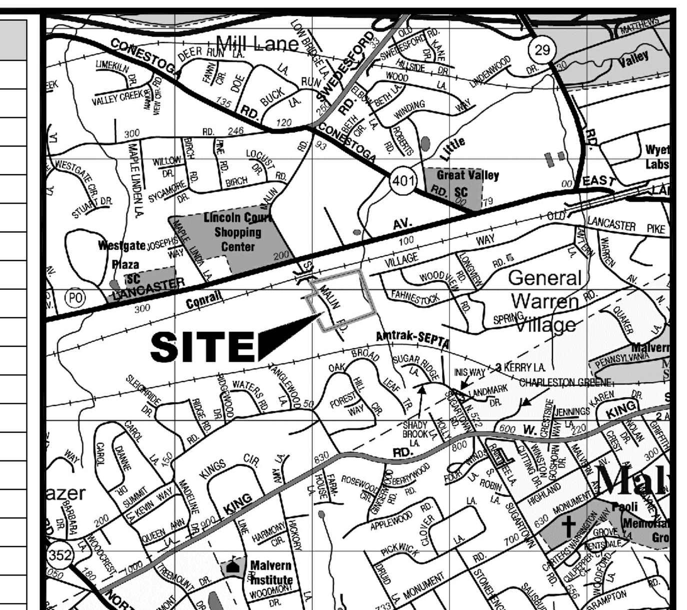
PRELIMINARY
LAND DEVELOPMENT PLAN
FOR
MALIN ROAD DEVELOPMENT
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SHEET INDEX	
SHEET 01	COVER SHEET
SHEET 02	TITLE PLAN
SHEET 03	EXISTING FEATURES / CONSERVATION PLAN 'A'
SHEET 04	EXISTING FEATURES / CONSERVATION PLAN 'B'
SHEET 05	DEMOLITION PLAN 'A'
SHEET 06	DEMOLITION PLAN 'B'
SHEET 07	DEMOLITION PLAN 'C'
SHEET 08	LAYOUT & GEOMETRY PLAN 'A'
SHEET 09	LAYOUT & GEOMETRY PLAN 'B'
SHEET 10	LAYOUT & GEOMETRY PLAN 'C'
SHEET 11	GRADING & UTILITY PLAN 'A'
SHEET 12	GRADING & UTILITY PLAN 'B'
SHEET 13	GRADING & UTILITY PLAN 'C'
SHEET 14	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN 'A'
SHEET 15	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN 'B'
SHEET 16	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN 'C'
SHEET 17	SEDIMENTATION & EROSION CONTROL PLAN 'A'
SHEET 18	SEDIMENTATION & EROSION CONTROL PLAN 'B'
SHEET 19	SEDIMENTATION & EROSION CONTROL PLAN 'C'
SHEET 20	SEDIMENTATION & EROSION CONTROL NOTES & DETAILS
SHEET 21	LANDSCAPING & LIGHTING PLAN 'A'
SHEET 22	LANDSCAPING & LIGHTING PLAN 'B'

CONT ...	
SHEET 23	LANDSCAPING & LIGHTING PLAN 'C'
SHEET 24	LANDSCAPING NOTE & DETAILS
SHEET 25	LIGHTING PLAN 'A'
SHEET 26	LIGHTING PLAN 'B'
SHEET 27	LIGHTING PLAN 'C'
SHEET 28	ROAD 'A' (MALIN ROAD) & ALLEY 1-3 PROFILES
SHEET 29	ROAD 'B' PROFILE, ALLEY #4, #5 & PARKING AREA
SHEET 30	ROAD 'C' PROFILE & EMERGENCY ACCESS PROFILE
SHEET 31	ROAD 'D' & 'E' PROFILE
SHEET 32	ROAD 'F' PROFILE
SHEET 33	OFF ROAD PROFILES (SANITARY)
SHEET 34	OFF ROAD PROFILES (STORM)
SHEET 35	OFF ROAD PROFILES (STORM)
SHEET 36	CONSTRUCTION DETAILS
SHEET 37	CONSTRUCTION DETAILS
SHEET 38	CONSTRUCTION DETAILS
SHEET 39	CONSTRUCTION DETAILS
SHEET 40	CONSTRUCTION DETAILS
SHEET 41	CONSTRUCTION DETAILS
SHEET 42	EMERGENCY VEHICLE TURNING TEMPLATE PLAN
SHEET 43	UNDERPASS WALKWAY



LOCATION MAP
SCALE: 1" = 2000'

DEVELOPMENT CHART

PROPOSED AMENDED ZONING DISTRICT (RESIDENTIAL REVITALIZATION DISTRICT)
(PROPOSED INFORMATION INCLUDES 'FUTURE DEVELOPMENT')

	REQUIRED	PROPOSED
MAXIMUM TRACT DENSITY (UNITS PER DEVELOPABLE AREA)	12 ^15	9.84 Units/Ac. 228 Units Proposed
MINIMUM TRACT AREA (ACRES)	10	23.17 (Total)
MAXIMUM BUILDING COVERAGE (% OF TRACT)	40%	< 23.7% (238,770 S.F.)
MAXIMUM IMPERVIOUS COVERAGE (% OF TRACT)	65%	< 52.3% (527,399 S.F.)
CENTRAL WATER & SEWER FACILITIES REQUIRED	Yes	Yes
MINIMUM LOT AREA (SQUARE FEET)	3,000 ^16	N/A
MAXIMUM HEIGHT, PRINCIPAL STRUCTURES (FEET)	50	50
MAXIMUM HEIGHT, PRINCIPAL STRUCTURES (STORIES)	4 stories	4 stories
MINIMUM LOT WIDTH @ RIGHT-OF-WAY LINE (FEET)	60	252
MINIMUM LOT WIDTH AT BUILDING SETBACK LINE (FEET)	60	N/A
MINIMUM SIDE YARD (ONE SIDE) (FEET)	9 ^17	N/A
MINIMUM REAR YARD (FEET)	15 ^18	N/A
MINIMUM ACCESSORY STRUCTURES SETBACK FROM PROPERTY LINES (FEET)	6 ^19	N/A
MAXIMUM HEIGHT, ACCESSORY STRUCTURES (FEET)	16	N/A
MAXIMUM HEIGHT, ACCESSORY STRUCTURES (STORIES)	1.5	N/A
MINIMUM SETBACKS FROM STREETS (FEET)		
ANY BUILDING FACE TO EXISTING ARTERIAL STREET ULTIMATE RIGHT-OF-WAY	50	N/A
ANY BUILDING FACE TO EXISTING COLLECTOR STREET ULTIMATE RIGHT-OF-WAY	30	N/A
ANY BUILDING FACE TO EXISTING LOCAL STREET ULTIMATE RIGHT-OF-WAY	10	10
ANY BUILDING FACE TO COMMON PARKING AREA	10	10
SURFACE PARKING AREAS TO EXISTING ARTERIAL STREET ULTIMATE RIGHT-OF-WAY	20	N/A
SURFACE PARKING AREAS TO EXISTING COLLECTOR STREET ULTIMATE RIGHT-OF-WAY	10	N/A
SURFACE PARKING AREAS TO EXISTING LOCAL STREET ULTIMATE RIGHT-OF-WAY	10	10
MINIMUM BUILDING SETBACKS FROM TRACT PERIMETER (EXCLUDING STREET FRONTAGES)(FEET):		
FROM OTHER RESIDENTIAL TRACTS	100	100
FROM NONRESIDENTIAL TRACTS OR DISTRICT BOUNDARY	20	20
MINIMUM SURFACE PARKING AREAS, DRIVEWAYS, SETBACK FROM TRACT PERIMETER (EXCLUDING STREET FRONTAGES)(FEET):		
FROM OTHER RESIDENTIAL TRACTS	100	100
FROM NONRESIDENTIAL TRACTS OR DISTRICT BOUNDARY	20	20
MINIMUM PRINCIPAL BUILDING SPACING (FEET):		
WINDOW WALL TO WINDOWLESS WALL	20	20
WINDOW WALL TO WINDOW WALL:		
FRONT TO FRONT	30	30
REAR TO REAR	30	30
END TO END	20	20
FRONT TO REAR	40	40
FRONT TO END	40	40
REAR TO END	35	35

^15 MAXIMUM TRACT DENSITY IN THE RRD DISTRICT SHALL BE CALCULATED BASED UPON UNITS PER GROSS TRACT AREA RATHER THAN UNITS PER DEVELOPABLE ACRE.

^16 PER UNIT FOR ALL SINGLE FAMILY ATTACHED DWELLING UNITS THAT ARE NOT DEVELOPED AS INDIVIDUAL ZERO LOT LINE UNITS OR DO NOT UTILIZE SECTION 200-15-1.E. MINIMUM LOT AREA SHALL NOT APPLY TO MULTIFAMILY DWELLING UNITS

^17 PER UNIT FOR ALL SINGLE FAMILY ATTACHED DWELLING UNITS THAT ARE NOT DEVELOPED AS INDIVIDUAL ZERO LOT LINE UNITS OR DO NOT UTILIZE SECTION 200-25-1-E; HOWEVER, THE PARTY WALL FOR ATTACHED DWELLINGS SHALL BE EXEMPTED FROM THIS REQUIREMENT. YARD AREA SHALL NOT APPLY TO MULTIFAMILY DWELLING UNITS

^18 PER UNIT FOR ALL SINGLE FAMILY ATTACHED DWELLING UNITS THAT ARE NOT DEVELOPED AS INDIVIDUAL ZERO LOT LINE UNITS OR DO NOT UTILIZE SECTION 200-25-1.E. YARD AREA SHALL NOT APPLY TO MULTIFAMILY DWELLING UNITS

^19 PER UNIT FOR ALL SINGLE FAMILY ATTACHED DWELLING UNITS THAT ARE NOT DEVELOPED AS INDIVIDUAL ZERO LOT LINE UNITS OR DO NOT UTILIZE SECTION 200-25-1.E. MINIMUM ACCESSORY SETBACK FROM PROPERTY LINES SHALL NOT APPLY TO MULTIFAMILY DWELLING UNITS

DENSITY CALCULATION:

MAX. DWELLING UNITS = 12 UNITS PER GROSS ACRE, 12 x 23.17 = 278.04 ~ 278 UNITS	
PROPOSED UNITS = 228	

IMPERVIOUS CALCULATION:

EXISTING IMPERVIOUS	385,320 S.F. (38.2%)
PROPOSED IMPERVIOUS	527,399 S.F. (52.3%)

PARKING TABULATION:

REQUIRED PARKING SPACES = 2 SPACES PER MULTIFAMILY UNIT

DESCRIPTION	REQUIRED	PROVIDED
FRONT ACCESS TOWNHOMES	228 UNITS x 2 = 456 SPACES	(2) CAR GARAGE ~ 456 SPACES (2) DRIVEWAY SPACES ~ 424 SPACES GUEST SPACES ~ 92 SPACES **TOTAL PROVIDED ~ 972 SPACES**

TRACT AREA:

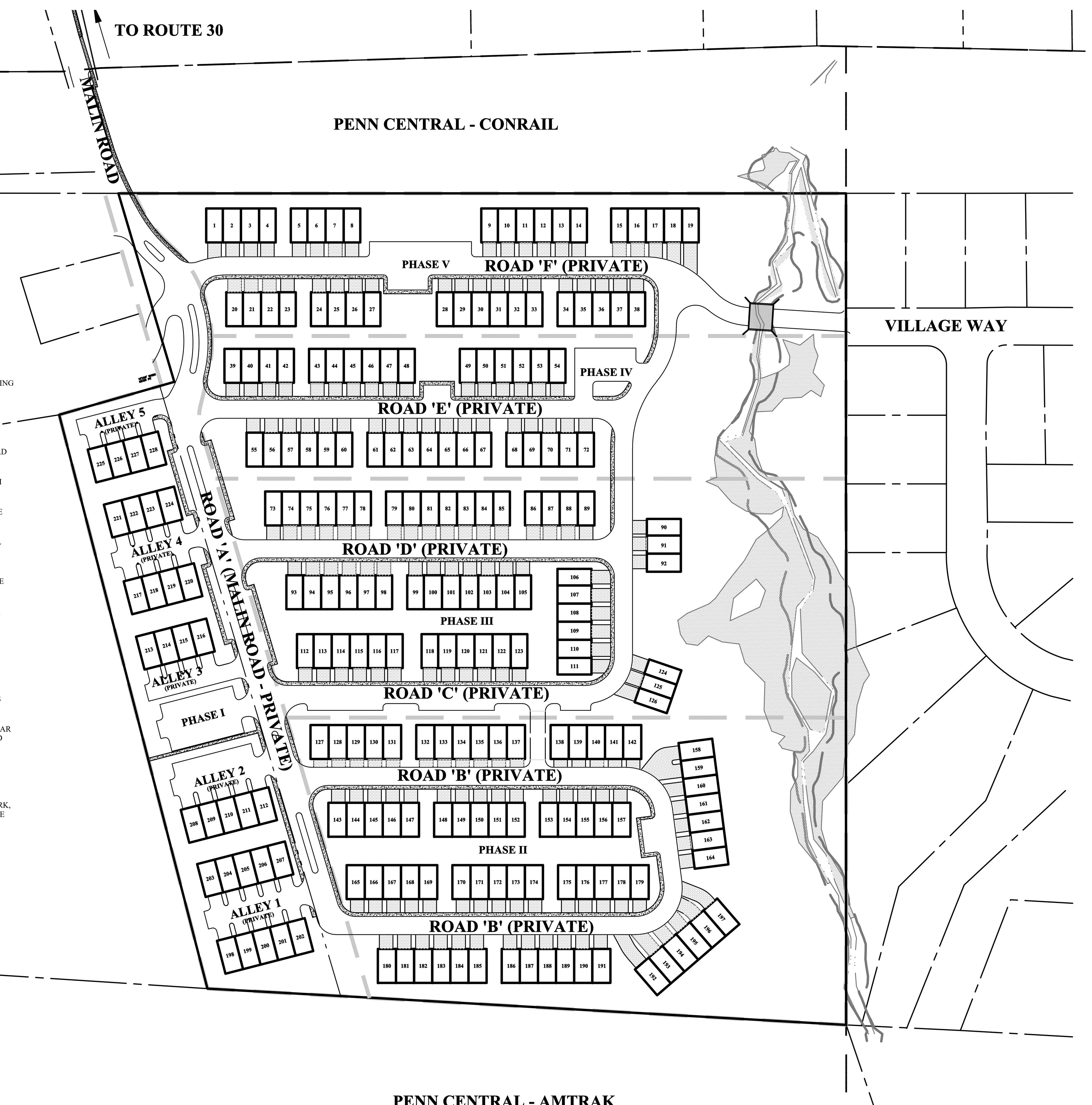
UPI: 42-4-321	272,669 S.F. (6.26 ACRES)
UPI: 42-4-321.1	141,368 S.F. (3.25 ACRES)
UPI: 42-4-321.2	595,074 S.F. (13.66 ACRES)
TOTAL	**1,009,111 S.F. (23.17 ACRES)**

VARIANCE REQUESTS:

1. THE APPLICANTS REQUEST A VARIANCE FROM SECTION 200-57.C.(6) OF THE EAST WHITELAND TOWNSHIP ZONING ORDINANCE TO PERMIT SINGLE-FAMILY ATTACHED DWELLINGS AND TOWNHOUSES IN ROWS OF MORE THAN 6 UNITS, ASSOCIATED DRIVEWAYS AND GRADING REQUIRED IN CONNECTION WITH THE FOREGOING TO BE LOCATED IN AREAS OF BOTH STEEP SLOPES AND VERY STEEP SLOPES.
2. THE APPLICANTS REQUEST A VARIANCE FROM SECTION 200-93.B OF THE EAST WHITELAND TOWNSHIP ZONING ORDINANCE TO PERMIT RETAINING WALLS TO EXCEED 6 FEET IN HEIGHT.

WAIVER REQUESTS:

1. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 175-31.A THAT REQUIRES ROADS TO BE AT LEAST 32 FEET WIDE. ROAD A IS PROPOSED TO BE 32 FEET WIDE BUT ALL OTHER STREETS ARE PROPOSED TO BE 24 FEET WIDE.
2. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 175-32.B(3) THAT REQUIRES ROADWAY CURVES TO HAVE A MINIMUM CENTERLINE RADIUS OF 150 FEET. A MINIMUM RADIUS OF 50 FEET IS PROPOSED.
3. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 175-32.F(1) THAT REQUIRES ROAD TO HAVE A MAXIMUM CENTERLINE GRADE OF 7%. A MAXIMUM CENTERLINE GRADE OF 10% IS PROPOSED.
4. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 175-33.C THAT REQUIRES CLEAR SITE TRIANGLES OF 100 FEET AT ALL INTERSECTIONS. CLEAR SITE TRIANGLES OF LESS THAN 100 FEET ARE PROPOSED FOR ALL ROADWAY APPROACHES TO ROAD A.
5. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 175-39.B(1) TO ALLOW DRVIEWAYS TO BE WITHIN THE RADIUS OF THE INTERSECTING STREETS.
6. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 175-39.B(5) THAT REQUIRES DRIVEWAYS TO HAVE 5 FOOT RADIUS OR EQUIVILENT CURB FLARE. DUE TO THE PROXIMITY OF THE DRIVEWAYS TO ONE ANOTHER THIS REQUIREMENT CAN NOT BE MET. MOUNTABLE CURB IS PROPOSED THROUGHOUT THE DEVELOPMENT TO ADDRESS THIS REQUIREMENT.
7. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 175-35 THAT REQUIRES ALL STREETS TO BE CONSTRUCTED WITH UPRIGHT CURB. A MOUNTABLE BELGIAN BLOCK CURB IS PROPOSED THROUGHOUT THE DEVELOPMENT.
8. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP STORMWATER MANAGEMENT ORDINANCE SECTION 170-402.b.8.(q) THAT REQUIRES A 50 FOOT NON-DISTURBANCE BUFFER AROUND STREAMS, WETLANDS AND OTHER WATERBODIES. A SMALL AREA OF RETAINING WALLS AND GRADING IS PROPOSED WITHIN 30 FEET OF THE DELINEATED WETLANDS NEAR UNITS 97 AND 129.
9. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP STORMWATER MANAGEMENT ORDINANCE SECTION 170-305.A THAT REQUIRES THE POST CONSTRUCTION RUNOFF VOLUME FOR THE 2 YEAR STORM TO BE LESS THAN THE PREDEVELOPED RUNOFF VOLUME. THE SITE IS CONSIDERED A BROWNFIELD AND IN ACCORDANCE WITH SECTION 170-301.O INFILTRATION MAY CONTRIBUTE TO THE MIGRATION OF CONTAMINANTS IN THE GROUNDWATER. A LETTER OUTLINING THE POTENTIAL FOR INCREASED MIGRATION OF CONTAMINATED GROUNDWATER RESULTING FROM INFILTRATION ON THE SITE HAS BEEN PREPARED BY A PROFESSIONAL GEOLOGIST AND IS INCLUDED WITH THE POST CONSTRUCTION STORMWATER MANAGEMENT CALCULATIONS.
10. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 175-40.B.(1) REQUIRING OPEN SPACE AREAS TO BE SET ASIDE FOR PARK, OPEN SPACE AND RECREATION USES. THIS WAIVER IS REQUESTED IN CONSIDERATION OF CLEANUP OF THE CONTAMINATION THAT EXISTS ON THE SITE.
11. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP ORDINANCE SECTION 65-1.B REQUIRING SWALES TO BE MORE THAN 10 FEET FROM A BUILDING FOUNDATION.
12. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP STORMWATER MANAGEMENT ORDINANCE SECTION 170-301.L THAT REQUIRES DIAGONAL STORM SEWER CROSSINGS TO BE MINIMIZED. SOME DIAGONAL CROSSINGS ARE PROPOSED.
13. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDIANCE SECTION 175.38.C REQUIRING ALL LOTS TO FRONT ON A PUBLIC STREET. ALL STREETS WITH THE DEVELOPMENT WILL BE PRIVATELY OWNED.
14. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDIANCE SECTION 175.38.G REQUIRING ALL LOTS TO HAVE DIRECT ACCESS TO A PUBLIC STREET. ALL STREETS WITH THE DEVELOPMENT WILL BE PRIVATELY OWNED.



LEGEND

PROPERTY BOUNDARY
ADJOINING PROPERTY LINE
EXISTING RIGHT OF WAY LINE
EXISTING EASEMENT LINE
FLOOD PLAIN LINE
PROPOSED RIGHT OF WAY LINE
PROPOSED EASEMENT LINE
PROPOSED PHASE LINE

PHASING LEGEND

PHASE I	31 TOWNHOMES	(31 - 24' X 45')
PHASE II	71 TOWNHOMES	(71 -24' X 45')
PHASE III	54 TOWNHOMES	(3 - 20' X 45') (18 - 22' X 45') (33 - 24' X 45')
PHASE IV	34 TOWNHOMES	(12 - 22' X 45') (22 - 24' X 45')
PHASE V	38 TOWNHOMES	(16 - 22' X 45') (22 - 24' X 45')

TOTAL PROPOSED UNITS = 228

GENERAL NOTES:

1. PROPOSED USE: 228 DWELLING UNITS.
2. APPLICANTS:

PHASES I AND II	PHASES III, IV AND V
9 MALIN ROAD DEVELOPMENT, LLC 110 NORTH PHOENIXVILLE PIKE SUITE 100 MALVERN, PA 19355 PH: 610-296-8175	CONSTITUTION DRIVE PARTNERS, LP 2701 RENAISSANCE BLVD FOURTH FLOOR KING OF PRUSSIA, PA 19406 PH: 610-337-5577

3. SITE INFORMATION:
   ZONING: RRD, RESIDENTIAL REVITALIZATION DISTRICT
   UPI's: 42-4-321 (10 MALIN ROAD ASSOCIATES, DB: 5172 PG: 2046)
   42-4-321.1 (10 MALIN ROAD ASSOCIATES, DB: 5172 PG: 2046)
   42-4-321.2 (CONSTITUTION DRIVE PARTNERS, DB: 6443 PG: 1567)
   BEING: 9, 10 & 1 S. MALIN ROAD, MALVERN, PA 19355
4. ELEVATIONS ARE BASED ON USGS DATUM. BENCHMARK REFERENCE = MANHOLE LOCATED AT THE INTERSECTION OF ROUTE 30 AND MALIN ROAD WITH A RIM ELEV. 383.09
5. EXISTING TOPOGRAPHY TAKEN FROM REFERENCE PLANS:
   A. PLAN TITLED "BOUNDARY AND TOPOGRAPHY SURVEY" DATED 6/15/2001, LAST REVISED 1/22/2004, FOR BISHOP TUBE FACILITY PREPARED BY DAWOOD ENGINEERING, INC. ENOLA, PA
   B. PLAN TITLED "LAND DEVELOPMENT PLAN" DATED 10/13/2005, FOR SOURCE REALTY GROUP PREPARED BY E.B. WALSH & ASSOCIATES, INC. EXTON, PA.
6. BOUNDARY AND SUPPLEMENTAL TOPOGRAPHY TAKEN FROM FIELD SURVEY PERFORMED BY INLAND DESIGN, LLC. DATED AUGUST, 2014.
7. GEOMETRY AND IMPROVEMENTS FOR THE INTERSECTION OF MALIN ROAD AND LINCOLN HIGHWAY ARE SHOWN PER THE APPROVED HIGHWAY OCCUPANCY PERMIT PLANS FOR LINCOLN COURT SHOPPING CENTER.
8. PROPERTY TO BE SERVED BY PUBLIC WATER AND SEWER.
9. WATER SERVICE SHALL BE PROVIDED BY AQUA PENNSYLVANIA, INC. TO A CENTRALIZED WATER SYSTEM THAT WILL BE OWNED AND MAINTAINED BY THE CONDOMINIUM ASSOCIATION.
10. SANITARY SEWER SERVICE SHALL BE PROVIDED BY EAST WHITELAND TOWNSHIP. A BLANKET EASEMENT SHALL BE PROVIDED TO EAST WHITELAND TOWNSHIP FOR THE PURPOSE OF ACCESS, INSPECTION, REPAIR, AND MAINTENANCE OF THE SANITARY SEWER SYSTEM. ALL SEWER FACILITIES SHALL BE OFFERED FOR DEDICATION TO EAST WHITELAND TOWNSHIP.
11. ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR CHESTER COUNTY, PENNSYLVANIA, MAP NUMBER 42029C0160F, MAP DATE SEPTEMBER 29, 2006, THERE IS NO FEMA 100-YEAR FLOOD PLAIN LOCATED ON THIS PROPERTY. LIMITS OF 100 YEAR FLOOD PLAIN SHOWN PER HEC-RAS ANALYSIS PREPARED BY INLAND DESIGN STUDY DATED 9-4-2015.
12. WETLANDS DELINEATED BY GREAT VALLEY ENVIRONMENTAL, AUGUST, 2014. FINAL CONFIGURATION DETERMINED PER SITE WALK WITH ARMY CORPS OF ENGINEERS ON APRIL 17, 2015.
13. A BLANKET EASEMENT SHALL BE PROVIDED TO EAST WHITELAND TOWNSHIP AND THE OWNER'S OF PHASES 1,2,3, 4 & 5 THEIR HEIRS, EXECUTORS, ADMINISTRATORS, SUCCESSOR AND ASSIGNS, OVER THE PROPOSED PRIVATE ROADWAYS AS SHOWN ON THIS PLAN, FOR ACCESS AND THE USE BY THE TOWNSHIP, ITS RESIDENTS, EMERGENCY VEHICLES, UTILITY COMPANIES AND OTHER SERVICE VEHICLES AS NECESSARY FOR THE CONTINUED SAFETY AND OPERATION OF THE ROADWAY AND UTILITIES CONTAINED WITH THE PROPOSED DEVELOPMENT PARCEL AND OVER ALL GREEN SPACE PORTIONS OF PHASES 1, 2, 3 , 4 & 5 AND FOR THE CONSTRUCTION AND MAINTENANCE OF ALL STORM WATER MANAGEMENT FACILITIES. THE PROPOSED ROADWAYS AS SHOWN ON THIS PLAN SHALL BE OWNED AND MAINTAINED BY THE CONDOMINIUM ASSOCIATION FOR THE PROPOSED DEVELOPMENT. ALL PROPOSED ALLEYS AND STREETS AS SHOWN ON THIS PLAN SHALL REMAIN PRIVATELY OWNED IN PERPETUITY AND SHALL NOT BE OFFERED FOR DEDICATION TO EAST WHITELAND TOWNSHIP UPON THE COMPLETION OF CONSTRUCTION OR AT ANY TIME IN THE FUTURE.
14. THIS PLAN HAS BEEN PHASED FOR PURPOSES OF CONSTRUCTION, FINANCING AND TITLE AS PER TOWNSHIP RESOLUTION AND AS SET FORTH IN THE CONDOMINIUM DECLARATION
15. ANY USER OF THESE PLANS IS RESPONSIBLE FOR CONTACTING THE APPROPRIATE AGENCY IN THE EVENT OF DISCREPANCIES BETWEEN THE PLAN, PLAN DETAILS, SHOP DRAWINGS, CONSTRUCTION STANDARDS AND FIELD CONDITIONS. THE APPLICABLE AGENCY MUST BE CONTACTED AND DISCREPANCIES RESOLVED BEFORE PROPOSED IMPROVEMENTS ARE CONSTRUCTED. THE PREPARER OF THESE PLANS AND ALL REVIEWING AGENCIES ARE NOT LIABLE FOR ANY DISCREPANCIES.
16. LOCATION OF ALL UNDERGROUND UTILITIES ARE APPROXIMATE. ALL LOCATIONS AND SIZES ARE BASED ON FIELD SURVEY OF UTILITY MARK-OUTS, 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.
17. RECEIVING WATER CLASSIFICATION: LITTLE VALLEY CREEK - EXCEPTIONAL VALUE (EV).
18. THE REQUIRED AS-BUILT PLANS SHALL BE PROVIDED TO THE TOWNSHIP FOR REVIEW AND APPROVAL UPON COMPLETION OF CONSTRUCTION AND PRIOR TO THE FULL RELEASE OF ANY FINANCIAL SECURITY.
19. A TOTAL OF 8.37 ACRES OF LAND IS REQUIRED FOR PARK, OPEN SPACE AND RECREATIONAL USES FOR THIS PROJECT. THE APPLICANTS ARE REQUESTING A WAIVER OF SECTION 175-40.B.(1) OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE REQUIRING THE DEDICATION OF OPEN SPACE. PLEASE REFER TO THE LIST OF WAIVERS SHOWN ON THIS SHEET.
20. ALL ROADWAYS WITHIN THE DEVELOPEMENT SHALL BE PRIVATELY OWNED AND NOT OFFERED TO EAST WHITELAND TOWNSHIP FOR DEDICATION.
21. THE SPEED LIMIT FOR ALL PRIVATE STREETS AND ALLEYS, AND THE PORTION OF MALIN ROAD WITHIN THIS DEVELOPMENT IS TO BE POSTED AT 20 MPH. ON STREET PARKING SHALL NOT BE PERMITTED.
22. NO VISION OBSTRUCTING OBJECTS (FENCES, TREES, ETC.) MAY BE PLACED WITHIN THE PROVIDED CLEAR SIGHT EASEMENTS.
23. ALL BASEMENTS AND/OR SUBGRADE FOUNDATIONS WALLS FOR ALL UNITS SHALL BE WATERPROOFED AS REQUIRED.
24. EAST WHITELAND TOWNSHIP AND THE DEVELOPERS SHALL EVALUATE THE CONDITION OF MALIN ROAD BEFORE, DURING AND AFTER THE COMPLETION OF CONSTRUCTION. ALL REQUIRED REPAIRS TO MALIN ROAD SHALL BE MADE AS DIRECTED BY EAST WHITELAND TOWNSHIP.
25. UNITS 127 THROUGH 142 SHALL BE PROHIBITED FROM TAKING VEHICULAR ACCESS TO ROAD 'C'. ALL VEHICULAR ACCESS FOR THESE UNITS SHALL BE TAKEN FROM ROAD 'B'.
26. ALL EXISTING SANITARY MANHOLES AFFECTED BY THE PROPOSED SANITARY SEWER DESIGN SHALL BE REPLACED. THESE STRUCTURES MAY ONLY BE REUSED IF APPROVED BY EAST WHITELAND TOWNSHIP. AFFECTED STRUCTURES ARE MANHOLES 1, 44, DOWNSTREAM OF 36 AND UPSTREAM OF 34.
27. ALL SANITARY SEWER DESIGN AND CONSTRUCTION SHALL CONFORM TO THE EAST WHITELAND TOWNSHIP STANDARD SPECIFICATIONS FOR CONSTRUCTION OF SANITARY SEWERS AND APPURTENANCES DATED MAY 9, 2013.
28. SHOP DRAWING SUBMITTALS FOR ALL PROPOSED SANITARY SEWER IMPROVEMENTS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE EAST WHITELAND TOWNSHIP ENGINEER.
29. ENGINEERED DESIGN CALCULATIONS AND PLANS SHALL BE SUBMITTED TO THE TOWNSHIP FOR REVIEW/APPROVAL FOR EACH OF THE PROPOSED RETAINING WALLS PRIOR TO CONSTRUCTION.
30. ALL DEBRIS AND VEGETATIVE COVER ALONG THE EXISTING SANITARY SEWER EASEMENT DOWNSTREAM OF MANHOLE #1 SHALL BE REMOVED.
31. FOR NEW DEVELOPMENT WITHIN THE RIPARIAN BUFFER AREA (RBA), NO DISTURBANCE OF VEGETATION AND SOIL EXCEPT FOR RESTORATION AND/OR REFORESTATION SHALL OCCUR, IN ORDER TO SHADE THE STREAM WITH NATURAL VEGETATION, TO PROVIDE A SOURCE OF NUMEROUS OTHER ORGANIC INPUTS TO THE AQUATIC SYSTEM, TO ANCHOR THE STREAM BANK AND FLOODPLAIN AREA AND TO CONSUME AND OTHERWISE REMOVE NITROGEN, SEDIMENT AND OTHER SUBSTANCES WHICH CAN ADVERSELY AFFECT STREAM SYSTEMS. WHERE PROHIBITIVE SLOPES OF 25% OR GREATER ARE LOCATED WITHIN THE DESIGNATED AREA, THE RBA SHALL BE INCREASED IN WIDTH SUCH THAT, AT ANY LOCATION, THE MINIMUM WIDTH OF DESIGNATED AREA WITH SLOPES LESS THAN 25% IS 25 FEET. FORESTED AND UNFORESTED VEGETATION SHALL BE ESTABLISHED THROUGH NATURAL SUCCESSION. SELECTIVE PLANTING SHALL BE INCORPORATED ON SITES DEVOID OF VEGETATION TO STIMULATE NATIVE SPECIES AND DISCOURAGE INVASIVE SPECIES. PLANT SELECTION AND PLANTING SHALL BE CONSISTENT WITH THE CHESTER COUNTY CONSERVATION DISTRICT, PADEP AND THE USDA RIPARIAN FORESTED BUFFER GUIDELINES. RIPARIAN BUFFER AREAS SHALL BE RESTRICTED TO THE FOLLOWING USES: FLOOD CONTROL, UTILITY RIGHTS-OF-WAY, PEDESTRIAN TRAILS, PASSIVE RECREATIONAL USES, STREET CROSSINGS, AND STORMWATER BMPS. TREE REMOVAL IN AN RBA SHALL REQUIRE PRIOR TOWNSHIP APPROVAL IN WRITING. RIPARIAN BUFFER AREAS SHALL BE PRESERVED OR RESTORED WITH NATIVE VEGETATION THAT CAN BE MAINTAINED THROUGH THE DELINEATION, PLAN REVIEW AND PERMITTING PROCESS, CONSTRUCTION, AND OCCUPANCY STAGES OF THE PROJECT.

COMMONWEALTH OF PENNSYLVANIA :
: SS:
COUNTY OF CHESTER :

ON THE _______ DAY OF _______________A.D. 2017 BEFORE ME, THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, RESIDING IN _______________ PERSONALLY APPEARED BO ERIXXON WHO ACKNOWLEDGES HIMSELF TO BE A MEMBER OF 9 MALIN ROAD ASSOCIATES, LLC A 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.

BO ERIXXON

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

NOTARY PUBLIC

COMMONWEALTH OF PENNSYLVANIA :
: SS:
COUNTY OF CHESTER :

ON THE _______ DAY OF _______________A.D. 2017 BEFORE ME, THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, RESIDING IN _______________ PERSONALLY APPEARED GUY WOLFINGTON, JR WHO ACKNOWLEDGES HIMSELF TO BE A MEMBER OF CONSTITUTION DRIVE PARTNERS, LP A PARTNERSHIP , 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 PARTNERSHIP BY HIMSELF.

GUY WOLFINGTON, JR.

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

NOTARY PUBLIC

EAST WHITELAND TOWNSHIP BOARD OF SUPERVISORS:

AT A MEETING HELD ON THE ______DAY OF _______, 2017, THE EAST WHITELAND TOWNSHIP BOARD OF SUPERVISORS, BY MOTION APPROVED THE PRELIMINARY PLAN, AS SHOWN AND DESCRIBED HEREON.

MEMBER DATE

MEMBER DATE

MEMBER DATE

EAST WHITELAND TOWNSHIP PLANNING COMMISSION:

AT A MEETING HELD ON THE ______DAY OF _______, 2017, THE EAST WHITELAND TOWNSHIP PLANNING COMMISSION, BY MOTION RECOMMENDED FOR APPROVAL THE PRELIMINARY PLAN, AS SHOWN AND DESCRIBED HEREON.

CHAIRPERSON DATE

MEMBER DATE

MEMBER DATE

CHESTER COUNTY PLANNING COMMISSION

PROCESSED AND REVIEWED. A REPORT HAS BEEN PREPARED BY THE CHESTER COUNTY PLANNING COMMISSION IN ACCORDANCE WITH THE MUNICIPALITIES PLANNING CODE.

CERTIFIED THIS DATE _______________.

_______________.
FOR THE DIRECTOR

RECORDED IN THE CHESTER COUNTY COURTHOUSE THIS _________DAY OF _____________, 2017, IN PLAN BOOK ___________, PAGE____________.

"I, CHARLES A. DOBSON, ON THIS DATE 1/6/2017, HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THE SWM SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE EAST WHITELAND TOWNSHIP ORDINANCE NO. 250-2014, EAST WHITELAND TOWNSHIP STORMWATER MANAGEMENT ORDINANCE."

CHARLES A. DOBSON, P.E.
LIC NO. PE-049197-E

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHARLES A. DOBSON NO.PE-049197-E

OWNER STATEMENT:

I HEREBY ACKNOWLEDGE THAT ANY REVISION TO THE APPROVED SWM SITE PLAN SHALL BE SUBMITTED AND APPROVED BY THE TOWNSHIP, AND A REVISED EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE SUBMITTED TO, AND APPROVED BY, THE CONSERVATION DISTRICT AND/OR THE TOWNSHIP AS APPLICABLE FOR A DETERMINATION OF ADEQUACY PRIOR TO CONSTRUCTION OF THE REVISED FEATURES.

OWNER (DATE)

EQUITABLE OWNER / APPLICANT

PHASES I AND II
9 MALIN ROAD DEVELOPMENT, LLC
ATTN: BO ERIXXON
110 NORTH PHOENIXVILLE PIKE
SUITE 100
MALVERN, PA 19355
PH: 610-296-8175

OWNER / APPLICANT

PHASES III, IV AND V
CONSTITUTION DRIVE PARTNERS, L.P.
ATTN: GUY WOLFINGTON, JR..
2701 RENAISSANCE BLVD.
FOURTH FLOOR
KING OF PRUSSIA, PA 19406
PH: 610-337-5577

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

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

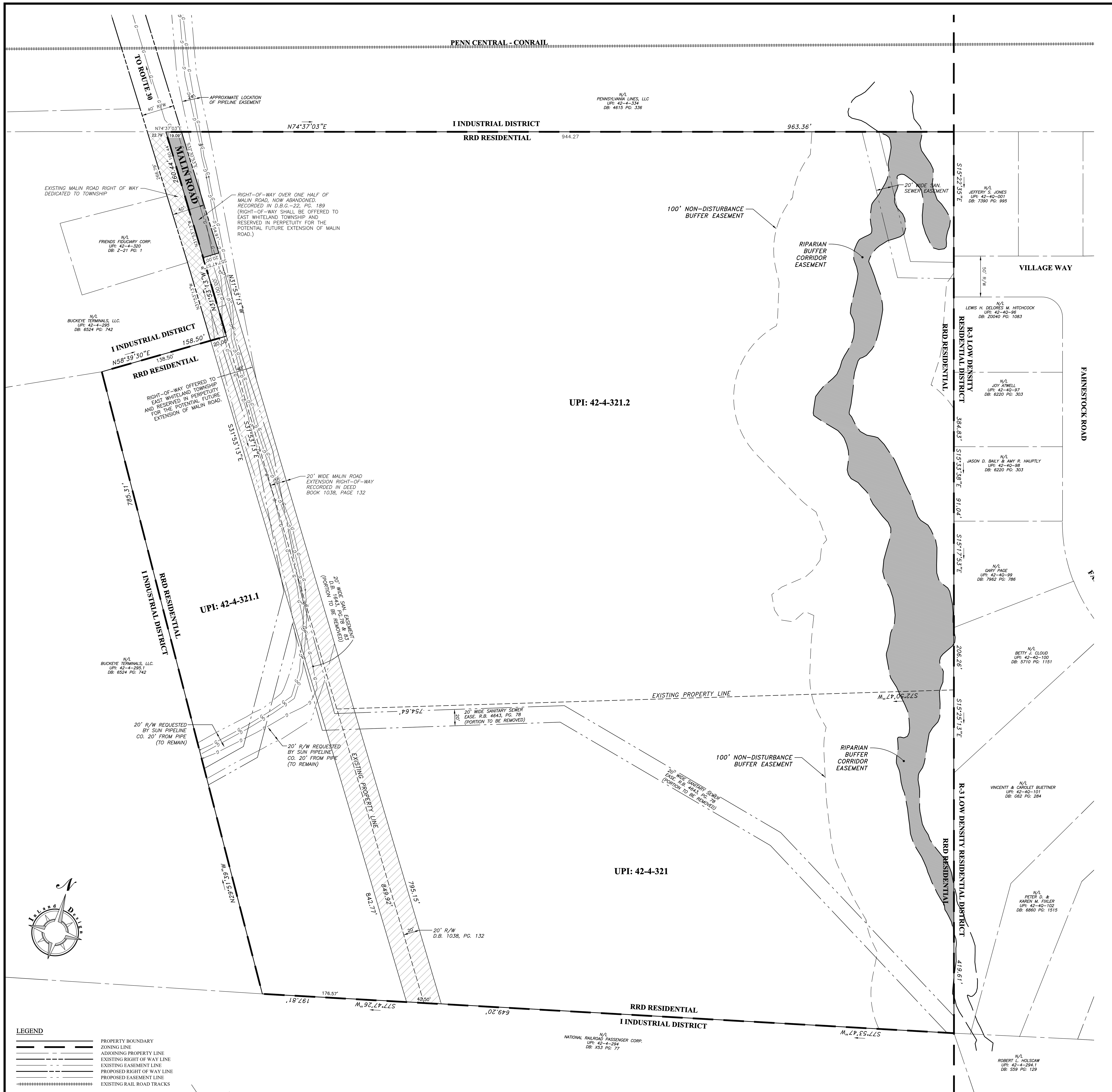
No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY LAND DEVELOPMENT PLAN

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

Date: 1/30/2015
Scale: 1" = 100'
Drawn by: TAH
Checked by: CAD
Project No. **10383**

COVER SHEET FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA



GENERAL NOTES:

1. PROPOSED USE: 228 DWELLING UNITS.
2. APPLICANTS:

PHASES I AND II	PHASES III, IV AND V
9 MALIN ROAD DEVELOPMENT, LLC	CONSTITUTION DRIVE PARTNERS, LP
110 NORTH PHOENIXVILLE PIKE	2701 RENAISSANCE BLVD
SUITE 100	FOURTH FLOOR
MALVERN, PA 19355	KING OF PRUSSIA, PA 19406
PH: 610-296-8175	PH: 610-337-5577

