30% MAX.	16.9% (9,731 S.F.)
MIN. FRONT YARD	50 FT.	50 FT.
MIN. SIDE YARD	30 FT.	6.4 FT. *
MIN. REAR YARD	30 FT.	30 FT. **
MAX. IMPERVIOUS COVERAGE	36% MAX.	35.95% (20,646.8 S.F.)
MAX. BUILDING HEIGHT	40 FT. MAX.	< 40 FT.
MAX. BUILDING SIZE	160 FT. LENGTH OR DEPTH	120 FT.
RIPARIAN BUFFER SETBACK	35 FT.	N/A
MINIMUM ROOM SIZES:		
FIRST BEDROOM	160 S.F.	> 160 S.F.
ALL OTHER BEDROOMS	120 S.F.	> 120 S.F.
LIVING ROOM	240 S.F.	> 240 S.F.
DINING ROOM	160 S.F.	> 160 S.F.
DINETTE	120 S.F.	> 120 S.F.
KITCHEN	80 S.F.	> 80 S.F.
BATH	40 S.F.	> 40 S.F.

\* EXISTING NON-CONFORMITY  
\*\* SEE VARIANCE NOTE FOR ACCESSORY USE (DECK) IN REAR SETBACK



COMMONWEALTH OF PENNSYLVANIA :  
COUNTY OF CHESTER : SS:  
ON THE \_\_\_\_\_ DAY OF \_\_\_\_\_ A.D. 2015 BEFORE ME, THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, RESIDING IN \_\_\_\_\_ PERSONALLY APPEARED BO ERICKSON WHO ACKNOWLEDGES HIMSELF TO BE THE MANAGING MEMBER OF 115 STRAFFORD AVENUE, LLC A LIMITED LIABILITY CORPORATION, AND THAT AS SUCH BEING AUTHORIZED TO DO SO, HE EXECUTED THE FOREGOING INSTRUMENT FOR THE PURPOSES THEREIN CONTAINED BY SIGNING THE NAME OF THE CORPORATION BY HIMSELF.

MANAGING MEMBER \_\_\_\_\_

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

NOTARY PUBLIC \_\_\_\_\_

DELAWARE COUNTY PLANNING COMMISSION  
PROCESSED AND REVIEWED. A REPORT HAS BEEN PREPARED BY THE DELAWARE COUNTY PLANNING COMMISSION IN ACCORDANCE WITH THE MUNICIPALITIES PLANNING CODE.  
CERTIFIED THIS DATE \_\_\_\_\_  
FOR THE DIRECTOR  
RECORDED IN THE DELAWARE COUNTY COURTHOUSE THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2015. IN PLAN BOOK \_\_\_\_\_ PAGE \_\_\_\_\_

CERTIFICATE OF CONFORMANCE:  
I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THESE PLANS ARE IN CONFORMITY WITH ENGINEERING, ZONING, BUILDING, SANITATION AND OTHER APPLICABLE TOWNSHIP ORDINANCES AND REGULATIONS.  
*Charles A. Dobson* 05/18/2015  
CHARLES A. DOBSON (DATE)

RADNOR TOWNSHIP DIRECTOR OF PUBLIC WORKS:  
I HEREBY CERTIFY THAT THE PLANS SHOWN HERETO WERE REVIEWED AND APPROVED BY THE RADNOR TOWNSHIP DIRECTOR OF PUBLIC WORKS.  
RADNOR TOWNSHIP DIRECTOR OF PUBLIC WORKS \_\_\_\_\_ DATE \_\_\_\_\_

RADNOR TOWNSHIP ZONING OFFICER:  
I HEREBY CERTIFY THAT THE PLANS SHOWN HERETO WERE REVIEWED AND APPROVED BY THE RADNOR TOWNSHIP ZONING OFFICER.  
RADNOR TOWNSHIP ZONING OFFICER \_\_\_\_\_ DATE \_\_\_\_\_

RADNOR TOWNSHIP ENGINEER:  
I HEREBY CERTIFY THAT THE PLANS SHOWN HERETO WERE REVIEWED AND APPROVED BY THE RADNOR TOWNSHIP ENGINEER.  
RADNOR TOWNSHIP ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

RADNOR TOWNSHIP BOARD OF COMMISSIONERS:  
I HEREBY CERTIFY THAT THE PLANS SHOWN HERETO WERE REVIEWED AND APPROVED BY THE RADNOR TOWNSHIP BOARD OF COMMISSIONERS.  
PRESIDENT \_\_\_\_\_ DATE \_\_\_\_\_  
SECRETARY \_\_\_\_\_ DATE \_\_\_\_\_

**EQUITABLE OWNER / APPLICANT:**

115 STRAFFORD AVENUE, LLC  
ATTN: BO ERICKSON  
110 NORTH PHOENIXVILLE PIKE  
SUITE 100  
MALVERN, PA 19355

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UPI: 36-6-327.8 & 36-6-327.9

Pennsylvania One Call System  
PA, act 172 of 1986 requires three working days notice  
Serial Numbers:  
**20142730827**

PENNSYLVANIA ACT 187 REQUIREMENTS:  
Inland Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does Inland Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

**INLAND DESIGN**  
Civil Engineers, Surveyors & Land Development Consultants  
16 Hagerty Blvd. West Chester, PA 19382  
Phone: (484) 947-2928 Fax: (484) 947-2946 Info@InlandDesign.net

**INLAND DESIGN**  
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Phone: (484) 947-2928 Fax: (484) 947-2946 Info@InlandDesign.net

COMMONWEALTH OF PENNSYLVANIA  
REGISTERED PROFESSIONAL ENGINEER  
CHARLES A. DOBSON  
10276-0001  
PENNSYLVANIA

No.	Date	Description
1	01-30-2015	PER TOWNSHIP ENGINEER REVIEW LETTER DATED 10-24-2014.
2	04-01-2015	PER TOWNSHIP ENGINEER REVIEW LETTER DATED 02-23-2015.
3	05-19-2015	PER TOWNSHIP ENGINEER REVIEW LETTER DATED 05-07-2015.

**PRELIMINARY / FINAL  
LAND DEVELOPMENT & LOT LINE CHANGE PLAN**

GRAPHIC SCALE  
100 0 50 100 200 400  
(IN FEET)  
1 inch = 100'

Date: 10/3/2014  
Scale: 1" = 100'  
Drawn by: TAH  
Checked by: CAD  
Project No. 10432

**COVER SHEET  
FOR  
BLOOMINGDALE AVE., LLC  
120 & 124 BLOOMINGDALE AVE.  
WAYNE, PA 19087  
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA**

S H E E T  
**1**  
OF 14













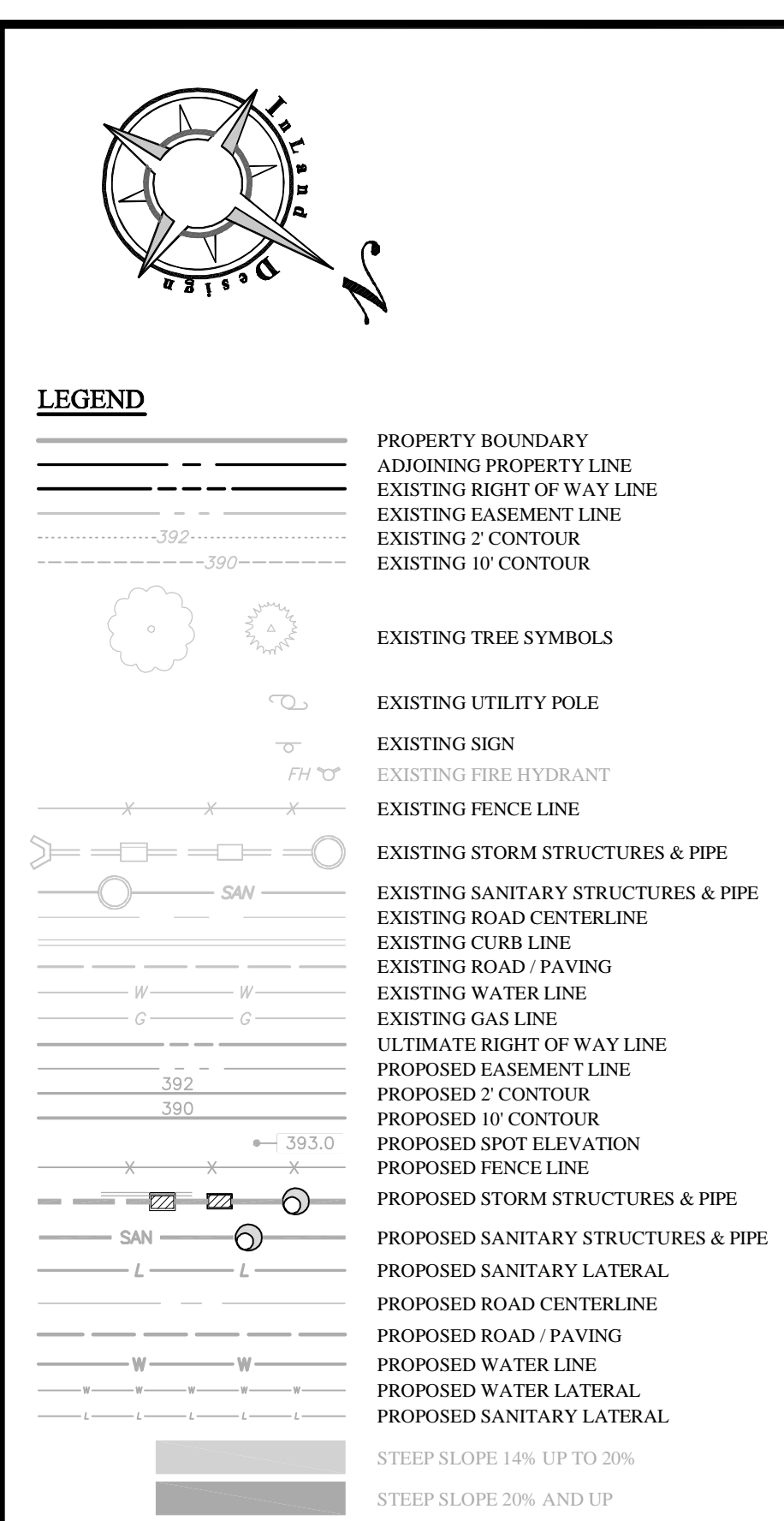












**RECHARGE BED CONSTRUCTION SEQUENCE (TYP.)**

THIS SEQUENCE IS INTENDED TO BE USED IN CONJUNCTION WITH THE OVERALL SEQUENCE OF CONSTRUCTION FOR THE ENTIRE PROJECT. CONSTRUCTION OF THE RECHARGE BED MUST NOT START UNTIL IT IS CALLED FOR IN THE OVERALL CONSTRUCTION SEQUENCE. BEFORE THE RECHARGE BED CAN BE OR UTILIZED, ALL AREAS TRIBUTARY TO THE RECHARGE BED SHALL BE STABILIZED WITH GRASS (MIN 70% COVER) IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS PROVIDED WITHIN THE PLAN SET. THIS IS A CRITICAL STAGE OF CONSTRUCTION. THE PERMITTEE SHALL PROVIDE ENGINEERING CONSTRUCTION OVERSIGHT FOR THE PROPOSED STORMWATER BMPs. ADDITIONAL SOIL TESTING MAY BE REQUIRED PRIOR TO THE INSTALLATION OF INFILTRATION BMPs TO ENSURE PROPER LOCATION AND FUNCTION. A LICENSED PROFESSIONAL KNOWLEDGEABLE IN THE DESIGN AND CONSTRUCTION OF STORMWATER BMPs, PREFERABLY THE DESIGN ENGINEER, SHALL CONDUCT THE OVERSIGHT.

- REMOVE PROTECTIVE CONSTRUCTION FENCE FROM THE PERIMETER OF THE RECHARGE BED AREA. STRIP TOPSOIL FROM THE AREA AND STOCKPILE AS SHOWN ON THE PLAN AND ACCORDING TO THE DETAILS.
- EXCAVATE THE RECHARGE BED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLAN. EXCAVATION OF THE RECHARGE BED SHALL BE COMPLETED USING AN EXCAVATOR (i.e. TRAC-HOE) THAT DOES NOT REQUIRE TRAVEL ACROSS THE BOTTOM OF THE FACILITY. ALL EXCAVATIONS SHALL BE MADE FROM THE EDGE OF THE RECHARGE BED TO AVOID COMPACTION OF THE BOTTOM OF THE BED.
- NOTE:** SHOULD ANY UNFAVORABLE CONDITIONS BE ENCOUNTERED DURING EXCAVATION OF THE RECHARGE BED (i.e. BEDROCK OR HIGH GROUNDWATER) THE DESIGN ENGINEER MUST BE CONTACTED IMMEDIATELY AND ADDITIONAL TESTING AND DESIGN MUST BE COMPLETED PRIOR TO COMMENCING WITH ANY ADDITIONAL CONSTRUCTION. REMEDIAL MEASURE MAY INCLUDE BUT NOT BE LIMITED TO THE REDESIGN OF THE RECHARGE BED OR RELOCATION OF ENTIRE BED TO A MORE SUITABLE LOCATION. ALL DESIGN CHANGES MUST BE APPROVED BY THE TOWNSHIP AND THE COUNTY CONSERVATION DISTRICT.
- ONCE THE RECHARGE BED HAS BEEN EXCAVATED TO THE REQUIRED ELEVATION, INSTALL THE FABRIC, PIPING AND STONE AS SHOWN ON THE PLAN AND ACCORDING TO THE DETAIL. CARE MUST BE TAKEN TO AVOID COMPACTION OF THE RECHARGE BED BOTTOM. ANY AREAS THAT ARE INADVERTENTLY COMPACTED MUST BE SCARIFIED WITH A CHISEL PLOW OR SIMILAR NON-COMPACTING MEASURES.
- UPON COMPLETION OF THE FABRIC, PIPE AND STONE INSTALLATION, INSTALL INLET PIPING AND OUTLET PIPING. INSTALL INLET SEDIMENT FILTERS ON THE INLETS. THESE ITEMS ARE REQUIRED TO PREVENT SEDIMENT DEPOSITION IN THE INLETS AND RECHARGE BED.
- CHECK THE RECHARGE BED AFTER EACH STORM EVENT AND CLEAN OUT ANY ACCUMULATED SEDIMENT IMMEDIATELY. ACCUMULATIONS OF ANY SEDIMENT SHALL BE REMOVED BY HAND AND PLACED IN A STABILIZED AREA THAT DOES NOT FLOW INTO THE RECHARGE BED. THE INLETS SHALL BE KEPT FREE OF ANY AND ALL DEBRIS IN ACCORDANCE WITH THE LONG TERM OPERATIONS AND MAINTENANCE NOTES SHOWN ON THIS PLAN.

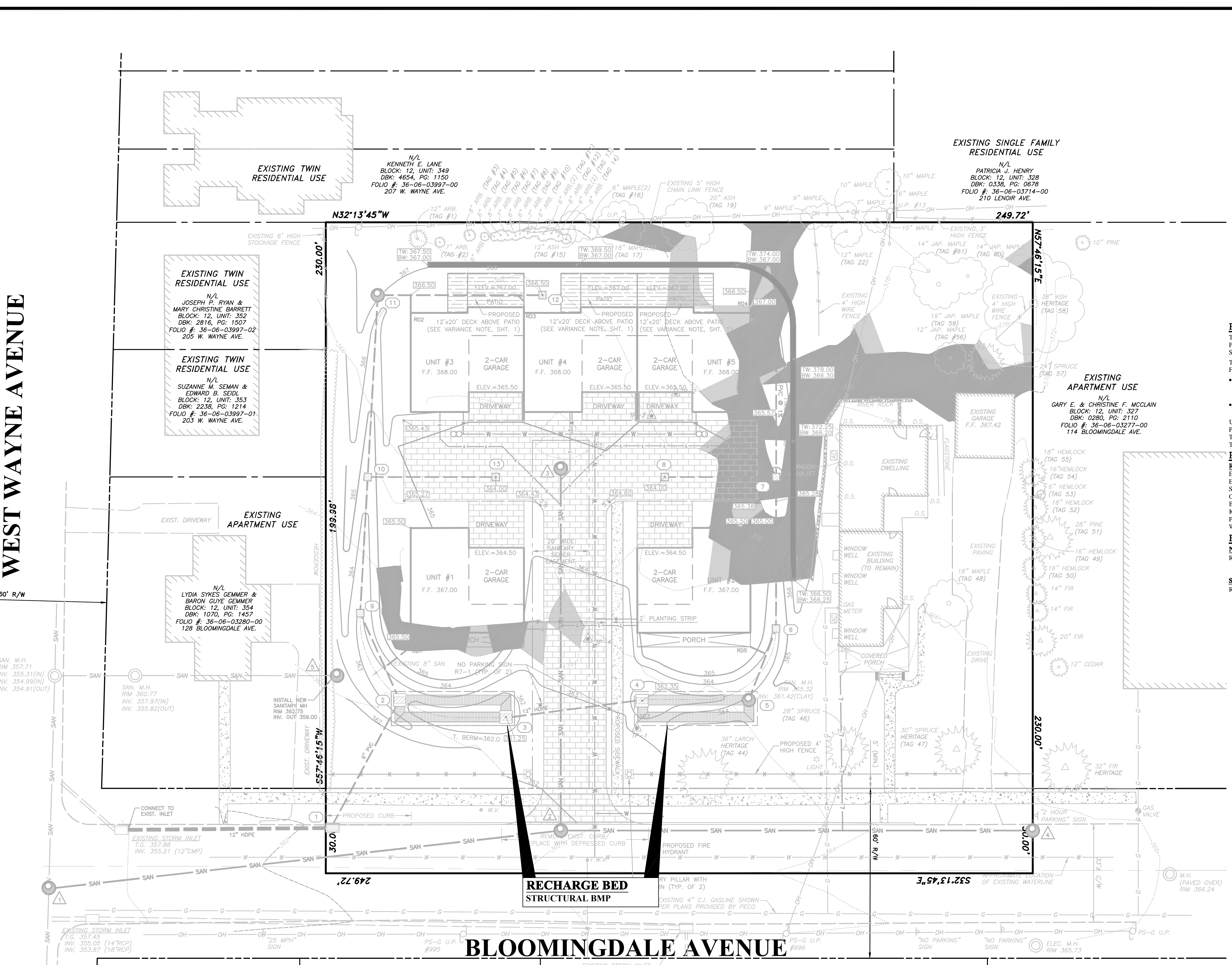
**SOILS DESCRIPTION (ENTIRE SITE WITHIN Mc SOIL)**

SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S.H.W.T.	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLOGIC SOIL GROUP
Md	MAN MADE GABBRO AND DIABASE MATERIALS	N/A	N/A	N/A	N/A	N/A	6e	C

SITE GEOLOGY: (MGP - MAFIC GNEISS); THIS PYROXENE-BEARING MAFIC GNEISS IS A DARK-COLORED, MEDIUM- TO FINE-GRAINED METAMORPHIC ROCK.

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UPSI: 36-6-327.8 & 36-6-327.9



N/L GABRIELLA AND BOWEN ASSOCIATES, LLC  
BLOCK: 12, UNIT: 355  
DBK: 2113, PG: 0322  
FOLIO #: 36-06-03298-00  
141 WAYNE AVE.

N/L ELLEN W. WARE, DIANE M. CLASSEN & NINA W. WARE, TRUSTEES UNDER WILL OF FRANK M. WARE, JR.  
BLOCK: 12, UNIT: 356  
DBK: 1484, PG: 2250  
FOLIO #: 36-06-03291-00  
125 BLOOMINGDALE AVE.

N/L R-B WAYNE  
BLOCK: 12, UNIT: 357  
DBK: 1785, PG: 2187  
FOLIO #: 36-06-03290-00  
123 BLOOMINGDALE AVE.

N/L R-B WAYNE  
BLOCK: 12, UNIT: 358  
DBK: 0236, PG: 1045  
FOLIO #: 36-06-03289-00  
115 BLOOMINGDALE AVE.

**OWNER STATEMENT:**  
I HEREBY ACKNOWLEDGE THAT ANY REVISION TO THE APPROVED DRAINAGE PLAN MUST BE APPROVED BY THE MUNICIPALITY.

OWNER \_\_\_\_\_ (DATE) \_\_\_\_\_

**DESIGN ENGINEER:**  
I, CHARLES A. DOBSON, ON THIS DATE \_\_\_\_\_ HEREBY CERTIFY THAT THE DRAINAGE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE RADNOR TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

*Charles A. Dobson*  
CHARLES A. DOBSON 5/19/2015 (DATE)

**INLAND DESIGN**  
Civil Engineers, Surveyors & Land Development Consultants  
16 Hagerty Blvd.  
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**PRELIMINARY / FINAL**  
**LAND DEVELOPMENT & LOT LINE CHANGE PLAN**

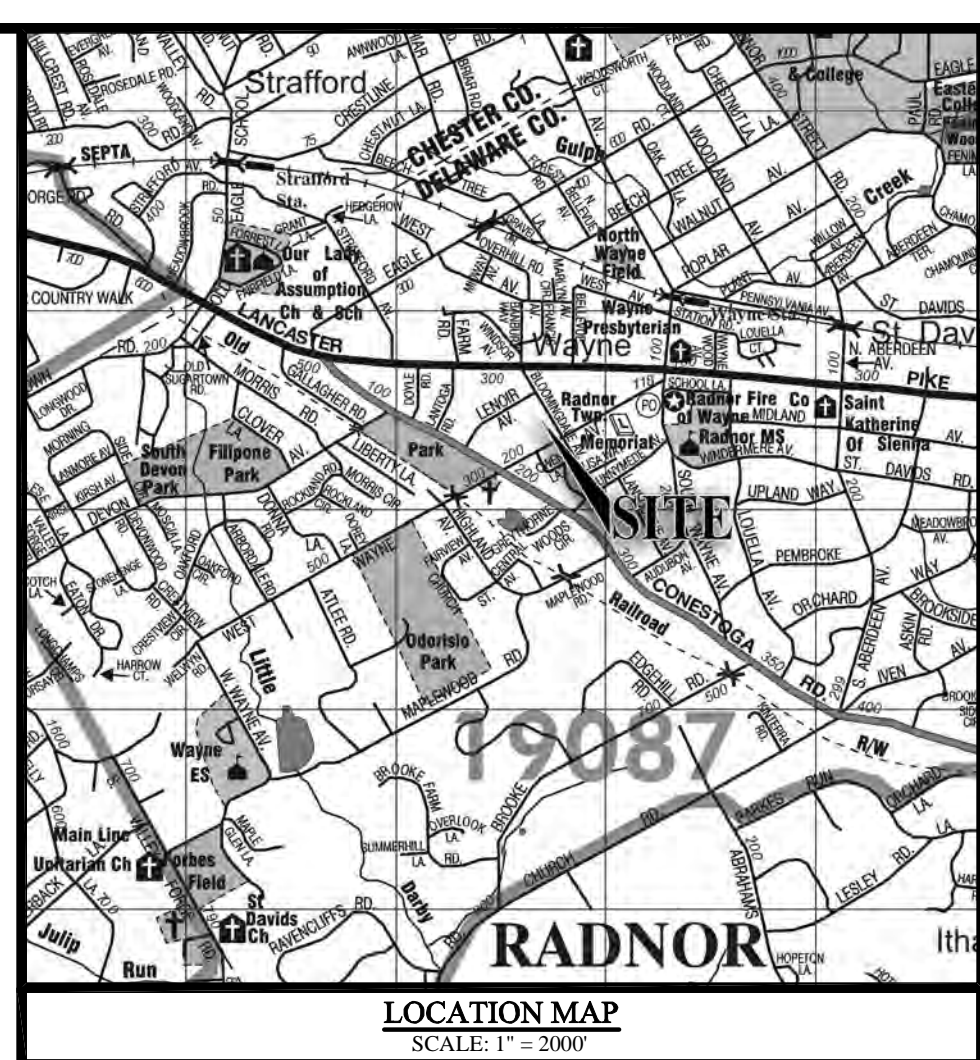
GRAPHIC SCALE  
20 0 10 20 40 80  
(IN FEET)  
1 inch = 20'

**POST CONSTRUCTION STORMWATER MANAGEMENT PLAN FOR**  
**BLOOMINGDALE AVE., LLC**  
**120 & 124 BLOOMINGDALE AVE.**  
**WAYNE, PA 19087**  
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

No.	Date:	Description:
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2	04-01-2015	PER TOWNSHIP ENGINEER REVIEW LETTER DATED 02-23-2015.
3	05-19-2015	PER TOWNSHIP ENGINEER REVIEW LETTER DATED 05-07-2015.

**DATE:** 10/3/2014  
**SCALE:** 1" = 20'  
**DRAWN BY:** TAH  
**CHECKED BY:** CAD  
**PROJECT NO.:** 10432

**SHEET**  
**7**  
**OF 14**



**BMP OPERATIONS AND MAINTENANCE PROCEDURES**  
THE PERMITTEE SHALL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, OPERATION AND MAINTENANCE OF POST CONSTRUCTION STORMWATER MANAGEMENT BMPs IDENTIFIED ON THE APPROVED POST CONSTRUCTION STORMWATER MANAGEMENT (PCSWM) PLAN.  
THE OPERATION AND MAINTENANCE REQUIREMENTS FOR THE PCSWM BMPs FOR THIS PROJECT INCLUDE THE FOLLOWING:

- INFLOW AND OUTFLOW POINTS INTO THE STORMWATER BMPs SHOULD BE KEPT CLEAR OF LEAVES AND OTHER DEBRIS. ANY LEAVES OR DEBRIS WILL NEGATIVELY IMPACT THE FUNCTION OF THESE SYSTEMS. ALL DOWNSPOUTS AND OVERFLOW PIPES SHALL BE KEPT IN GOOD WORKING ORDER.
- ALL INSPECTIONS OF THE POST CONSTRUCTION STORMWATER MANAGEMENT BMPs SHALL BE PERFORMED BY THE APPOINTED REPRESENTATIVE OF THE OWNER.

UNTIL THE SITE IS STABILIZED AND DURING CONSTRUCTION ACTIVITIES, ALL BMPs MUST BE MAINTAINED PROPERLY BY THE CONTRACTOR. ALL PERMANENT MAINTENANCE PROCEDURES SHALL BE PERFORMED BY THE OWNER, HIS SUCCESSOR, OR ASSIGNS. THE OWNER IDENTITY & CONTACT INFORMATION CAN BE FOUND AT THE BOTTOM OF THIS SHEET.

**PERMANENT BMP MAINTENANCE:**  
**RECHARGE BED -** UNDERGROUND RECHARGE BED SHALL BE INSPECTED QUARTERLY AND AFTER RAINFALL EVENTS TO ENSURE THAT THEY ARE WORKING PROPERLY AND THAT DEBRIS AND OR SEDIMENT HAS NOT ENTERED THE SYSTEM. IF THE INSPECTION REVEALS THAT THE SEEPAGE BED HAS BEEN CONTAMINATED WITH SILT, THE SYSTEM WILL BE REPAIRED. ACCUMULATED SILT AND DEBRIS THAT HAS DEPOSITED IN THE BOTTOM OF ALL INLETS AND MANHOLES UPSTREAM AND WITHIN THE SYSTEM WILL BE REMOVED ON A QUARTERLY BASIS. INFLOW AND OUTFLOW POINTS INTO THE INDIVIDUAL ON LOT INFILTRATION SYSTEMS SHOULD BE KEPT CLEAR OF LEAVES AND OTHER DEBRIS. ANY LEAVES OR DEBRIS WILL NEGATIVELY IMPACT THE PERFORMANCE OF THESE SYSTEMS. ALL DOWNSPOUTS AND OVERFLOW PIPES SHOULD BE KEPT IN GOOD WORKING ORDER.

**BMP SUMMARY**  
**NON-STRUCTURAL BMPs**  
REDUCE IMPERVIOUS COVER - IMPERVIOUS COVER ON THE PROPERTY WILL BE REDUCED THEREBY REDUCING THE RATE AND VOLUME OF RUNOFF.

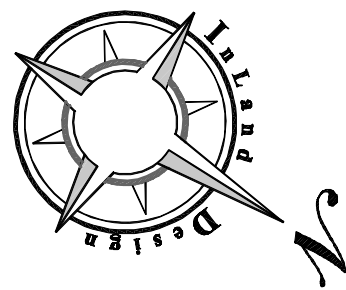
**STRUCTURAL BMPs**  
RECHARGE BED - THE RECHARGE BED IS USED TO REDUCE THE VOLUME OF RUNOFF FROM THE SITE AND IMPROVE WATER QUALITY. THE CONSTRUCTION OF THE RECHARGE BED IS A CRITICAL STAGE OF CONSTRUCTION AND REQUIRES AND ENGINEER'S OVERSIGHT DURING CONSTRUCTION.

- GENERAL NOTES:**
- PCSM REPORTING AND RECORDKEEPING. THE PCSM PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE DEPARTMENT OR THE CONSERVATION DISTRICT.
  - UPON PERMANENT STABILIZATION OF THE EARTH DISTURBANCE ACTIVITY UNDER §102.22(A)(2) (RELATING TO PERMANENT STABILIZATION), AND INSTALLATION OF BMPs IN ACCORDANCE WITH AN APPROVED PLAN PREPARED AND IMPLEMENTED IN ACCORDANCE WITH §§ 102.4 AND 102.8 (RELATING TO EROSION AND SEDIMENT CONTROL REQUIREMENTS; AND PCSM REQUIREMENTS), THE PERMITTEE OR CO-PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION TO THE DEPARTMENT OR CONSERVATION DISTRICT.
  - THE NOTICE OF TERMINATION MUST INCLUDE:
    - (1) THE FACILITY NAME, ADDRESS AND LOCATION.
    - (2) THE OPERATOR NAME AND ADDRESS.
    - (3) THE PERMIT NUMBER.
    - (4) THE REASON FOR PERMIT TERMINATION.
    - (5) IDENTIFICATION OF THE PERSONS WHO HAVE AGREED TO AND WILL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPs IN ACCORDANCE WITH §102.8(M) AND PROOF OF COMPLIANCE WITH §102.8(M).
  - PRIOR TO ACCEPTING THE NOI, THE DEPARTMENT AND OR CONSERVATION DISTRICT SHALL PERFORM A FINAL INSPECTION AND APPROVE OR DENY THE NOTICE OF TERMINATION.
  - THE PERMITTEE SHALL PROVIDE ENGINEERING CONSTRUCTION OVERSIGHT FOR THE PROPOSED STORMWATER BMPs. ADDITIONAL SOIL TESTING MAY BE REQUIRED PRIOR TO THE INSTALLATION OF INFILTRATION BMPs TO ENSURE PROPER LOCATION AND FUNCTION. A LICENSED PROFESSIONAL KNOWLEDGEABLE IN THE DESIGN AND CONSTRUCTION OF STORMWATER BMPs, PREFERABLY THE DESIGN ENGINEER, SHALL CONDUCT THE OVERSIGHT.
  - A LOG SHOWING DATES THAT EROSION AND SEDIMENTATION CONTROL BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO THE REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
  - 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 2601 ET SEQ 271.1 AND 2811 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIAL AT THE SITE.
  - THE CONTRACTOR TO MAINTAIN WRITTEN REPORT DOCUMENTING INSPECTIONS AND REPAIRS.

**PCSWM LONG TERM OPERATIONS AND MAINTENANCE REQUIREMENTS**

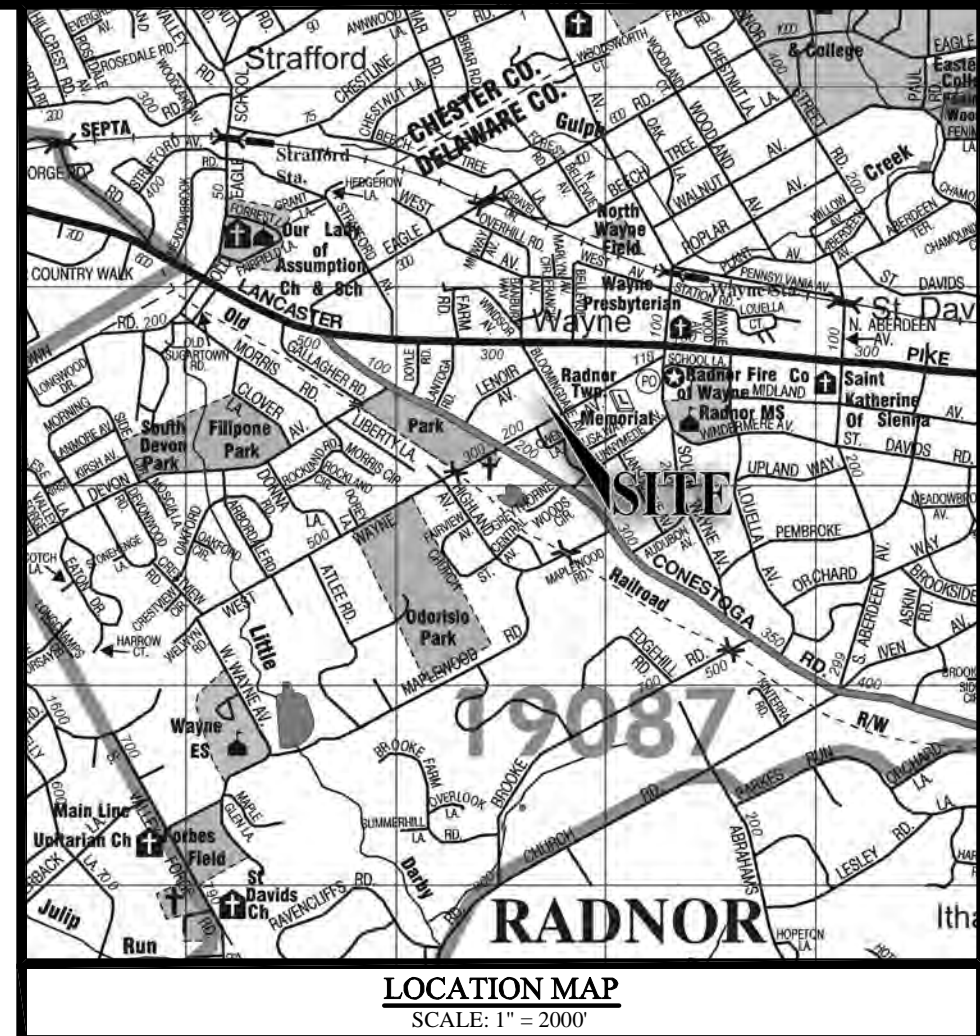
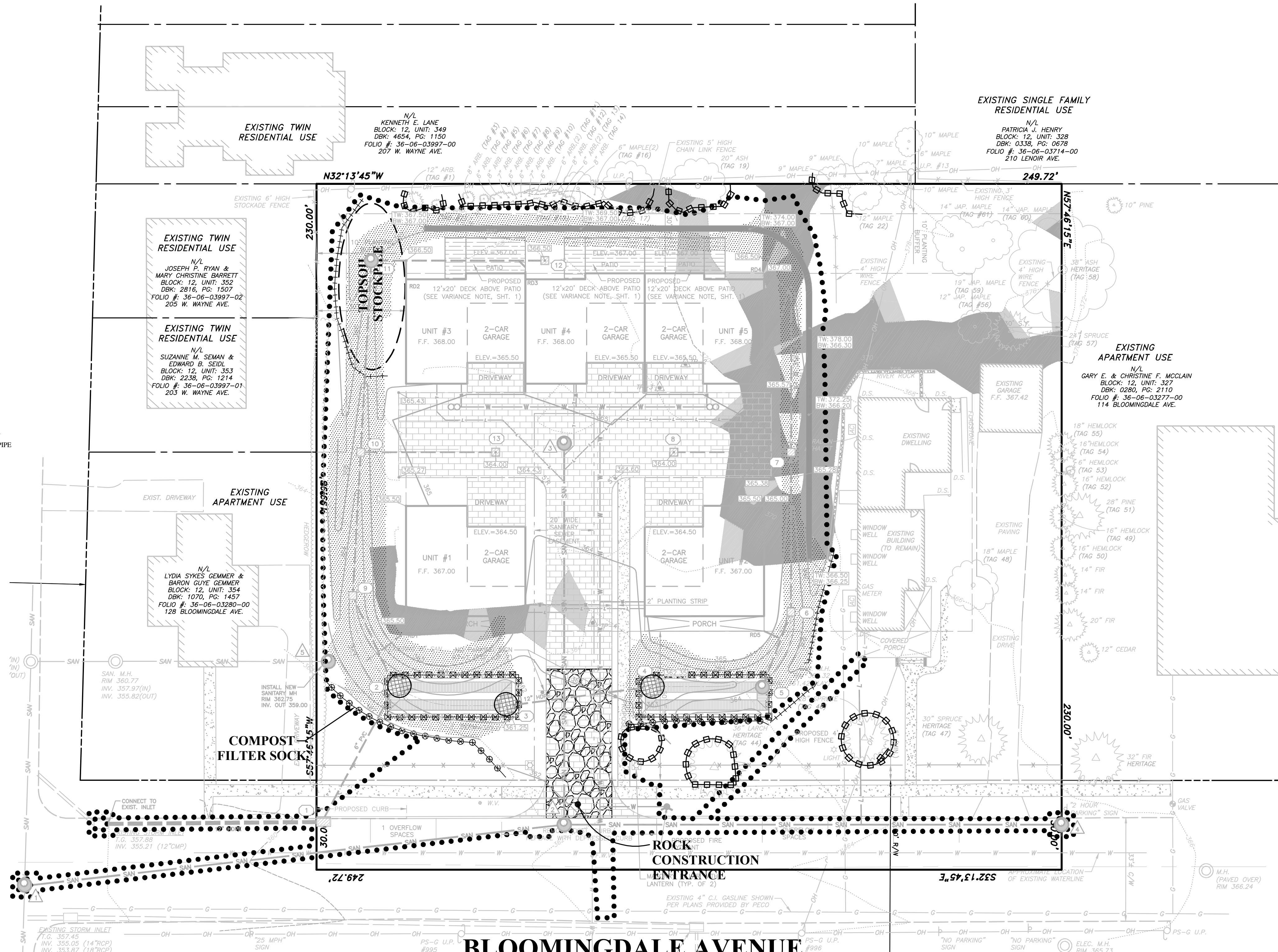
- UNTIL THE PERMITTEE OR CO-PERMITTEE HAS RECEIVED WRITTEN APPROVAL OF A NOTICE OF TERMINATION, THE PERMITTEE OR CO-PERMITTEE WILL REMAIN RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT TERMS AND CONDITIONS INCLUDING LONG-TERM OPERATION AND MAINTENANCE OF ALL PCSM BMPs ON THE PROJECT SITE AND IS RESPONSIBLE FOR VIOLATIONS OCCURRING ON THE PROJECT SITE.
- THE PERMITTEE OR CO-PERMITTEE SHALL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPs UNLESS A DIFFERENT PERSON IS IDENTIFIED IN THE NOTICE OF TERMINATION AND HAS AGREED TO LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPs.
- FOR ANY PROPERTY CONTAINING A PCSM BMP, THE PERMITTEE OR CO-PERMITTEE SHALL RECORD AN INSTRUMENT WITH THE RECORDER OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE PCSM BMP AND THE RELATED OBLIGATIONS IN THE ORDINARY COURSE OF A TITLE SEARCH OF THE SUBJECT PROPERTY. THE RECORDED INSTRUMENT MUST IDENTIFY THE PCSM BMP, PROVIDE FOR NECESSARY ACCESS RELATED TO LONG-TERM OPERATION AND MAINTENANCE FOR PCSM BMPs AND PROVIDE NOTICE THAT THE RESPONSIBILITY FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP IS A COVENANT THAT RUNS WITH THE LAND THAT IS BINDING UPON AND ENFORCEABLE BY SUBSEQUENT GRANTEE, AND PROVIDE PROOF OF FILING WITH THE NOTICE OF TERMINATION UNDER § 102.70(b)(5) (RELATING TO PERMIT TERMINATION).
- THE PERSON RESPONSIBLE FOR PERFORMING LONG-TERM OPERATION AND MAINTENANCE MAY ENTER INTO AN AGREEMENT WITH ANOTHER PERSON INCLUDING A CONSERVATION DISTRICT, NONPROFIT ORGANIZATION, MUNICIPALITY, AUTHORITY, PRIVATE CORPORATION OR OTHER PERSON, TO TRANSFER THE RESPONSIBILITY FOR PCSM BMPs OR TO PERFORM LONG-TERM OPERATION AND MAINTENANCE AND PROVIDE NOTICE THEREOF TO THE DEPARTMENT.
- A PERMITTEE OR CO-PERMITTEE THAT FAILS TO TRANSFER LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP OR OTHERWISE FAILS TO COMPLY WITH THIS REQUIREMENT SHALL REMAIN JOINTLY AND SEVERALLY RESPONSIBLE WITH THE LANDOWNER FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPs LOCATED ON THE PROPERTY.





**LEGEND**

- PROPERTY BOUNDARY
- - - ADJOINING PROPERTY LINE
- - - EXISTING RIGHT OF WAY LINE
- - - EXISTING EASEMENT LINE
- - - EXISTING 2' CONTOUR
- - - EXISTING 10' CONTOUR
- EXISTING TREE SYMBOLS
- EXISTING UTILITY POLE
- EXISTING SIGN
- EXISTING FENCE LINE
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING FIRE HYDRANT
- STEEP SLOPE 14% - 20%
- STEEP SLOPE 20% - UP
- ULTIMATE RIGHT OF WAY LINE
- - - PROPOSED EASEMENT LINE
- - - PROPOSED 2' CONTOUR
- - - PROPOSED 10' CONTOUR
- - - PROPOSED SPOT ELEVATION
- - - PROPOSED FENCE LINE
- PROPOSED STORM STRUCTURE AND PIPE
- PROPOSED SANITARY STRUCTURE AND PIPE
- PROPOSED SANITARY LATERAL
- PROPOSED ROAD CENTERLINE
- PROPOSED ROAD / PAVING
- PROPOSED WATER LINE
- PROPOSED WATER LATERAL
- PROPOSED SANITARY LATERAL
- STEEP SLOPE 14% UP TO 20%
- STEEP SLOPE 20% AND UP
- 18" SILT FENCE
- TREE PROTECTION FENCE
- ORANGE CONSTRUCTION FENCE
- LIMIT OF DISTURBANCE BOUNDARY
- ROCK CONSTRUCTION ENTRANCE
- INLET SEDIMENT FILTER
- EROSION CONTROL BLANKET



- SEQUENCE OF CONSTRUCTION**
- 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, A REPRESENTATIVE FROM THE DELAWARE COUNTY CONSERVATION DISTRICT FOR AN ON SITE PRE-CONSTRUCTION MEETING.
1. DELINEATE LIMITS OF DISTURBANCE AS SHOWN ON THE PLAN.
  2. INSTALL ROCK CONSTRUCTION ENTRANCE, SILT FENCE, SEDIMENT TRAP AND TREE PROTECTION FENCING AS SHOWN ON THE PLAN AND ACCORDING TO THE DETAILS. PLACE BARRIER FENCE AROUND THE PROPOSED RECHARGE BED TO PROTECT THE AREA FROM ANY EQUIPMENT TRAFFIC UNTIL THE RECHARGE BED IS READY FOR INSTALLATION. PERFORM SITE DEMOLITION AS SHOWN ON THE DEMOLITION PLAN.
  3. STRIP TOPSOIL FROM ALL AREAS TO BE DISTURBED AND STOCKPILE AS SHOWN ON THE PLAN.
  4. PLACE STONE IN THE AREAS OF THE PROPOSED COMMON DRIVEWAYS TO PROVIDE A MUD FREE ACCESS TO THE AREAS OF CONSTRUCTION.
  5. BEGIN HOME CONSTRUCTION.
  6. COMPLETE BULK EARTHWORK RELATED TO GRADING OF THE SITE INCLUDING DRIVEWAYS, LANDSCAPE BUFFER AREAS AND LAWN AREAS.
- NOTE:** UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITIES THAT WILL EXCEED 7 DAYS, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.
7. INSTALL ALL UNDERGROUND UTILITIES AND THE PAVERS. THE RECHARGE BEDS (SEE SEPARATE SEQUENCE OF CONSTRUCTION) SHALL NOT BE CONSTRUCTED UNTIL ALL AREAS DRAINING TO THEM ARE PERMANENTLY STABILIZED. ONCE THE RECHARGE BEDS ARE INSTALLED, PLACE INLET PROTECTION AS SHOWN ON THE PLAN AND IN THE DETAIL.
- NOTE:** THE INSTALLATION OF THE RECHARGE BED IS IDENTIFIED AS A CRITICAL STAGE OF CONSTRUCTION AND REQUIRES ENGINEER OVERSIGHT DURING CONSTRUCTION.
8. COMPLETE FINE GRADING OF THE DRIVEWAYS AND PARKING AREAS AND INSTALL STONE BASE COURSE AND PAVING.
  9. PLACE EROSION CONTROL BLANKET AS SHOWN ON THE PLAN AND IN THE DETAIL. INSTALL PROPOSED GUTTERS, DOWNSPOUTS AND ROOF LEADERS FOR THE BUILDINGS. ONCE THE RECHARGE BEDS ARE INSTALLED CONNECT THE ROOF LEADERS TO THE RECHARGE BED AS SHOWN ON THE PLAN.
  10. INSTALL PERMANENT SEEDING AND MULCH ON ALL DISTURBED AREAS IN ACCORDANCE WITH THE SEEDING SPECIFICATIONS SHOWN ON THE PLAN. REMOVE THE SEDIMENT TRAP AND INSTALL LANDSCAPING AS SHOWN ON THE PLAN AND IN THE DETAIL.
- NOTE:** UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITIES THAT WILL EXCEED 7 DAYS, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.
11. ONCE ALL AREAS HAVE BEEN PERMANENTLY STABILIZED (DETERMINED BY MINIMUM 70% ESTABLISHED GRASS COVER), REMOVE ALL REMAINING EROSION CONTROLS MEASURES AND STABILIZE ANY AREAS DISTURBED BY THE REMOVAL OF THE EROSION CONTROLS MEASURES. THE DELAWARE COUNTY CONSERVATION DISTRICT SHALL PERFORM A SITE INSPECTION AND ISSUE APPROVAL OF STABILIZED AREAS PRIOR TO THE REMOVAL OF THE TEMPORARY EROSION CONTROL MEASURES.

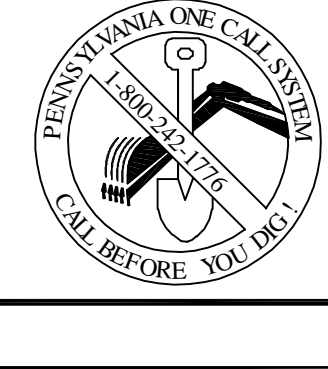
**SOILS DESCRIPTION (ENTIRE SITE WITHIN Mc SOIL)**

SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S.H.W.T.	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLOGIC SOIL GROUP
Md	MAN MADE GABBRO AND DIABASE MATERIALS	N/A	N/A	N/A	N/A	N/A	6e	C

SITE GEOLOGY: (MGP - MAFIC GNEISS); THIS PYROXENE-BEARING MAFIC GNEISS IS A DARK-COLORED, MEDIUM- TO FINE-GRAINED METAMORPHIC ROCK.

LIMIT OF DISTURBANCE BOUNDARY: 34,147 SF S.F. (0.78 AC.)

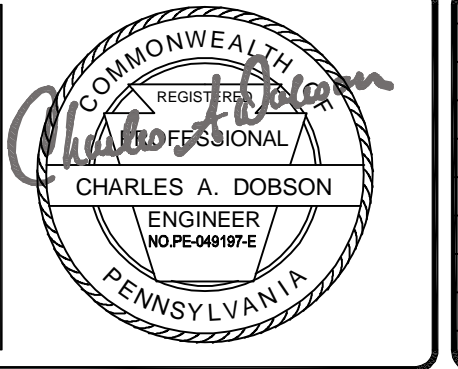
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Pennsylvania One Call System  
PA, act 172 of 1986 requires three working days notice  
Serial Numbers:  
**20142730827**

PENNSYLVANIA ACT 187 REQUIREMENTS:  
Inland Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does Inland Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

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No.	Date	Description
1	01-30-2015	PER TOWNSHIP ENGINEER REVIEW LETTER DATED 10-24-2014.
2	04-01-2015	PER TOWNSHIP ENGINEER REVIEW LETTER DATED 02-23-2015.
3	05-19-2015	PER TOWNSHIP ENGINEER REVIEW LETTER DATED 05-07-2015.

**PRELIMINARY / FINAL**  
**LAND DEVELOPMENT & LOT LINE CHANGE PLAN**

GRAPHIC SCALE  
20 0 10 20 40 80  
(IN FEET)  
1 inch = 20'

Date: 10/3/2014  
Scale: 1" = 20'  
Drawn by: TAH  
Checked by: CAD  
Project No: 10432

**SEDIMENTATION AND EROSION CONTROL**  
**PLAN FOR**  
**BLOOMINGDALE AVE., LLC**  
**120 & 124 BLOOMINGDALE AVE.**  
**WAYNE, PA 19087**  
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

**S H E E T**  
**8**  
**OF 14**



### STANDARD E&S PLAN NOTES

- ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
- AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
- AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
- AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
- CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPs SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
- AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
- ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 2001.1 ET SEQ. 271.1 AND 271.1 ET SEQ. CONSTRUCTION MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP001 MUST BE REQUIRED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.
- ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
- VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY FROM LOTS (SPECIFY LOT NUMBERS) ONTO SPECIFIC ROAD NAMES.
- UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, UPGRADING, REPAIR AND REPLACEMENT MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- A LOG SHOWING DATES THAT E&S BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
- SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELLED, OR SWEEP INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
- ALL SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
- AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 4 INCHES - 6 TO 12 INCHES ON COMPACTED SOILS - PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
- ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. ALL FILLS AND ALL BUILDING STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
- ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
- FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOIL, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
- FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
- ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS, DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE COVER SHALL BE APPLIED TO ALL PLANTED AREAS NOT FINISHED BY THE END OF THE PROJECT. FILL SHALL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
- PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL, 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS. E&S BMPs SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPs.
- AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED OR CONVERTED TO PERMANENT BEST MANAGEMENT PRACTICES. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPs SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.
- FAILURE TO CORRECTLY INSTALL E&S BMPs, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPs MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING IMPOSED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000 PER DAY IN CIVIL PENALTIES, UP TO \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.

### OPTIONAL NOTES

- CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.
- ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIAL WASTES.
- UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE CONVEYED PAST THE WORK AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.
- CHANNELS HAVING RIPRAP, RENO MATTRRESS, OR GABION LININGS MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.
- SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING POTENTIAL TO CLOG THE BASIN/TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS.
- SEDIMENT BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES.
- ANY DAMAGE THAT OCCURS IN WHOLE OR IN PART AS A RESULT OF BASIN OR TRAP DISCHARGE SHALL BE IMMEDIATELY REPAIRED BY THE PERMITTEE IN A PERMANENT MANNER SATISFACTORY TO THE MUNICIPALITY, LOCAL CONSERVATION DISTRICT, AND THE OWNER OF THE DAMAGED PROPERTY.
- UPON REQUEST, THE APPLICANT OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT (RECORD DRAWING) FOR ANY SEDIMENT BASIN OR TRAP TO THE MUNICIPAL INSPECTOR, LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
- EROSION CONTROL, BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER WITHIN 50 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.
- FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN MAXIMUM \_\_\_\_\_ LAYERED LIFTS AT \_\_\_\_\_% DENSITY.

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UP: 36-6-327.8 & 36-6-327.9

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REGISTERED PROFESSIONAL ENGINEER  
**CHARLES A. DOBSON**  
PENNSYLVANIA

No.	Date	Description
1	01-30-2015	PER TOWNSHIP ENGINEER REVIEW LETTER DATED 10-24-2014.
2	04-01-2015	PER TOWNSHIP ENGINEER REVIEW LETTER DATED 02-23-2015.
3	05-19-2015	PER TOWNSHIP ENGINEER REVIEW LETTER DATED 05-07-2015.

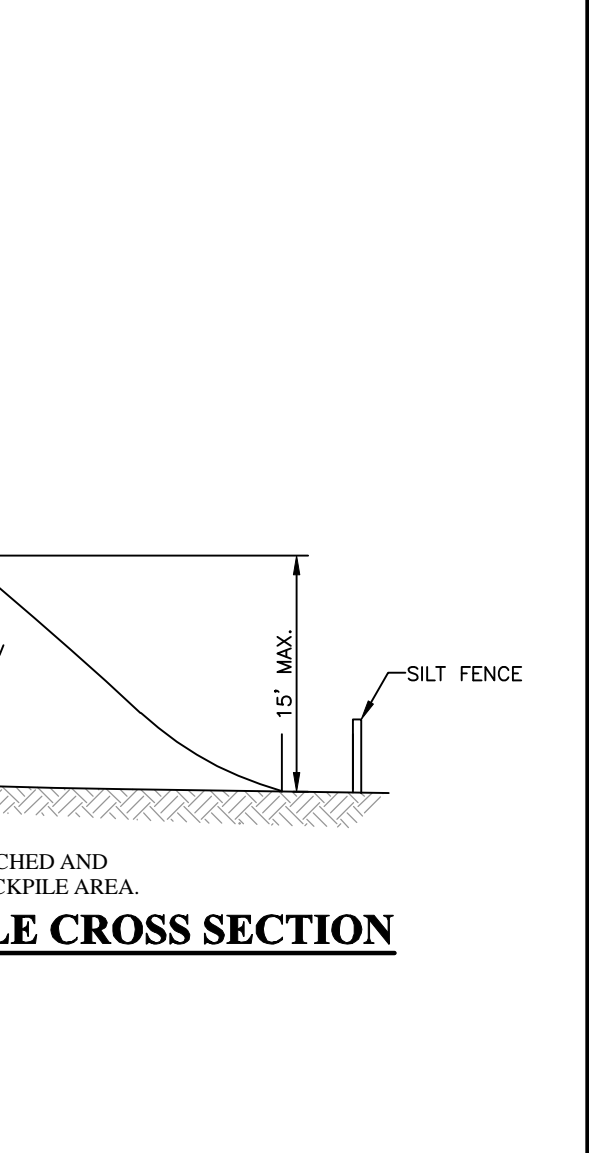
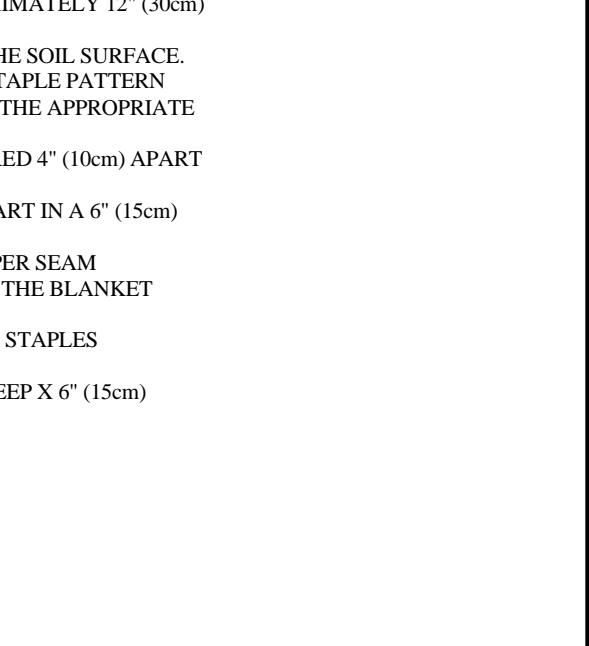
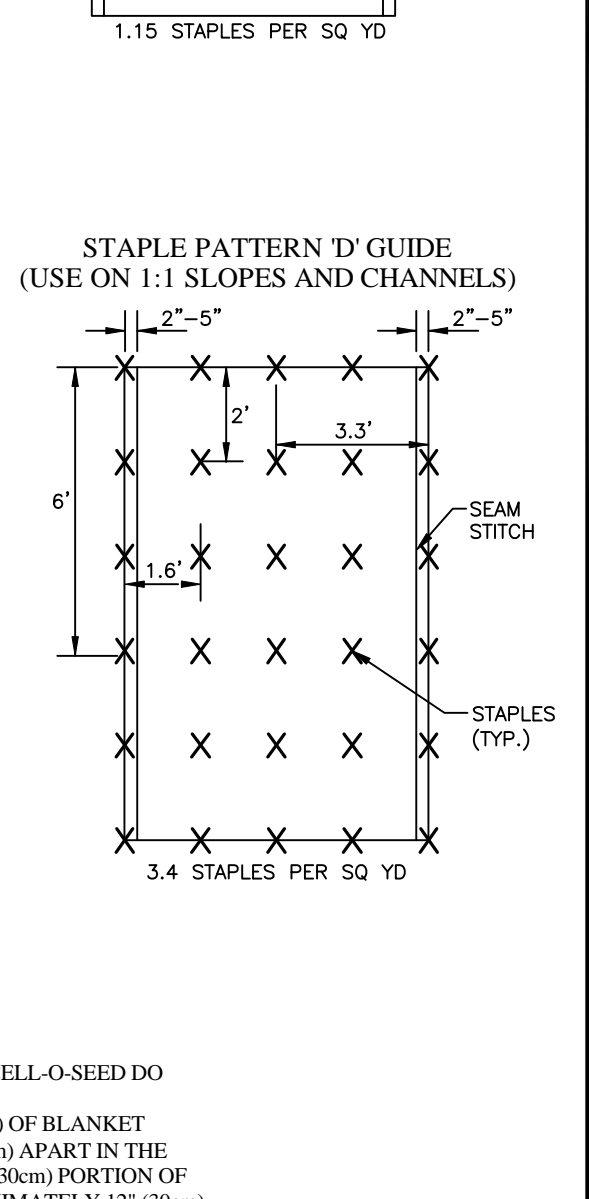
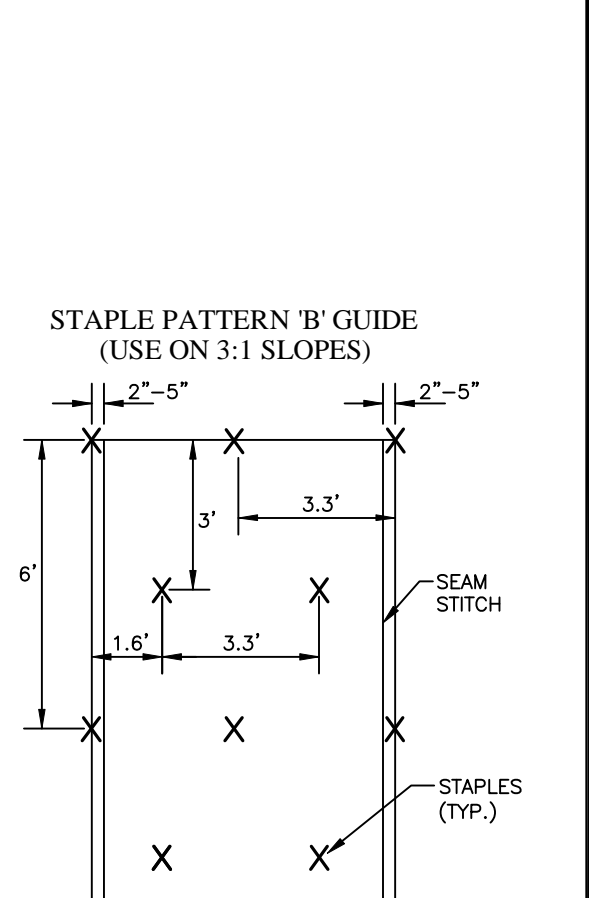
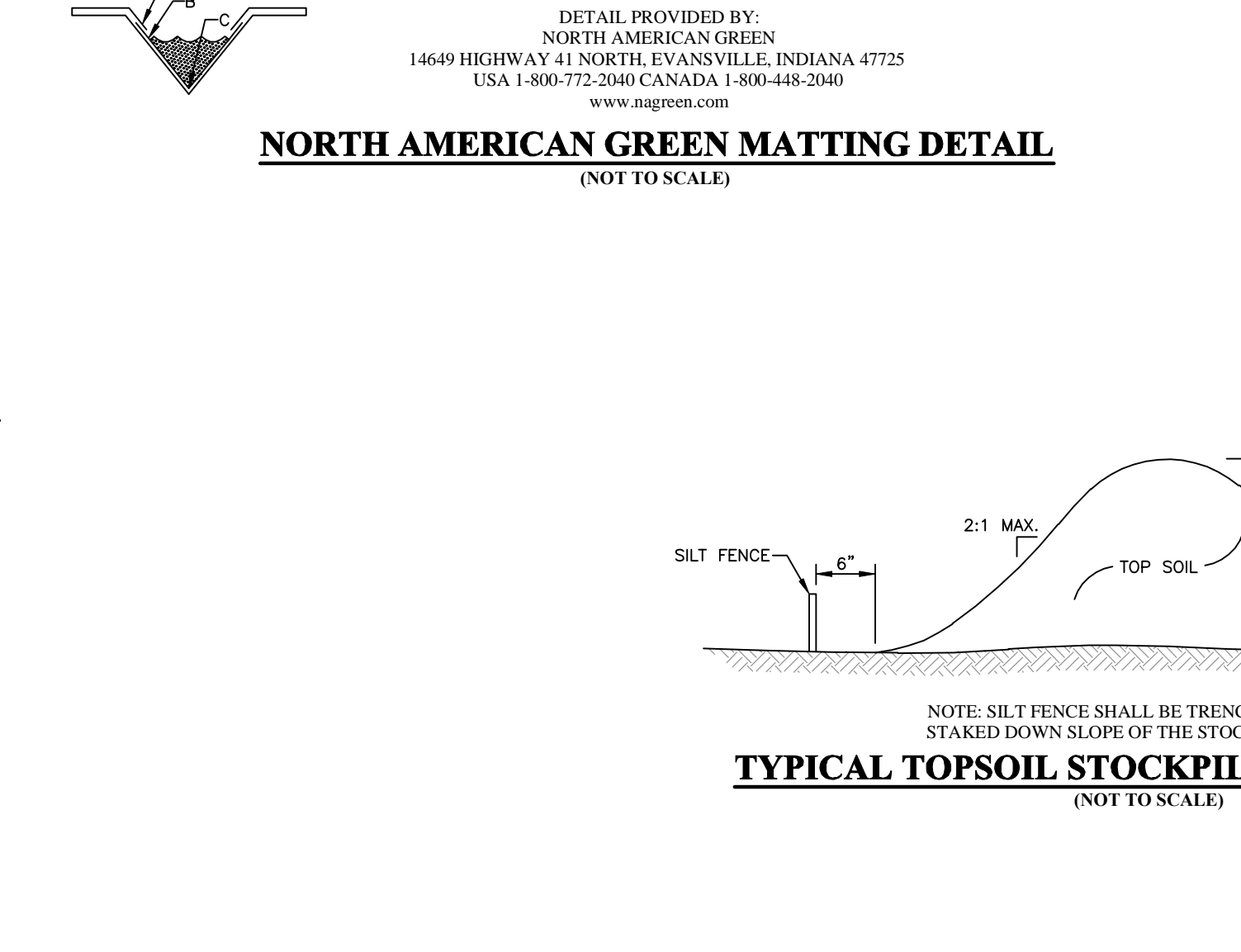
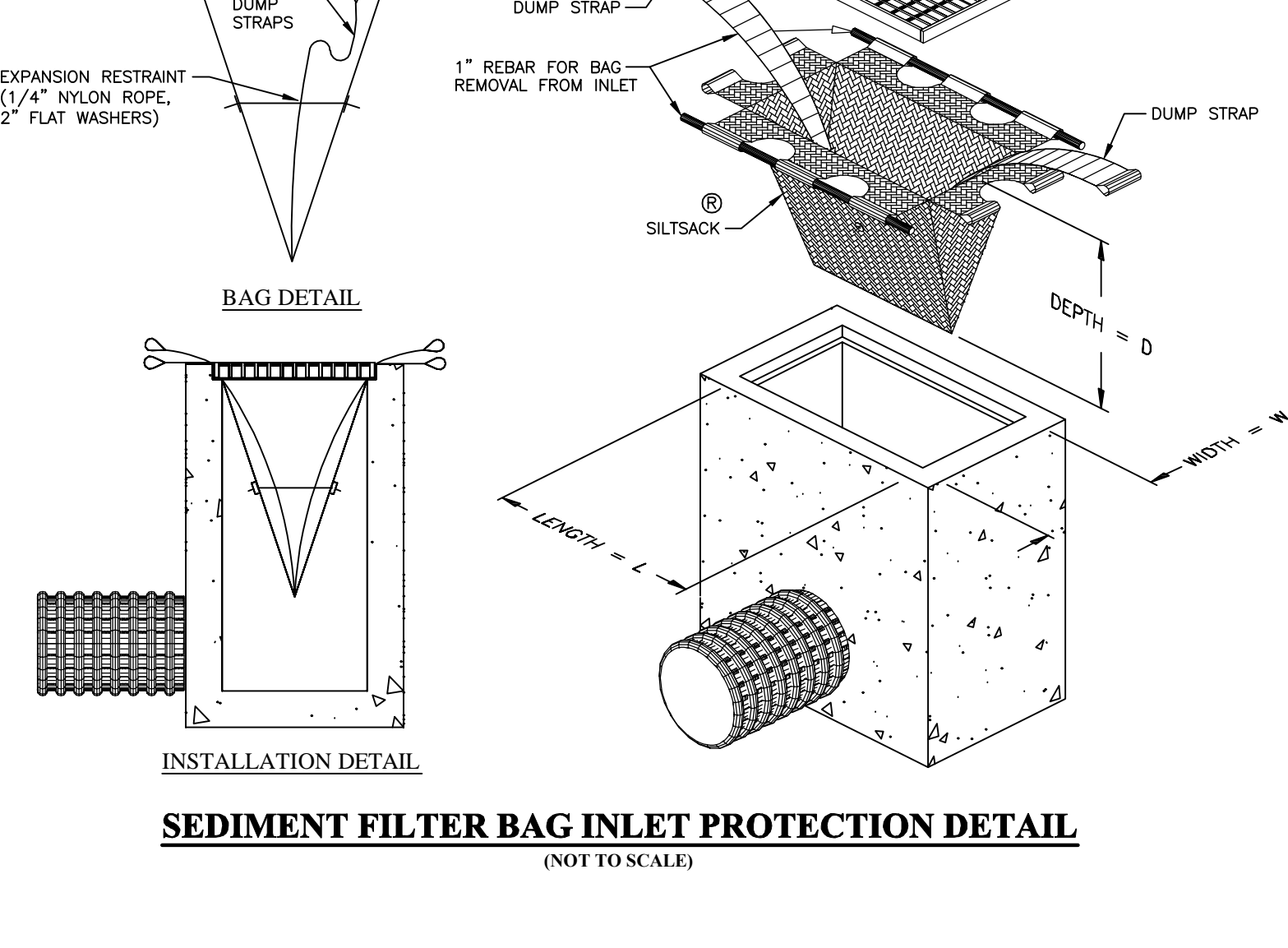
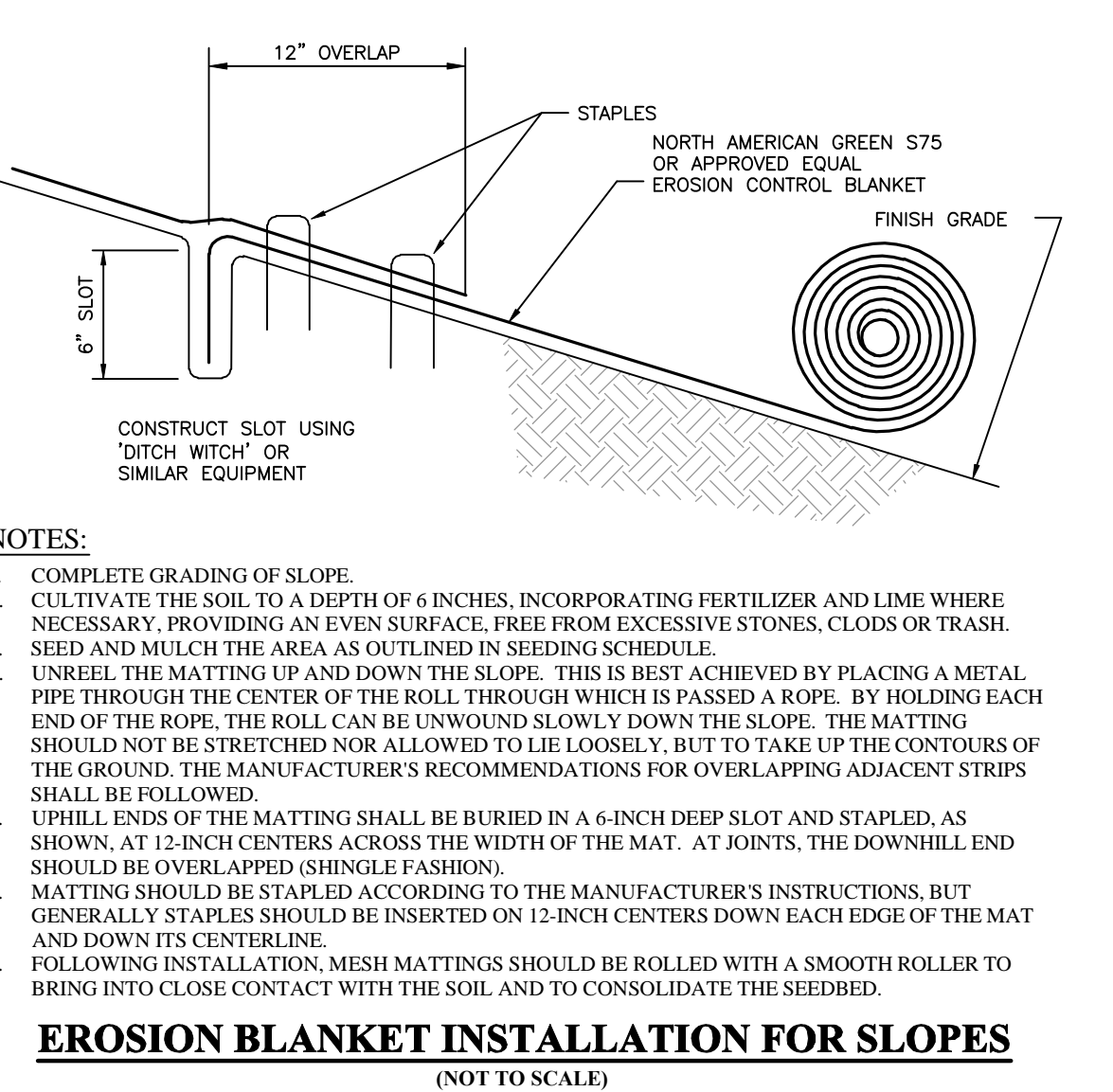
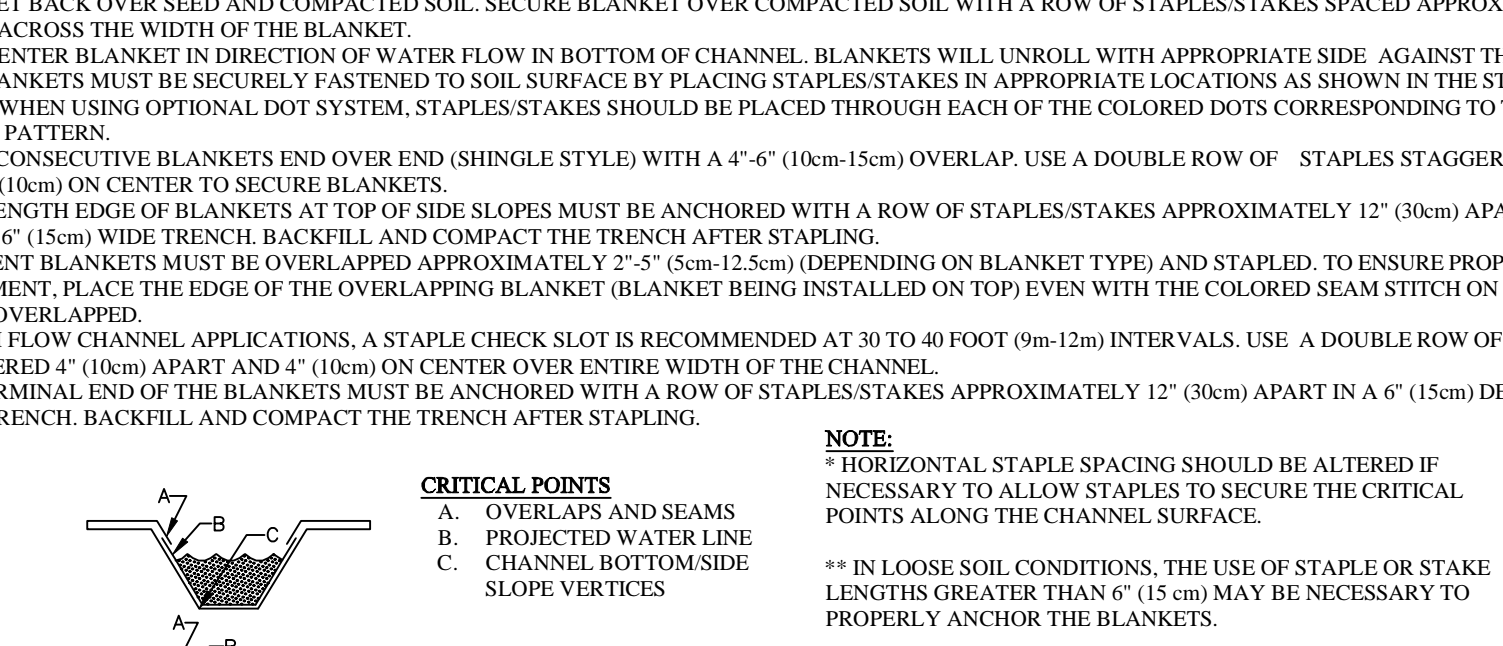
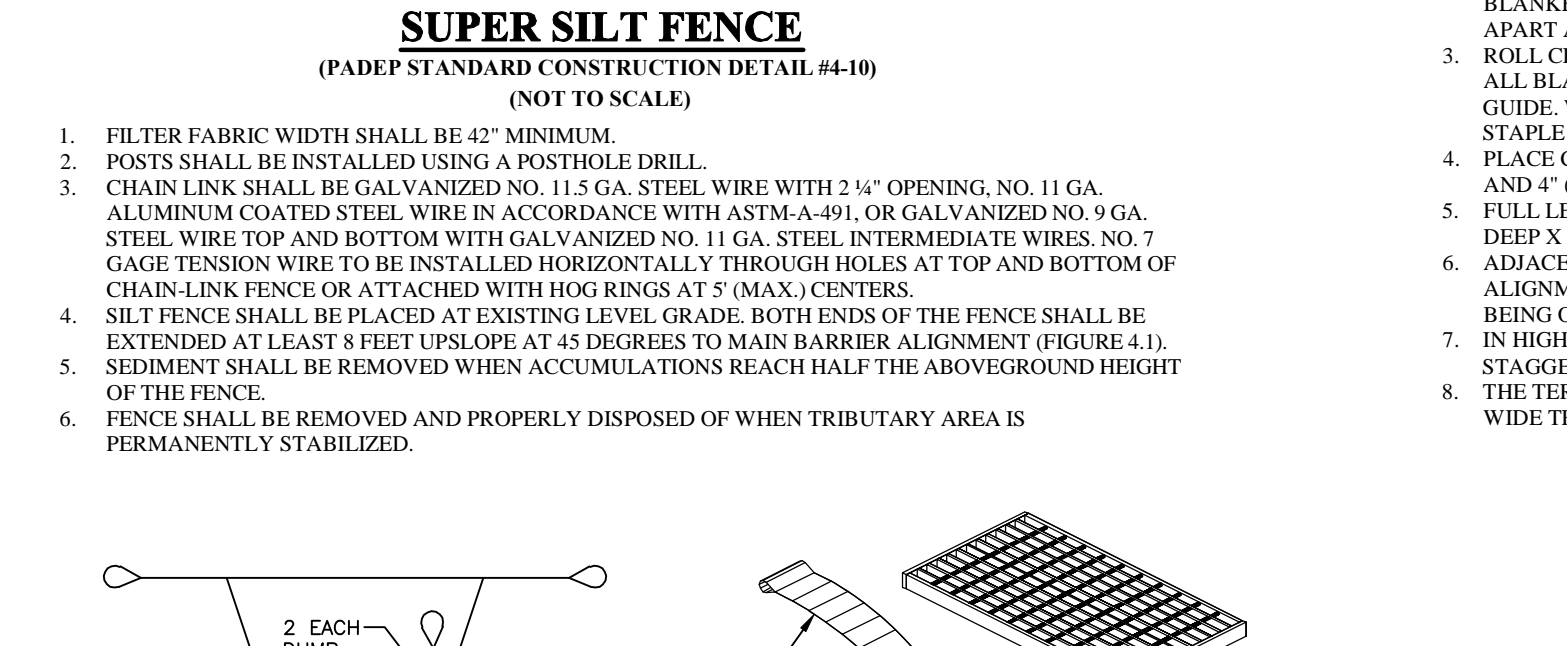
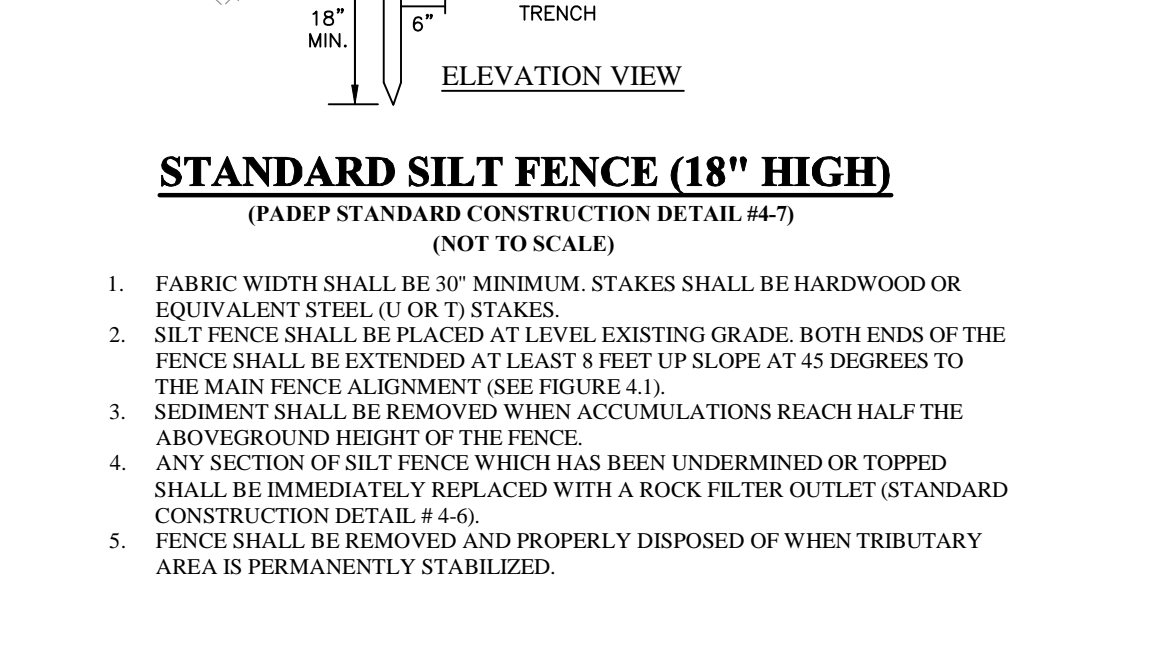
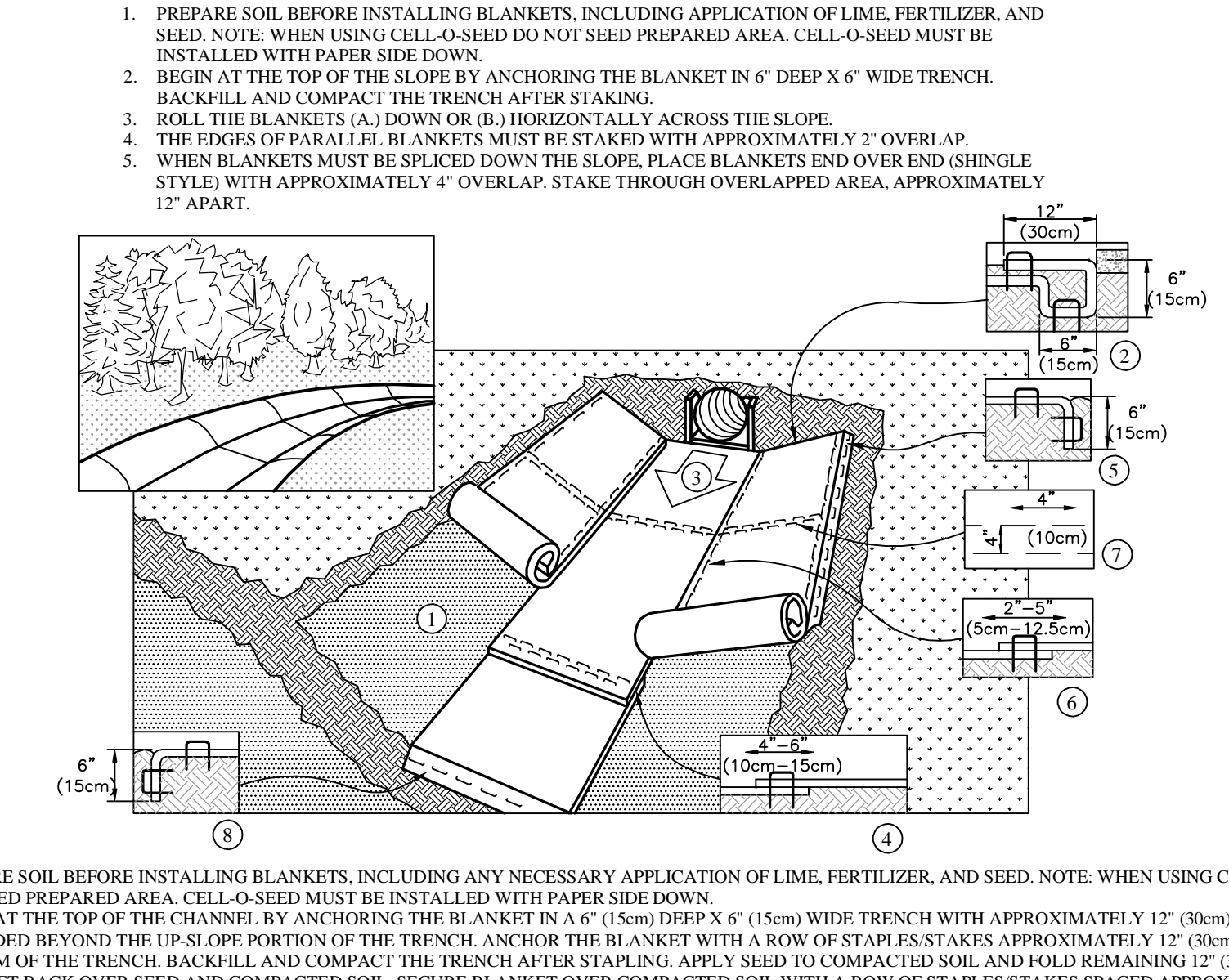
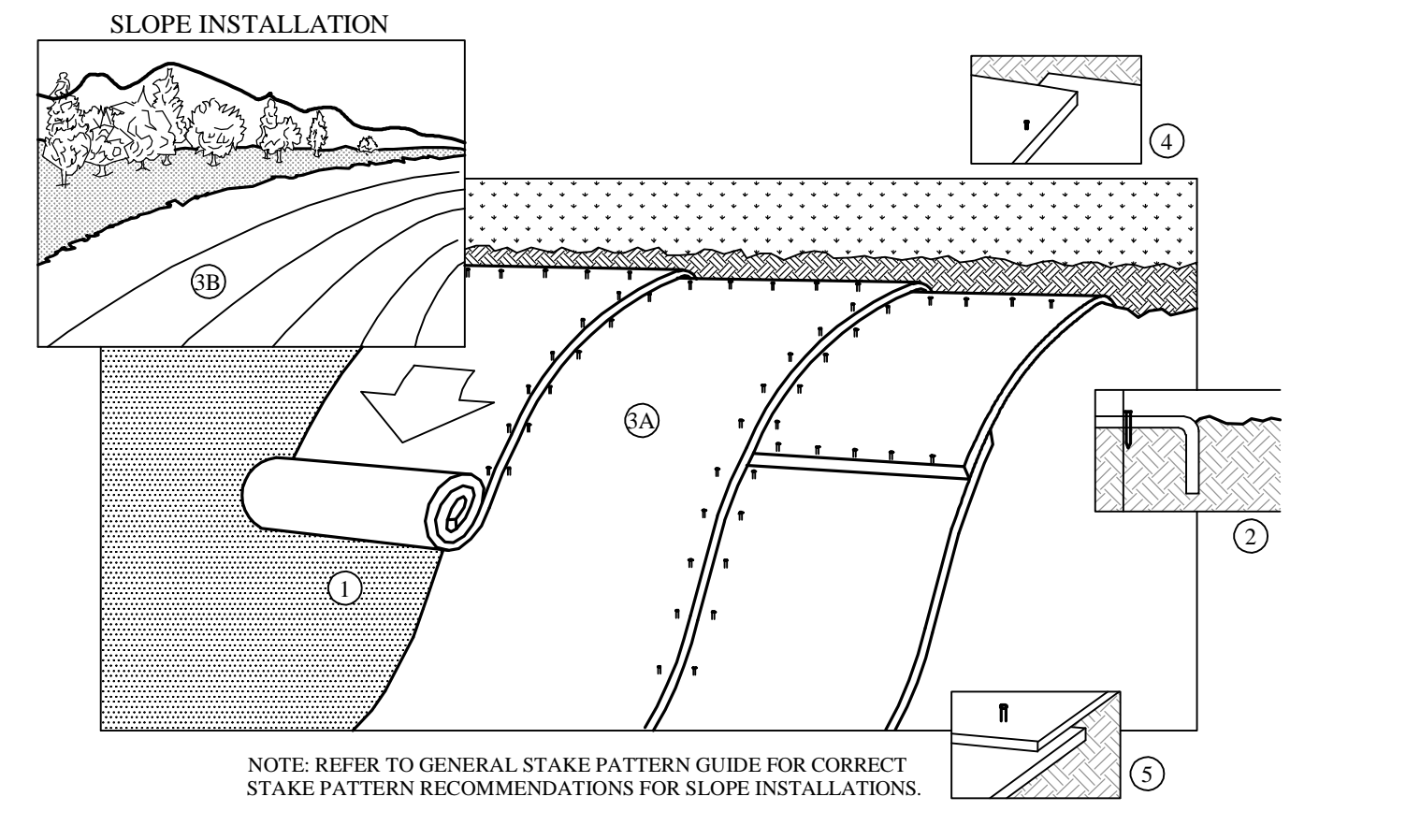
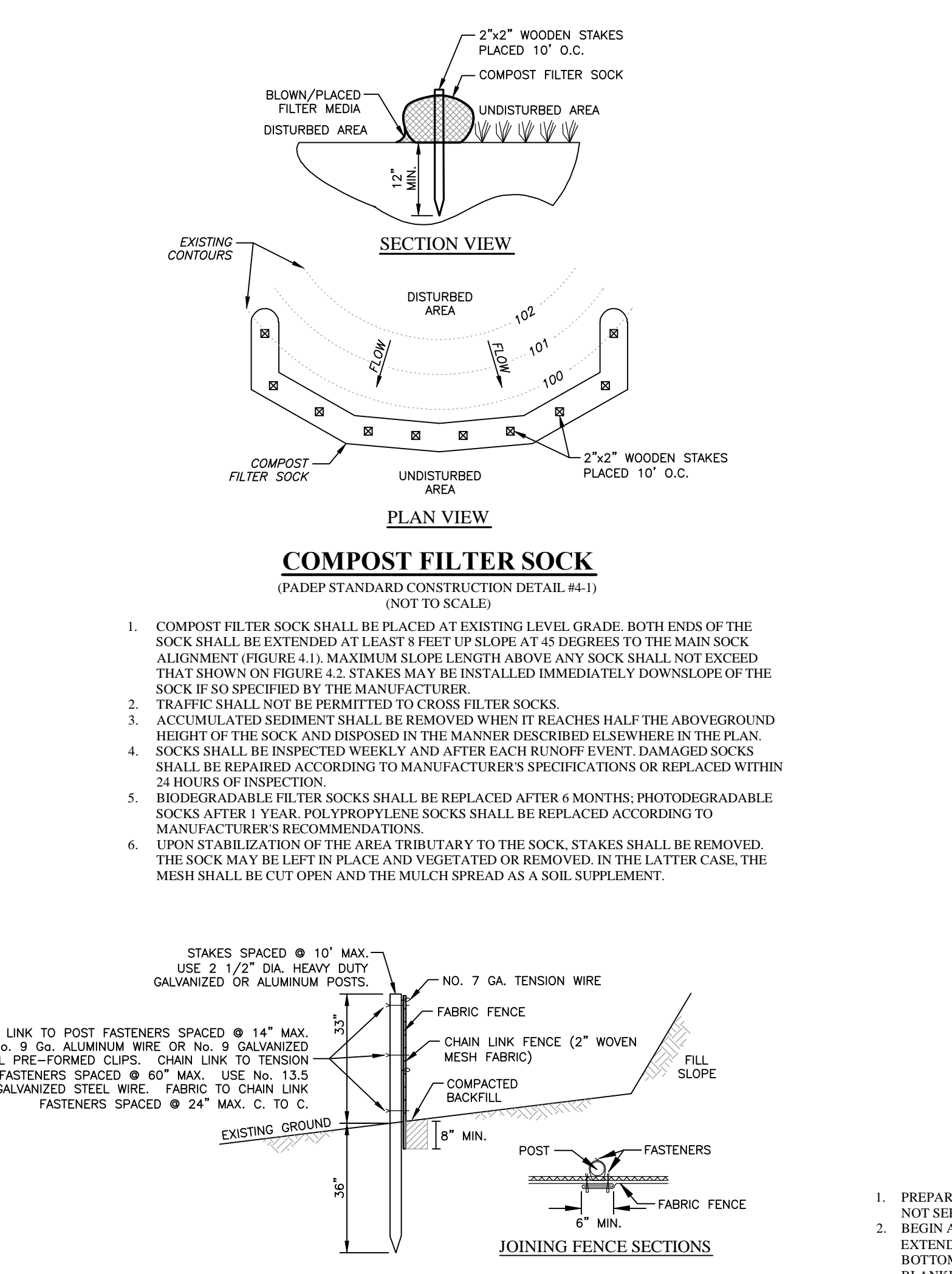
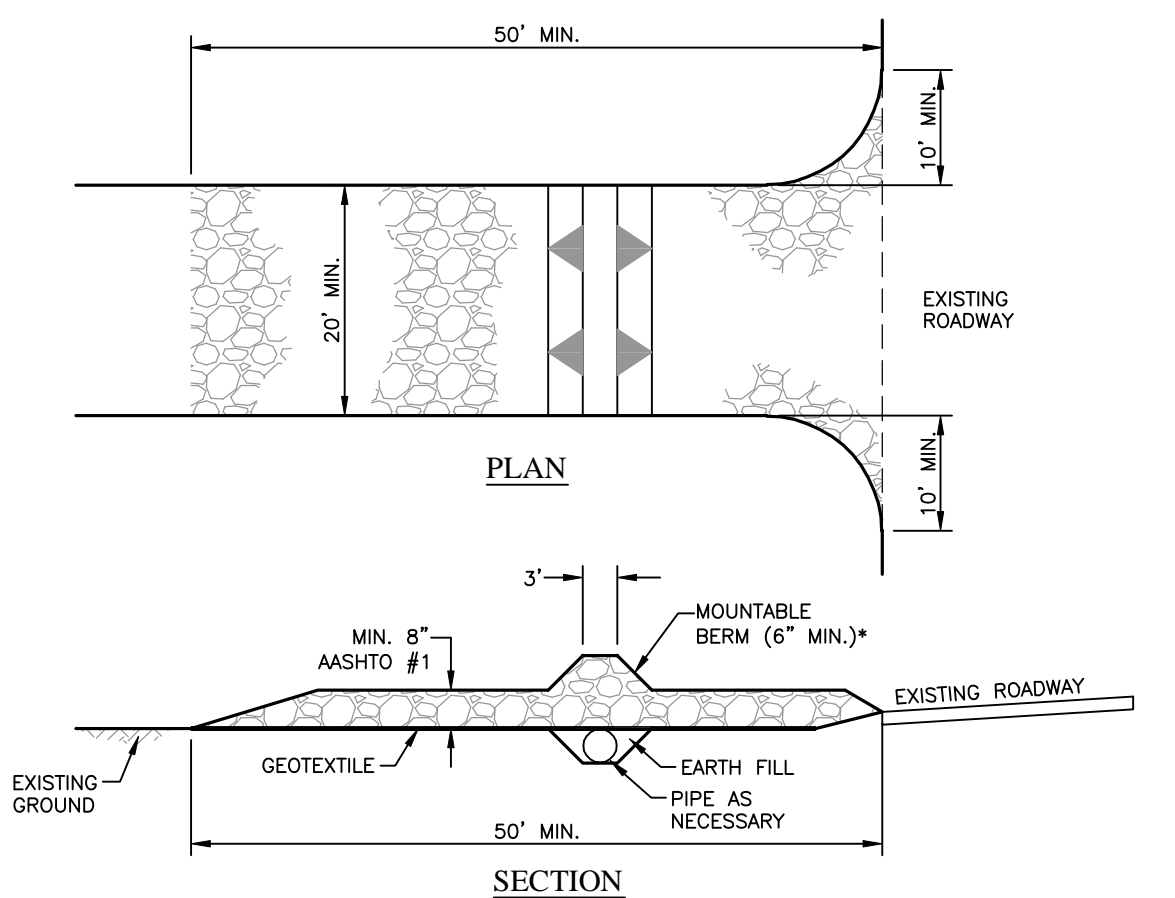
**PRELIMINARY / FINAL**  
**LAND DEVELOPMENT & LOT LINE CHANGE PLAN**

GRAPHIC SCALE  
0 10 20 30 40 50 60 70 80  
(IN FEET)  
1 inch = 20'

Date: 10/3/2014  
Scale: 1" = 20'  
Drawn by: TAH  
Checked by: CAD  
Project No.: **10432**

**SEDIMENTATION AND EROSION CONTROL**  
**DETAILS & NOTES FOR**  
**BLOOMINGDALE AVE., LLC**  
**120 & 124 BLOOMINGDALE AVE.**  
**WAYNE, PA 19087**  
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

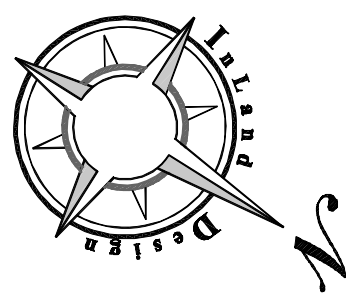
**S H E E T**  
**9**  
**OF 14**



**SEDIMENTATION AND EROSION CONTROL**  
**DETAILS & NOTES FOR**  
**BLOOMINGDALE AVE., LLC**  
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**S H E E T**  
**9**  
**OF 14**





LEGEND

- PROPERTY BOUNDARY
ADJOINING PROPERTY LINE
EXISTING RIGHT OF WAY LINE
EXISTING EASEMENT LINE
EXISTING 2' CONTOUR
EXISTING 10' CONTOUR
EXISTING TREE SYMBOLS
EXISTING FENCE LINE
EXISTING STORM STRUCTURES & PIPE
EXISTING SANITARY STRUCTURES & PIPE
EXISTING ROAD CENTERLINE
EXISTING CURB LINE
EXISTING ROAD / PAVING
EXISTING WATER LINE
EXISTING GAS LINE
EXISTING FIRE HYDRANT
ULTIMATE RIGHT OF WAY LINE
PROPOSED EASEMENT LINE
PROPOSED 2' CONTOUR
PROPOSED 10' CONTOUR
PROPOSED FENCE LINE
PROPOSED STORM STRUCTURES & PIPE
PROPOSED SANITARY STRUCTURES & PIPE
PROPOSED ROAD CENTERLINE
PROPOSED ROAD / PAVING
STEEP SLOPE 14% UP TO 20%
STEEP SLOPE 20% AND UP

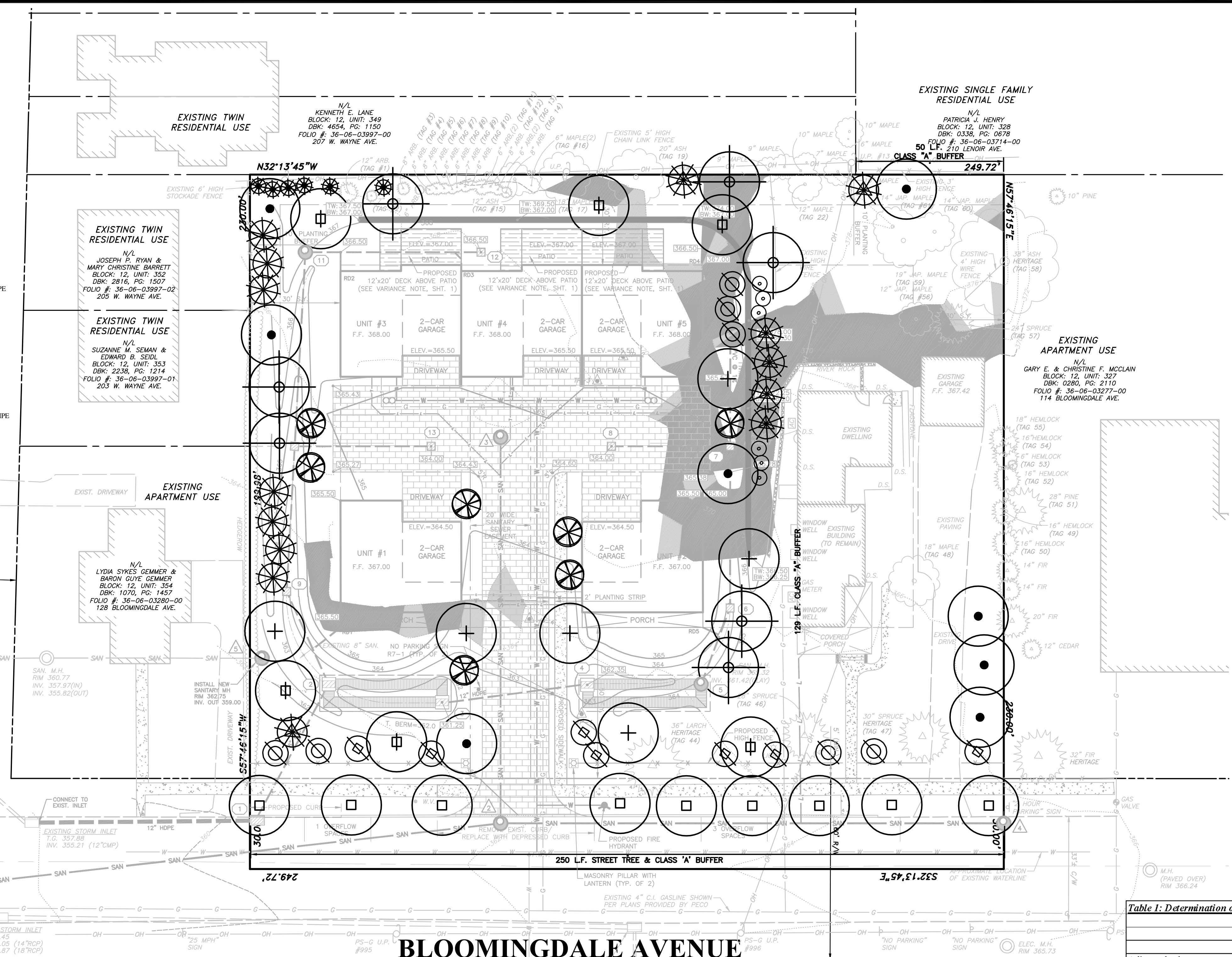
TREE LEGEND

- RED MAPLE (AR)
WILLOW LEAF OAK (QP)
ZELKOVA (ZK)
GINKGO (GB)
HONEY LOCUST (GT)
FLOWERING DOGWOOD (CK)
EASTERN REDBUD (CC)
AUTUMNALIS CHERRY (PC)
WHITE PINE (PS)
NORWAY SPRUCE (PA)
"GREEN GIANT" ARBOR VITAE (TH)
NORTHERN BAYBERRY (BB)

SOILS DESCRIPTION (ENTIRE SITE WITHIN Mc SOIL)

Table with 8 columns: SYMBOL, DESCRIPTION, SLOPE, AVAILABLE WATER CAPACITY, DRAINAGE CLASS, DEPTH TO S.H.W.T., DEPTH TO BEDROCK, CAPABILITY UNIT, HYDROLOGIC SOIL GROUP.

SITE GEOLOGY: (MGP - CLASS GNEISS); THIS PYROXENE-BEARING MAFIC GNEISS IS A DARK-COLORED, MEDIUM- TO FINE-GRAINED METAMORPHIC ROCK.