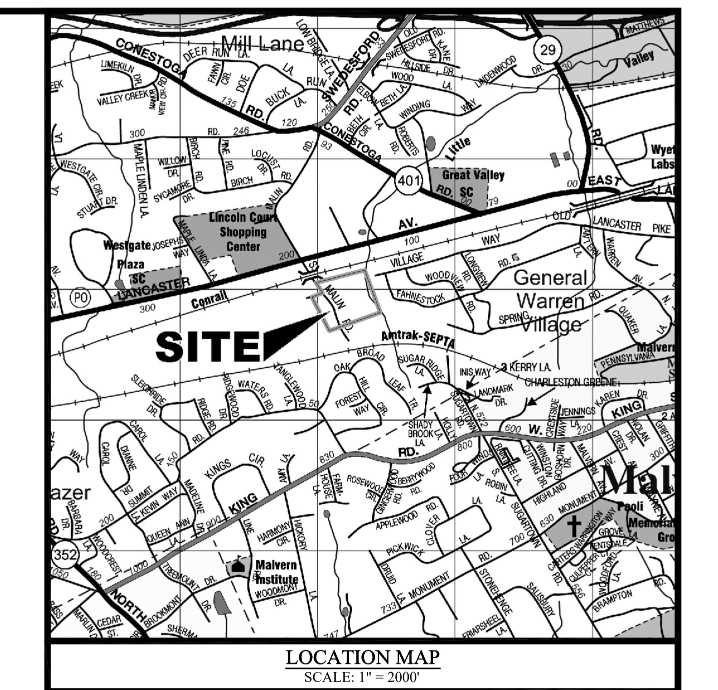
3. SITE INFORMATION:
   ZONING: RRD, RESIDENTIAL REVITALIZATION DISTRICT
   UPI's: 42-4-321 (10 MALIN ROAD ASSOCIATES, DB: 5172 PG: 2046)
   42-4-321.1 (10 MALIN ROAD ASSOCIATES, DB: 5172 PG: 2046)
   42-4-321.2 (CONSTITUTION DRIVE PARTNERS, DB: 6443 PG: 1567)
   BEING: 9, 10 & 1 S. MALIN ROAD, MALVERN, PA 19355
4. ELEVATIONS ARE BASED ON USGS DATUM. BENCHMARK REFERENCE = MANHOLE LOCATED AT THE INTERSECTION OF ROUTE 30 AND MALIN ROAD WITH A RIM ELEV. 383.09
5. EXISTING TOPOGRAPHY TAKEN FROM REFERENCE PLANS:
   A. PLAN TITLED "BOUNDARY AND TOPOGRAPHY SURVEY" DATED 6/15/2001, LAST REVISED 1/22/2004, FOR BISHOP TUBE FACILITY PREPARED BY DAWOOD ENGINEERING, INC. ENOLA, PA
   B. PLAN TITLED "LAND DEVELOPMENT PLAN" DATED 10/13/2005, FOR SOURCE REALTY GROUP PREPARED BY E.B. WALSH & ASSOCIATES, INC. EXTON, PA.
6. BOUNDARY AND SUPPLEMENTAL TOPOGRAPHY TAKEN FROM FIELD SURVEY PERFORMED BY INLAND DESIGN, LLC. DATED AUGUST, 2014.
7. GEOMETRY AND IMPROVEMENTS FOR THE INTERSECTION OF MALIN ROAD AND LINCOLN HIGHWAY ARE SHOWN PER THE APPROVED HIGHWAY OCCUPANCY PERMIT PLANS FOR LINCOLN COURT SHOPPING CENTER.
8. PROPERTY TO BE SERVED BY PUBLIC WATER AND SEWER.
9. WATER SERVICE SHALL BE PROVIDED BY AQUA PENNSYLVANIA, INC. TO A CENTRALIZED WATER SYSTEM THAT WILL BE OWNED AND MAINTAINED BY THE CONDOMINIUM ASSOCIATION.
10. SANITARY SEWER SERVICE SHALL BE PROVIDED BY EAST WHITELAND TOWNSHIP. A BLANKET EASEMENT SHALL BE PROVIDED TO EAST WHITELAND TOWNSHIP FOR THE PURPOSE OF ACCESS, INSPECTION, REPAIR, AND MAINTENANCE OF THE SANITARY SEWER SYSTEM. ALL SEWER FACILITIES SHALL BE OFFERED FOR DEDICATION TO EAST WHITELAND TOWNSHIP.
11. ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR CHESTER COUNTY, PENNSYLVANIA, MAP NUMBER 42029C0160F, MAP DATE SEPTEMBER 29, 2006, THERE IS NO FEMA 100-YEAR FLOOD PLAIN LOCATED ON THIS PROPERTY. LIMITS OF 100 YEAR FLOOD PLAIN SHOWN PER HEC-RAS ANALYSIS PREPARED BY INLAND DESIGN STUDY DATED 9-4-2015.
12. WETLANDS DELINEATED BY GREAT VALLEY ENVIRONMENTAL, AUGUST, 2014. FINAL CONFIGURATION DETERMINED PER SITE WALK WITH ARMY CORPS OF ENGINEERS ON APRIL 17, 2015.
13. A BLANKET EASEMENT SHALL BE PROVIDED TO EAST WHITELAND TOWNSHIP AND THE OWNER'S OF PHASES 1,2,3, 4 & 5 THEIR HEIRS, EXECUTORS, ADMINISTRATORS, SUCCESSOR AND ASSIGNS, OVER THE PROPOSED PRIVATE ROADWAYS AS SHOWN ON THIS PLAN, FOR ACCESS AND THE USE BY THE TOWNSHIP, ITS RESIDENTS, EMERGENCY VEHICLES, UTILITY COMPANIES AND OTHER SERVICE VEHICLES AS NECESSARY FOR THE CONTINUED SAFETY AND OPERATION OF THE ROADWAY AND UTILITIES CONTAINED WITH THE PROPOSED DEVELOPMENT PARCEL AND OVER ALL GREEN SPACE PORTIONS OF PHASES 1, 2, 3 , 4 & 5 AND FOR THE CONSTRUCTION AND MAINTENANCE OF ALL STORM WATER MANAGEMENT FACILITIES. THE PROPOSED ROADWAYS AS SHOWN ON THIS PLAN SHALL BE OWNED AND MAINTAINED BY THE CONDOMINIUM ASSOCIATION FOR THE PROPOSED DEVELOPMENT. ALL PROPOSED ALLEYS AND STREETS AS SHOWN ON THIS PLAN SHALL REMAIN PRIVATELY OWNED IN PERPETUITY AND SHALL NOT BE OFFERED FOR DEDICATION TO EAST WHITELAND TOWNSHIP UPON THE COMPLETION OF CONSTRUCTION OR AT ANY TIME IN THE FUTURE.
14. THIS PLAN HAS BEEN PHASED FOR PURPOSES OF CONSTRUCTION, FINANCING AND TITLE AS PER TOWNSHIP RESOLUTION AND AS SET FORTH IN THE CONDOMINIUM DECLARATION
15. ANY USER OF THESE PLANS IS RESPONSIBLE FOR CONTACTING THE APPROPRIATE AGENCY IN THE EVENT OF DISCREPANCIES BETWEEN THE PLAN, PLAN DETAILS, SHOP DRAWINGS, CONSTRUCTION STANDARDS AND FIELD CONDITIONS. THE APPLICABLE AGENCY MUST BE CONTACTED AND DISCREPANCIES RESOLVED BEFORE PROPOSED IMPROVEMENTS ARE CONSTRUCTED. THE PREPARER OF THESE PLANS AND ALL REVIEWING AGENCIES ARE NOT LIABLE FOR ANY DISCREPANCIES.
16. LOCATION OF ALL UNDERGROUND UTILITIES ARE APPROXIMATE. ALL LOCATIONS AND SIZES ARE BASED ON FIELD SURVEY OF UTILITY MARK-OUTS, 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.
17. RECEIVING WATER CLASSIFICATION: LITTLE VALLEY CREEK - EXCEPTIONAL VALUE (EV).
18. THE REQUIRED AS-BUILT PLANS SHALL BE PROVIDED TO THE TOWNSHIP FOR REVIEW AND APPROVAL UPON COMPLETION OF CONSTRUCTION AND PRIOR TO THE FULL RELEASE OF ANY FINANCIAL SECURITY.
19. A TOTAL OF 8.37 ACRES OF LAND IS REQUIRED FOR PARK, OPEN SPACE AND RECREATIONAL USES FOR THIS PROJECT. THE APPLICANTS ARE REQUESTING A WAIVER OF SECTION 175-40.B.(1) OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE REQUIRING THE DEDICATION OF OPEN SPACE. PLEASE REFER TO THE LIST OF WAIVERS SHOWN ON THIS SHEET.
20. ALL ROADWAYS WITHIN THE DEVELOPEMENT SHALL BE PRIVATELY OWNED AND NOT OFFERED TO EAST WHITELAND TOWNSHIP FOR DEDICATION.
21. THE SPEED LIMIT FOR ALL PRIVATE STREETS AND ALLEYS, AND THE PORTION OF MALIN ROAD WITHIN THIS DEVELOPMENT IS TO BE POSTED AT 20 MPH. ON STREET PARKING SHALL NOT BE PERMITTED.
22. NO VISION OBSTRUCTING OBJECTS (FENCES, TREES, ETC.) MAY BE PLACED WITHIN THE PROVIDED CLEAR SIGHT EASEMENTS.
23. ALL BASEMENTS AND/OR SUBGRADE FOUNDATIONS WALLS FOR ALL UNITS SHALL BE WATERPROOFED AS REQUIRED.
24. EAST WHITELAND TOWNSHIP AND THE DEVELOPERS SHALL EVALUATE THE CONDITION OF MALIN ROAD BEFORE, DURING AND AFTER THE COMPLETION OF CONSTRUCTION. ALL REQUIRED REPAIRS TO MALIN ROAD SHALL BE MADE AS DIRECTED BY EAST WHITELAND TOWNSHIP.
25. UNITS 127 THROUGH 142 SHALL BE PROHIBITED FROM TAKING VEHICULAR ACCESS TO ROAD 'C'. ALL VEHICULAR ACCESS FOR THESE UNITS SHALL BE TAKEN FROM ROAD 'B'.
26. ALL EXISTING SANITARY MANHOLES AFFECTED BY THE PROPOSED SANITARY SEWER DESIGN SHALL BE REPLACED. THESE STRUCTURES MAY ONLY BE REUSED IF APPROVED BY EAST WHITELAND TOWNSHIP. AFFECTED STRUCTURES ARE MANHOLES 1, 44, DOWNSTREAM OF 36 AND UPSTREAM OF 34.
27. ALL SANITARY SEWER DESIGN AND CONSTRUCTION SHALL CONFORM TO THE EAST WHITELAND TOWNSHIP STANDARD SPECIFICATIONS FOR CONSTRUCTION OF SANITARY SEWERS AND APPURTENANCES DATED MAY 9, 2013.
28. SHOP DRAWING SUBMITTALS FOR ALL PROPOSED SANITARY SEWER IMPROVEMENTS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE EAST WHITELAND TOWNSHIP ENGINEER.
29. ENGINEERED DESIGN CALCULATIONS AND PLANS SHALL BE SUBMITTED TO THE TOWNSHIP FOR REVIEW/APPROVAL FOR EACH OF THE PROPOSED RETAINING WALLS PRIOR TO CONSTRUCTION.
30. ALL DEBRIS AND VEGETATIVE COVER ALONG THE EXISTING SANITARY SEWER EASEMENT DOWNSTREAM OF MANHOLE #1 SHALL BE REMOVED.
31. FOR NEW DEVELOPMENT WITHIN THE RIPARIAN BUFFER AREA (RBA), NO DISTURBANCE OF VEGETATION AND SOIL EXCEPT FOR RESTORATION AND/OR REFORESTATION SHALL OCCUR, IN ORDER TO SHADE THE STREAM WITH NATURAL VEGETATION, TO PROVIDE A SOURCE OF NUMEROUS OTHER ORGANIC INPUTS TO THE AQUATIC SYSTEM, TO ANCHOR THE STREAM BANK AND FLOODPLAIN AREA AND TO CONSUME AND OTHERWISE REMOVE NITROGEN, SEDIMENT AND OTHER SUBSTANCES WHICH CAN ADVERSELY AFFECT STREAM SYSTEMS. WHERE PROHIBITIVE SLOPES OF 25% OR GREATER ARE LOCATED WITHIN THE DESIGNATED AREA, THE RBA SHALL BE INCREASED IN WIDTH SUCH THAT, AT ANY LOCATION, THE MINIMUM WIDTH OF DESIGNATED AREA WITH SLOPES LESS THAN 25% IS 25 FEET. FORESTED AND UNFORESTED VEGETATION SHALL BE ESTABLISHED THROUGH NATURAL SUCCESSION. SELECTIVE PLANTING SHALL BE INCORPORATED ON SITES DEVOID OF VEGETATION TO STIMULATE NATIVE SPECIES AND DISCOURAGE INVASIVE SPECIES. PLANT SELECTION AND PLANTING SHALL BE CONSISTENT WITH THE CHESTER COUNTY CONSERVATION DISTRICT, PADEP AND THE USDA RIPARIAN FORESTED BUFFER GUIDELINES. RIPARIAN BUFFER AREAS SHALL BE RESTRICTED TO THE FOLLOWING USES: FLOOD CONTROL, UTILITY RIGHTS-OF-WAY, PEDESTRIAN TRAILS, PASSIVE RECREATIONAL USES, STREET CROSSINGS, AND STORMWATER BMPS. TREE REMOVAL IN AN RBA SHALL REQUIRE PRIOR TOWNSHIP APPROVAL IN WRITING. RIPARIAN BUFFER AREAS SHALL BE PRESERVED OR RESTORED WITH NATIVE VEGETATION THAT CAN BE MAINTAINED THROUGH THE DELINEATION, PLAN REVIEW AND PERMITTING PROCESS, CONSTRUCTION, AND OCCUPANCY STAGES OF THE PROJECT.

VARIANCE REQUESTS:

1. THE APPLICANTS REQUEST A VARIANCE FROM SECTION 200-57.C.(6) OF THE EAST WHITELAND TOWNSHIP ZONING ORDINANCE TO PERMIT SINGLE-FAMILY ATTACHED DWELLINGS AND TOWNHOUSES IN ROWS OF MORE THAN 6 UNITS, ASSOCIATED DRIVEWAYS AND GRADING REQUIRED IN CONNECTION WITH THE FOREGOING TO BE LOCATED IN AREAS OF BOTH STEEP SLOPES AND VERY STEEP SLOPES.
2. THE APPLICANTS REQUEST A VARIANCE FROM SECTION 200-93.B OF THE EAST WHITELAND TOWNSHIP ZONING ORDINANCE TO PERMIT RETAINING WALLS TO EXCEED 6 FEET IN HEIGHT.

WAIVER REQUESTS:

1. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 175-31.A THAT REQUIRES ROADS TO BE AT LEAST 32 FEET WIDE. ROAD A IS PROPOSED TO BE 32 FEET WIDE BUT ALL OTHER STREETS ARE PROPOSED TO BE 24 FEET WIDE.
2. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 175-32.B(3) THAT REQUIRES ROADWAY CURVES TO HAVE A MINIMUM CENTERLINE RADIUS OF 150 FEET. A MINIMUM RADIUS OF 50 FEET IS PROPOSED.
3. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 175-32.F(1) THAT REQUIRES ROAD TO HAVE A MAXIMUM CENTERLINE GRADE OF 7%. A MAXIMUM CENTERLINE GRADE OF 10% IS PROPOSED.
4. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 175-33.C THAT REQUIRES CLEAR SITE TRIANGLES OF 100 FEET AT ALL INTERSECTIONS. CLEAR SITE TRIANGLES OF LESS THAN 100 FEET ARE PROPOSED FOR ALL ROADWAY APPROACHES TO ROAD A.
5. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 175-39.B(1) TO ALLOW DRVIEWAYS TO BE WITHIN THE RADIUS OF THE INTERSECTING STREETS.
6. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 175-39.B(5) THAT REQUIRES DRIVEWAYS TO HAVE 5 FOOT RADIUS OR EQUIVILENT CURB FLARE. DUE TO THE PROXIMITY OF THE DRIVEWAYS TO ONE ANOTHER THIS REQUIREMENT CAN NOT BE MET. MOUNTABLE CURB IS PROPOSED THROUGHOUT THE DEVELOPMENT TO ADDRESS THIS REQUIREMENT.
7. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 175-35 THAT REQUIRES ALL STREETS TO BE CONSTRUCTED WITH UPRIGHT CURB. A MOUNTABLE BELGIAN BLOCK CURB IS PROPOSED THROUGHOUT THE DEVELOPMENT.
8. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP STORMWATER MANAGEMENT ORDINANCE SECTION 170-402.b.8.(q) THAT REQUIRES A 50 FOOT NON-DISTURBANCE BUFFER AROUND STREAMS, WETLANDS AND OTHER WATERBODIES. A SMALL AREA OF RETAINING WALLS AND GRADING IS PROPOSED WITHIN 30 FEET OF THE DELINEATED WETLANDS NEAR UNITS 97 AND 129.
9. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP STORMWATER MANAGEMENT ORDINANCE SECTION 170-305.A THAT REQUIRES THE POST CONSTRUCTION RUNOFF VOLUME FOR THE 2 YEAR STORM TO BE LESS THAN THE PREDEVELOPED RUNOFF VOLUME. THE SITE IS CONSIDERED A BROWNFIELD AND IN ACCORDANCE WITH SECTION 170-301.O INFILTRATION MAY CONTRIBUTE TO THE MIGRATION OF CONTAMINANTS IN THE GROUNDWATER. A LETTER OUTLINING THE POTENTIAL FOR INCREASED MIGRATION OF CONTAMINATED GROUNDWATER RESULTING FROM INFILTRATION ON THE SITE HAS BEEN PREPARED BY A PROFESSIONAL GEOLOGIST AND IS INCLUDED WITH THE POST CONSTRUCTION STORMWATER MANAGEMENT CALCULATIONS.
10. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 175-40.B.(1) REQUIRING OPEN SPACE AREAS TO BE SET ASIDE FOR PARK, OPEN SPACE AND RECREATION USES. THIS WAIVER IS REQUESTED IN CONSIDERATION OF CLEANUP OF THE CONTAMINATION THAT EXISTS ON THE SITE.
11. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP ORDINANCE SECTION 65-1.B REQUIRING SWALES TO BE MORE THAN 10 FEET FROM A BUILDING FOUNDATION.
12. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP STORMWATER MANAGEMENT ORDINANCE SECTION 170-301.L THAT REQUIRES DIAGONAL STORM SEWER CROSSINGS TO BE MINIMIZED. SOME DIAGONAL CROSSINGS ARE PROPOSED.
13. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDIANCE SECTION 175.38.C REQUIRING ALL LOTS TO FRONT ON A PUBLIC STREET. ALL STREETS WITH THE DEVELOPMENT WILL BE PRIVATELY OWNED.
14. THE APPLICANTS REQUEST A WAIVER OF THE EAST WHITELAND TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDIANCE SECTION 175.38.G REQUIRING ALL LOTS TO HAVE DIRECT ACCESS TO A PUBLIC STREET. ALL STREETS WITH THE DEVELOPMENT WILL BE PRIVATELY OWNED.



LOCATION MAP
SCALE: 1" = 2000'

COMMONWEALTH OF PENNSYLVANIA :
: SS:
COUNTY OF CHESTER :

ON THE ________ DAY OF ________________A.D. 2017 BEFORE ME, THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, RESIDING IN ______________________ PERSONALLY APPEARED BO ERIXXON WHO ACKNOWLEDGES HIMSELF TO BE A MEMBER OF 9 MALIN ROAD ASSOCIATES, LLC A 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.

BO ERIXXON

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

NOTARY PUBLIC

COMMONWEALTH OF PENNSYLVANIA :
: SS:
COUNTY OF CHESTER :

ON THE ________ DAY OF ________________A.D. 2017 BEFORE ME, THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, RESIDING IN ______________________ PERSONALLY APPEARED GUY WOLFINGTON, JR WHO ACKNOWLEDGES HIMSELF TO BE A MEMBER OF CONSTITUTION DRIVE PARTNERS, LP A PARTNERSHIP , 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 PARTNERSHIP BY HIMSELF.

GUY WOLFINGTON, JR.

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

NOTARY PUBLIC

EAST WHITELAND TOWNSHIP BOARD OF SUPERVISORS:

AT A MEETING HELD ON THE ______DAY OF _______, 2017, THE EAST WHITELAND TOWNSHIP BOARD OF SUPERVISORS, BY MOTION APPROVED THE PRELIMINARY PLAN, AS SHOWN AND DESCRIBED HEREON.

MEMBER DATE

MEMBER DATE

MEMBER DATE

EAST WHITELAND TOWNSHIP PLANNING COMMISSION:

AT A MEETING HELD ON THE ______DAY OF _______, 2017, THE EAST WHITELAND TOWNSHIP PLANNING COMMISSION, BY MOTION RECOMMENDED FOR APPROVAL THE PRELIMINARY PLAN, AS SHOWN AND DESCRIBED HEREON.

CHAIRPERSON DATE

MEMBER DATE

MEMBER DATE

CHESTER COUNTY PLANNING COMMISSION

PROCESSED AND REVIEWED. A REPORT HAS BEEN PREPARED BY THE CHESTER COUNTY PLANNING COMMISSION IN ACCORDANCE WITH THE MUNICIPALITIES PLANNING CODE.

CERTIFIED THIS DATE ______________________.

______________________.
FOR THE DIRECTOR

RECORDED IN THE CHESTER COUNTY COURTHOUSE THIS _________DAY OF ____________, 2017, IN PLAN BOOK ___________, PAGE____________.

"I, CHARLES A. DOBSON, ON THIS DATE 1/6/2017, HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THE SWM SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE EAST WHITELAND TOWNSHIP ORDINANCE NO. 250-2014, EAST WHITELAND TOWNSHIP STORMWATER MANAGEMENT ORDINANCE."

CHARLES A. DOBSON, P.E.
LIC NO. PE-049197-E

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL CHARLES A. DOBSON ENGINEER NO.PE-049197-E

OWNER STATEMENT:

I HEREBY ACKNOWLEDGE THAT ANY REVISION TO THE APPROVED SWM SITE PLAN SHALL BE SUBMITTED AND APPROVED BY THE TOWNSHIP, AND A REVISED EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE SUBMITTED TO, AND APPROVED BY, THE CONSERVATION DISTRICT AND/OR THE TOWNSHIP AS APPLICABLE FOR A DETERMINATION OF ADEQUACY PRIOR TO CONSTRUCTION OF THE REVISED FEATURES.

OWNER (DATE)

EQUITABLE OWNER / APPLICANT

PHASES I AND II
9 MALIN ROAD DEVELOPMENT, LLC
ATTN: BO ERIXXON
110 NORTH PHOENIXVILLE PIKE
SUITE 100
MALVERN, PA 19355
PH: 610-296-8175

OWNER / APPLICANT

PHASES III, IV AND V
CONSTITUTION DRIVE PARTNERS, L.P.
ATTN: GUY WOLFINGTON, JR..
2701 RENAISSANCE BLVD.
FOURTH FLOOR
KING OF PRUSSIA, PA 19406
PH: 610-337-5577

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROMAN W. DYCHDALA LAND SURVEYOR SU075374

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY LAND DEVELOPMENT PLAN

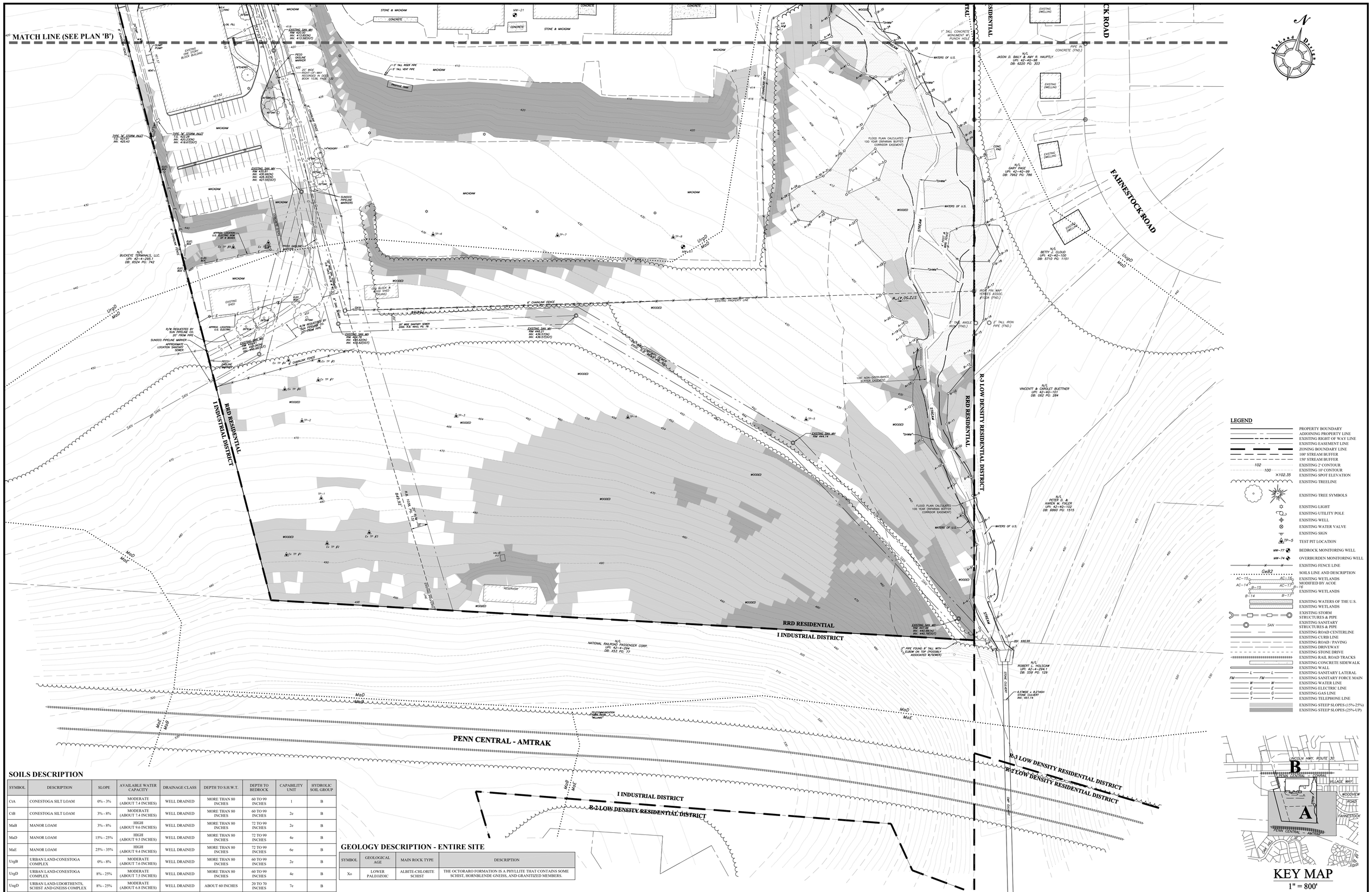
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 Inch = 50'

Date: 1/30/2015
Scale: 1" = 50'
Drawn by: TAH
Checked by: CAD
Project No. **10383**

TITLE PLAN FOR

MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA



LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- ZONING BOUNDARY LINE
- 100' STREAM BUFFER
- 150' STREAM BUFFER
- 102 — EXISTING 2' CONTOUR
- 100 — EXISTING 10' CONTOUR
- ×102.35 — EXISTING SPOT ELEVATION
- EXISTING TREELINE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WELL
- EXISTING WATER VALVE
- EXISTING SIGN
- TP-5 — TEST PIT LOCATION
- MW-77 — BEDROCK MONITORING WELL
- MW-74 — OVERBURDEN MONITORING WELL
- EXISTING FENCE LINE
- GeB2 — SOILS LINE AND DESCRIPTION
- AC-15, AC-16, AC-14, AC-17 — EXISTING WETLANDS MODIFIED BY ACOE
- B-15, B-16, B-14, B-17 — EXISTING WETLANDS
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- EXISTING STORM STRUCTURES & PIPE
- SAN — EXISTING SANITARY STRUCTURES & PIPE
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING DRIVEWAY
- EXISTING STONE DRIVE
- EXISTING RAIL ROAD TRACKS
- EXISTING CONCRETE SIDEWALK
- EXISTING WALL
- L — EXISTING SANITARY LATERAL
- FM — EXISTING SANITARY FORCE MAIN
- W — EXISTING WATER LINE
- E — EXISTING ELECTRIC LINE
- G — EXISTING GAS LINE
- T — EXISTING TELEPHONE LINE
- EXISTING STEEP SLOPES (15%-25%)
- EXISTING STEEP SLOPES (25%-UP)

KEY MAP

1" = 800'

SOILS DESCRIPTION

SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S.H.W.T.	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLIC SOIL GROUP
CtA	CONESTOGA SILT LOAM	0% - 3%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	1	B
CtB	CONESTOGA SILT LOAM	3% - 8%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
MaB	MANOR LOAM	3% - 8%	HIGH (ABOUT 9.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	2e	B
MaD	MANOR LOAM	15% - 25%	HIGH (ABOUT 9.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	4e	B
MaE	MANOR LOAM	25% - 35%	HIGH (ABOUT 9.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	6e	B
UrgB	URBAN LAND-CONESTOGA COMPLEX	0% - 8%	MODERATE (ABOUT 7.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
UrgD	URBAN LAND-CONESTOGA COMPLEX	8% - 25%	MODERATE (ABOUT 7.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	4e	B
UugD	URBAN LAND-UDORTHENTS, SCHIST AND GNEISS COMPLEX	8% - 25%	MODERATE (ABOUT 6.8 INCHES)	WELL DRAINED	ABOUT 60 INCHES	20 TO 70 INCHES	7e	B

GEOLOGY DESCRIPTION - ENTIRE SITE

SYMBOL	GEOLOGICAL AGE	MAIN ROCK TYPE	DESCRIPTION
Xo	LOWER PALEOZOIC	ALBITE-CHLORITE SCHIST	THE OCTORARO FORMATION IS A PHYLLITE THAT CONTAINS SOME SCHIST, HORNBLENDE GNEISS, AND GRANITIZED MEMBERS.

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising therefrom or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

InLand Design

Civil Engineers, Surveyors & Land Development Consultants

16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net

Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL CHARLES A. DOBSON ENGINEER NO.PE-049187-E PENNSYLVANIA

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 Inch = 40'

Date:	1/30/2015
Scale:	1" = 40'
Drawn by:	TAH
Checked by:	CAD
Project No.	10383

EXISTING CONDITIONS / CONSERVATION PLAN 'A'
FOR

MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

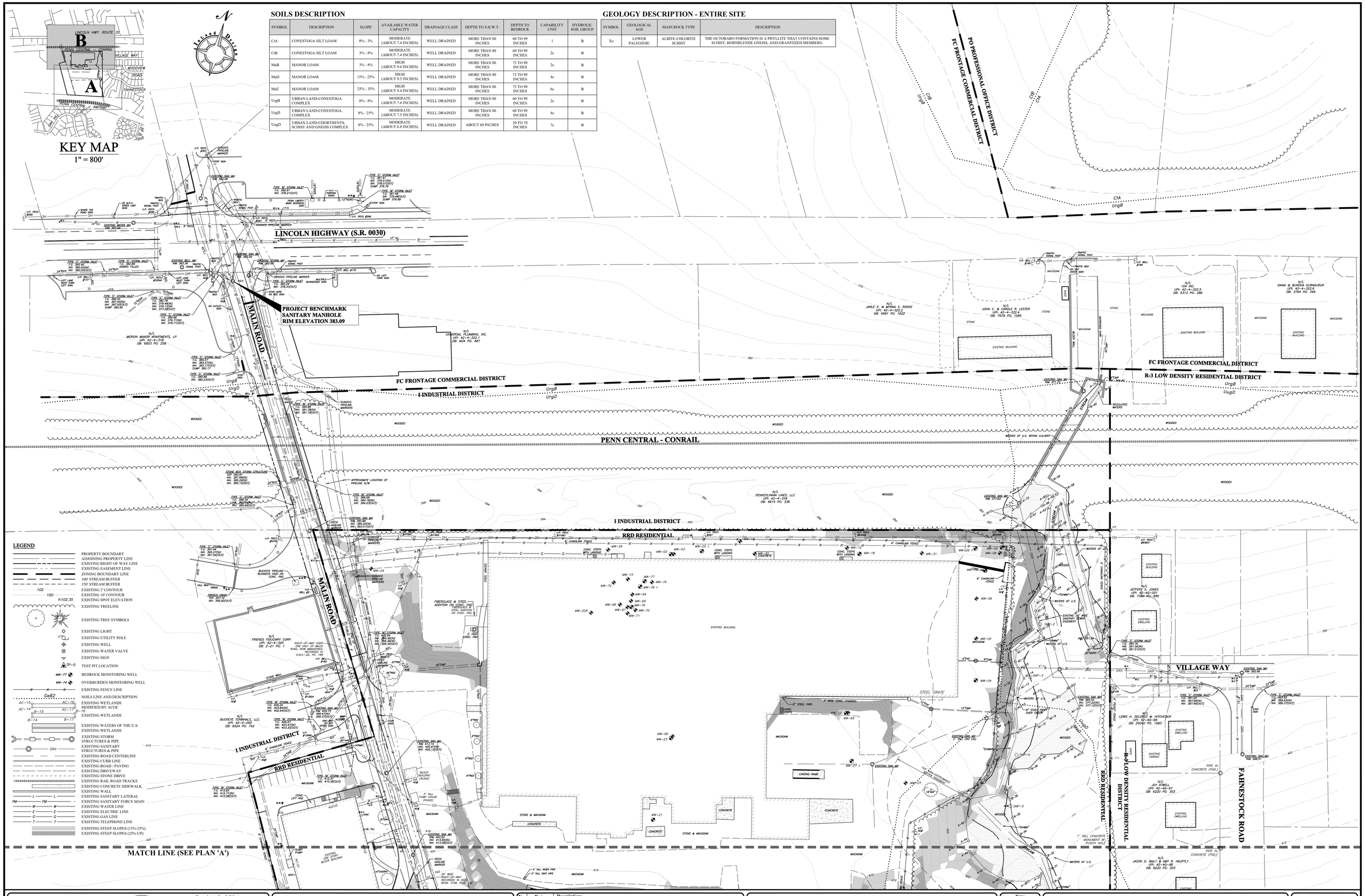
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SOILS DESCRIPTION

SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S.H.W.T.	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLIC SOIL GROUP
CtA	CONESTOGA SILT LOAM	0% - 3%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	1	B
CtB	CONESTOGA SILT LOAM	3% - 8%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
MaB	MANOR LOAM	3% - 8%	HIGH (ABOUT 9.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	2e	B
MaD	MANOR LOAM	15% - 25%	HIGH (ABOUT 9.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	4e	B
MaE	MANOR LOAM	25% - 35%	HIGH (ABOUT 9.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	6e	B
UrgB	URBAN LAND-CONESTOGA COMPLEX	0% - 8%	MODERATE (ABOUT 7.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
UrgD	URBAN LAND-CONESTOGA COMPLEX	8% - 25%	MODERATE (ABOUT 7.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	4e	B
UugD	URBAN LAND-UDORTHENTS, SCHIST AND GNEISS COMPLEX	8% - 25%	MODERATE (ABOUT 6.8 INCHES)	WELL DRAINED	ABOUT 60 INCHES	20 TO 70 INCHES	7e	B

GEOLOGY DESCRIPTION - ENTIRE SITE

SYMBOL	GEOLOGICAL AGE	MAIN ROCK TYPE	DESCRIPTION
Xo	LOWER PALEOZOIC	ALBITE-CHLORITE SCHIST	THE OCTORARO FORMATION IS A PHYLLITE THAT CONTAINS SOME SCHIST, HORNBLENDE GNEISS, AND GRANITIZED MEMBERS.



COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
P.A. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHARLES A. DOBSON NO.PE-044187-E

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

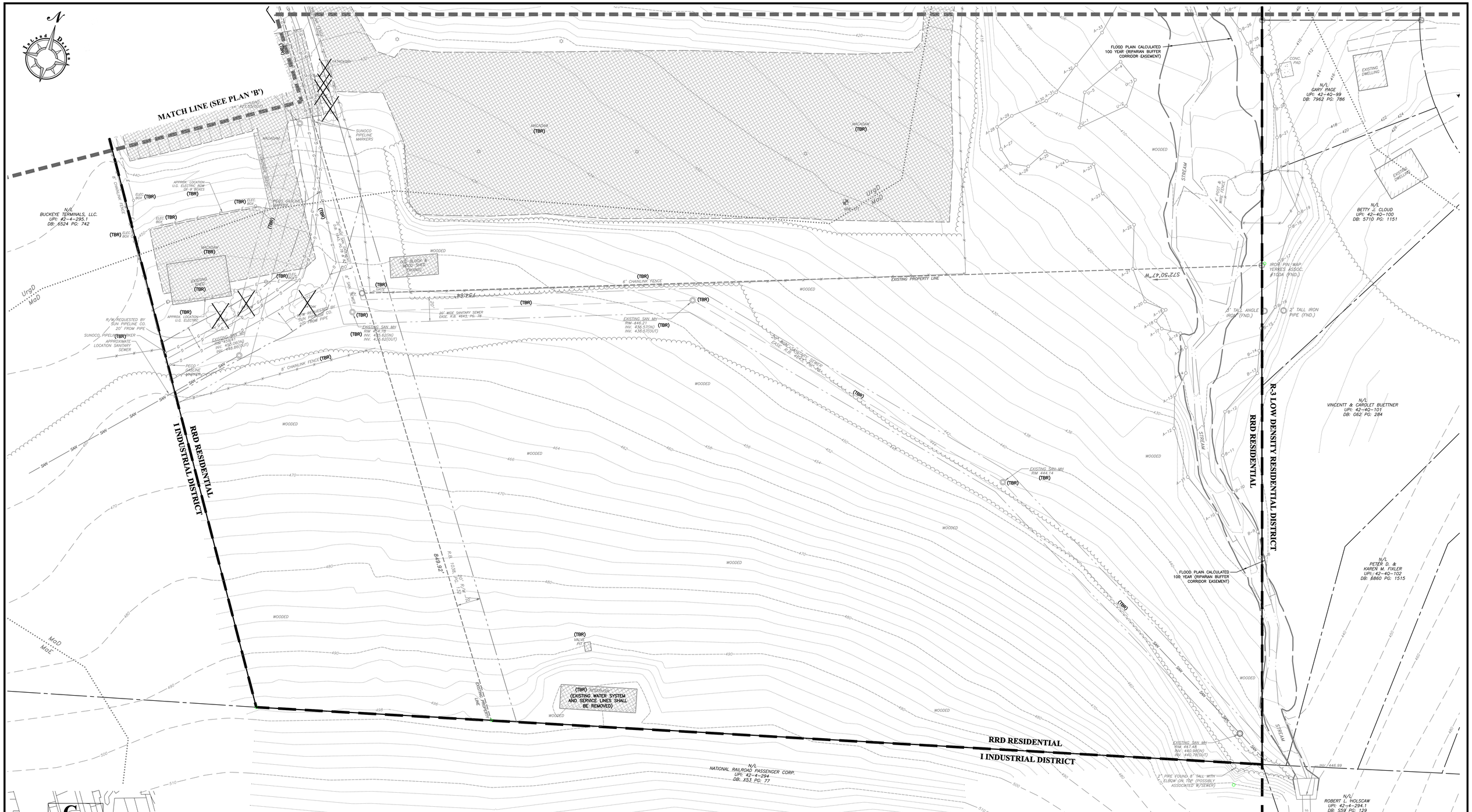
GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 Inch = 40'

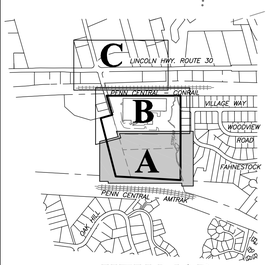
Date: 1/30/2015
Scale: 1" = 40'
Drawn by: TAH
Checked by: CAD
Project No. **10383**

EXISTING CONDITIONS / CONSERVATION PLAN 'B'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SHEET **4** OF 43





KEY MAP

1" = 800'

SOILS DESCRIPTION

SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S.H.W.T.	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLIC SOIL GROUP
CuA	CONESTOGA SILT LOAM	0% - 3%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	1	B
CuB	CONESTOGA SILT LOAM	3% - 8%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
MaB	MANOR LOAM	3% - 8%	HIGH (ABOUT 9.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	2e	B
MaD	MANOR LOAM	15% - 25%	HIGH (ABOUT 9.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	4e	B
MaE	MANOR LOAM	25% - 35%	HIGH (ABOUT 9.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	6e	B
UrgB	URBAN LAND-CONESTOGA COMPLEX	0% - 8%	MODERATE (ABOUT 7.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
UrgD	URBAN LAND-CONESTOGA COMPLEX	8% - 25%	MODERATE (ABOUT 7.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	4e	B
UsgD	URBAN LAND-UDORTHENTS, SCHIST AND GNEISS COMPLEX	8% - 25%	MODERATE (ABOUT 6.8 INCHES)	WELL DRAINED	ABOUT 60 INCHES	20 TO 70 INCHES	7e	B

GEOLOGY DESCRIPTION - ENTIRE SITE

SYMBOL	GEOLOGICAL AGE	MAIN ROCK TYPE	DESCRIPTION
Xo	LOWER PALEOZOIC	ALBITE-CHLORITE SCHIST	THE OCTORARO FORMATION IS A PHYLLITE THAT CONTAINS SOME SCHIST, HORNBLENDE GNEISS, AND GRANITIZED MEMBERS.

LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- ZONING BOUNDARY LINE
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING TREELINE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WELL
- EXISTING WATER VALVE
- EXISTING SIGN
- TEST PIT LOCATION
- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL
- EXISTING FENCE LINE
- SOILS LINE AND DESCRIPTION
- STEEP SLOPE 15% - 25%
- STEEP SLOPE 25% - UP
- EXISTING STORM STRUCTURES & PIPE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING WETLANDS MODIFIED BY ACOE
- EXISTING WETLANDS
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING DRIVEWAY
- EXISTING STONE DRIVE
- EXISTING CONCRETE SIDEWALK
- EXISTING WALL
- EXISTING SANITARY LATERAL
- EXISTING SANITARY FORCE MAIN
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- EXISTING RAIL ROAD TRACKS
- EXISTING ITEMS TO BE REMOVED
- TO BE REMOVED
- EXISTING TREE TO BE REMOVED

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall Further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM
1-800-242-1776
CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

InLand Design
Civil Engineers, Surveyors & Land Development Consultants
16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHARLES A. DOBSON
ENGINEER
ME-PE-049197-E

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

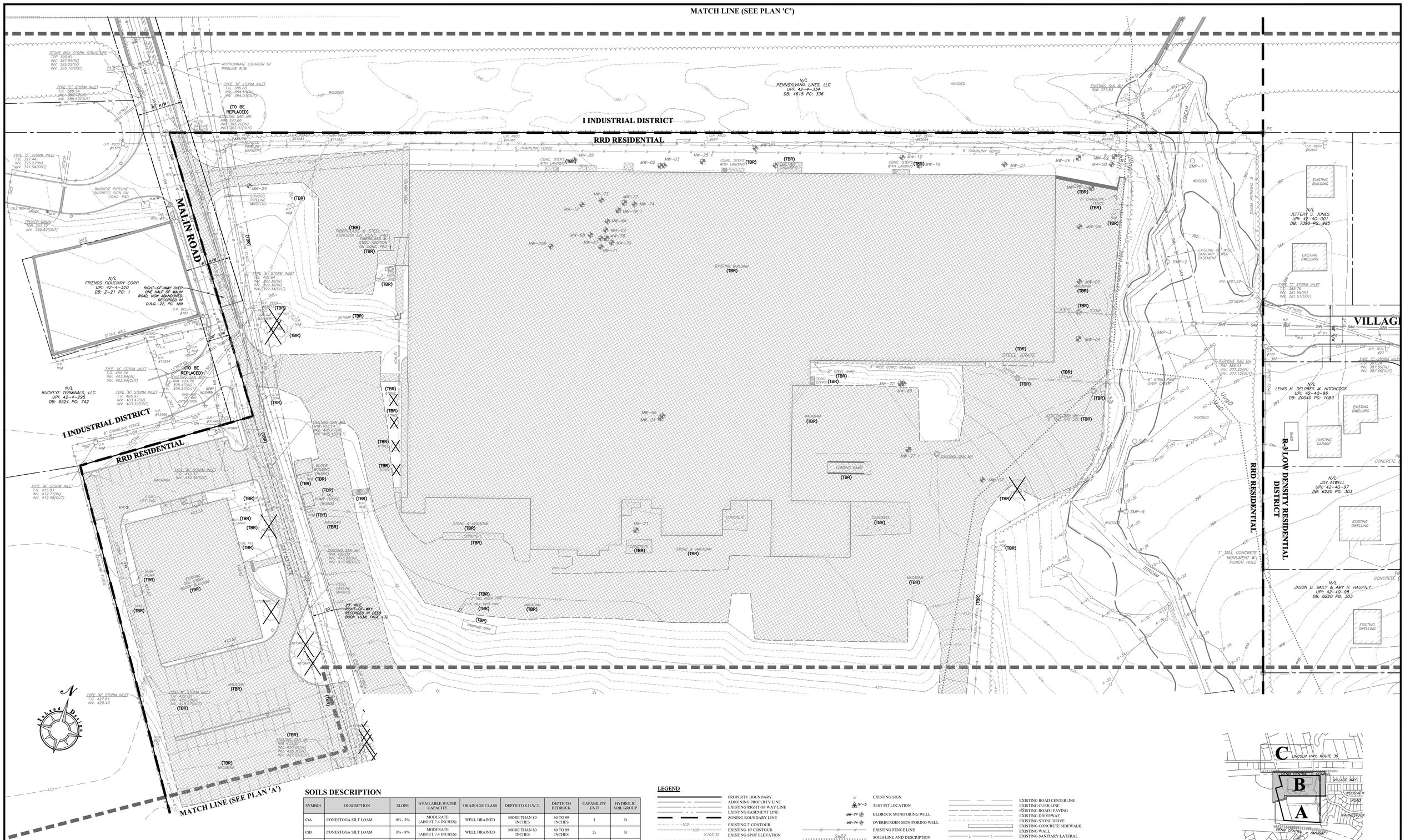
PRELIMINARY
LAND DEVELOPMENT PLAN

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

Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

DEMOLITION PLAN 'A'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SHEET 5 OF 43



SOILS DESCRIPTION

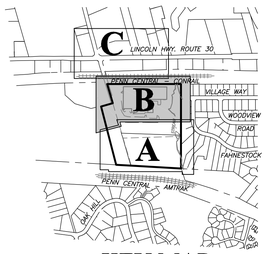
SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S.H.W.T.	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLIC SOIL GROUP
CtA	CONESTOGA SILT LOAM	0% - 3%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	1	B
CtB	CONESTOGA SILT LOAM	3% - 8%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
MaB	MANOR LOAM	3% - 8%	HIGH (ABOUT 9.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	2e	B
MaD	MANOR LOAM	15% - 25%	HIGH (ABOUT 9.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	4e	B
MaE	MANOR LOAM	25% - 35%	HIGH (ABOUT 9.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	6e	B
UrgB	URBAN LAND-CONESTOGA COMPLEX	0% - 8%	MODERATE (ABOUT 7.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
UrgD	URBAN LAND-CONESTOGA COMPLEX	8% - 25%	MODERATE (ABOUT 7.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	4e	B
UugD	URBAN LAND-UDORTHENTS, SCHIST AND GNEISS COMPLEX	8% - 25%	MODERATE (ABOUT 6.8 INCHES)	WELL DRAINED	ABOUT 60 INCHES	20 TO 70 INCHES	7e	B

GEOLOGY DESCRIPTION - ENTIRE SITE

SYMBOL	GEOLOGICAL AGE	MAIN ROCK TYPE	DESCRIPTION
Xo	LOWER PALEOZOIC	ALBITE-CHLORITE SCHIST	THE OCTORARO FORMATION IS A PHYLLITE THAT CONTAINS SOME SCHIST, HORNBLENDE GNEISS, AND GRANTIZED MEMBERS.

LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- ZONING BOUNDARY LINE
- 102 — EXISTING 2' CONTOUR
- 100 — EXISTING 10' CONTOUR
- X102.35 — EXISTING SPOT ELEVATION
- EXISTING TREELINE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WELL
- EXISTING WATER VALVE
- EXISTING SIGN
- TP-5 — TEST PIT LOCATION
- MW-77 — BEDROCK MONITORING WELL
- MW-74 — OVERBURDEN MONITORING WELL
- EXISTING FENCE LINE
- GeB2 — SOILS LINE AND DESCRIPTION
- STEEP SLOPE 15% - 25%
- STEEP SLOPE 25% - UP
- EXISTING STORM STRUCTURES & PIPE
- SAN — EXISTING SANITARY STRUCTURES & PIPE
- AC-15, AC-14, B-15, B-14, AC-16, AC-17, B-16, B-17 — EXISTING WETLANDS MODIFIED BY ACOE
- EXISTING WETLANDS
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING DRIVEWAY
- EXISTING STONE DRIVE
- EXISTING CONCRETE SIDEWALK
- EXISTING WALL
- L — EXISTING SANITARY LATERAL
- FM — EXISTING SANITARY FORCE MAIN
- W — EXISTING WATER LINE
- E — EXISTING ELECTRIC LINE
- G — EXISTING GAS LINE
- T — EXISTING TELEPHONE LINE
- EXISTING RAIL ROAD TRACKS
- EXISTING ITEMS TO BE REMOVED
- (TBR) — TO BE REMOVED
- EXISTING TREE TO BE REMOVED



KEY MAP
1" = 800'

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHARLES A. DOBSON
ENGINEER
NO.PE-040157-E

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

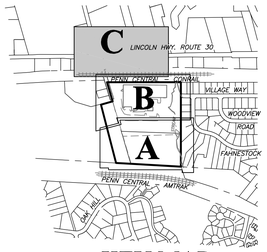
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 Inch = 30'

Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

DEMOLITION PLAN 'B'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SHEET 6 OF 43



KEY MAP

1" = 800'

LEGEND

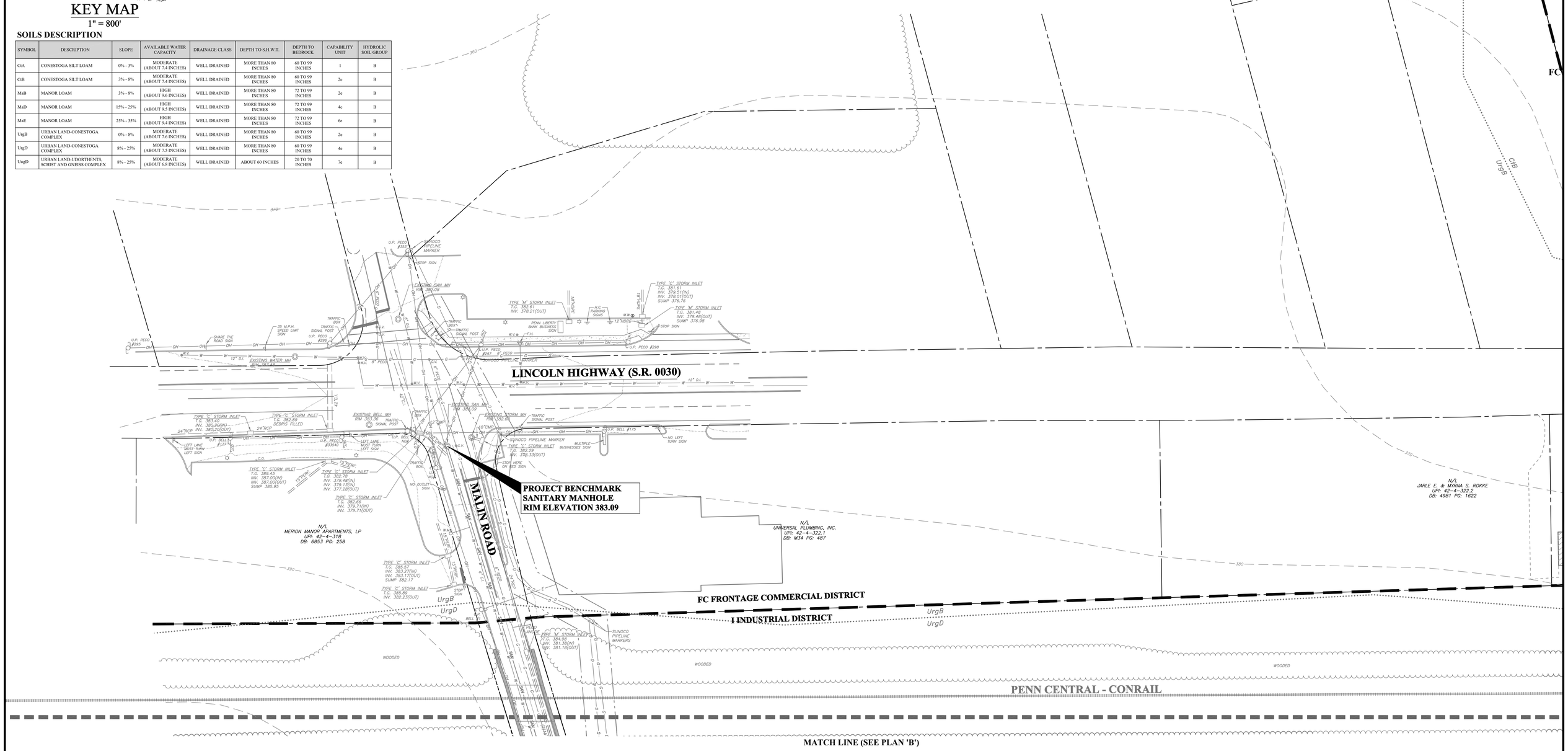
- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- ZONING BOUNDARY LINE
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING TREELINE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WELL
- EXISTING WATER VALVE
- EXISTING SIGN
- TEST PIT LOCATION
- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL
- EXISTING FENCE LINE
- SOILS LINE AND DESCRIPTION
- STEEP SLOPE 15% - 25%
- STEEP SLOPE 25% - UP
- EXISTING STORM STRUCTURES & PIPE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING WETLANDS MODIFIED BY ACOE
- EXISTING WETLANDS
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD - PAVING
- EXISTING DRIVEWAY
- EXISTING STONE DRIVE
- EXISTING CONCRETE SIDEWALK
- EXISTING WALL
- EXISTING SANITARY LATERAL
- EXISTING SANITARY FORCE MAIN
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- EXISTING RAIL ROAD TRACKS
- EXISTING ITEMS TO BE REMOVED
- TO BE REMOVED
- EXISTING TREE TO BE REMOVED

GEOLOGY DESCRIPTION - ENTIRE SITE

SYMBOL	GEOLOGICAL AGE	MAIN ROCK TYPE	DESCRIPTION
Xo	LOWER PALEOZOIC	ALBITE-CHLORITE SCHIST	THE OCTORARO FORMATION IS A PHYLLITE THAT CONTAINS SOME SCHIST, HORNBLENDE GNEISS, AND GRANITIZED MEMBERS.

SOILS DESCRIPTION

SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S.H.W.T.	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLIC SOIL GROUP
CtA	CONESTOGA SILT LOAM	0% - 3%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	1	B
CtB	CONESTOGA SILT LOAM	3% - 8%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
MaB	MANOR LOAM	3% - 8%	HIGH (ABOUT 9.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	2e	B
MaD	MANOR LOAM	15% - 25%	HIGH (ABOUT 9.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	4e	B
MaE	MANOR LOAM	25% - 35%	HIGH (ABOUT 9.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	6e	B
UrgB	URBAN LAND-CONESTOGA COMPLEX	0% - 8%	MODERATE (ABOUT 7.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
UrgD	URBAN LAND-CONESTOGA COMPLEX	8% - 25%	MODERATE (ABOUT 7.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	4e	B
UsgD	URBAN LAND-UDORTHENTS, SCHIST AND GNEISS COMPLEX	8% - 25%	MODERATE (ABOUT 6.8 INCHES)	WELL DRAINED	ABOUT 60 INCHES	20 TO 70 INCHES	7e	B



COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. In the event of unauthorized reuse of these plans by a third party, the second party agrees to hold InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE-CALL SYSTEM, INC. 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
P.A. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

InLand Design

Civil Engineers, Surveyors & Land Development Consultants

16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net

Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL LAND SURVEYOR CHARLES A. DOBSON ENGINEER 062-PS-049372-E

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

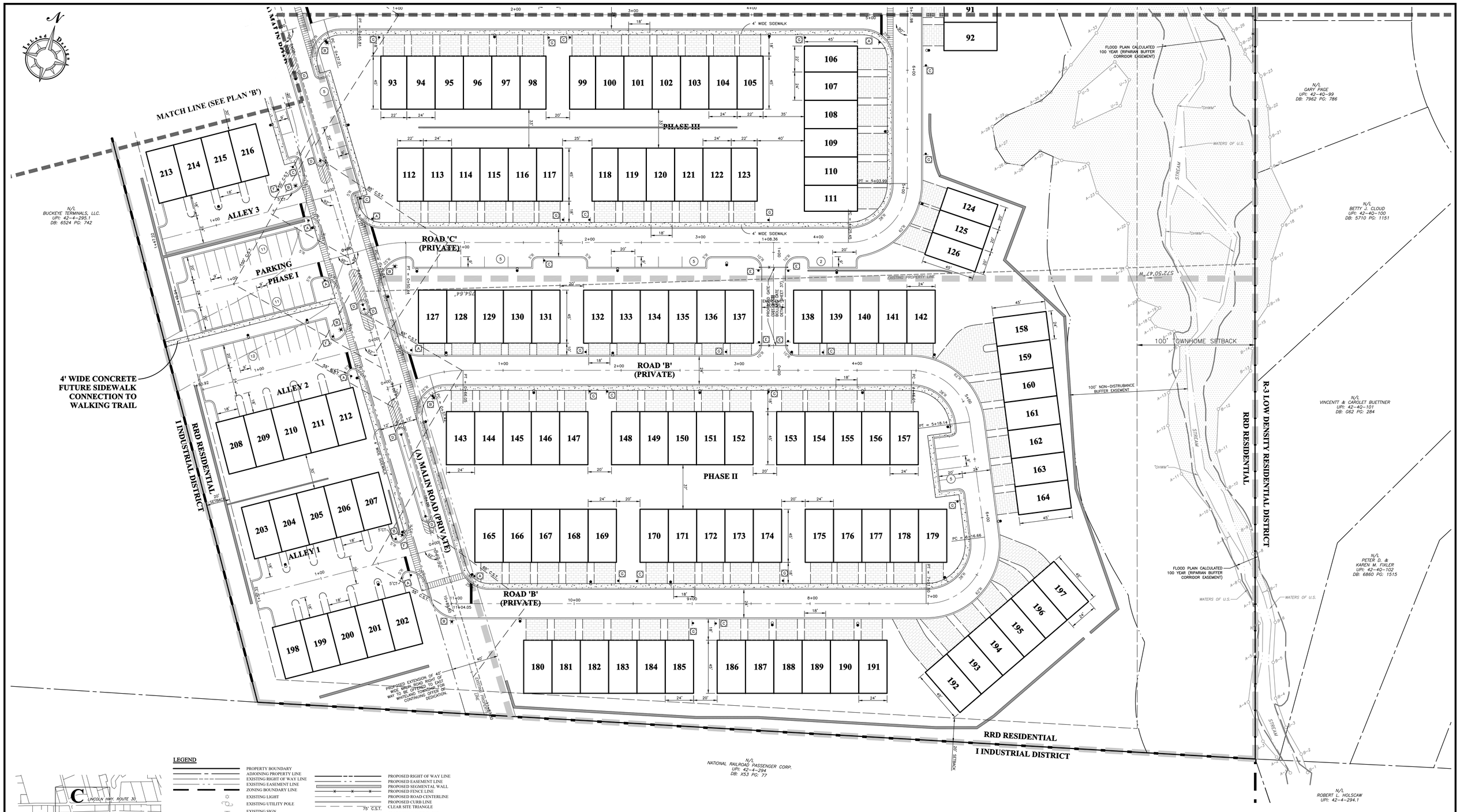
PRELIMINARY
LAND DEVELOPMENT PLAN

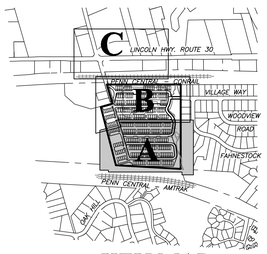
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 Inch = 30'

Date: **1/30/2015**
Scale: **1" = 30'**
Drawn by: **TAH**
Checked by: **CAD**
Project No. **10383**

DEMOLITION PLAN 'C'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA





KEY MAP
1" = 800'

LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- ZONING BOUNDARY LINE
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING SIGN
- EXISTING FENCE LINE
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING DRIVEWAY
- EXISTING STONE DRIVE
- EXISTING CONCRETE SIDEWALK
- EXISTING WALL
- EXISTING RAIL ROAD TRACKS
- EXISTING WETLANDS MODIFIED BY ACOE
- EXISTING WETLANDS
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- PROPOSED GORE TRANSITION
- PROPOSED PEDESTRIAN CROSS WALK
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT LINE
- PROPOSED SEGMENTAL WALL
- PROPOSED FENCE LINE
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB LINE
- CLEAR SITE TRIANGLE
- PROPOSED 5' CURB TAPER
- PROPOSED ROAD / PAVING
- PROPOSED DRIVEWAY
- PROPOSED STONE DRIVE
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PHASE LINE
- PROPOSED PAVERS
- PROPOSED STREET LIGHT
- PROPOSED STOP BAR
- PROPOSED "STOP" SIGN
- PROPOSED STREET SIGN
- PROPOSED SPEED LIMIT SIGN
- PROPOSED "KEEP RIGHT" & WARNING DIAMOND SIGN
- PROPOSED "EMERGENCY & AUTHORIZED VEHICLES ONLY" SIGN
- PROPOSED "NO OUTLET" SIGN
- PROPOSED "NO PARKING" SIGN
- PROPOSED "ALL TRAFFIC MUST TURN RIGHT" SIGN
- PROPOSED "ROAD NARROWS" SIGN

SIGHT DISTANCE CHART

ROAD NAME	LOOKING RIGHT	LOOKING LEFT
ROAD 'B' (STA. 10+97)	> 250 FT.	15 FT. (END OF ROAD)
ROAD 'B' (STA. 0+10)	> 250 FT.	223 FT. (END OF ROAD)
ROAD 'C' (STA. 11+51)	> 250 FT.	> 250 FT.
ROAD 'C' (STA. 0+10)	> 250 FT.	> 250 FT.
ROAD 'D' (STA. 0+10)	> 250 FT.	> 250 FT.
ROAD 'E' (STA. 0+10)	> 250 FT.	> 250 FT.

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL LAND SURVEYOR CHARLES A. DOBSON ENGINEER HOPE-049187-E PENNSYLVANIA

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

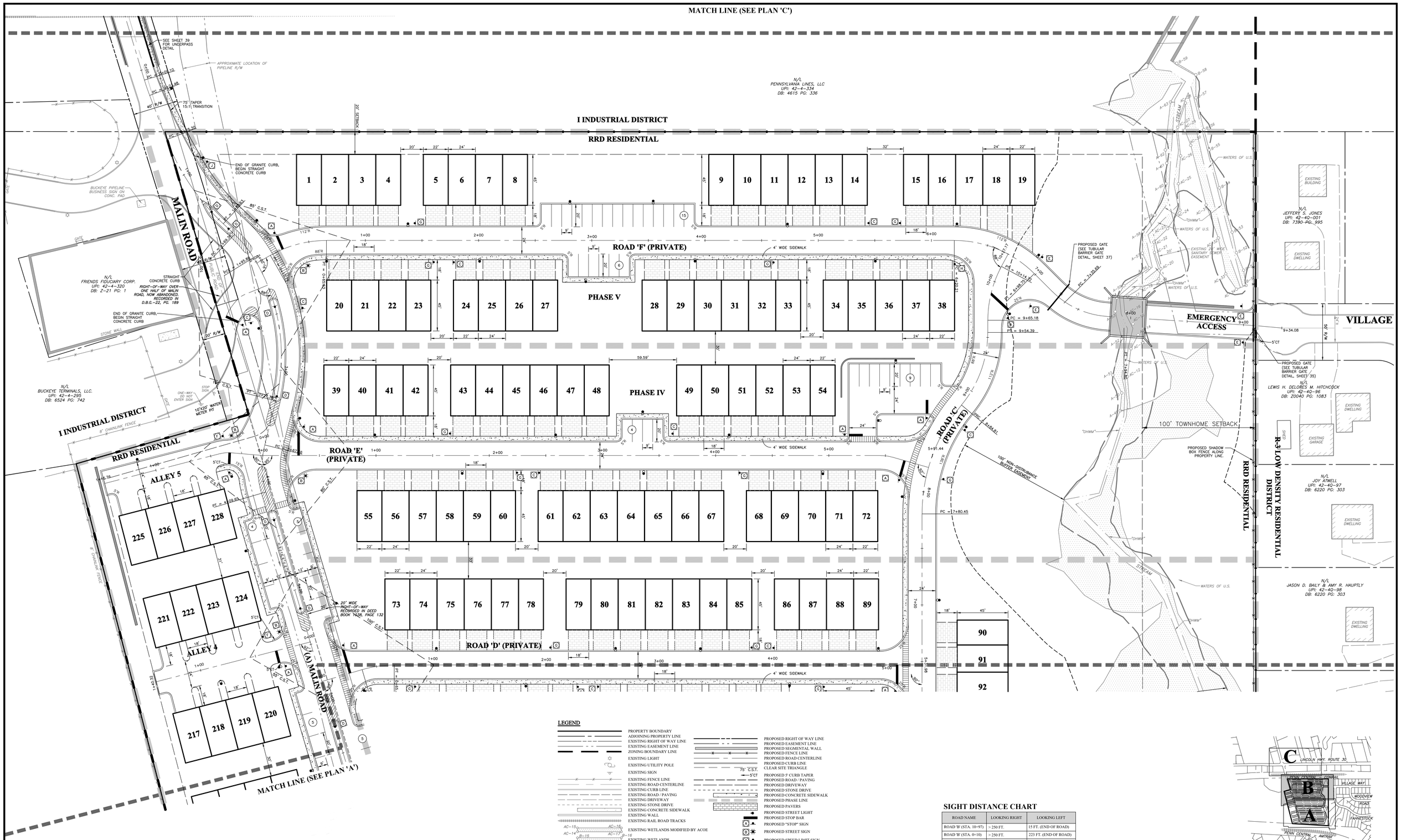
PRELIMINARY
LAND DEVELOPMENT PLAN

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

Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

LAYOUT & GEOMETRY PLAN 'A'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

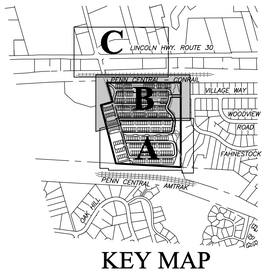


LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- ZONING BOUNDARY LINE
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING SIGN
- EXISTING FENCE LINE
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING DRIVEWAY
- EXISTING STONE DRIVE
- EXISTING CONCRETE SIDEWALK
- EXISTING WALL
- EXISTING RAIL ROAD TRACKS
- EXISTING WETLANDS MODIFIED BY ACOE
- EXISTING WETLANDS
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- PROPOSED GORE TRANSITION
- PROPOSED PEDESTRIAN CROSS WALK
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT LINE
- PROPOSED SEGMENTAL WALL
- PROPOSED FENCE LINE
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB LINE
- CLEAR SITE TRIANGLE
- PROPOSED 5' CURB TAPER
- PROPOSED ROAD / PAVING
- PROPOSED DRIVEWAY
- PROPOSED STONE DRIVE
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PHASE LINE
- PROPOSED PAVERS
- PROPOSED STREET LIGHT
- PROPOSED STOP BAR
- A — PROPOSED "STOP" SIGN
- B — PROPOSED STREET SIGN
- C — PROPOSED SPEED LIMIT SIGN
- D — PROPOSED "KEEP RIGHT" & WARNING DIAMOND SIGN
- E — PROPOSED "EMERGENCY & AUTHORIZED VEHICLES ONLY" SIGN
- F — PROPOSED "NO OUTLET" SIGN
- G — PROPOSED "NO PARKING" SIGN
- H — PROPOSED "ALL TRAFFIC MUST TURN RIGHT" SIGN
- J — PROPOSED "ROAD NARROWS" SIGN

SIGHT DISTANCE CHART

ROAD NAME	LOOKING RIGHT	LOOKING LEFT
ROAD 'B' (STA. 10+97)	> 250 FT.	15 FT. (END OF ROAD)
ROAD 'B' (STA. 0+10)	> 250 FT.	223 FT. (END OF ROAD)
ROAD 'C' (STA. 11+51)	> 250 FT.	> 250 FT.
ROAD 'C' (STA. 0+10)	> 250 FT.	> 250 FT.
ROAD 'D' (STA. 0+10)	> 250 FT.	> 250 FT.
ROAD 'E' (STA. 0+10)	> 250 FT.	> 250 FT.



KEY MAP
1" = 800'

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall Further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689
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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

InLand Design
Civil Engineers, Surveyors & Land Development Consultants
16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHARLES A. DOBSON NO. PE-049157-E PENNSYLVANIA

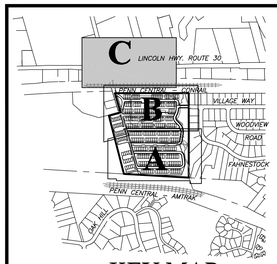
No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

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

Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

LAYOUT & GEOMETRY PLAN 'B'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

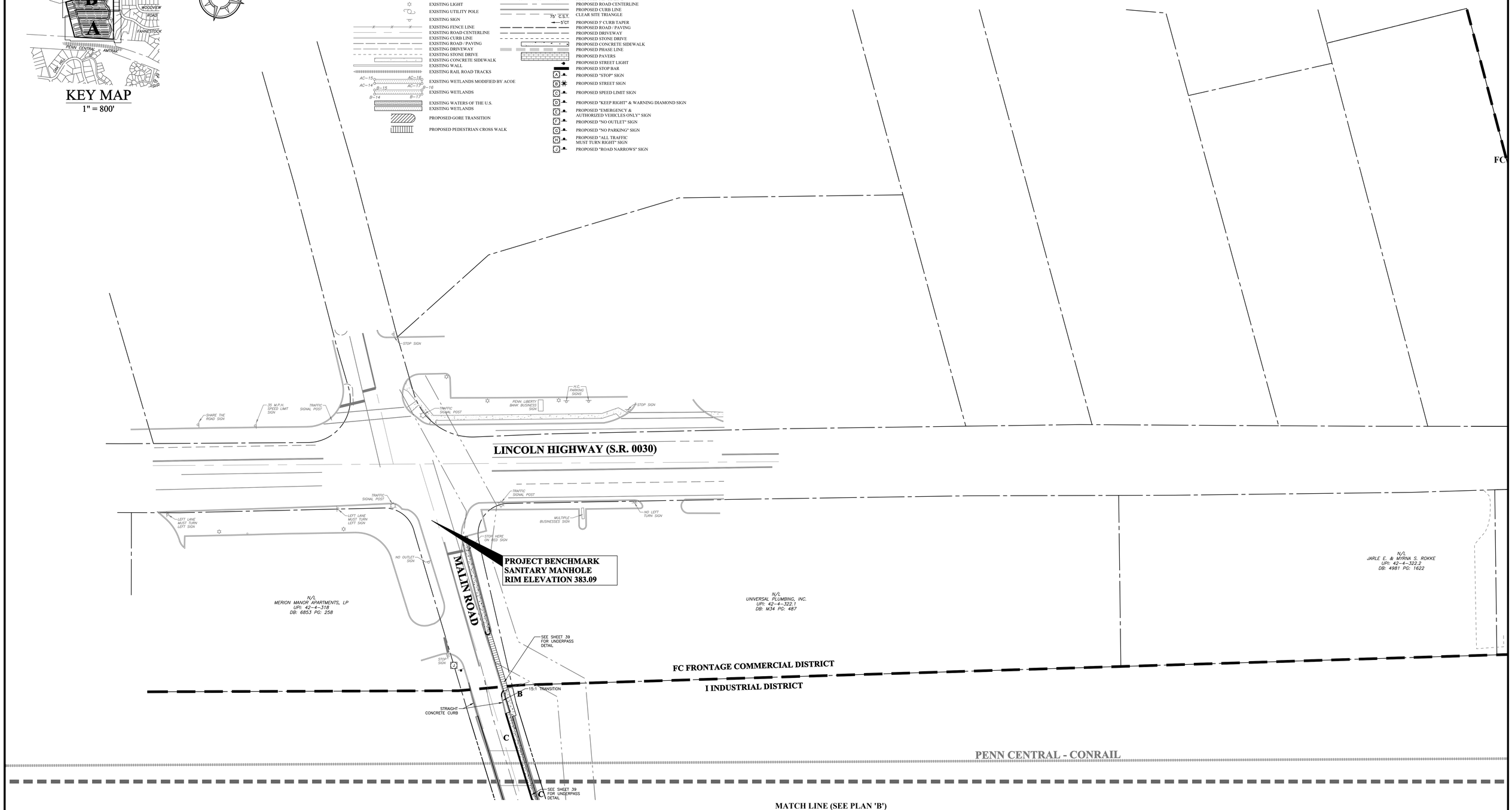


KEY MAP

1" = 800'

LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- ZONING BOUNDARY LINE
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING SIGN
- EXISTING FENCE LINE
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING DRIVEWAY
- EXISTING STONE DRIVE
- EXISTING CONCRETE SIDEWALK
- EXISTING WALL
- EXISTING RAIL ROAD TRACKS
- EXISTING WETLANDS MODIFIED BY ACOE (AC-13, AC-14, AC-15, AC-16, AC-17, B-13, B-14, B-15, B-16, B-17)
- EXISTING WETLANDS
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- PROPOSED GORE TRANSITION
- PROPOSED PEDESTRIAN CROSS WALK
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT LINE
- PROPOSED SEGMENTAL WALL
- PROPOSED FENCE LINE
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB LINE
- 75' C.S.T. — CLEAR SITE TRIANGLE
- 5'CT — PROPOSED 5' CURB TAPER
- PROPOSED ROAD / PAVING
- PROPOSED DRIVEWAY
- PROPOSED STONE DRIVE
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PHASE LINE
- PROPOSED PAVERS
- PROPOSED STREET LIGHT
- PROPOSED STOP BAR
- A — PROPOSED "STOP" SIGN
- B — PROPOSED STREET SIGN
- C — PROPOSED SPEED LIMIT SIGN
- D — PROPOSED "KEEP RIGHT" & WARNING DIAMOND SIGN
- E — PROPOSED "EMERGENCY & AUTHORIZED VEHICLES ONLY" SIGN
- F — PROPOSED "NO OUTLET" SIGN
- G — PROPOSED "NO PARKING" SIGN
- H — PROPOSED "ALL TRAFFIC MUST TURN RIGHT" SIGN
- J — PROPOSED "ROAD NARROWS" SIGN



SIGHT DISTANCE CHART

ROAD NAME	LOOKING RIGHT	LOOKING LEFT
ROAD 'B' (STA. 10+97)	> 250 FT.	15 FT. (END OF ROAD)
ROAD 'B' (STA. 0+10)	> 250 FT.	223 FT. (END OF ROAD)
ROAD 'C' (STA. 11+51)	> 250 FT.	> 250 FT.
ROAD 'C' (STA. 0+10)	> 250 FT.	> 250 FT.
ROAD 'D' (STA. 0+10)	> 250 FT.	> 250 FT.
ROAD 'E' (STA. 0+10)	> 250 FT.	> 250 FT.

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Number:
201416426089

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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHARLES A. DOBSON
ENGINEER
VO-FS-00012-E
PENNSYLVANIA

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

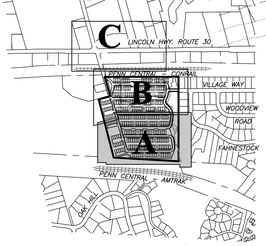
PRELIMINARY
LAND DEVELOPMENT PLAN

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

Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

LAYOUT & GEOMETRY PLAN 'C'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA



KEY MAP

1" = 800'

SOILS DESCRIPTION

SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S.H.W.T.	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLIC SOIL GROUP
CtA	CONESTOGA SILT LOAM	0% - 3%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	1	B
CtB	CONESTOGA SILT LOAM	3% - 8%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
MaB	MANOR LOAM	3% - 8%	HIGH (ABOUT 9.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	2e	B
MaD	MANOR LOAM	15% - 25%	HIGH (ABOUT 9.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	4e	B
MaE	MANOR LOAM	25% - 35%	HIGH (ABOUT 9.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	6e	B
UrgB	URBAN LAND-CONESTOGA COMPLEX	0% - 8%	MODERATE (ABOUT 7.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
UrgD	URBAN LAND-CONESTOGA COMPLEX	8% - 25%	MODERATE (ABOUT 7.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	4e	B
UsgD	URBAN LAND-UDORTHENTS, SCHIST AND GNEISS COMPLEX	8% - 25%	MODERATE (ABOUT 6.8 INCHES)	WELL DRAINED	ABOUT 60 INCHES	20 TO 70 INCHES	7e	B

GEOLOGY DESCRIPTION - ENTIRE SITE

SYMBOL	GEOLOGICAL AGE	MAIN ROCK TYPE	DESCRIPTION
Xo	LOWER PALEOZOIC	ALBITE-CHLORITE SCHIST	THE OCTORARO FORMATION IS A PHYLLITE THAT CONTAINS SOME SCHIST, HORNBLENDE GNEISS, AND GRANITIZED MEMBERS.

LEGEND

PROPERTY BOUNDARY
ADJOINING PROPERTY LINE
EXISTING RIGHT OF WAY LINE
EXISTING EASEMENT LINE
FLOOD PLAIN LINE
ZONING BOUNDARY LINE
EXISTING 2' CONTOUR
EXISTING 10' CONTOUR
EXISTING SPOT ELEVATION
EXISTING TREELINE
EXISTING TREE SYMBOLS
EXISTING LIGHT
EXISTING UTILITY POLE
EXISTING WELL
EXISTING WATER VALVE
EXISTING SIGN
TEST PIT LOCATION
EXISTING FENCE LINE
SOILS LINE AND DESCRIPTION
EXISTING WETLANDS MODIFIED BY ACOE
EXISTING WETLANDS
EXISTING STORM STRUCTURES & PIPE
EXISTING SANITARY STRUCTURES & PIPE
EXISTING ROAD CENTERLINE
EXISTING CURB LINE
EXISTING ROAD / PAVING
EXISTING DRIVEWAY
EXISTING STONE DRIVE
EXISTING CONCRETE SIDEWALK
EXISTING WALL
EXISTING SANITARY LATERAL
EXISTING SANITARY FORCE MAIN
EXISTING WATER LINE
EXISTING ELECTRIC LINE
EXISTING GAS LINE
EXISTING TELEPHONE LINE
EXISTING WATERS OF THE U.S.
EXISTING WETLANDS
BEDROCK MONITORING WELL
OVERBURDEN MONITORING WELL
EXISTING RAIL ROAD TRACKS
CONTAMINATED AREAS (TO BE REMEDIATED)
PROPOSED RIGHT OF WAY LINE
PROPOSED EASEMENT LINE
PROPOSED 2' CONTOUR
PROPOSED 10' CONTOUR
PROPOSED SPOT ELEVATION
PROPOSED TREELINE
PROPOSED UTILITY POLE
PROPOSED WELL
PROPOSED WATER VALVE
PROPOSED STOP BAR
PROPOSED SIGN
PROPOSED FIRE HYDRANT
PROPOSED FENCE LINE
PROPOSED STORM STRUCTURES & PIPE
PROPOSED SANITARY STRUCTURES & PIPE
PROPOSED ROAD CENTERLINE
PROPOSED CURB LINE
PROPOSED 5' CURB TAPER
PROPOSED ROAD / PAVING
PROPOSED DRIVEWAY
PROPOSED CONCRETE SIDEWALK
PROPOSED SEGMENTAL WALL
PROPOSED SANITARY LATERAL
PROPOSED SANITARY FORCE MAIN
PROPOSED WATER LINE
PROPOSED ELECTRIC LINE
PROPOSED GAS LINE
PROPOSED TELEPHONE LINE
PROPOSED PHASE LINE
PROPOSED CLEAR SITE TRIANGLE
PROPOSED PAVERS
PROPOSED STREET LIGHT

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA
CHARLES A. DOBSON
ENGINEER

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

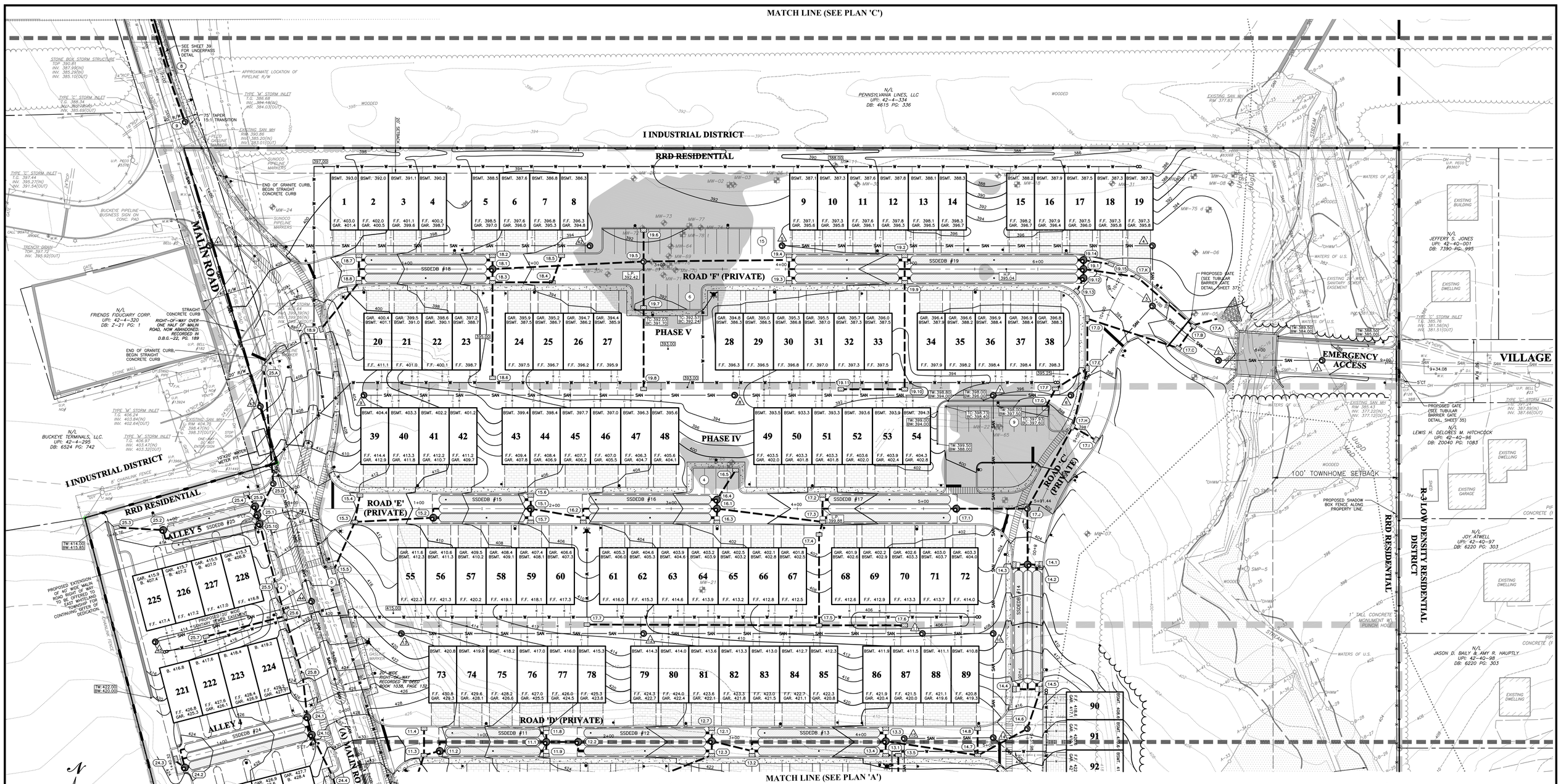
PRELIMINARY
LAND DEVELOPMENT PLAN

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

Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

GRADING & UTILITY PLAN 'A'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SHEET
11
OF 43



SOILS DESCRIPTION

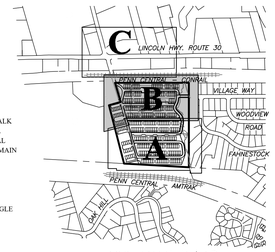
SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S.H.W.T.	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLIC SOIL GROUP
CtA	CONESTOGA SILT LOAM	0% - 3%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	1	B
CtB	CONESTOGA SILT LOAM	3% - 8%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
MaB	MANOR LOAM	3% - 8%	HIGH (ABOUT 9.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	2e	B
MaD	MANOR LOAM	15% - 25%	HIGH (ABOUT 9.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	4e	B
MaE	MANOR LOAM	25% - 35%	HIGH (ABOUT 9.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	6e	B
UrgB	URBAN LAND-CONESTOGA COMPLEX	0% - 8%	MODERATE (ABOUT 7.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
UrgD	URBAN LAND-CONESTOGA COMPLEX	8% - 25%	MODERATE (ABOUT 7.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	4e	B
UugD	URBAN LAND-UDORTHENTS, SCHIST AND GNEISS COMPLEX	8% - 25%	MODERATE (ABOUT 6.8 INCHES)	WELL DRAINED	ABOUT 60 INCHES	20 TO 70 INCHES	7e	B

GEOLOGY DESCRIPTION - ENTIRE SITE

SYMBOL	GEOLOGICAL AGE	MAIN ROCK TYPE	DESCRIPTION
Xo	LOWER PALEOZOIC	ALBITE-CHLORITE SCHIST	THE OCTORARO FORMATION IS A PHYLLITE THAT CONTAINS SOME SCHIST, HORNBLENDE GNEISS, AND GRANITIZED MEMBERS.

LEGEND

PROPERTY BOUNDARY
ADJOINING PROPERTY LINE
EXISTING RIGHT OF WAY LINE
EXISTING EASEMENT LINE
FLOOD PLAIN LINE
ZONING BOUNDARY LINE
EXISTING 2' CONTOUR
EXISTING 10' CONTOUR
EXISTING SPOT ELEVATION
EXISTING TREELINE
EXISTING TREE SYMBOLS
EXISTING LIGHT
EXISTING UTILITY POLE
EXISTING WELL
EXISTING WATER VALVE
EXISTING SIGN
TEST PIT LOCATION
EXISTING FENCE LINE
SOILS LINE AND DESCRIPTION
EXISTING WETLANDS MODIFIED BY ACOE
EXISTING WETLANDS
EXISTING STORM STRUCTURES & PIPE
EXISTING SANITARY STRUCTURES & PIPE
EXISTING ROAD CENTERLINE
EXISTING CURB LINE
EXISTING ROAD / PAVING
EXISTING DRIVEWAY
EXISTING STONE DRIVE
EXISTING CONCRETE SIDEWALK
EXISTING WALL
EXISTING SANITARY LATERAL
EXISTING SANITARY FORCE MAIN
EXISTING WATER LINE
EXISTING ELECTRIC LINE
EXISTING GAS LINE
EXISTING TELEPHONE LINE
EXISTING WATERS OF THE U.S.
EXISTING WETLANDS
BEDROCK MONITORING WELL
OVERBURDEN MONITORING WELL
EXISTING RAIL ROAD TRACKS
CONTAMINATED AREAS (TO BE REMEDIATED)
PROPOSED RIGHT OF WAY LINE
PROPOSED EASEMENT LINE
PROPOSED 2' CONTOUR
PROPOSED 10' CONTOUR
PROPOSED SPOT ELEVATION
PROPOSED TREELINE
PROPOSED UTILITY POLE
PROPOSED WELL
PROPOSED WATER VALVE
PROPOSED STORM PIPE
PROPOSED SIGN
PROPOSED FIRE HYDRANT
PROPOSED FENCE LINE
PROPOSED STORM STRUCTURES & PIPE
PROPOSED SANITARY STRUCTURES & PIPE
PROPOSED ROAD CENTERLINE
PROPOSED CURB LINE
PROPOSED 5' CURB TAPER
PROPOSED ROAD / PAVING
PROPOSED DRIVEWAY
PROPOSED CONCRETE SIDEWALK
PROPOSED SEGMENTAL WALL
PROPOSED SANITARY LATERAL
PROPOSED SANITARY FORCE MAIN
PROPOSED WATER LINE
PROPOSED ELECTRIC LINE
PROPOSED GAS LINE
PROPOSED TELEPHONE LINE
PROPOSED PHASE LINE
PROPOSED CLEAR SITE TRIANGLE
PROPOSED PAVERS
PROPOSED STREET LIGHT



KEY MAP
1" = 800'

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any because of, from, or in connection with unauthorized use, or any such use by the third party's prospective bidders, purchasers, or intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
P.A. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

InLand Design
Civil Engineers, Surveyors & Land Development Consultants
16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL CHARLES A. DOBSON ENGINEER

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

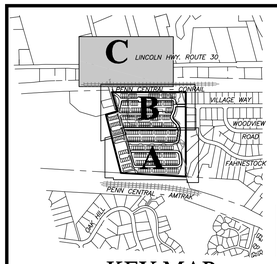
PRELIMINARY
LAND DEVELOPMENT PLAN

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

Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

GRADING & UTILITY PLAN 'B'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SHEET **12** OF 43



KEY MAP

1" = 800'

GEOLOGY DESCRIPTION - ENTIRE SITE

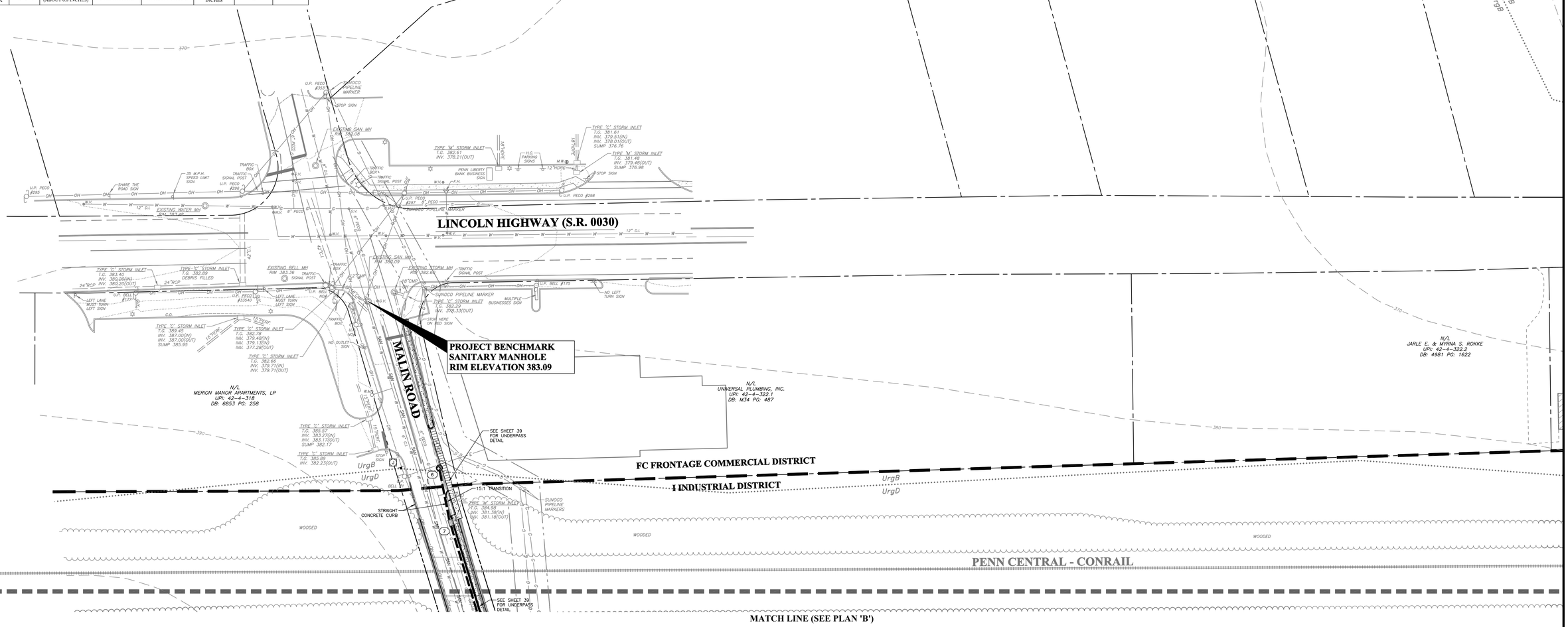
SYMBOL	GEOLOGICAL AGE	MAIN ROCK TYPE	DESCRIPTION
Xo	LOWER PALEOZOIC	ALBITE-CHLORITE SCHIST	THE OCTORARO FORMATION IS A PHYLLITE THAT CONTAINS SOME SCHIST, HORNBLENDE GNEISS, AND GRANITIZED MEMBERS.

SOILS DESCRIPTION

SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S.H.W.T.	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLIC SOIL GROUP
CtA	CONESTOGA SILT LOAM	0% - 3%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	1	B
CtB	CONESTOGA SILT LOAM	3% - 8%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
MaB	MANOR LOAM	3% - 8%	HIGH (ABOUT 9.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	2e	B
MaD	MANOR LOAM	15% - 25%	HIGH (ABOUT 9.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	4e	B
MaE	MANOR LOAM	25% - 35%	HIGH (ABOUT 9.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	6e	B
UrgB	URBAN LAND-CONESTOGA COMPLEX	0% - 8%	MODERATE (ABOUT 7.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
UrgD	URBAN LAND-CONESTOGA COMPLEX	8% - 25%	MODERATE (ABOUT 7.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	4e	B
UugD	URBAN LAND-UDORTHENTS, SCHIST AND GNEISS COMPLEX	8% - 25%	MODERATE (ABOUT 6.8 INCHES)	WELL DRAINED	ABOUT 60 INCHES	20 TO 70 INCHES	7e	B

LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- FLOOD PLAIN LINE
- ZONING BOUNDARY LINE
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING TREELINE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WELL
- EXISTING WATER VALVE
- EXISTING SIGN
- TEST PIT LOCATION
- EXISTING FENCE LINE
- SOILS LINE AND DESCRIPTION
- EXISTING WETLANDS MODIFIED BY ACOE
- EXISTING WETLANDS
- EXISTING STORM STRUCTURES & PIPE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING DRIVEWAY
- EXISTING STONE DRIVE
- EXISTING CONCRETE SIDEWALK
- EXISTING WALL
- EXISTING SANITARY LATERAL
- EXISTING SANITARY FORCE MAIN
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL
- EXISTING RAIL ROAD TRACKS
- CONTAMINATED AREAS (TO BE REMEDIATED)
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT LINE
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED WELL
- PROPOSED WATER VALVE
- PROPOSED STOP BAR
- PROPOSED SIGN
- PROPOSED FIRE HYDRANT
- PROPOSED FENCE LINE
- PROPOSED STORM STRUCTURES & PIPE
- PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB LINE
- PROPOSED 5' CURB TAPER
- PROPOSED ROAD / PAVING
- PROPOSED DRIVEWAY
- PROPOSED CONCRETE SIDEWALK
- PROPOSED SEGMENTAL WALL
- PROPOSED SANITARY LATERAL
- PROPOSED SANITARY FORCE MAIN
- PROPOSED WATER LINE
- PROPOSED ELECTRIC LINE
- PROPOSED GAS LINE
- PROPOSED TELEPHONE LINE
- PROPOSED PHASE LINE
- PROPOSED CLEAR SITE TRIANGLE
- PROPOSED PAVERS
- PROPOSED STREET LIGHT



COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any reproduction of these plans for any purpose, without the express authorization by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC. the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE-CALL SYSTEM, INC. — CALL BEFORE YOU DIG!