BLOOMINGDALE AVENUE

PLANT LIST

Table with 10 columns: KEY, BOTANICAL NAME, COMMON NAME, QTY., CAL., HT., WIDTH, ROOT, REMARKS. Lists various tree species like Acer rubrum, Ginkgo biloba, etc.

LANDSCAPING COMPLIANCE CHART

Table with 5 columns: REPLACEMENT TREE REQUIREMENTS, TREE SIZE TO BE REMOVED, # TO BE REMOVED, # OF CANOPY TREE REPLACEMENT, # OF FLOWERING TREE REPLACEMENT, # OF EVERGREEN TREE REPLACEMENT.

Table 1: Determination of Buffer Yard Class

Table with 10 columns: Proposed Land Use, Single-Family, Planned Cluster, Retail and Consumer, Utilities, Public, Nonresidential Off-Street. Includes a 'Table 1: Determination of Buffer Yard Class' section.

SEE SHEET 13 FOR NOTES & DETAILS

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Serial Numbers: 20142730827
PENNSYLVANIA ACT 187 REQUIREMENTS: Inland Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does Inland Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

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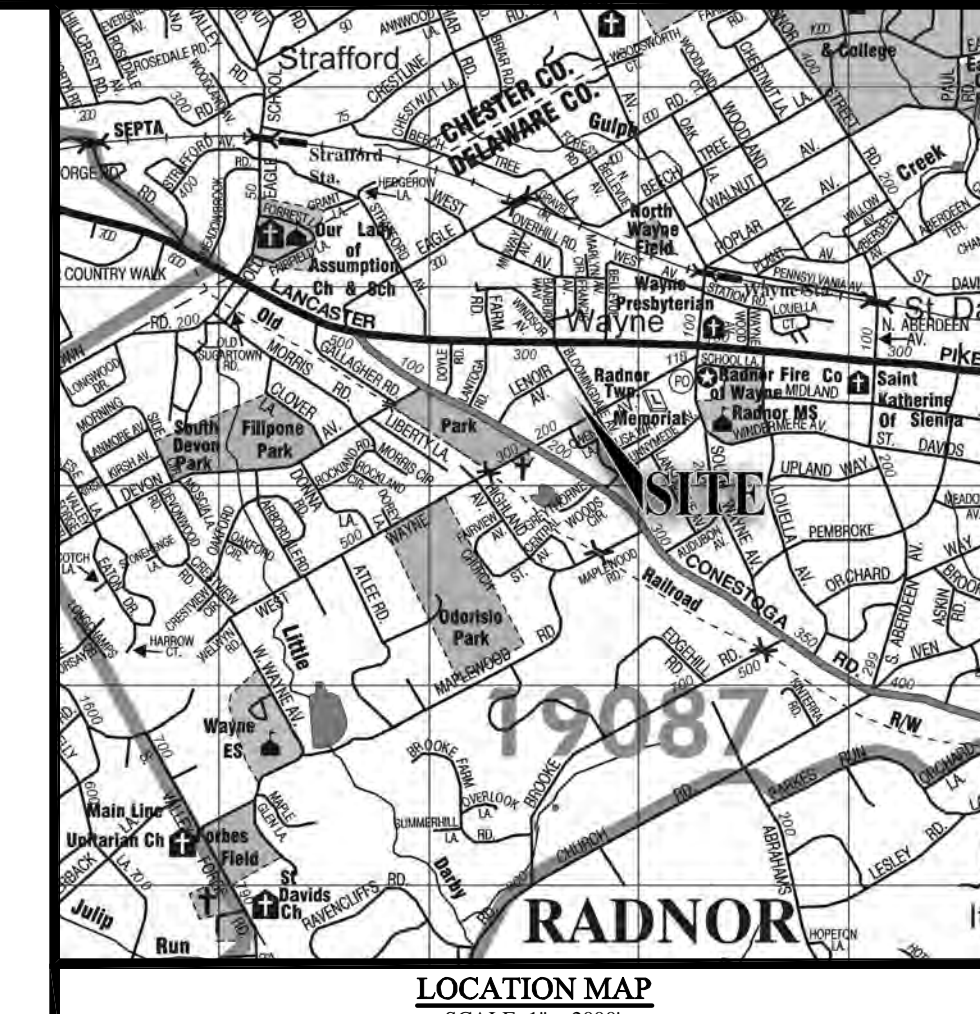
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PRELIMINARY / FINAL
LAND DEVELOPMENT & LOT LINE CHANGE PLAN
GRAPHIC SCALE
20 0 10 20 30 40 50 60 70 80
(IN FEET)
1 inch = 20'

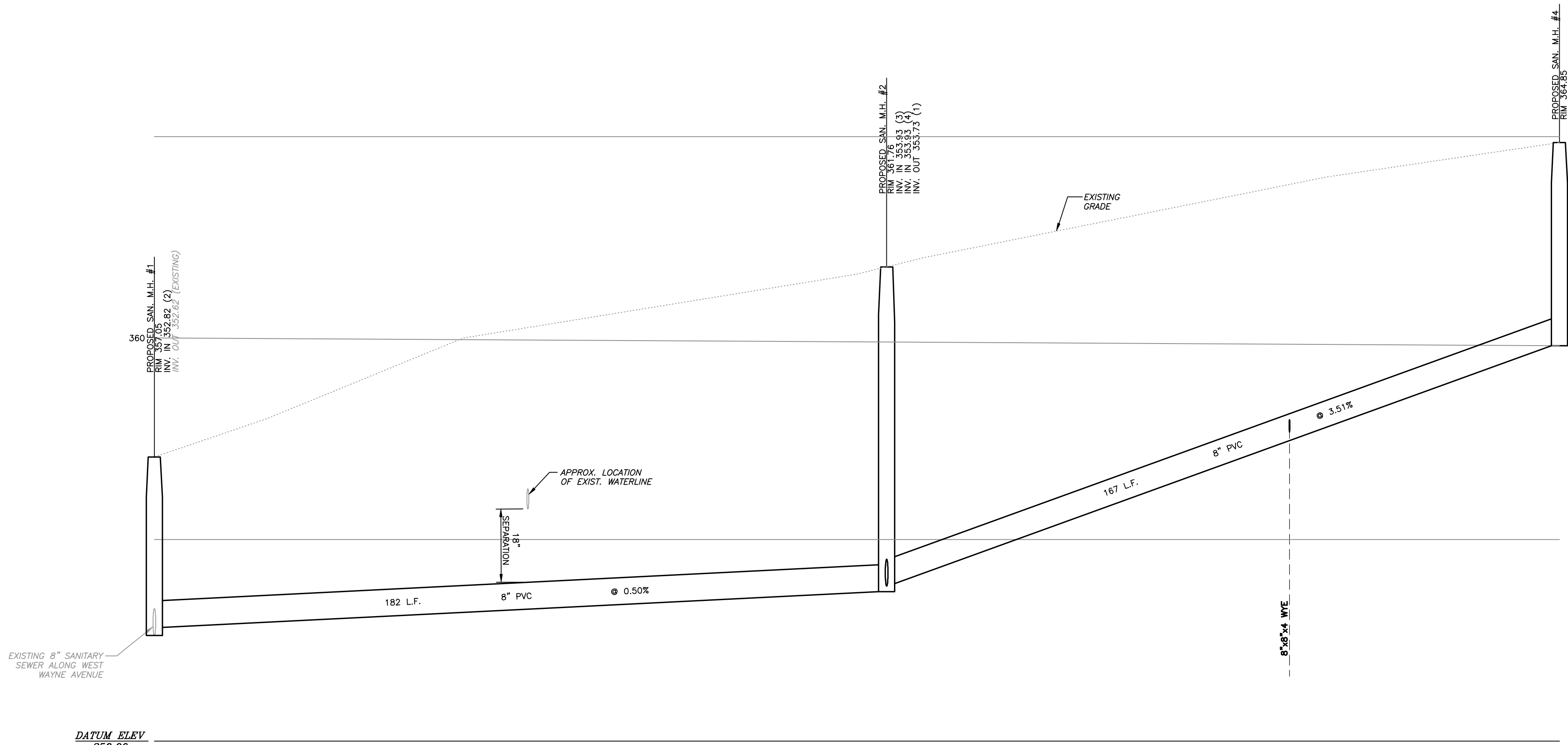
Date: 10/3/2014
Scale: 1" = 20'
Drawn by: TAH
Checked by: CAD
Project No: 10432

LANDSCAPING PLAN
FOR
BLOOMINGDALE AVE., LLC
120 & 124 BLOOMINGDALE AVE.
WAYNE, PA 19087
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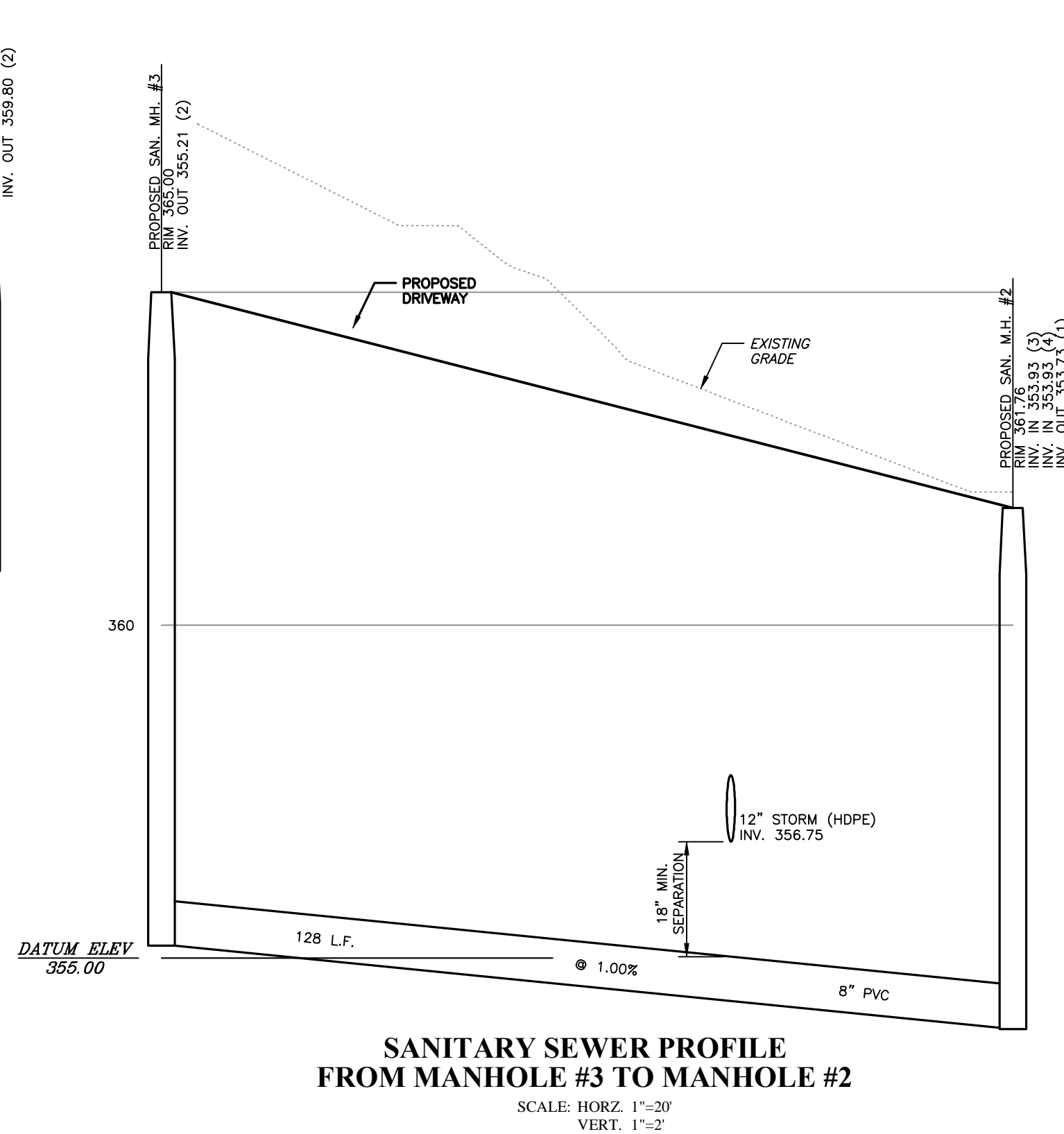
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10
OF 14



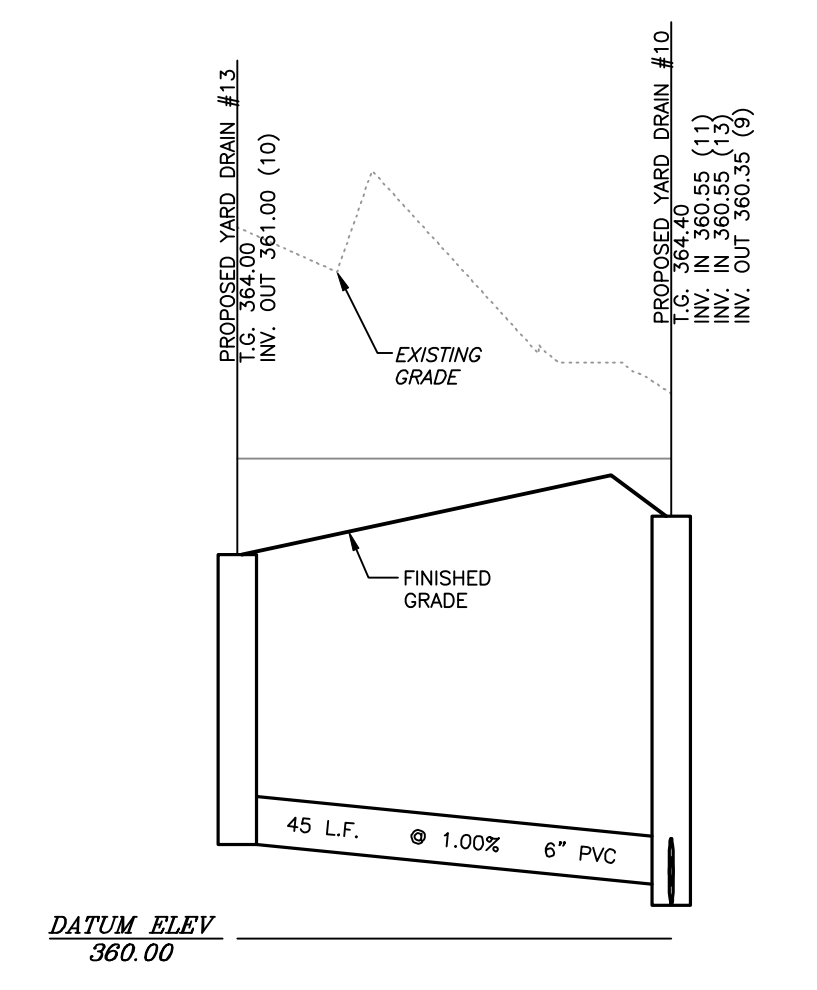




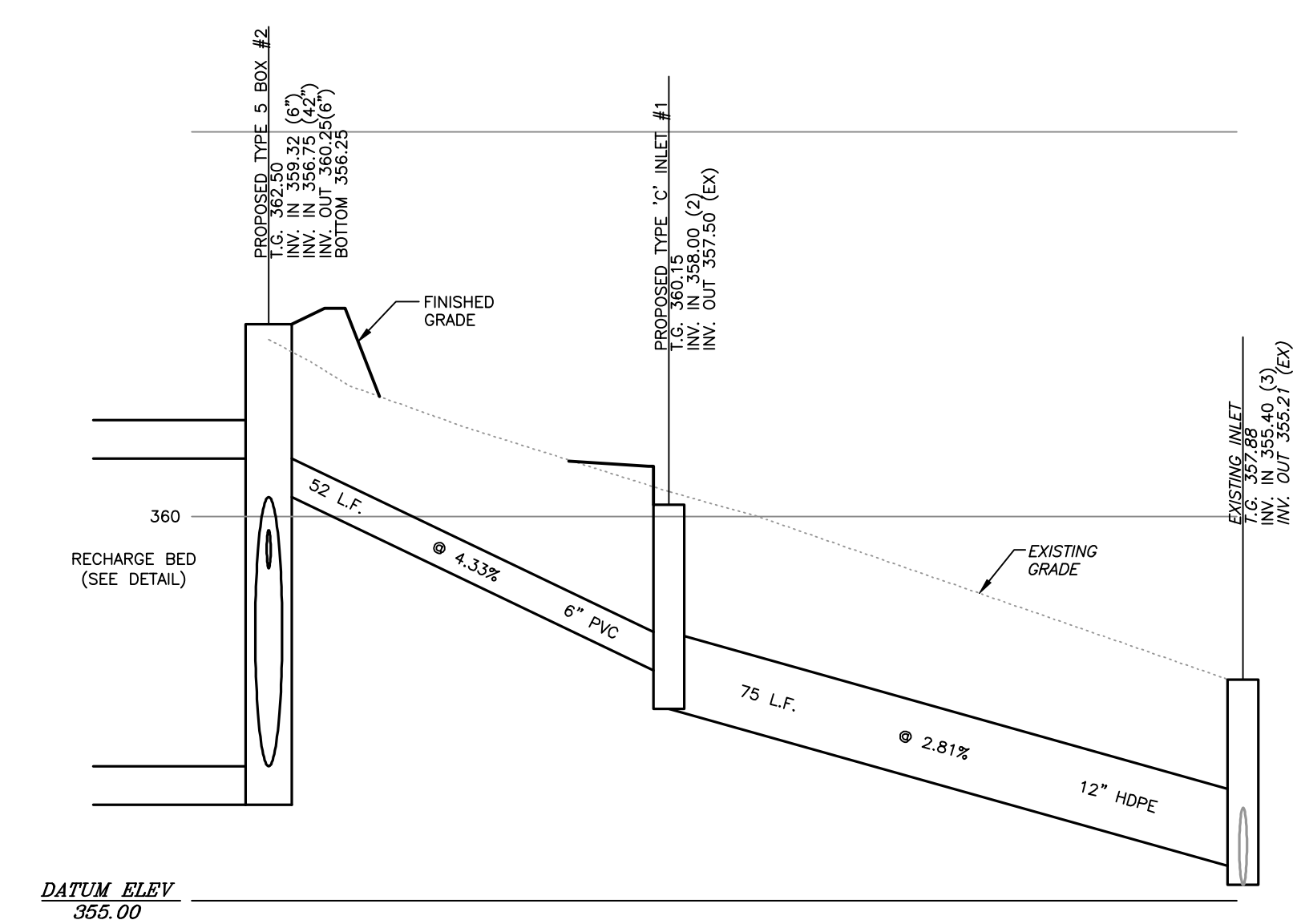
**SANITARY SEWER PROFILE  
FROM MANHOLE #4 TO MANHOLE #1**  
SCALE: HORZ. 1"=20'  
VERT. 1"=2'



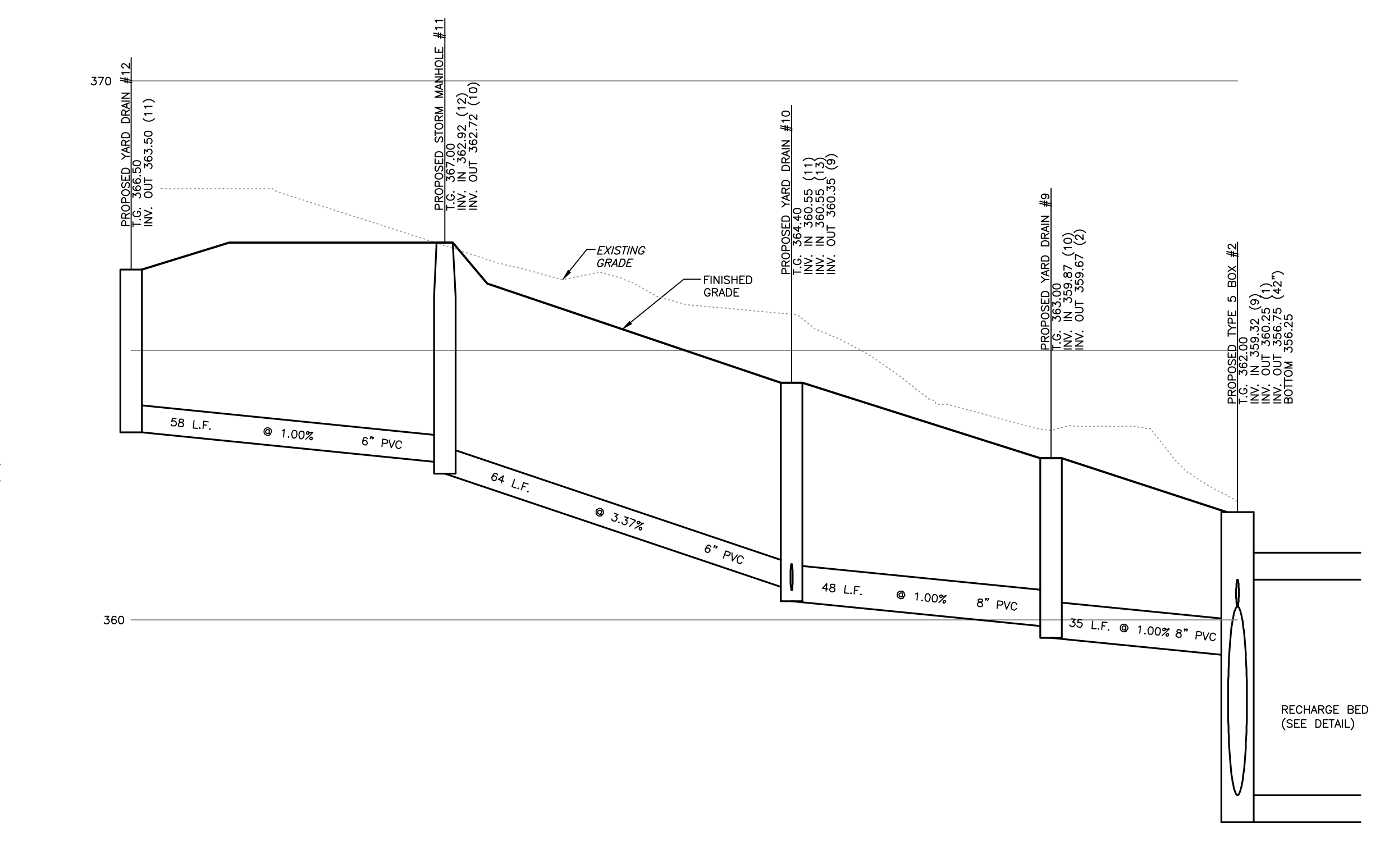
**SANITARY SEWER PROFILE  
FROM MANHOLE #3 TO MANHOLE #2**  
SCALE: HORZ. 1"=20'  
VERT. 1"=2'



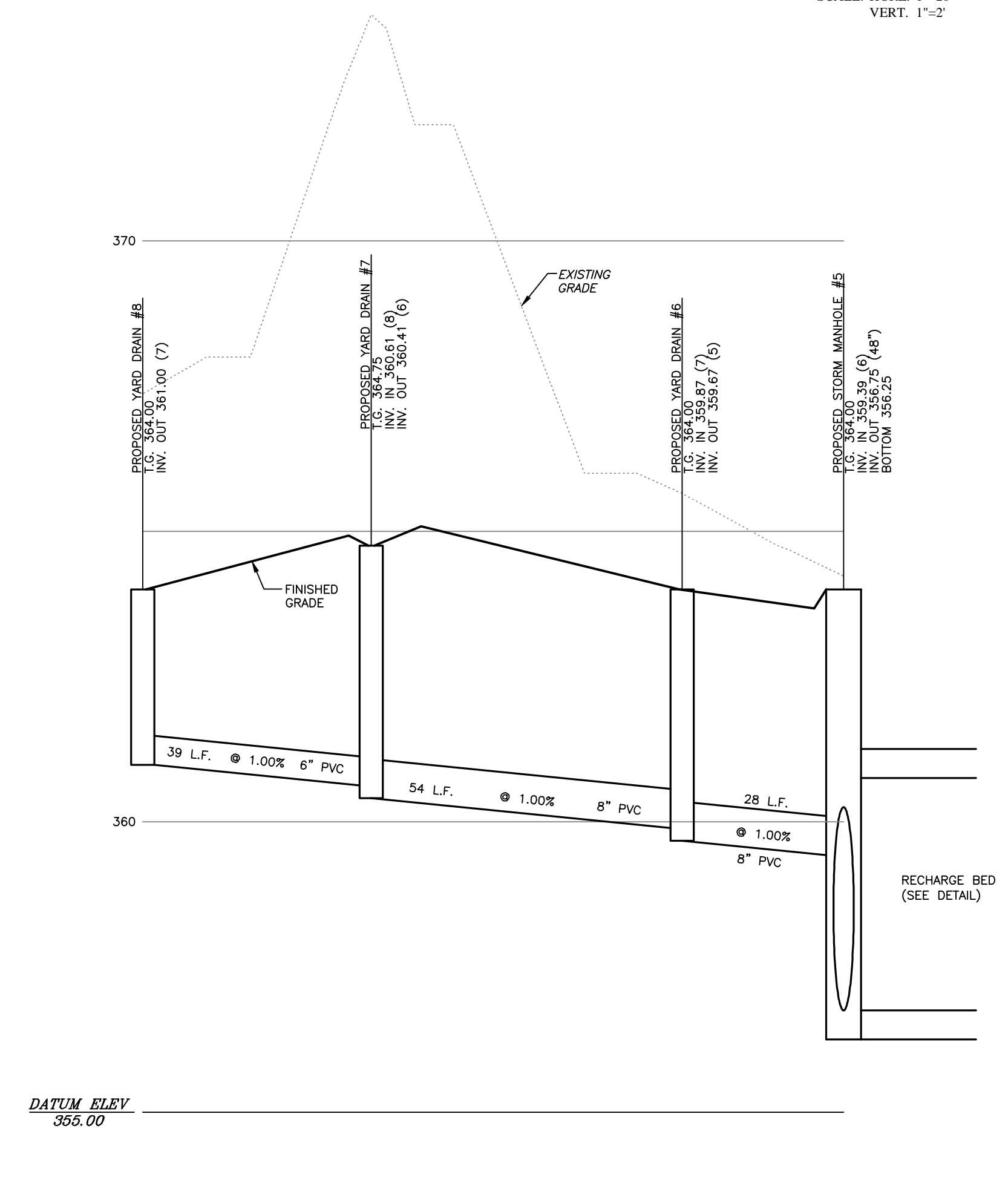
**STORM SEWER PROFILE  
FROM INLET #13 TO INLET #10**  
SCALE: HORZ. 1"=20'  
VERT. 1"=2'



**STORM SEWER PROFILE  
FROM INLET #2 TO EXISTING INLET**  
SCALE: HORZ. 1"=20'  
VERT. 1"=2'

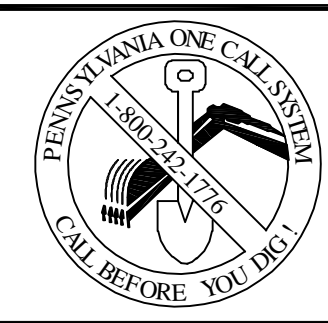


**STORM SEWER PROFILE  
FROM INLET #12 TO INLET #2**  
SCALE: HORZ. 1"=20'  
VERT. 1"=2'



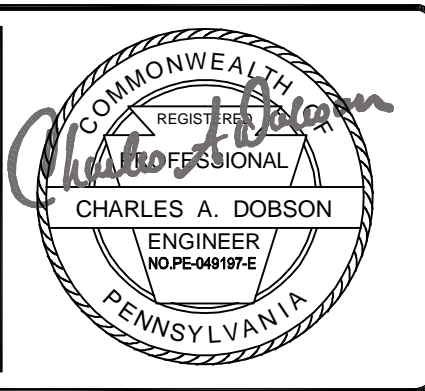
**STORM SEWER PROFILE  
FROM INLET #8 TO MH #5**  
SCALE: HORZ. 1"=20'  
VERT. 1"=2'

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PA, act 172 of 1986 requires  
three working days notice  
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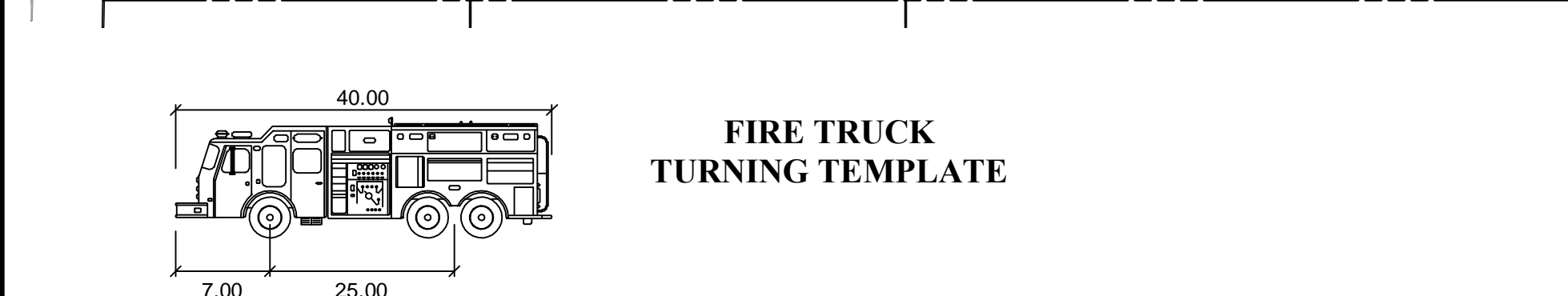
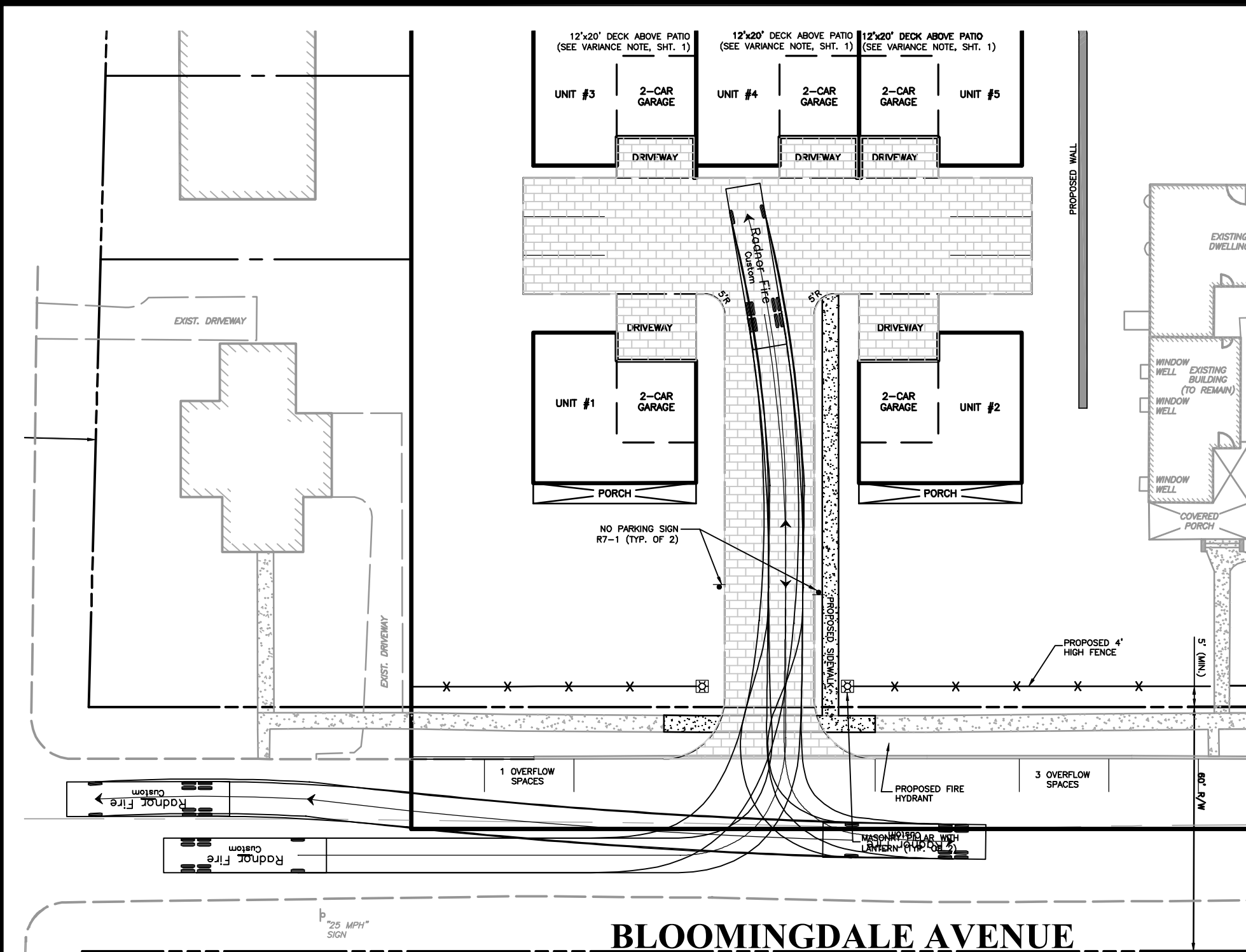
**PRELIMINARY / FINAL**  
**LAND DEVELOPMENT & LOT LINE CHANGE PLAN**

Date: 10/3/2014  
Scale: AS NOTED  
Drawn by: TAH  
Checked by: CAD  
Project No. **10432**

**SEWER PROFILES & RECHARGE BED DETAILS  
FOR  
BLOOMINGDALE AVE., LLC  
120 & 124 BLOOMINGDALE AVE.  
WAYNE, PA 19087  
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**S H E E T  
11  
OF 14**



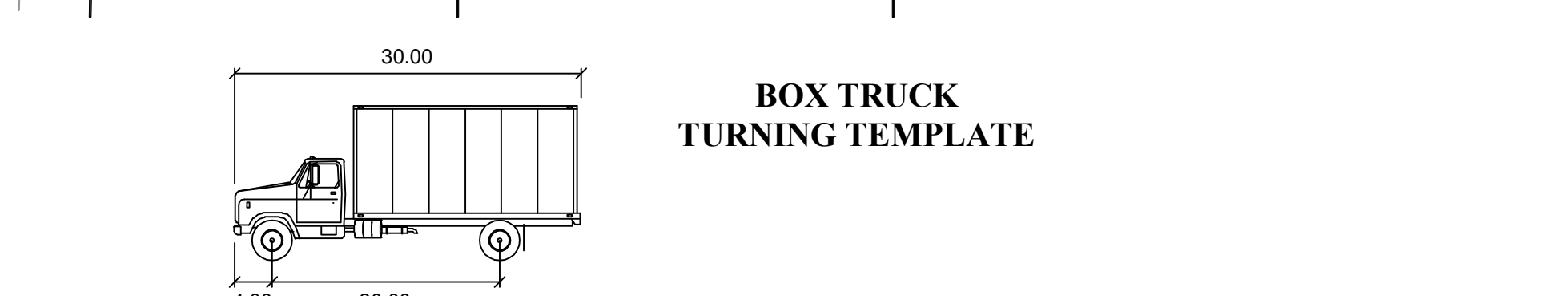
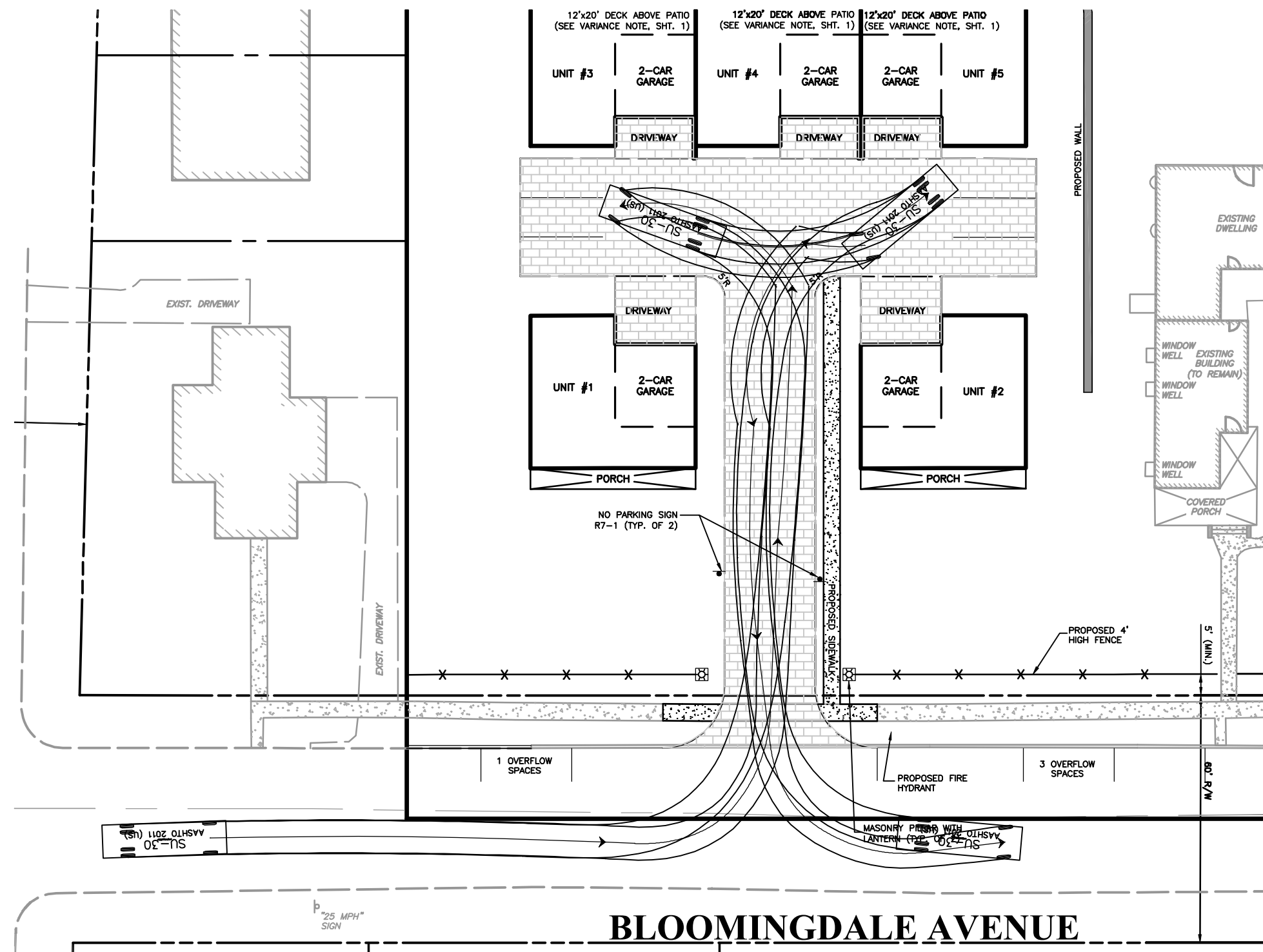


**FIRE TRUCK TURNING TEMPLATE**

Radnor Fire

feet

Width : 8.50  
Track : 8.50  
Lock to Lock Time : 6.0  
Steering Angle : 42.0

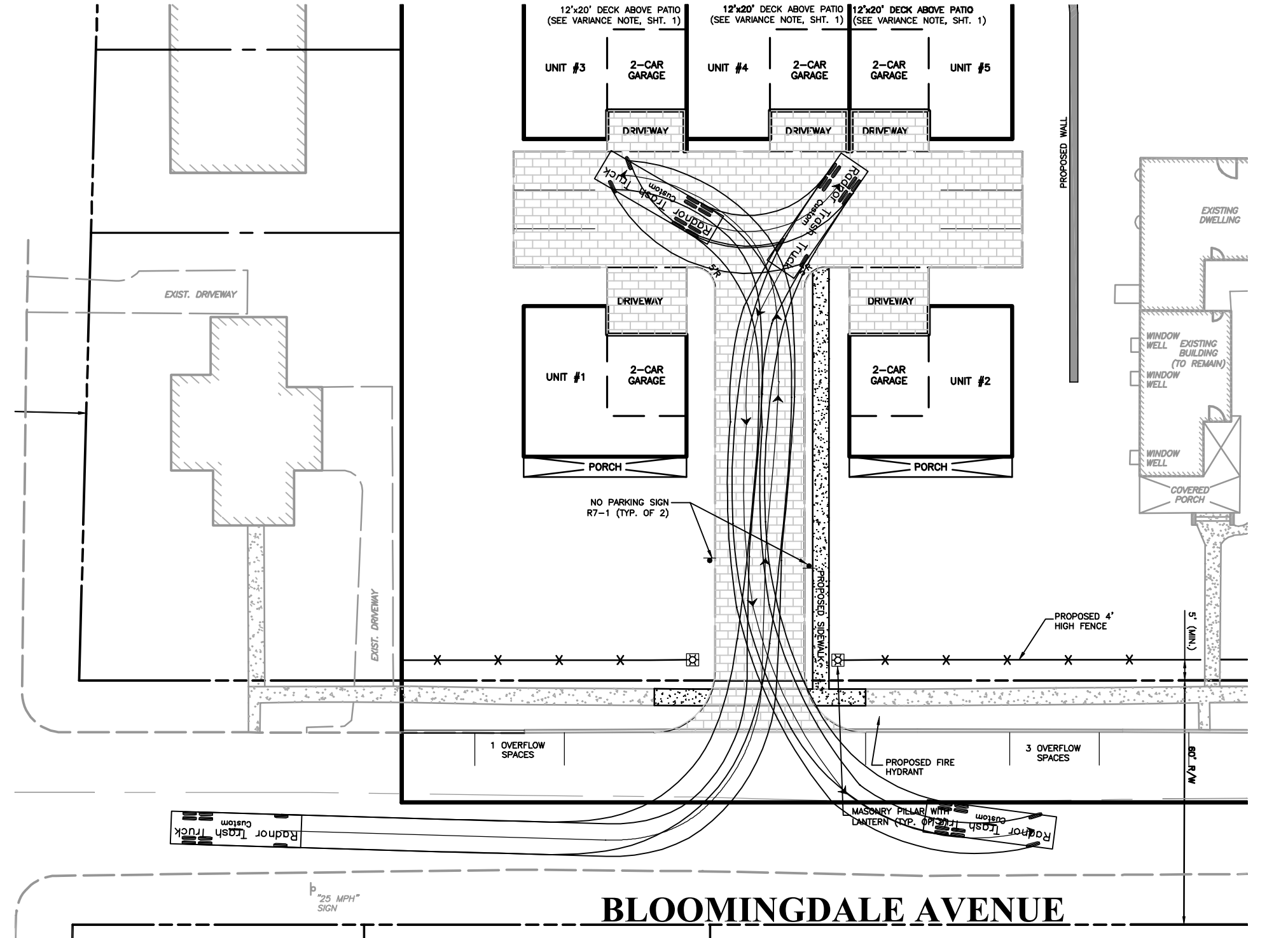


**BOX TRUCK TURNING TEMPLATE**

BOX TRUCK

feet

Width : 8.00  
Track : 8.00  
Lock to Lock Time : 6.0  
Steering Angle : 31.8



**TRASH TRUCK TURNING TEMPLATE**

Radnor Trash Truck

feet

Width : 8.00  
Track : 8.00  
Lock to Lock Time : 6.0  
Steering Angle : 27.4

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UPI: 36-6-327.8 & 36-6-327.9

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**PRELIMINARY / FINAL**  
**LAND DEVELOPMENT & LOT LINE CHANGE PLAN**

GRAPHIC SCALE  
30 0 15 30 60 120  
(IN FEET)  
1 inch = 30'

Date: 10/3/2014  
Scale: 1" = 30'  
Drawn by: TAH  
Checked by: CAD  
Project No: **10432**

**VEHICLE TURNING TEMPLATE PLAN**  
**FOR**  
**BLOOMINGDALE AVE., LLC**  
**120 & 124 BLOOMINGDALE AVE.**  
**WAYNE, PA 19087**  
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**S H E E T**  
**12**  
**OF 14**



**GENERAL SPECIFICATIONS**

- A. NOTES & PLANTING INSTRUCTIONS**
- THE EXECUTION OF THIS PLAN INCLUDES THE FURNISHING OF PLANT MATERIALS AS SPECIFIED, ACCURATE LAYOUT, SUFFICIENT TOPSOIL, NUTRIENT ADDITIVES, PEAT MOSS, PLANTING, PRUNING, STAKING, WATERING, LABOR, CLEAN-UP AND ALL OTHER NECESSARY SERVICES TO EXECUTE THE PLANTINGS PROPERLY AND IN FULL ACCORDANCE WITH THESE SPECIFICATIONS AND DETAILS.
  - ALL PLANT MATERIALS ARE TO BE NURSERY GROWN, OF EXCELLENT LANDSCAPE QUALITY AND FREE FROM INSECTS AND DISEASES. FURTHERMORE, PLANTS SHALL HAVE BEEN GROWN FOR AT LEAST TWO YEARS IN THE SAME HARDINESS ZONE AS THE SITE.
  - INSTALLATION TO BE IN ACCORDANCE WITH AMERICAN ASSOCIATION OF NURSERYMAN STANDARDS.
  - PLANT SIZES SHALL BE A FAIR AVERAGE BETWEEN THE SIZE RANGE INDICATED. CALIPER SHALL BE MEASURED AT 4.5' ABOVE GROUND.
  - TREES IN PAVED AREAS SHALL BE UNIFORM IN SHAPE, SIZE, AND CHARACTER. LOWEST BRANCHES SHALL BE AT LEAST 7' FROM GROUND.
  - IF TREES CANNOT BE LOCATED WHERE SHOWN DUE TO UTILITIES OR OTHER OBSTRUCTIONS, EXISTING OR PROPOSED, TREES SHALL BE RELOCATED IN THE FIELD AS APPROVED BY THE OWNER'S REPRESENTATIVE.
  - NO SUBSTITUTIONS ARE ACCEPTABLE UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE AND THE TOWNSHIP.
  - LANDSCAPE CONTRACTOR TO GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF 18 MONTHS FROM THE DAY OF FINAL APPROVAL OF THE LANDSCAPE INSTALLATION BY THE TOWNSHIP.
  - BACKFILL MIXTURE SHALL BE A MIXTURE BY VOLUME OF 3/4 TOPSOIL (TO BE PROVIDED ON SITE) AND 1/4 PEAT MOSS.
  - ALL SHRUBS AND GROUND COVER SHALL BE PLACED IN CONTINUOUS BEDS AS DELINEATED ON THE PLANS.
  - MULCH TO BE SHREDDED OAK BARK OR APPROVED EQUAL AND APPLIED TO A MINIMUM DEPTH OF 2 INCHES.
  - A PRE-EMERGENT HERBICIDE SUCH AS "TREPLAN" SHALL BE APPLIED TO ALL PLANTING BEDS ACCORDING TO MANUFACTURER'S RECOMMENDATION (PRIOR TO PLACEMENT OF MULCH). A SECOND APPLICATION OF PRE-EMERGENT HERBICIDE SHALL BE INCLUDED AS A PART OF THIS WORK.
  - THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE TO SELECT ALL PLANT MATERIAL AT THE NURSERY AND APPROVE STAKING OF ALL PLANT MATERIAL LOCATIONS AT THE SITE BEFORE DELIVERY.
  - LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR WATERING IN SUFFICIENTLY AT TIME OF PLANTING AND UNTIL JOB IS COMPLETED AND TURNED OVER TO OWNER.