Pennsylvania One Call System
P.A. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

InLand Design
Civil Engineers, Surveyors & Land Development Consultants
16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — CHARLES A. DOBSON — PE-073540-E

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

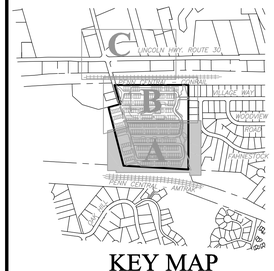
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 Inch = 30'

Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

GRADING & UTILITY PLAN 'C'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SHEET 13 OF 43



KEY MAP

1" = 800'

LEGEND

PROPERTY BOUNDARY
ADJOINING PROPERTY LINE
EXISTING RIGHT OF WAY LINE
EXISTING EASEMENT LINE
FLOOD PLAIN LINE
ZONING BOUNDARY LINE
EXISTING 2' CONTOUR
EXISTING 10' CONTOUR
EXISTING SPOT ELEVATION
EXISTING TREELINE
EXISTING TREE SYMBOLS
EXISTING LIGHT
EXISTING UTILITY POLE
EXISTING WELL
EXISTING WATER VALVE
EXISTING SIGN
TEST PIT LOCATION
EXISTING FENCE LINE
SOILS LINE AND DESCRIPTION
EXISTING WETLANDS MODIFIED BY ACOE
EXISTING WETLANDS
EXISTING STORM STRUCTURES & PIPE
EXISTING SANITARY STRUCTURES & PIPE
EXISTING ROAD CENTERLINE
EXISTING CURB LINE
EXISTING ROAD / PAVING
EXISTING DRIVEWAY
EXISTING STONE DRIVE
EXISTING CONCRETE SIDEWALK
EXISTING WALL
EXISTING SANITARY LATERAL
EXISTING SANITARY FORCE MAIN
EXISTING WATER LINE
EXISTING ELECTRIC LINE
EXISTING GAS LINE
EXISTING TELEPHONE LINE
EXISTING WATERS OF THE U.S.
EXISTING WETLANDS
BEDROCK MONITORING WELL
OVERBURDEN MONITORING WELL
EXISTING RAIL ROAD TRACKS
CONTAMINATED AREAS (TO BE REMEDIATED)
PROPOSED RIGHT OF WAY LINE
PROPOSED EASEMENT LINE
PROPOSED 2' CONTOUR
PROPOSED 10' CONTOUR
PROPOSED SPOT ELEVATION
PROPOSED TREELINE
PROPOSED UTILITY POLE
PROPOSED WELL
PROPOSED WATER VALVE
PROPOSED STOP BAR
PROPOSED SIGN
PROPOSED FIRE HYDRANT
PROPOSED FENCE LINE
PROPOSED STORM STRUCTURES & PIPE
PROPOSED SANITARY STRUCTURES & PIPE
PROPOSED ROAD CENTERLINE
PROPOSED CURB LINE
PROPOSED 5' CURB TAPER
PROPOSED ROAD / PAVING
PROPOSED DRIVEWAY
PROPOSED CONCRETE SIDEWALK
PROPOSED SEGMENTAL WALL
PROPOSED SANITARY LATERAL
PROPOSED SANITARY FORCE MAIN
PROPOSED WATER LINE
PROPOSED ELECTRIC LINE
PROPOSED GAS LINE
PROPOSED TELEPHONE LINE
PROPOSED PHASE LINE
PROPOSED CLEAR SITE TRIANGLE
PROPOSED PAVERS
PROPOSED STREET LIGHT

RECEIVING WATER CLASSIFICATION: LITTLE VALLEY CREEK - EXCEPTIONAL VALUE (EV)

SEE SHEET 16 FOR STORMWATER MANGEMENT NOTES AND SIGNATURE BLOCKS

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

Pennsylvania One Call System
P.A. act 172 of 1986 requires
three working days notice
Serial Number
20141642689

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.

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

InLand Design
Civil Engineers, Surveyors & Land Development Consultants
16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHARLES A. DOBSON PENNSYLVANIA

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY LAND DEVELOPMENT PLAN

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

Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN 'A' FOR

MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

MATCH LINE (SEE PLAN 'C')

I INDUSTRIAL DISTRICT

RRD RESIDENTIAL

MALIN ROAD

ROAD 'F' (PRIVATE)

PHASE V

PHASE IV

ROAD 'E' (PRIVATE)

ROAD 'C' (PRIVATE)

ROAD 'D' (PRIVATE)

ALLEY 5

ALLEY 4

SUBSURFACE EXT. DET. BED STRUCTURAL BMP

EMERGENCY ACCESS

100' TOWNHOME SETBACK

VILLAGE

R-3 LOW DENSITY RESIDENTIAL DISTRICT

N/L PENNSYLVANIA LINES, LLC UPI: 42-4-334 DB: 4615 PG: 336

N/L FRIENDS FIDUCIARY CORP. UPI: 42-4-320 DB: Z-21 PG: 1

N/L BUCKEYE TERMINALS, LLC. UPI: 42-4-295 DB: 6524 PG: 742

N/L JEFFERY S. JONES UPI: 42-40-001 DB: 7390 PG: 995

N/L LEWIS H. DELORES M. HITCHCOCK UPI: 42-40-96 DB: 20040 PG: 1083

N/L JOY ATWELL UPI: 42-40-97 DB: 6220 PG: 303

N/L JASON D. BAILY & AMY R. HAUPTLY UPI: 42-40-98 DB: 6220 PG: 303

MATCH LINE (SEE PLAN 'A')

KEY MAP

1" = 800'

LEGEND

PROPERTY BOUNDARY
ADJOINING PROPERTY LINE
EXISTING RIGHT OF WAY LINE
EXISTING EASEMENT LINE
FLOOD PLAIN LINE
ZONING BOUNDARY LINE
EXISTING 2' CONTOUR
EXISTING 10' CONTOUR
EXISTING SPOT ELEVATION
EXISTING TREELINE
EXISTING TREE SYMBOLS
EXISTING LIGHT
EXISTING UTILITY POLE
EXISTING WELL
EXISTING WATER VALVE
EXISTING SIGN
TEST PIT LOCATION
EXISTING FENCE LINE
SOILS LINE AND DESCRIPTION
EXISTING WETLANDS MODIFIED BY ACOE
EXISTING WETLANDS
EXISTING STORM STRUCTURES & PIPE
EXISTING SANITARY STRUCTURES & PIPE
EXISTING ROAD CENTERLINE
EXISTING CURB LINE
EXISTING ROAD / PAVING
EXISTING DRIVEWAY
EXISTING STONE DRIVE
EXISTING CONCRETE SIDEWALK
EXISTING WALL
EXISTING SANITARY LATERAL
EXISTING SANITARY FORCE MAIN
EXISTING WATER LINE
EXISTING ELECTRIC LINE
EXISTING GAS LINE
EXISTING TELEPHONE LINE
EXISTING WATERS OF THE U.S.
EXISTING WETLANDS
BEDROCK MONITORING WELL
OVERBURDEN MONITORING WELL
EXISTING RAIL ROAD TRACKS
CONTAMINATED AREAS (TO BE REMEDIATED)
PROPOSED RIGHT OF WAY LINE
PROPOSED EASEMENT LINE
PROPOSED 2' CONTOUR
PROPOSED 10' CONTOUR
PROPOSED SPOT ELEVATION
PROPOSED TREELINE
PROPOSED UTILITY POLE
PROPOSED WELL
PROPOSED WATER VALVE
PROPOSED STOP BAR
PROPOSED SIGN
PROPOSED FIRE HYDRANT
PROPOSED FENCE LINE
PROPOSED STORM STRUCTURES & PIPE
PROPOSED SANITARY STRUCTURES & PIPE
PROPOSED ROAD CENTERLINE
PROPOSED CURB LINE
PROPOSED 5' CURB TAPER
PROPOSED ROAD / PAVING
PROPOSED DRIVEWAY
PROPOSED CONCRETE SIDEWALK
PROPOSED SEGMENTAL WALL
PROPOSED SANITARY LATERAL
PROPOSED SANITARY FORCE MAIN
PROPOSED WATER LINE
PROPOSED ELECTRIC LINE
PROPOSED GAS LINE
PROPOSED TELEPHONE LINE
PROPOSED PHASE LINE
PROPOSED CLEAR SITE TRIANGLE
PROPOSED PAVERS
PROPOSED STREET LIGHT

SEE SHEET 16 FOR STORMWATER MANGEMENT NOTES AND SIGNATURE BLOCKS

RECEIVING WATER CLASSIFICATION:
LITTLE VALLEY CREEK - EXCEPTIONAL VALUE (EV)

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

Pennsylvania One Call System
P.A. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL LAND SURVEYOR CHARLES A. DOBSON ENGINEER 40.PE-040914 PENNSYLVANIA

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY LAND DEVELOPMENT PLAN

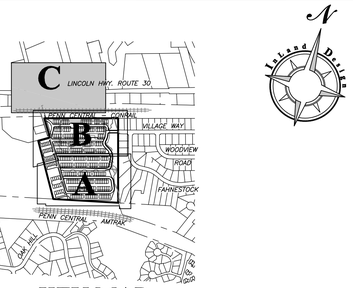
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 Inch = 30'

Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN 'B' FOR

MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA



KEY MAP

1" = 800'

LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- FLOOD PLAIN LINE
- ZONING BOUNDARY LINE
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING TREELINE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WELL
- EXISTING WATER VALVE
- EXISTING SIGN
- TEST PIT LOCATION
- EXISTING FENCE LINE
- SOILS LINE AND DESCRIPTION
- EXISTING WETLANDS MODIFIED BY ACOE
- EXISTING WETLANDS
- EXISTING STORM STRUCTURES & PIPE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING DRIVEWAY
- EXISTING STONE DRIVE
- EXISTING CONCRETE SIDEWALK
- EXISTING WALL
- EXISTING SANITARY LATERAL
- EXISTING SANITARY FORCE MAIN
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL
- EXISTING RAIL ROAD TRACKS
- CONTAMINATED AREAS (TO BE REMEDIATED)
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT LINE
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED WELL
- PROPOSED WATER VALVE
- PROPOSED STOP BAR
- PROPOSED SIGN
- PROPOSED FIRE HYDRANT
- PROPOSED FENCE LINE
- PROPOSED STORM STRUCTURES & PIPE
- PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB LINE
- PROPOSED 5' CURB TAPER
- PROPOSED ROAD / PAVING
- PROPOSED DRIVEWAY
- PROPOSED CONCRETE SIDEWALK
- PROPOSED SEGMENTAL WALL
- PROPOSED SANITARY LATERAL
- PROPOSED SANITARY FORCE MAIN
- PROPOSED WATER LINE
- PROPOSED ELECTRIC LINE
- PROPOSED GAS LINE
- PROPOSED TELEPHONE LINE
- PROPOSED PHASE LINE
- PROPOSED CLEAR SITE TRIANGLE
- PROPOSED PAVERS
- PROPOSED STREET LIGHT

OWNER STATEMENT:

I HEREBY ACKNOWLEDGE THAT ANY REVISION TO THE APPROVED SWM SITE PLAN SHALL BE SUBMITTED AND APPROVED BY THE TOWNSHIP, AND A REVISED EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE SUBMITTED TO, AND APPROVED BY, THE CONSERVATION DISTRICT AND/OR THE TOWNSHIP AS APPLICABLE FOR A DETERMINATION OF ADEQUACY PRIOR TO CONSTRUCTION OF THE REVISED FEATURES.

OWNER _____ (DATE) _____

"I, **CHARLES A. DOBSON**, ON THIS DATE **1/6/2017**, HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THE SWM SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE EAST WHITELAND TOWNSHIP ORDINANCE NO. 250-2014, EAST WHITELAND TOWNSHIP STORMWATER MANAGEMENT ORDINANCE."

Charles A. Dobson

CHARLES A. DOBSON, P.E.
LIC NO. PE-049197-E

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHARLES A. DOBSON
ENGINEER
NO.PE-049197-E

BEST MANAGEMENT PRACTICES (BMP) OPERATIONS AND MAINTENANCE PROCEDURES

1. 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.
2. 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.
3. 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 BEDS - UNDERGROUND RECHARGE BEDS 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.

AGENCY APPROVALS:

PERMIT REQUIRED	ISSUING AGENCY	STATUS
NPDES PERMIT	PA DEP	TO BE SUBMITTED
JOINT PERMIT	PA DEP/ACOE	TO BE SUBMITTED
ACT 537 APPROVAL	PA DEP	PENDING
LETTER OF ADEQUACY	CCCD	TO BE SUBMITTED

GENERAL NOTES:

1. PCSWM REPORTING AND RECORDKEEPING. THE PCSWM PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE DEPARTMENT OR THE CONSERVATION DISTRICT.
2. 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 PCSWM REQUIREMENTS), THE PERMITTEE OR CO-PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION TO THE DEPARTMENT OR CONSERVATION DISTRICT.
3. 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 PCSWM BMPS IN ACCORDANCE WITH §102.8(M) AND PROOF OF COMPLIANCE WITH §102.8(M)(2).
4. PRIOR TO ACCEPTING THE NOI, THE DEPARTMENT AND/OR CONSERVATION DISTRICT STAFF WILL PERFORM A FINAL INSPECTION AND APPROVE OR DENY THE NOTICE OF TERMINATION.
5. 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, PERFERRABLY THE DESIGN ENGINEER, SHALL CONDUCT THE OVERSIGHT.
6. 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.
7. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ. 271.1 AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIAL AT THE SITE.
8. THE CONTRACTOR TO MAINTAIN WRITTEN REPORT DOCUMENTING INSPECTIONS AND REPAIRS.
9. DURING SITE CONSTRUCTION, ALL INFILTRATION PRACTICE COMPONENTS SHALL BE PROTECTED FROM COMPACTION DUE TO HEAVY EQUIPMENT OPERATION OR STORAGE OF FILL OR CONSTRUCTION MATERIAL. INFILTRATION AREAS SHALL ALSO BE PROTECTED FROM SEDIMENTATION. AREAS THAT ARE ACCIDENTALLY COMPACTED OR GRADED SHALL BE REMEDIATED TO RESTORE SOIL COMPOSITION AND POROSITY. ADEQUATE DOCUMENTATION TO THIS EFFECT SHALL BE SUBMITTED TO THE MUNICIPAL ENGINEER FOR REVIEW. ALL AREAS DESIGNATED FOR INFILTRATION SHALL NOT RECEIVE RUNOFF UNTIL THE CONTRIBUTORY DRAINAGE AREA HAS ACHIEVED FINAL STABILIZATION.
10. ALL REGULATED ACTIVITIES SHALL BE CONDUCTED, OPERATED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN ARTICLES III, VII AND VIII OF THE EAST WHITELAND TOWNSHIP STORMWATER MANAGEMENT ORDINANCE. WHEN A SWM SITE PLAN IS REQUIRED, ALL REGULATED ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FINAL APPROVED SWM SITE PLAN.
11. THE MUNICIPAL ENGINEER OR OTHER MUNICIPAL DESIGNEE SHALL BE PROVIDED ACCESS TO THE SITE TO INSPECT ALL PHASES OF THE EROSION AND SEDIMENT CONTROL MEASURES AND INSTALLATION OF THE PERMANENT BMPS AND CONVEYANCES AT SUCH TIMES AS DEEMED APPROPRIATE BY THE MUNICIPAL ENGINEER OR OTHER MUNICIPAL DESIGNEE.
12. PERIODIC INSPECTIONS MAY BE MADE BY THE MUNICIPAL ENGINEER OR OTHER DESIGNEE DURING CONSTRUCTION. A SET OF DESIGN PLANS APPROVED BY THE MUNICIPALITY SHALL BE ON FILE AND AVAILABLE FOR VIEWING AT THE SITE THROUGHOUT THE DURATION OF THE CONSTRUCTION ACTIVITY.
13. INSPECTIONS, INCLUDING BUT NOT LIMITED TO A FINAL INSPECTION, OF ALL CONSTRUCTED BMPS, CONVEYANCES, OR OTHER STORMWATER FACILITIES, AND RELATED IMPROVEMENTS MAY BE CONDUCTED BY THE MUNICIPAL ENGINEER OR OTHER DESIGNEE TO CONFIRM COMPLIANCE WITH THIS CHAPTER AND WITH THE FINAL APPROVED SWM SITE PLAN PRIOR TO THE ISSUANCE OF ANY OCCUPANCY PERMIT, USE PERMIT, OR OTHER FORM OF FINAL APPROVAL OF THE PROJECT BY THE MUNICIPALITY.
14. UPON COMPLETION OF CONSTRUCTION, EVERY PERMANENT STORMWATER BMP, CONVEYANCE OR OTHER STORMWATER FACILITY CONSTRUCTED OR USED AS PART OF THE REGULATED ACTIVITY SHALL BE OPERATED, MAINTAINED AND INSPECTED BY THE LANDOWNER, OR OTHER DESIGNATED PERSON, IN ACCORDANCE WITH THE O&M PLAN AND O&M AGREEMENT APPROVED BY THE MUNICIPALITY.
15. THE MUNICIPALITY OR ITS DESIGNEE MAY PERIODICALLY INSPECT ANY PERMANENT STORMWATER BMP, CONVEYANCE OR FACILITY FOR COMPLIANCE WITH THIS CHAPTER, AN APPROVED O&M PLAN, OR AN APPROVED O&M AGREEMENT, PER THE PROVISIONS OF ARTICLE IX. THE MUNICIPALITY MAY INSPECT AT ANY TIME IT HAS REASON TO BELIEVE A VIOLATION EXISTS. THE MUNICIPALITY MAY PURSUE ENFORCEMENT FOR VIOLATIONS CONSISTENT WITH THE PROVISIONS OF ARTICLE IX.
16. THE OWNER AND CONTRACTOR SHALL ENSURE THAT THE PROPOSED INFILTRATION AREAS SHALL BE PROTECTED FROM COMPACTION BEFORE AND DURING CONSTRUCTION OF THE SITE IMPROVEMENTS.

POST CONSTRUCTION STORMWATER MANAGEMENT (PCSWM) LONG TERM OPERATIONS AND MAINTENANCE REQUIREMENTS

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

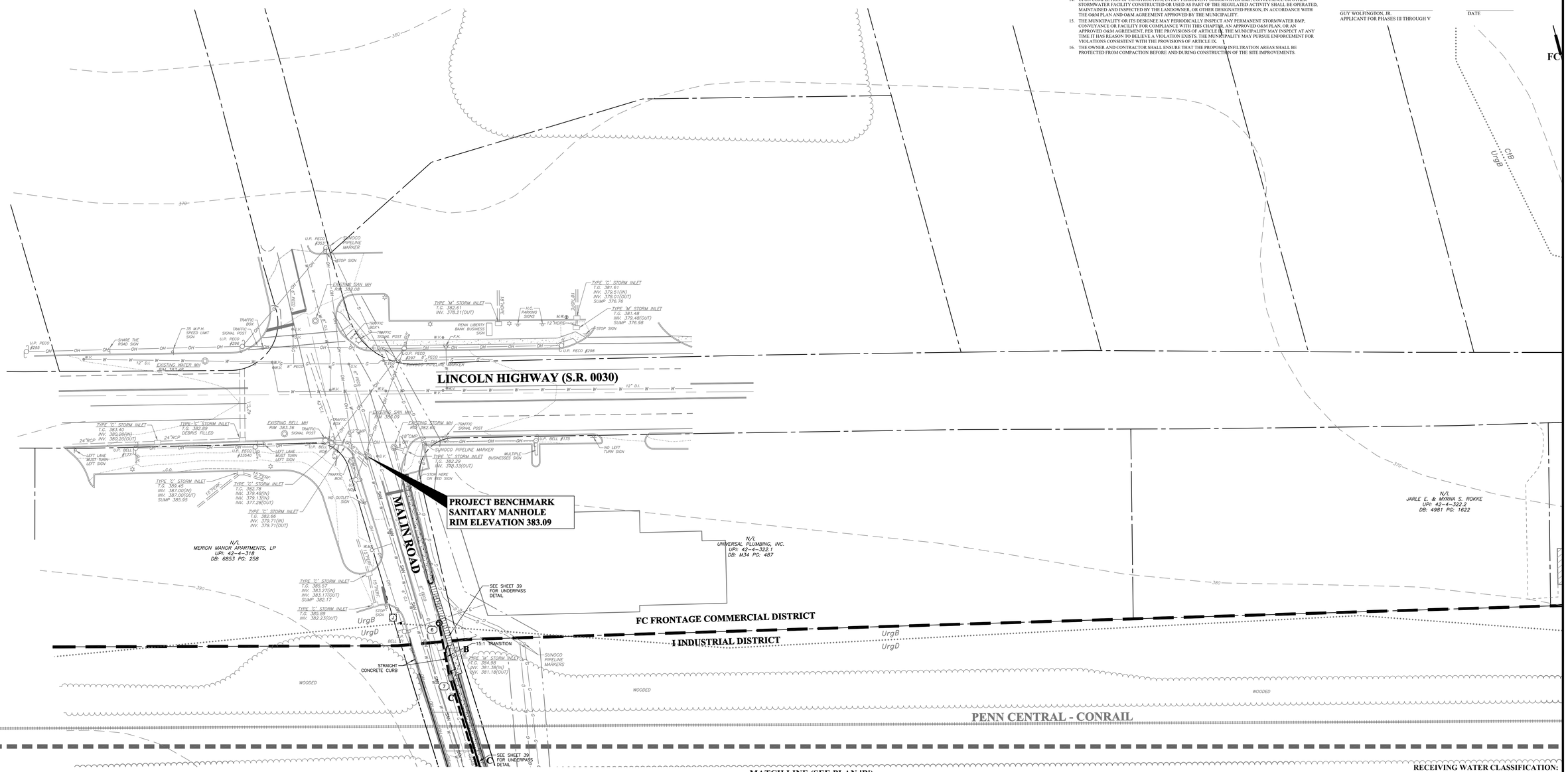
STORMWATER MANAGMENT REVISION NOTE:

I, BO ERIXXON, APPLICANT FOR PHASES I AND II HEREBY ACKNOWLEDGE THAT ANY REVISION TO THE APPROVED SWM SITE PLAN SHALL BE SUBMITTED TO AND AND APPROVED BY EAST WHITELAND TOWNSHIP, AND THAT A REVISED EROSION AND SEDIMENT CONTROL SHALL BE SUBMITTED TO AND APPROVED BY THE CONSERVATION DISTRICT AND/OR TOWNSHIP AS APPLICABLE FOR A DETERMINATION OF ADEQUACY PRIOR TO THE CONSTRUCTION OF THE REVISED FEATURES.

BO ERIXXON, APPLICANT FOR PHASES I AND II _____ DATE _____

I, GUY WOLFINGTON, JR., APPLICANT FOR PHASES III THROUGH V HEREBY ACKNOWLEDGE THAT ANY REVISION TO THE APPROVED SWM SITE PLAN SHALL BE SUBMITTED TO AND AND APPROVED BY EAST WHITELAND TOWNSHIP, AND THAT A REVISED EROSION AND SEDIMENT CONTROL SHALL BE SUBMITTED TO AND APPROVED BY THE CONSERVATION DISTRICT AND/OR TOWNSHIP AS APPLICABLE FOR A DETERMINATION OF ADEQUACY PRIOR TO THE CONSTRUCTION OF THE REVISED FEATURES.

GUY WOLFINGTON, JR. _____ DATE _____
APPLICANT FOR PHASES III THROUGH V



MATCH LINE (SEE PLAN 'B')

RECEIVING WATER CLASSIFICATION:
LITTLE VALLEY CREEK - EXCEPTIONAL VALUE (EV)

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM, INC. CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

InLand Design
Civil Engineers, Surveyors & Land Development Consultants
16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHARLES A. DOBSON
ENGINEER
NO.PE-049197-E

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

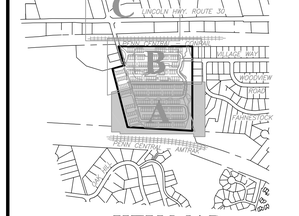
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 Inch = 30'

Date:	1/30/2015
Scale:	1" = 30'
Drawn by:	TAH
Checked by:	CAD
Project No.	10383

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN 'C'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SHEET **16** OF 43



KEY MAP

1" = 800'

LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- ZONING BOUNDARY LINE
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING TREELINE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WELL
- EXISTING WATER VALVE
- EXISTING SIGN
- TP-5 TEST PIT LOCATION
- EXISTING FENCE LINE
- GeB2 SOILS LINE AND DESCRIPTION
- AC-15 AC-16 AC-14 AC-17 EXISTING WETLANDS MODIFIED BY ACOE
- B-15 B-16 B-14 B-17 EXISTING WETLANDS
- EXISTING RAIL ROAD TRACKS
- EXISTING STORM STRUCTURES & PIPE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING DRIVEWAY
- EXISTING STONE DRIVE
- EXISTING CONCRETE SIDEWALK
- EXISTING WALL
- EXISTING SANITARY LATERAL
- EXISTING SANITARY FORCE MAIN
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- MW-77 BEDROCK MONITORING WELL
- MW-74 OVERBURDEN MONITORING WELL
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT LINE
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED WELL
- PROPOSED WATER VALVE
- PROPOSED SIGN
- PROPOSED FIRE HYDRANT
- PROPOSED FENCE LINE
- PROPOSED STORM STRUCTURES & PIPE
- PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB LINE
- PROPOSED ROAD / PAVING
- PROPOSED DRIVEWAY
- PROPOSED CONCRETE SIDEWALK
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- PROPOSED SEGMENTAL WALL
- PROPOSED SANITARY LATERAL
- PROPOSED SANITARY FORCE MAIN
- PROPOSED WATER LINE
- PROPOSED ELECTRIC LINE
- PROPOSED GAS LINE
- PROPOSED TELEPHONE LINE
- PROPOSED PHASE LINE
- PROPOSED PAVERS
- 100' STREAM BUFFER
- 150' STREAM BUFFER
- 18" SILT FENCE
- COMPOST FILTER SOCK
- LIMIT OF DISTURBANCE/NPDES PERMIT BOUNDARY
- ROCK CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET FOR SLOPES
- INLET SEDIMENT FILTER

SOILS DESCRIPTION

SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S.H.W.T.	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLIC SOIL GROUP
CtA	CONESTOGA SILT LOAM	0% - 3%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	1	B
CtB	CONESTOGA SILT LOAM	3% - 8%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
MaB	MANOR LOAM	3% - 8%	HIGH (ABOUT 9.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	2e	B
MaD	MANOR LOAM	15% - 25%	HIGH (ABOUT 9.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	4e	B
MaE	MANOR LOAM	25% - 35%	HIGH (ABOUT 9.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	6e	B
UrgB	URBAN LAND-CONESTOGA COMPLEX	0% - 8%	MODERATE (ABOUT 7.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
UrgD	URBAN LAND-CONESTOGA COMPLEX	8% - 25%	MODERATE (ABOUT 7.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	4e	B
UugD	URBAN LAND-UDORTHENTS, SCHIST AND GNEISS COMPLEX	8% - 25%	MODERATE (ABOUT 6.8 INCHES)	WELL DRAINED	ABOUT 60 INCHES	20 TO 70 INCHES	7e	B

NOTE:

FOR COMPLETE DESIGN INFORMATION ON ALL EROSION AND SEDIMENTATION FACILITIES, REFER TO EROSION AND SEDIMENT CONTROL DESIGN CALCULATIONS DATED XX/XX/XXXX AS PREPARED BY INLAND DESIGN, LLC.

GEOLOGY DESCRIPTION - ENTIRE SITE

SYMBOL	GEOLOGICAL AGE	MAIN ROCK TYPE	DESCRIPTION
Xo	LOWER PALEOZOIC	ALBITE-CHLORITE SCHIST	THE OCTORARO FORMATION IS A PHYLLITE THAT CONTAINS SOME SCHIST, HORNBLENDE GNEISS, AND GRANTIZED MEMBERS.

NPDES PERMIT BOUNDARY INCLUDES THE ENTIRE SITE BOUNDARY IN ADDITION TO THE LIMIT OF DISTURBANCE IN MALIN ROAD REQUIRED TO INSTALL DRAINAGE & PEDESTRIAN IMPROVEMENTS.

RECEIVING WATER CLASSIFICATION:
LITTLE VALLEY CREEK - EXCEPTIONAL VALUE (EV)
LIMIT OF DISTURBANCE BOUNDARY: 798,360 S.F. (18.33 AC.)

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM, INC. — CALL BEFORE YOU DIG!

Pennsylvania One Call System
P.A. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

InLand Design

Civil Engineers, Surveyors & Land Development Consultants

16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net

Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — CHARLES A. DOBSON — ENGINEER / SURVEYOR — PENNSYLVANIA

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

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

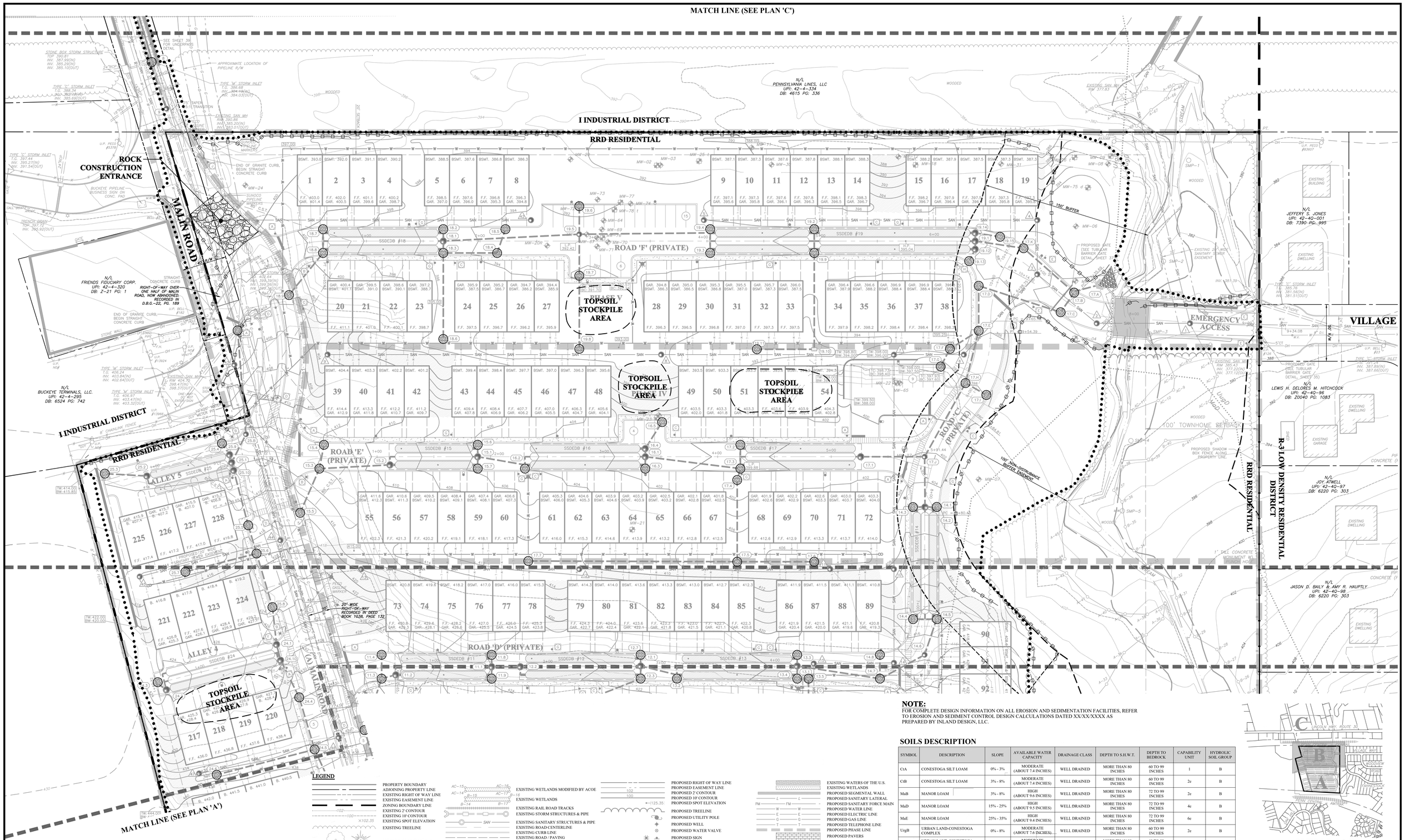
Date:	1/30/2015
Scale:	1" = 30'
Drawn by:	TAH
Checked by:	CAD
Project No.	10383

SEDIMENTATION & EROSION CONTROL PLAN 'A'
FOR

MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SHEET **17** OF 43



NOTE:

FOR COMPLETE DESIGN INFORMATION ON ALL EROSION AND SEDIMENTATION FACILITIES, REFER TO EROSION AND SEDIMENT CONTROL DESIGN CALCULATIONS DATED XX/XX/XXXX AS PREPARED BY INLAND DESIGN, LLC.

SOILS DESCRIPTION

SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S.H.W.T.	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLIC SOIL GROUP
CtA	CONESTOGA SILT LOAM	0% - 3%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	1	B
CtB	CONESTOGA SILT LOAM	3% - 8%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
MaB	MANOR LOAM	3% - 8%	HIGH (ABOUT 9.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	2e	B
MaD	MANOR LOAM	15% - 25%	HIGH (ABOUT 9.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	4e	B
MaE	MANOR LOAM	25% - 35%	HIGH (ABOUT 9.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	6e	B
UrgB	URBAN LAND-CONESTOGA COMPLEX	0% - 8%	MODERATE (ABOUT 7.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
UrgD	URBAN LAND-CONESTOGA COMPLEX	8% - 25%	MODERATE (ABOUT 7.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	4e	B
UugD	URBAN LAND-UDORTHENTS, SCHIST AND GNEISS COMPLEX	8% - 25%	MODERATE (ABOUT 6.8 INCHES)	WELL DRAINED	ABOUT 60 INCHES	20 TO 70 INCHES	7e	B

GEOLOGY DESCRIPTION - ENTIRE SITE

SYMBOL	GEOLOGICAL AGE	MAIN ROCK TYPE	DESCRIPTION
Xo	LOWER PALEOZOIC	ALBITE-CHLORITE SCHIST	THE OCTORARO FORMATION IS A PHYLLITE THAT CONTAINS SOME SCHIST, HORNBLENDE GNEISS, AND GRANTIZED MEMBERS.

KEY MAP

1" = 800'

NPDES PERMIT BOUNDARY INCLUDES THE ENTIRE SITE BOUNDARY IN ADDITION TO THE LIMIT OF DISTURBANCE IN MALIN ROAD REQUIRED TO INSTALL DRAINAGE & PEDESTRIAN IMPROVEMENTS.

RECEIVING WATER CLASSIFICATION:
LITTLE VALLEY CREEK - EXCEPTIONAL VALUE (EV)
LIMIT OF DISTURBANCE BOUNDARY: 803,582 S.F. (18.45 AC.)

LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- ZONING BOUNDARY LINE
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING TREELINE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WELL
- EXISTING WATER VALVE
- EXISTING SIGN
- TEST PIT LOCATION
- EXISTING FENCE LINE
- SOILS LINE AND DESCRIPTION
- EXISTING WETLANDS MODIFIED BY ACOE
- EXISTING WETLANDS
- EXISTING RAIL ROAD TRACKS
- EXISTING STORM STRUCTURES & PIPE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING DRIVEWAY
- EXISTING STONE DRIVE
- EXISTING CONCRETE SIDEWALK
- EXISTING WALL
- EXISTING SANITARY LATERAL
- EXISTING SANITARY FORCE MAIN
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT LINE
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED WELL
- PROPOSED WATER VALVE
- PROPOSED SIGN
- PROPOSED FIRE HYDRANT
- PROPOSED FENCE LINE
- PROPOSED STORM STRUCTURES & PIPE
- PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB LINE
- PROPOSED ROAD / PAVING
- PROPOSED DRIVEWAY
- PROPOSED CONCRETE SIDEWALK
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- PROPOSED SEGMENTAL WALL
- PROPOSED SANITARY LATERAL
- PROPOSED SANITARY FORCE MAIN
- PROPOSED WATER LINE
- PROPOSED ELECTRIC LINE
- PROPOSED GAS LINE
- PROPOSED TELEPHONE LINE
- PROPOSED PHASE LINE
- PROPOSED PAVERS
- 100' STREAM BUFFER
- 150' STREAM BUFFER
- 18" SILT FENCE
- COMPOST FILTER SOCK
- LIMIT OF DISTURBANCE/NPDES PERMIT BOUNDARY
- ROCK CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET FOR SLOPES
- INLET SEDIMENT FILTER

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission and verification, or assignment of these plans by InLand Design, LLC for any other purpose, intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Number
20141642689

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 www.InLandDesign.net
Phone: (484) 947-2928 Fax: (484) 947-2946 Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL CHARLES A. DOBSON ENGINEER NO.PE-049315-E

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY LAND DEVELOPMENT PLAN

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

Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

SEDIMENTATION & EROSION CONTROL PLAN 'B'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SHEET **18** OF 43

KEY MAP

1" = 800'

NPDES PERMIT BOUNDARY INCLUDES THE ENTIRE SITE BOUNDARY IN ADDITION TO THE LIMIT OF DISTURBANCE IN MALIN ROAD REQUIRED TO INSTALL DRAINAGE & PEDESTRIAN IMPROVEMENTS.

SOILS DESCRIPTION

SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S.H.W.T.	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLIC SOIL GROUP
CtA	CONESTOGA SILT LOAM	0% - 3%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	1	B
CtB	CONESTOGA SILT LOAM	3% - 8%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
MaB	MANOR LOAM	3% - 8%	HIGH (ABOUT 9.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	2e	B
MaD	MANOR LOAM	15% - 25%	HIGH (ABOUT 9.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	4e	B
MaE	MANOR LOAM	25% - 35%	HIGH (ABOUT 9.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	6e	B
UrgB	URBAN LAND-CONESTOGA COMPLEX	0% - 8%	MODERATE (ABOUT 7.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
UrgD	URBAN LAND-CONESTOGA COMPLEX	8% - 25%	MODERATE (ABOUT 7.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	4e	B
UugD	URBAN LAND-UDORTHENTS, SCHIST AND GNEISS COMPLEX	8% - 25%	MODERATE (ABOUT 6.8 INCHES)	WELL DRAINED	ABOUT 60 INCHES	20 TO 70 INCHES	7e	B

GEOLOGY DESCRIPTION - ENTIRE SITE

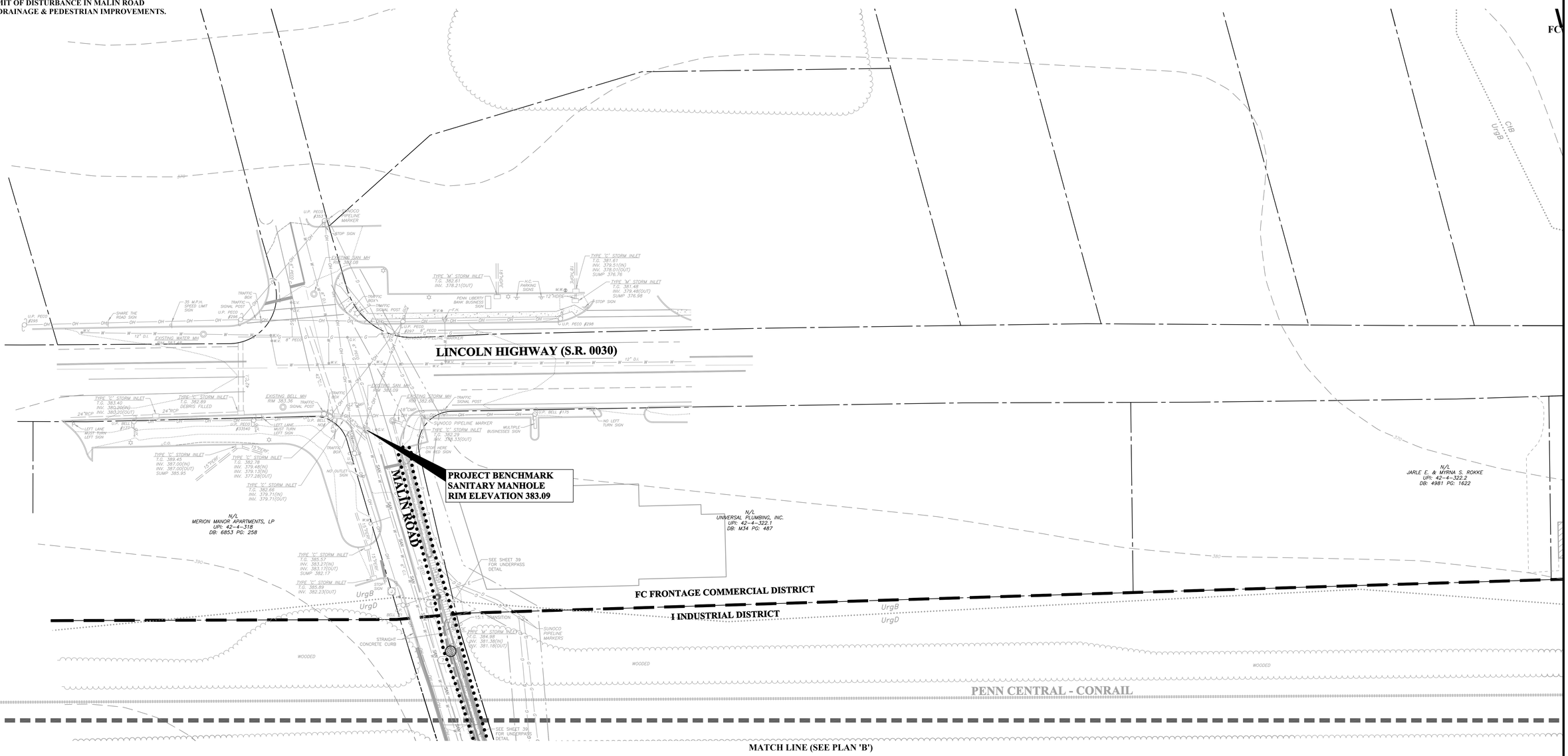
SYMBOL	GEOLOGICAL AGE	MAIN ROCK TYPE	DESCRIPTION
Xo	LOWER PALEOZOIC	ALBITE-CHLORITE SCHIST	THE OCTORARO FORMATION IS A PHYLLITE THAT CONTAINS SOME SCHIST, HORNBLENDE GNEISS, AND GRANITIZED MEMBERS.

NOTE:

FOR COMPLETE DESIGN INFORMATION ON ALL EROSION AND SEDIMENTATION FACILITIES, REFER TO EROSION AND SEDIMENT CONTROL DESIGN CALCULATIONS DATED XX/XX/XXXX AS PREPARED BY INLAND DESIGN, LLC.

LEGEND

PROPERTY BOUNDARY
ADJOINING PROPERTY LINE
EXISTING RIGHT OF WAY LINE
EXISTING EASEMENT LINE
ZONING BOUNDARY LINE
EXISTING 2' CONTOUR
EXISTING 10' CONTOUR
EXISTING SPOT ELEVATION
EXISTING TREELINE
EXISTING TREE SYMBOLS
EXISTING LIGHT
EXISTING UTILITY POLE
EXISTING WELL
EXISTING WATER VALVE
EXISTING SIGN
TEST PIT LOCATION
EXISTING FENCE LINE
SOILS LINE AND DESCRIPTION
EXISTING WETLANDS MODIFIED BY ACOE
EXISTING WETLANDS
EXISTING RAIL ROAD TRACKS
EXISTING STORM STRUCTURES & PIPE
EXISTING SANITARY STRUCTURES & PIPE
EXISTING ROAD CENTERLINE
EXISTING CURB LINE
EXISTING ROAD / PAVING
EXISTING DRIVEWAY
EXISTING STONE DRIVE
EXISTING CONCRETE SIDEWALK
EXISTING WALL
EXISTING SANITARY LATERAL
EXISTING SANITARY FORCE MAIN
EXISTING WATER LINE
EXISTING ELECTRIC LINE
EXISTING GAS LINE
EXISTING TELEPHONE LINE
BEDROCK MONITORING WELL
OVERBURDEN MONITORING WELL
PROPOSED RIGHT OF WAY LINE
PROPOSED EASEMENT LINE
PROPOSED 2' CONTOUR
PROPOSED 10' CONTOUR
PROPOSED SPOT ELEVATION
PROPOSED TREELINE
PROPOSED UTILITY POLE
PROPOSED WELL
PROPOSED WATER VALVE
PROPOSED SIGN
PROPOSED FIRE HYDRANT
PROPOSED FENCE LINE
PROPOSED STORM STRUCTURES & PIPE
PROPOSED SANITARY STRUCTURES & PIPE
PROPOSED ROAD CENTERLINE
PROPOSED CURB LINE
PROPOSED ROAD / PAVING
PROPOSED DRIVEWAY
PROPOSED CONCRETE SIDEWALK
EXISTING WATERS OF THE U.S.
EXISTING WETLANDS
PROPOSED SEGMENTAL WALL
PROPOSED SANITARY LATERAL
PROPOSED SANITARY FORCE MAIN
PROPOSED WATER LINE
PROPOSED ELECTRIC LINE
PROPOSED GAS LINE
PROPOSED TELEPHONE LINE
PROPOSED PHASE LINE
PROPOSED PAVERS
100' STREAM BUFFER
150' STREAM BUFFER
18" SILT FENCE
COMPOST FILTER SOCK
LIMIT OF DISTURBANCE/NPDES PERMIT BOUNDARY
ROCK CONSTRUCTION ENTRANCE
EROSION CONTROL BLANKET FOR SLOPES
INLET SEDIMENT FILTER



RECEIVING WATER CLASSIFICATION:
LITTLE VALLEY CREEK - EXCEPTIONAL VALUE (EV)
LIMIT OF DISTURBANCE BOUNDARY: 803,582 S.F. (18.45 AC.)

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any reproduction, in whole or in part, without written consent of InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Number
20141642689

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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHARLES A. DOBSON
ENGINEER
HO.PE.049787-E
PENNSYLVANIA

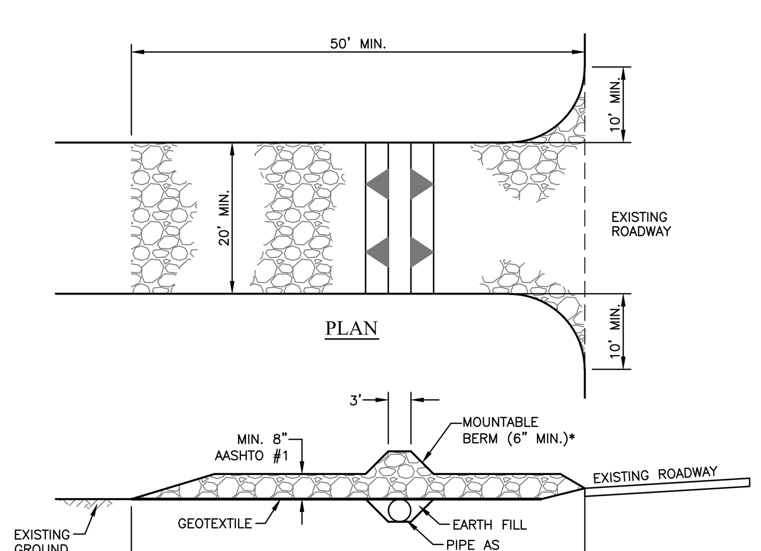
No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

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

Date:	1/30/2015
Scale:	1" = 30'
Drawn by:	TAH
Checked by:	CAD
Project No.	10383

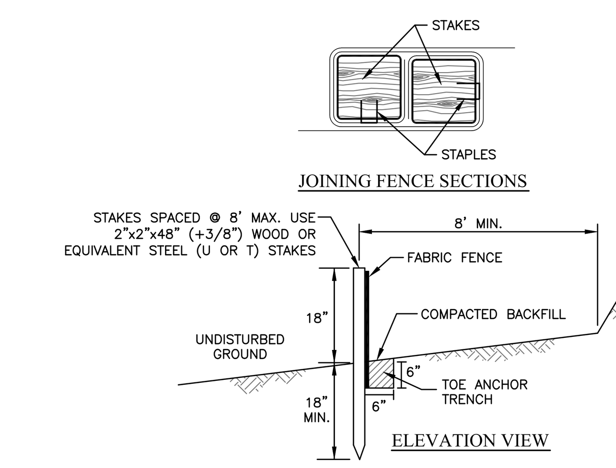
SEDIMENTATION & EROSION CONTROL PLAN 'C'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA



ROCK CONSTRUCTION ENTRANCE DETAIL

(PADEP STANDARD CONSTRUCTION DETAIL #3-1)
(NOT TO SCALE)

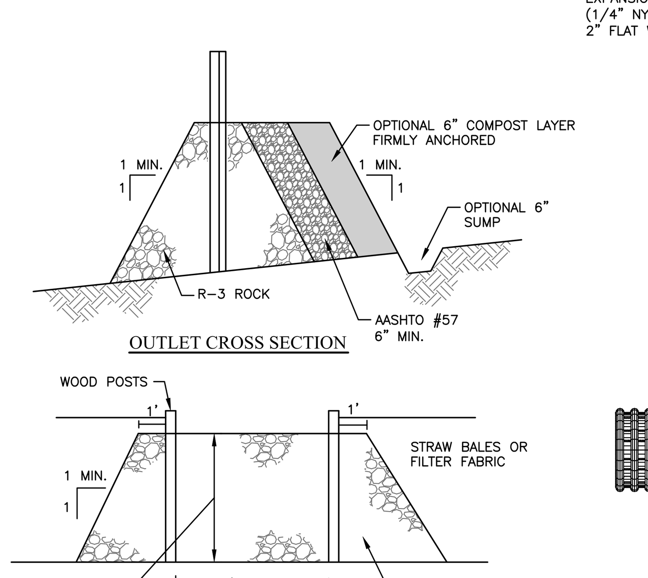
1. REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
2. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
3. MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.
4. MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.



STANDARD SILT FENCE (18" HIGH)

(PADEP STANDARD CONSTRUCTION DETAIL #4-7)
(NOT TO SCALE)

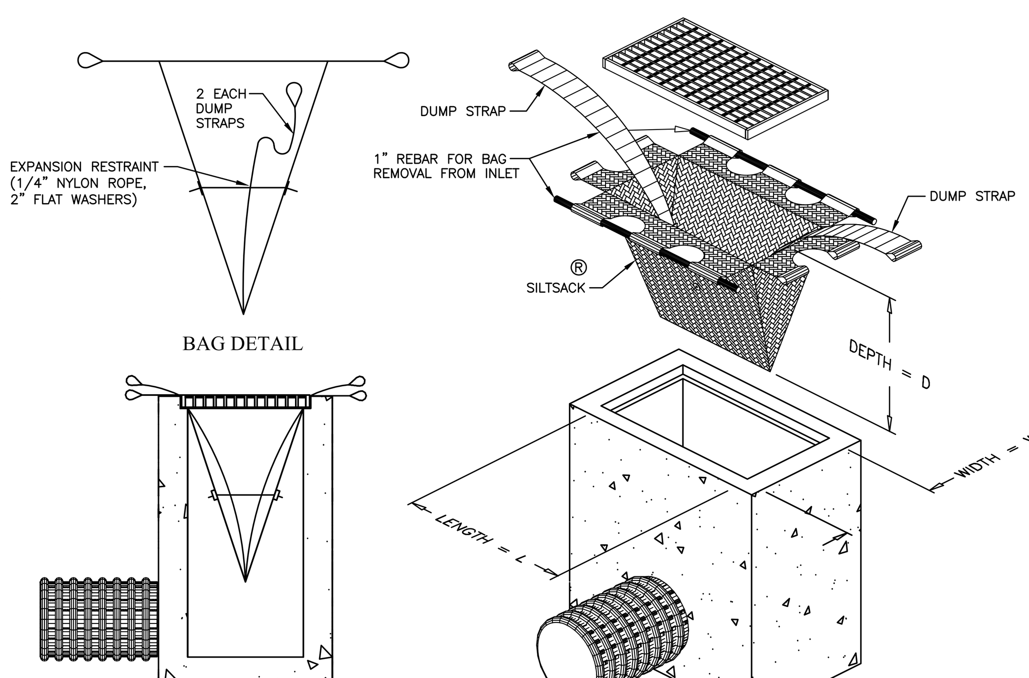
1. FABRIC WIDTH SHALL BE 30" MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES.
2. SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT (SEE FIGURE 4.1).
3. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVEGROUND HEIGHT OF THE FENCE.
4. ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL # 4-6).
5. FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.



ROCK FILTER OUTLET

(PADEP STANDARD CONSTRUCTION DETAIL #4-6)
(NOT TO SCALE)

1. A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.
2. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

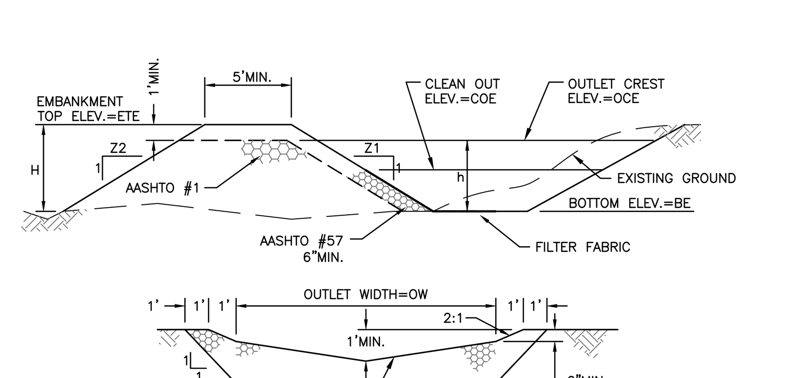


SEDIMENT FILTER BAG INLET PROTECTION

NOT TO SCALE

OPTIONAL NOTES

1. 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.
2. 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.
3. 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.
4. CHANNELS HAVING RIPRAP, RENO MATTRESS, OR GABION LININGS MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.
5. 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.
6. SEDIMENT BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES.
7. 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.
8. 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.
9. 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.
10. 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.

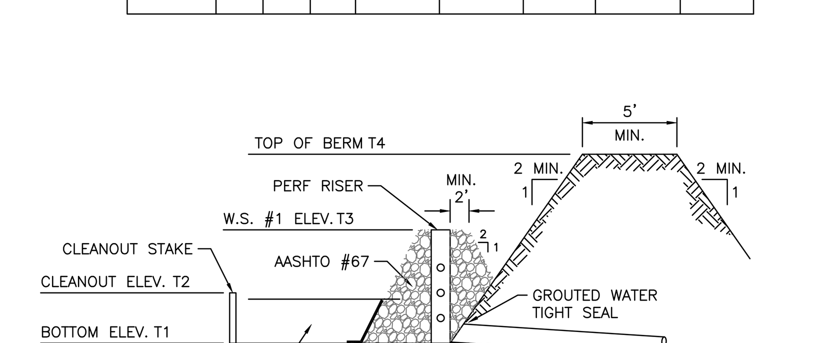


SEDIMENT TRAP DETAIL

(NOT TO SCALE)

SEDIMENT TRAP TABULATION

TRAP NO.	Z1 (FT)	H (FT)	H (FT)	EMBANK. TOP ELEV. ETE (FT)	OUTLET CREST ELEV. OCE (FT)	CLEAN OUT ELEV. COE (FT)	BOTTOM ELEV. BE (FT)	OUTLET WIDTH OW (FT)



DETAIL SEDIMENT TRAP

(NOT TO SCALE)

NOTES

1. RISER SHALL HAVE 1 – 1" DIAMETER HOLE EVERY 12" VERTICALLY FROM THE BOTTOM ELEVATION.
1. SEDIMENT SHOULD BE REMOVED FROM TRAPS WHEN SEDIMENT HAS ACCUMULATED TO CLEANOUT ELEVATION ON HALF THE STAKES TO RESTORE ORIGINAL TRAP STORAGE CAPACITIES.
2. SEDIMENTATION TRAPS WILL BE PROTECTED FROM UNAUTHORIZED ACTS OF THIRD PARTIES.

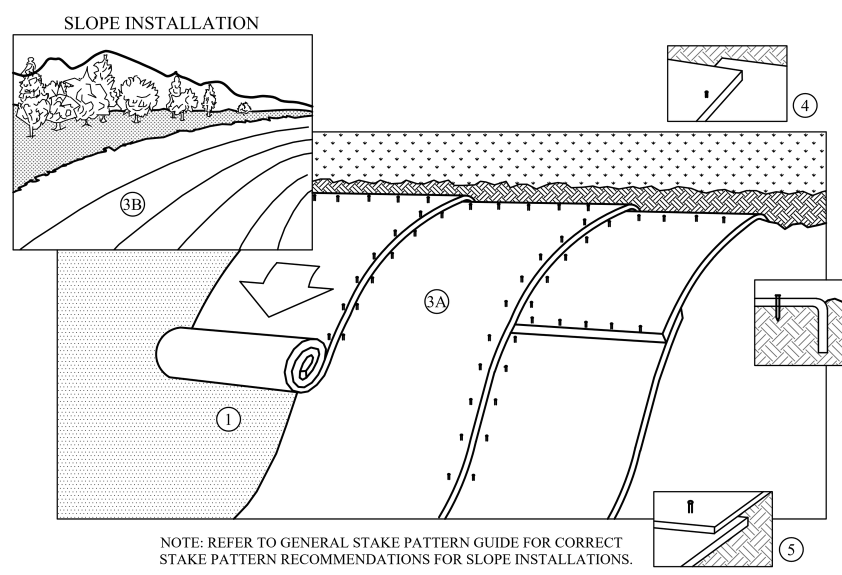
STANDARD E&S PLAN NOTES

1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
2. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
3. AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
5. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
6. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
7. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAPS(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
9. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
10. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
11. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.
13. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
14. VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY FROM LOTS (SPECIFY LOT NUMBERS) ONTO (SPECIFY ROAD NAMES) .
15. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
16. A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
17. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
18. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
19. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES -- 6 TO 12 INCHES ON COMPACTED SOILS -- PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
20. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
21. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
22. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
23. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
24. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
25. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
26. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
27. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
28. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
29. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
30. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPS.
31. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
32. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.
33. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE 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.

1. IF SOIL TEST RESULTS ARE NOT AVAILABLE, APPLY AT LEAST SIX (6) TONS OF AGRICULTURAL GRADE LIMESTONE AND 100-200-200 (100 POUNDS OF N, 200 POUNDS OF P205 AND 200 POUNDS OF K20) PER ACRE TO DISTURBED AREAS.
2. ALL ON-LOT DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED BY SEEDING WITH THE FOLLOWING SEED MIXTURE AT THE RATE OF 176 POUNDS PER ACRE: 50% KENTUCKY BLUEGRASS BARON MIX, 25% RED FESCUE-PENNLAWN, 20% CHAMPION PERENNIAL RYEGRASS, AND 5% ANNUAL. THE SEEDING DATES FOR THIS MIXTURE SHALL BE MARCH 15 TO JUNE 15 AND/OR AUGUST 15 TO OCTOBER 15. AFTER SEEDING IS COMPLETE, MULCH THE SEEDED AREAS WITH CLEAN UN-ROTTED SMALL GRAIN STRAW OR SALT HAY AT A RATE OF THREE (3) TONS PER ACRE. (OTHER SEED MIXTURES MAY BE SUBSTITUTED IF APPROVED BY THE CHESTER COUNTY CONSERVATION DISTRICT OR THE TOWNSHIP ENGINEER).
3. IF THE ABOVE SEED MIXTURES DO NOT GERMINATE SATISFACTORILY IN AREAS OF THE SITE DUE TO WET SOIL CONDITIONS, THOSE AREAS SHALL BE RESEEDED WITH REED CANARY GRASS AT THE RATE OF 100 POUNDS PER ACRE.
4. PERMANENT SEEDING SHALL ONLY OCCUR DURING THE DATES LISTED ABOVE. IF AREAS ARE PREPARED FOR SEEDING AT OTHER TIMES, THEN THE PREPARED SEEDBED SHALL BE HEAVILY MULCHED WITH CLEAN UN-ROTTED SMALL GRAIN STRAW OR SALT HAY AT THE RATE OF THREE (3) TONS PER ACRE. THE MULCH SHALL THEN BE REMOVED AND THE AREA SHALL BE DRESSED, SEEDED AND RE-MULCHED AS DESCRIBED ABOVE.
5. DISTURBED AREAS ON WHICH ACTIVITIES HAVE CEASED AND WHICH WILL REMAIN EXPOSED FOR MORE THAN 15 DAYS MUST BE STABILIZED IMMEDIATELY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. DISTURBED AREAS WHICH ARE NOT FINISHED AT GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING, TEMPORARY SEEDING MIXTURE (ANNUAL RYEGRASS, 40 POUNDS PER ACRE, OR SEE PENNSYLVANIA STATE UNIVERSITY AGRONOMY GUIDE FOR OTHER SEEDING RECOMMENDATIONS). APPLY 1 TON OF AGRICULTURAL LIMESTONE PER ACRE, PLUS FERTILIZER, AT THE RATE OF 50-50-200 PER ACRE. (50 LBS. OF N, 50 LBS OF P205, AND 200 LBS. OF K20).

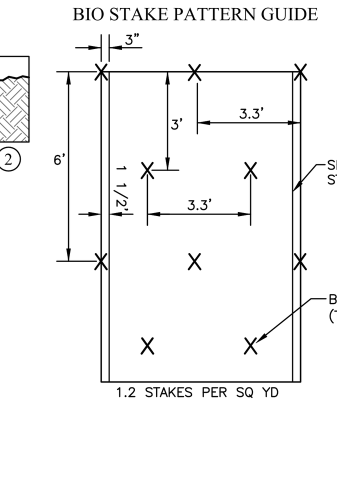
UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROLS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING MUST BE PERFORMED IMMEDIATELY.

SLOPE INSTALLATION

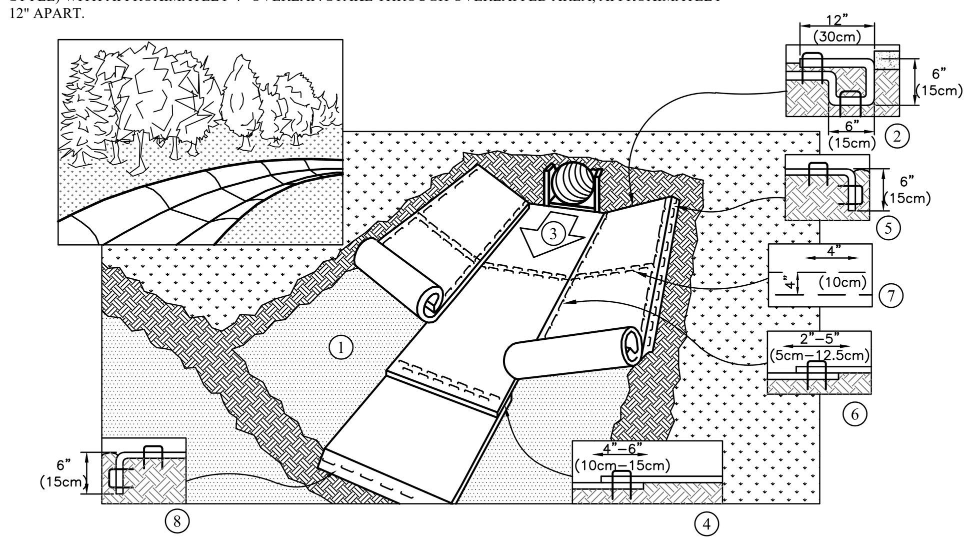


NOTE: REFER TO GENERAL STAKE PATTERN GUIDE FOR CORRECT STAKE PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS.

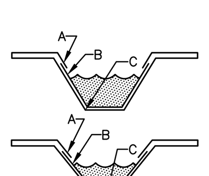
BIO STAKE PATTERN GUIDE



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 STAKING.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAKED WITH APPROXIMATELY 2" OVERLAP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 4" OVERLAP. STAKE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY 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 CHANNEL BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"-6" (10cm-15cm) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"-5" (5cm-12.5cm) (DEPENDING ON BLANKET TYPE) AND STAPLED. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE BLANKET BEING OVERLAPPED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9m-12m) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.



CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

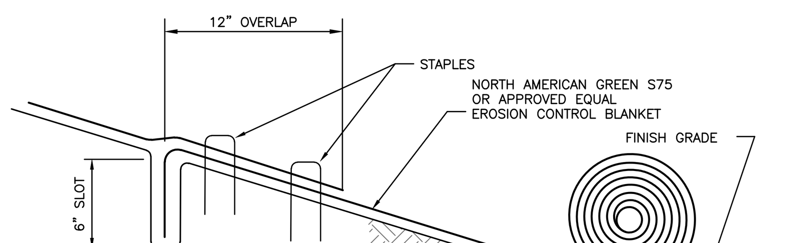
NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

DETAIL PROVIDED BY:
NORTH AMERICAN GREEN
14649 HIGHWAY 41 NORTH, EVANSVILLE, INDIANA 47725
USA 1-800-772-2040 CANADA 1-800-448-2040
www.nagreen.com

NORTH AMERICAN GREEN MATTING DETAIL

(NOT TO SCALE)

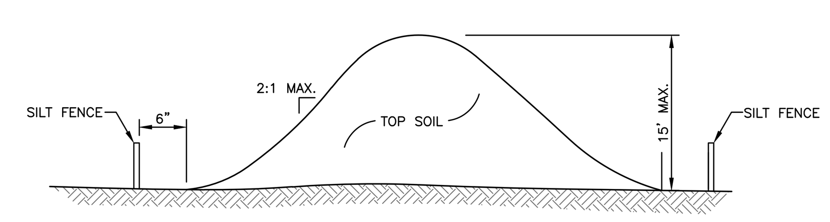


NOTES

1. COMPLETE GRADING OF SLOPE.
2. CULTIVATE THE SOIL TO A DEPTH OF 6 INCHES, INCORPORATING FERTILIZER AND LIME WHERE NECESSARY, PROVIDING AN EVEN SURFACE, FREE FROM EXCESSIVE STONES, CLODS OR TRASH.
3. SEED AND MULCH THE AREA AS OUTLINED IN SEEDING SCHEDULE.
4. UNREEL THE MATTING UP AND DOWN THE SLOPE. THIS IS BEST ACHIEVED BY PLACING A METAL PIPE THROUGH THE CENTER OF THE ROLL THROUGH WHICH IS PASSED A ROPE. BY HOLDING EACH END OF THE ROPE, THE ROLL CAN BE UNWOUND SLOWLY DOWN THE SLOPE. THE MATTING SHOULD NOT BE STRETCHED NOR ALLOWED TO LIE LOOSELY, BUT TO TAKE UP THE CONTOURS OF THE GROUND. THE MANUFACTURER'S RECOMMENDATIONS FOR OVERLAPPING ADJACENT STRIPS SHALL BE FOLLOWED.
5. UPHILL ENDS OF THE MATTING SHALL BE BURIED IN A 6-INCH DEEP SLOT AND STAPLED, AS SHOWN, AT 12-INCH CENTERS ACROSS THE WIDTH OF THE MAT. AT JOINTS, THE DOWNHILL END SHOULD BE OVERLAPPED (SHINGLE FASHION).
6. MATTING SHOULD BE STAPLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS, BUT GENERALLY STAPLES SHOULD BE INSERTED ON 12-INCH CENTERS DOWN EACH EDGE OF THE MAT AND DOWN ITS CENTERLINE.
7. FOLLOWING INSTALLATION, MESH MATTINGS SHOULD BE ROLLED WITH A SMOOTH ROLLER TO BRING INTO CLOSE CONTACT WITH THE SOIL AND TO CONSOLIDATE THE SEEDBED.

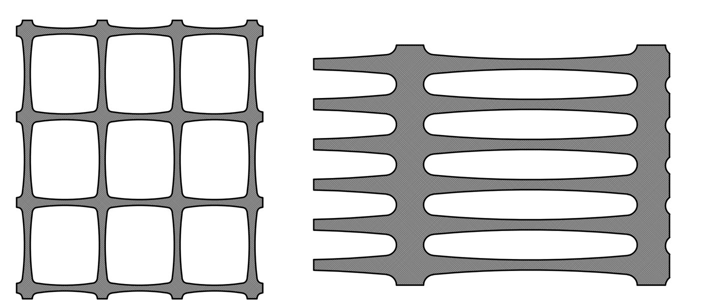
EROSION BLANKET INSTALLATION FOR SLOPES

NOT TO SCALE



TYPICAL TOPSOIL STOCKPILE CROSS SECTION

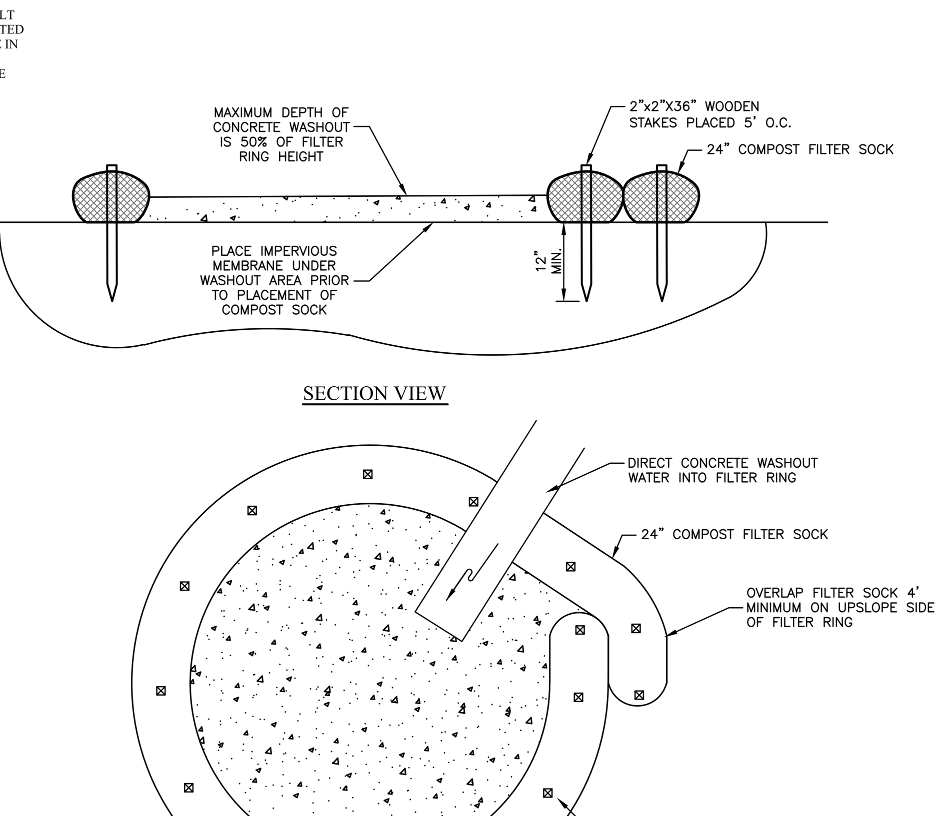
(NOT TO SCALE)



FOR GENERAL USE:
TENSAR SAFETY FENCE BX 2051, 4' HT., ORANGE
FOR EXTRA PROTECTION:
TENSAR SAFETY FENCE UX 4250, 4' HT., ORANGE
INSTALLATION: ATTACH FENCE TO 2" x 2" PINE STAKES DRIVEN AT LEAST 18" INTO THE GROUND, SPACED 8' ON CENTER, WITH WIRE FASTENERS IN 3 PLACES PER STAKE.

ORANGE CONSTRUCTION FENCE DETAIL

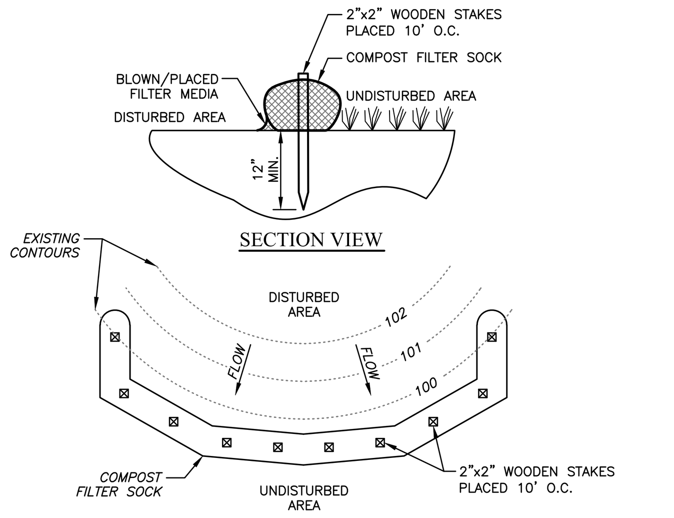
NOT TO SCALE



COMPOST SOCK WASHOUT INSTALLATION

(PADEP STANDARD FIGURE 3.18)
(NOT TO SCALE)

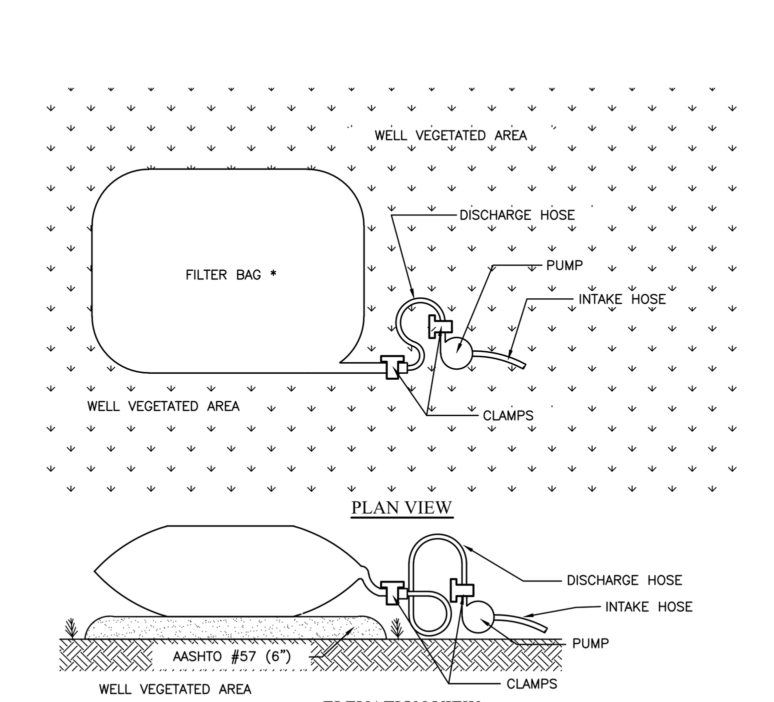
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. 18" FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.



COMPOST FILTER SOCK

(PADEP STANDARD CONSTRUCTION DETAIL #4-1)
(NOT TO SCALE)

1. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (FIGURE 4.1). MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON FIGURE 4.2. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
2. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
3. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
4. 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 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.



PUMPED WATER FILTER BAG

(NOT TO SCALE)

1. FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.
2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.
3. BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE FLOW PATH SHALL BE PROVIDED. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%.
4. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
5. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

PENNSYLVANIA ONE CALL SYSTEM · 1-800-242-1776 · CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires three working days notice
Serial Numbers:
20141642689

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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA · REGISTERED PROFESSIONAL · CHARLES A. DOBSON · ENGINEER · NO.PE-049197-E

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

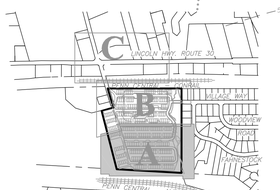
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 Inch = 50'

Date: **1/30/2015**
Scale: **AS NOTED**
Drawn by: **TAH**
Checked by: **CAD**
Project No. **10383**

SEDIMENTATION & EROSION CONTROL NOTES & DETAILS FOR

MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA



KEY MAP
1" = 800'

LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- FLOOD PLAIN LINE
- ZONING BOUNDARY LINE
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING TREELINE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WELL
- EXISTING WATER VALVE
- EXISTING SIGN
- TEST PIT LOCATION
- EXISTING FENCE LINE
- SOILS LINE AND DESCRIPTION
- EXISTING WETLANDS MODIFIED BY ACOE
- EXISTING WETLANDS
- EXISTING STORM STRUCTURES & PIPE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING DRIVEWAY
- EXISTING STONE DRIVE
- EXISTING CONCRETE SIDEWALK
- EXISTING WALL
- EXISTING SANITARY LATERAL
- EXISTING SANITARY FORCE MAIN
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL
- EXISTING RAIL ROAD TRACKS
- CONTAMINATED AREAS (TO BE REMEDIATED)
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT LINE
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED WELL
- PROPOSED WATER VALVE
- PROPOSED STOP BAR
- PROPOSED SIGN
- PROPOSED FIRE HYDRANT
- PROPOSED FENCE LINE
- PROPOSED STORM STRUCTURES & PIPE
- PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB LINE
- PROPOSED 5' CURB TAPER
- PROPOSED ROAD / PAVING
- PROPOSED DRIVEWAY
- PROPOSED CONCRETE SIDEWALK
- PROPOSED SEGMENTAL WALL
- PROPOSED SANITARY LATERAL
- PROPOSED SANITARY FORCE MAIN
- PROPOSED WATER LINE
- PROPOSED ELECTRIC LINE
- PROPOSED GAS LINE
- PROPOSED TELEPHONE LINE
- PROPOSED PHASE LINE
- PROPOSED CLEAR SITE TRIANGLE
- PROPOSED PAVERS
- PROPOSED STREET LIGHT

PLANT LEGEND

- SHADEMASTER LOCUST (GT)
- LIFTIELEAF LINDON (PA)
- DOGWOOD (CF)
- CEDAR (JV)
- RED MAPLE (AR)
- LAUREL OAK (GP)
- HORNBEAM (HB)
- WHITE PINE (WP)
- WILLOW OAK (QP)
- YEW (Y)
- REDBUD (CC)
- SPRUCE (PO)
- BAYBERRY (MP)
- HOLLY (IG)

GENERAL NOTES:

1. CONTRACTOR SHALL ENSURE THAT THE FINAL PLACEMENT OF LANDSCAPING SHALL NOT OCCUR WITHIN 5 FT. OF ANY INSTALLED SUB-SURFACE UTILITY OR RETAINING WALL.
2. ANY LANDSCAPING TO BE INSTALLED WITHIN THE MEDIANS OF MALIN ROAD SHALL NOT EXCEED AND BE MAINTAINED TO A HEIGHT OF 36" TALL.
3. SMALL TREES AND SHRUBS PLANTED WITHIN THE LINE OF SITE FOR THE EXISTING PRIVATE ACCESS DRIVE SHALL BE MAINTAINED TO A HEIGHT OF NO MORE THAN 36".
4. PLEASE REFER TO SHEET 24 FOR PLANT LIST AND PLANTING REQUIREMENTS CHART.

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Number
20141642689

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.

PENNSYLVANIA ONE-CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

InLand Design
Civil Engineers, Surveyors & Land Development Consultants
16 Hagerty Blvd. West Chester, PA 19382 www.InLandDesign.net
Phone: (484) 947-2928 Fax: (484) 947-2946 Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL CHARLES A. DOBSON ENGINEER PENNSYLVANIA

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY LAND DEVELOPMENT PLAN

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

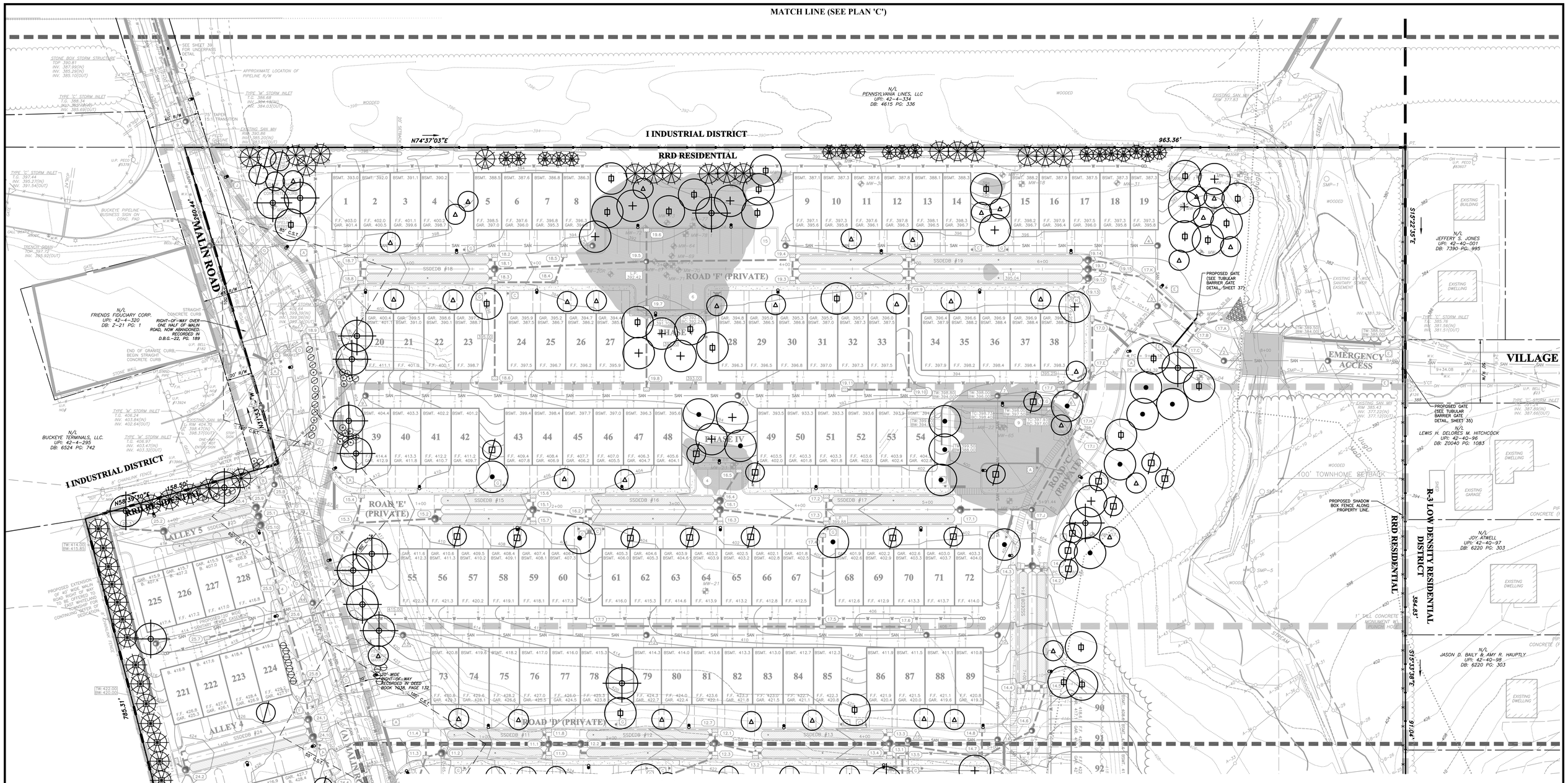
Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

LANDSCAPING & LIGHTING PLAN 'A' FOR

MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SHEET **21** OF 43



GENERAL NOTES:

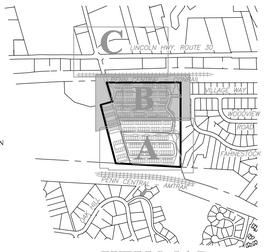
1. CONTRACTOR SHALL ENSURE THAT THE FINAL PLACEMENT OF LANDSCAPING SHALL NOT OCCUR WITHIN 5 FT. OF ANY INSTALLED SUB-SURFACE UTILITY OR RETAINING WALL.
2. ANY LANDSCAPING TO BE INSTALLED WITHIN THE MEDIANS OF MALIN ROAD SHALL NOT EXCEED AND BE MAINTAINED TO A HEIGHT OF 36" TALL.
3. SMALL TREES AND SHRUBS PLANTED WITHIN THE LINE OF SITE FOR THE EXISTING PRIVATE ACCESS DRIVE SHALL BE MAINTAINED TO A HEIGHT OF NO MORE THAN 36".
4. PLEASE REFER TO SHEET 24 FOR PLANT LIST AND PLANTING REQUIREMENTS CHART.

PLANT LEGEND

- SHADEMASTER LOCUST (GT)
- LIFTIELEAF LINDON (PA)
- DOGWOOD (CF)
- CEDAR (JV)
- RED MAPLE (AR)
- LAUREL OAK (GP)
- HORNBEAM (HB)
- WHITE PINE (WP)
- WILLOW OAK (QP)
- YEW (Y)
- REDBUD (CC)
- SPRUCE (PO)
- BAYBERRY (MP)
- HOLLY (IG)

LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- FLOOD PLAIN LINE
- ZONING BOUNDARY LINE
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING TREELINE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WELL
- EXISTING WATER VALVE
- EXISTING SIGN
- TEST PIT LOCATION
- EXISTING FENCE LINE
- SOILS LINE AND DESCRIPTION
- EXISTING WETLANDS MODIFIED BY ACOE
- EXISTING WETLANDS
- EXISTING STORM STRUCTURES & PIPE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING DRIVEWAY
- EXISTING STONE DRIVE
- EXISTING CONCRETE SIDEWALK
- EXISTING WALL
- EXISTING SANITARY LATERAL
- EXISTING SANITARY FORCE MAIN
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL
- EXISTING RAIL ROAD TRACKS
- CONTAMINATED AREAS (TO BE REMEDIATED)
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT LINE
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED WELL
- PROPOSED WATER VALVE
- PROPOSED STOP BAR
- PROPOSED SIGN
- PROPOSED FIRE HYDRANT
- PROPOSED FENCE LINE
- PROPOSED STORM STRUCTURES & PIPE
- PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB LINE
- PROPOSED 5' CURB TAPER
- PROPOSED ROAD / PAVING
- PROPOSED DRIVEWAY
- PROPOSED CONCRETE SIDEWALK
- PROPOSED SEGMENTAL WALL
- PROPOSED SANITARY LATERAL
- PROPOSED SANITARY FORCE MAIN
- PROPOSED WATER LINE
- PROPOSED ELECTRIC LINE
- PROPOSED GAS LINE
- PROPOSED TELEPHONE LINE
- PROPOSED PHASE LINE
- PROPOSED CLEAR SITE TRIANGLE
- PROPOSED PAVERS
- PROPOSED STREET LIGHT



KEY MAP
1" = 800'

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
P.A. act 172 of 1986 requires
three working days notice.
Serial Numbers:
20141642689
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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL LAND SURVEYOR CHARLES A. DOBSON ENGINEER NO.PE-049187-E

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

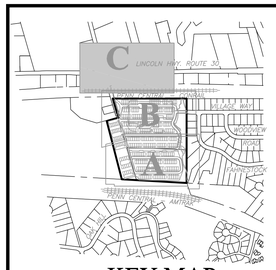
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 Inch = 30'

Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

LANDSCAPING & LIGHTING PLAN 'B'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SHEET **22** OF 43



KEY MAP

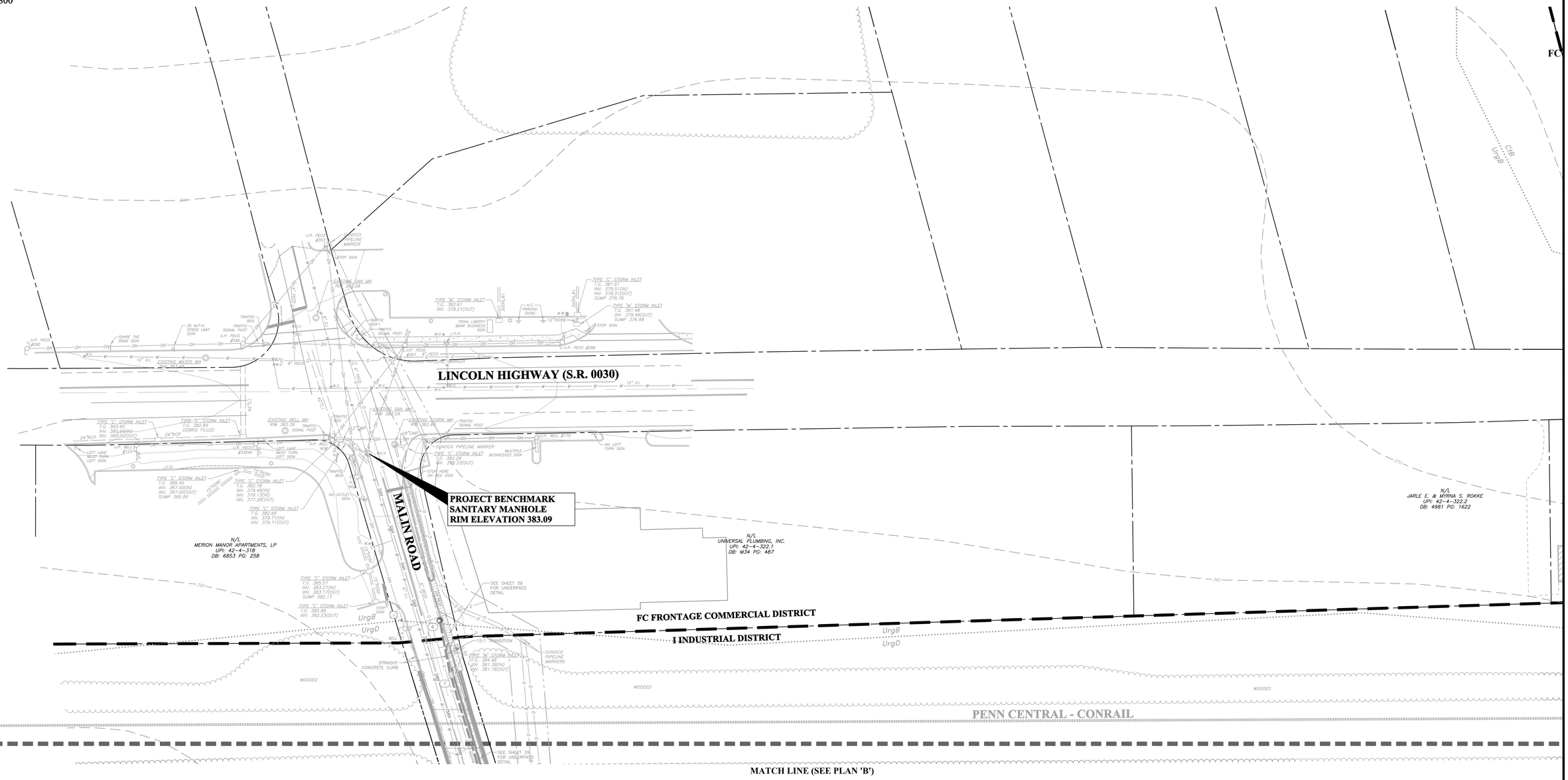
1" = 800'

LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- FLOOD PLAIN LINE
- ZONING BOUNDARY LINE
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING TREELINE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WELL
- EXISTING WATER VALVE
- EXISTING SIGN
- TEST PIT LOCATION
- EXISTING FENCE LINE
- SOILS LINE AND DESCRIPTION
- EXISTING WETLANDS MODIFIED BY ACOE
- EXISTING WETLANDS
- EXISTING STORM STRUCTURES & PIPE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING DRIVEWAY
- EXISTING STONE DRIVE
- EXISTING CONCRETE SIDEWALK
- EXISTING WALL
- EXISTING SANITARY LATERAL
- EXISTING SANITARY FORCE MAIN
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL
- EXISTING RAIL ROAD TRACKS
- CONTAMINATED AREAS (TO BE REMEDIATED)
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT LINE
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED WELL
- PROPOSED WATER VALVE
- PROPOSED STOP BAR
- PROPOSED SIGN
- PROPOSED FIRE HYDRANT
- PROPOSED FENCE LINE
- PROPOSED STORM STRUCTURES & PIPE
- PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB LINE
- PROPOSED 5' CURB TAPER
- PROPOSED ROAD / PAVING
- PROPOSED DRIVEWAY
- PROPOSED CONCRETE SIDEWALK
- PROPOSED SEGMENTAL WALL
- PROPOSED SANITARY LATERAL
- PROPOSED SANITARY FORCE MAIN
- PROPOSED WATER LINE
- PROPOSED ELECTRIC LINE
- PROPOSED GAS LINE
- PROPOSED TELEPHONE LINE
- PROPOSED PHASE LINE
- PROPOSED CLEAR SITE TRIANGLE
- PROPOSED PAVERS
- PROPOSED STREET LIGHT

PLANT LEGEND

- SHADEMASTER LOCUST (GT)
- RED MAPLE (AR)
- WILLOW OAK (QP)
- LIFTIELEAF LINDON (PA)
- LAUREL OAK (GP)
- YEW (Y)
- DOGWOOD (CF)
- HORNBEAM (HB)
- REDBUD (CC)
- BAYBERRY (MP)
- CEDAR (JV)
- WHITE PINE (WP)
- SPRUCE (PO)
- HOLLY (IG)



GENERAL NOTES:

1. CONTRACTOR SHALL ENSURE THAT THE FINAL PLACEMENT OF LANDSCAPING SHALL NOT OCCUR WITHIN 5 FT. OF ANY INSTALLED SUB-SURFACE UTILITY OR RETAINING WALL.
2. ANY LANDSCAPING TO BE INSTALLED WITHIN THE MEDIANS OF MALIN ROAD SHALL NOT EXCEED AND BE MAINTAINED TO A HEIGHT OF 36" TALL.
3. SMALL TREES AND SHRUBS PLANTED WITHIN THE LINE OF SITE FOR THE EXISTING PRIVATE ACCESS DRIVE SHALL BE MAINTAINED TO A HEIGHT OF NO MORE THAN 36".
4. PLEASE REFER TO SHEET 24 FOR PLANT LIST AND PLANTING REQUIREMENTS CHART.