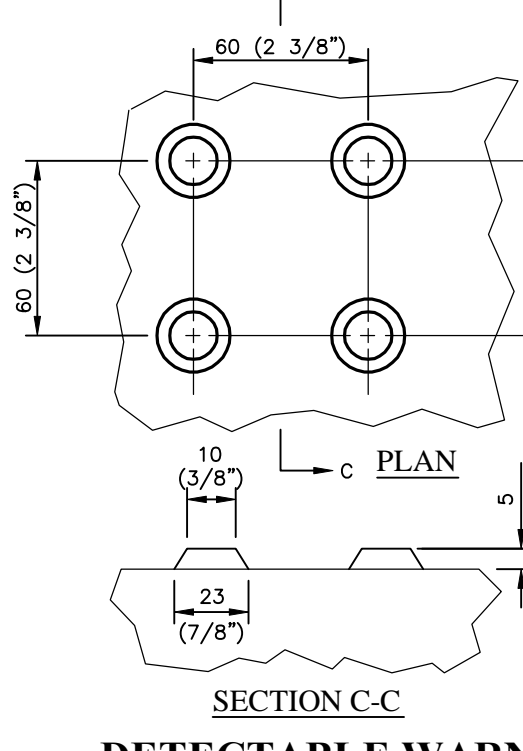
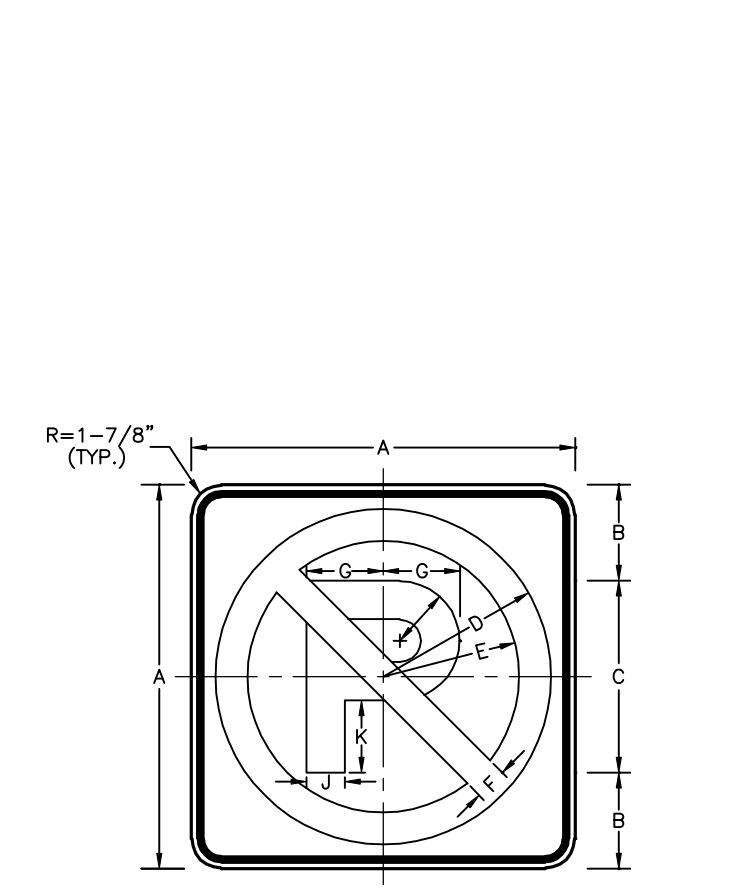
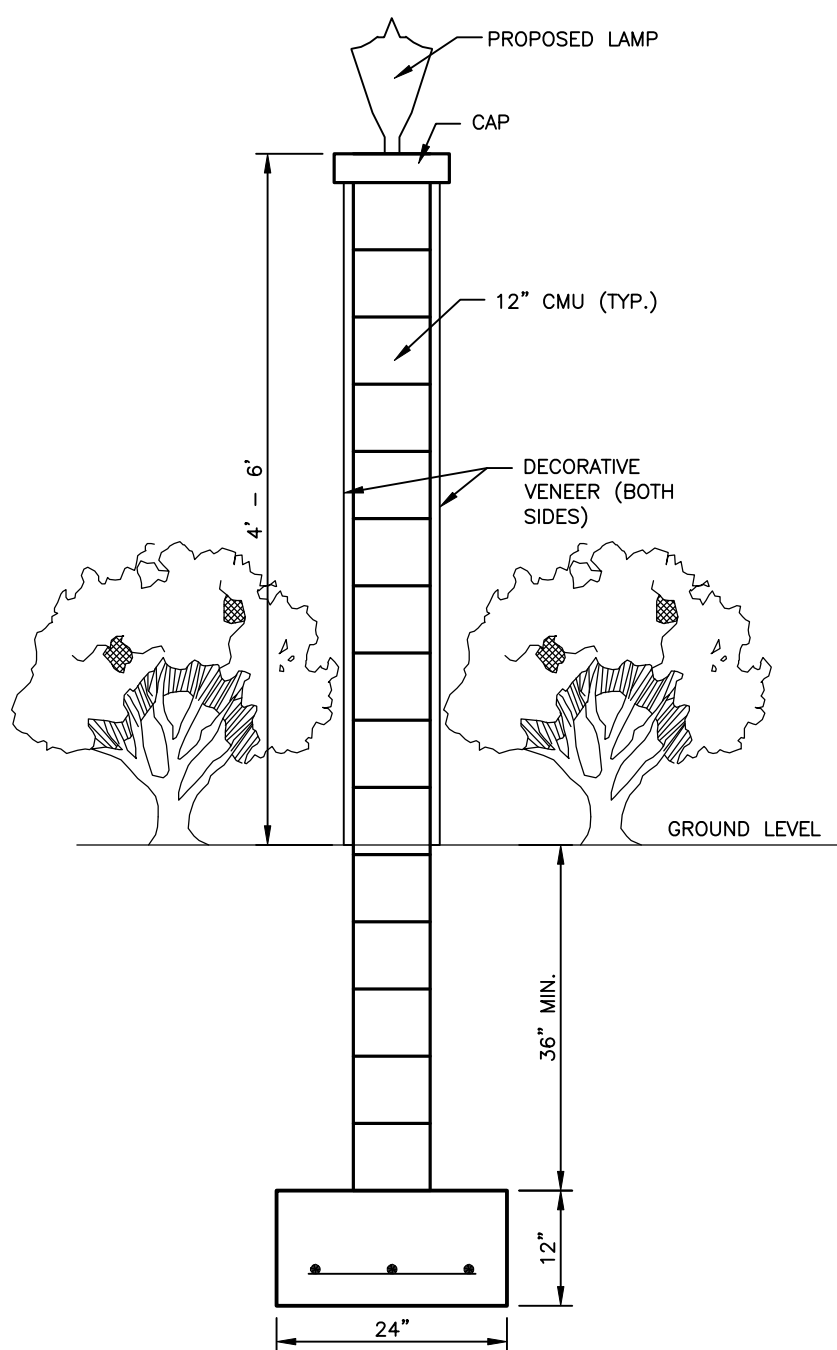
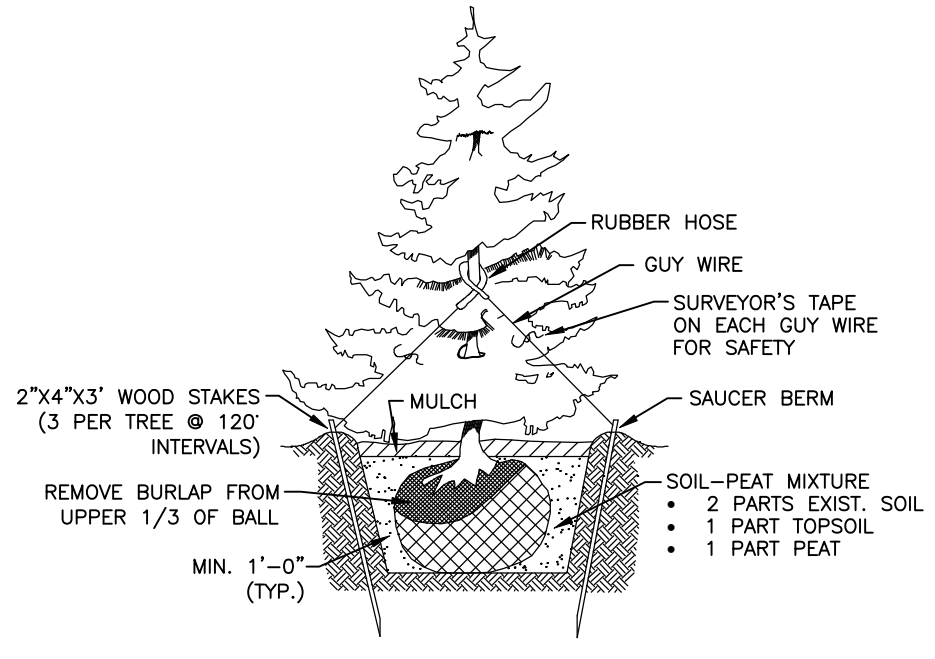
**SEEDING SPECIFICATIONS:**

- ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SEED.
- SEEDING SHALL COMMENCE BETWEEN AUGUST 15 AND SEPTEMBER 30, OR BETWEEN MARCH 15 AND APRIL 30, AS WEATHER PERMITS AND/OR AS APPROVED BY THE OWNER'S REPRESENTATIVE.
- TOPSOIL USED FOR SEEDING IS STOCKPILED ON SITE. TOPSOIL SHALL BE SPREAD TO A DEPTH OF 6" AND FINDED GRADED, REMOVING ALL DEBRIS AND STONES LARGER THAN 1". REMOVE FROM THE SITE ALL DEBRIS AND STONES.
- INCORPORATE BY DISING INTO THE TOP 2" OF THE TOPSOIL THE FOLLOWING:
  - A) AGRICULTURAL LIMESTONE AT 50 LBS./1000 S.F.
  - B) FERTILIZER (5-10-5) AT 30 LBS./1000 S.F.
- SEEDING MIX: APPLY GRASS SEED COMPOSED OF THE FOLLOWING VARIETIES WHICH SHALL BE MIXED IN THE PROPORTIONS AND SHALL TEST THE MINIMUM PERCENTAGES OF PURITY AND GERMINATION SPECIFIED.
 

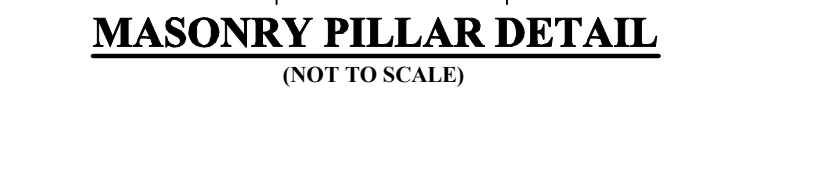
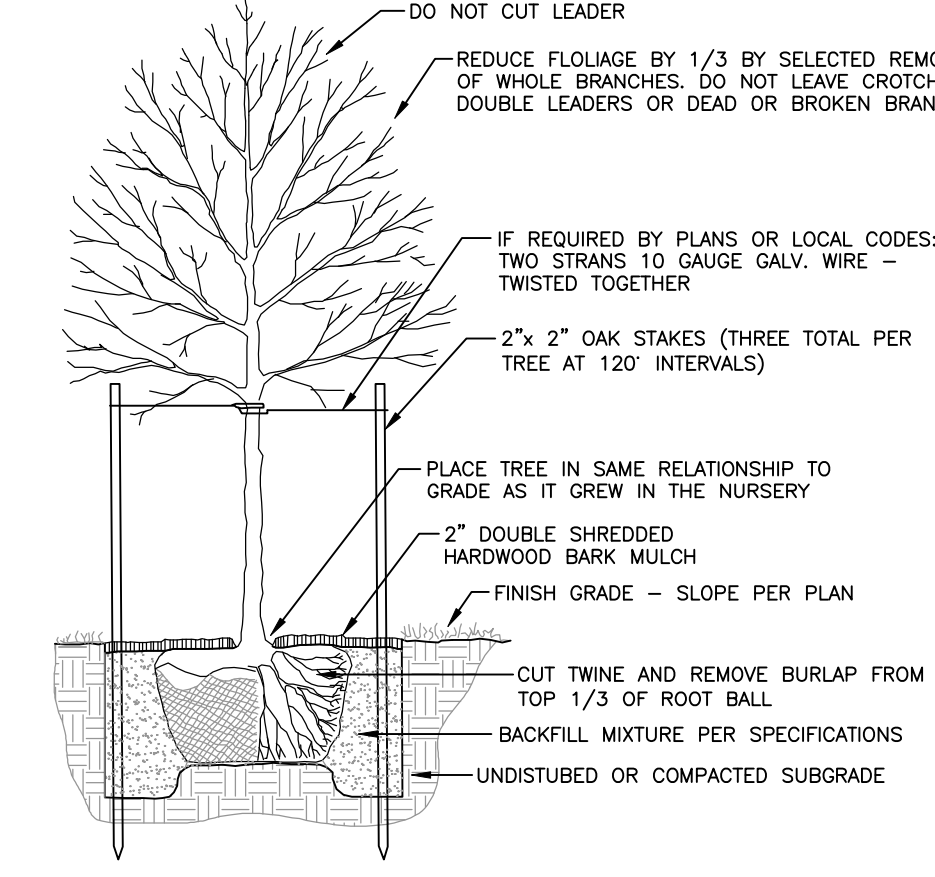
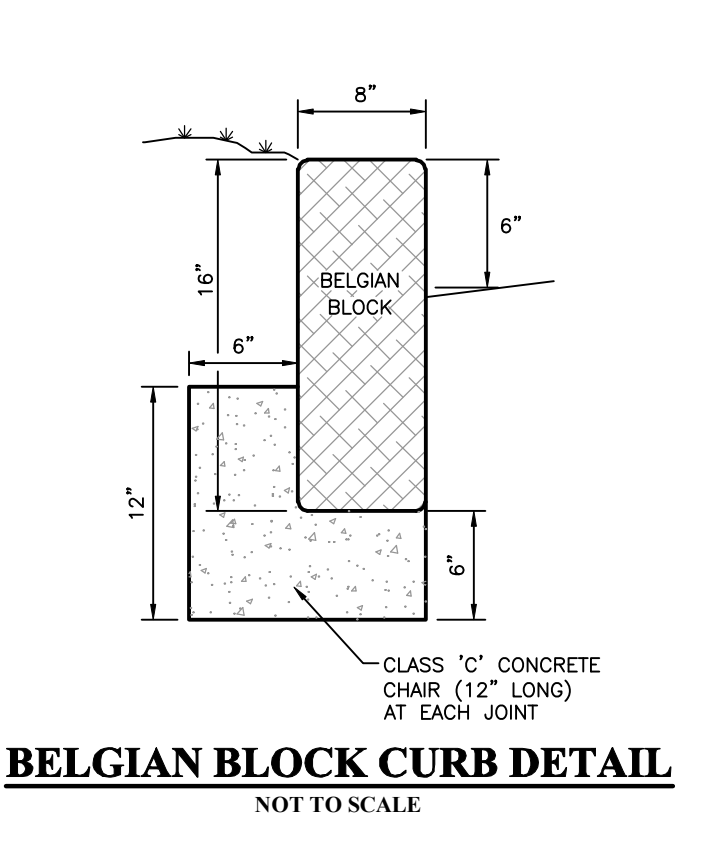
MIXTURE A: (SEED RATE @ 4-1/2 LBS./1,000 S.F. OR 200 LB./ACRE)	MIN. %	MAX. %	GERMINATION	PURE SEED WEED SEED
20% HYBRID KY BLUEGRASS	80	95	0.02	
20% HYBRID TURF TYPE TALL FESCUE	80	95	0.02	
40% HYBRID PERENNIAL RYE	80	95	0.02	
- FIRM SEED BED WITH ROLLER AND MULCH WITH SALT HAY AND ASPHALTIC TACK COAT OR HYDRO MULCH AT THE RATE OF 1,500 LBS. PER ACRE.
- ALL LAWN WORK INCLUDING THE REPAIR OF WASHOUTS, GULLIES, ETC., SHALL BE GUARANTEED FOR ONE CALENDAR YEAR FROM THE DATE OF COMPLETION OF INSTALLATION.
- SOD (IF REQUIRED) SHALL BE SAME AS SEED MIX AND INSTALLED IN ACCORDANCE WITH AMERICAN ASSOCIATION OF SOD PRODUCERS' STANDARDS.

**NOTES**

- ALL STREET TREES, SCREEN BUFFERS, REPLACEMENT TREES, INDIVIDUAL LOT LANDSCAPING AND OTHER REQUIRED PLANT MATERIAL SHALL BE PLANTED PRIOR TO THE ISSUANCE OF A USE AND OCCUPANCY PERMIT.
- ALL PLANT MATERIAL TO BE INSTALLED IN ACCORDANCE WITH THE PLANTING PRACTICES STATED IN CHAPTER 3 OF TREE MAINTENANCE BY T.P. PIRONE.
- THE DEVELOPER IS TO CONTACT THE TOWNSHIP IN WRITING TO REQUEST A FINAL INSPECTION OF ACCEPTANCE AT THE END OF THE GUARANTY PERIOD.
- PLANT MATERIAL IN CLOSE PROXIMITY TO PROPOSED AND EXISTING UTILITIES TO BE ADJUSTED AT TIME OF PLANTING TO AVOID ANY CONFLICT WITH THE UTILITIES.



- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS ( ) PARENTHESIS.
- ALIKON DETECTIBLE WARNING DOMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN THE DOMES.
- PROVIDE DETECTIBLE WARNING SURFACE THAT CONTRAST 70% IN LIGHT REFLECTANCE WITH ADJOINING SURFACE. EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT OR SAFETY YELLOW.

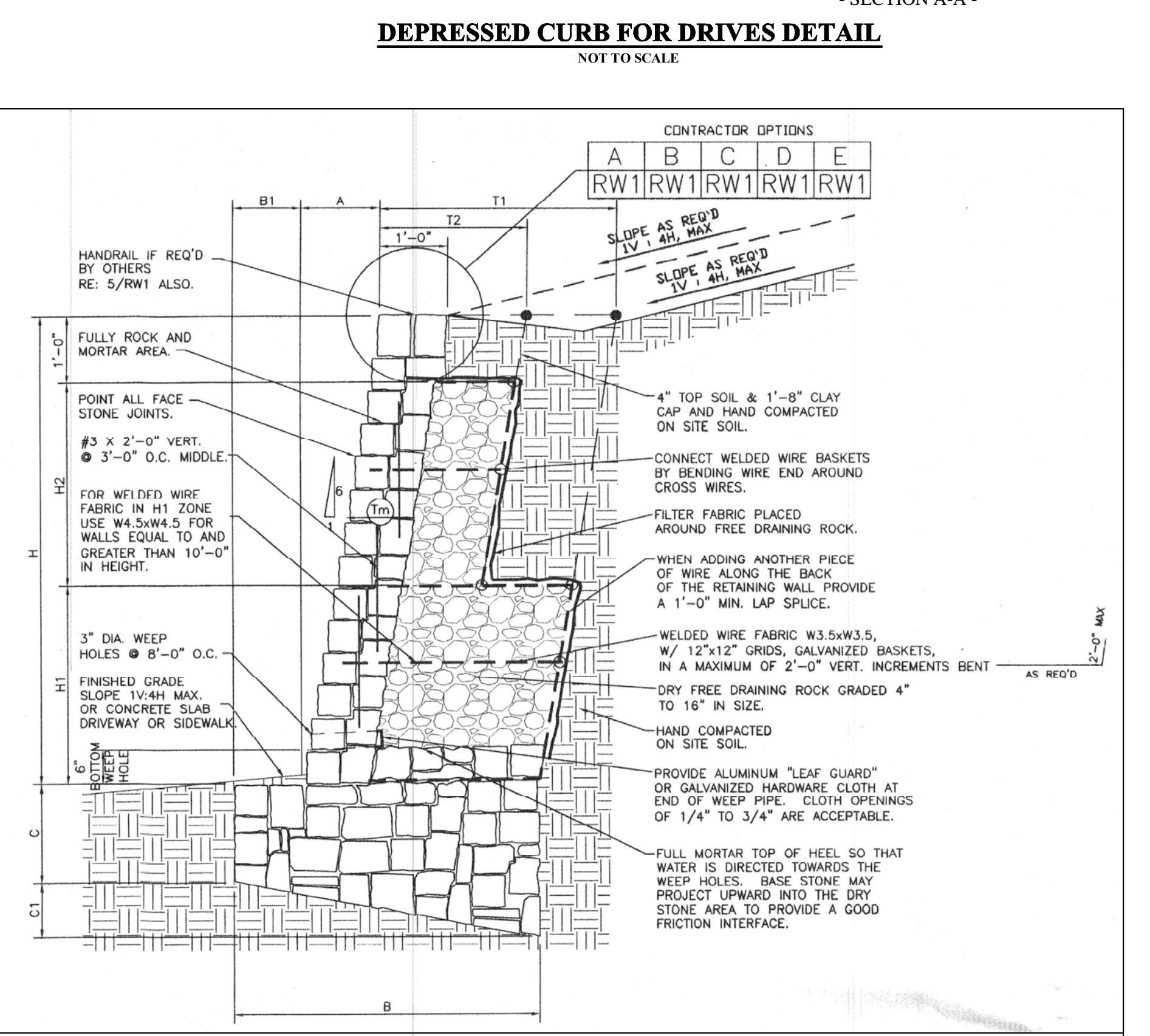
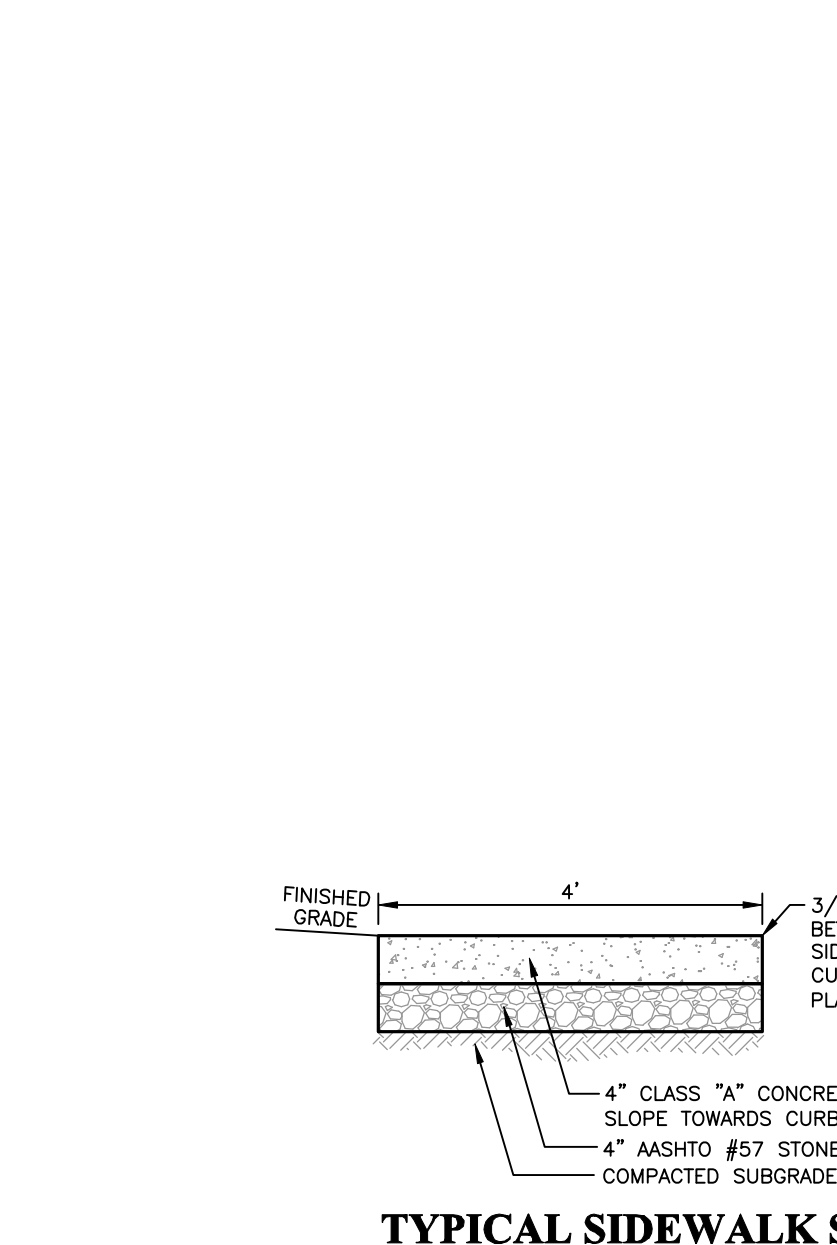
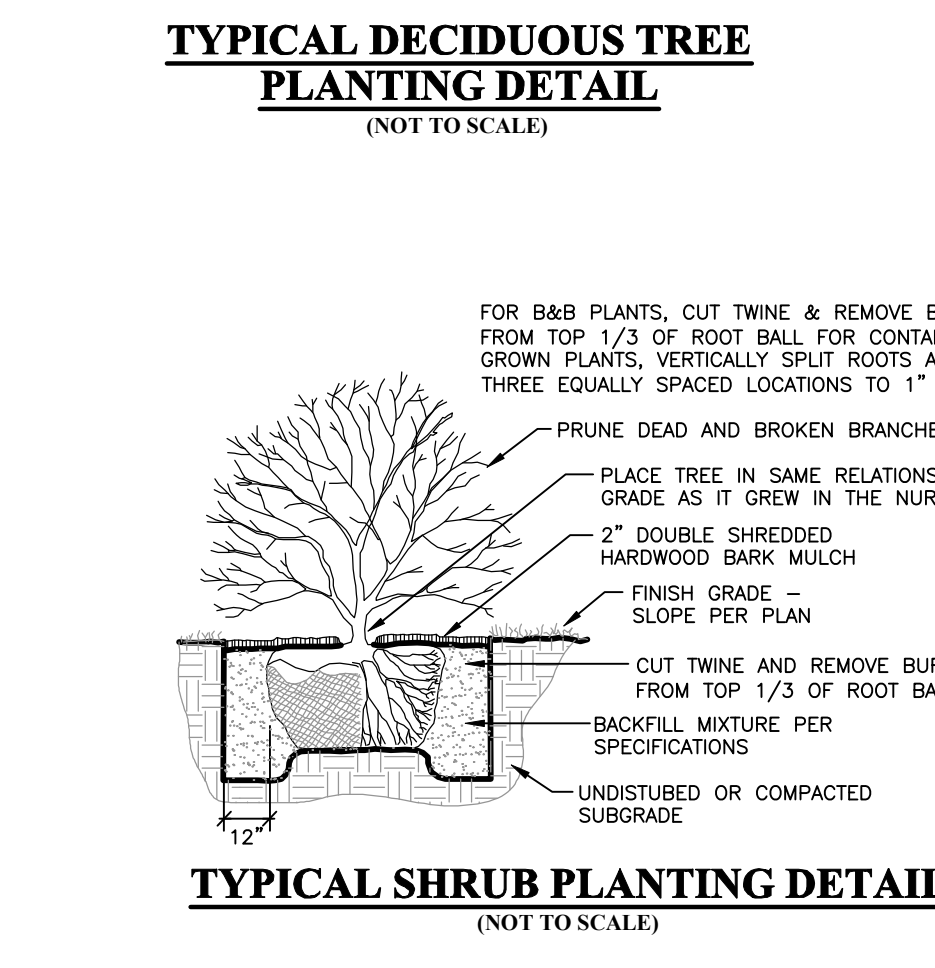
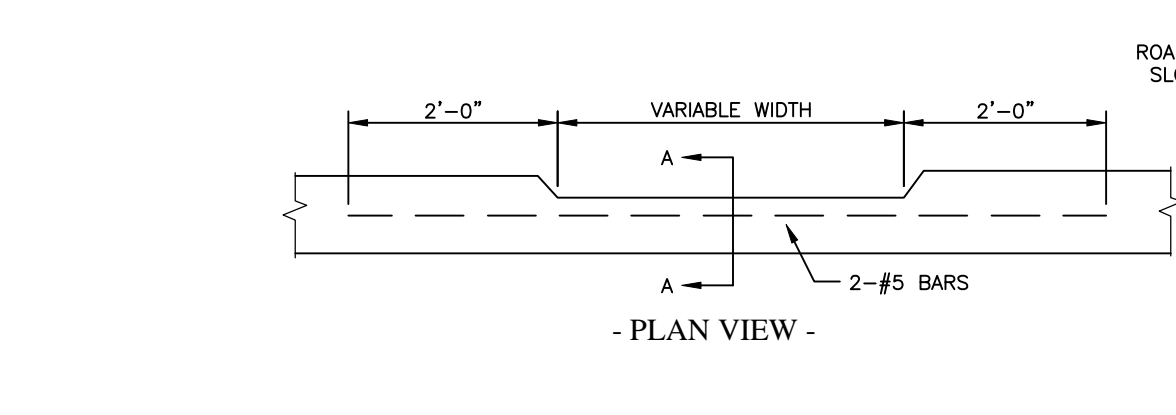


**DIMENSIONS**

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
12x12	12	3	6	4 7/8	3 7/8	1	2 23/64	1 7/8
24x24	24	6	12	10 1/2	8 1/2	1	4 25/32	3 3/4
36x36	36	9	18	15 3/4	12 3/4	1	7 11/64	5 5/8

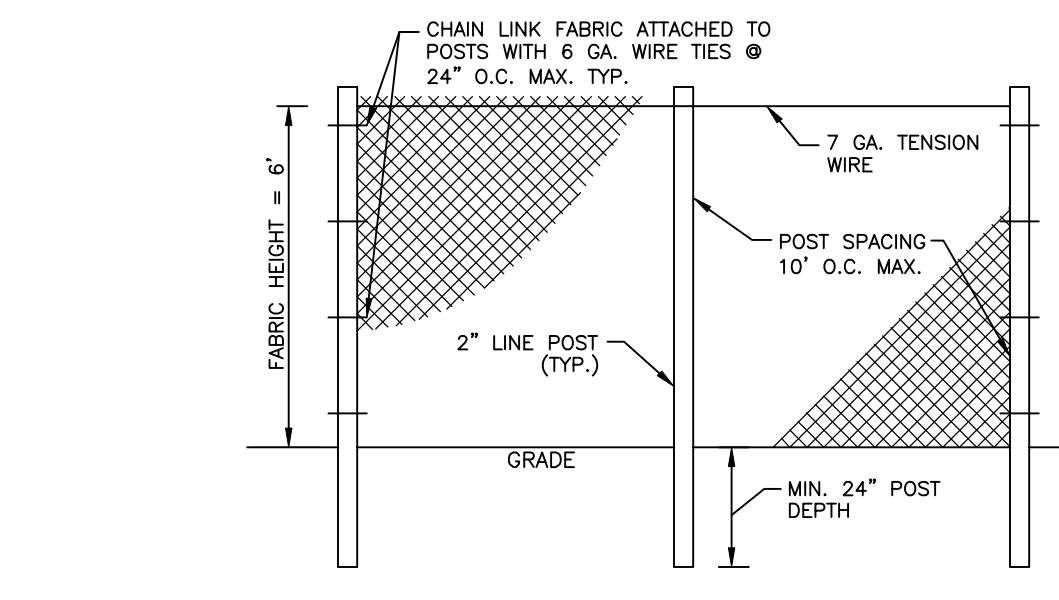
SIGN SIZE	SERIES LINES			MAR. GIN	BOR. DER.	BLANK STD.	
	A	B	I				
12x12	1	13/32	2 1/4	E(m)	3/8	3/8	B3-12
24x24	2	13/32	4 1/2	E(m)	3/8	3/8	B3-24
36x36	3	30/64	6 3/4	E(m)	5/8	7/8	B3-36



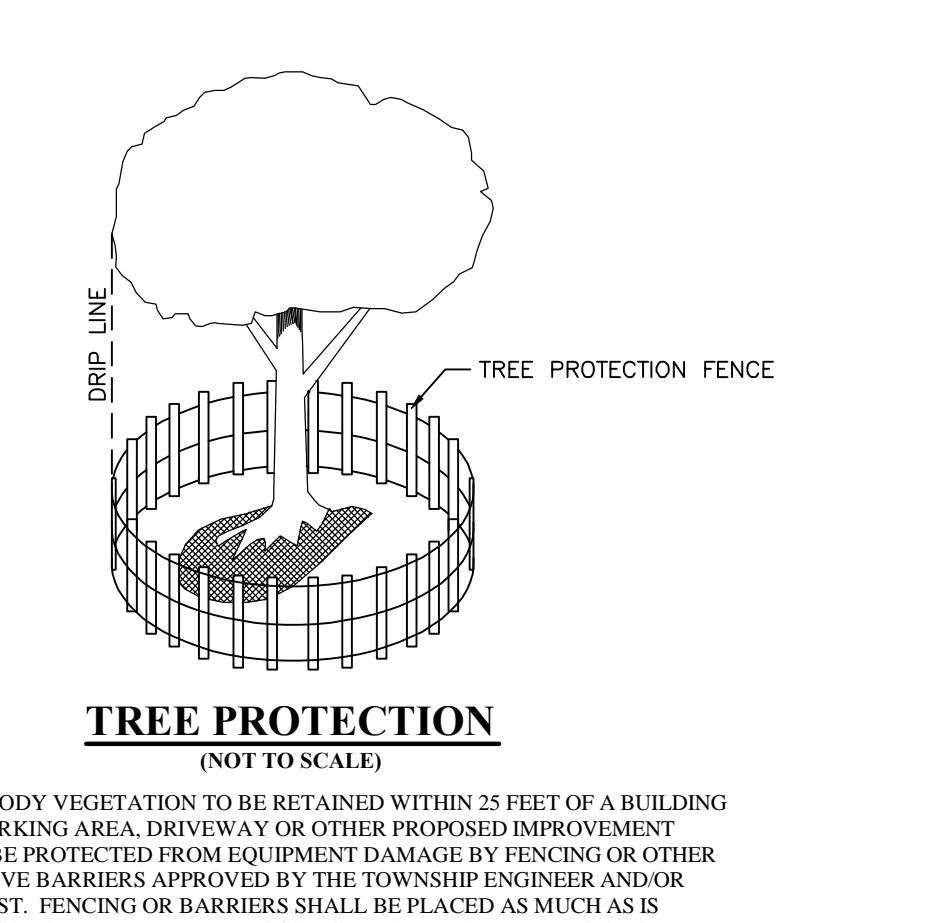
**MASONRY WALL SCHEDULE**  
2500 psf - BEARING CAPACITY (BASED NATURAL UNDISTURBED SOILS - SEE GENERAL NOTES SHEET RW1)

WALL HEIGHT	BASE WIDTH	TOP WIDTH	BASE DEPTH (EQ)	BASE DEPTH (HEEL)	BATTER	THICKNESS	THICKNESS	WALL HEIGHT	THICKNESS	WALL HEIGHT	THICKNESS	VOLUME	BEARING
5'-0"	3'-2"	1'-3"	3'-0"	0'-7"	0'-10"	0'-8"	2'-0"	1'-11"	2'-0"	1'-2"	21.3		
6'-0"	3'-7"	1'-4"	3'-0"	0'-8"	1'-0"	0'-9"	2'-6"	2'-3"	2'-6"	1'-3"	21.4		
7'-0"	4'-0"	1'-6"	3'-0"	0'-9"	1'-2"	1'-0"	3'-0"	2'-8"	3'-0"	1'-7"	26.7	2500 psf	
8'-0"	4'-6"	1'-7"	3'-0"	0'-10"	1'-4"	1'-0"	3'-6"	2'-10"	3'-6"	1'-10"	32.3		
9'-0"	4'-9"	1'-7"	3'-0"	0'-11"	1'-6"	1'-3"	4'-0"	3'-2"	4'-0"	2'-2"	37.9		

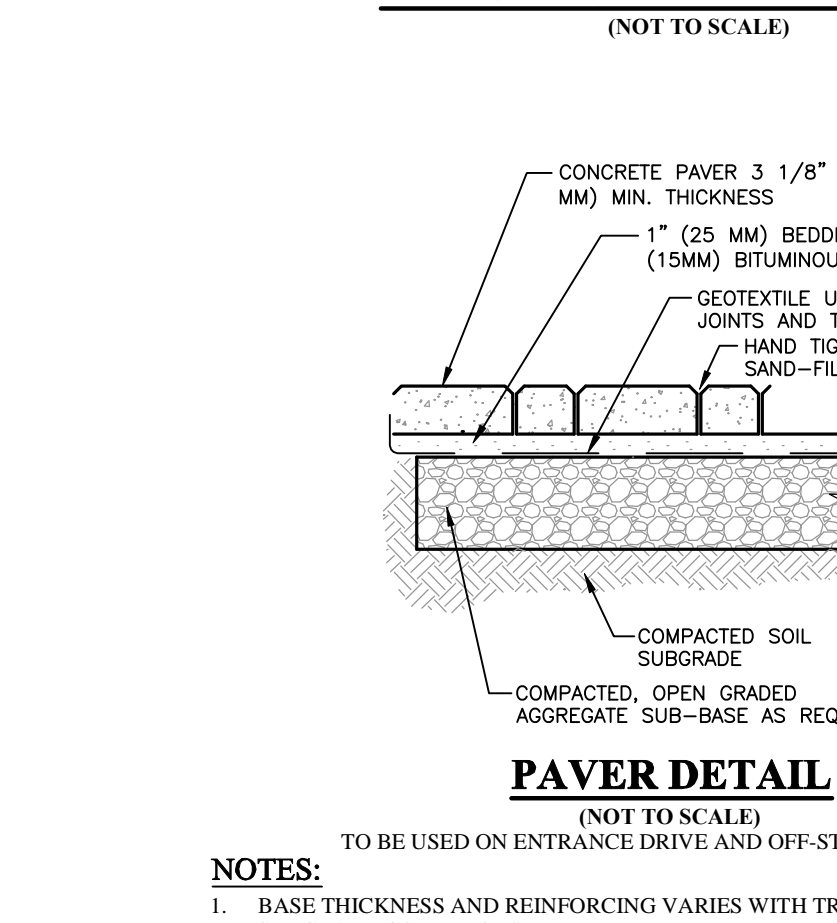
USE THIS SCHEDULE FOR 2/RW2



- PROTECTION BARRIERS SHALL BE 6 FEET HIGH, CONSTRUCTED OF 2" CHAIN LINK MESH FABRIC.
- FABRIC SHALL BE SECURED TO 2" POSTS WITH 6 GA. ALUMINUM WIRE TIES AT 24" O.C.
- POSTS SHALL BE A MINIMUM OF 2 FEET IN THE GROUND AND SPACED 10 FEET ON CENTER MAX.
- PLASTIC ZIP-TIES MAY NOT BE USED TO SECURE FABRIC TO POSTS.



ALL WOODY VEGETATION TO BE RETAINED WITHIN 25 FEET OF A BUILDING SITE, PARKING AREA, DRIVEWAY OR OTHER PROPOSED IMPROVEMENT SHALL BE PROTECTED FROM EQUIPMENT DAMAGE BY FENCING OR OTHER EFFECTIVE BARRIERS APPROVED BY THE TOWNSHIP ENGINEER AND/OR ARBORIST. FENCING OR BARRIERS SHALL BE PLACED AS MUCH AS IS PRACTICAL AT THE DRIPLINE. LOCATION MAY BE ALTERED TO AVOID INTERFERENCE WITH PROPOSED GRADING AND IMPROVEMENTS AS SHOWN ON THE PLANS. BARRIER LOCATION SHALL BE SUBJECT TO APPROVAL BY THE TOWNSHIP ENGINEER AND/OR ARBORIST.



- NOTES:**
- BASE THICKNESS AND REINFORCING VARIES WITH TRAFFIC, CLIMATE, AND SUBGRADE CONDITIONS.

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UP1: 36-6-327.8 & 36-6-327.9

Pennsylvania One Call System  
PA, act 172 of 1986 requires three working days notice  
Serial Numbers:  
**20142730827**

PENNSYLVANIA ACT 187 REQUIREMENTS:  
Inland Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does Inland Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

**INLAND DESIGN**  
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www.InlandDesign.net Info@InlandDesign.net

**CHARLES A. DOBSON**  
REGISTERED PROFESSIONAL ENGINEER  
NO. 000001910  
PENNSYLVANIA

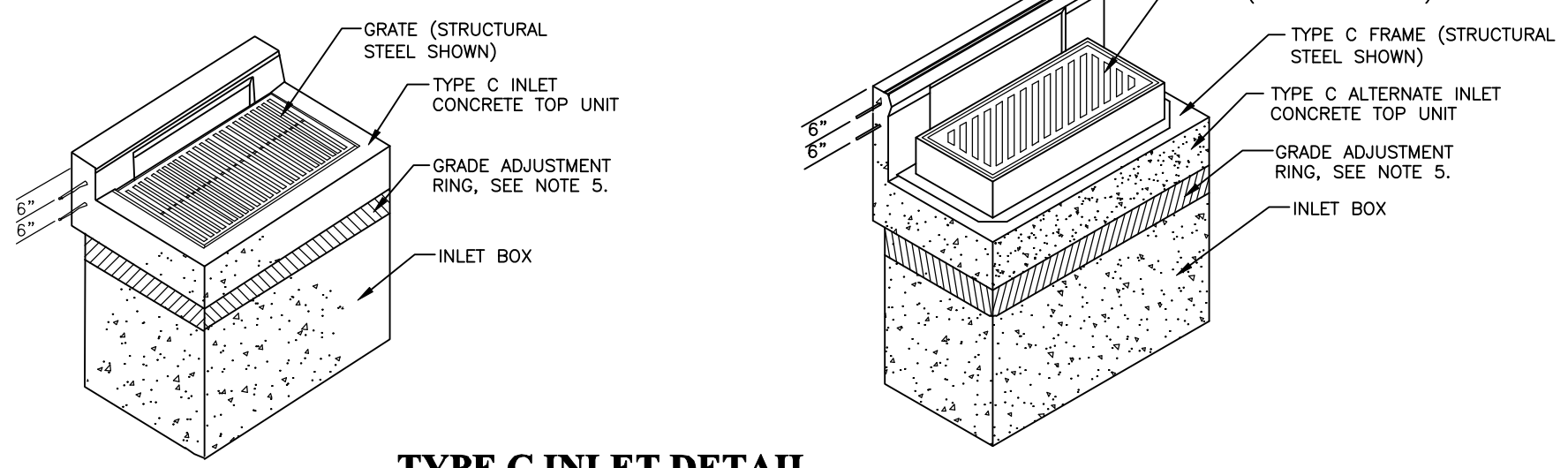
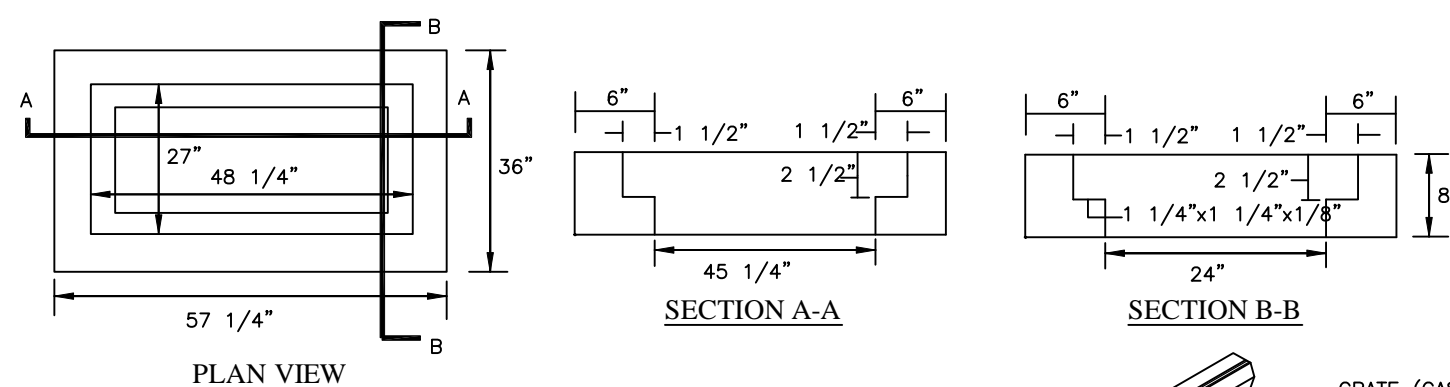
No.	Date:	Description:
1	01-30-2015	PER TOWNSHIP ENGINEER REVIEW LETTER DATED 10-24-2014.
2	04-01-2015	PER TOWNSHIP ENGINEER REVIEW LETTER DATED 02-23-2015.
3	05-19-2015	PER TOWNSHIP ENGINEER REVIEW LETTER DATED 05-07-2015.

**PRELIMINARY / FINAL**  
**LAND DEVELOPMENT & LOT LINE CHANGE PLAN**

Date: 10/3/2014  
Scale:  
AS NOTED  
Drawn by: TAH  
Checked by: CAD  
Project No. **10432**

**CONSTRUCTION DETAILS FOR**  
**BLOOMINGDALE AVE., LLC**  
**120 & 124 BLOOMINGDALE AVE.**  
**WAYNE, PA 19087**  
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

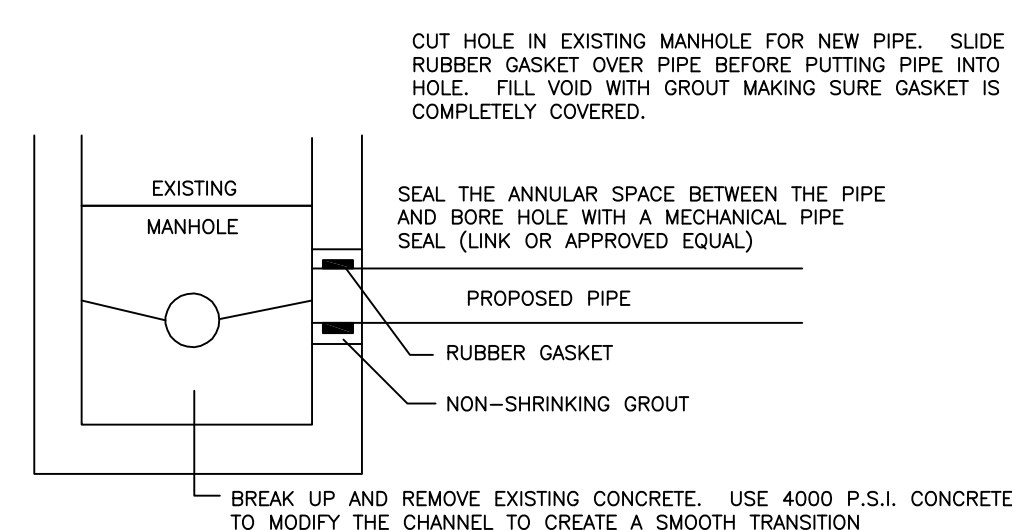




**TYPE C INLET DETAIL**  
(NOT TO SCALE)

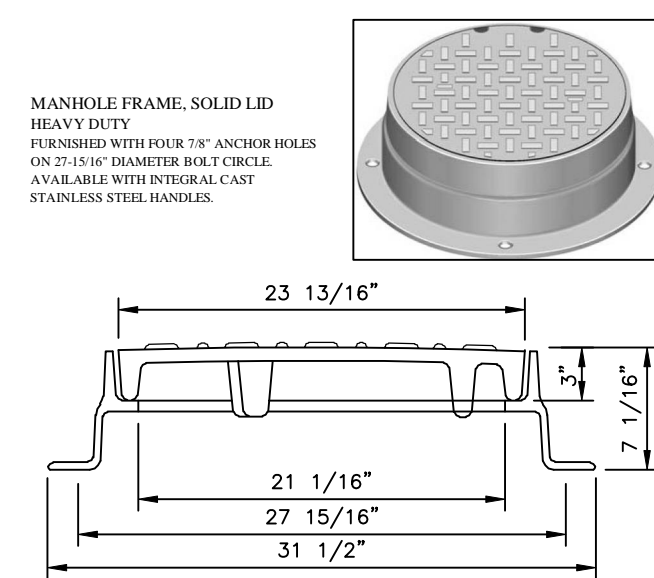
**NOTES**

- CONSTRUCTION REQUIREMENTS:
  - CONSTRUCT IN ACCORDANCE WITH PENNDOT PUBLICATION 408 SPECIFICATIONS, SECTIONS 605, 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 PSI.
  - CLEAR COVER FOR STEEL: WALLS: CAST-IN-PLACE 2" PRECAST 1 1/2" FOOTINGS: CAST-IN-PLACE 2 1/2" (TOP BARS) 3" (BOTTOM BARS) 2" (SIDE COVER) PRECAST 2" (TOP BARS) 1 1/2" (BOTTOM BARS) 1 1/2" (SIDE COVER) SLABS: CAST-IN-PLACE 2" (TOP AND BOTTOM BARS)
- THIS SHEET DEPICTS THE VARIOUS COMPONENTS REQUIRED FOR COMPLETE INLET ASSEMBLIES. FOR INDIVIDUAL COMPONENTS AND OTHER SPECIAL DETAILS, SEE THE FOLLOWING:
  - \* "TOPFRAMES" DRAWING FOR CONCRETE TOP UNITS
  - \* "GRATES" DRAWING FOR GRATES
  - \* "TOPFRAMES" DRAWING FOR FRAMES
  - \* "INPLABOX" DRAWING FOR STANDARD INLET BOXES (CAST-IN-PLACE)
  - \* "PRESTBX" DRAWING FOR STANDARD INLET BOXES AND GRADE ADJUSTMENT RINGS (PRECAST)
  - \* "NSTANDBX" DRAWING FOR MODIFIED INLET BOXES (CAST-IN-PLACE) AND PRECAST
  - \* "NSTANDBX" DRAWING FOR TYPE D-INLET
- EACH TYPE OF INLET SHOWN IS SUITED FOR A PARTICULAR SITUATION AS FOLLOWS:
  - \* TYPE C INLET IS DESIGNATED FOR INSTALLATION WITH NON-MOUNTABLE CURBS.
  - \* TYPE M INLET IS DESIGNATED FOR INSTALLATION IN MEDIAN AREAS AND MOUNTABLE CURBS.
  - \* TYPE S INLET IS DESIGNATED FOR INSTALLATION IN SHOULDER SWALE AREAS.
- THE SECTION COMPONENTS TO ACHIEVE A SPECIFIED INLET ASSEMBLY IS THE CONTRACTOR'S RESPONSIBILITY.
- USE PRECAST CONCRETE OR STEEL GRADE ADJUSTMENT RINGS WHEN REQUIRED.
- FOR FOOTING REINFORCEMENT, TOP AND BOTTOM, USE #4 BARS AT 12" CENTERS EACH WAY OR 0.20 IN.2' FT. W.W.F. (6" MAX. SPACING).



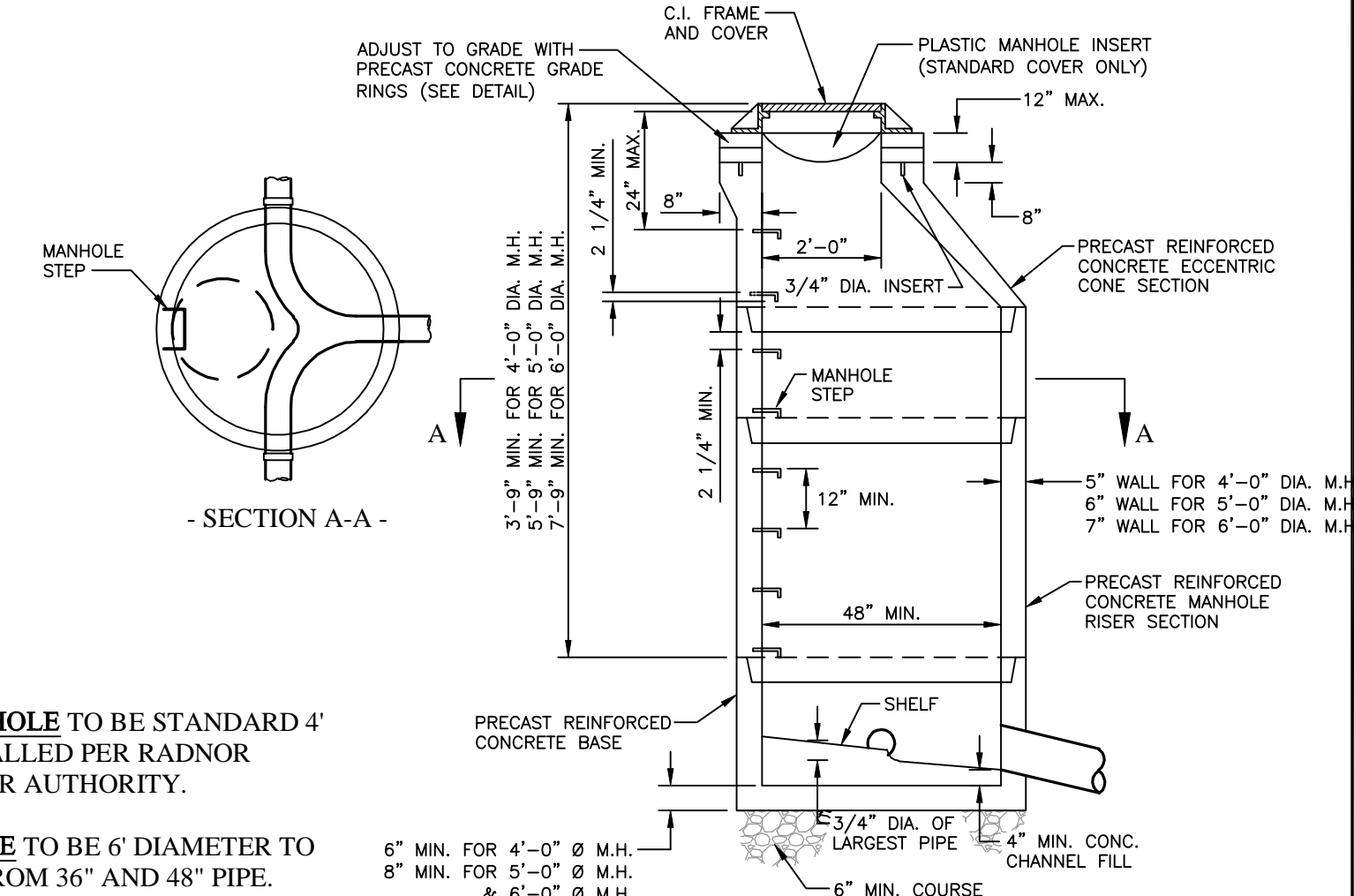
**MANHOLE CONNECTION DETAIL**

THE CONNECTION TO THE EXISTING MANHOLE SHALL BE BY CORE BORING THROUGH THE WALL AND THE SHOULDER OF THE MANHOLE BASE TO THE EXISTING CHANNEL.



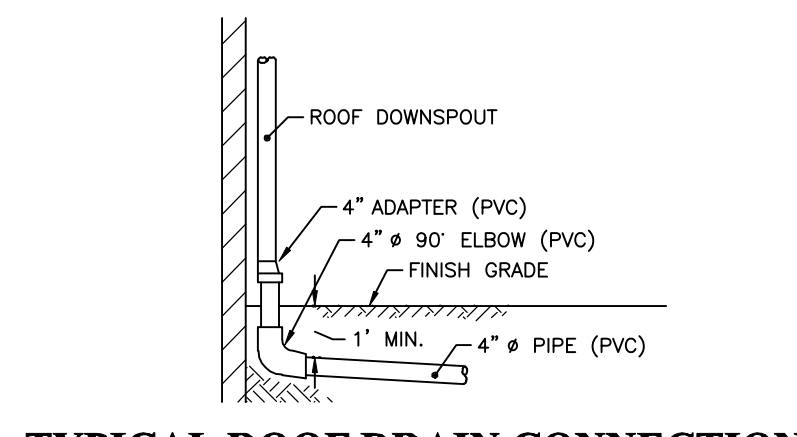
**NEENAH FOUNDRY R-1788-A1 SANITARY MANHOLE FRAME AND COVER DETAIL**

- NOT TO SCALE
- SANITARY SEWERS TO BE DEDICATED TO RADNOR TOWNSHIP SHALL BE INDICATED ON MANHOLE LID AS "R.S." AS APPROVED BY RADNOR TOWNSHIP.
  - SANITARY SEWERS TO BE PRIVATE SHALL BE INDICATED AS "PRIVATE SEWER" ON MANHOLE LID.

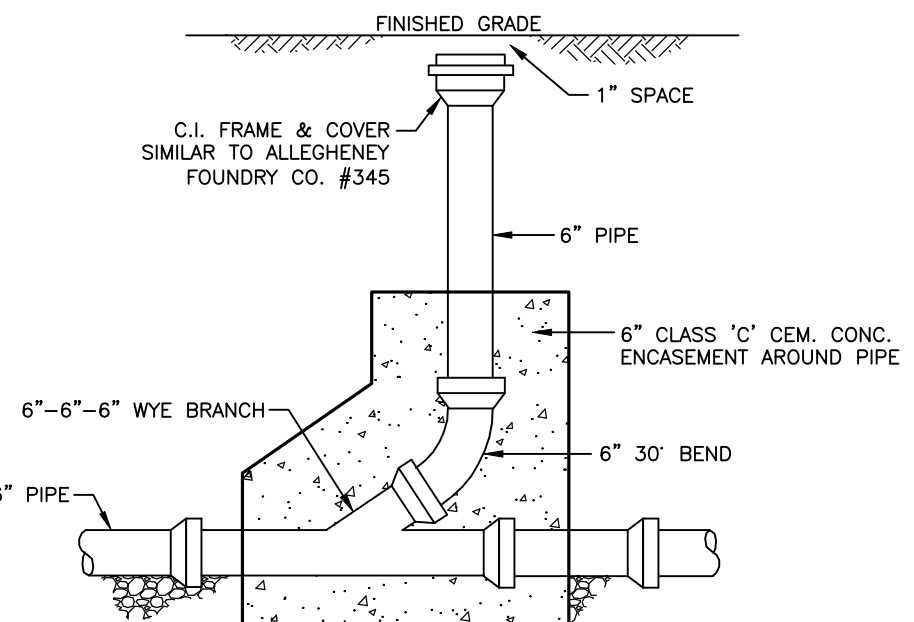


**PRECAST CONCRETE MANHOLE**  
(NOT TO SCALE)

- THE DEPTH OF THE INVERT CHANNEL SHALL BE EQUAL TO 3/4 OF THE DIAMETER OF THE SEWER.
- THE BENCH SHALL SLOPE TOWARD THE INVERT CHANNEL AT A RATE OF 1" PER FOOT.
- FOR MANHOLES HAVING 5' DIAMETER AND 6' DIAMETER BASE, REDUCTION IN DIAMETER TO 4" SHALL START AT THE FIRST JOINT ABOVE THE UPPERMOST PIPE CONNECTION TO WALL, WHERE DEPTH IS SUFFICIENT.
- ALL MANHOLE FRAMES SHALL BE BOLTED TO THE CONE SECTION OR CONCRETE SLAB WITH 4-3/4" DIAMETER BOLTS WITH WASHERS AND NUTS. BOLTS TO BE AT 90 DEGREES ON THE BOLT CIRCLE.
- ALL CONCRETE SHALL BE 4000 P.S.I. MINIMUM.
- ENTIRE OUTSIDE SURFACE OF MANHOLE SHALL RECEIVE TWO COATS (24 MIL DFT TOTAL) OF COAL TAR EPOXY BITUMASTIC 300M BY KOP-COAT CARBOLINE CO. OR APPROVED EQUAL.
- INSTALL DOUBLE RING PLASTIC PERFORMED JOINT SEALANT BETWEEN ALL SECTIONS AND UNDER FRAME AND BETWEEN GRADE RINGS.
- MANHOLE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ASTM C478.
- STEPS TO BE ALUMINUM ALLOY WITH DEEP TREAD. STEEL REINFORCED POLYPROPYLENE IS OPTIONAL.
- A RESILIENT PIPE CONNECTION GASKET SHALL BE INTEGRALLY CAST IN MANHOLE WALL AT ALL PIPE CONNECTIONS.
- 4" DIAMETER - 8" TO 15" PIPES  
5" DIAMETER - 16" TO 27" PIPES  
6" DIAMETER - 30" TO 48" PIPES
- ENTIRE INTERIOR SURFACE OF MANHOLE SHALL RECEIVE TWO COATS (6 MIL DFT EACH) OF WHITE EPOXY COATING, HI-GARD EPOXY BY KOP-COAT CARBOLINE CO. OR APPROVED EQUAL.
- EACH MANHOLE WHICH DOES NOT HAVE A WATERTIGHT COVER SHALL BE PROVIDED WITH A DEEP BOWL MANHOLE INSERT WITH VENTILATION HOLES, BY PARSON ENVIRONMENTAL PRODUCTS, INC.
- APPLY WRAP AROUND HEAT SHRINKABLE MEMBRANE ON GRADE RING ASSEMBLY TO BE BURIED.

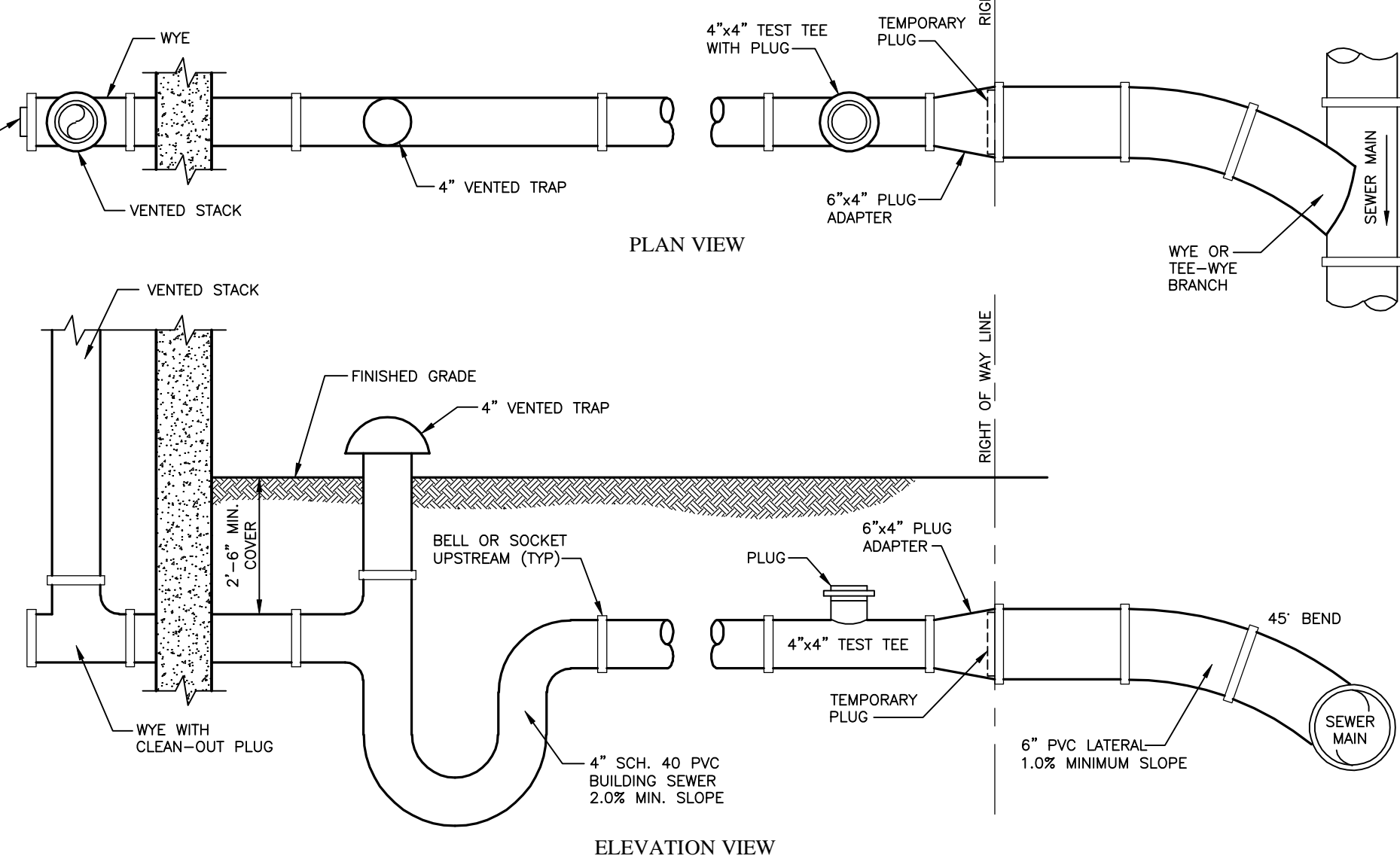


**TYPICAL ROOF DRAIN CONNECTION**  
(NOT TO SCALE)



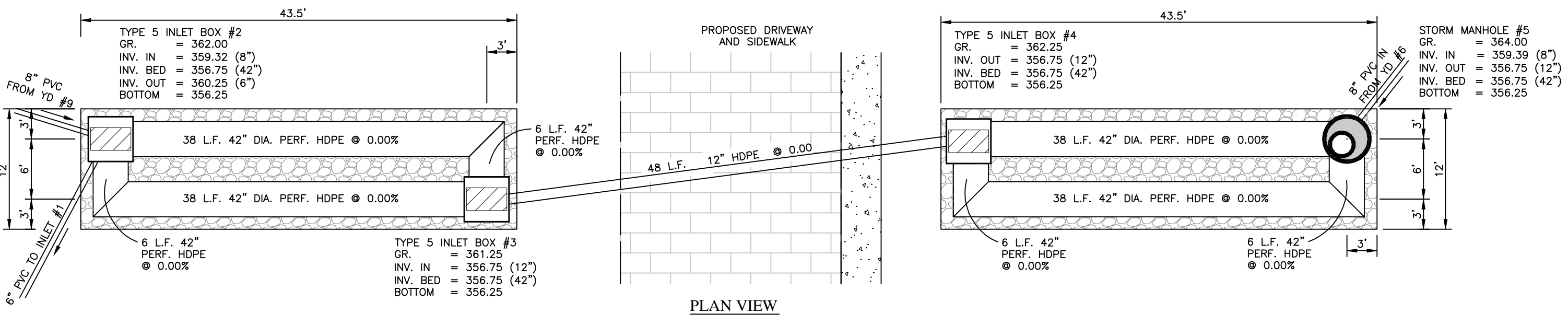
**SANITARY SEWER CLEANOUT DETAIL**  
(NOT TO SCALE)

CLEANOUTS IN SIDEWALKS OR STREETS SHALL BE BROUGHT TO FINISHED GRADE WITH 12" x 6" CONCRETE PAD AT SURFACE.

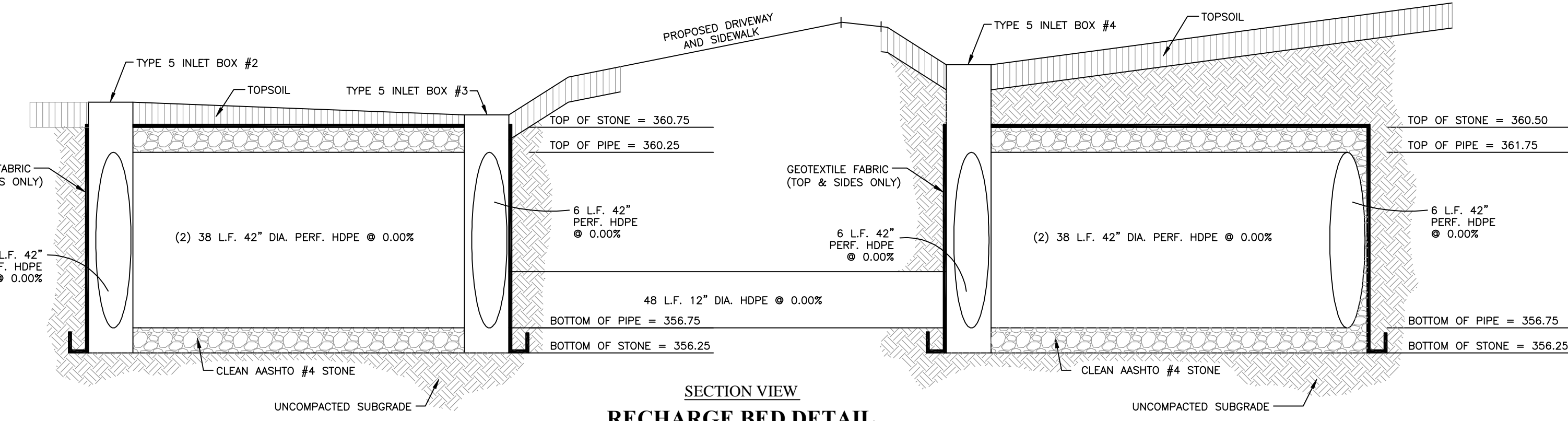


**SANITARY SEWER LATERAL DETAIL**  
(NOT TO SCALE)

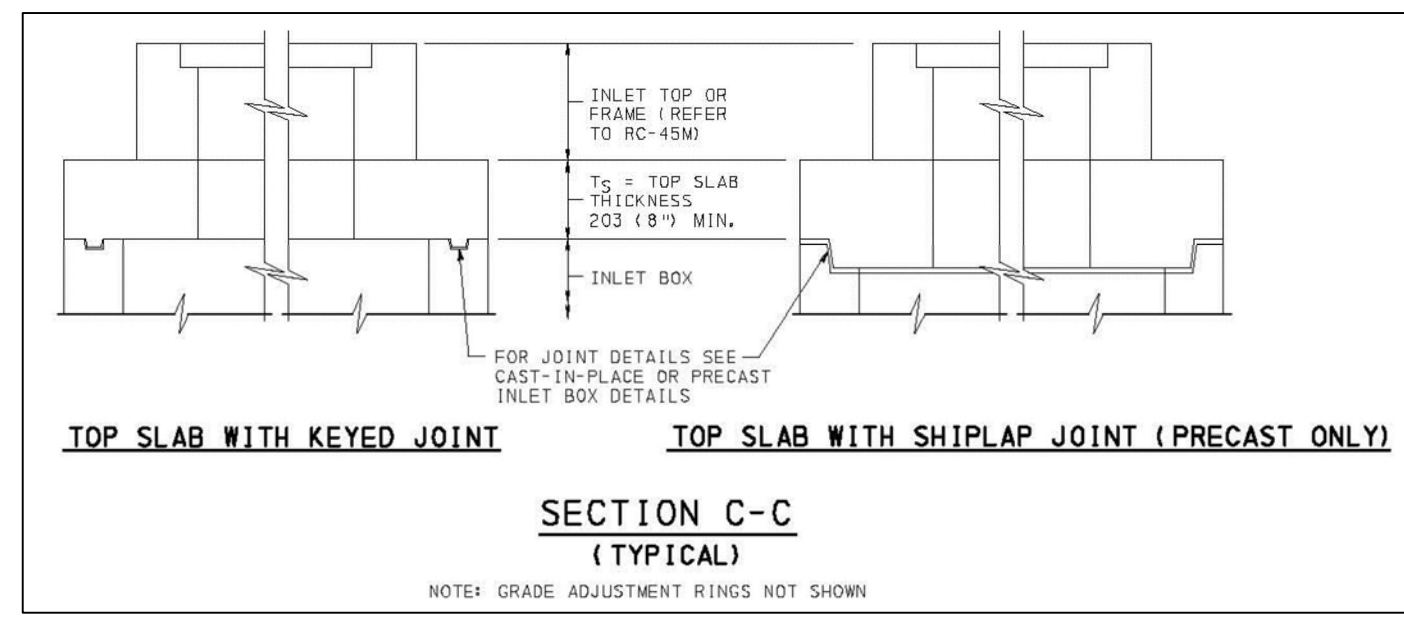
- BUILDING SEWER FROM RIGHT OF WAY LINE TO BUILDING PLUMBING SYSTEM SHALL CONFORM TO THE BOCA NATIONAL PLUMBING CODE.
- TEMPORARY PIPE PLUG TO REMAIN IN LATERAL UNTIL CONSTRUCTION OF BUILDING SEWER OCCURS. BUILDING SEWER SHALL BE PLUGGED AT TEST TEE UNTIL CONSTRUCTION IS COMPLETED AND TESTED.
- PIPE TO BE EMBEDDED IN AGGREGATE (SEE PIPE EMBEDMENT DETAIL).



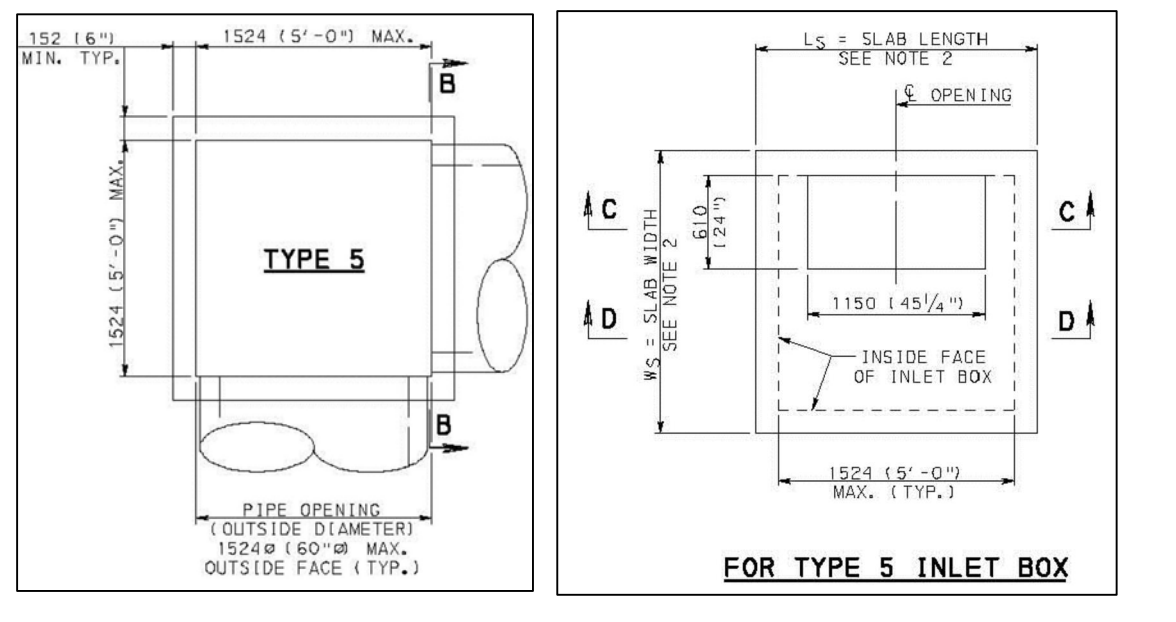
**RECHARGE BED DETAIL**  
SCALE: 1" = 10' (H)  
1" = 2' (V)



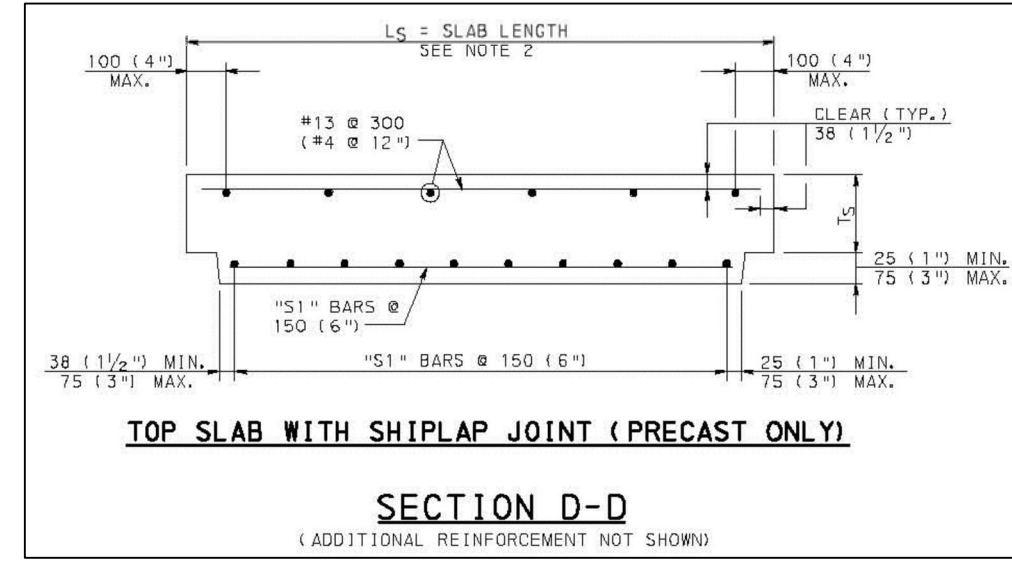
**SECTION VIEW**



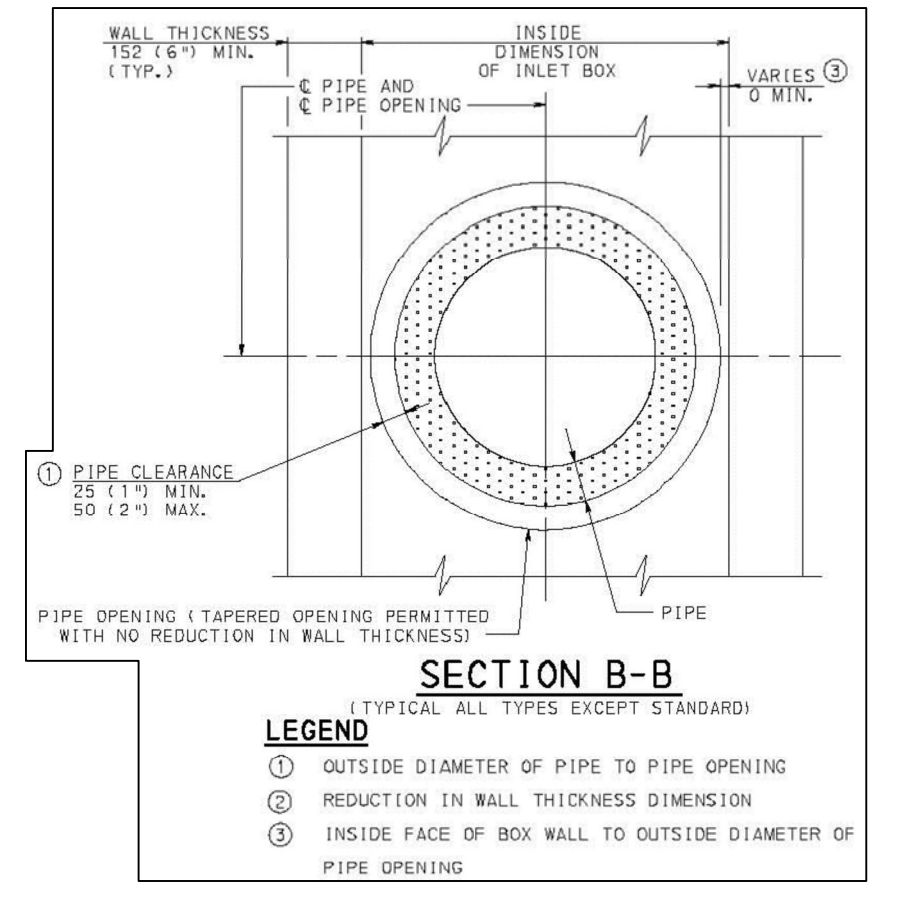
**SECTION C-C**  
(TYPICAL)



**FOR TYPE 5 INLET BOX**



**TOP SLAB WITH SHIPLAP JOINT (PRECAST ONLY)**



**SECTION B-B**  
(TYPICAL ALL TYPES EXCEPT STANDARD)

- LEGEND**
- OUTSIDE DIAMETER OF PIPE TO PIPE OPENING
  - REDUCTION IN WALL THICKNESS DIMENSION
  - INSIDE FACE OF BOX WALL TO OUTSIDE DIAMETER OF PIPE OPENING

**TYPE 5 INLET BOX DETAIL**  
(NOT TO SCALE)

- NOTES:**
- FOR ADDITIONAL NOTES, SEE SHEETS 1 - 3.
  - OUT TO OUT DIMENSIONS OF TOP SLABS TO MATCH SIZE OF INLET BOX.
  - SET EDGE OF OPENING AT INSIDE FACE OF INLET BOX FOR ACCESS, IF POSSIBLE.
  - FOR SECTION D-D AND REINFORCEMENT REQUIREMENTS, SEE SHEET B.
  - FOR ADDITIONAL REINFORCEMENT AROUND OPENINGS, SEE SHEETS 8 & 10.

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UPJ: 36-6-327.8 & 36-6-327.9

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Info@InlandDesign.net

No.	Date	Description
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**PRELIMINARY / FINAL**  
**LAND DEVELOPMENT & LOT LINE CHANGE PLAN**

Date: 10/3/2014  
Scale: AS NOTED  
Drawn by: TAH  
Checked by: CAD  
Project No: 10432

**CONSTRUCTION DETAILS**  
**FOR**  
**BLOOMINGDALE AVE., LLC**  
**120 & 124 BLOOMINGDALE AVE.**  
**WAYNE, PA 19087**  
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

**SHEET**  
**14**  
**OF 14**



ALL LOCATIONS OF EXISTING UTILITIES, SHOWN ON THIS PLAN, HAVE BEEN DEVELOPED FROM FIELD LOCATIONS OF VISIBLE ABOVE GROUND UTILITY STRUCTURES AND INFORMATION FURNISHED BY THE UTILITY COMPANIES.

ALL LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. COMPLETENESS OR ACCURACY OF THE LOCATIONS AND DEPTH OF ALL STRUCTURES CANNOT BE GUARANTEED. CONTRACTORS MUST VERIFY ALL LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE THE START OF ANY WORK.

AS PER ACT 187 HOUSE BILL 2627, BEFORE THE START OF ANY EXCAVATION WORK THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANIES THROUGH THE PENNSYLVANIA "ONE CALL SYSTEM" 1-800-242-1776 THREE DAYS PRIOR TO THE START OF ANY EXCAVATION. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION.

**LINE TYPE / SYMBOL LEGEND:**

---	EXISTING PROPERTY LINE
- - -	PROPOSED PROPERTY LINE
- - -	R.O.W. LINE
X	BUILDING SETBACK
X	EXISTING FENCE
X	EXISTING OVERHEAD ELECTRIC
E	EXISTING ELECTRIC LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY LINE
378	EXISTING 1' CONTOUR
380	EXISTING 5' CONTOUR

[Shaded Box]	PROPOSED HOUSE
[Shaded Box]	PROPOSED DRIVE
[Shaded Box]	PROPOSED PORCH
[Shaded Box]	PROPOSED WALK
[Hatched Box]	TO BE REMOVED

- TREE TO BE REMOVED
- EXISTING TREE
- EXISTING TEST PIT

**TREES TO BE REMOVED**

12" CHERRY (TRIPLE), 12" CHERRY, 10" CHERRY, 12" CHERRY, 10" CHINESE MAPLE, 10" OAK, 8" MAPLE, 10" CEDAR (QUAD), 7" CHINESE MAPLE, 8" CHERRY, 8" PINE, 20" PINE, 18" PINE, 18" ASH, 7" DOGWOOD, 6" CHERRY (TWIN), 7" HEMLOCK, 18" SPRUCE, 26" SPRUCE, 24" HEMLOCK, 12" CHERRY, 10" MAPLE

**TREE REPLACEMENT FORMULA:**

6-18 INCH DBH REMOVED	=	1 REPLACEMENT TREE
19-29 INCH DBH REMOVED	=	3 REPLACEMENT TREES, 2 BEING LARGE CANOPY TREES
30 INCH DBH & GREATER REMOVED	=	6 REPLACEMENT TREES, 4 BEING LARGE CANOPY TREES

**TOTAL TREES BEING REMOVED:**

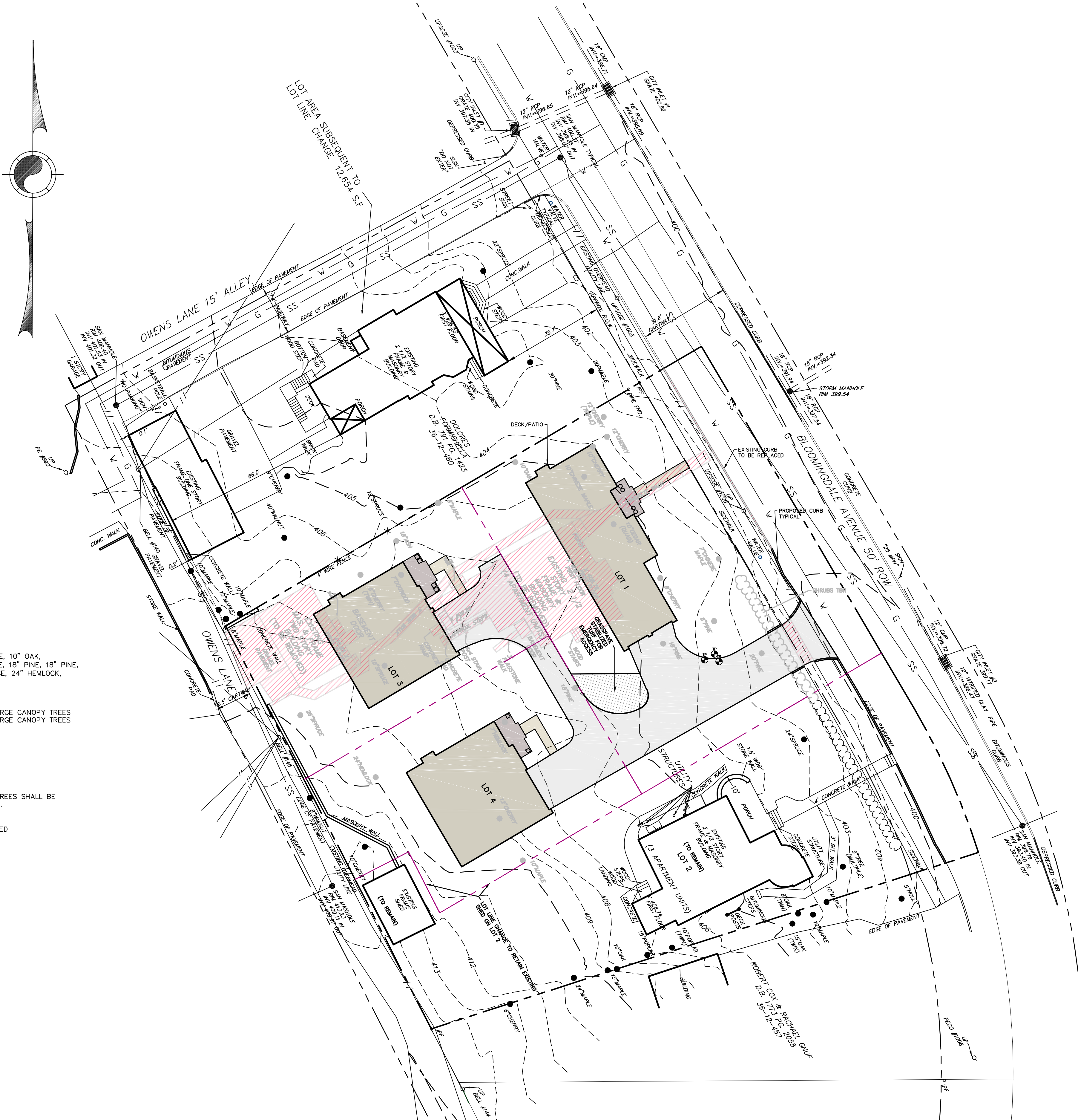
6-18 INCH DBH	=	20
19-29 INCH DBH	=	3
30 INCH DBH & GREATER	=	0
TOTAL	=	0

**REPLACEMENT TREES REQUIRED** = 29, 6 BEING LARGE CANOPY TREES

NOTE: SHOULD ANY ADDITIONAL TREES BE REMOVED, ADDITIONAL REPLACEMENT TREES SHALL BE PROVIDED IN ACCORDANCE WITH THE RADNOR TOWNSHIP ORDINANCE No. 2012-05.

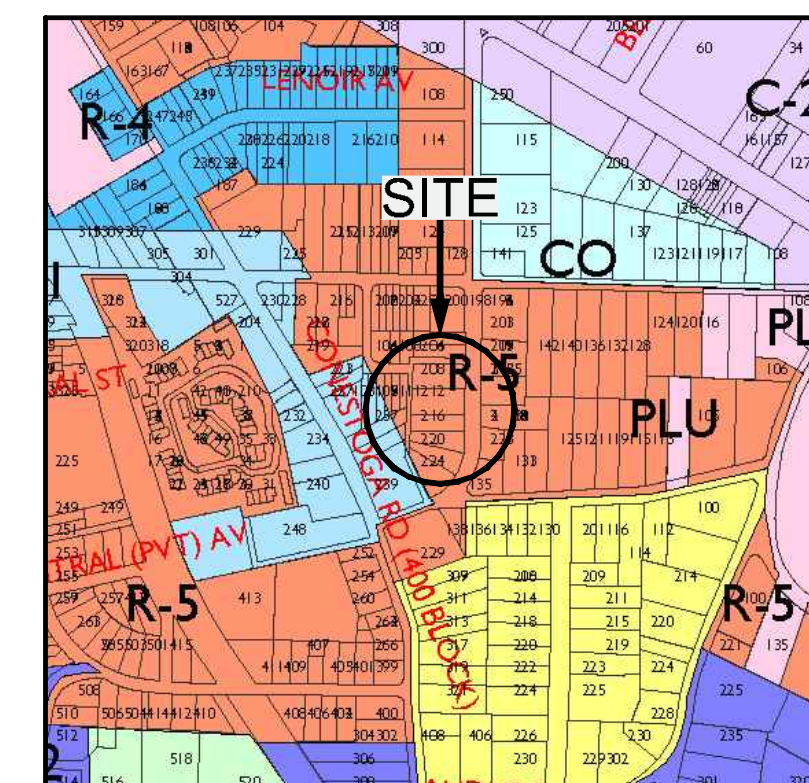
**TREE REPLACEMENT NOTES:**

- 1) REPLACEMENT TREES WILL BE SELECTED FROM THE LIST OF TOWNSHIP APPROVED TREES PRIOR TO THE ISSUANCE OF A GRADING PERMIT.
- 2) TREES TO BE PLANTED OUTSIDE OF REQUIRED SITE LINE.



**GENERAL NOTES:**

1. OWNER/APPLICANT: GLI INVESTMENTS, LP, 200 LANSOWNE AVENUE, WAYNE, PA 19087
2. THE SURVEY FOR THIS PLAN WAS PROVIDED BY A SURVEY AND PLAN FOR NORCINI BUILDING COMPANY DATED FEBRUARY 20, 2008 BY CHESTER VALLEY ENGINEERS, INC., PAOLI, PA, UNDER THE PROFESSIONAL SEAL OF JOSEPH H. BLACKBURN, III, P.L.S. NO. SU-061639
- THE ABOVE PLAN CONTAINS THE FOLLOWING NOTES:
  - A. BEING DELAWARE COUNTY ASSESSMENT MAP 36-12, PARCEL 458, 459, & 460.
  - B. ACTUAL FIELD SURVEY PERFORMED JANUARY 16-20, 2006 BY CHESTER VALLEY ENGINEERS, INC.
  - C. VERTICAL DATUM ASSUMED FROM U.S.G.S. MAP, VALLEY FORGE QUADRANGLE.
  - D. BOUNDARY PLOTTED FROM THE FOLLOWING DEEDS: DEED BOOK 791, PAGE 1423, DEED BOOK 2061, PAGE 469, DEED BOOK 2330, PAGE 932, DEED BOOK 1773, PAGE 2058.
  - E. IRON PINS WILL BE PLACED AT NEW PROPERTY CORNERS UPON FINAL APPROVAL.
  - F. SOIL LINES TAKEN FROM SOIL SURVEY OF CHESTER AND DELAWARE COUNTIES, PA, ISSUED MAY 1963 BY THE SOIL CONSERVATION SERVICE OF THE US DEPARTMENT OF AGRICULTURE.
  - G. BY GRAPHIC PLOTTING ONLY, THE SUBJECT PROPERTY LIES WITHIN AN AREA IDENTIFIED AS "ZONE X, AREAS DETERMINED TO BE OUTSIDE OF THE 500-YEAR FLOODPLAIN" ON FLOOD INSURANCE RATE MAP 42045C0002 D FOR DELAWARE COUNTY, PENNSYLVANIA DATED SEPTEMBER 30, 1993 BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
  3. THE INTENT OF THIS PLAN IS TO DEPICT THE CONSTRUCTION OF PROPOSED LOTS, BUILDINGS, DRIVEWAYS, WALKS, UTILITY SYSTEMS, AND OTHER RELATED SITE IMPROVEMENTS ALONG WITH THE REMOVAL OF EXISTING CONDITIONS.
  4. THE PROPOSED LOTS ARE CURRENTLY NOT SERVED BY ANY PUBLIC UTILITY SYSTEMS.
  5. THE EXISTENCE AND/OR LOCATION OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION.
  6. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. ANY DISCREPANCIES THAT MAY AFFECT THE PUBLIC SAFETY OR PROJECT COST, MUST BE IDENTIFIED TO THE ENGINEER IN WRITING IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITH DESIGN DISCREPANCIES IS DONE SO AT THE CONTRACTOR'S OWN RISK.
  7. THE STORMWATER MANAGEMENT DETENTION AND COLLECTION SYSTEM AND INLETS ARE TO BE OWNED AND MAINTAINED BY THE LOT OWNERS (LOT 1, 3, & 4).
  8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ANY DEBRIS AND FLUSH OUT ALL EXISTING AND PROPOSED STORM DRAINAGE FACILITIES WITHIN THE PROJECT LIMITS AT THE COMPLETION OF CONSTRUCTION.
  9. THE GROUND IMMEDIATELY ADJACENT TO THE PROPOSED FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING AT A SLOPE OF NOT LESS THAN FIVE (5%) PERCENT FOR A MINIMUM DISTANCE OF TEN (10') FEET MEASURED PERPENDICULAR TO THE FACE OF THE WALL. IMPERVIOUS SURFACES WITHIN TEN (10') FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF TWO (2%) PERCENT AWAY FROM THE BUILDING.
  10. ALL WOODY VEGETATION TO BE RETAINED WITHIN TWENTY-FIVE FEET OF A BUILDING SITE OR DISTURBED AREA SHALL BE PROTECTED FROM EQUIPMENT DAMAGE BY FENCING PLACED AT THE DRIPLINES.
  11. GRADE CHANGES AROUND THE DRIPLINES OF TREES TO BE RETAINED SHALL BE MINIMIZED. TREATMENT OF THE TREES PRIOR TO CONSTRUCTION TO PROTECT THE ROOT SYSTEM SHALL BE PERFORMED.
  12. ALL DISTURBED ROOTS MUST BE CUT AS CLEANLY AS POSSIBLE. THE TRENCH MUST BE BACKFILLED AS QUICKLY AS POSSIBLE, AVOIDING COMPACTION. TREE LIMBS MUST BE CUT BACK IN PROPORTION TO THE ROOT AREA LOSS.
  13. ON-SITE TREES TO BE SAVED SHALL BE PREPARED FOR CONSTRUCTION BY APPROPRIATE CROWN AND DEEP ROOTING FERTILIZATION AND PROTECTED BY APPROPRIATE FENCING. ALL TREES ARE TO BE DEEP ROOT FERTILIZED USING 16-32-16 SLOW RELEASE, WATER DISPERSIBLE @ 15 LBS. PER 100 GALLON OR EQUAL.
  14. REFERENCE PLAN: "FINAL TITLE PLAN" PLAN OF SUBDIVISION FOR "BLOOMINGDALE COURT" 212 & 216 BLOOMINGDALE AVENUE, RADNOR TOWNSHIP, DELAWARE COUNTY, PA., PREPARED BY EDWARD B. WALSH & ASSOCIATES, INC. DATED 06-12-2008 PROJECT NUMBER 3449.
  15. THE APPLICANT IS RESPONSIBLE FOR RAISING THE EXISTING CURB ALONG THE PROPERTY FRONTAGE TO A UNIFORM HEIGHT PER THE DETAIL ON SHEET 7.
  16. THE MAINTENANCE FOR THE PROPOSED ACCESS AND UTILITY EASEMENT SHALL BE SHARED EQUALLY BETWEEN LOT 1, 3, & 4.



**LOCATION MAP**  
SCALE: 1" = 600'

**ZONING DISTRICT R-5 (RESIDENCE DISTRICT)**

LOT SIZE	5,500 SF MIN
WIDTH	55' MIN
BUILDING AREA	35% MAX
FRONT YARD	25' MIN
SIDE YARD	10' MIN
REAR YARD	20' MIN
BUILDING HEIGHT	35' 20" ACCESSORY
IMPERVIOUS COVERAGE	40% MAX

FOR MORE DETAILED INFORMATION YOUR ATTENTION IS CALLED TO THE ZONING CODE OF RADNOR TOWNSHIP, LATEST EDITION.

THIS PROJECT IS BEING DEVELOPED IN THE DARBY CREEK WATERSHED DISTRICT A.

**212 BLOOMINGDALE AVENUE:**

TAX PARCEL NUMBER: 36060328400

BLOCK AND UNIT NUMBER: BLOCK 12, UNIT 459000

SOURCE OF DEED: BOOK 5248 PAGE 1733

TOTAL AREA:(TO THE TITLE LINE) 35,444.24 SF (0.8137 ACRES)

NET AREA:(TO THE ROAD R/W) 30,475.37 SF (0.6996 ACRES)

**216 BLOOMINGDALE AVENUE:**

TAX PARCEL NUMBER: 36060328500

BLOCK AND UNIT NUMBER: BLOCK 12, UNIT 458000

SOURCE OF DEED: BOOK 5248 PAGE 1733

TOTAL AREA:(TO THE TITLE LINE) CONTIGUOUS

NET AREA:(TO THE ROAD R/W) CONTIGUOUS

**EXISTING IMPERVIOUS COVERAGE TO REMAIN (LOT 2):**

HOUSE	1,896 SF (6.22%)
PORCH	217 SF
WALK	730 SF
WALL & MISC.	105 SF
TOTAL	2,948 SF (9.67%)

**EXISTING IMPERVIOUS COVERAGE TO BE REMOVED:**

HOUSE	2,030 SF (6.66%)
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WALK	1,235 SF
TOTAL	3,361 SF (11.03%)

**PROPOSED IMPERVIOUS COVERAGE:**

HOUSE	4,452 SF (14.61%)
DRIVEWAY	3,136 SF
PATIO	276 SF
WALK	184 SF
TOTAL	8,048 SF (26.41%)

**TOTAL IMPERVIOUS COVERAGE:**

TOTAL=14,367 SF (47.11%)
TO BE REMOVED=3,361 SF
NEW IMPERVIOUS AREA=10,996 SF (36.08%) (20.83% BUILDING AREA)

Serial Number: 2015-005-2102

**CALL BEFORE YOU DIG!**  
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL Pennsylvania One Call System, Inc. 1-800-242-1776

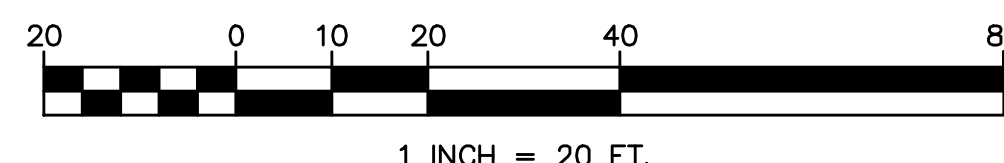
**RESOLUTION TO SOIL LIMITATIONS:**

BASED ON THE EXISTING SOIL TYPES AND IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SOILS INFORMATION									
SYMBOL	NAME	%SLOPE	ERODIBILITY INDEX	HYDROLOGIC GROUP	AGRICULTURAL CAPABILITY CLASS	DRAINAGE	LOAD BEARING CAPACITY	DEPTH TO WATER	DEPTH TO BEDROCK
Md	MADE LAND GABBRIC MATERIALS	NOT RATED	NOT RATED	C	6E	WELL DRAINED	NOT RATED	3'+	4'+

**REQUIREMENTS FOR DEMOLITION PERMITS**

- SEWER SEAL PERMIT FROM RADNOR TOWNSHIP PUBLIC WORKS DEPARTMENT.
- RODENT CERTIFICATE/LETTER FROM A LICENCED PEST CONTROL OPERATOR STATING THE PROPERTY IS RODENT FREE.
- LETTER FROM PECO STATING THE ELECTRIC AND GAS SERVICES HAVE BEEN TERMINATED.
- LETTER FROM AQUA PENNSYLVANIA STATING THE WATER SERVICE HAS BEEN TERMINATED.
- CLEARING PERMIT.
- BUILDING DIRECTOR APPROVAL.



**MOMENEE & ASSOCIATES, INC.**  
REGISTERED PROFESSIONAL ENGINEER  
KEVIN R. MOMENEE  
ENGINEER  
PE020326E

**PROPOSED CONDITIONS PLAN**

**MOMENEE & ASSOCIATES, INC.**  
CIVIL ENGINEERS AND LAND SURVEYORS  
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010 PHONE: (610) 527-3030 FAX: (610) 527-9008

FINAL PLAN OF SUBDIVISION  
**212 & 216 BLOOMINGDALE AVENUE**  
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

DATE: JANUARY 08, 2015  
SHEET NO. 1  
OF 7  
SCALE: 1" = 20'  
FILE NO.: 13-060

ONE-CALL: 20150052102  
DRAWN BY: S.M.B.  
CHECKED BY: J.C.M.

OWNER/APPLICANT  
GLI INVESTMENTS, LP  
200 LANSOWNE AVENUE  
WAYNE, PA 19087



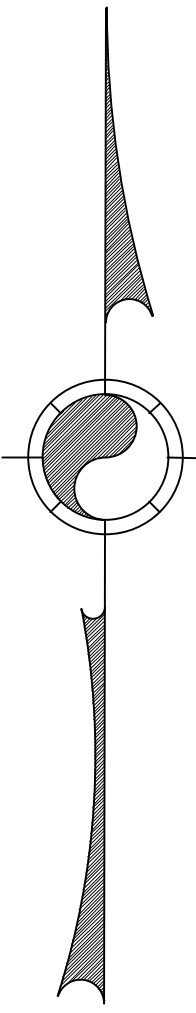
ALL LOCATIONS OF EXISTING UTILITIES, SHOWN ON THIS PLAN, HAVE BEEN DEVELOPED FROM FIELD LOCATIONS OF VISIBLE ABOVE GROUND UTILITY STRUCTURES AND INFORMATION FURNISHED BY THE UTILITY COMPANIES.

ALL LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. COMPLETENESS OR ACCURACY OF THE LOCATIONS AND DEPTH OF ALL STRUCTURES CANNOT BE GUARANTEED. CONTRACTORS MUST VERIFY ALL LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE THE START OF ANY WORK.

AS PER ACT 187 HOUSE BILL 2627, BEFORE THE START OF ANY EXCAVATION WORK THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANIES THROUGH THE PENNSYLVANIA "ONE CALL SYSTEM" 1-800-242-1776 THREE DAYS PRIOR TO THE START OF ANY EXCAVATION. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION.

**LINE TYPE / SYMBOL LEGEND:**

	EXISTING PROPERTY LINE
	PROPOSED PROPERTY LINE
	R.O.W. LINE
	BUILDING SETBACK
	PROPOSED 4" SANITARY LATERAL
	PROPOSED 6" SANITARY MAIN
	PROPOSED STORMPIPE
	EXISTING 1' CONTOUR
	EXISTING 5' CONTOUR
	PROPOSED STORMWATER EASEMENT
	PROPOSED SANITARY EASEMENT
	COMMON DRIVE
	TREE TO BE REMOVED
	EXISTING TREE



**RADNOR TOWNSHIP ZONING HEARING BOARD  
APPEAL NO. 2746 ORDER DATED OCTOBER 18, 2007**

BASED UPON THE RECORD AND UPON THE FACTS AND CIRCUMSTANCES PECULIAR TO THE SUBJECT PREMISES, THIS BOARD DETERMINES THAT OWENS LANE, AT PRESENT TIME AND AS SAME PRESENTLY EXISTS, CONSTITUTES A "STREET" UNDER ZONING CODE 280-4, SUBJECT TO ALL CONDITIONS AND QUALIFICATIONS SET FORTH ABOVE.