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without First obtaining the expressed written permission and consent of InLand Design, LLC. In the event of unauthorized reuse by others, or other persons acquiring signatures by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Number
20141642689

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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

InLand Design
Civil Engineers, Surveyors & Land Development Consultants
16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL LAND ENGINEER CHARLES A. DOBSON ENGINEER 042-PE-049192-E PENNSYLVANIA

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

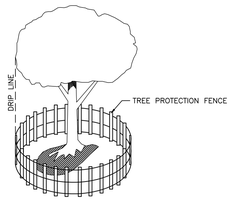
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 Inch = 30'

Date:	1/30/2015
Scale:	1" = 30'
Drawn by:	TAH
Checked by:	CAD
Project No.	10383

LANDSCAPING & LIGHTING PLAN 'C'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

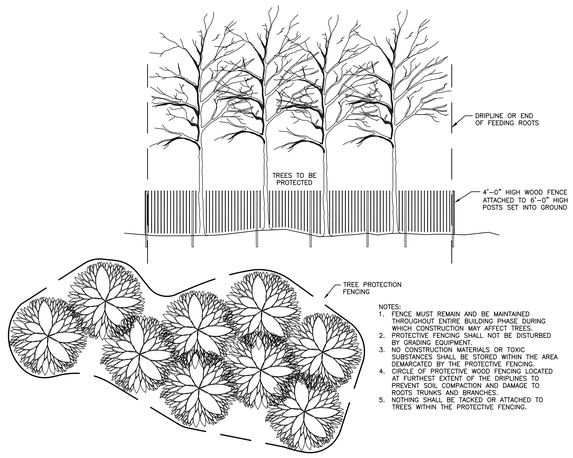
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SHEET 23 OF 43



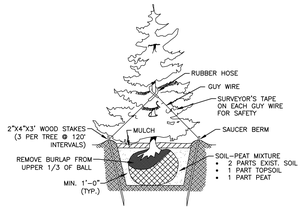
TREE PROTECTION
(NOT TO SCALE)

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 CLEARLY VISIBLE AND 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.



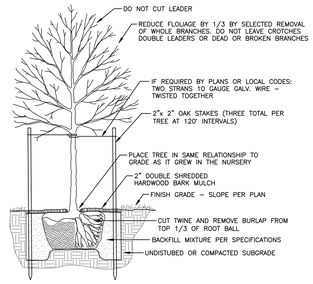
NOTES:
1. FENCE MUST REMAIN AND BE MAINTAINED THROUGHOUT ENTIRE BUILDING PHASE DURING WHICH CONSTRUCTION MAY AFFECT TREES.
2. PROTECTIVE FENCING SHALL NOT BE DISTURBED BY GRADING EQUIPMENT.
3. NO CONSTRUCTION MATERIALS OR TOXIC SUBSTANCES SHALL BE STORED WITHIN THE AREA DEMARCATED BY THE PROTECTIVE FENCING.
4. CIRCLE OF PROTECTIVE WOOD FENCING LOCATED AT FURTHEST EXTENT OF THE DRIPLINES TO PREVENT SOIL COMPACTION AND DAMAGE TO ROOTS TRUNKS AND BRANCHES.
5. NOTHING SHALL BE TACKED OR ATTACHED TO TREES WITHIN THE PROTECTIVE FENCING.

TYPICAL TREE PROTECTION DETAIL (TREE GROUP)
(NOT TO SCALE)

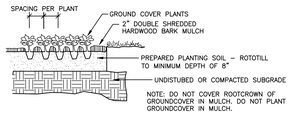


TYPICAL EVERGEEN TREE PLANTING DETAIL
(NOT TO SCALE)

TYPICAL SHRUB PLANTING DETAIL
(NOT TO SCALE)



TYPICAL DECIDUOUS TREE PLANTING DETAIL
(NOT TO SCALE)



TYPICAL GROUNDCOVER PLANTING DETAIL
(NOT TO SCALE)

GENERAL SPECIFICATIONS

A. NOTES & PLANTING INSTRUCTIONS

1. 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.
2. 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.
3. INSTALLATION TO BE IN ACCORDANCE WITH AMERICAN ASSOCIATION OF NURSERYMAN STANDARDS.
4. PLANT SIZES SHALL BE A FAIR AVERAGE BETWEEN THE SIZE RANGE INDICATED. CALIPER SHALL BE MEASURED AT 4.5' ABOVE GROUND.
5. TREES IN PAVED AREAS SHALL BE UNIFORM IN SHAPE, SIZE, AND CHARACTER. LOWEST BRANCHES SHALL BE AT LEAST 7' FROM GROUND.
6. 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.
7. NO SUBSTITUTIONS ARE ACCEPTABLE UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE AND THE MUNICIPALITY.
8. 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 MUNICIPALITY.
9. BACKFILL MIXTURE SHALL BE A MIXTURE BY VOLUME OF 3/4 TOPSOIL (TO BE PROVIDED ON SITE) AND 1/4 PEAT MOSS.
10. ALL SHRUBS AND GROUND COVER SHALL BE PLACED IN CONTINUOUS BEDS AS DELINEATED ON THE PLANS.
11. MULCH TO BE SHREDDED OAK BARK OR APPROVED EQUAL AND SPREAD TO A MINIMUM DEPTH OF 2 INCHES.
12. 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.
13. 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.
14. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR WATERING IN SUFFICIENTLY AT TIME OF PLANTING AND UNTIL JOB IS COMPLETED AND TURNED OVER TO OWNER.

SEEDING SPECIFICATIONS:

1. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SEEDED.
2. 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.
3. TOPSOIL USED FOR SEEDING IS STOCKPILED ON SITE. TOPSOIL SHALL BE SPREAD TO A DEPTH OF 6" AND FIND GRADED, REMOVING ALL DEBRIS AND STONES LARGER THAN 1". REMOVE FROM THE SITE ALL DEBRIS AND STONES.
4. INCORPORATE BY DESCING 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.
5. 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

PROP. BY WT.	MIN. % COMMON NAME	MIN. % GERMINATION	MAX % PURE SEED	MAX % 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

6. 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.
7. ALL LAWN WORK INCLUDING THE REPAIR OF WASHOUTS, GULLIES, ETC., SHALL BE GUARANTEED FOR ONE CALENDAR YEAR FROM THE DATE OF COMPLETION OF INSTALLATION.
8. SOD (IF REQUIRED) SHALL BE SAME AS SEED MIX AND INSTALLED IN ACCORDANCE WITH AMERICAN ASSOCIATION OF SOD PRODUCERS' STANDARDS.

NOTES

1. 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.
2. ALL PLANT MATERIAL TO BE INSTALLED IN ACCORDANCE WITH THE PLANTING PRACTICES STATED IN CHAPTER 3 OF TREE MAINTENANCE BY T.P. PIRONE.
3. THE DEVELOPER IS TO CONTACT THE MUNICIPALITY IN WRITING TO REQUEST A FINAL INSPECTION OF ACCEPTANCE AT THE END OF THE GUARANTY PERIOD.
4. PLANT MATERIAL IN CLOSE PROXIMTY TO PROPOSED AND EXISTING UTILITIES TO BE ADJUSTED AT TIME OF PLANTING TO AVOID ANY CONFLICT WITH THE UTILITIES.
5. STREET TREES SHALL BE PLANTED 5 FEET OUTSIDE THE RIGHT-OF-WAY.
6. STREET TREE CALIPER SHALL BE AT LEAST 2.5 INCHES IN DIAMETER.
7. STREET TREES SHALL BE PLANTED NOT LESS THAN 40 FEET APART NOR MORE THAN 50 FEET APART.
8. STREET TREES SHALL BE PROPERLY BALLED AND BURLAPPED.
9. ALL STREET TREES SPECIES ARE SUBJECT TO THE APPROVAL OF THE PLANNING COMMISSION.
10. CONTRACTOR TO WATCH FOR EXISTING TREES AND ROOTS DURING CONSTRUCTION.

REQUIREMENTS CHART

	REQUIRED	PROPOSED
STREET TREES, SALDO SECTION 175-30-D		
5,278 L.F. STREET FRONTAGE, STAGGERED ALONG BOTH SIDES, AND SPACED ON FORTY-FOOT CENTERS	5,278 / 40 * 2 = 264 STREET TREES REQUIRED	264 STREET TREES
LANDSCAPE BUFFER, ZONING SECTION 200-61		
NORTH PROPERTY LINE - 964 L.F. (NEIGHBORING DISTRICT = I - INDUSTRIAL)	0	* - (35) EVERGREENS TREES
WEST PROPERTY LINE - 1,204 L.F. (NEIGHBORING DISTRICT = I - INDUSTRIAL)	0	* - (53) EVERGREEN TREES
SOUTH PROPERTY LINE - 847 L.F. (NEIGHBORING DISTRICT = I - INDUSTRIAL)	0	* - (9) EVERGREEN TREES AND EXISTING VEGETATION.
EAST PROPERTY LINE - 1,101 L.F. (NEIGHBORING DISTRICT = R3 - LOW DENSITY RESIDENTIAL)	0	EXISITING SCREENING IN PLACE
BUILDING S.F.175-41(D)		
(1) SHADE TREE, (1) CONIFEROUS TREE PER 5,000 SF. LOT (264) UNITS @ (1,800) S.F. PER UNIT (LOT) = 482,000 S.F.	482,000 S.F. / 5,000 = 96.48 97 SHADE TREES & 97 CONIFEROUS TREES	97 SHADE TREES & 97 CONIFEROUS TREES (* -USED TO PROVIDE BUFFERING ALONG PROPERTY LINES)

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	QTY.	CAL./HT/	ROOT
SHADE TREE					
GT	GLEDITSIA TRICANTHOS INERMIS SHADEMASTER	SHADEMASTER LOCUST	57	2 1/2" CAL.	B&B
QP	QUERCUS PHELLOS	WILLOW OAK	28	2 1/2" CAL.	B&B
AR	ACER RUBRUM	RED MAPLE	43	2 1/2" CAL.	B&B
SYC	TILIA CORDATA	LIFTIELEAF LINDON	55	2 1/2" CAL.	B&B
GP	QUERCUS IMBRICARIA	LAUREL OAK	82	1 1/2" CAL.	B&B
EVERGREEN TREE					
JV	JUNIPERUS VIRGINIA	EASTERN RED CEDAR	18	7' - 8' HT.	B&B
WP	PINUS STROBUS	EASTERN WHITE PINE	32	7' - 8' HT.	B&B
PO	PICEA ABIES	NORWAY SPRUCE	47	16-18' HT.	B&B
FLOWERING TREE					
CF	CORNUS FLORIDA	FLOWERING DOGWOOD	22	2" CAL.	B&B
HB	CARPINUS BET FASTIGIATA'	COLUMNAR HORNBEAM	62	1 1/2" CAL.	B&B
CC	CERCIS CANADENSIS	EASTERN REDBUD	13	2" CAL.	B&B
SHRUBS					
Y	TAXUS CUPSIDATA	HATFIELD UPRIGHT YEW	39	30" - 36"	B&B
MP	MYRICA PENNSYLVANICA	NORTHERN BAYBERRY	16	30" - 36"	CONT.

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

PENNSYLVANIA ONE CALL SYSTEM, INC. CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHARLES A. DOBSON NO.PE-049757-E

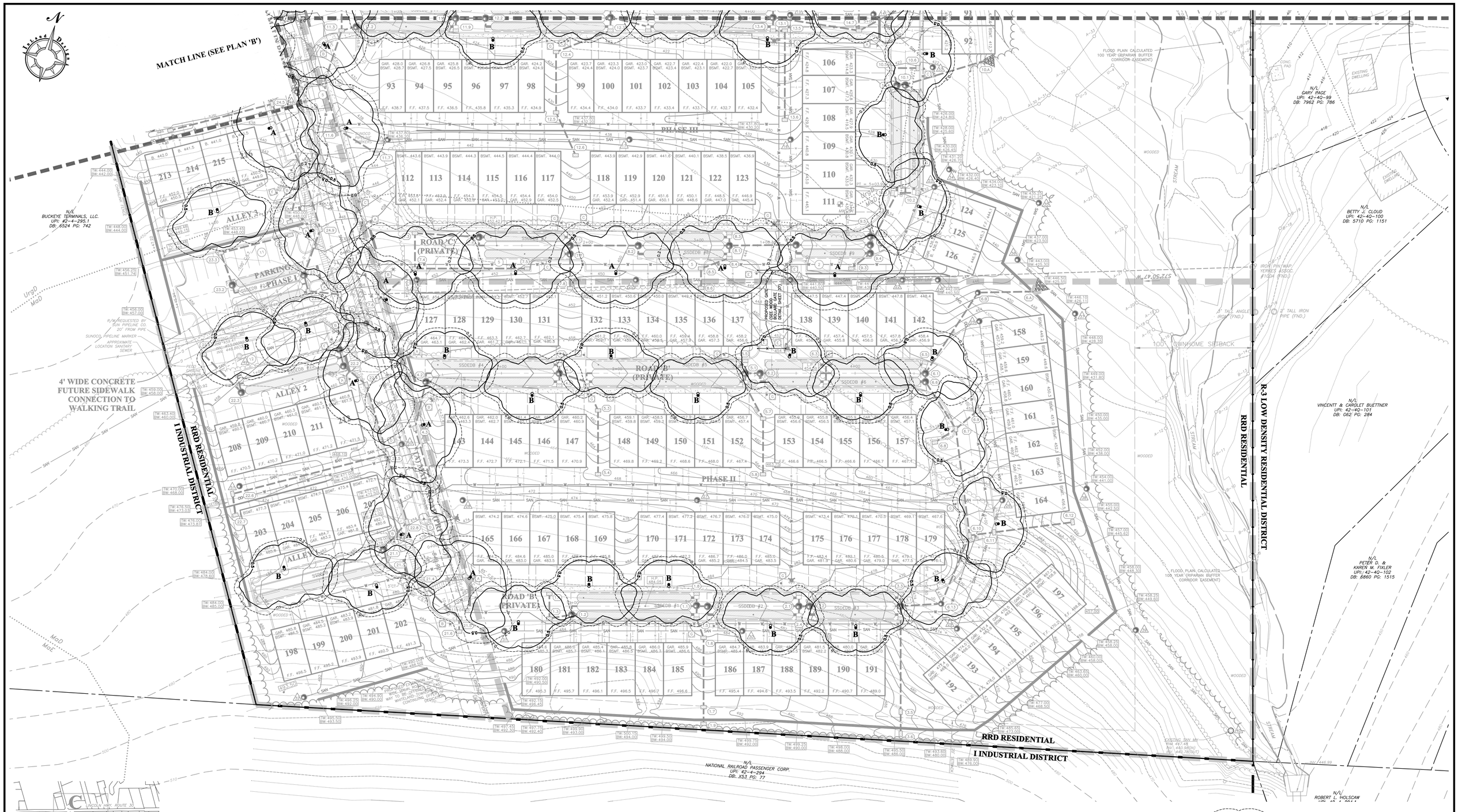
No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 Inch = 50'

Date: 1/30/2015
Scale: AS NOTED
Drawn by: TAH
Checked by: CAD
Project No. 10383

LANDSCAPING NOTES & DETAILS
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

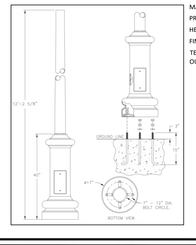


KEY MAP

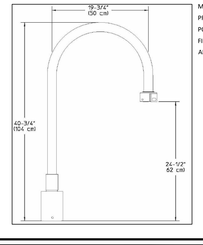
1" = 800'

GENERAL NOTES:

1. ALL LIGHT FOUNDATIONS SHALL BE INSTALLED A MINIMUM OF 2 FT. FROM ANY WATER MAINS.

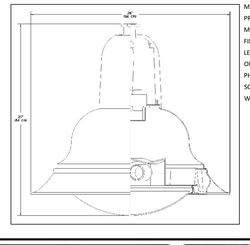


MANUFACTURER: PHILIPS
PRODUCT: ZURICH ANCHOR BASE POST
HEIGHT: 12' & 16'
FINISH: BLACK
TENON OPTION: 4" DIA.
OUTLET LOCATION: 4" FROM TOP OF BASE



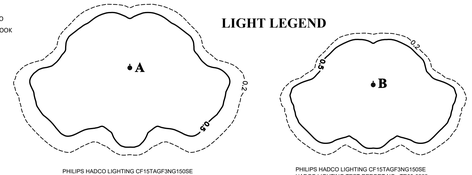
MANUFACTURER: PHILIPS, HADCO
PRODUCT: HFP510, SINGLE
POST DIAMETER: 4" POST MOUNT
FINISH: BLACK
ARM ACCESSORY: NONE

HOUSING:
413F, LOW-COPPER CAST ALUMINUM. 0.090" THICK SPUN ALUMINUM HINGED LENS FRAME IS CAST ALUMINUM WITH STAINLESS STEEL SPRING LATCH FOR TOOL-LESS LAMP ACCESS. A WEATHERPROOF BALLAST ASSEMBLY ISOLATES THE BALLAST FROM WATER AND HEAT FOR LONGER LIFE. INCLUDES 0.090" THICK SPUN ALUMINUM DECORATIVE BRIM. DECORATIVE FLUTED ALUMINUM SPINNING AVAILABLE FOR BALLAST HOUSING. ALL NON-FERROUS FASTENERS PREVENT CORROSION AND ENSURE LONGER LIFE.
FINISH:
THERMOSET POLYESTER POWDERCOAT IS ELECTROSTATICALLY APPLIED AFTER A FIVE-STAGE CONVERSION CLEANING PROCESS AND BONDED BY HEAT FUSION THERMOSETTING. LABORATORY TESTED FOR SUPERIOR WEATHERABILITY AND FADE RESISTANCE IN ACCORDANCE WITH ASTM B117 SPECIFICATIONS. FOR LARGER PROJECTS WHERE A CUSTOM COLOR IS REQUIRED, CONTACT THE FACTORY FOR MORE INFORMATION.
OPTICAL ASSEMBLY:
TYPE II CUTOFF. TYPE III CUTOFF. TYPE IV CUTOFF. TYPE V CUTOFF. PRECISION FORMED, SEGMENTED SPECULAR ALUMINUM INTERNAL CUTOFF REFLECTOR WITH HORIZONTAL LAMP MOUNTING. REFLECTOR IS ROTATABLE IN 90° INCREMENTS. U.V. STABILIZED, CLEAR ACRYLIC SAG LENS. CLEAR TEMPERED FLAT GLASS LENS. U.V. STABILIZED ACRYLIC LONG GLOBE WITH OPTICAL RIB (TM) TECHNOLOGY. U.V. STABILIZED, CLEAR, TEXTURED POLYCARBONATE SAG LENS.



MANUFACTURER: PHILIPS, HADCO
PRODUCT: CF15, WESTBROOK
MOUNTING: TOP ARM
FINISH: BLACK
LENS: FLATGLASS
OPTICS: TYPE III
PHOTO CONTROL: NONE
SOCKET: MOGUL
WATTAGE: 150

LIGHT LEGEND



PHILIPS HADCO LIGHTING CF15TAGF3NG1505E
HADCO LIGHTING TEST REPORT NO. TR09-0866
LAMP(S): CDM150UPS/4K. LUMEN RATING: 16000 LMS.
CANDELA FILE "152_CF15-153SHGF-09.IES"
1 LAMP(S) PER LUMINAIRE. 16000 INITIAL LUMENS PER LAMP
LIGHT LOSS FACTOR = 1.000. WATTS PER LUMINAIRE = 151
OUTREACH (FROM MOUNTING AXIS TO PHOTOMETRIC CENTER)= 20 IN
MOUNTING HEIGHT= 16 FT
NUMBER LOCATIONS= 29. NUMBER LUMINAIRES= 29
KW ALL LOCATIONS= 4.4

PHILIPS HADCO LIGHTING CF15TAGF3NG1505E
HADCO LIGHTING TEST REPORT NO. TR09-0866
LAMP(S): CDM150UPS/4K. LUMEN RATING: 16000 LMS.
CANDELA FILE "152_CF15-153SHGF-09.IES"
1 LAMP(S) PER LUMINAIRE. 16000 INITIAL LUMENS PER LAMP
LIGHT LOSS FACTOR = 1.000. WATTS PER LUMINAIRE = 151
OUTREACH (FROM MOUNTING AXIS TO PHOTOMETRIC CENTER)= 20 IN
MOUNTING HEIGHT= 12 FT
NUMBER LOCATIONS= 48. NUMBER LUMINAIRES= 48
KW ALL LOCATIONS= 7.2

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Number:
20141642689

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.

PENNSYLVANIA ONE-CALL SYSTEM 800-242-1776 CALL BEFORE YOU DIG!

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

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL CHARLES A. DOBSON ENGINEER VALID PRINTS ONLY

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

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

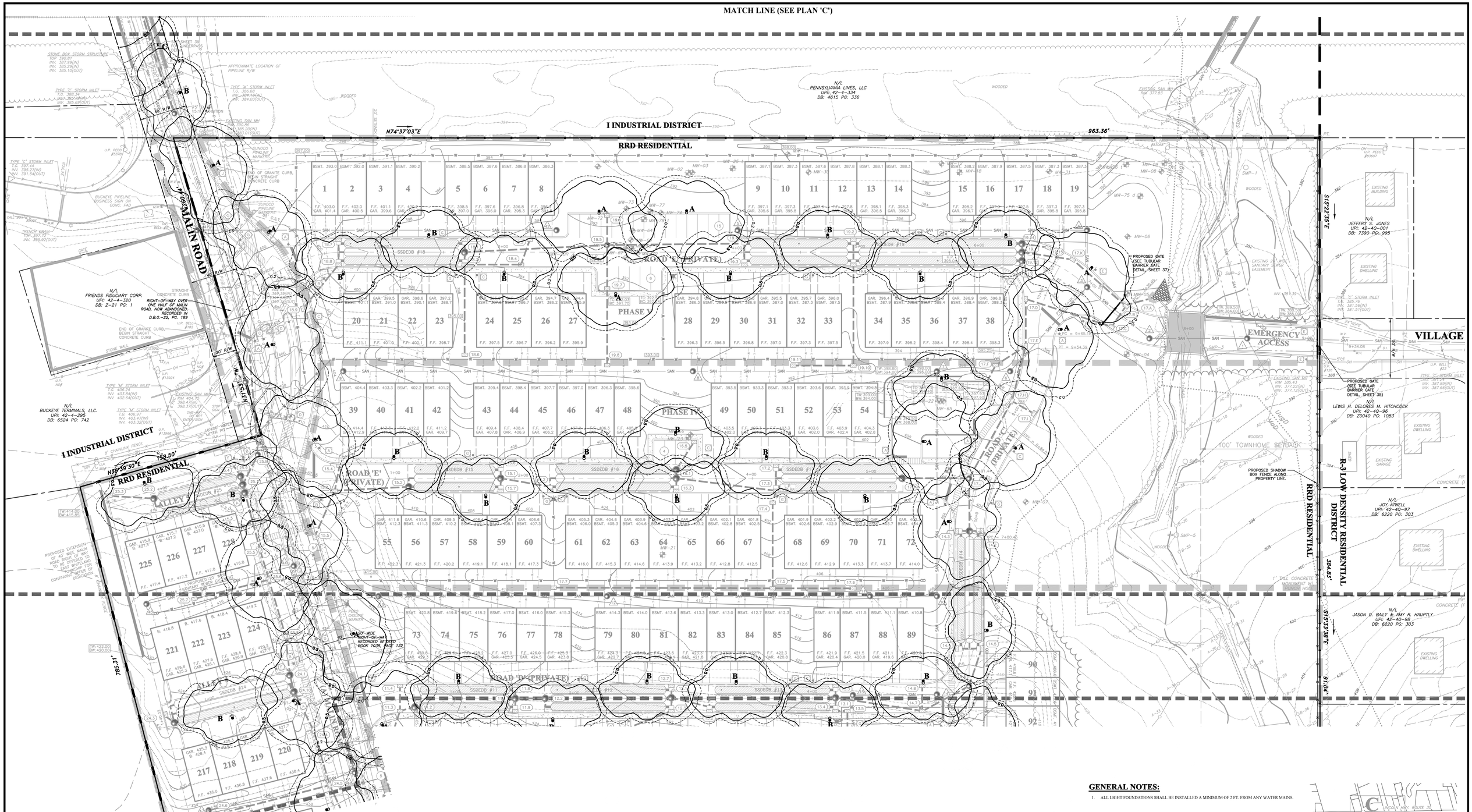
Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

LIGHTING PLAN 'A'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SHEET **25** OF 43

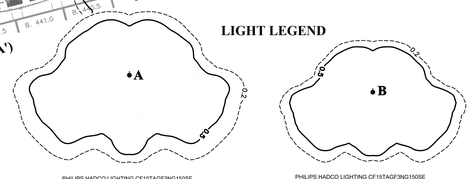
MATCH LINE (SEE PLAN 'C')



GENERAL NOTES:

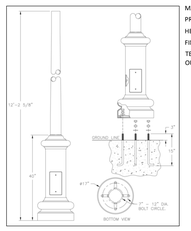
1. ALL LIGHT FOUNDATIONS SHALL BE INSTALLED A MINIMUM OF 2 FT. FROM ANY WATER MAINS.

LIGHT LEGEND

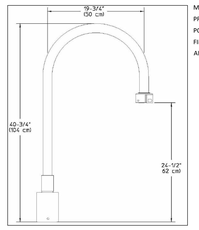


PHILIPS HADCO LIGHTING CF15TAGF3NG150SE
HADCO LIGHTING TEST REPORT NO. TR09-0866
LAMP(S): CDM150/U/PS/4K LUMEN RATING: 16000 LMS.
CANDELA FILE 152_CF15-1553HGF-09.IES'
1 LAMP(S) PER LUMINAIRE. 16000 INITIAL LUMENS PER LAMP
LIGHT LOSS FACTOR = 1.000. WATTS PER LUMINAIRE = 151
OUTREACH (FROM MOUNTING AXIS TO PHOTOMETRIC CENTER)= 20 IN
MOUNTING HEIGHT= 16 FT
NUMBER LOCATIONS= 29. NUMBER LUMINAIRES= 29
KW ALL LOCATIONS= 4.4

PHILIPS HADCO LIGHTING CF15TAGF3NG150SE
HADCO LIGHTING TEST REPORT NO. TR09-0866
LAMP(S): CDM150/U/PS/4K LUMEN RATING: 16000 LMS.
CANDELA FILE 152_CF15-1553HGF-09.IES'
1 LAMP(S) PER LUMINAIRE. 16000 INITIAL LUMENS PER LAMP
LIGHT LOSS FACTOR = 1.000. WATTS PER LUMINAIRE = 151
OUTREACH (FROM MOUNTING AXIS TO PHOTOMETRIC CENTER)= 20 IN
MOUNTING HEIGHT= 12 FT
NUMBER LOCATIONS= 48. NUMBER LUMINAIRES= 48
KW ALL LOCATIONS= 7.2

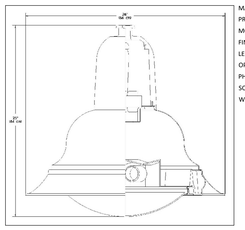


MANUFACTURER: PHILIPS
PRODUCT: ZURICH ANCHOR BASE POST
HEIGHT: 12' & 16'
FINISH: BLACK
TENON OPTION: 4" DIA.
OUTLET LOCATION: 4" FROM TOP OF BASE

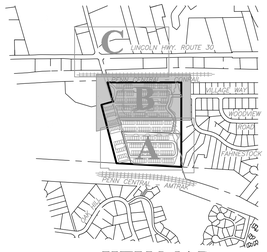


MANUFACTURER: PHILIPS, HADCO
PRODUCT: HFP510, SINGLE
POST DIAMETER: 4" POST MOUNT
FINISH: BLACK
ARM ACCESSORY: NONE

HOUSING:
4138. LOW-COPPER CAST ALUMINUM. 0.090" THICK SPUN ALUMINUM . HINGED LENS FRAME IS CAST ALUMINUM WITH STAINLESS STEEL SPRING LATCH FOR TOOL-LESS LAMP ACCESS. A WEATHERPROOF BALLAST ASSEMBLY ISOLATES THE BALLAST FROM WATER AND HEAT FOR LONGER LIFE. INCLUDES 0.090" THICK SPUN ALUMINUM DECORATIVE BRIM. DECORATIVE FLUTED ALUMINUM SPINNING AVAILABLE FOR BALLAST HOUSING. ALL NON-FERROUS FASTENERS PREVENT CORROSION AND ENSURE LONGER LIFE.
FINISH:
THERMOSET POLYESTER POWDERCOAT IS ELECTROSTATICALLY APPLIED AFTER A FIVE-STAGE CONVERSION CLEANING PROCESS AND BONDED BY HEAT FUSION THERMOSETTING. LABORATORY TESTED FOR SUPERIOR WEATHERABILITY AND FADE RESISTANCE IN ACCORDANCE WITH ASTM B117 SPECIFICATIONS. FOR LARGER PROJECTS WHERE A CUSTOM COLOR IS REQUIRED, CONTACT THE FACTORY FOR MORE INFORMATION.
OPTICAL ASSEMBLY:
TYPE II CUTOFF. TYPE III CUTOFF. TYPE IV CUTOFF. TYPE V CUTOFF. PRECISION FORMED, SEGMENTED SPECULAR ALUMINUM INTERNAL CUTOFF REFLECTOR WITH HORIZONTAL LAMP MOUNTING. REFLECTOR IS ROTATABLE IN 90° INCREMENTS. U.V. STABILIZED, CLEAR ACRYLIC SAG LENS. CLEAR TEMPERED FLAT GLASS LENS. U.V. STABILIZED ACRYLIC LONG GLOBE WITH OPTICAL RIB (TM) TECHNOLOGY. U.V. STABILIZED, CLEAR, TEXTURED POLYCARBONATE SAG LENS.



MANUFACTURER: PHILIPS, HADCO
PRODUCT: CF15, WESTBROOK
MOUNTING: TOP ARM
FINISH: BLACK
LENS: FLATGLASS
OPTICS: TYPE III
PHOTO CONTROL: NONE
SOCKET: MOGUL
WATTAGE: 150



KEY MAP
1" = 800'

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any because of, or arising from, any unauthorized reuse or assignment of these plans by any other and Design, LLC, for any purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Number
20141642689

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 www.InLandDesign.net
Phone: (484) 947-2928 Fax: (484) 947-2946 Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL CHARLES A. DOBSON ENGINEER CO-PE-044919-E

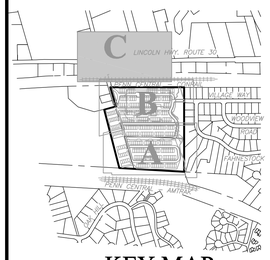
No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

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

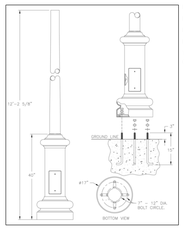
Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

LANDSCAPING & LIGHTING PLAN 'B'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

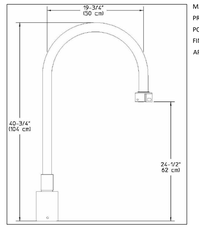


KEY MAP

1" = 800'

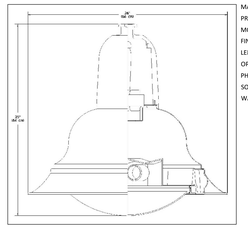


MANUFACTURER: PHILIPS
PRODUCT: ZURICH ANCHOR BASE POST
HEIGHT: 12' & 16'
FINISH: BLACK
TENON OPTION: 4" DIA.
OUTLET LOCATION: 4" FROM TOP OF BASE

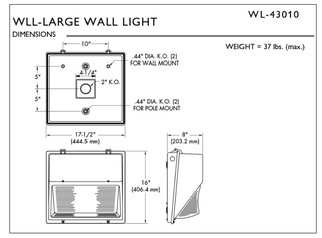


MANUFACTURER: PHILIPS, HADCO
PRODUCT: HFP510, SINGLE
POST DIAMETER: 4" POST MOUNT
FINISH: BLACK
ARM ACCESSORY: NONE

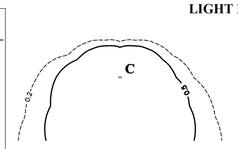
HOUSING:
411F, LOW-COPPER CAST ALUMINUM. 0.090" THICK SPUN ALUMINUM . HINGED LENS FRAME IS CAST ALUMINUM WITH STAINLESS STEEL SPRING LATCH FOR TOOL-LESS LAMP ACCESS. A WEATHERPROOF BALLAST ASSEMBLY ISOLATES THE BALLAST FROM WATER AND HEAT FOR LONGER LIFE. INCLUDES 0.090" THICK SPUN ALUMINUM DECORATIVE BRIM. DECORATIVE FLUTED ALUMINUM SPINNING AVAILABLE FOR BALLAST HOUSING. ALL NON-FERROUS FASTENERS PREVENT CORROSION AND ENSURE LONGER LIFE.
FINISH:
THERMOSET POLYESTER POWDERCOAT IS ELECTROSTATICALLY APPLIED AFTER A FIVE-STAGE CONVERSION CLEANING PROCESS AND BONDED BY HEAT FUSION THERMOSETTING. LABORATORY TESTED FOR SUPERIOR WEATHERABILITY AND FADE RESISTANCE IN ACCORDANCE WITH ASTM B117 SPECIFICATIONS. FOR LARGER PROJECTS WHERE A CUSTOM COLOR IS REQUIRED, CONTACT THE FACTORY FOR MORE INFORMATION.
OPTICAL ASSEMBLY:
TYPE II CUTOFF. TYPE III CUTOFF. TYPE IV CUTOFF. TYPE V CUTOFF. PRECISION FORMED; SEGMENTED SPECULAR ALUMINUM INTERNAL CUTOFF REFLECTOR WITH HORIZONTAL LAMP MOUNTING. REFLECTOR IS ROTATABLE IN 90° INCREMENTS. U.V. STABILIZED, CLEAR ACRYLIC SAG LENS. CLEAR TEMPERED FLAT GLASS LENS. U.V. STABILIZED ACRYLIC LONG GLOBE WITH OPTICAL RIB (TM) TECHNOLOGY. U.V. STABILIZED, CLEAR, TEXTURED POLYCARBONATE SAG LENS.



MANUFACTURER: PHILIPS, HADCO
PRODUCT: CF15, WESTBROOK
MOUNTING: TOP ARM
FINISH: BLACK
LENS: FLATGLASS
OPTICS: TYPE III
PHOTO CONTROL: NONE
SOCKET: MOGUL
WATTAGE: 150

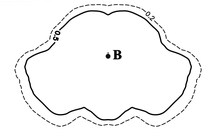


LIGHT LEGEND



CATALOG NUMBER: WLL400M
TEST NUMBER: 13230
LAMP: METAL HALIDE
WATTAGE: 400
LUMENS: 40,000
TILT ANGLE: 0°
MOUNTING HEIGHT: 10 FEET

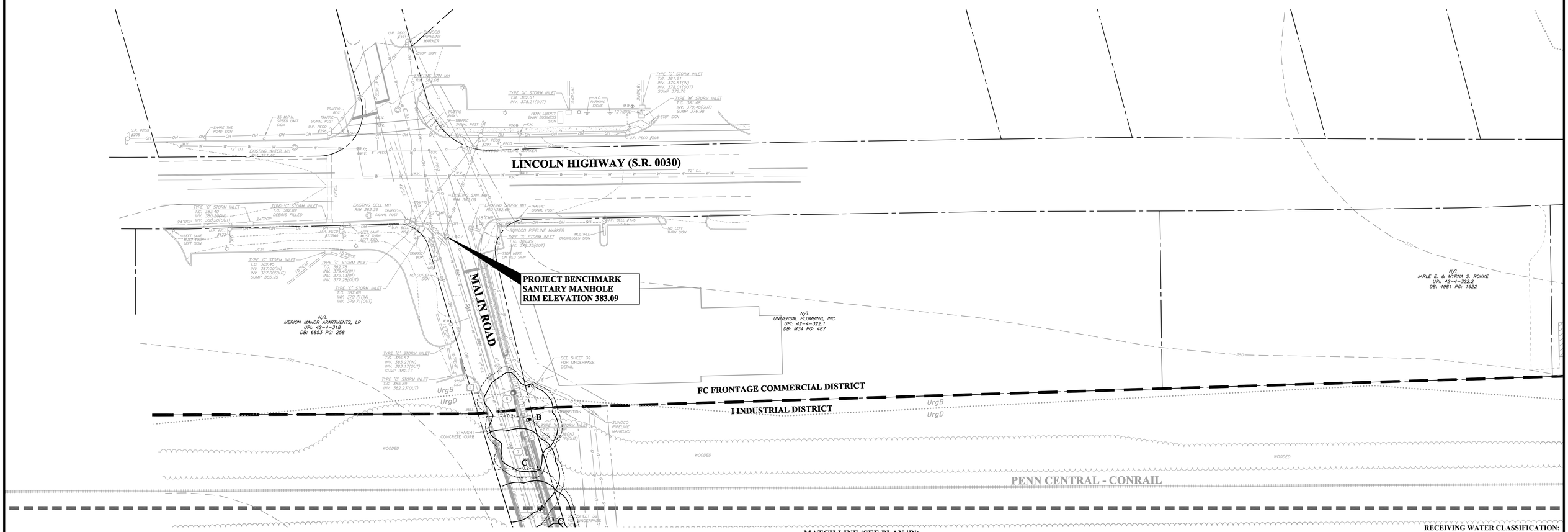
TO BE PLACED UNDER RAILROAD OVERPASS. CONTRACTOR TO PROVIDE ALL CONDUIT AND POWER SUPPLY IN ACCORDANCE WITH REQUIREMENTS OF PENNSYLVANIA LINES, LLC



PHILIPS HADCO LIGHTING CF15TAGF3NG150SE
HADCO LIGHTING TEST REPORT NO. TR09-0866
LAMP(S): CDM150/U/PS/4K LUMEN RATING: 16000 LMS.
CANDELA FILE '152_CF15-15S3HGF-09-8.5'
1 LAMP(S) PER LUMINAIRE. 16000 INITIAL LUMENS PER LAMP
LIGHT LOSS FACTOR = 1.000, WATTS PER LUMINAIRE = 151
OUTREACH (FROM MOUNTING AXIS TO PHOTOMETRIC CENTER)= 20 IN
MOUNTING HEIGHT= 12 FT
NUMBER LOCATIONS= 48, NUMBER LUMINAIRES= 48
KW ALL LOCATIONS= 7.2

GENERAL NOTES:

1. ALL LIGHT FOUNDATIONS SHALL BE INSTALLED A MINIMUM OF 2 FT. FROM ANY WATER MAINS.



RECEIVING WATER CLASSIFICATION:
LITTLE VALLEY CREEK - EXCEPTIONAL VALUE (EV)

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
P.A. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHARLES A. DOBSON No.PE-048197-E

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

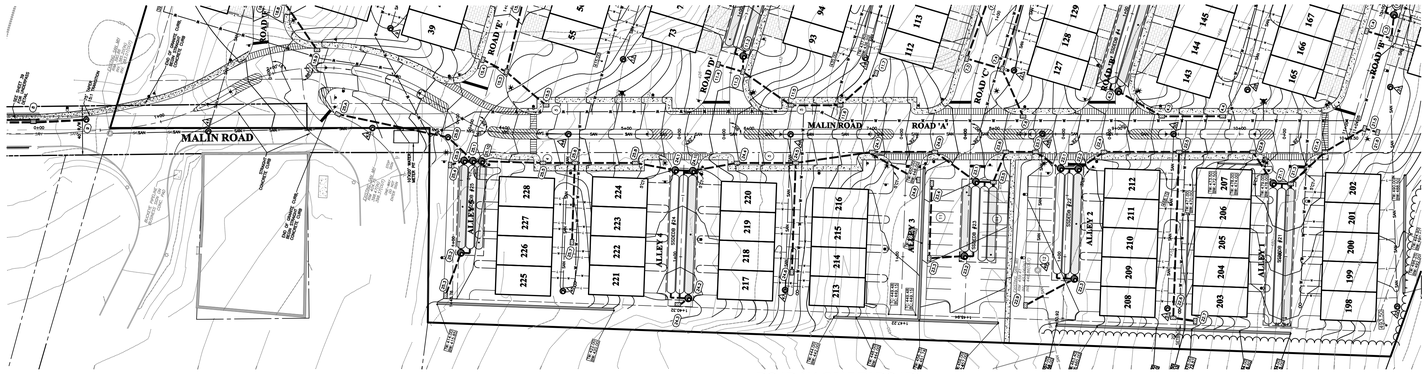
PRELIMINARY
LAND DEVELOPMENT PLAN

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

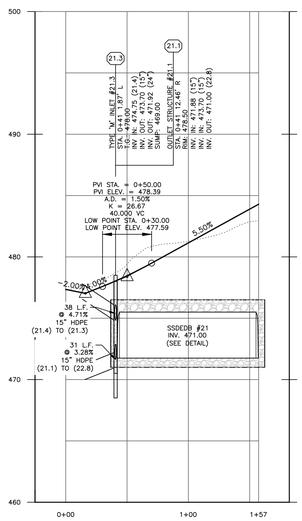
Date:	1/30/2015
Scale:	1" = 30'
Drawn by:	TAH
Checked by:	CAD
Project No.	10383

LIGHTING PLAN 'C'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

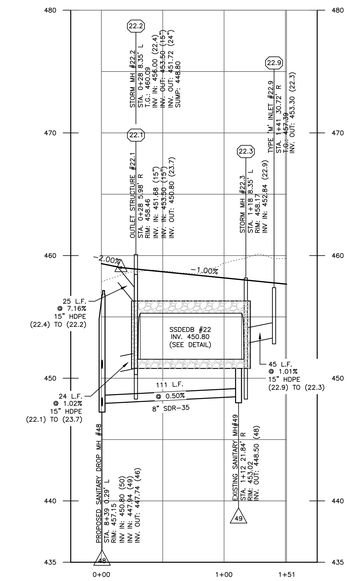
SHEET
27
OF 43



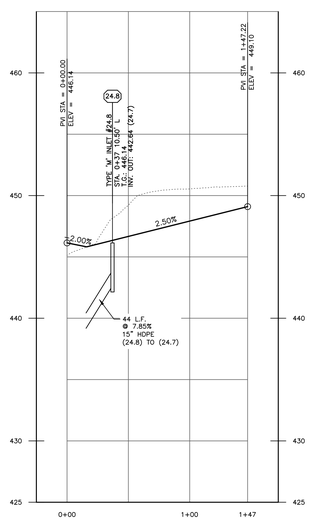
ROAD 'A' (MALIN ROAD)
PLAN VIEW
1" = 50'



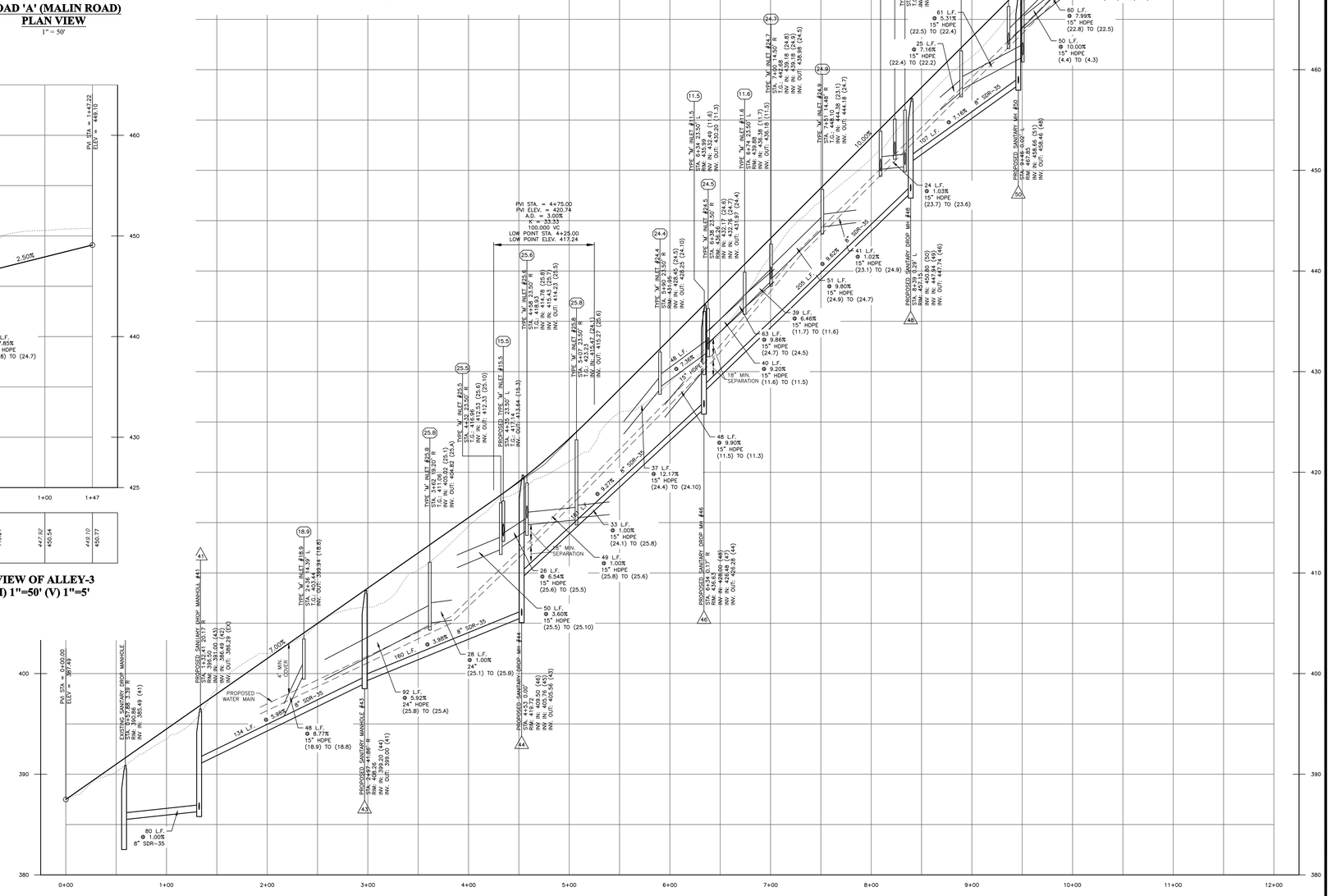
PROFILE VIEW OF ALLEY-1
SCALE: (H) 1"=50' (V) 1"=5'



PROFILE VIEW OF ALLEY-2
SCALE: (H) 1"=50' (V) 1"=5'



PROFILE VIEW OF ALLEY-3
SCALE: (H) 1"=50' (V) 1"=5'



PROFILE VIEW OF ROAD-A (MALIN ROAD)
SCALE: (H) 1"=50' (V) 1"=5'

NOTE:
THE FOLLOWING SANITARY SEWER RUNS SHALL BE DEDICATED TO THE EAST WHITELAND TOWNSHIP SEWER AUTHORITY.