**WAIVER LIST:**

THE APPLICANT REQUESTS THE FOLLOWING WAIVERS OF THE RADNOR TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE:

- SECTION 255-27.1(6) - NO COMMON DRIVEWAYS SHALL BE PERMITTED BETWEEN TWO (2) OR MORE SINGLE-FAMILY DWELLINGS. THE PROPOSED DRIVEWAY IS CENTRALLY LOCATED WITHIN THE DEVELOPMENT, BETWEEN TWO (2) OF THE PROPOSED DWELLINGS.
- SECTION 255-27.1(7) - NO COMMON DRIVEWAY SHALL PROVIDE ACCESS TO MORE THAN THREE (3) LOTS OR THREE (3) SINGLE-FAMILY DWELLINGS. APPLICANT WISHES TO CONSTRUCT A SHARED DRIVEWAY SERVING FIVE (5) DWELLINGS.
- SECTION 255-47.D - ALONG THE EXISTING STREET ON WHICH A SUBDIVISION OR LAND DEVELOPMENT ABUTS (HEREINAFTER CALLED A "BOUNDARY STREET"), IMPROVEMENTS SHALL BE MADE TO THE STREET. THE IMPROVEMENTS TO THE BOUNDARY STREET SHALL BE DETERMINED BY THE WIDTH OF THE REQUIRED CARTWAY AND BUILT TO THE SPECIFICATIONS ESTABLISHED BY THE TOWNSHIP.

**ZONING TABLE (R-5 RESIDENTIAL DISTRICT):**

	REQUIRED	LOT 1	LOT 2	LOT 3	LOT 4
GROSS LOT AREA	N/A	12,030 S.F.	11,639 S.F.	5,832 S.F.	5,944 S.F.
NET LOT AREA	5,500 S.F.	8,929 S.F.	9,770 S.F.	5,832 S.F.	5,944 S.F.
LOT WIDTH	55' MIN.	124'	67'	60'	64'
FRONT YARD	25' MIN.	25'	25'	25'	25'
REAR YARD	20' MIN.	20'	20'	20'	20'
SIDE YARD	10' MIN.	10'	10'	10'	10'
MAX. BUILDING HEIGHT	35'	35'	35'	35'	35'
MAX. BUILDING AREA	35%	19.69%	19.41%	25.55%	24.90%
MAX. IMPERVIOUS AREA	40%	20.75%	29.05%	27.26%	26.56%

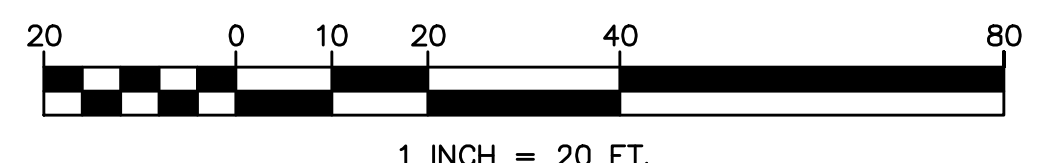
Serial Number: 2015-005-2102



COMPONENT: MOMENEE AND ASSOCIATES, INC. CONSULTING ENGINEERS, EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND ALL OTHER PROPRIETARY RIGHTS IN THESE PLANS. ALL DRAWINGS, SPECIFICATIONS AND NOTES HEREOF ARE AND SHALL REMAIN THE PROPERTY OF MOMENEE AND ASSOCIATES, INC. NO PART OF THESE PLANS, DRAWINGS AND ASSOCIATED THEREWITH ARE TO BE REPRODUCED, COPIED, EITHER WHOLLY OR IN PART, WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN PERMISSION AND CONSENT OF MOMENEE AND ASSOCIATES, INC. ANY REUSE WITHOUT WRITTEN PERMISSION, VERIFICATION, CONSENT OR ADAPTATION BY MOMENEE AND ASSOCIATES, INC. FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT THE THIRD PARTY'S SOLE RISK AND WITHOUT LIABILITY OF MOMENEE AND ASSOCIATES, INC. THE THIRD PARTY SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL CLAMS, DAMAGES, LOSSES, AND EXPENSES ARISING THEREFROM OR RESULTING THEREFROM.

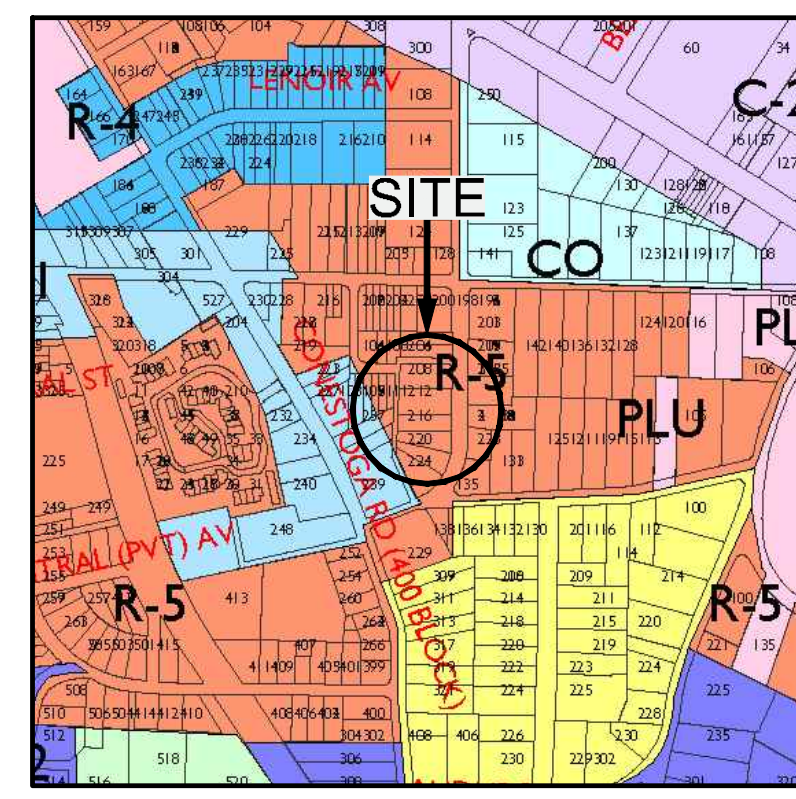
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**GENERAL NOTES:**

- OWNER/APPLICANT: GLI INVESTMENTS, LP 200 LANSDOWNE AVENUE WAYNE, PA 19087
- THE SURVEY FOR THIS PLAN WAS PROVIDED BY A SURVEY AND PLAN FOR NORCINI BUILDING COMPANY DATED FEBRUARY 20, 2008 BY CHESTER VALLEY ENGINEERS, INC., PAOLI, PA, UNDER THE PROFESSIONAL SEAL OF JOSEPH H. BLACKBURN, III, P.L.S. NO. SU-061639
- THE ABOVE PLAN CONTAINS THE FOLLOWING NOTES:
  - BEING DELAWARE COUNTY ASSESSMENT MAP 36-12, PARCEL 458, 459, & 460.
  - ACTUAL FIELD SURVEY PERFORMED JANUARY 16-20, 2006 BY CHESTER VALLEY ENGINEERS, INC.
  - VERTICAL DATUM ASSUMED FROM U.S.G.S. MAP, VALLEY FORGE QUADRANGLE.
  - BOUNDARY PLOTTED FROM THE FOLLOWING DEEDS: DEED BOOK 791, PAGE 1423, DEED BOOK 2061, PAGE 469, DEED BOOK 2330, PAGE 932, DEED BOOK 1773, PAGE 2058.
  - IRON PINS WILL BE PLACED AT NEW PROPERTY CORNERS UPON FINAL APPROVAL.
  - SOIL LINES TAKEN FROM SOIL SURVEY OF CHESTER AND DELAWARE COUNTIES, PA, ISSUED MAY 1963 BY THE SOIL CONSERVATION SERVICE OF THE US DEPARTMENT OF AGRICULTURE.
  - BY GRAPHIC PLOTTING ONLY, THE SUBJECT PROPERTY LIES WITHIN AN AREA IDENTIFIED AS "ZONE X, AREAS DETERMINED TO BE OUTSIDE OF THE 500-YEAR FLOODPLAIN" ON FLOOD INSURANCE RATE MAP 42045C0002 D FOR DELAWARE COUNTY, PENNSYLVANIA DATED SEPTEMBER 30, 1993 BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
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SCALE: 1" = 600'

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**212 BLOOMINGDALE AVENUE:**

**TAX PARCEL NUMBER:** 36060328400

**BLOCK AND UNIT NUMBER:** BLOCK 12, UNIT 459000

**SOURCE OF DEED:** BOOK 5248 PAGE 1733

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**BLOCK AND UNIT NUMBER:** BLOCK 12, UNIT 458000

**SOURCE OF DEED:** BOOK 5248 PAGE 1733

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STATE OF PENNSYLVANIA  
COUNTY OF DELAWARE SS

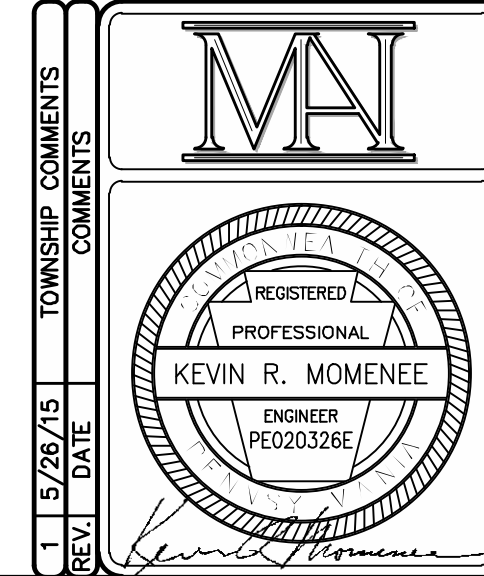
ON THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_, BEFORE ME A NOTARY PUBLIC IN AND FOR THE COMMONWEALTH OF PENNSYLVANIA, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED \_\_\_\_\_ WHO ACKNOWLEDGED HIMSELF TO BE THE OWNER OF THE PROPERTY SHOWN ON THIS PLAN AND THE SUBDIVISION PLAN THEREOF WAS MADE AT HIS DIRECTION AND THAT HE ACKNOWLEDGES THE SAME TO BE HIS ACT AND PLAN AND DESIRES THE SAME TO BE RECORDED AS SUCH ACCORDING TO LAW.

WITNESS MY HAND AND SEAL THE DAY AND DATE ABOVE WRITTEN.

\_\_\_\_\_  
(SIGNATURE)

\_\_\_\_\_  
NOTARY PUBLIC OR OTHER OFFICER

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



**RECORD PLAN: (SHEET 1 OF 1 FOR RECORDING)**

**MOMENEE & ASSOCIATES, INC.**  
CIVIL ENGINEERS AND LAND SURVEYORS  
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010 PHONE: (610) 527-3030 FAX: (610) 527-9008

**FINAL PLAN OF SUBDIVISION**  
212 & 216 BLOOMINGDALE AVENUE  
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

DATE: JANUARY 08, 2015  
SHEET NO. 2  
OF 7  
SCALE: 1" = 20'  
FILE NO.: 13-060

ONE-CALL: 20150052102  
DRAWN BY: S.M.B.  
CHECKED BY: J.C.M.

OWNER/APPLICANT  
GLI INVESTMENTS, LP  
200 LANSDOWNE AVENUE  
WAYNE, PA 19087



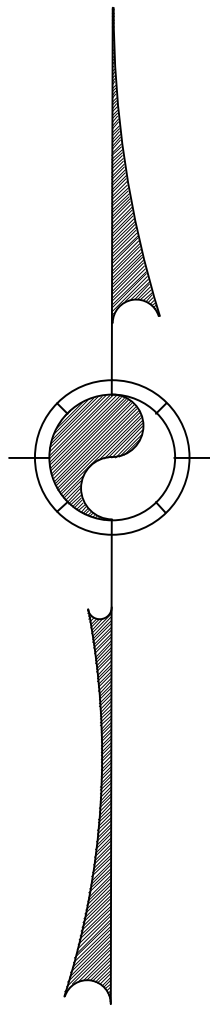
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ALL LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. COMPLETENESS OR ACCURACY OF THE LOCATIONS AND DEPTH OF ALL STRUCTURES CANNOT BE GUARANTEED. CONTRACTORS MUST VERIFY ALL LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE THE START OF ANY WORK.

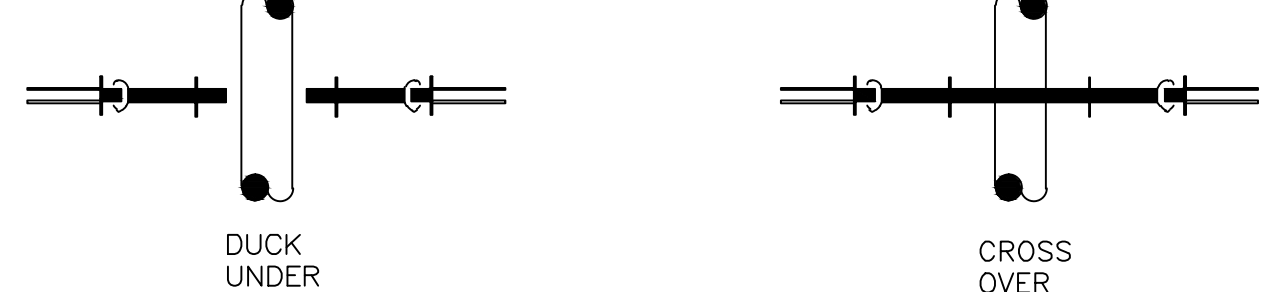
AS PER ACT 187 HOUSE BILL 2627, BEFORE THE START OF ANY EXCAVATION WORK THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANIES THROUGH THE PENNSYLVANIA "ONE CALL SYSTEM" 1-800-242-1776 THREE DAYS PRIOR TO THE START OF ANY EXCAVATION. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION.

**LINE TYPE / SYMBOL LEGEND:**

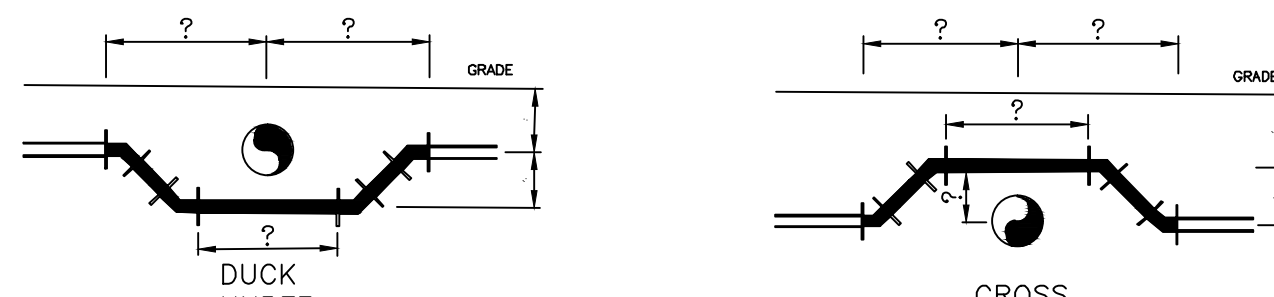
---	EXISTING PROPERTY LINE
- - -	PROPOSED PROPERTY LINE
---	R.O.W. LINE
---	BUILDING SETBACK
X X X	EXISTING FENCE
---	PROPOSED 1-1/2" GAS SERVICE LATERAL
---	PROPOSED ELECTRIC LINE
---	PROPOSED 1" WATER SERVICE LATERAL
---	PROPOSED 4" SANITARY LATERAL
---	PROPOSED 6" SANITARY MAIN
---	EXISTING 1' CONTOUR
---	EXISTING 5' CONTOUR
---	PROPOSED GRADING



**DUCK UNDERS/CROSS OVERS WITH VERTICAL BENDS**  
ALL DIMENSIONS TO BE SPECIFIED BY AQUA PA AND/OR CONTRACTOR(S)/OTHERS



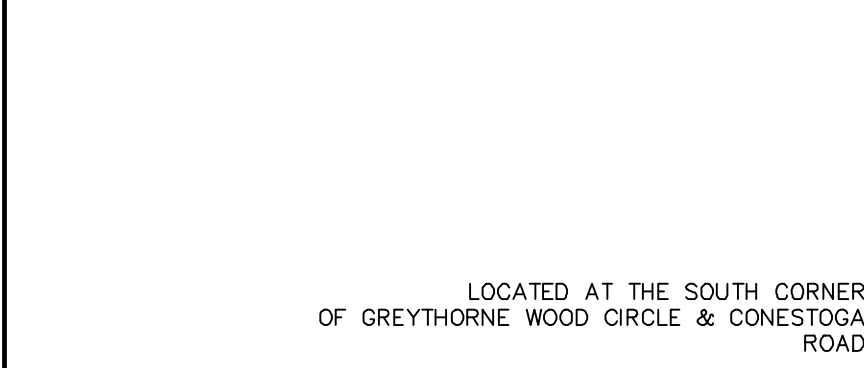
PLAN VIEW  
N.T.S.



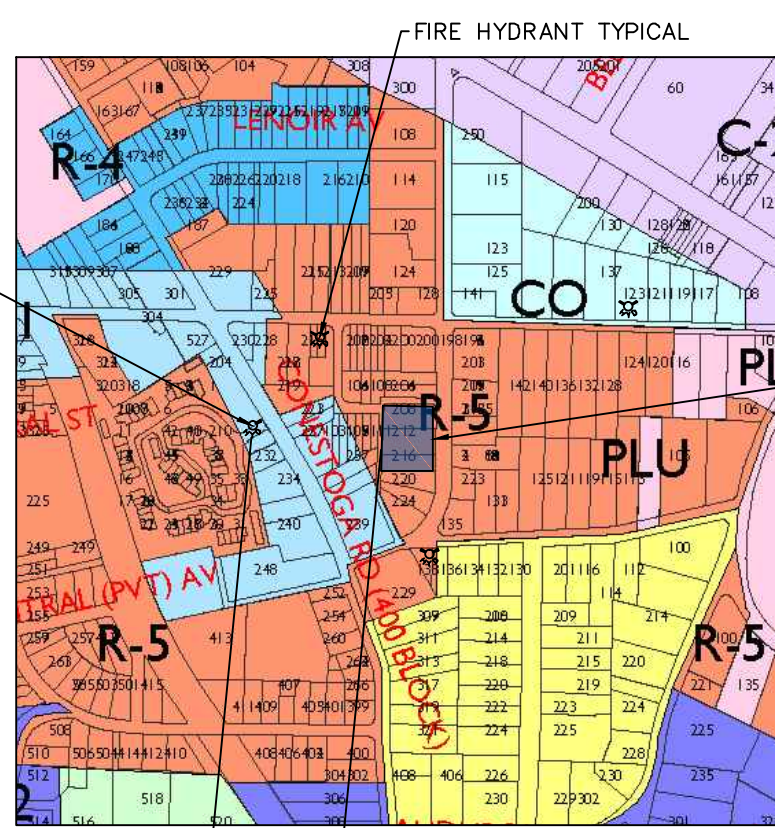
PROFILE VIEW  
N.T.S.

**PROPOSED STORMWATER MANAGEMENT DETAILS:**

INLET	INVERT	GRATE ELEVATION	SLOPE	PIPE LENGTH	DIAMETER/MATERIAL
YARD DRAIN 1	399.90 OUT	401.50	1.25%	89'	8" HDPE
CATCH BASIN 1	399.01 IN 398.91 OUT	401.50	1.25%	2'	8" HDPE
YARD DRAIN 2	401.01 OUT	405.00	1.25%	64'	8" HDPE
YARD DRAIN 3	400.41 IN 400.21 OUT	405.75	1.25%	48'	8" HDPE
CATCH BASIN 3	399.71 IN 399.61 OUT	405.50	1.25%	71'	12" HDPE
CATCH BASIN 2	398.72 IN 398.62 OUT	401.50	4.0%	3'	12" HDPE



LOCATED AT THE SOUTH CORNER OF GREYTHORNE WOOD CIRCLE & CONESTOGA ROAD



**FIRE HYDRANT MAP**  
SCALE=1"=600'

Serial Number: 2015-005-2102

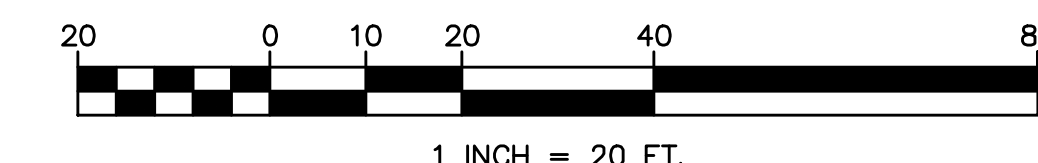
**CALL BEFORE YOU DIG!**

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL Pennsylvania One Call System, Inc. 1-800-242-1776

COMMENTS: MOMENEE & ASSOCIATES, INC. CONSULTING ENGINEERS, EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND ALL OTHER PROPRIETARY RIGHTS IN THESE PLANS, ALL DRAWINGS, SPECIFICATIONS AND NOTES THEREOF AND SHALL REMAIN THE PROPERTY OF MOMENEE & ASSOCIATES, INC. NO PART OF THESE PLANS OR ANY INFORMATION CONTAINED HEREIN IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN PERMISSION AND CONSENT OF MOMENEE & ASSOCIATES, INC. ANY REUSE, ADAPTATION, MODIFICATION, REPRODUCTION, OR TRANSMISSION OF ANY PART OF THESE PLANS WITHOUT THE EXPRESS WRITTEN PERMISSION AND CONSENT OF MOMENEE & ASSOCIATES, INC. SHALL BE AT THE THIRD PARTY'S SOLE RISK AND WITHOUT LIABILITY OF MOMENEE & ASSOCIATES, INC. MOMENEE & ASSOCIATES, INC. SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE, LOSS, OR EXPENSES RESULTING FROM THE USE OF THESE PLANS.

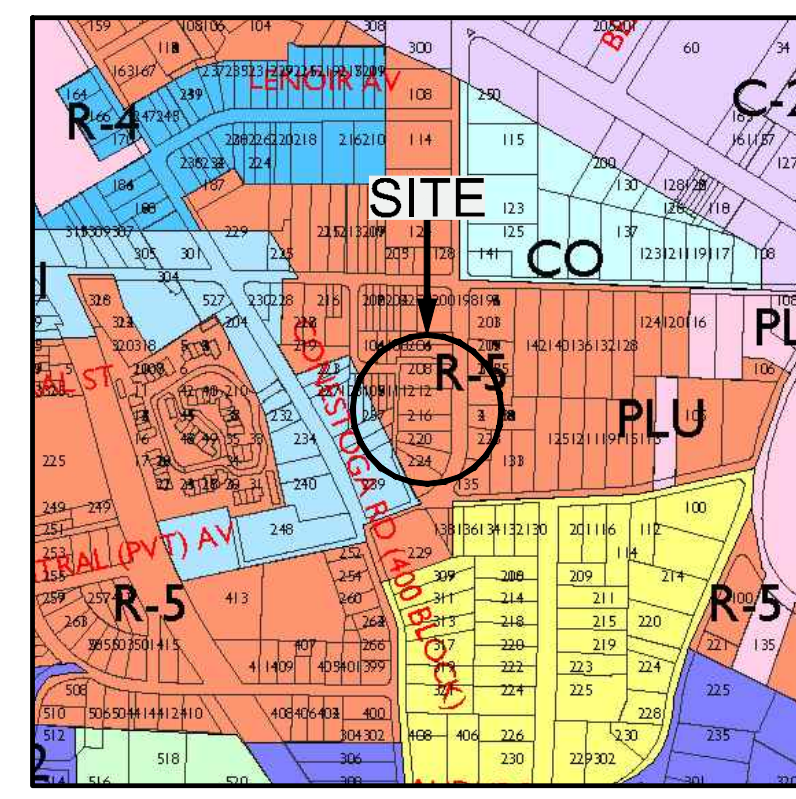
**RESOLUTION TO SOIL LIMITATIONS:**  
BASED ON THE EXISTING SOIL TYPES AND IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

SOILS INFORMATION									
SYMBOL	NAME	%SLOPE	ERODIBILITY INDEX	HYDROLOGIC GROUP	AGRICULTURAL CAPABILITY CLASS	DRAINAGE	LOAD BEARING CAPACITY	DEPTH TO SH WATER	DEPTH TO BEDROCK
Md	MADE LAND BARREN AND DIABASE MATERIALS	NOT RATED	NOT RATED	C	6E	WELL DRAINED	NOT RATED	3'+	4'+



**CARE OF EXISTING TREES:**

- ALL WOODY VEGETATION TO BE RETAINED WITHIN TWENTY-FIVE FEET OF A BUILDING SITE OR DISTURBED AREA SHALL BE PROTECTED FROM EQUIPMENT DAMAGE BY FENCING PLACED AT THE DRIP LINES. TREE PROTECTION FENCING SHALL BE INSTALLED TO PROTECT ALL EXISTING TREES FROM DAMAGE DUE TO LANDSCAPE OPERATIONS, OPERATIONS BY OTHER CONTRACTORS AND TRADES, AND OTHERS. MAINTAIN PROTECTION FENCING FOR THE DURATION OF PROJECT.
- GRADE CHANGES AROUND THE DRIP LINES OF TREES TO BE RETAINED SHALL BE MINIMIZED. TREATMENT OF THE TREES PRIOR TO CONSTRUCTION TO PROTECT THE ROOT SYSTEM SHALL BE PERFORMED.
- SELECTIVELY PRUNE EXISTING TREES AT THE EDGE OF ALL TREE PROTECTION ZONES, AND OTHER EXISTING TREES AFFECTED BY CONSTRUCTION, UNDER LANDSCAPE ARCHITECT'S DIRECTION. REMOVE SUCKER SHOOTS, DEAD, RUBBING AND DAMAGED BRANCHES.
- ANY EXCAVATION NEAR ADJACENT ROOT SYSTEMS WILL REQUIRE ROOT PRUNING OF AFFECTED TREE(S). ALL DISTURBED ROOTS MUST BE CUT AS CLEANLY AS POSSIBLE. THE TRENCH MUST BE BACKFILLED AS QUICKLY AS POSSIBLE, AVOIDING COMPACTION. TREE LIMBS MUST BE CUT BACK IN PROPORTION TO THE ROOT AREA LOSS.
- FERTILIZE PRUNED EXISTING TREES WITH 3 TO 4 LBS. OF LIQUID FERTILIZER PER 1,000 SQUARE FEET OF DRIP AREA, OR, 5 GALLONS OF LIQUID FERTILIZER PER CALIPER INCH OF TRUNK DIAMETER.
- FERTILIZE IN EARLY SPRING BEFORE GROWTH BEGINS.
- FERTILIZE BEGINNING 2' FROM TRUNK AT INTERVALS 2' TO 3' ON CENTER IN A GRID-LIKE PATTERN TO A DEPTH OF 6-18" WITHIN THE DRIP LINE AND BEYOND WHERE POSSIBLE. INJECTION FERTILIZATION METHOD SHALL BE ACCEPTABLE SUBJECT TO LANDSCAPE ARCHITECT'S APPROVAL.



LOCATION MAP  
SCALE: 1" = 600'

**STORMWATER MANAGEMENT FACILITY MAINTENANCE PLAN**

THE STORMWATER MANAGEMENT FACILITIES ON THESE LOTS CONSIST OF A SUBSURFACE DETENTION/RECHARGE BASIN. THE BASIN IS COMPRISED OF FULLY PERFORATED HDPE PIPE WITHIN A STONE BED SURROUNDING BY FILTER FABRIC. AN INTERNAL CONTROL RISER ALLOWS CONTROLLED DISCHARGE OF FLOWS FROM THE SYSTEM. WATER RUNOFF IS DIRECTED TO THE BASIN VIA ROOF DRAINS, A 2"x2" INLET, AND PIPING WHICH CAPTURES AND COLLECTS RUNOFF FROM PORTIONS OF THE ROOF, PORTIONS OF THE DRIVEWAY, AND SOME OTHER AREAS ON THE PROPERTY. THE INLET IS PROVIDED WITH A ONE FOOT SUMP BELOW THE INLET PRIOR TO ENTERING THE SUBSURFACE SYSTEM SO THAT DEBRIS CAN BE COLLECTED.

A CONTROL STRUCTURE WITHIN THE SYSTEM DISCHARGES TO THE EXISTING STORM WATER SYSTEM WITHIN BLOOMINGDALE AVENUE. AN ACCESS MANHOLE WITH A LADDER IS PROVIDED AT THE END OF THE SUBSURFACE PIPE SYSTEM TO FACILITATE ACCESS AND MAINTENANCE OF THE SYSTEM.

LOT 1, 3, & 4 PROPERTY OWNERS WILL BE RESPONSIBILITY FOR THE CONTINUED OPERATION AND MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITIES.

MAINTENANCE OF THE FACILITIES SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

- THE OWNER, OCCUPANT, TENANT OR OTHER USER OF THE PROPERTY SHALL NOT IMPEDE THE FLOW OF WATER DRAINING TO THE STORMWATER MANAGEMENT BASIN.
- ALL ROOF DOWNSPOUTS, INLETS, CURB OPENINGS AND OTHER WATER WAYS SHALL BE KEPT OPEN AND OPERATION TO PASS THE FLOW OF WATER TO THE BASIN AS INTENDED.
- GRASS AND LANDSCAPING IN THE VICINITY OF ALL INLETS SHALL BE KEPT TRIM AND FREE FROM DEBRIS ACCUMULATION, AND DOWNSPOUTS AND INLETS SHALL BE KEPT FREE OF OBSTRUCTIONS THAT COULD BLOCK THE FREE FLOW OF WATER TO AND WITHIN THEM.
- INLET SUMPS SHALL BE CLEANED OF ACCUMULATED DEBRIS BEFORE ANY DEBRIS CAN BE DISCHARGED INTO THE SYSTEMS. INLET STRUCTURES SHALL BE INSPECTED AT LEAST MONTHLY TO INSURE THAT THEY ARE CLEAN AND REMAIN OPERATIONAL.
- SUBSURFACE PIPES SHALL BE INSPECTED ON AN ANNUAL BASIS TO INSURE THAT THEY ARE CLEAN AND OPERATIONAL. ANY ACCUMULATED DEBRIS AND SILT SHALL BE REMOVED IN A TIMELY MANNER. THE SUBSURFACE PIPES SHALL BE KEPT FREE OF OBSTRUCTIONS THAT COULD BLOCK THE FREE FLOW OF WATER WITHIN THEM.
- PROMPT REMEDIAL MEASURES ARE TO BE TAKEN IN THE EVENT OF ANY BLOCKAGE OR MALFUNCTION OF THE SYSTEM.

THE OWNER, OCCUPANT, TENANT OR OTHER USER OF THE PROPERTY SHALL NOT TAKE ANY MEASURES TO DISRUPT OR IMPAIR THE EFFECTIVENESS OF THE BASIN OR ITS CONTROLS. THIS INCLUDES ALTERATION OF GRADES IN ANY MANNER THAT WOULD DIVERT RUNOFF AWAY FROM INLET COLLECTION POINTS.

**NOTES:**

- THE STORMWATER MANAGEMENT FACILITIES ARE DESIGNED TO ACCOUNT FOR NEW AND/OR REPLACEMENT IMPERVIOUS COVER ON SITE OF UP TO 10,354 SF. EACH LOT CAN HAVE AN ADDITIONAL 616 SF OF FUTURE IMPERVIOUS COVERAGE.
- THE RESPONSIBILITY FOR THE CONTINUED MAINTENANCE AND OPERATION OF THE STORMWATER MANAGEMENT SYSTEM AND OTHER DRAINAGE FACILITIES SHALL BE THE OBLIGATION OF LOTS 1, 3, & 4 PROPERTY OWNERS.
- THE TOWNSHIP ENGINEER'S OFFICE SHALL BE NOTIFIED 48 HOURS PRIOR TO THE CONSTRUCTION OF THE STORMWATER MANAGEMENT SYSTEM AND PRIOR TO THE START OF EARTHMOVING ACTIVITIES.
- A GENERAL EASEMENT IS HEREBY CREATED OVER THE STORMWATER MANAGEMENT SYSTEM THAT PERMITS INGRESS AND EGRESS BY RADNOR TOWNSHIP.
- A GENERAL EASEMENT IS HEREBY CREATED OVER THE SANITARY SYSTEM THAT PERMITS INGRESS AND EGRESS BY RADNOR TOWNSHIP.

**PERCOLATION TEST:**

SOIL INFILTRATION TESTING WAS CONDUCTED BY RUSSELL L. LOSCO, C.P.S. SC OF LANCHESTER SOIL CONSULTANTS, INC. ON JANUARY 28, 2008.

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THE EXISTING CONDITIONS ARE AS SHOWN AND THAT THIS DRAINAGE PLAN COMPLIES WITH ALL THE DESIGN STANDARDS AND CRITERIA OF THE RADNOR TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

*Kevin R. Momenee*  
KEVIN R. MOMENEE, P.E., P.L.S. 05/26/15 DATE

**GRADING & UTILITIES PLAN**

**MOMENEE & ASSOCIATES, INC.**  
CIVIL ENGINEERS AND LAND SURVEYORS  
924 COUNTY LINE ROAD, BRYN MAWR, PA 19010 PHONE: (610) 527-3030 FAX: (610) 527-9008

FINAL PLAN OF SUBDIVISION  
212 & 216 BLOOMINGDALE AVENUE  
RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

DATE: JANUARY 08, 2015  
SHEET NO. 3  
OF 7  
SCALE: 1" = 20'  
FILE NO.: 13-060

ONE-CALL: 20150052102  
DRAWN BY: S.M.B.  
CHECKED BY: J.C.M.

OWNER/APPLICANT  
GL1 INVESTMENTS, LP  
200 LANSDOWNE AVENUE  
WAYNE, PA 19087



ALL LOCATIONS OF EXISTING UTILITIES, SHOWN ON THIS PLAN, HAVE BEEN DEVELOPED FROM FIELD LOCATIONS OF VISIBLE ABOVE GROUND UTILITY STRUCTURES AND INFORMATION FURNISHED BY THE UTILITY COMPANIES.

ALL LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. COMPLETENESS OR ACCURACY OF THE LOCATIONS AND DEPTH OF ALL STRUCTURES CANNOT BE GUARANTEED. CONTRACTORS MUST VERIFY ALL LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE THE START OF ANY WORK.

AS PER ACT 187 HOUSE BILL 2627, BEFORE THE START OF ANY EXCAVATION WORK THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANIES THROUGH THE PENNSYLVANIA "ONE CALL SYSTEM" 1-800-242-1779 THREE DAYS PRIOR TO THE START OF ANY EXCAVATION. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION.

**MAINTENANCE OF TEMPORARY SEDIMENTATION CONTROL STRUCTURES**

**STABILIZED CONSTRUCTION ENTRANCE:** THE STABILIZED CONSTRUCTION ENTRANCES ARE TO BE CONSTRUCTED PER THE DETAIL. THE STABILIZED CONSTRUCTION ENTRANCES SHALL BE MAINTAINED SO THAT TIRE SCRUBBING ACTIVITY DOES NOT BECOME INEFFECTIVE. ANY BUILDUP OF MUD OR SOIL ON THE STREET SHALL BE CLEANED AT THE END OF EACH WORKING DAY.

**INLET SILT TRAPS:** INLET SILT TRAPS SHALL BE CONSTRUCTED PER THE DETAIL AND CLEANED AFTER EACH STORM EVENT OR AS DIRECTED BY THE CONSERVATION DISTRICT OR TOWNSHIP ENGINEER.

**SILT FENCE:** SILT FENCE SHALL BE INSTALLED PER THE DETAIL WITH ROCK FILTER OUTLETS PROVIDED EVERY 100 FEET AND AT EXISTING AND GRADED LOW POINTS. SEDIMENT SHALL BE REMOVED FROM SILT FENCES WHEN IT REACHES 1/2 THE FENCE HEIGHT OR AS DIRECTED BY THE CONSERVATION DISTRICT OR TOWNSHIP ENGINEER. SILT FENCING WHICH HAS BEEN UNDERMINED OR TOPPED WILL BE REPLACED WITH ROCK FILTER OUTLETS IMMEDIATELY.

**SEDIMENT DISPOSAL:** SILT REMOVED FROM TEMPORARY SEDIMENT CONTROL STRUCTURES SHALL BE DISPOSED ON-SITE IN UNDISTURBED AREAS LOCATED OUTSIDE OF FLOOD PLAINS, WETLANDS, STEEP SLOPES AND DRAINAGE SWALES.

**DUST CONTROL:** DUST AND OTHER PARTICULATES SHALL BE KEPT WITHIN TOLERABLE LIMITS BY USING WATER. APPLICATION SHALL BE AS NEEDED OR AS DIRECTED BY THE TOWNSHIP ENGINEER OR THE CONSERVATION DISTRICT.

**PLACING TOPSOIL OR TOPSOIL MIXTURE**

**PREPARATION OF AREAS TO BE TOPSOILED**

GRADE THE AREAS TO BE COVERED BY TOPSOIL, USING ACCEPTABLE METHODS. LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE PLACING THE TOPSOIL. REMOVE STONES AND OTHER FOREIGN MATERIAL 2 INCHES OR LARGER IN DIMENSION. REMOVE AND SATISFACTORILY DISPOSE OF UNSUITABLE AND SURPLUS MATERIAL.

**PLACING AND SPREADING TOPSOIL**

PLACE TOPSOIL ON THE PREPARED AREAS AND, UNLESS OTHERWISE INDICATED, SPREAD AND COMPACT TO A 4-INCH UNIFORM DEPTH ± 1 1/2 INCHES. COMPACT WITH A ROLLER WEIGHING NOT OVER 120 POUNDS PER FOOT WIDTH OF ROLLER OR BY OTHER ACCEPTABLE METHODS, AS DIRECTED. REMOVE OVERDEPTH TOPSOIL, UNLESS OTHERWISE AGREED UPON IN WRITING. DO NOT PLACE TOPSOIL IN A WET OR FROZEN CONDITION.

**SEEDING SPECIFICATIONS:**

WHERE DENUDED AREAS ARE DESIRED TO BE LAWN:

1. PERFORM ALL CULTURAL OPERATION AT RIGHT ANGLES TO THE SLOPE.
2. APPLY LIME ACCORDING TO TEST OR AT THE RATE OF 25 LBS. OF GROUND LIMESTONE PER 1,000 SQ. FT.
3. APPLY FERTILIZER ACCORDING TO SOIL TEST OR WORK IN DEEPLY 20 LBS. OF 0-20-20 OR EQUIVALENT PER 1,000 SQ. FT. AND AT THE TIME OF SEEDING. WORK INTO THE SURFACE 10 LBS. OF 10-10-10 OR EQUIVALENT PER 1,000 SQ. FT. OR OTHER APPROVED MIXTURE.
4. SMOOTH AND FIRM SEEDED AREA PRIOR TO SEEDING.
5. SEED USING A MIXTURE OF 60% PENNSTAR KENTUCKY BLUEGRASS, 30% PENNLAWN RED FESCUE AND 10% PENNFINE PERENNIAL RYEGRASS AT THE RATE OF FIVE (5) POUNDS PER 1,000 SQ. FT. OR OTHER APPROVED MIXTURE.
6. COVER GRASS AND LEGUME SEEDS WITH 1/4" OF SOIL WITH SOIL EQUIPMENT, MULCH, USING 2 BALES/1,000 SQ. FT.
7. MOW AS REQUIRED.
8. WHERE SLOPES EXCEED 25% JUTE NETTING OR OTHER APPROVED (EQUAL) SLOPE STABILIZATION MEASURES SHALL BE UTILIZED. IN ADDITION, THE SEEDING SPECIFICATIONS FOR STEEP SLOPES SHALL BE INCREASED TO INCLUDE 3 LBS./1,000 SQ. FT. OF ANNUAL RYEGRASS FOR RAPID VEGETAL ESTABLISHMENT.

**HYDROSEEDING SPECIFICATIONS**

**DEFINITION:** STABILIZING SEDIMENT PRODUCING AND SEVERELY ERODED AREAS BY ESTABLISHING PERMANENT GRASS COVER.

**PURPOSE:** TO PROVIDE PERMANENT VEGETATIVE COVER TO CONTROL RAPID RUN-OFF AND EROSION.

**PROCEDURE:** SURFACE TO BE HYDRO-SEEDED SHALL BE CLEANED OF ALL DEBRIS AND OTHER MATTER HARMFUL TO UNIFORM GERMINATION. A WATER-SLURRY MIXTURE COMPOSED OF THE BELOW MENTIONED "MATERIALS" SHALL BE SPRAYED UNIFORMLY OVER THE AREAS TO BE HYDRO-SEEDED.

**MATERIALS:** APPLICATION RATE

PERMANENT SEEDING		APPLICATION RATE
NAME	DESCRIPTION	(PER ACRE)
1) SEED MIXTURE	60% PENNSTAR KENTUCKY BLUEGRASS 30% PENNLAWN RED FESCUE 10% PENNFINE PERENNIAL RYEGRASS	260 LBS.
2) COMMERCIAL FERTILIZER	10-20-20	1,000 LBS.
3) LIME	GROUND AGRICULTURAL LIMESTONE (MAY BE APPLIED SEPARATELY)	2 TONS
4) MULCH	HAY OR STRAW	3 TONS
5) SOIL STABILIZER	TERRA TACK OR EQUIVALENT	20 LBS.
TEMPORARY		APPLICATION RATE
1) SEED	ANNUAL RYEGRASS (95% PURE)	40 LBS.
2) COMMERCIAL FERTILIZER	5-5-5	1,000 LBS.
3) LIME	GROUND AGRICULTURAL LIMESTONE (MAY BE APPLIED SEPARATELY)	1 TON
4) MULCH	HAY OR STRAW	3 TONS

Serial Number: 2015-005-2102  
**CALL BEFORE YOU DIG!**  
 PENNSYLVANIA LAW REQUIRES FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL Pennsylvania One Call System, Inc. 1-800-242-1776

**SOIL EROSION CONTROL DETAILS**

CONTROL NUMBER	DESCRIPTION
1	18" FILTREXX DIVERSION BERM
2	18" COMPOST SOCK OR 30" SILT FENCE
3	18" COMPOST SOCK OR 30" SILT FENCE
4	18" COMPOST SOCK OR 30" SILT FENCE
5	18" FILTREXX DIVERSION BERM

**RESOLUTION TO SOIL LIMITATIONS:**

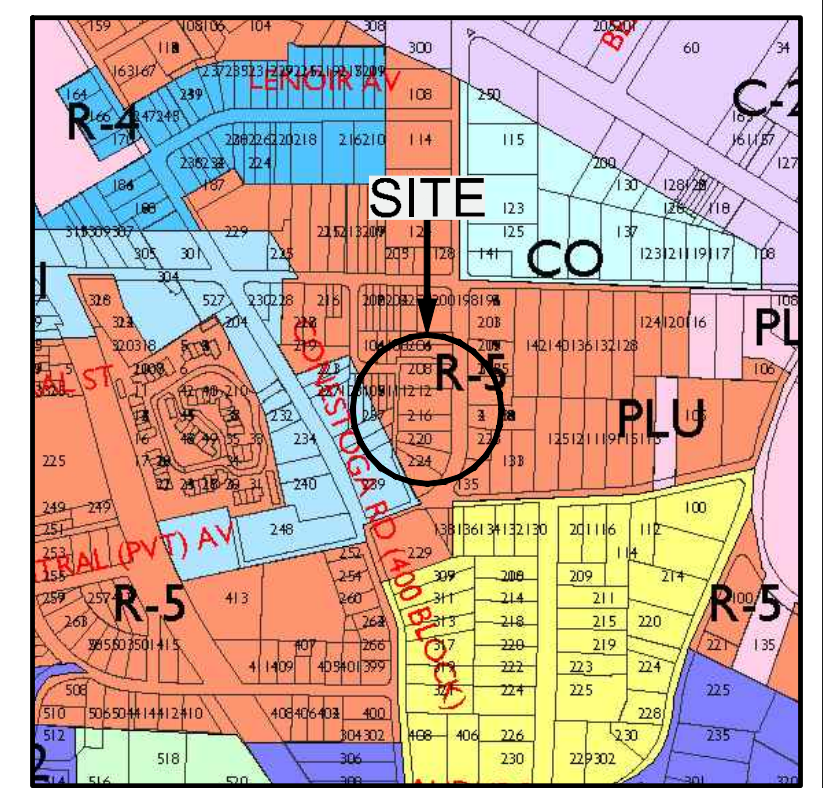
BASED ON THE EXISTING SOIL TYPES AND IF THE PROPOSED EROSION AND SEDIMENTATION CONTROL MEASURES ARE INSTALLED AND MAINTAINED PROPERLY, NO UNFORESEEN SOIL LIMITATIONS OR PROBLEMS ARE LIKELY. NEVERTHELESS, IF A PROBLEM DOES DEVELOP, THE DEVELOPER MUST TEMPORARILY SEED AND MULCH THE DISTURBED AREA. SUITABLE TOPSOIL SHALL BE IMPORTED TO SITE IF INADEQUATE QUANTITIES OF SUITABLE TOPSOIL EXIST ON SITE. ADEQUACY OF SOIL TO BE DETERMINED BY SITE GEOTECHNICAL ENGINEER IN CONJUNCTION WITH THE LANDSCAPE ARCHITECT. SOIL AMENDMENTS SHALL BE ADDED AS REQUIRED. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SITE GEOTECHNICAL ENGINEER SHALL ALSO BE CONSULTED DURING WINTER GRADING OPERATIONS.

		SOILS INFORMATION							
SYMBOL	NAME	%SLOPE	ERODIBILITY INDEX	HYDROLOGIC GROUP	AGRICULTURAL CAPABILITY CLASS	DRAINAGE	LOAD BEARING CAPACITY	DEPTH TO WATER	DEPTH TO BEDROCK
Md	MADE LAND GABBRO AND DIABASE MATERIALS	NOT RATED	NOT RATED	C	6E	WELL DRAINED	NOT RATED	3'+	4'+

**CONSTRUCTION TIMING AND SEQUENCE**

NOTE: THE TOWNSHIP ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO THE INSTALLATION OF THE SEEPAGE BED AND PRIOR TO THE START OF ANY EARTHMOVING ACTIVITIES.

01. NOTIFY THE TOWNSHIP THAT CONSTRUCTION IS GOING TO COMMENCE. ANTICIPATED DATE: FALL 2015.
02. INSTALL TREE PROTECTION AS INDICATED ON THE PLAN.
03. INSTALL SILT FENCE AS SHOWN ON THE PLAN AND ON THE DOWNHILL SLOPE OF ANY EXCAVATION OR ANTICIPATED DISTURBANCE.
04. INSTALL TIRE CLEANER, PROVIDE MATING AND HOSE FOR CLEANING, IF THIS METHOD PROVES INEFFECTIVE INSTALL STABILIZED CONSTRUCTION ENTRANCE, CONSTRUCTION ENTRANCES ARE TO BE USED BY ALL VEHICLES EXISTING THE SITE.
05. PRIOR TO EARTH DISTURBANCE, NOTIFY THE TOWNSHIP ENGINEER THAT CONSTRUCTION IS GOING TO BEGIN.
06. ONCE THE EROSION AND SEDIMENT CONTROLS ARE IN PLACE AND FUNCTIONING, BEGIN DEMOLITION OF THE RESIDENCE, GARAGE, AND THE OTHER IMPERVIOUS FEATURES DESIGNATED FOR REMOVAL. ALL CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN AN APPROVED MANNER.
07. CLEAR AND GRUB THE AREAS AS NECESSARY WITHIN THE LIMITS OF DISTURBANCE OF EXISTING VEGETATION. STRIP TOPSOIL FROM AREAS OF CONSTRUCTION AND STOCKPILE SUITABLE MATERIAL FOR FUTURE USE. UNSUITABLE MATERIAL SHALL BE DISPOSED OF PROPERLY. SURROUND TOPSOIL WITH SILT FENCE AND SEED TO ESTABLISH TEMPORARY VEGETATIVE COVER.
08. EXCAVATE FOR AND BEGIN TO CONSTRUCT THE FOUNDATIONS FOR THE NEW RESIDENCE. UPON COMPLETION OF FOUNDATION WALLS, BACKFILL FOUNDATIONS AND ROUGH GRADE AROUND THE HOUSE. ANY GRADED OR DISTURBED AREA MUST BE TEMPORARILY SEEDED IF NO FURTHER EARTH MOVING IS ANTICIPATED IMMEDIATELY. USE ANY ADDITIONAL EXCAVATED MATERIAL FROM THE NEW FOUNDATION TO BACKFILL THE EXISTING BASEMENT.
09. CONTINUE WITH BUILDING CONSTRUCTION AND ROUGH GRADE THE SITE. INSTALL UTILITIES AS NECESSARY.
10. CONCURRENT WITH THE BUILDING CONSTRUCTION INSTALL THE ROOF RAINWATER COLLECTION SYSTEM, INLET, SUMP BOX, AND CONVEYANCE PIPING. PLACE INLET PROTECTION ON THE INLET.
11. INSPECT SEDIMENT BARRIERS FREQUENTLY, ESPECIALLY AFTER HEAVY STORMS. REPLACE AND REPAIR SEDIMENT BARRIERS AS NECESSARY.
12. UPON FINAL STABILIZATION OF THE CONTRIBUTORY AREA, INSTALL PERMANENT STORMWATER MANAGEMENT SYSTEM, AND JUNCTION BOX. CONNECT THE ROOF DRAINS AND INLET TO THE SYSTEM, AND CONNECT THE SYSTEM TO THE EXISTING STORM SEWER.
13. INSTALL FINAL BINDER AND WEARING COURSES ON THE NEW DRIVEWAY AREAS.
14. FINAL GRADE DENUDED AREAS, SPREAD STOCKPILED TOPSOIL AND SEED GRADED AREAS TO REESTABLISH PERMANENT VEGETATION. STABILIZE SLOPES IN EXCESS OF 4:1 WITH 500 OR EROSION CONTROL NETTING AND MULCH.
15. INSTALL FINAL LANDSCAPE FEATURES, AND COMPLETE CONSTRUCTION.
16. UPON PERMANENT STABILIZATION, REMOVE THE SEDIMENT BARRIERS. IMMEDIATELY SEED ANY DENUDED AREAS DUE TO THEIR REMOVAL.
17. CONSTRUCTION COMPLETED. ANTICIPATED DATE: SPRING 2017.



- NOTES:**
- 1) NEWLY GRADED SLOPES TWENTY FIVE PERCENT (25% OR GREATER) SHALL BE SODDED OR STABILIZED WITH EROSION CONTROL NETTING.
  - 2) GEOTEXTILE FABRIC SHALL BE CLASS 1. GEOTEXTILE FABRIC IN ACCORDANCE WITH PENNDOT SPECIFICATION FROM 408. THE TYPE AND/OR THICKNESS SHALL BE DUFFONT TYPAR #5401, AMCOO PROPEX #4545 OR APPROVED EQUAL OR AS OTHERWISE INDICATED ON THE PLAN.
  - 3) TO ALL AREA WHICH REMAIN DISTURBED FOR MORE THAN 20 DAYS AND WILL BE SUBJECT TO THE ACTION OF EARTHMOVING AND OTHER EQUIPMENT, APPLY A MULCH (WOODCHIP-20 TONS PER ACRE; HAY OR STRAW-3 TONS PER ACRE). ALL OTHER DISTURBED AREAS REMAINING OPEN FOR MORE THAN 20 DAYS SHALL BE TEMPORARILY SEEDED AND MULCHED.
  - 4) ALL TREES AND BRUSH WITHIN THE SIGHT TRIANGLE SHALL BE TRIMMED AND/OR REMOVED AS NECESSARY TO OBTAIN CLEAR SIGHT DISTANCE WITH THE APPROVAL OF THE TOWNSHIP ARBORIST.
  - 5) SHOULD UNFORESEEN EROSION CONDITIONS DEVELOP DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE ACTION TO REMEDY SUCH CONDITIONS AND TO PREVENT DAMAGE TO ADJACENT PROPERTIES AS A RESULT OF INCREASED RUNOFF AND/OR SEDIMENT DISPLACEMENT. STOCKPILES OF WOODCHIPS, HAY BALES, CRUSHED STONE AND OTHER MULCHES SHALL BE HELD IN READINESS TO DEAL IMMEDIATELY WITH EMERGENCY PROBLEMS OF EROSION.
  - 6) THE CONTRACTOR SHALL, BY SCHEDULING THE CONSTRUCTION, UTILIZE NEW PLANTINGS AND PROPERLY INSTALL EROSION CONTROL FENCING, HAY BALES AND OTHER EROSION CONTROL MEASURES TO MINIMIZE EROSION DAMAGE.
  - 7) ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED AND WHICH WILL REMAIN EXPOSED FOR MORE THAN 20 DAYS MUST BE SEEDED AND MULCHED IMMEDIATELY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEEDING MIXTURE AND MULCH. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN ONE YEAR MUST BE SEEDED AND MULCHED WITH A PERMANENT SEED MIXTURE AND MULCH. DIVERSIONS, CHANNELS, SEDIMENTATION BASINS, SEDIMENT TRAPS, AND STOCKPILES MUST BE SEEDED AND MULCHED IMMEDIATELY.
  - 8) A ROUTINE "END-OF-DAY-CHECK" SHALL BE MADE DURING CONSTRUCTION TO MAKE SURE THAT ALL CONTROL MEASURES ARE WORKING PROPERLY. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL DESIGN, IMPLEMENT, AND MAINTAIN CONTROL MEASURES WHICH PREVENT ACCELERATED EROSION AND SEDIMENTATION. THERE SHALL BE NO ADVERSE DISCHARGE OF THE SEDIMENT OR OTHER SOLID MATERIALS FROM THE SITE AS THE RESULT OF STORMWATER RUNOFF.
  - 9) TEMPORARY EROSION CONTROL MEASURES MAY BE REMOVED ONLY AFTER THE CONSTRUCTION AREA AND CONTAINED SILT IS STABILIZED AND THE LAWN AREA ESTABLISHED.

**LINE/SYMBOL LEGEND:**

- EXISTING PROPERTY LINE
- - - PROPOSED PROPERTY LINE
- - - R.O.W. LINE
- - - BUILDING SETBACK
- X X X EXISTING FENCE
- X X X PROPOSED 1 1/2" GAS SERVICE LATERAL
- E E E PROPOSED ELECTRIC LINE
- W W W PROPOSED 1" WATER SERVICE LATERAL
- SS SS PROPOSED 4" SANITARY LATERAL
- SS SS PROPOSED 6" SANITARY MAIN
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- PROPOSED GRADING
- LIMITS OF DISTURBANCE
- SILT FENCE
- FILTREXX DIVERSION BERM
- TREE PROTECTION
- ⊙ SILT FENCE NUMBER
- ~ FLOW PATH

**EROSION & SEDIMENT CONTROL PLAN**

**MOMENEE & ASSOCIATES, INC.**  
 CIVIL ENGINEERS AND LAND SURVEYORS  
 924 COUNTY LINE ROAD, BRYN MAWR, PA 19010 PHONE: (610) 527-3030 FAX: (610) 527-9008

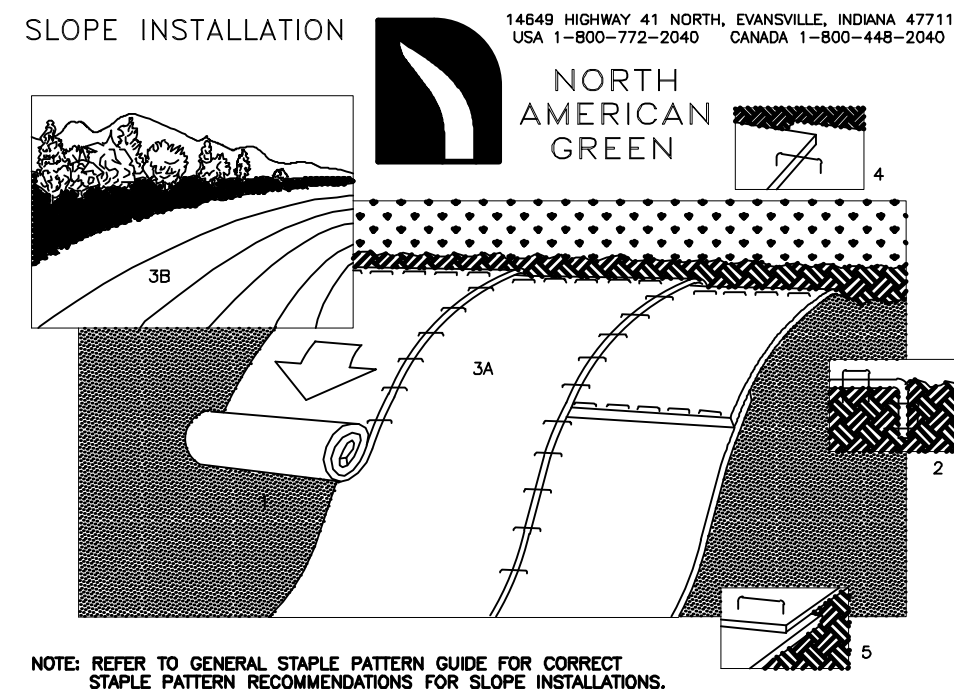
FINAL PLAN OF SUBDIVISION  
 212 & 216 BLOOMINGDALE AVENUE  
 RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

DATE: JANUARY 08, 2015  
 SHEET NO. 4  
 OF 7  
 SCALE: 1" = 20'  
 FILE NO.: 13-060

ONE-CALL: 20150052102  
 DRAWN BY: S.M.B.  
 CHECKED BY: J.C.M.

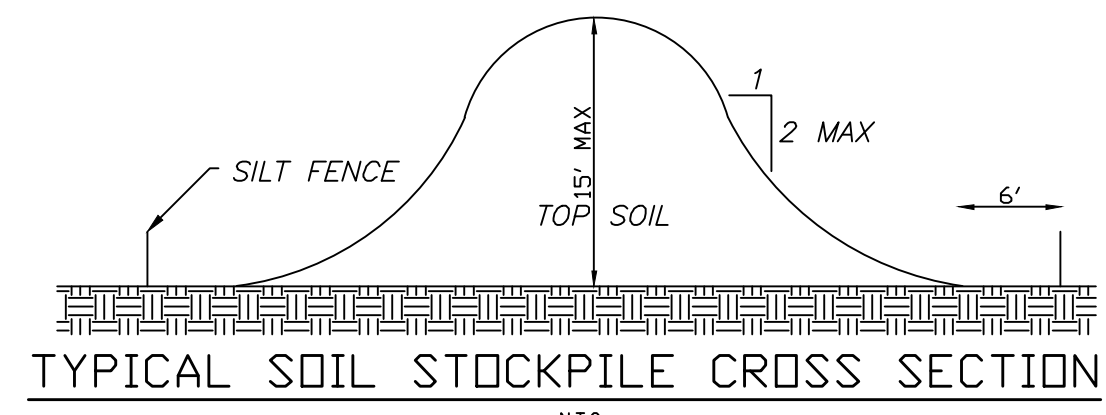
OWNER/APPLICANT  
 GL1 INVESTMENTS, LP  
 200 LANSDOWNE AVENUE  
 WAYNE, PA 19087





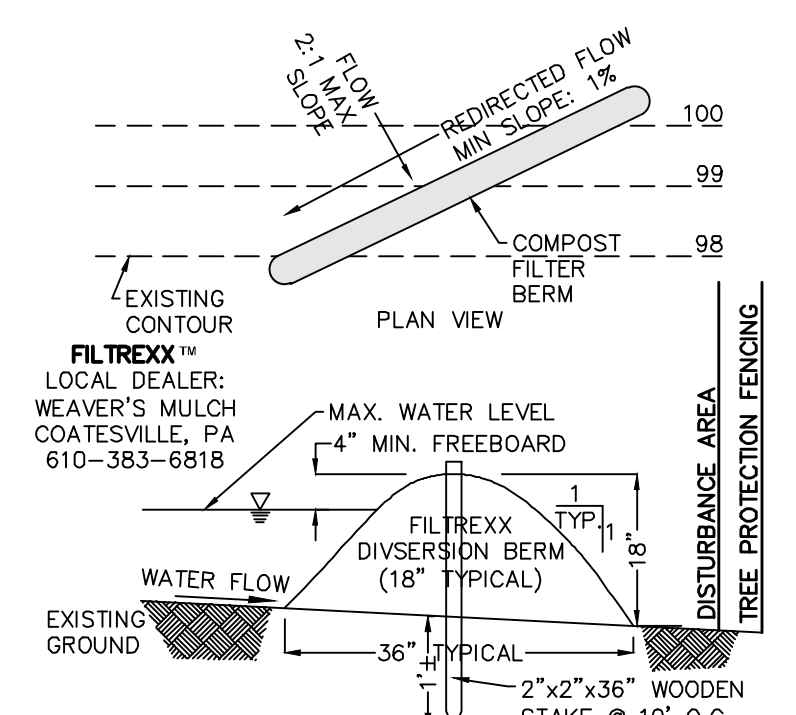
NOTE: REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS.

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



NOTE: SILT FENCE MUST COMPLETELY ENIRCLE STOCKPILES

TOP SOIL PROTECTION:  
TOPSOIL SHALL NOT BE REMOVED FROM THE DEVELOPMENT SITE OR USED AS FILL. TOPSOIL SHALL BE REMOVED FROM THE AREAS OF CONSTRUCTION AND STORED SEPARATELY. THE TOPSOIL SHALL BE STABILIZED TO MINIMIZE EROSION DURING STORAGE. UPON COMPLETION OF CONSTRUCTION, THE TOPSOIL SHALL BE UNIFORMLY REDISTRIBUTED ON THE SITE.

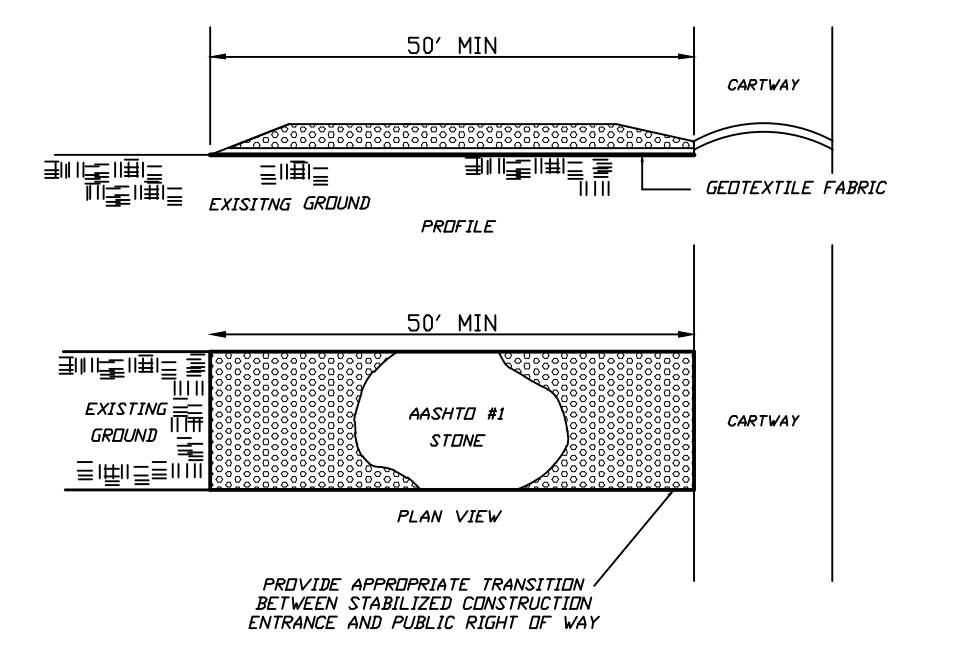


NOTES:  
1. ALL MATERIAL TO MEET FILTREXX FILTREXX MATERIAL SPECIFICATIONS AND USE FILTREXX GROWING MEDIA. SOIL AND/OR SAND MAY BE ADDED TO THE FILTREXX GROWING MEDIA AT PERCENT DETERMINED BY ENGINEER.  
2. THE CONTRACTOR SHALL MAINTAIN THE COMPOST FILTER BERM IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED.  
3. BLOWN/PLACED FILTER MEDIA SHALL BE STABILIZED WITH SEED AND EROSION CONTROL BLANKET IMMEDIATELY AFTER INSTALLATION.  
4. WHERE THE BERM REQUIRES REPAIR, IT WILL BE ROUTINELY REPAIRED.  
5. THE CONTRACTOR SHALL REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE BERM WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE BERM, OR AS DIRECTED BY THE ENGINEER.  
6. THE COMPOST FILTER BERM WILL BE DISPersed ON SITE WHEN NO LONGER REQUIRED, AS DETERMINED BY THE ENGINEER.  
7. ALL BERMS TO BE TEMPORARILY LINED WITH LANDLOK S1 WHEN INSTALLED. IF VEGETATION DOES NOT ESTABLISH WITHIN SIX MONTHS FROM THE TIME OF INSTALLATION, THEN THE BERM MUST BE SODED.

**TEMPORARY FILTREXX DIVERSION BERM**  
N.T.S.

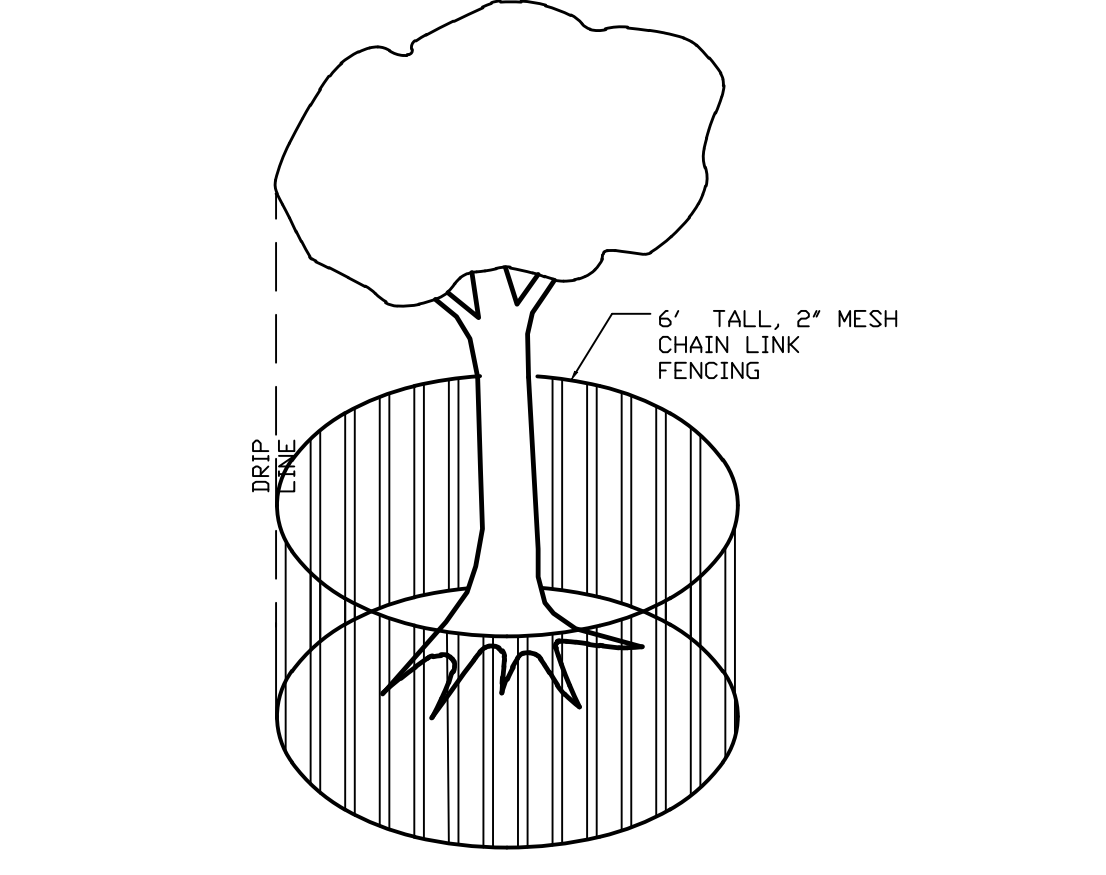
COMPOST STANDARDS  
(PER PENNSYLVANIA DEP EROSION AND SEDIMENT POLLUTION CONTROL MANUAL, TABLE 4.2)

ORGANIC MATTER CONTENT	80% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 - 8.0
MOISTURE CONTENT	30% - 50%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 gS/m (mg/mg/cm) MAXIMUM



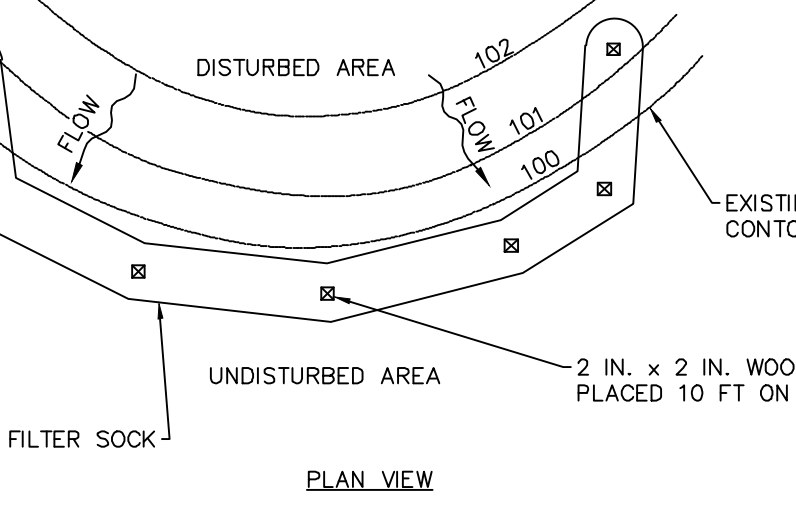
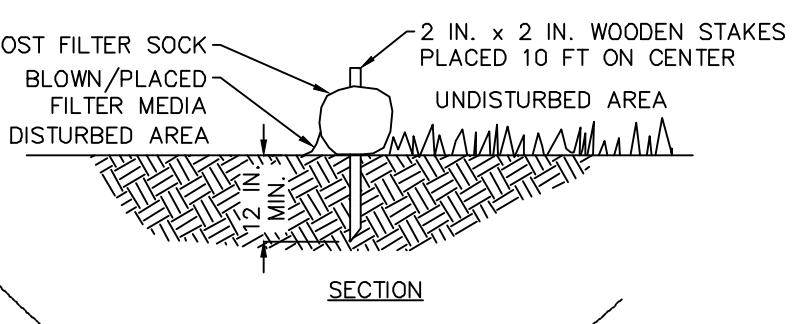
**STABILIZED CONSTRUCTION ENTRANCE**  
N.T.S.

1. THICKNESS - NOT LESS THAN EIGHT (8) INCHES.
2. WIDTH - NOT LESS THAN FULL WIDTH OF ALL POINTS OF ACCESS OR EGRESS.
3. WASHING - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO BE CLEANED TO REMOVED SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS OR OTHER APPROVED METHODS.
4. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DIPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.



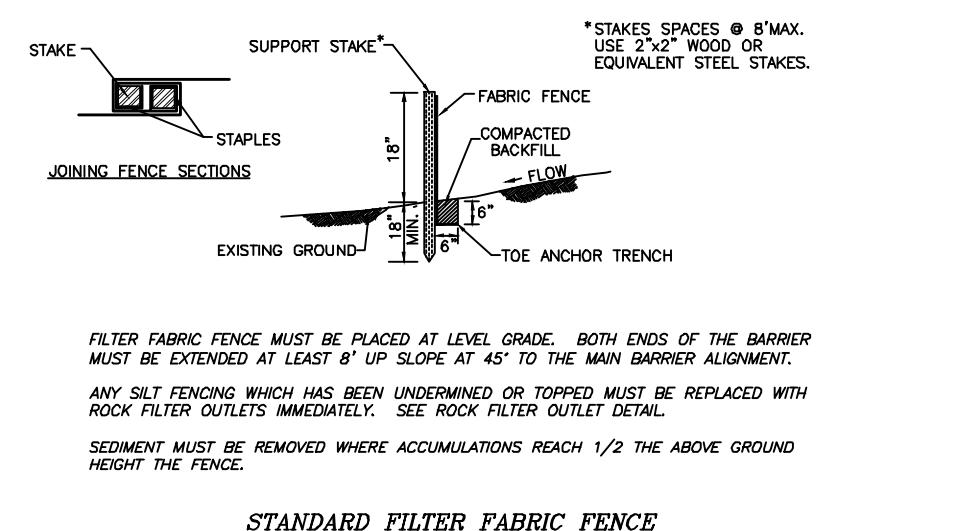
**TREE PROTECTION FENCE PLACEMENT**  
N.T.S.

ALL WOODY VEGETATION TO BE RETAINED WITHIN 25 FEET OF A BUILDING SITE, PARKING AREA, DRIVEWAY OR OTHER PROPOSED IMPROVEMENT SHALL BE PROTECTED FROM EQUIPMENT DAMAGE BY FENCING OR OTHER EFFECTIVE BARRIERS APPROVED BY THE TOWNSHIP ENGINEER AND/OR ARBORIST. FENCING OR BARRIERS SHALL BE PLACED AS MUCH AS IS PRACTICAL AT THE DRIPLINE. LOCATION MAY BE ALTERED TO AVOID INTERFERENCE WITH PROPOSED GRADING AND IMPROVEMENTS AS SHOWN ON THE PLANS. BARRIER LOCATION SHALL BE SUBJECT TO APPROVAL BY THE TOWNSHIP ENGINEER AND/OR ARBORIST.

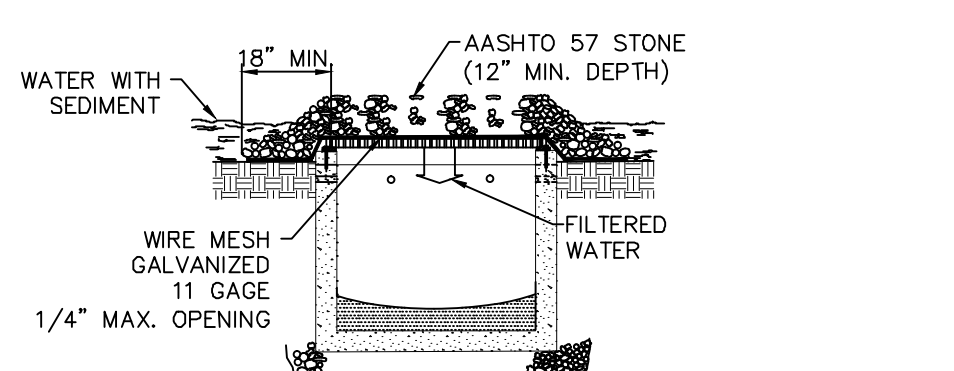


- NOTES:  
1. SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.  
2. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA. TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.  
3. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.  
4. COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.  
5. BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.  
6. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

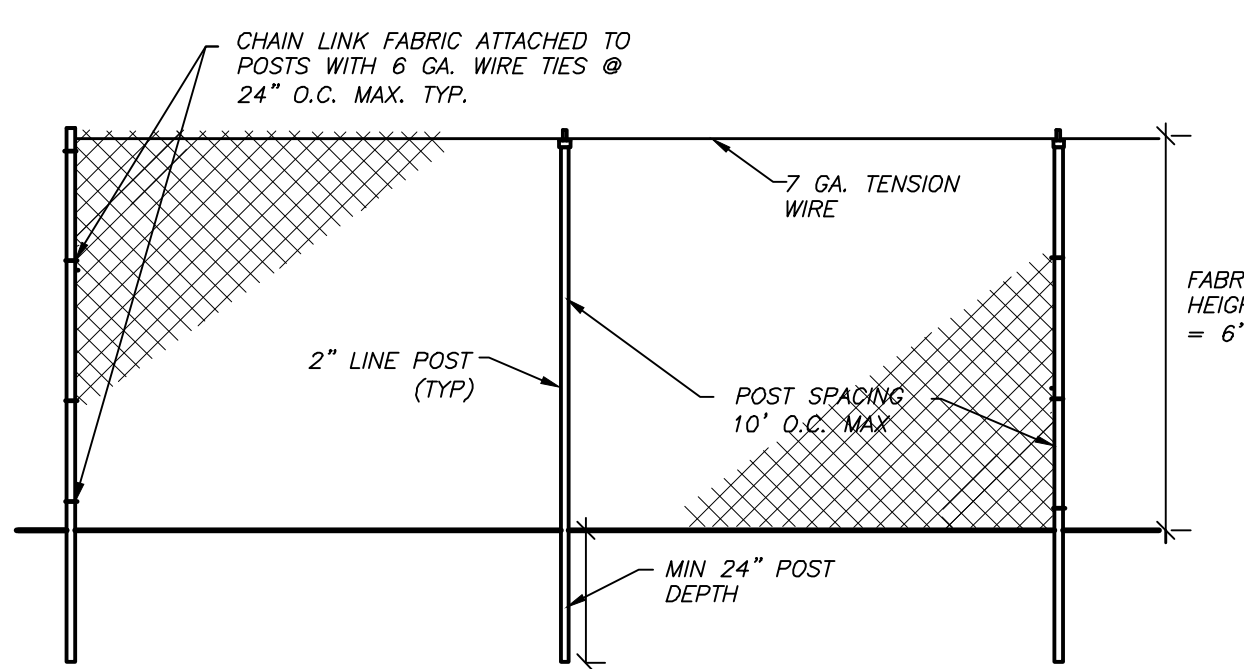
**STANDARD CONSTRUCTION DETAIL #4-1**  
**COMPOST FILTER SOCK**  
NOT TO SCALE



**STANDARD FILTER FABRIC FENCE**  
N.T.S.



**GRAVEL SEDIMENT FILTER FOR INLET**  
N.T.S.



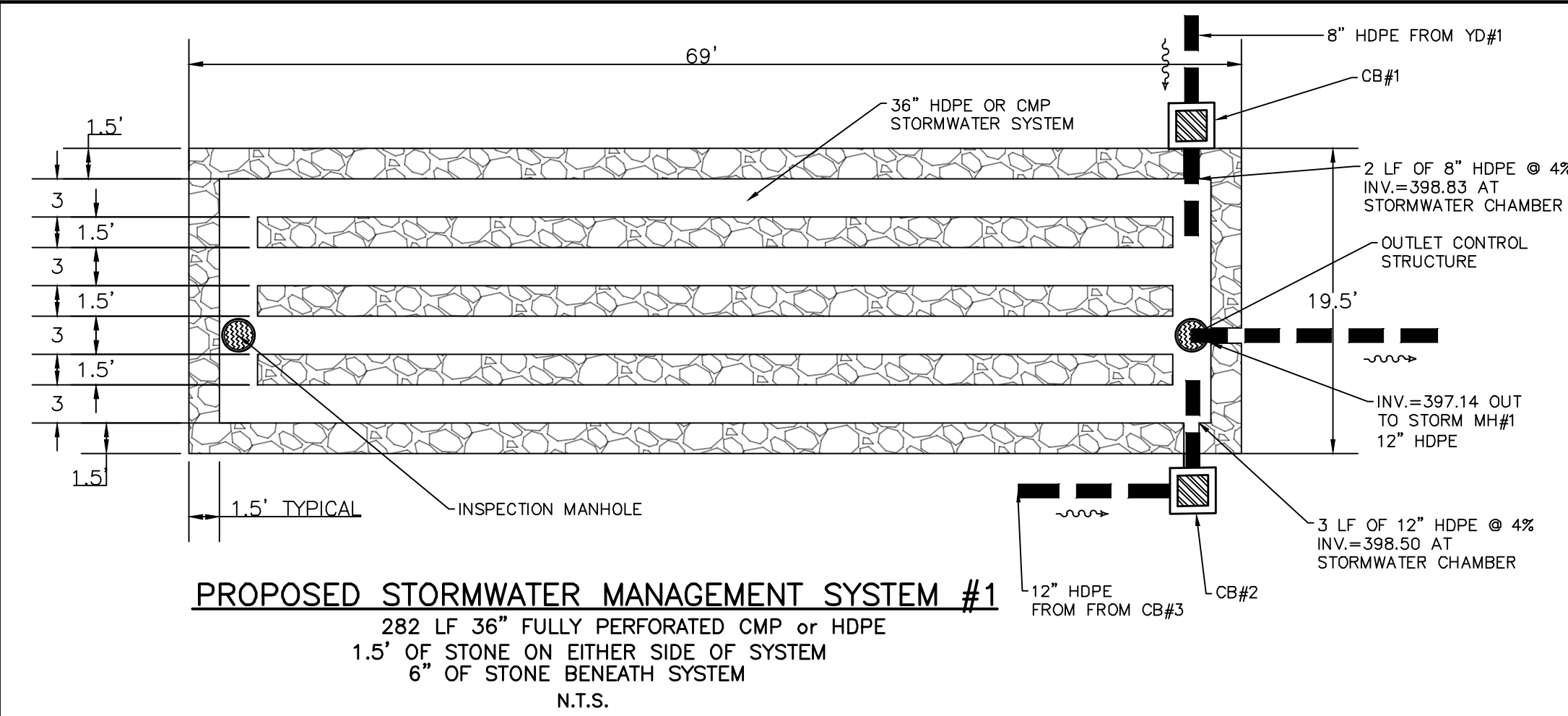
1. PROTECTION BARRIERS SHALL BE 6 FEET HIGH, CONSTRUCTED OF 2" CHAIN LINK MESH FABRIC.
2. FABRIC SHALL BE SECURED TO 2" POSTS WITH 6 GA. ALUMINUM WIRE TIES AT 24" O.C.
3. POSTS SHALL BE A MINIMUM OF 2 FEET IN THE GROUND AND SPACED 10 FEET ON CENTER MAX.
4. PLASTIC ZIP-TIES MAY NOT BE USED TO SECURE FABRIC TO POSTS.

**TREE PROTECTION BARRIER FENCING**  
N.T.S.

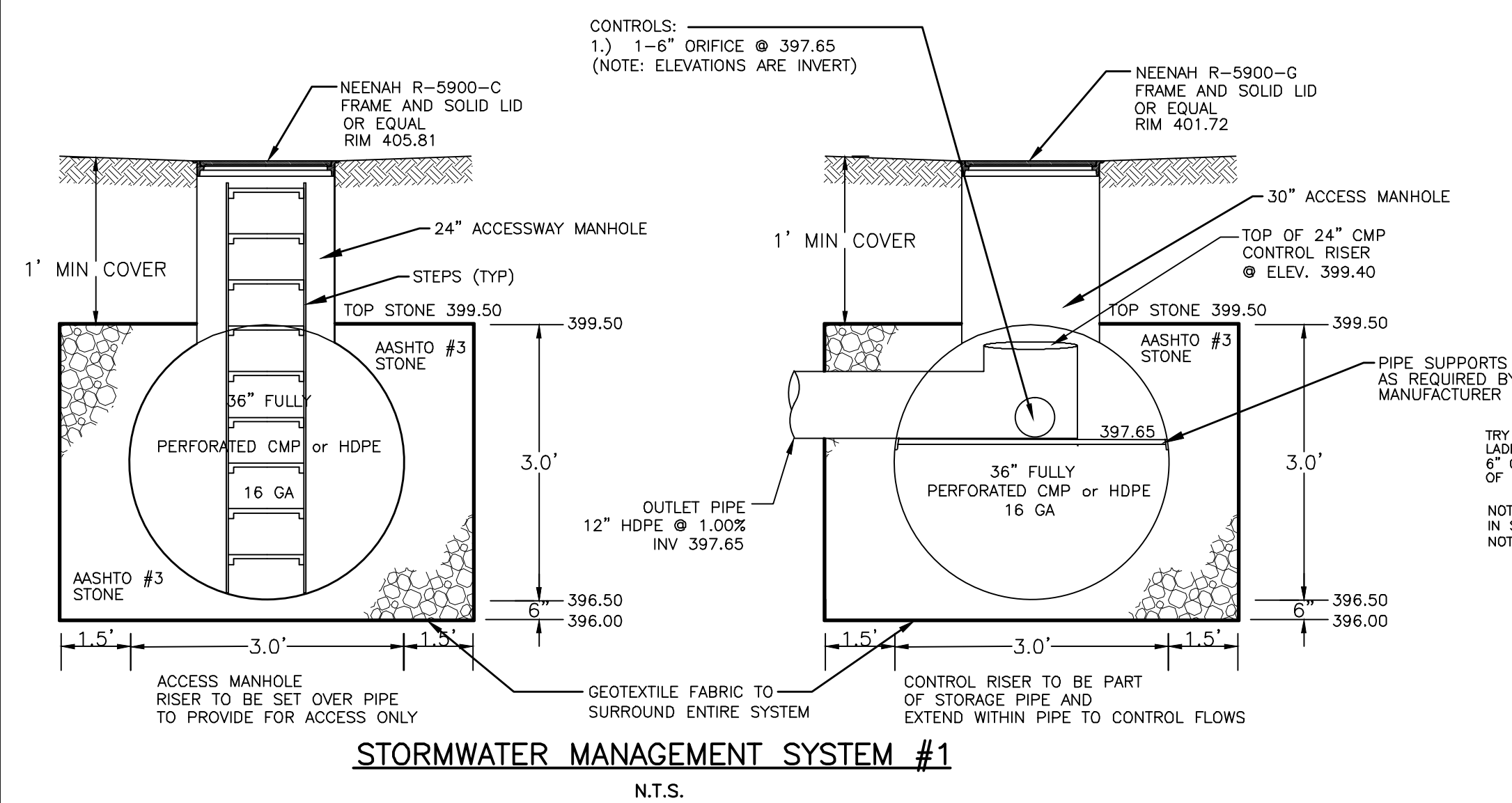
Serial Number: 2015-005-2102  
CALL BEFORE YOU DIG!  
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL  
Pennsylvania One Call System, Inc.  
1-800-242-1776

	<b>EROSION &amp; SEDIMENT CONTROL DETAILS</b>	
	<b>MOMENEE &amp; ASSOCIATES, INC.</b> CIVIL ENGINEERS AND LAND SURVEYORS 924 COUNTY LINE ROAD, BRYN MAWR, PA 19010 PHONE: (610) 527-3030 FAX: (610) 527-9008	
	FINAL PLAN OF SUBDIVISION <b>212 &amp; 216 BLOOMINGDALE AVENUE</b> RADNOR TOWNSHIP * DELAWARE COUNTY * PENNSYLVANIA	
	DATE: JANUARY 08, 2015 SHEET NO. <b>5</b> OF 7	OWNER/APPLICANT GL1 INVESTMENTS, LP 200 LANSDOWNE AVENUE WAYNE, PA 19087
ONE-CALL: 20150052102 DRAWN BY: S.M.B. CHECKED BY: J.C.M.	SCALE: AS NOTED FILE NO.: 13-060	



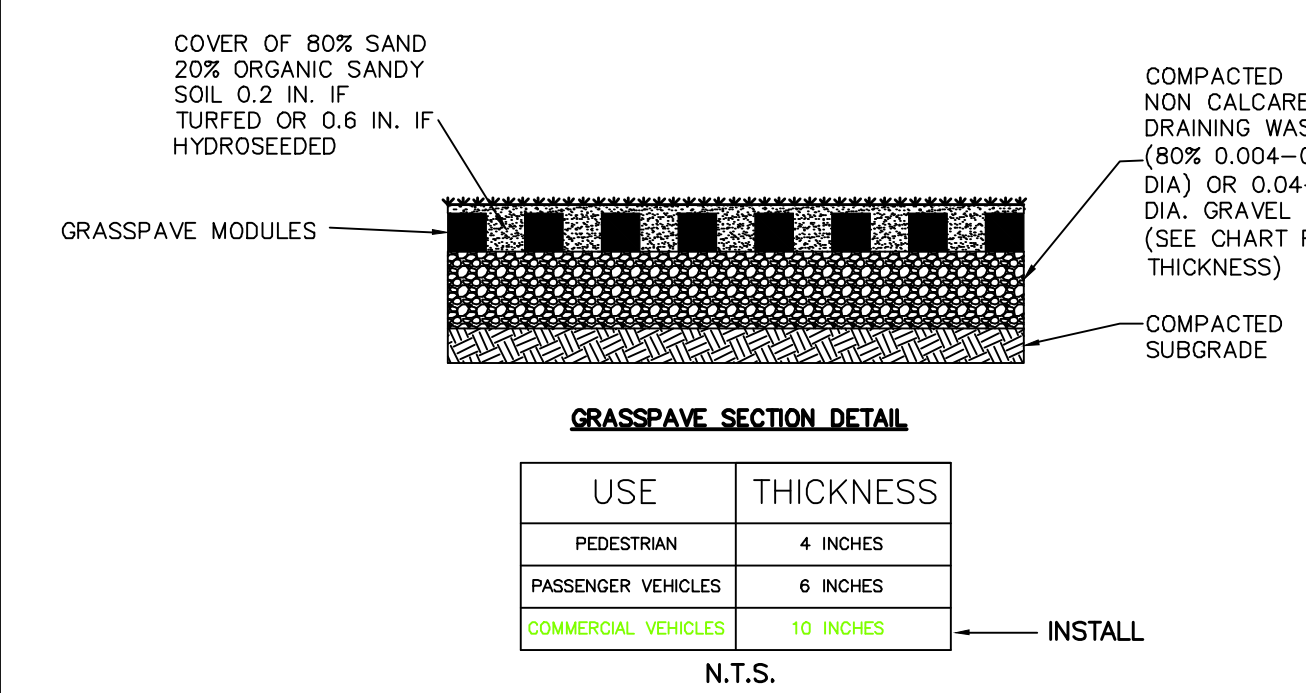


**PROPOSED STORMWATER MANAGEMENT SYSTEM #1**  
 282 LF 36" FULLY PERFORATED CMP OR HDPE  
 1.5' OF STONE ON EITHER SIDE OF SYSTEM  
 6" OF STONE BENEATH SYSTEM  
 N.T.S.



**STORMWATER MANAGEMENT SYSTEM #1**  
 N.T.S.

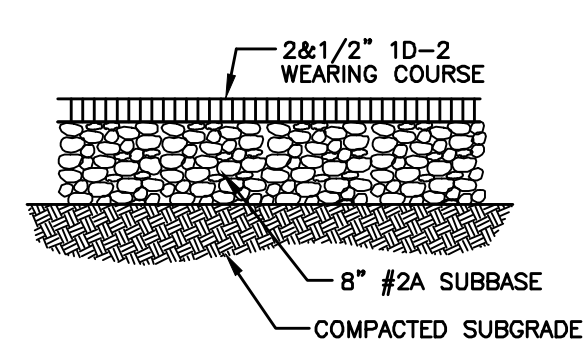
- CONSTRUCTION SPECIFICATIONS STORMWATER DETENTION SYSTEMS**
- ALTER AND REFINE THE GRADES AS NECESSARY TO BRING SUBGRADE TO REQUIRED GRADES AND SECTIONS AS SHOWN IN THE DRAWINGS.
  - THE TYPE OF EQUIPMENT USED IN SUBGRADE PREPARATION CONSTRUCTION SHALL NOT CAUSE UNDESIRABLE COMPACTION. TRAFFIC OVER SUBGRADE SHALL BE KEPT AT A MINIMUM.
  - INSTALL POLYPROPYLENE GEOTEXTILE FABRIC (I.E. DUPONT TYPAR #3401, AMOCO PROPEX #4545, OR APPROVED EQUAL) ON BOTTOM OF BED AREAS AND TACK UP SIDES OF EXCAVATION. WHERE EDGES OF ROLLS OVERLAP, THEY SHALL DO SO BY AT LEAST TWO FEET. ADEQUATE FABRIC SHALL BE LEFT ON THE ROLLS (NOT CUT FROM SIDE INSTALLATION) TO FACILITATE OVERTOPPING THE STONE AT COMPLETION OF BED AREA.
  - ALL STONE USED SHALL BE CLEAN, WASHED, CRUSHED STONE AGGREGATE MEETING PENNDOT/AASHTO #3 SPECIFICATIONS.
  - STONE BASE COURSE SHALL BE LAID OVER A DRY SUBGRADE, TO A DEPTH SHOWN IN DRAWINGS. IN LIFTS TO LAY NATURALLY COMPACTED. DO NOT ROLL OR COMPACT THE STONE BASE COURSE. KEEP THE BASE COURSE CLEAN FROM DEBRIS, CLAY AND ERODING SOIL.
  - COVER STONE BED WITH REMAINING FABRIC.
  - STONE BED TO BE TOTALLY ENCLOSED IN THE GEOTEXTILE FABRIC.
  - ALL CMP TO BE ALUMINIZED STEEL PIPE.
  - STORMWATER RISER ACCESS LADDER WILL BE USED.



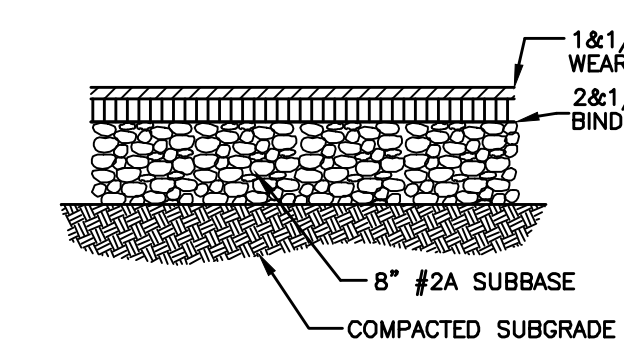
**GRASSPAVE SECTION DETAIL**  
 N.T.S.

- NOTES:**
- ALL CMP TO BE ALUMINIZED STEEL.
  - ALL HDPE TO BE N12 AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS (ADS).
  - PERFORATIONS FOR 36" PIPE SHALL SATISFY AASHTO DESIGNATION M36/M36M-90 FOR CLASS 2 PERFORATIONS. THE PERFORATIONS SHALL BE CIRCULAR HOLES WITH NOMINAL DIAMETERS OF 5/16 TO 3/8 INCH. THE PERFORATIONS SHALL BE UNIFORMLY SPACED AROUND THE FULL PERIPHERY OF THE PIPE. THE PERFORATIONS SHALL PROVIDE AN OPENING AREA OF NOT LESS THAN 3.3 SQ. IN. PER SQ. FT. OF PIPE SURFACE BASED ON NOMINAL DIAMETER AND LENGTH OF PIPE. 30 PERFORATIONS, 3/8 INCH DIAMETER, PER SQUARE FOOT OR 565 PERFORATIONS PER LINEAR FOOT SATISFIES THIS REQUIREMENT.

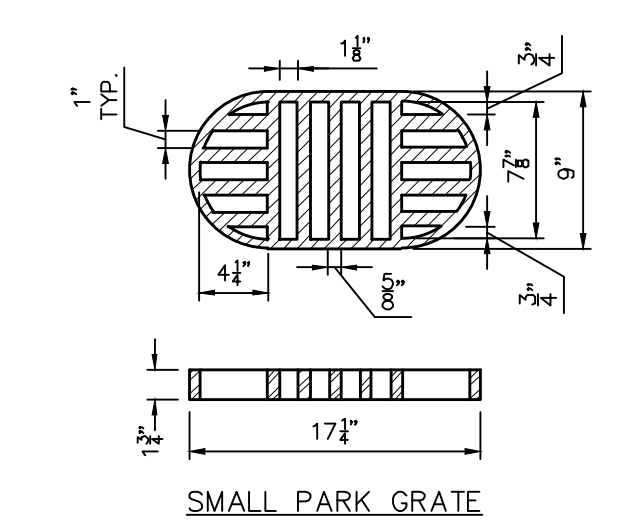
- INFILTRATION BMP NOTES:**
- INFILTRATION BMP FILTER FABRIC AND STONE SHOULD BE KEPT CLEAN OF SOIL/SEDIMENT DURING THE INSTALLATION PROCESS. IF INSPECTION INDICATES THAT SOIL SEDIMENT HAS ENTERED ANY OF THE INFILTRATION SEEPAGE BEDS, APPROPRIATE MEASURES (I.E. CLEANING THE SOIL/SEDIMENT FROM FABRIC, STONE, BED ETC. AND OR REPLACEMENT OF THE FABRIC AND STONE) SHOULD BE ADDRESSED.
  - ALL STONE FOR THE CONSTRUCTION OF THE INFILTRATION BMP SHOULD BE UNIFORMLY GRADED AND CLEAN WASHED AGGREGATE.
  - THE BOTTOM OF ALL INFILTRATION BMPs SHALL BE UNDISTURBED OR UNCOMPACTED SUBGRADE.
  - INFLOW AND OUTFLOW POINTS INTO THE INDIVIDUAL ON-LOT SYSTEMS SHOULD BE KEPT CLEAR OF LEAVES AND OTHER DEBRIS. ANY LEAVES AND DEBRIS WILL NEGATIVELY IMPACT THE PERFORMANCE OF THESE SYSTEMS. ALL DOWNSPOUTS AND OVERFLOW PIPES SHOULD BE KEPT IN GOOD WORKING ORDER.
  - ALL INFILTRATION BMPs SHALL BE LOCATED A MINIMUM OF 10' FROM A BASEMENT WALL.
  - AFTER THE INFILTRATION BED IS COMPLETELY INSTALLED, ALL HEAVY CONSTRUCTION EQUIPMENT SHALL BE RESTRICTED FROM THE INFILTRATION BEDS TO ELIMINATE IMPACTS WHICH MAY COMPROMISE IT. IN THE EVENT ANY IMPACTS COMPROMISE THE FUNCTIONALITY OF THE INFILTRATION BEDS, IT MUST BE IMMEDIATELY REPAIRED OR REPLACED TO DESIGN SPECIFICATIONS.



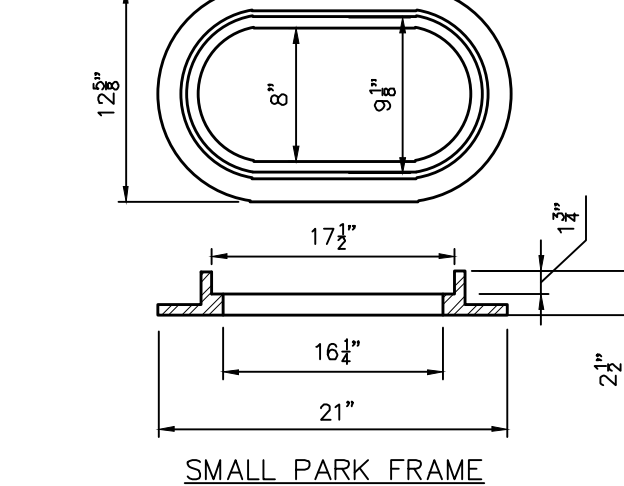
**DRIVEWAY PAVING DETAIL**  
 N.T.S.



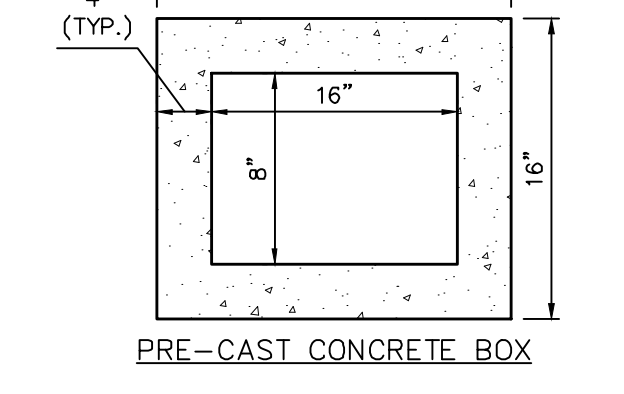
**COMMON DRIVE PAVING DETAIL**  
 N.T.S.



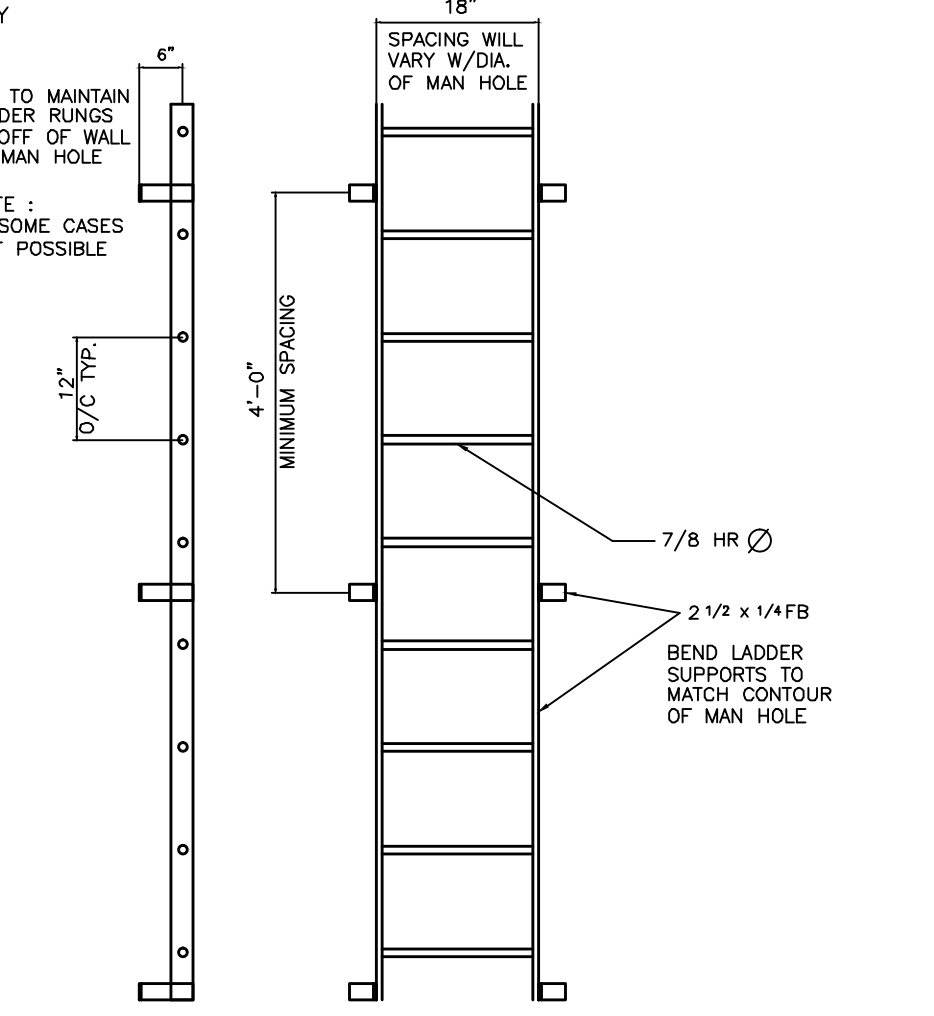
**SMALL PARK GRATE**  
 N.T.S.