1. MANHOLES: 40, 39, 38, 37, 36, 35, 34, 33, 14, 10, 7, 6, 3, 2, 1

2. MANHOLES: 49, 48, 46, 44, 43, 41, TO EXISTING SANITARY MANHOLE IN MALIN ROAD AT STA. 0+58.

ALL OTHER SANITARY SEWERS SHALL BE OFFERED FOR DEDICATION.

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
P.A. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689
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. **Phone: (484) 947-2928**
West Chester, PA 19382 **Fax: (484) 947-2946**
www.InLandDesign.net **Info@InLandDesign.net**

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHARLES A. DOBSON NO.PE-044816-E

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 Inch = 50'

Date:	1/30/2015
Scale:	AS NOTED
Drawn by:	TAH
Checked by:	CAD
Project No.	10383

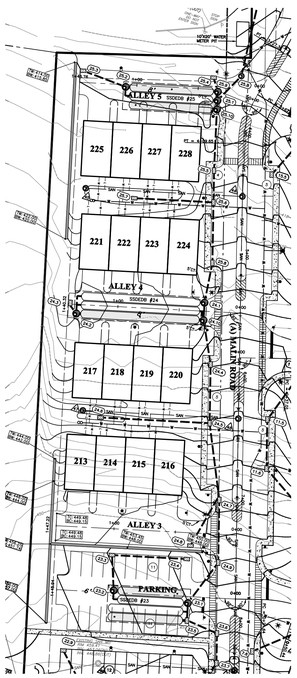
ROAD 'A' (MALIN ROAD) & ALLEY 1-3 PROFILES
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

NOTE:
THE FOLLOWING SANITARY SEWER RUNS SHALL BE DEDICATED TO THE EAST WHITELAND TOWNSHIP SEWER AUTHORITY.

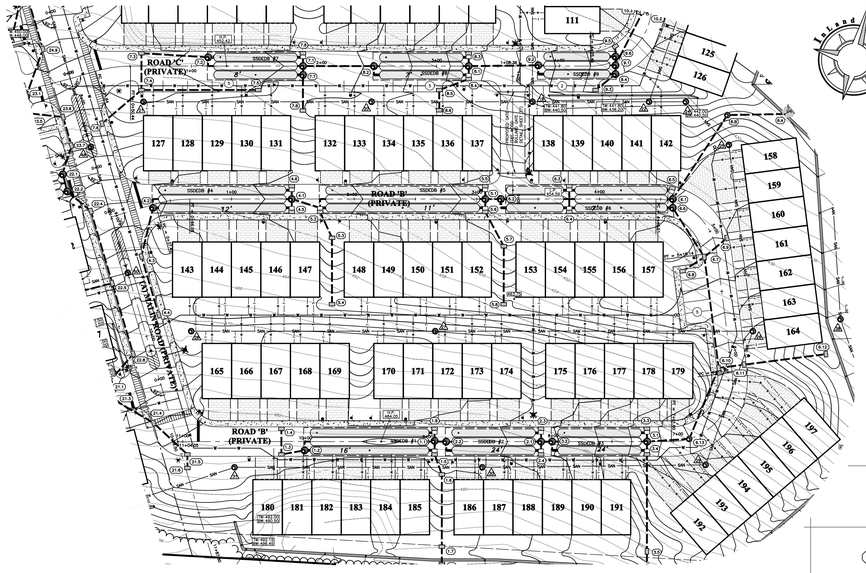
1. MANHOLES: 40, 39, 38, 37, 36, 35, 34, 33, 14, 10, 7, 6, 3, 2, 1

2. MANHOLES: 49, 48, 46, 44, 43, 41, TO EXISTING SANITARY MANHOLE IN MALIN ROAD AT STA. 0+58.

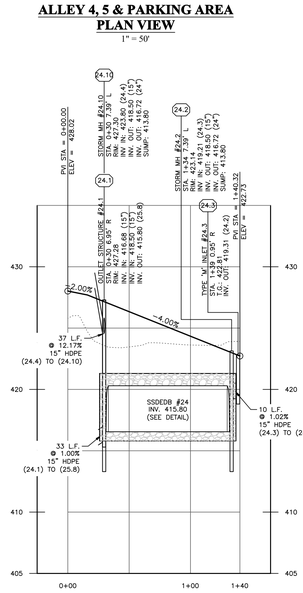
ALL OTHER SANITARY SEWERS SHALL BE OFFERED FOR DEDICATION.



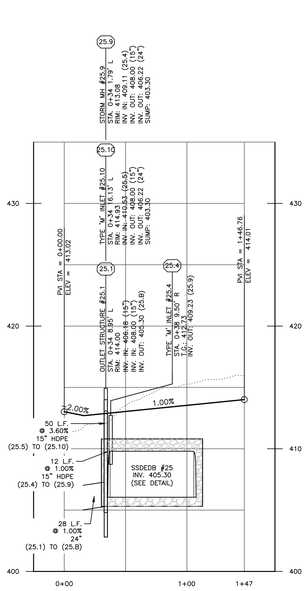
ALLEY 4, 5 & PARKING AREA PLAN VIEW
1" = 50'



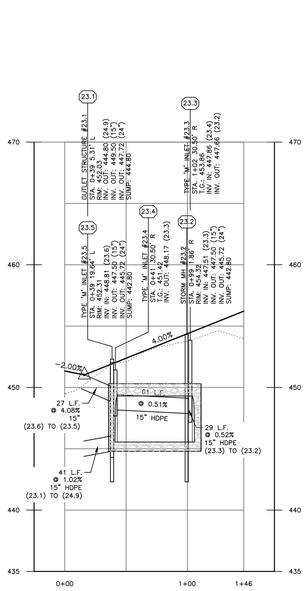
ROAD 'B' PLAN VIEW
1" = 50'



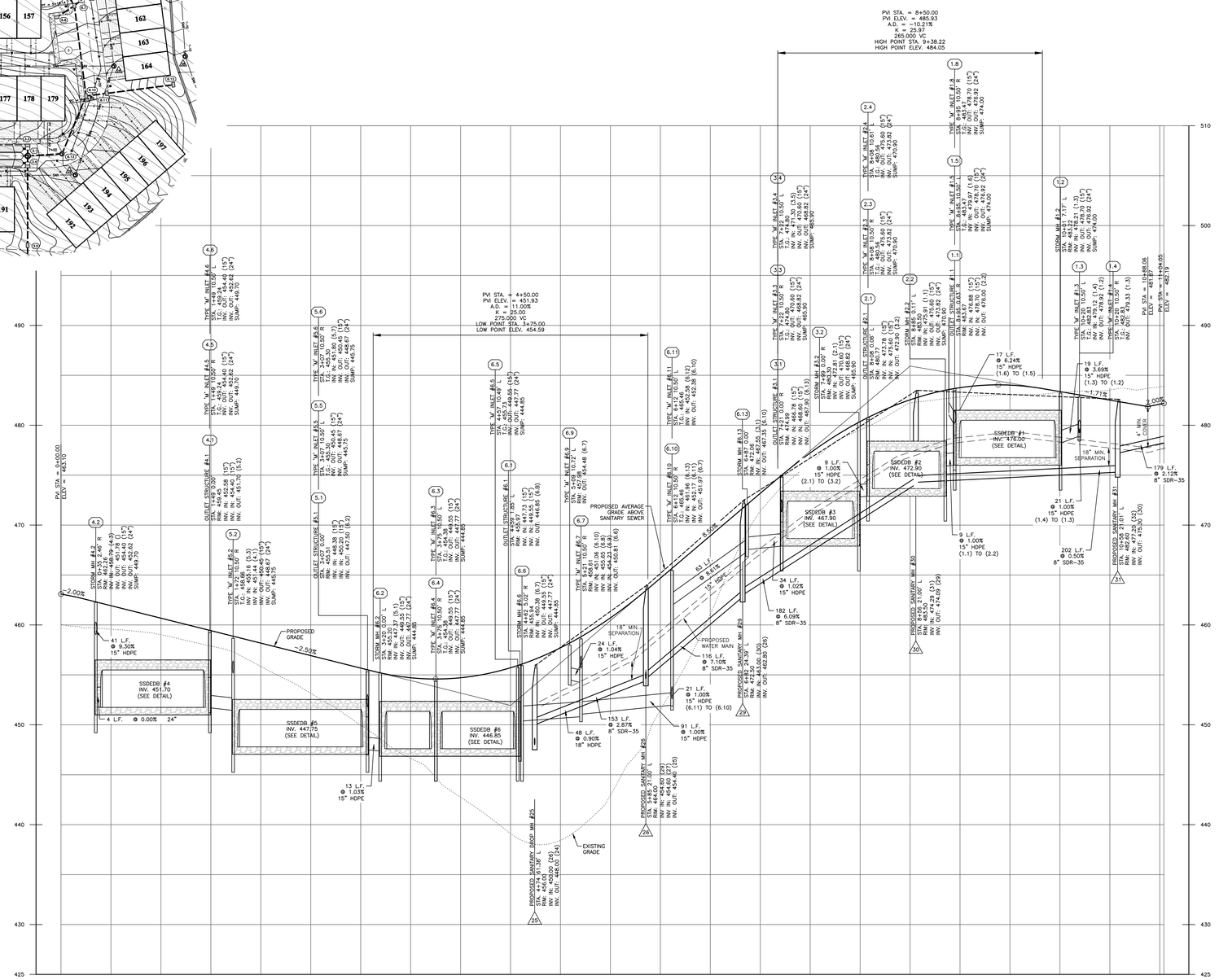
PROFILE VIEW OF ALLEY-4
SCALE: (H) 1"=50' (V) 1"=5'



PROFILE VIEW OF ALLEY-5
SCALE: (H) 1"=50' (V) 1"=5'



PROFILE VIEW OF PARKING
SCALE: (H) 1"=50' (V) 1"=5'



PROFILE VIEW OF ROAD-B
SCALE: (H) 1"=50' (V) 1"=5'

COPYRIGHT
Inland Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of Inland Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of Inland Design, LLC. Any re-use without written permission, verification, consent or adaptation by Inland Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to Inland Design, LLC the third party shall further indemnify and hold harmless Inland Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE-CALL SYSTEM, INC. 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
P.A. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

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

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHARLES A. DOBSON VL-026-040616-E

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

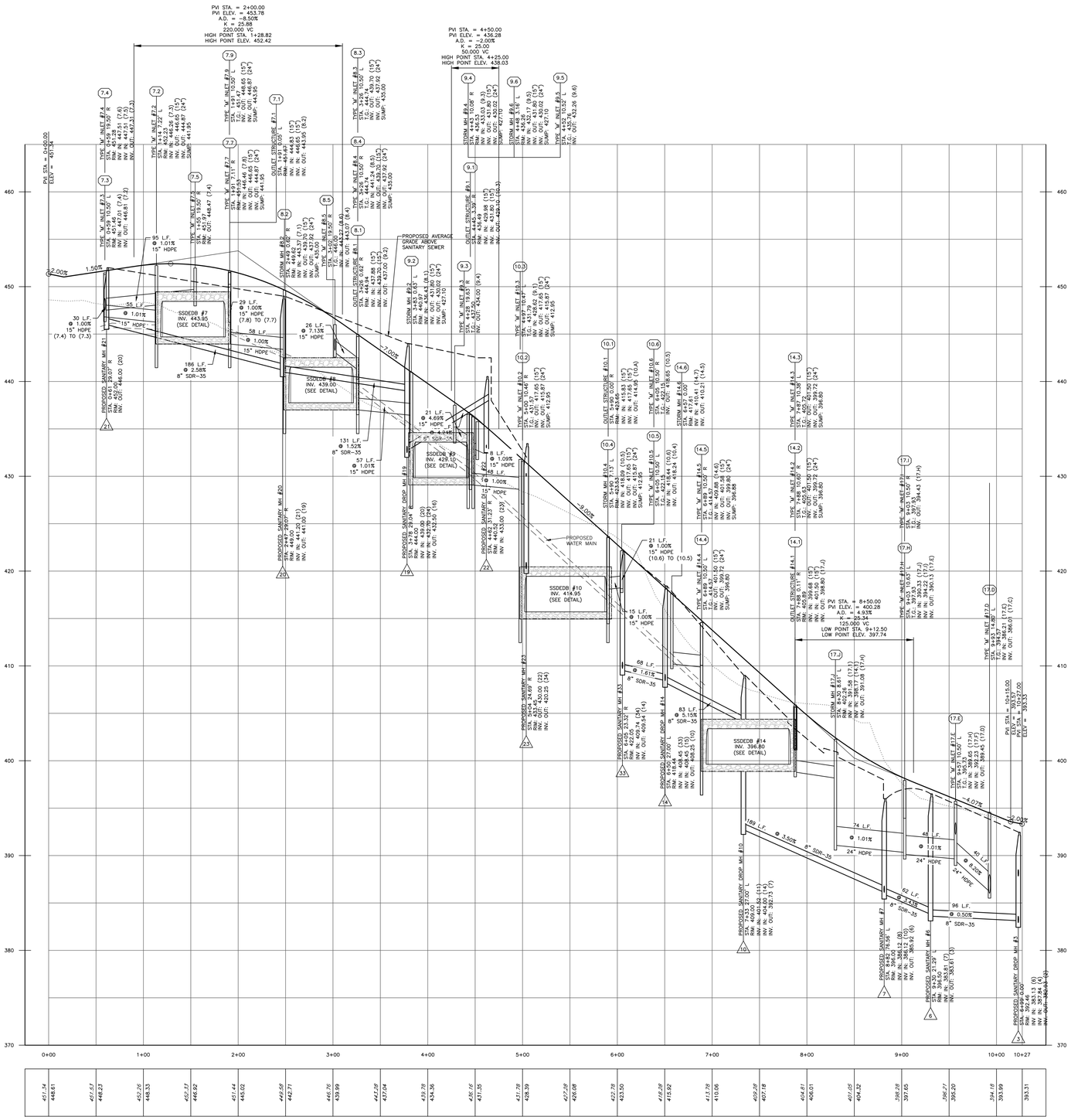
PRELIMINARY
LAND DEVELOPMENT PLAN

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50'

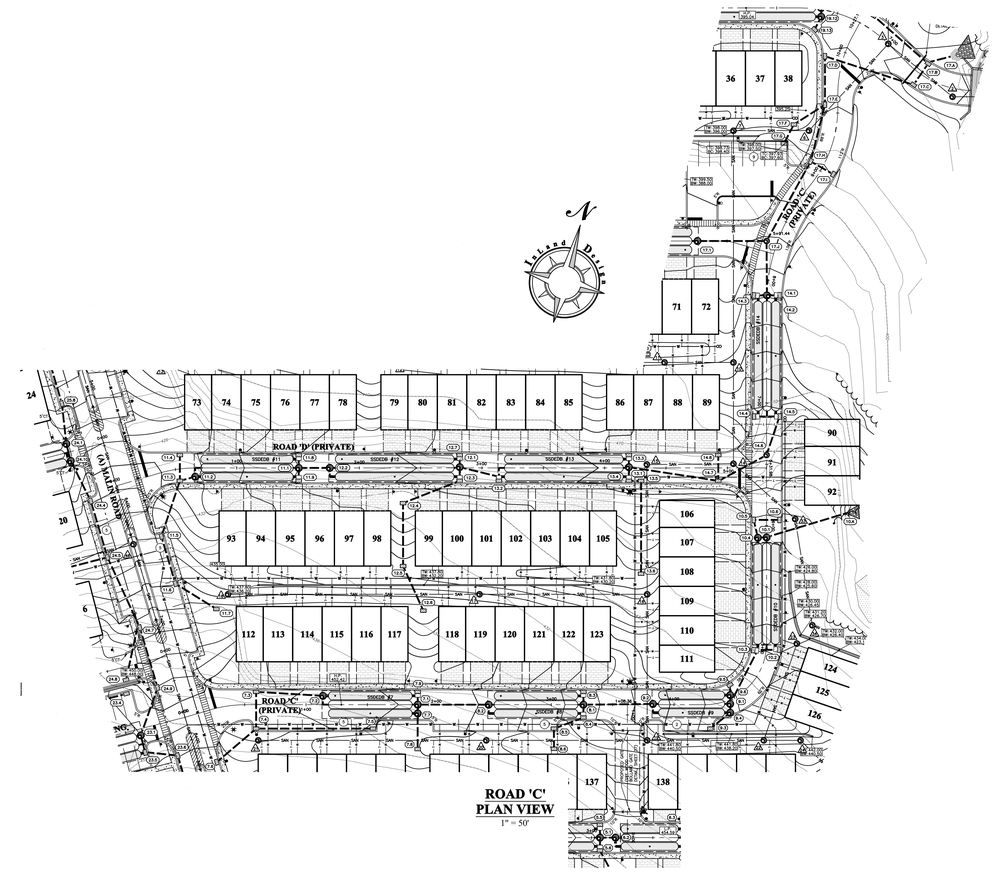
Date:	1/30/2015
Scale:	AS NOTED
Drawn by:	TAH
Checked by:	CAD
Project No.	10383

ROAD 'B' PROFILE, ALLEY #4, #5 & PARKING AREA
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

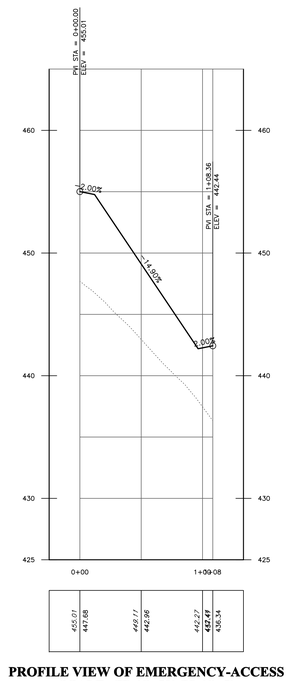
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA



PROFILE VIEW OF ROAD-C
SCALE: (H) 1"=50' (V) 1"=5'



ROAD 'C'
PLAN VIEW
1" = 50'



PROFILE VIEW OF EMERGENCY-ACCESS
SCALE: (H) 1"=50' (V) 1"=5'

NOTE:
THE FOLLOWING SANITARY SEWER RUNS SHALL BE DEDICATED TO THE EAST WHITELAND TOWNSHIP SEWER AUTHORITY.

1. MANHOLES: 40, 39, 38, 37, 36, 35, 34, 33, 14, 10, 7, 6, 3, 2, 1

2. MANHOLES: 49, 48, 46, 44, 43, 41, TO EXISTING SANITARY MANHOLE IN MALIN ROAD AT STA. 0+58.

ALL OTHER SANITARY SEWERS SHALL BE OFFERED FOR DEDICATION.

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

InLand Design
Civil Engineers, Surveyors & Land Development Consultants
16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHARLES A. DOBSON NO.PE-048187-E

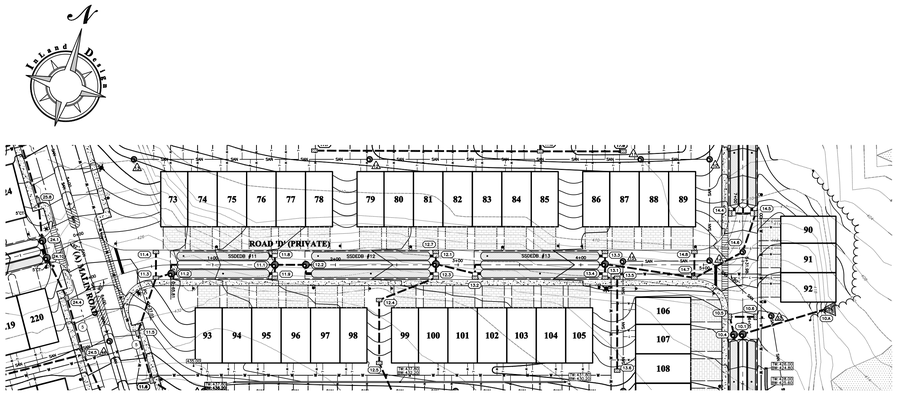
No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

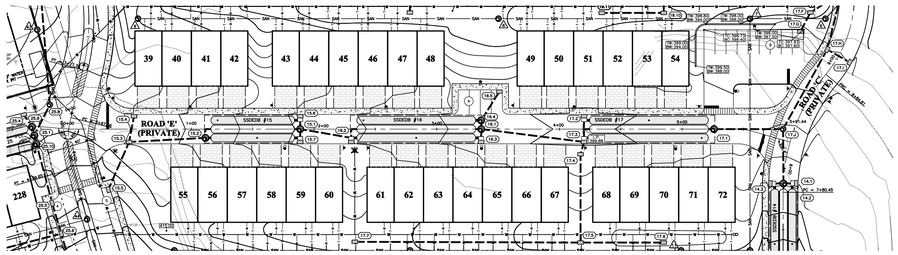
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50'

Date:	1/30/2015
Scale:	AS NOTED
Drawn by:	TAH
Checked by:	CAD
Project No.	10383

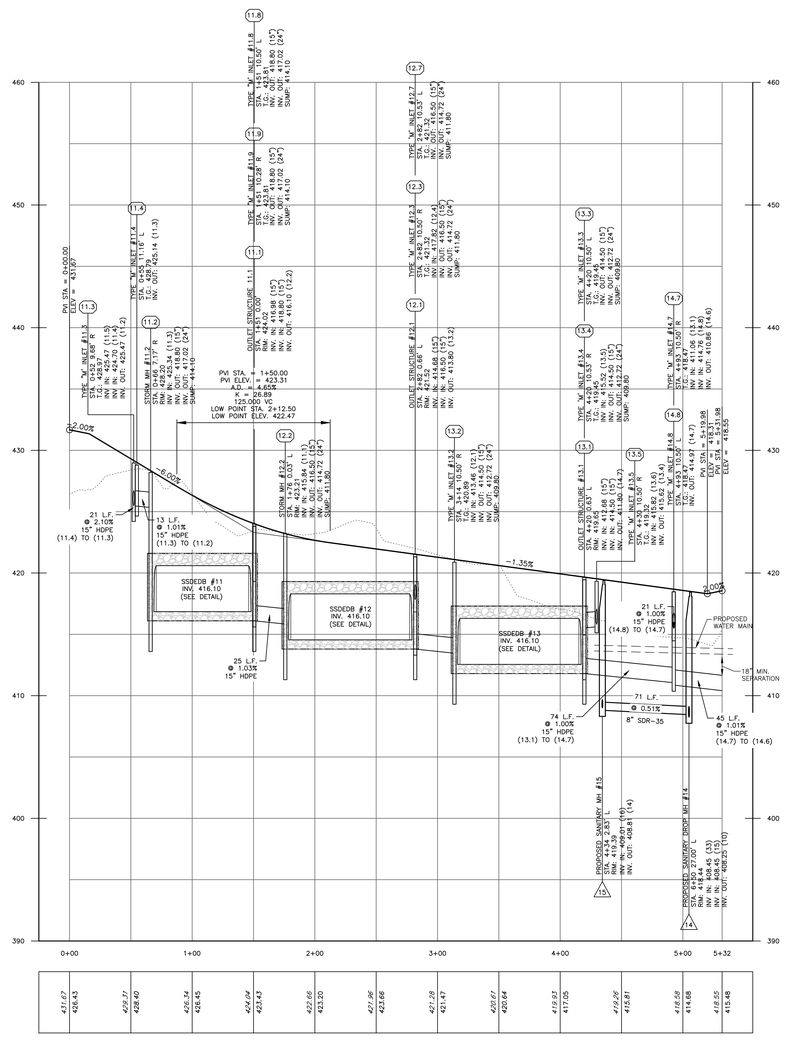
ROAD 'C' PROFILE & EMERGENCY ACCESS PROFILE
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA



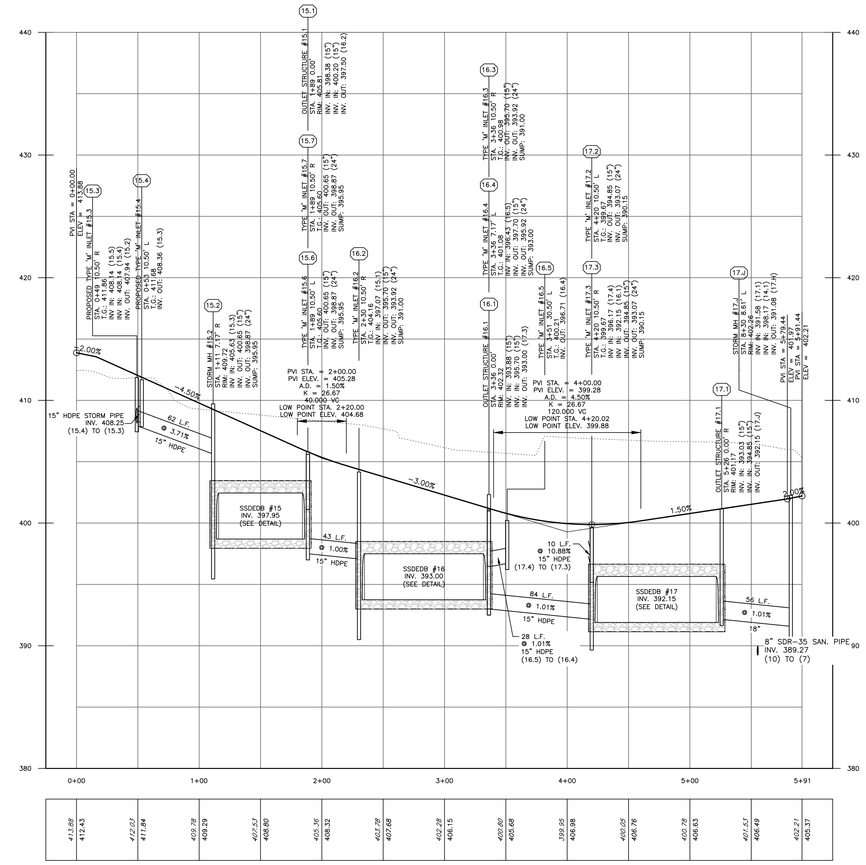
ROAD 'D'
PLAN VIEW
1" = 50'



ROAD 'E'
PLAN VIEW
1" = 50'



PROFILE VIEW OF ROAD-D
SCALE: (H) 1"=50' (V) 1"=5'



PROFILE VIEW OF ROAD-E
SCALE: (H) 1"=50' (V) 1"=5'

NOTE:
THE FOLLOWING SANITARY SEWER RUNS SHALL BE DEDICATED TO THE EAST WHITELAND TOWNSHIP SEWER AUTHORITY.

1. MANHOLES: 40, 39, 38, 37, 36, 35, 34, 33, 14, 10, 7, 6, 3, 2, 1

2. MANHOLES: 49, 48, 46, 44, 43, 41, TO EXISTING SANITARY MANHOLE IN MALIN ROAD AT STA. 0+58.

ALL OTHER SANITARY SEWERS SHALL BE OFFERED FOR DEDICATION.

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM, INC. CALL BEFORE YOU DIG!

Pennsylvania One Call System
P.A. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

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

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL CHARLES A. DOBSON ENGINEER I WE-PE-040818-P PENNSYLVANIA

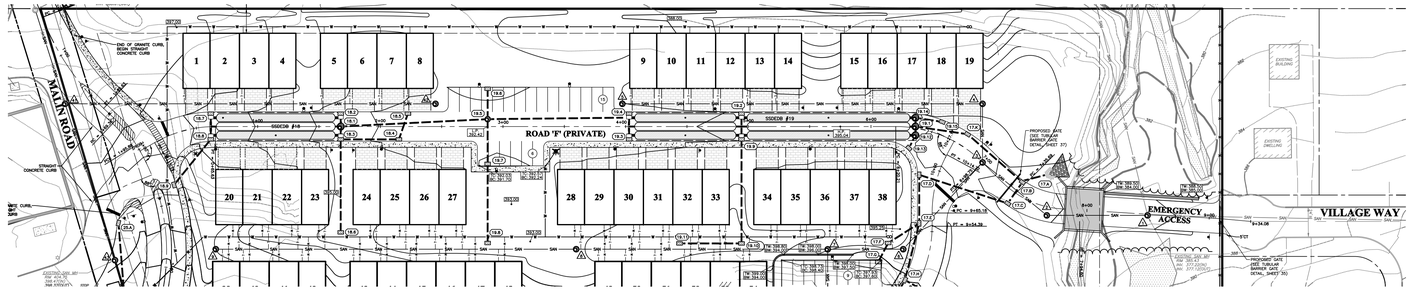
No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 Inch = 50'

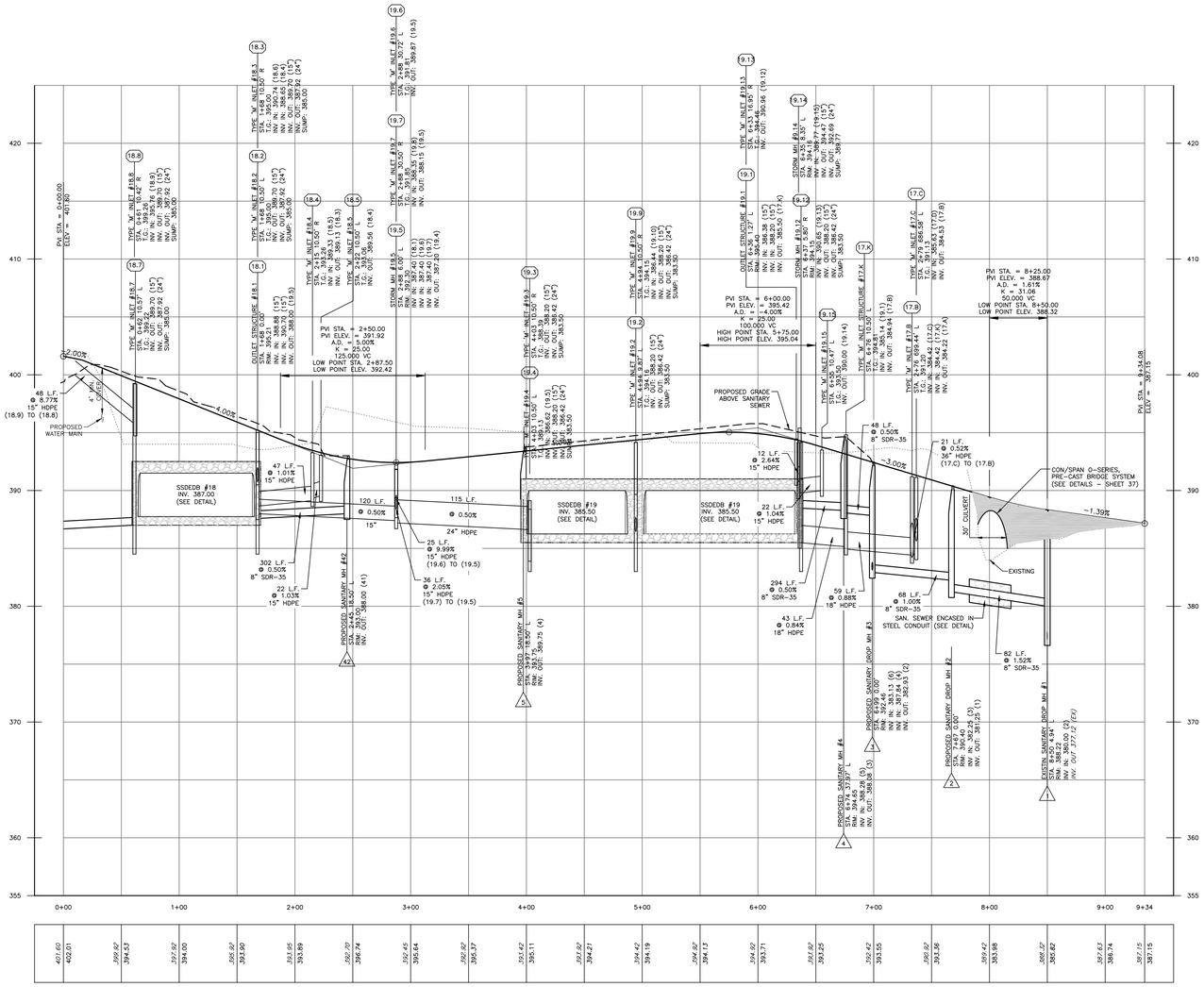
Date:	1/30/2015
Scale:	AS NOTED
Drawn by:	TAH
Checked by:	CAD
Project No.	10383

ROAD 'D' & 'E' PROFILE
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA



ROAD 'F' PLAN VIEW

1" = 50'



PROFILE VIEW OF ROAD-F

SCALE: (H) 1"=50' (V) 1"=5'

NOTE:
THE FOLLOWING SANITARY SEWER RUNS SHALL BE DEDICATED TO THE EAST WHITELAND TOWNSHIP SEWER AUTHORITY.

1. MANHOLES: 40, 39, 38, 37, 36, 35, 34, 33, 14, 10, 7, 6, 3, 2, 1

2. MANHOLES: 49, 48, 46, 44, 43, 41, TO EXISTING SANITARY MANHOLE IN MALIN ROAD AT STA. 0+58.

ALL OTHER SANITARY SEWERS SHALL BE OFFERED FOR DEDICATION.

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

Pennsylvania One Call System
P.A. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141442689

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. **Phone: (484) 947-2928**
West Chester, PA 19382 **Fax: (484) 947-2946**
www.InLandDesign.net **Info@InLandDesign.net**

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHARLES A. DOBSON
ENGINEER
VOLUME 044874
PENNSYLVANIA

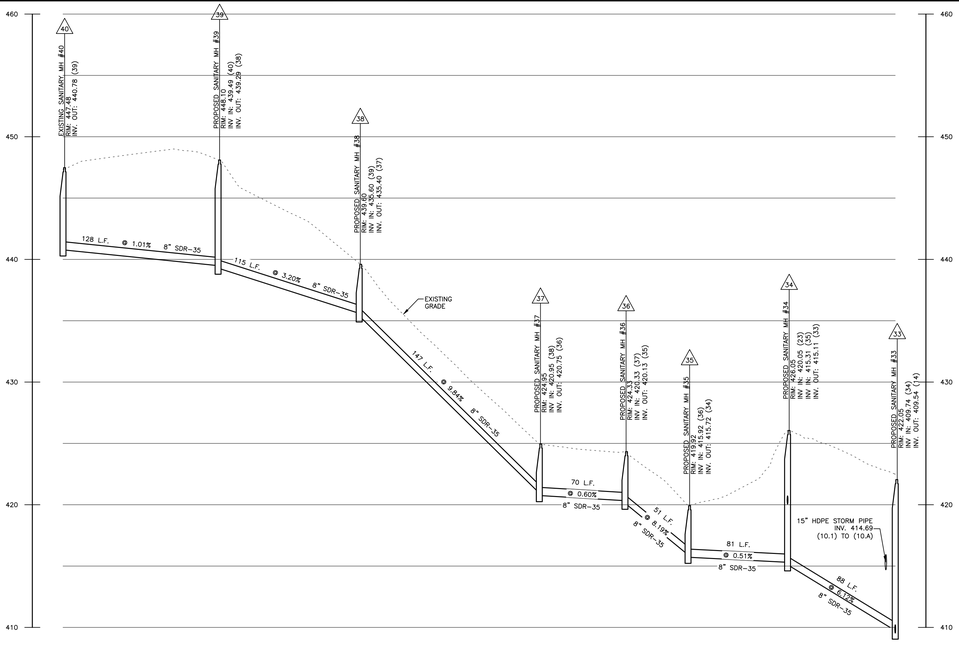
No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

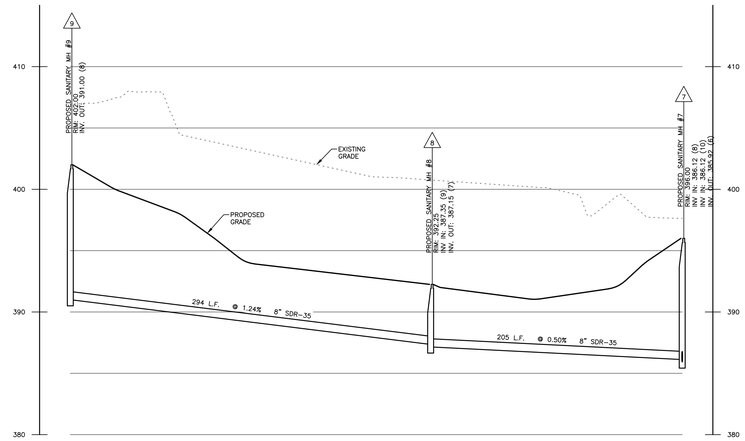
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50'

Date:	1/30/2015
Scale:	AS NOTED
Drawn by:	TAH
Checked by:	CAD
Project No.	10383

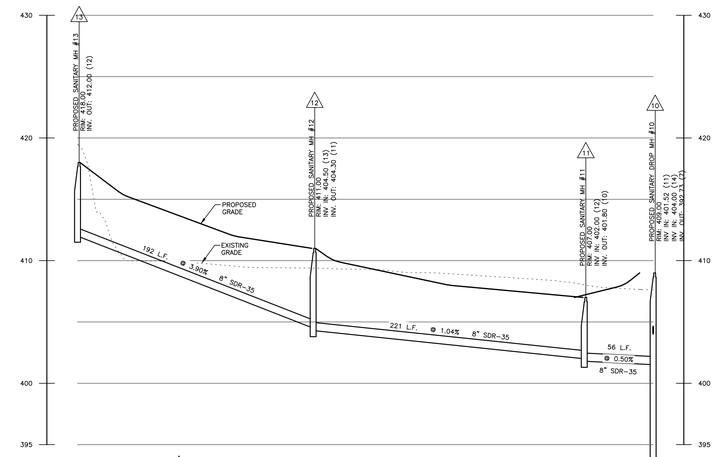
ROAD 'F' PROFILE
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA



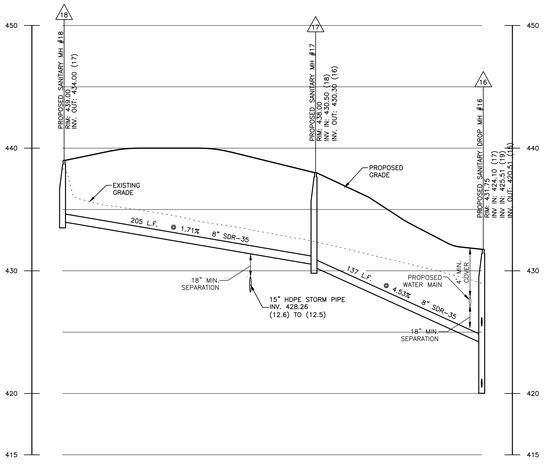
SANITARY MH #40 TO MH #33
SCALE: (H) 1"=50' (V) 1"=5'
(ENTIRE RUN TO BE DEDICATED)



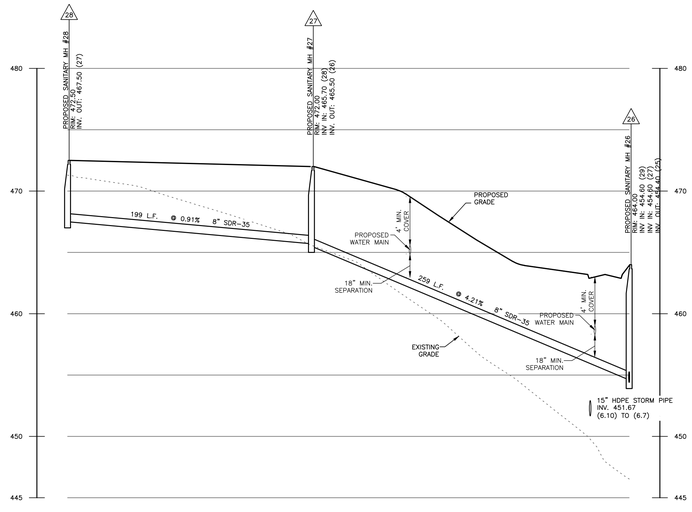
SANITARY MH #9 TO MH #7
SCALE: (H) 1"=50' (V) 1"=5'



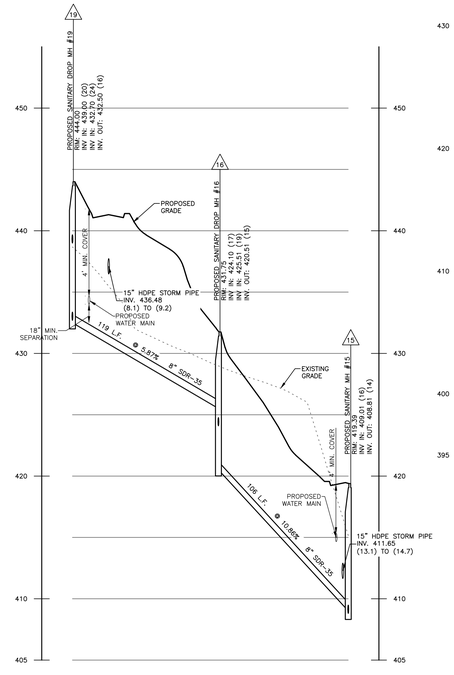
SANITARY MH #13 TO MH #10
SCALE: (H) 1"=50' (V) 1"=5'



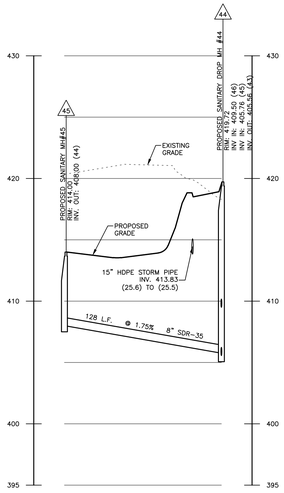
SANITARY MH #18 TO MH #16
SCALE: (H) 1"=50' (V) 1"=5'



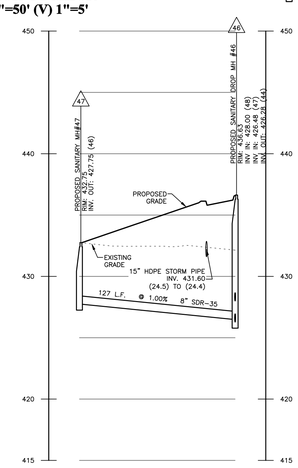
SANITARY MH #28 TO MH #26
SCALE: (H) 1"=50' (V) 1"=5'



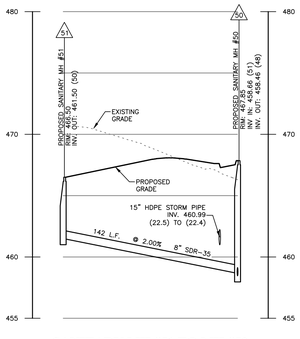
SANITARY MH #19 TO MH #15
SCALE: (H) 1"=50' (V) 1"=5'



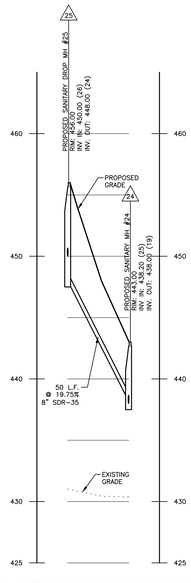
SANITARY MH #45 TO MH #44
SCALE: (H) 1"=50' (V) 1"=5'



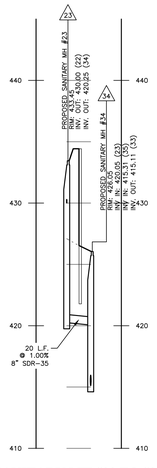
SANITARY MH #47 TO MH #46
SCALE: (H) 1"=50' (V) 1"=5'



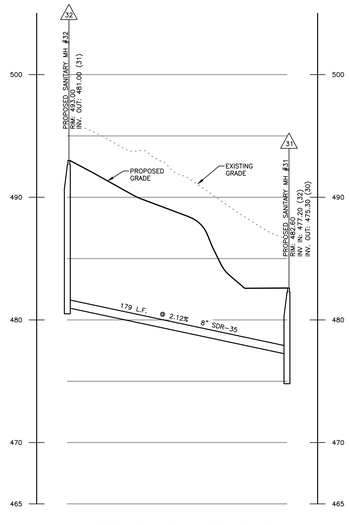
SANITARY MH #51 TO MH #50
SCALE: (H) 1"=50' (V) 1"=5'



SANITARY MH #25 TO MH #24
SCALE: (H) 1"=50' (V) 1"=5'



SANITARY MH #23 TO #34
SCALE: (H) 1"=50' (V) 1"=5'



SANITARY MH #32 TO MH #31
SCALE: (H) 1"=50' (V) 1"=5'

NOTE:
THE FOLLOWING SANITARY SEWER RUNS SHALL BE DEDICATED TO THE EAST WHITELAND TOWNSHIP SEWER AUTHORITY.

1. MANHOLES: 40, 39, 38, 37, 36, 35, 34, 33, 14, 10, 7, 6, 3, 2, 1

2. MANHOLES: 49, 48, 46, 44, 43, 41, TO EXISTING SANITARY MANHOLE IN MALIN ROAD AT STA. 0+58.

ALL OTHER SANITARY SEWERS SHALL BE OFFERED FOR DEDICATION.