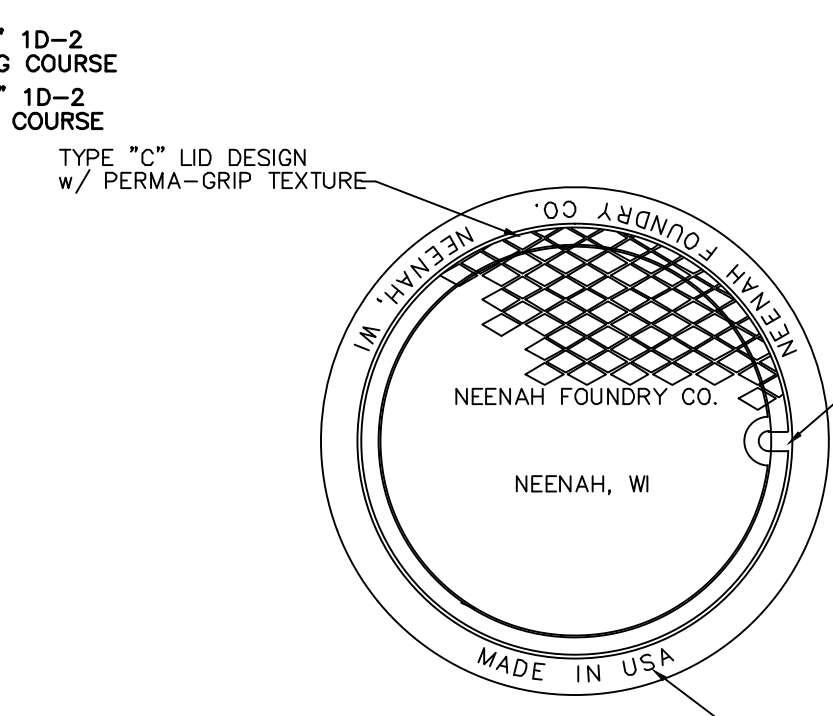
**SMALL PARK FRAME**  
 N.T.S.



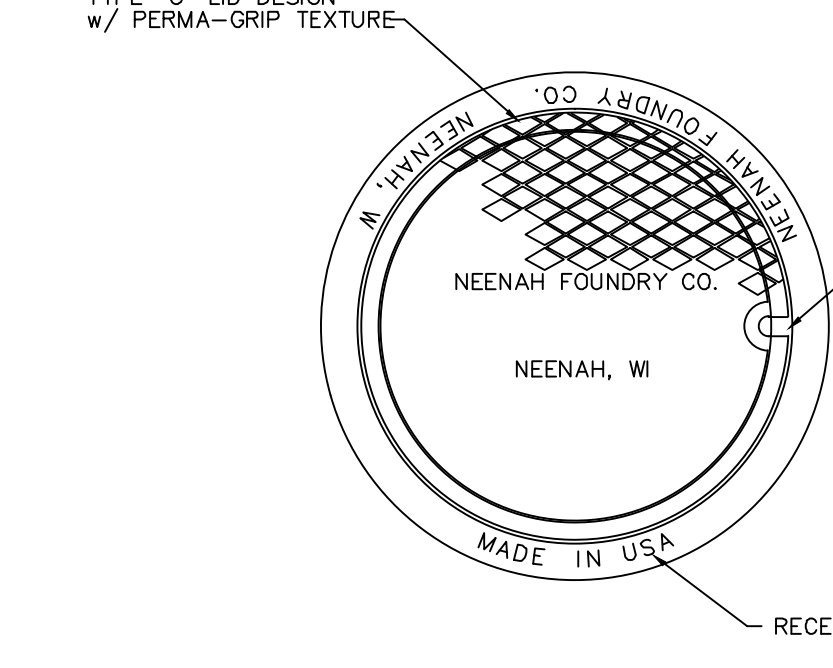
**SMALL PARK GRATE DETAIL**  
 N.T.S.



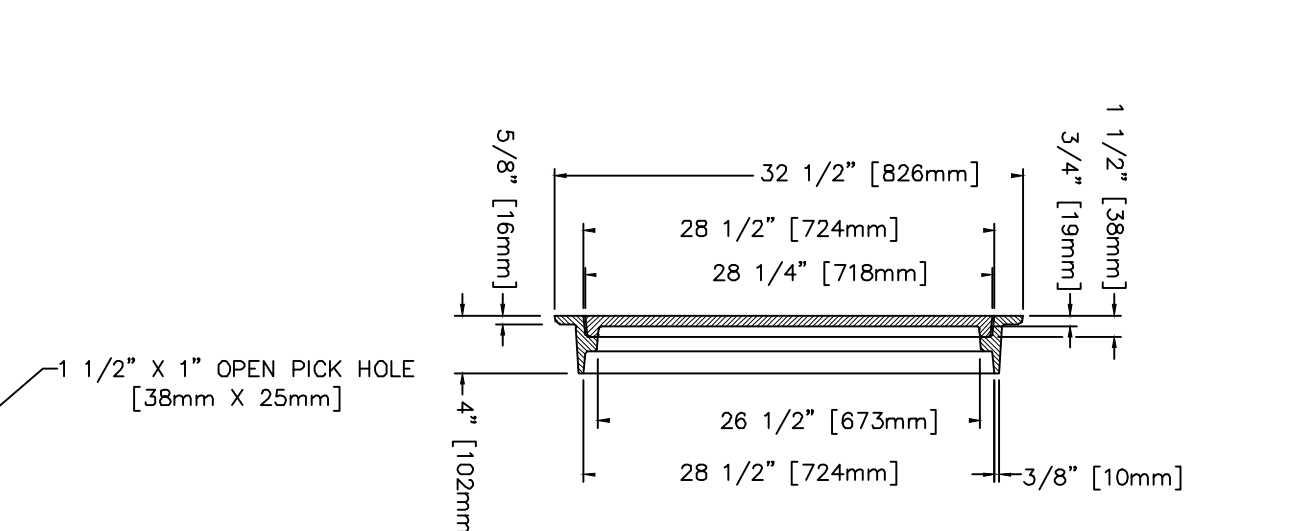
**STORMWATER RISER ACCESS LADDER**  
 N.T.S.



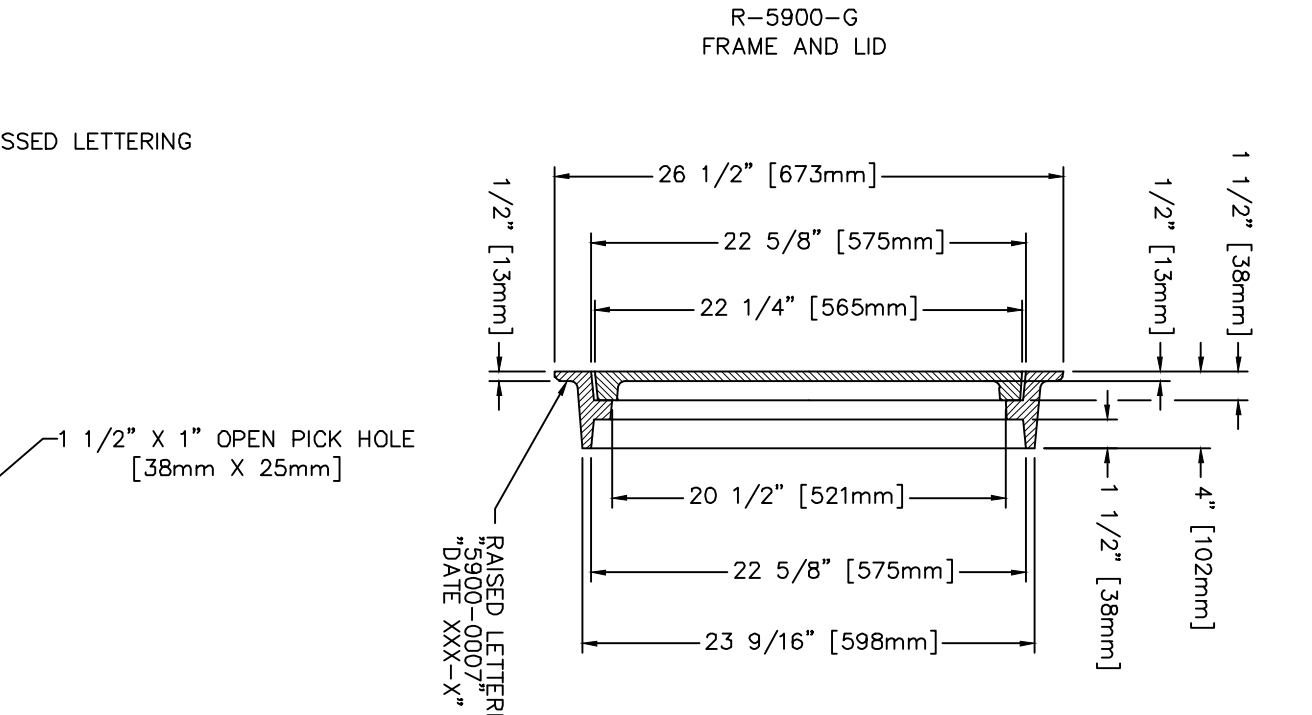
**30" ACCESS MANHOLE**  
 R-5900-G  
 FRAME AND LID  
 N.T.S.



**24" MANHOLE OVER RISER**  
 R-5900-E  
 FRAME AND LID  
 N.T.S.



**30" ACCESS MANHOLE**  
 R-5900-G  
 FRAME AND LID  
 N.T.S.

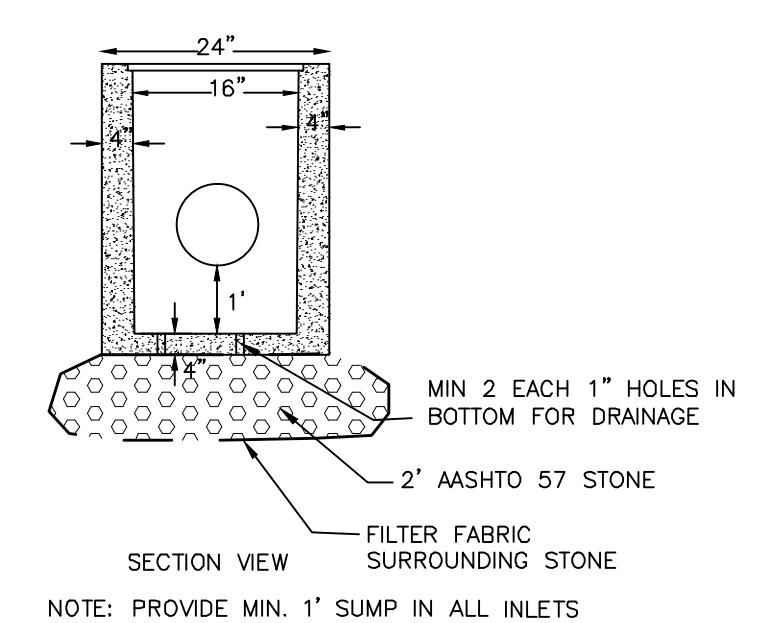


**24" MANHOLE OVER RISER**  
 R-5900-E  
 FRAME AND LID  
 N.T.S.

**MATERIAL:** CAST GRAY IRON ASTM A-48, CLASS 35B FOR CORRUGATED METAL PIPE SIZED TO FIT SNUGLY INTO OPENING OF CORRUGATED PIPE.

**ADDITIONAL ANCHORAGE TO METAL PIPE MAY BE ACCOMPLISHED BY DRILLING HOLES IN THE SLEEVE OR BARREL PORTION OF THE FRAME AND BOLTING THE FRAME IN PLACE. FRAMES CAN BE FURNISHED DRILLED FOR THIS PURPOSE ON SPECIAL ORDER.**

**STORMWATER OBSERVATION MANHOLE DETAILS**  
 N.T.S.



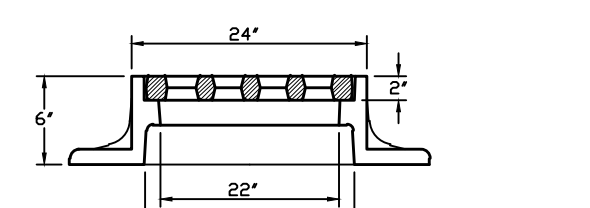
**SMALL PARK GRATE BOX**  
 (NON-TRAFFIC BEARING)  
 N.T.S.

Manufactured by MODERN CONCRETE SEPTIC TANK CO. or other NPCC certified plant



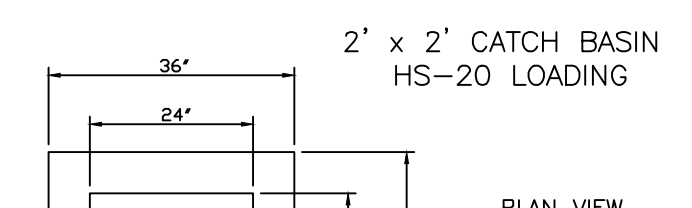
**2' x 2' SUMP BOX**  
 (NON-TRAFFIC BEARING)  
 N.T.S.

Manufactured by MODERN CONCRETE SEPTIC TANK CO. or other NPCC certified plant



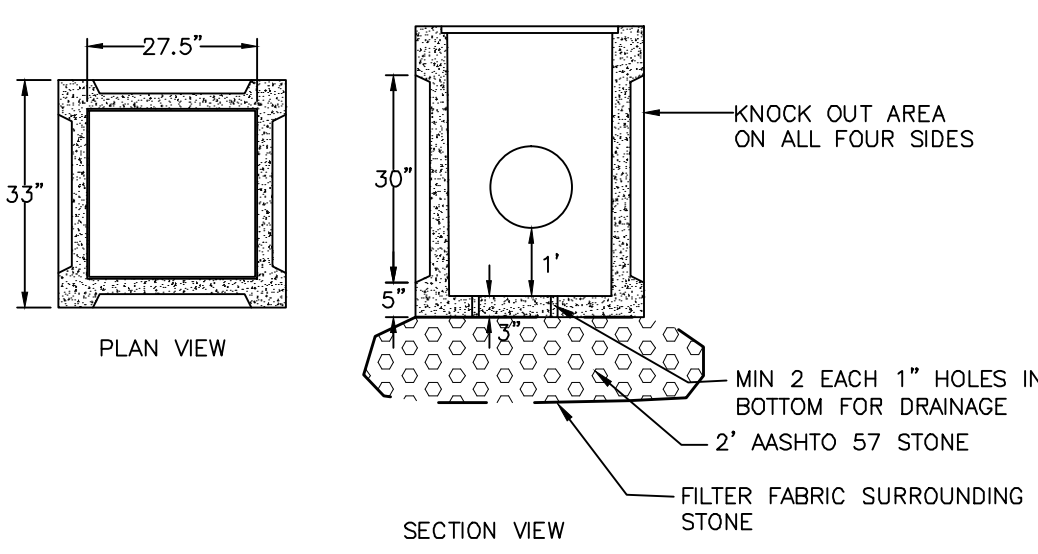
**SQUARE GUTTER INLET**  
 (FRAME AND GRATE)  
 N.T.S.

MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B  
 FINISH: NOT PAINTED

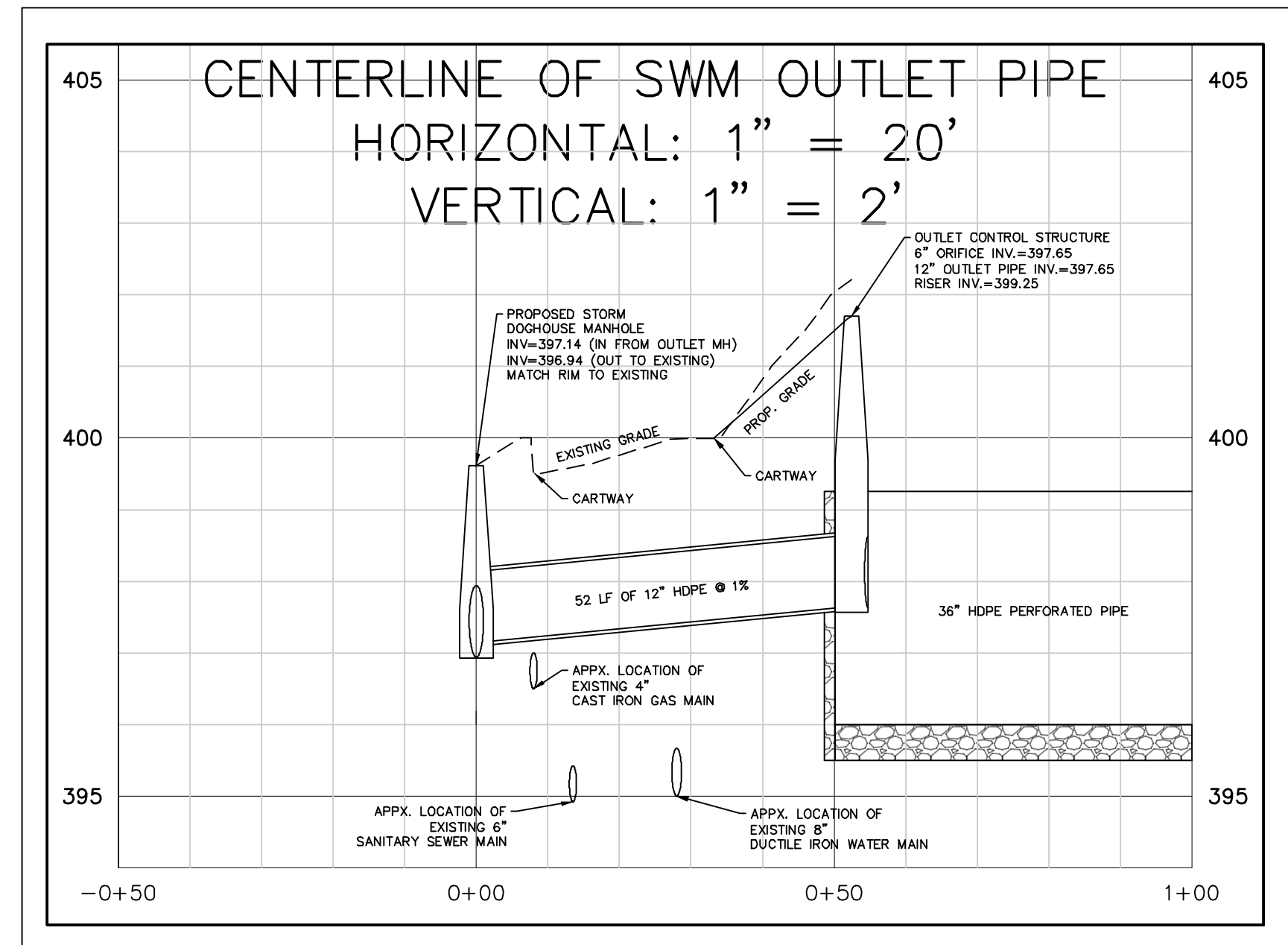


**2' x 2' INLET**  
 (TRAFFIC BEARING)  
 N.T.S.

Manufactured by Modern Concrete Septic Tank Co. or other NPCC certified plant. Sump box to be provided with solid lid.



**DOWNSPOUT DETAIL**  
 N.T.S.



**CENTERLINE OF SWM OUTLET PIPE**  
 HORIZONTAL: 1" = 20'  
 VERTICAL: 1" = 2'  
 N.T.S.

Serial Number: 2015-005-2102  
**CALL BEFORE YOU DIG!**  
 PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL Pennsylvania One Call System, Inc. 1-800-242-1776

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**REGISTERED PROFESSIONAL ENGINEER**  
 KEVIN R. MOMENEE  
 ENGINEER  
 PE020326E

**CONSTRUCTION DETAILS**

**MOMENEE & ASSOCIATES, INC.**  
 CIVIL ENGINEERS AND LAND SURVEYORS  
 924 COUNTY LINE ROAD, BRYN MAWR, PA 19010 PHONE: (610) 527-3030 FAX: (610) 527-9008

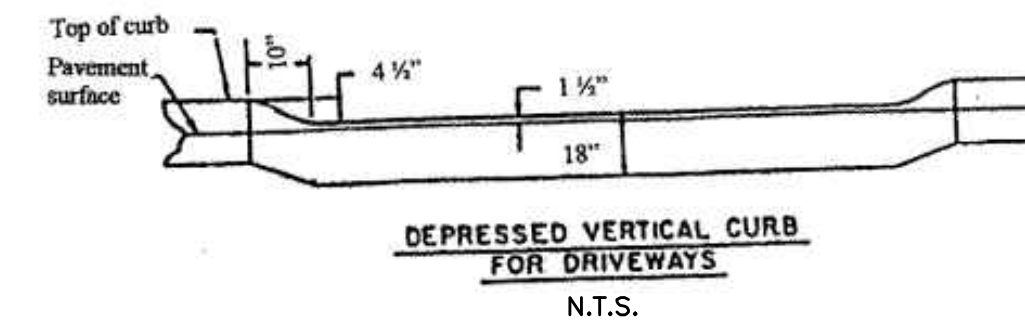
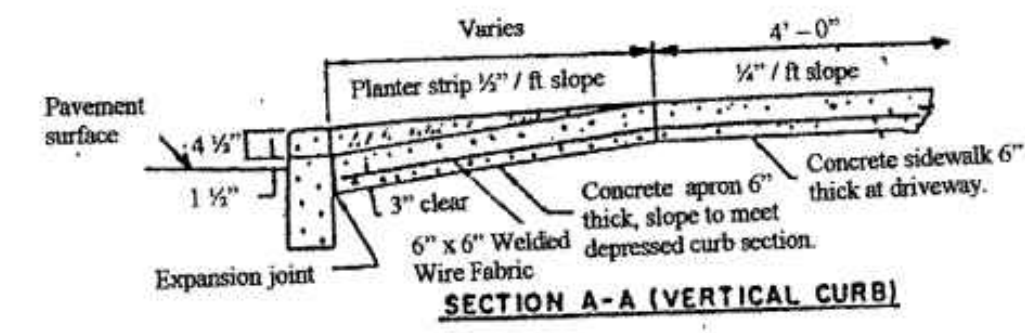
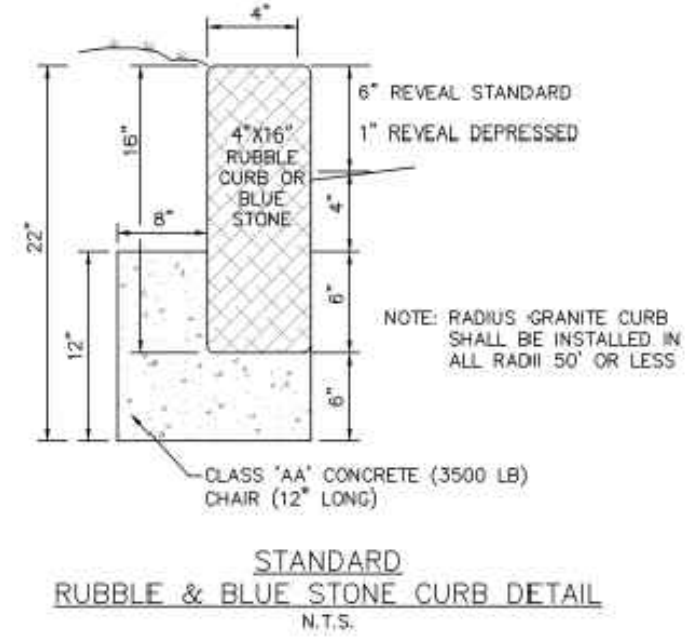
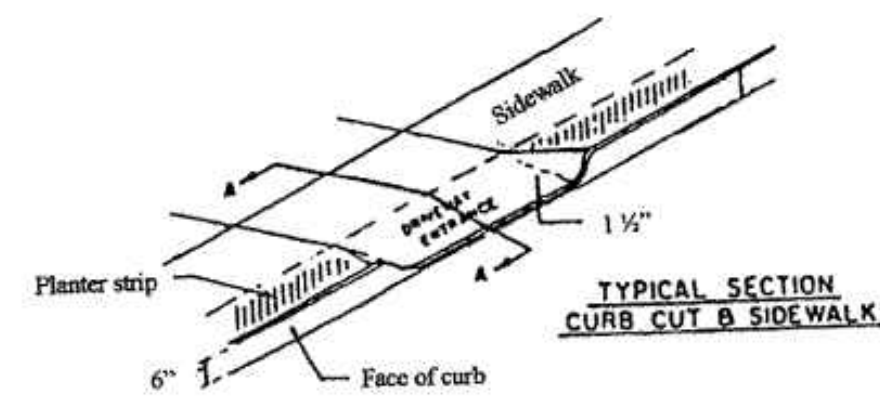
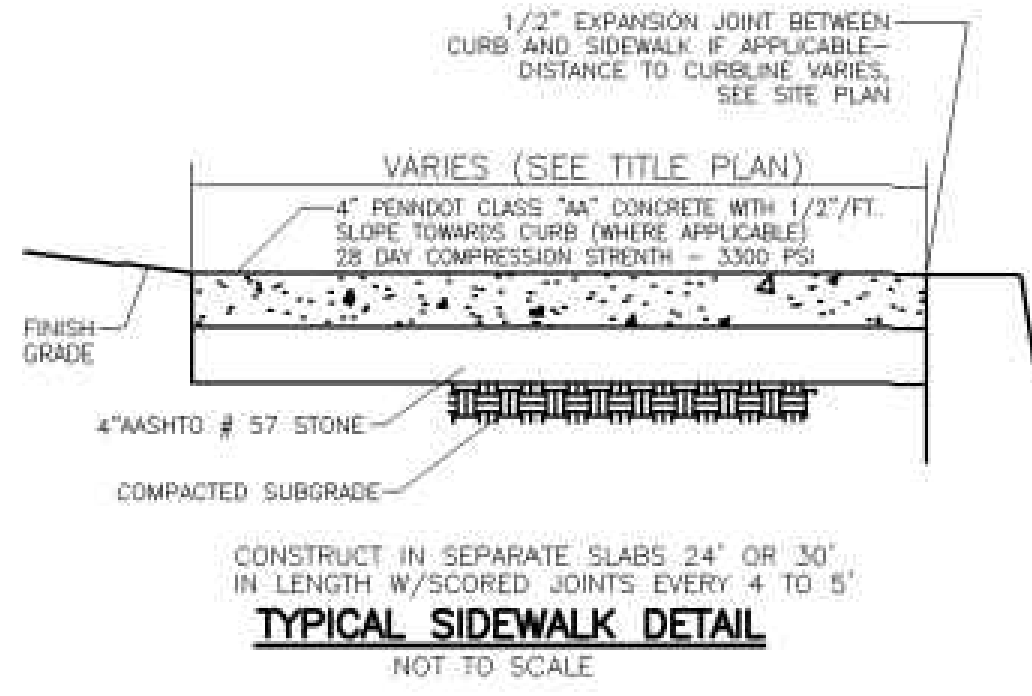
FINAL PLAN OF SUBDIVISION  
 212 & 216 BLOOMINGDALE AVENUE  
 RADNOR TOWNSHIP • DELAWARE COUNTY • PENNSYLVANIA

DATE: JANUARY 08, 2015  
 SHEET NO. 6  
 OF 7  
 SCALE: AS NOTED  
 FILE NO.: 13-060

ONE-CALL: 20150052102  
 DRAWN BY: S.M.B.  
 CHECKED BY: J.C.M.

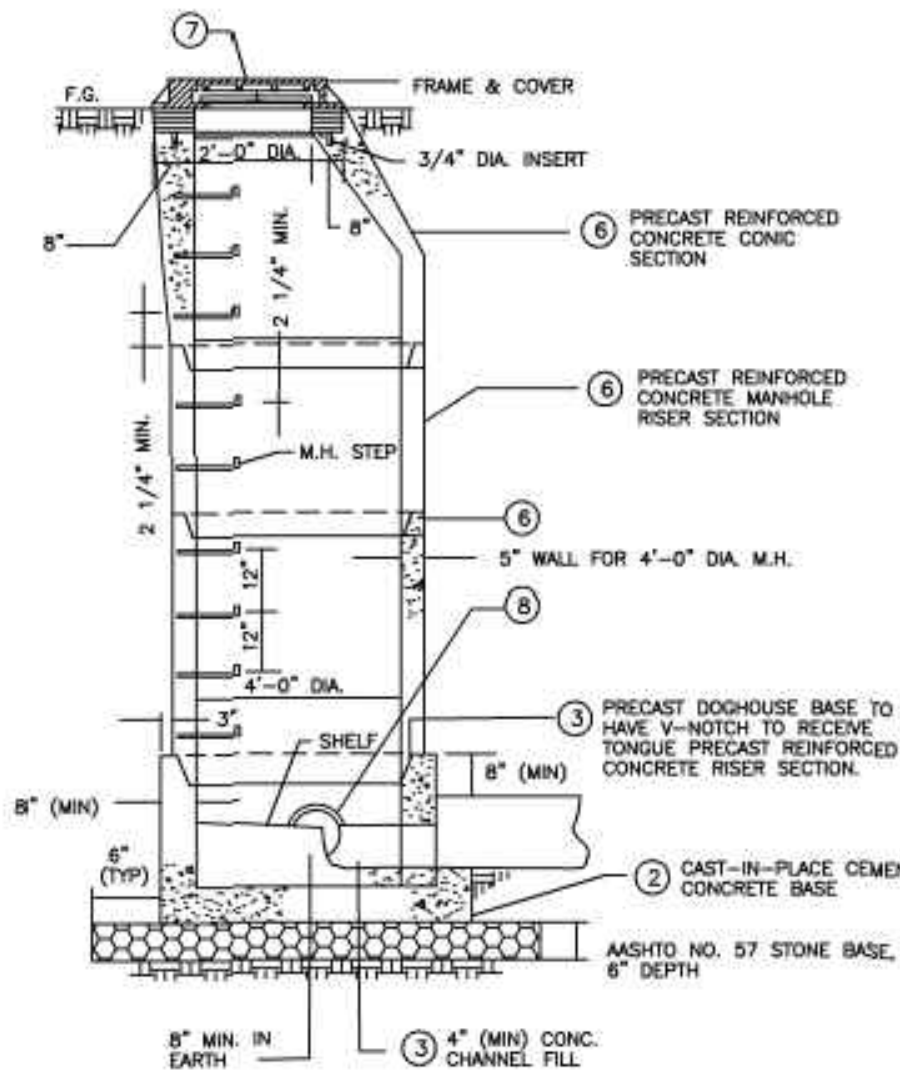
OWNER/APPLICANT  
 GL1 INVESTMENTS, LP  
 200 LANSLOWNE AVENUE  
 WAYNE, PA 19087



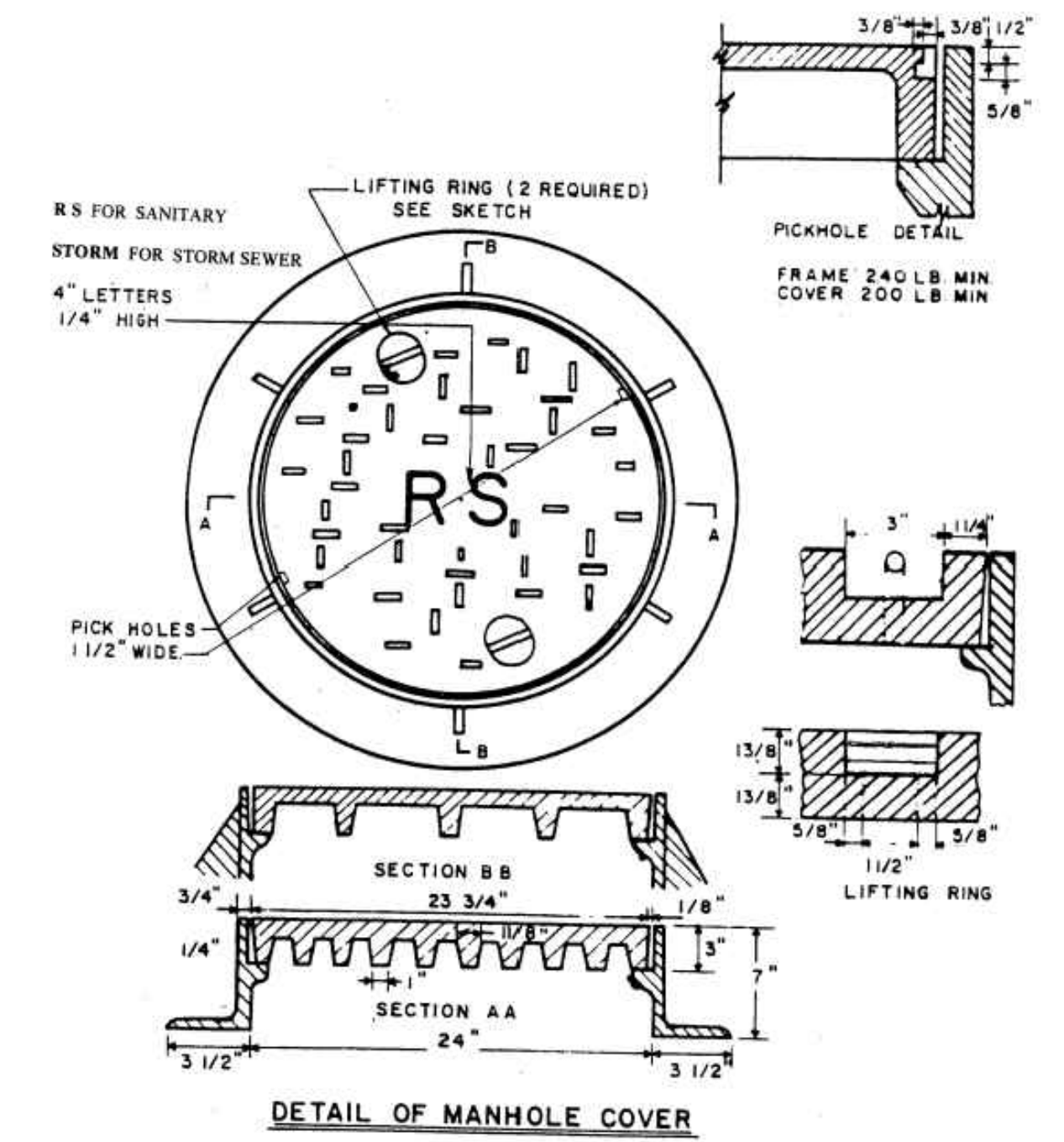


**SANITARY SEWER DOGHOUSE MANHOLE CONSTRUCTION SPECIFICATIONS**

- EXCAVATE AROUND EXISTING STORM SEWER MANHOLE AND MAIN. REMOVE EXISTING STORM MANHOLE.
- CAST-IN-PLACE CEMENT CONCRETE BASE BENEATH EXISTING STORM SEWER AT LOCATION SHOWN.
- INSTALL PRECAST DOGHOUSE RISER SECTION ON NEWLY CAST BASE.
- INSTALL BASIN OUTLET PIPE INTO THE PRECAST OPENING IN THE MANHOLE WALL. GROUT INSIDE AND OUTSIDE OF MANHOLE WALL AT PIPE INTERFACE WITH NON-SHRINK GROUT TO PROVIDE A WATER TIGHT SEAL.
- GROUT MANHOLE CHANNEL AROUND THE EXISTING STORM SEWER WITH CLASS 'A' CEMENT CONCRETE.
- INSTALL REMAINING RISER SECTION(S) AND CONICAL TOP SECTION.
- INSTALL CAST IRON FRAME AND COVER.
- COMPLETELY REMOVE EXISTING SEWER PIPE TO THE LIMIT OF THE INSIDE WALL OF THE MANHOLE. GROUT INSIDE AND OUTSIDE OF MANHOLE WALL AT PIPE INTERFACE WITH NON-SHRINK GROUT TO PROVIDE A WATER TIGHT SEAL.

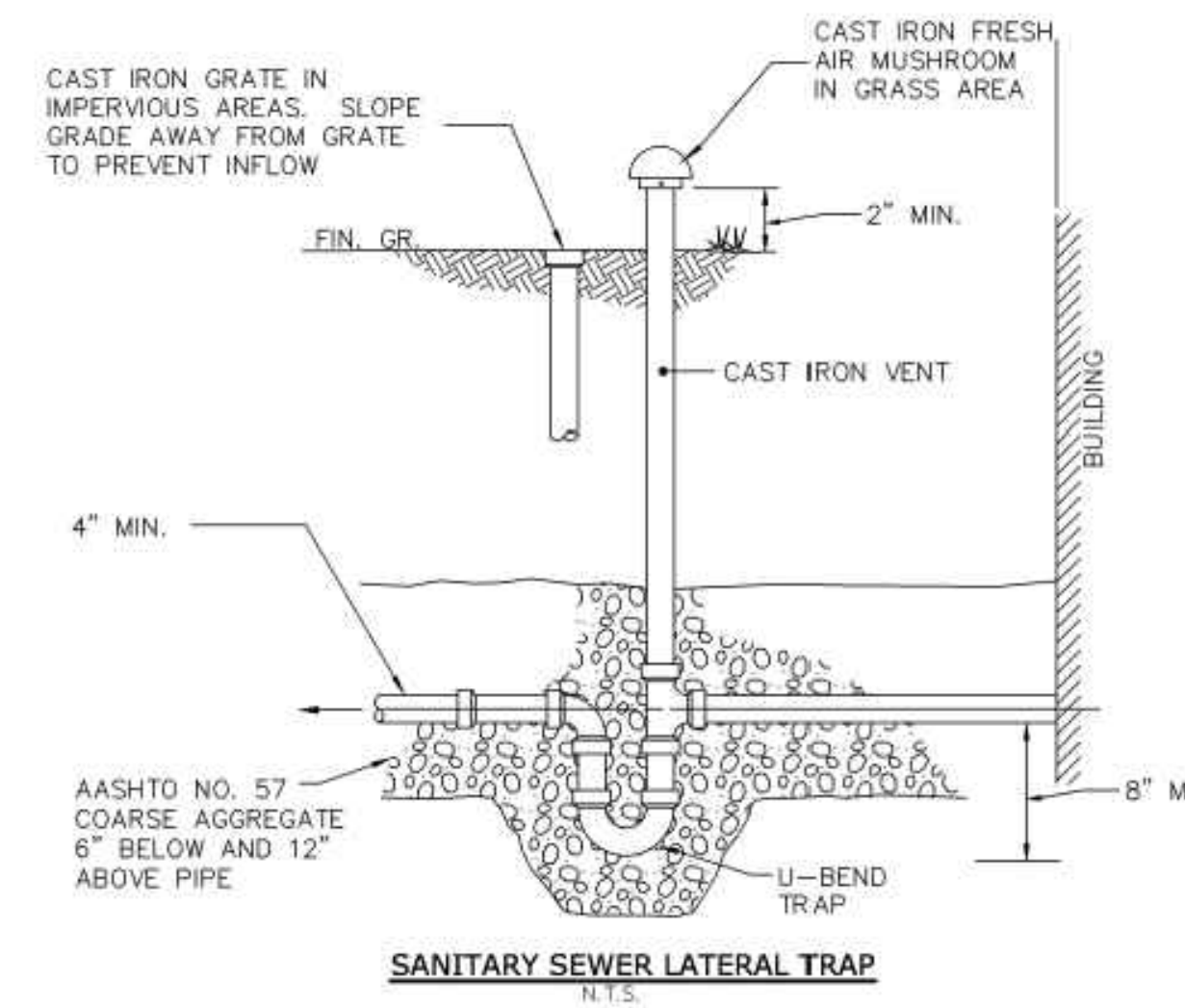


**SANITARY SEWER DOGHOUSE MANHOLE DETAIL**  
NOT TO SCALE

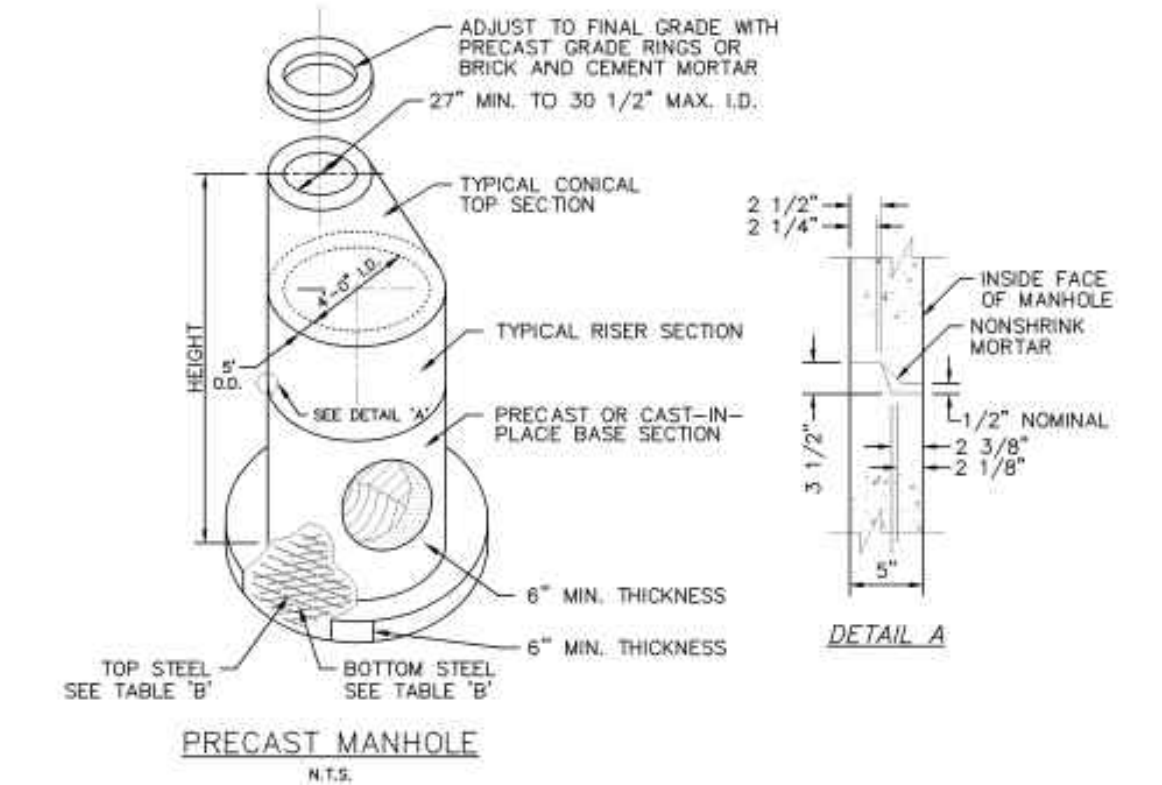


DETAIL OF MANHOLE COVER  
N.T.S.

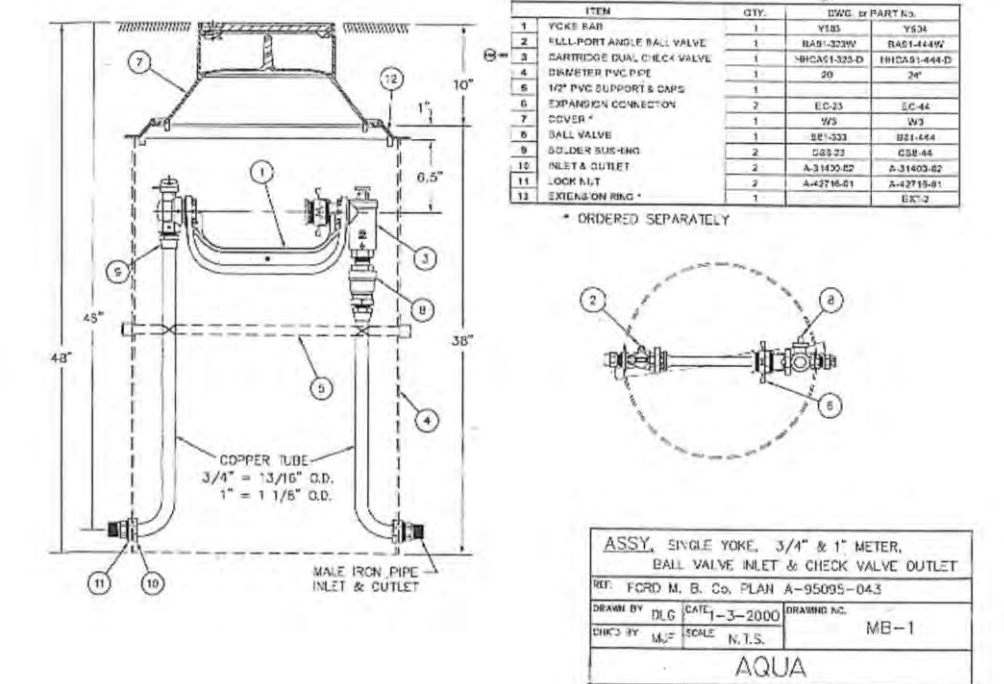
- NOTES:
- TRAP AND RISER MUST BE CAST IRON
  - NO REDUCTION IN SIZE FROM HOUSE TO SEWER MAIN
  - NO STORM SEWER OR SURFACE WATER OF ANY KIND MAY ENTER THE SANITARY SYSTEM.
  - CONCRETE ENCASUREMENT MAY BE REQUIRED AT THE DISCRETION OF THE TOWNSHIP ENGINEER.



**SANITARY SEWER LATERAL TRAP**  
N.T.S.



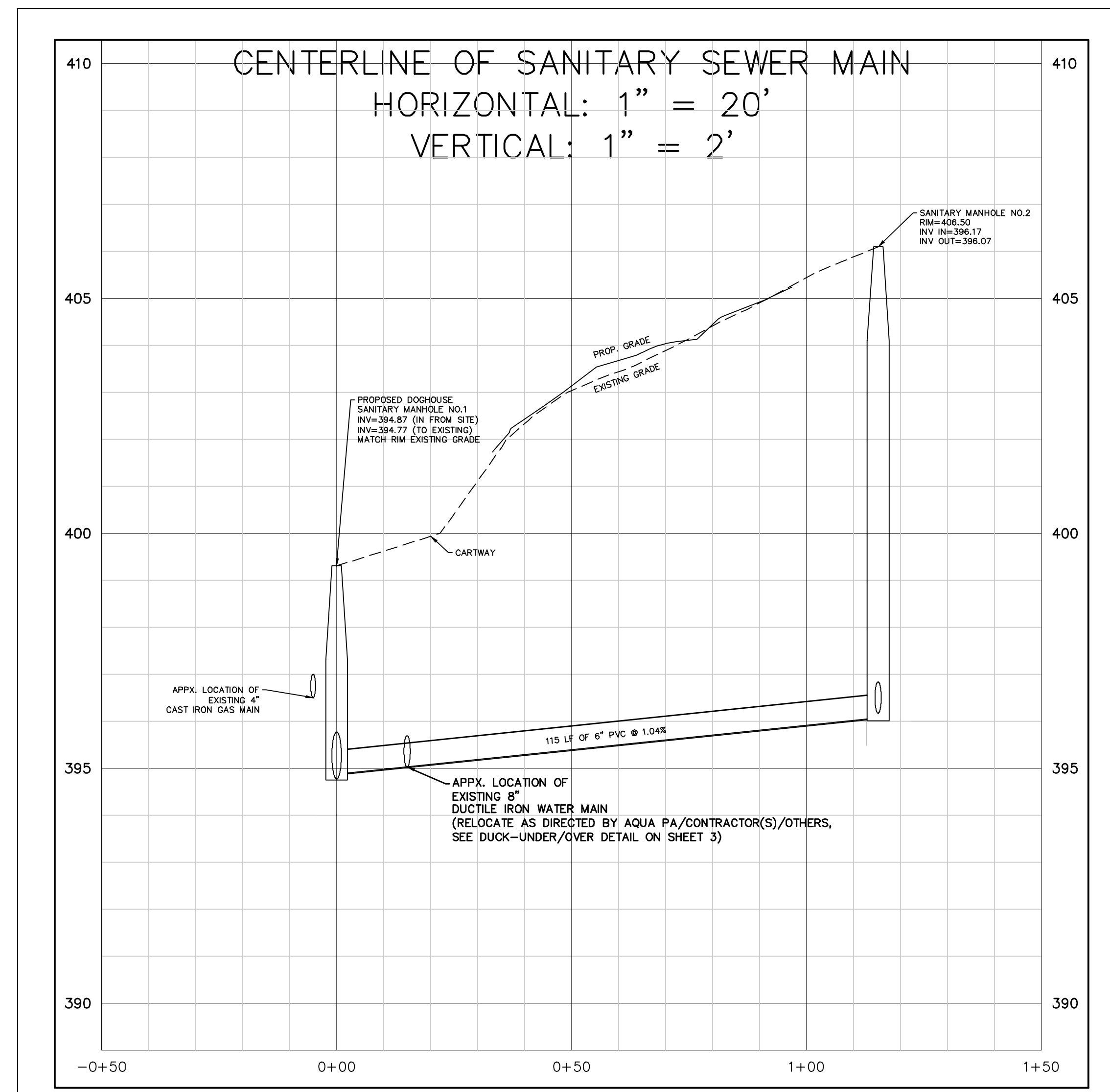
- NOTES:
- Precast manholes meeting the requirements of publication 408 specifications, section 605.2(C), may be substituted for Type 'A' and 'B' manholes.
  - Provide manhole steps meeting the requirements of publication 408 specifications, section 605.2(C). Alternate configurations and dimensions, as approved by the engineer, may be used.



**NOTES:**

- THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REPAIR OF THIS OPENING FOR A PERIOD OF ONE YEAR FOLLOWING APPROVAL OF THE STREET REPAIR BY THE TOWNSHIP ENGINEER.
- THE TOWNSHIP MUST BE NOTIFIED 24 HOURS PRIOR TO ANY STREET REPAIR.
- PIPE SHALL BE CENTERED IN TRENCH.

**TRENCH RESTORATION AND BACKFILL FOR PAVED AREAS**  
NOT TO SCALE



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OWNER/APPLICANT  
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200 LANSDOWNE AVENUE  
WAYNE, PA 19087

REGISTERED PROFESSIONAL ENGINEER  
KEVIN R. MOMENEE  
PE202026E