SANITARY SEWER SPECIFICATIONS AND NOTES

1. ALL PVC SDR 35 AND SDR 26 GRAVITY SEWER PIPE SHALL BE MANUFACTURED FROM PVC COMPOUND WITH A CELL CLASS OF 12364 AND/OR 12454 AS PER ASTM D 1784. PIPE SHALL BE MANUFACTURED IN STRICT COMPLIANCE TO ASTM D2241 WITH REGARD TO PRESSURE RATING, MATERIAL WORKMANSHIP, BURST PRESSURE, FLATTENING, IMPACT RESISTANCE AND EXTRUSION QUALITY. PVC SDR 35 AND SDR 26 PIPE SHALL CONFORM TO ASTM D 3034 FOR GASKET OR SOLVENT WELD PIPE WITH A MINIMUM PIPE STIFFNESS OF 46. PIPE SHALL BE PLASTIC SEWER MAIN OUTSIDE DIAMETER WITH A STANDARD DIMENSION RATIO (SDR) OF 35 OR 26 AS APPLICABLE. GASKETS SHALL CONFORM TO ASTM F 477. ALL PIPE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND LOCAL CODE REQUIREMENTS. BURIED PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D 2321 AND ASTM F 1668. SOLVENT CEMENTS SHALL CONFORM TO ASTM D 2564, PRIMER SHALL CONFORM TO ASTM F 656.
2. SEWER PIPE INSTALLATION AT DEPTHS UP TO 12 FEET SHALL BE SDR 35. SEWER PIPE INSTALLATION AT DEPTHS BETWEEN 12 FEET AND 20 FEET SHALL BE SDR 26. ALL SEWER INSTALLATION DEEPER THAN 20 FEET SHALL BE CLASS 52 DUCTILE IRON PIPE.
3. ALL EXISTING AND PROPOSED SEWERS WITHIN THE PROJECT ARE 8 INCHES IN DIAMETER.
4. ALL EXISTING SANITARY MANHOLES TO REMAIN SHALL BE FIELD INVESTIGATED TO DETERMINE IF THEY NEED TO BE REPLACED TO SUPPORT THE PROPOSED CHANGES.
5. ALL SANITARY SEWER SHALL HAVE A MINIMUM 4' OF COVER.
6. ALL SANITARY SEWER DESIGN AND CONSTRUCTION SHALL CONFORM TO THE EAST WHITELAND TOWNSHIP STANDARD SPECIFICATIONS FOR CONSTRUCTION OF SANITARY SEWERS AND APPURTENANCES DATED MAY 9, 2013.
7. SHOP DRAWING SUBMITTALS FOR ALL PROPOSED SANITARY SEWER IMPROVEMENTS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE EAST WHITELAND TOWNSHIP ENGINEER.

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any reuse without written permission, verification, or adaptation by InLand Design, LLC for any other project or specific purpose intended will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC (the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

PENNSYLVANIA ONE CALL SYSTEM
1-800-242-1776
CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689
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. **Phone: (484) 947-2928**
West Chester, PA 19382 **Fax: (484) 947-2946**
www.InLandDesign.net **Info@InLandDesign.net**

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
CHARLES A. DOBSON
NO.PE-049187-E

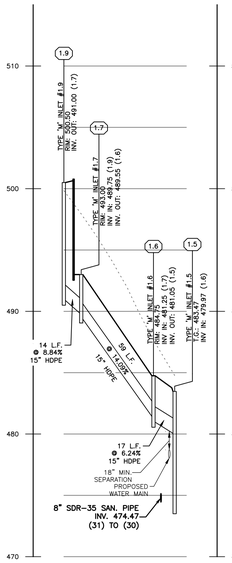
No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

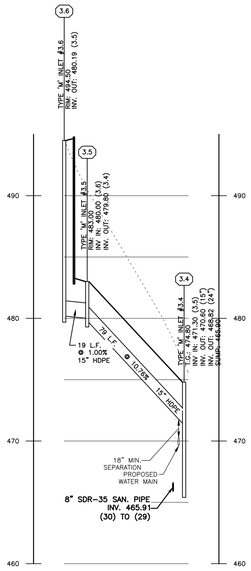
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 Inch = 50'

Date: **1/30/2015**
Scale: **AS NOTED**
Drawn by: **TAH**
Checked by: **CAD**
Project No. **10383**

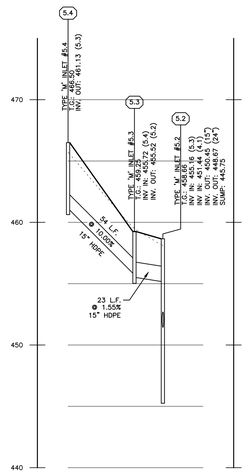
SEWER PROFILES
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA



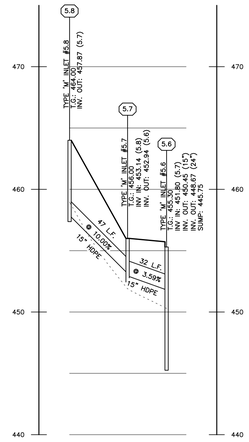
STORM INLET #1.9 TO MH #1.5
SCALE: (H) 1"=50' (V) 1"=5'



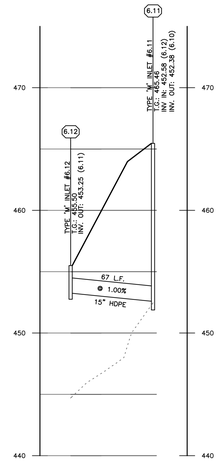
STORM INLET #3.6 TO #3.4
SCALE: (H) 1"=50' (V) 1"=5'



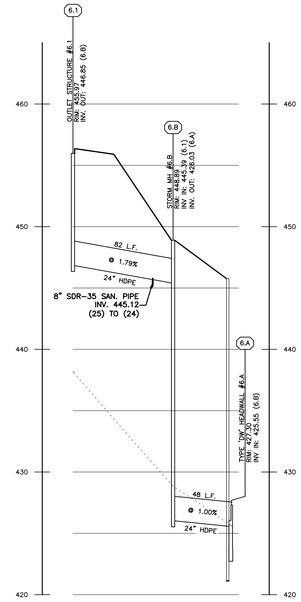
STORM INLET #5.4 TO #5.2
SCALE: (H) 1"=50' (V) 1"=5'



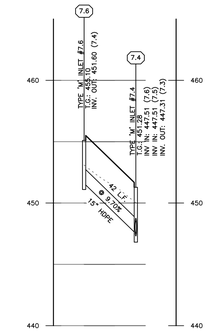
STORM INLET #5.8 TO #5.6
SCALE: (H) 1"=50' (V) 1"=5'



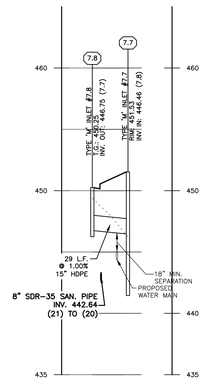
STORM INLET #6.12 TO #6.11
SCALE: (H) 1"=50' (V) 1"=5'



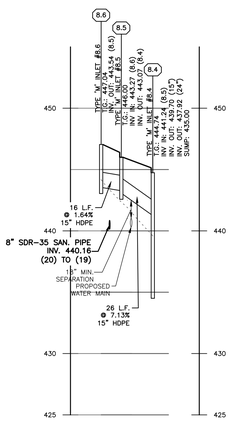
OUTLET STRUCTURE #6.1 TO ENDWALL #6.A
SCALE: (H) 1"=50' (V) 1"=5'



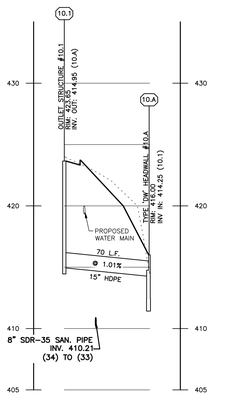
STORM INLET #7.6 TO 7.4
SCALE: (H) 1"=50' (V) 1"=5'



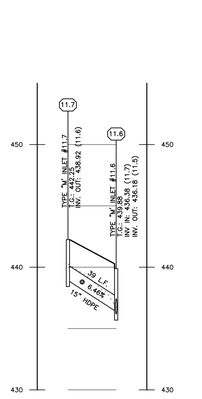
STORM INLET #7.8 TO #7.7
SCALE: (H) 1"=50' (V) 1"=5'



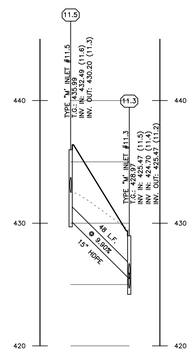
STORM INLET #8.6 TO #8.4
SCALE: (H) 1"=50' (V) 1"=5'



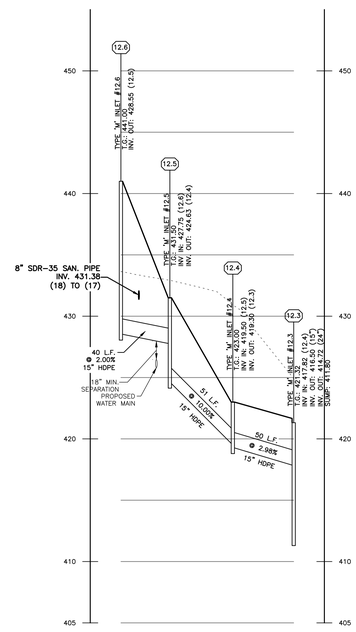
OUTLET STRUCTURE #10.1 TO ENDWALL #10.A
SCALE: (H) 1"=50' (V) 1"=5'



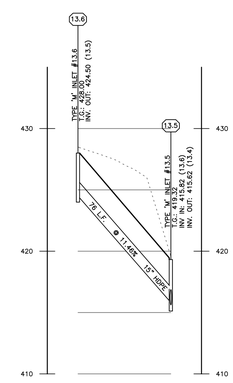
STORM INLET #11.7 TO #11.6
SCALE: (H) 1"=50' (V) 1"=5'



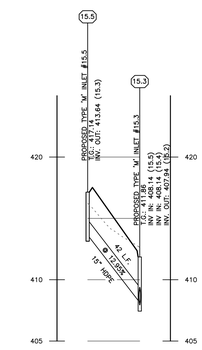
STORM INLET #11.5 TO #11.3
SCALE: (H) 1"=50' (V) 1"=5'



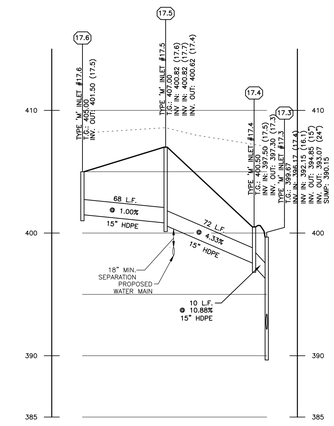
STORM INLET #12.6 TO #12.3
SCALE: (H) 1"=50' (V) 1"=5'



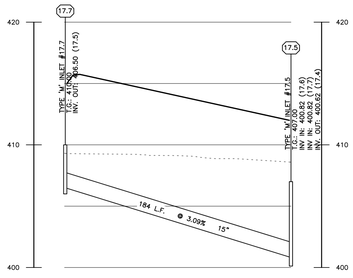
STORM INLET #13.6 TO #13.5
SCALE: (H) 1"=50' (V) 1"=5'



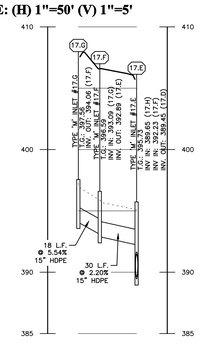
STORM iNLET #15.5 TO #15.3
SCALE: (H) 1"=50' (V) 1"=5'



STORM INLET #17.6 TO #17.3
SCALE: (H) 1"=50' (V) 1"=5'



STORM INLET #17.7 TO #17.6
SCALE: (H) 1"=50' (V) 1"=5'



STORM INLET #17.G TO #17.E
SCALE: (H) 1"=50' (V) 1"=5'

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

PENNSYLVANIA ONE CALL SYSTEM
CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
CHARLES A. DOBSON
NO.PE-048187-E

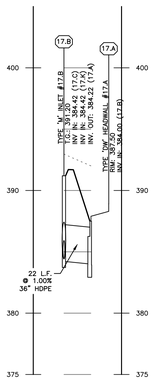
No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

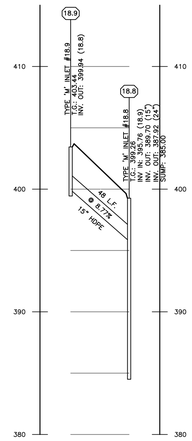
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 Inch = 50'

Date: 1/30/2015
Scale: AS NOTED
Drawn by: TAH
Checked by: CAD
Project No. 10383

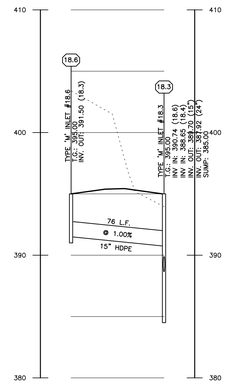
SEWER PROFILES
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA



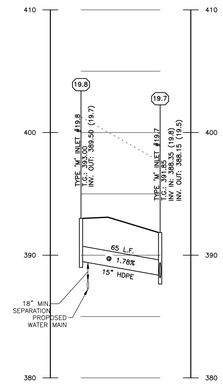
STORM INLET #17.B TO ENDWALL #17.A
SCALE: (H) 1"=50' (V) 1"=5'



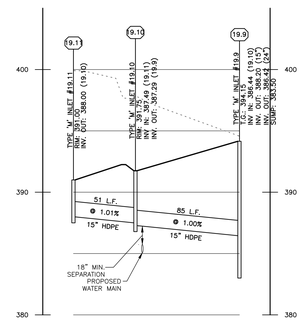
STORM INLET #18.9 TO #18.8
SCALE: (H) 1"=50' (V) 1"=5'



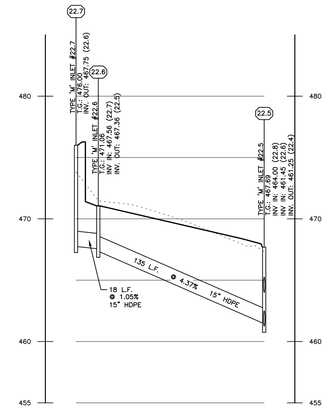
STORM INLET #18.6 TO #18.3
SCALE: (H) 1"=50' (V) 1"=5'



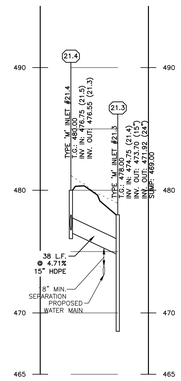
STORM INLET #19.8 TO #19.6
SCALE: (H) 1"=50' (V) 1"=5'



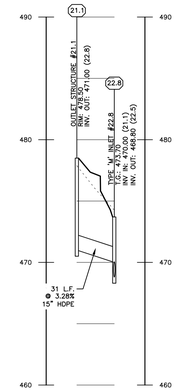
STORM INLET #19.11 TO #19.9
SCALE: (H) 1"=50' (V) 1"=5'



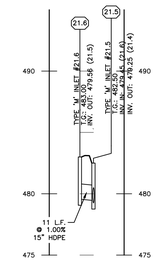
STORM INLET #22.7 TO #22.5
SCALE: (H) 1"=50' (V) 1"=5'



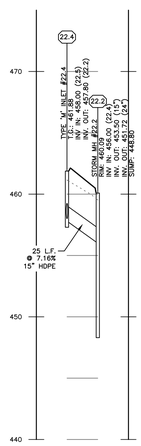
STORM INLET #21.4 TO #21.3
SCALE: (H) 1"=50' (V) 1"=5'



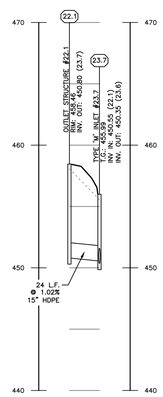
OUTLET STRUCTURE #21.1 TO INLET #22.8
SCALE: (H) 1"=50' (V) 1"=5'



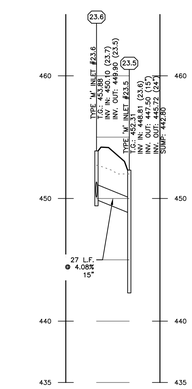
STORM 21.6-21.5
SCALE: (H) 1"=50' (V) 1"=5'



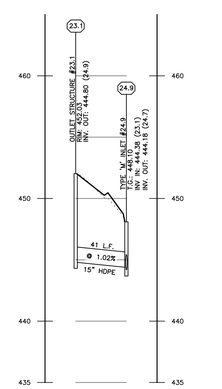
STORM INLET #22.4 TO MH #22.2
SCALE: (H) 1"=50' (V) 1"=5'



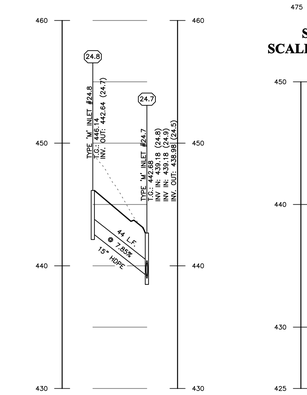
OUTLET STRUCTURE #22.1 TO INLET #23.7
SCALE: (H) 1"=50' (V) 1"=5'



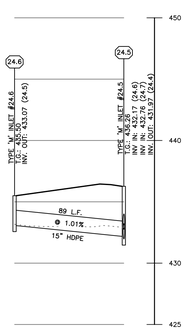
STORM INLET #23.6 TO INLET #23.5
SCALE: (H) 1"=50' (V) 1"=5'



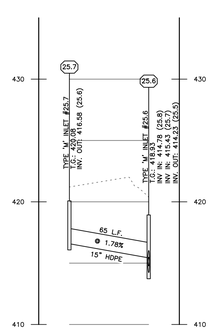
OUTLET STRUCTURE #23.1 TO INLET #24.9
SCALE: (H) 1"=50' (V) 1"=5'



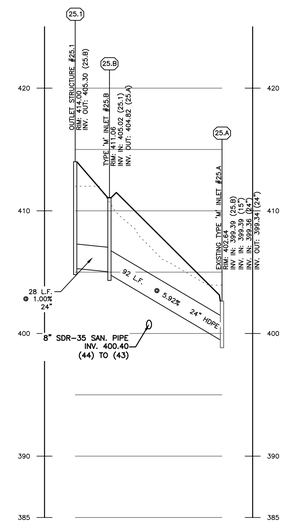
STORM INLET #24.8 TO #24.7
SCALE: (H) 1"=50' (V) 1"=5'



STORM INLET #24.6 TO #24.5
SCALE: (H) 1"=50' (V) 1"=5'



STORM INLET #25.7 TO #25.6
SCALE: (H) 1"=50' (V) 1"=5'



OUTLET STRUCTURE #25.1 TO INLET 25.A
SCALE: (H) 1"=50' (V) 1"=5'

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. In the event of unauthorized reuse by third parties, or unauthorized alterations by InLand Design, LLC for the specific project intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE-CALL SYSTEM, INC. 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
P.A. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

InLand Design
Civil Engineers, Surveyors & Land Development Consultants
16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL CHARLES A. DOBSON ENGINEER NO.PE-044018-E PENNSYLVANIA

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

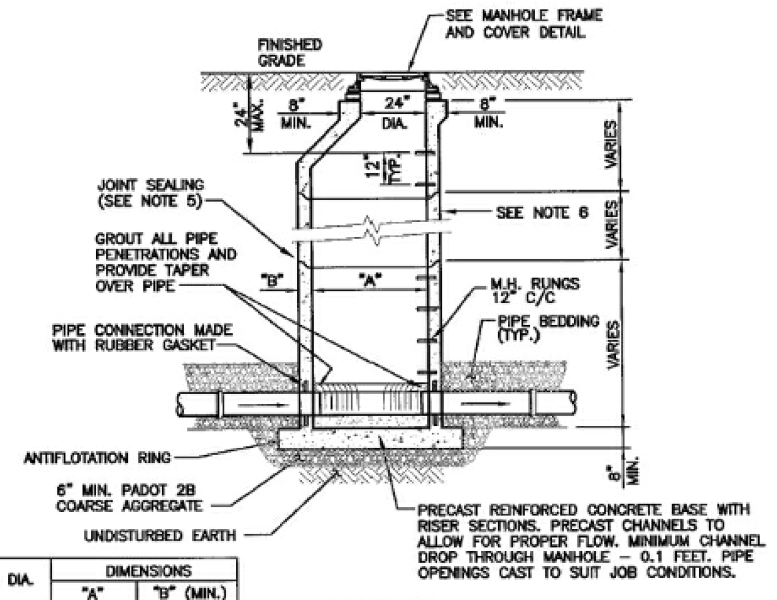
PRELIMINARY
LAND DEVELOPMENT PLAN

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 Inch = 50'

Date: 1/30/2015
Scale: AS NOTED
Drawn by: TAH
Checked by: CAD
Project No. 10383

SEWER PROFILES
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

NOTES:
1. ADJUST TO GRADE WITH CONCRETE GRADE RINGS (MAXIMUM VERTICAL ADJUSTMENT 6"). SEE FRAME & COVER DETAILS.
2. MECHANICALLY VIBRATED PRECAST CONCRETE SHALL CONFORM TO A.S.T.M. SPEC. C-478.
3. FOR MANHOLES WHERE TOP OF RIM TO INVERT DISTANCE IS LESS THAN 5'-0", USE FLAT TOP MANHOLE IN LIEU OF CONE TOP.
4. FILL ALL LIFTING HOLES WITH NON-SHRINK GROUT.
5. PROVIDE 2 RINGS OF PREFORMED BUTYL RUBBER SEALING COMPOUND (INSIDE & OUTSIDE) AT ALL MANHOLE JOINTS.
6. COAT INTERIOR WITH NSF APPROVED EPOXY, 20-MIL DFT & EXTERIOR WITH BITUMASTIC, 20-MIL DFT. INTERIOR COLOR: WHITE EXTERIOR COLOR: BLACK

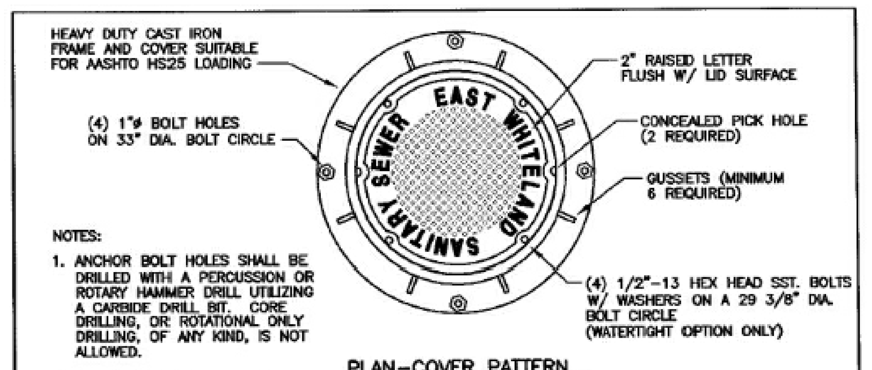


PIPE DIA.	DIMENSIONS	
	"A"	"B" (MIN.)
8"-15"	4'-0"	5"
18"-21"	5'-0"	6"
24"-36"	6'-0"	7"

SECTION

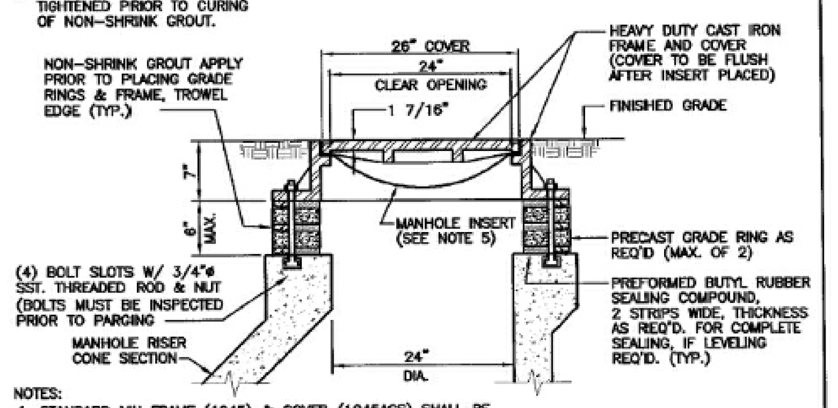
REVISION	DATE

EAST WHITELAND TOWNSHIP
STANDARD DETAIL - SEWER SYSTEM
PRECAST MANHOLE
ARRO
Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
DATE: 5/9/13
DETAIL: 1
DWG. NAME 1031000sd01



PLAN-COVER PATTERN

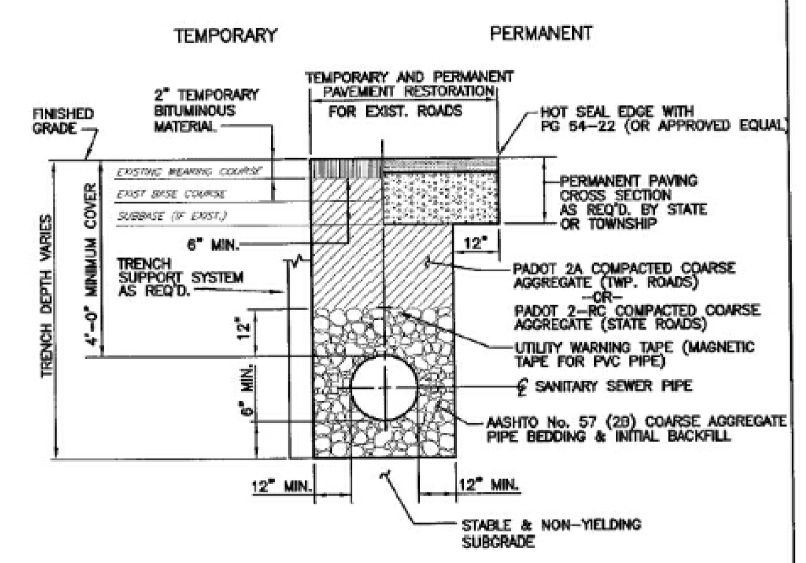
NOTES:
1. ANCHOR BOLT HOLES SHALL BE DRILLED WITH A PERCUSSION OR ROTARY HAMMER DRILL UTILIZING A CARBIDE DRILL BIT. CORE DRILLING, OR ROTATIONAL ONLY DRILLING, OF ANY KIND, IS NOT ALLOWED.
2. FRAME ANCHORS SHALL BE TIGHTENED PRIOR TO CURING OF NON-SHRINK GROUT.



NOTES:
1. STANDARD MH FRAME (1045) & COVER (1045AGS) SHALL BE AS MANUFACTURED BY EAST JORDAN IRON WORKS, INC.
2. WATERTIGHT FRAME (1045ZPT) & COVER (1040APT) SHALL BE AS MANUFACTURED BY EAST JORDAN IRON WORKS, INC.
3. MANHOLE INSERT NOT REQUIRED FOR WATERTIGHT MH. FRAME & COVER.
4. FRAME & COVER SHALL BE DESIGNED FOR AASHTO HS-25 LOADING.
5. MANHOLE INSERTS REQ'D. FOR ALL STANDARD FRAMES & COVERS. FRAME SHALL BE SPECIALLY MACHINED TO ACCOMODATE INSERT SO THAT TOP OF COVER IS EVEN WITH TOP OF FRAME WHEN INSERT IS INSTALLED.

REVISION	DATE

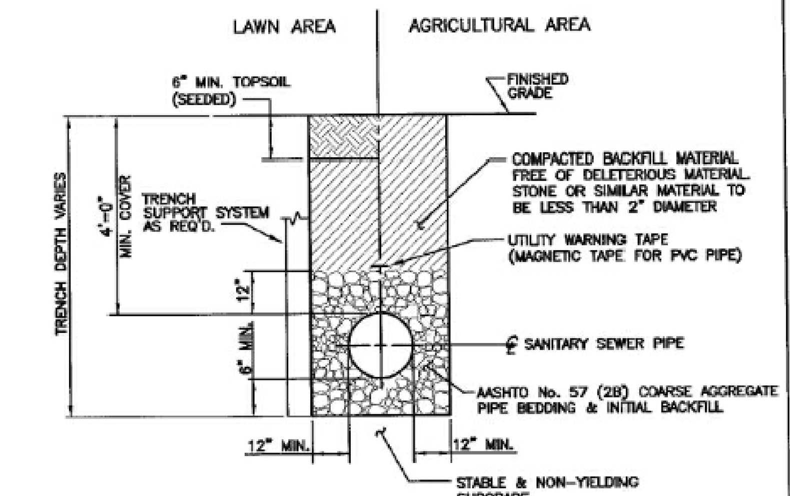
EAST WHITELAND TOWNSHIP
STANDARD DETAIL - SEWER SYSTEM
STANDARD MANHOLE FRAME & COVER
ARRO
Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
DATE: 5/9/13
DETAIL: 2
DW. NAME 1031000sd02



NOTES:
1. PROVIDE TRENCH SUPPORT SYSTEM AS REQ'D. FOR EXCAVATION PROTECTION & TO ALLOW FOR REQ'D. COMPACTION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING TRENCHES, IF REQ'D., BEFORE PLACEMENT OF BEDDING MATERIAL.
3. FOR STATE ROADS, ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE. DESIGN & CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HIGHWAY OCCUPANCY PERMIT ISSUED BY PADOT FOR THE SPECIFIC PROJECT.
4. A MINIMUM HALF CARTWAY-WIDTH MILL & OVERLAY IS REQUIRED. FOR FACILITIES LOCATED IN THE ROAD CENTERLINE, A FULL CARTWAY-WIDTH MILL & OVERLAY SHALL BE REQUIRED.

REVISION	DATE

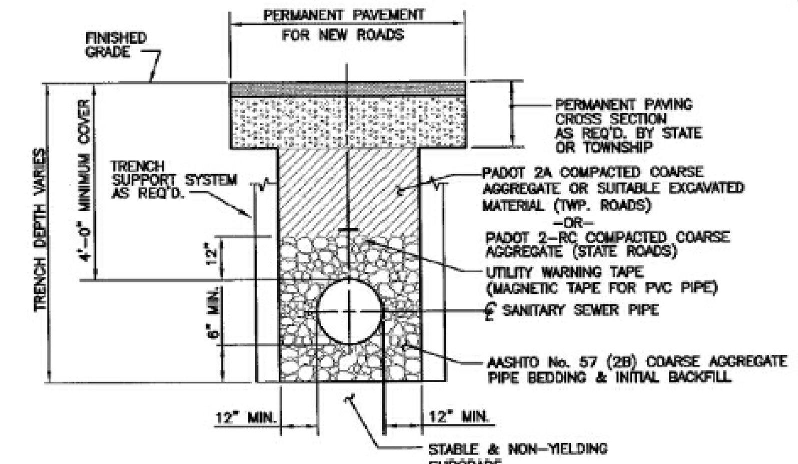
EAST WHITELAND TOWNSHIP
STANDARD DETAIL - SEWER SYSTEM
TRENCH RESTORATION - EXISTING ROADS
ARRO
Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
DATE: 5/9/13
DETAIL: 6A
DWG. NAME 1031000sd06A



NOTES:
1. PROVIDE TRENCH SUPPORT SYSTEM AS REQ'D. FOR EXCAVATION PROTECTION & TO ALLOW FOR REQ'D. COMPACTION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING TRENCHES, IF REQ'D., BEFORE PLACEMENT OF BEDDING MATERIAL.
3. IF EDGE OF TRENCH IS 3' OR LESS FROM EDGE OF PAVING OF A STATE ROAD, RESTORATION ABOVE TOP OF INITIAL BACKFILL SHALL BE IN ACCORDANCE WITH THE HIGHWAY OCCUPANCY PERMIT ISSUED BY PADOT FOR THE SPECIFIC PROJECT.

REVISION	DATE

EAST WHITELAND TOWNSHIP
STANDARD DETAIL - SEWER SYSTEM
TRENCH RESTORATION - LAWN/AGRICULTURAL AREAS
ARRO
Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
DATE: 5/9/13
DETAIL: 6C
DWG. NAME 1031000sd06C



NOTES:
1. PROVIDE TRENCH SUPPORT SYSTEM AS REQ'D. FOR EXCAVATION PROTECTION & TO ALLOW FOR REQ'D. COMPACTION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING TRENCHES, IF REQ'D., BEFORE PLACEMENT OF BEDDING MATERIAL.
3. FOR STATE ROADS, ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE. DESIGN & CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HIGHWAY OCCUPANCY PERMIT ISSUED BY PADOT FOR THE SPECIFIC PROJECT.

REVISION	DATE

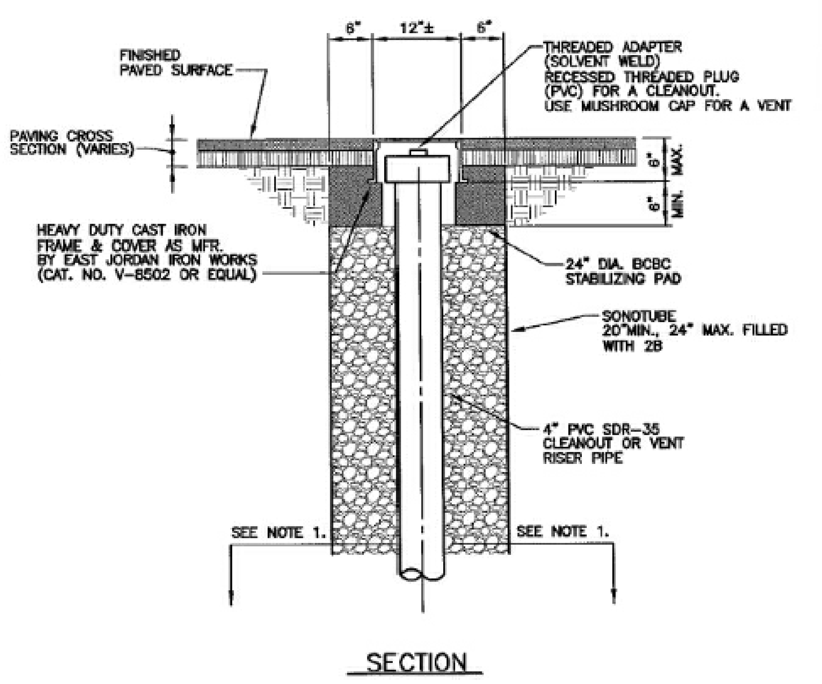
EAST WHITELAND TOWNSHIP
STANDARD DETAIL - SEWER SYSTEM
TRENCH RESTORATION - NEW ROADS
ARRO
Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
DATE: 5/9/13
DETAIL: 6B
DWG. NAME 1031000sd6B

NOTES:
1. BUILDING SEWER SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL PLUMBING CODE.
2. BUILDING SEWER (4") IS MINIMUM. LARGER PIPE MAY BE USED IF REQUIRED & CONSISTENT WITH LOCAL PLUMBING CODE.
3. ALL LATERALS SHALL BE PLUGGED AS INDICATED WHEN INSTALLED PRIOR TO BUILDING SEWER.
4. ACCORDING TO FIELD CONDITIONS, VERTICAL RISER (SEE STANDARD DETAIL) MAY BE UTILIZED WHEN AUTHORIZED BY THE TOWNSHIP ENGINEER.
5. TO CONDUCT TESTING OF BUILDING SEWER, INSTALL EXPANDABLE TEST PLUGS AT LOCATIONS SHOWN. AT COMPLETION OF SUCCESSFUL TESTING, REMOVE PLUGS.
6. NO BUILDING SEWER VENT CAPS SHALL BE INSTALLED WITHIN A 100-YR FLOOD PLAIN OR WITHIN FLOOD PRONE AREAS.
7. NO VENT CAPS OR CLEANOUTS SHALL BE INSTALLED IN DRIVEWAYS OR OTHER PAVED AREAS, UNLESS SPECIFICALLY APPROVED BY THE TOWNSHIP.
8. WHEN INSTALLED PRIOR TO BUILDING SEWER THE LATERAL SHALL BE INSTALLED TO THE EDGE OF THE SEWER EASEMENT FOR SEWERS LOCATED IN AN EASEMENT OR TO THE STREET RIGHT-OF-WAY AS A MIN., OR TO SUCH POINT, AS REQUIRED, TO CLEAR STREET SIDEWALKS & UNDERGROUND UTILITIES.
9. FOR NEW SEWER MAINS AND LATERALS INSTALLED PRIOR TO BUILDING SEWER, INSTALL & TEST LATERAL CONCURRENTLY WITH MAIN.
10. FOR CONNECTION TO EXISTING SEWER MAINS, CONCURRENTLY TEST BUILDING SEWER & LATERAL UP TO TEST TEE.
11. REFER TO SECTION 6 OF TECHNICAL SPECIFICATIONS FOR COMPLETE MATERIAL, INSTALLATION & TESTING REQUIREMENTS.
12. TEST PRESSURE: MINIMUM RESIDUAL PRESSURE OF 5.0 PSI MUST BE MAINTAINED FOR 15 MINUTES WITHOUT INTRODUCTION OF ADDITIONAL AIR.
13. *(Left Blank Intentionally)*
14. CLEANOUTS SHALL BE INSTALLED AT MAXIMUM SEVENTY FIVE (75) FOOT INTERVALS, UNLESS 6" DIAMETER BUILDING SEWER PIPE IS UTILIZED, IN WHICH CASE THE CLEANOUTS SHALL BE INSTALLED AT MAXIMUM ONE HUNDRED (100) FOOT INTERVALS. A CLEANOUT SHALL BE INSTALLED AT EACH CHANGE IN HORIZONTAL DIRECTION.
15. THE TOWNSHIP ENGINEER MAY APPROVE MINOR DEVIATION(S) FROM THE REQUIREMENT(S) OF THE 17-SERIES DETAILS ON A CASE-BY-CASE BASIS (E.G. DEPTH OF COVER OVER BUILDING SEWER, TRAP LOCATION, ETC.) UPON BEING FURNISHED SUFFICIENT JUSTIFICATION THAT SAID REQUIREMENT(S) CANNOT BE MET DUE TO ACTUAL FIELD CONDITIONS.
16. NEW BUILDING SEWERS & LATERALS SHALL BE CONNECTED TO EXISTNG MAINS VIA CUT-IN WYES. THE CUT-IN WYE SHALL BE CONNECTED TO THE EXISTING MAIN ON BOTH SIDES WITH MECHANICAL COUPLINGS, AS APPROVED BY THE TOWNSHIP ENGINEER.
17. ON DETAIL 17B, THE CONNECTION TO THE EXISTING LATERAL MAY ALTERNATIVELY BE MADE WITH A 6"x4" REDUCER (BxS) FOLLOWED BY A 4" TEST TEE (BxBxS) WITH 4" CLEAN OUT RISER. TEST TEE TO BE INSTALLED ONLY IF CLEANOUT DOES NOT EXIST WITHIN 5 FEET OF R/W OR EASEMENT LINE.

NOTE:
USE THE ABOVE NOTES WITH DETAILS 17A, 17B, 17C & 17D

REVISION	DATE

EAST WHITELAND TOWNSHIP
STANDARD DETAIL - SEWER SYSTEM
BUILDING DRAIN, BUILDING SEWER, & LATERAL NOTES
ARRO
Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
DATE: 5/9/13
DETAIL: 17E
DWG. NAME 1031000sd17_ABCDE

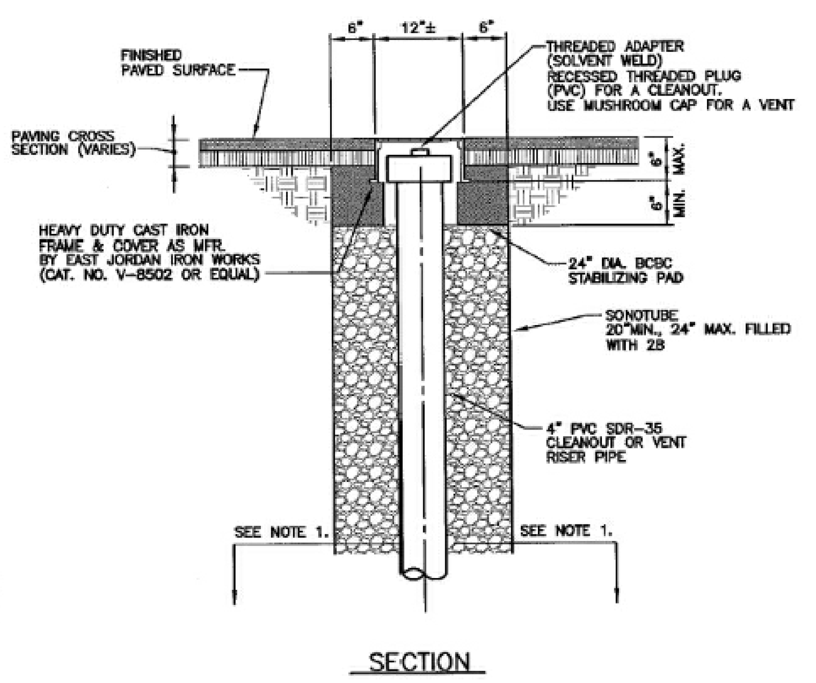


SECTION

NOTE:
1. SEE BUILDING SEWER DETAILS.

REVISION	DATE

EAST WHITELAND TOWNSHIP
STANDARD DETAIL - SEWER SYSTEM
CLEANOUT OR VENT IN PAVED AREA
ARRO
Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
DATE: 5/9/13
DETAIL: 18
DWG. NAME 1031000sd18



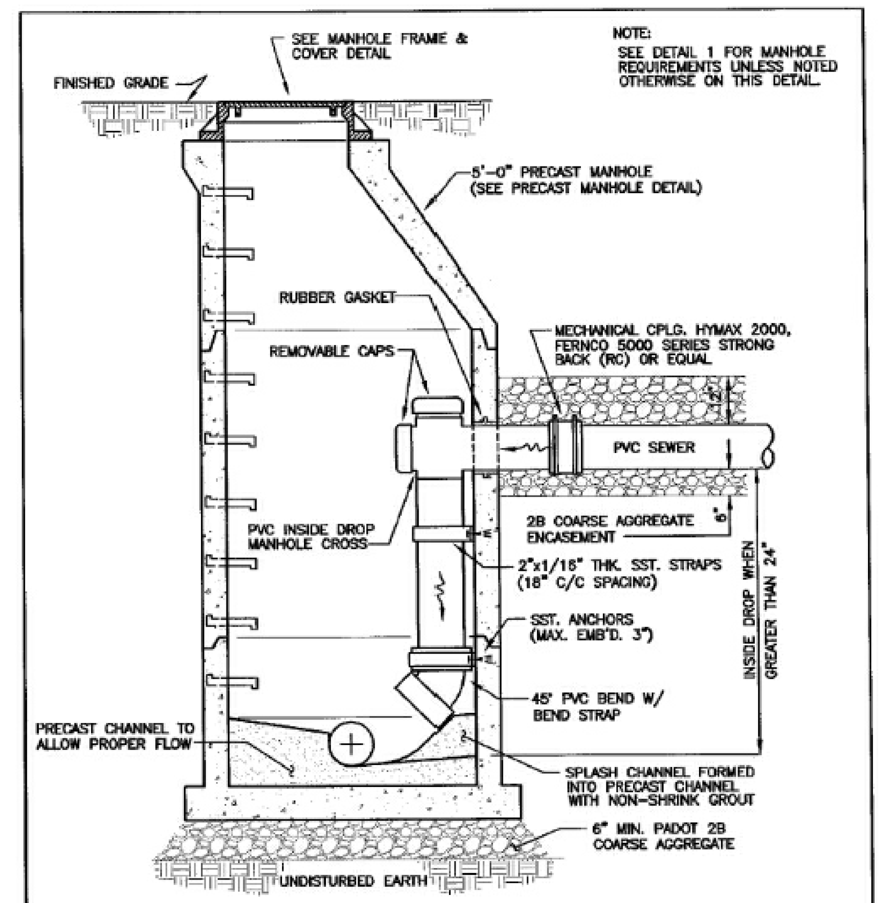
SECTION

NOTE:
1. SEE BUILDING SEWER DETAILS.

REVISION	DATE

EAST WHITELAND TOWNSHIP
STANDARD DETAIL - SEWER SYSTEM
CLEANOUT OR VENT IN PAVED AREA
ARRO
Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
DATE: 5/9/13
DETAIL: 18
DWG. NAME 1031000sd18

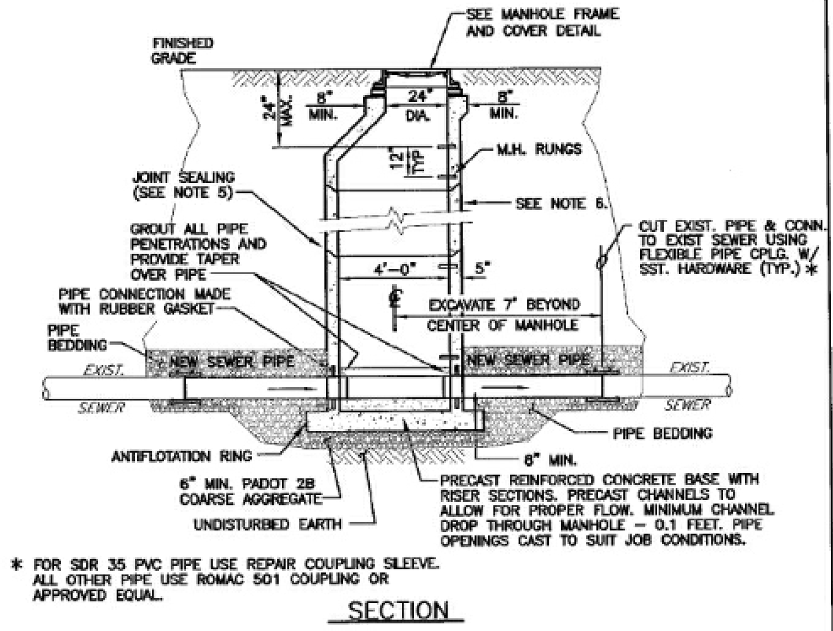
NOTE:
SEE DETAIL 1 FOR MANHOLE REQUIREMENTS UNLESS NOTED OTHERWISE ON THIS DETAIL.



REVISION	DATE

EAST WHITELAND TOWNSHIP
STANDARD DETAIL - SEWER SYSTEM
MANHOLE DROP CONNECTION
ARRO
Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
DATE: 5/9/13
DETAIL: 5
DWG. NAME 1031000sd05

NOTES:
1. ADJUST TO GRADE WITH CONCRETE GRADE RINGS (MAXIMUM VERTICAL ADJUSTMENT 6"). SEE FRAME & COVER DETAILS.
2. MECHANICALLY VIBRATED PRECAST CONCRETE SHALL CONFORM TO A.S.T.M. SPEC. C-478.
3. FOR MANHOLES WHERE TOP OF RIM TO INVERT DISTANCE IS LESS THAN 5'-0", USE FLAT TOP MANHOLE IN LIEU OF CONE TOP.
4. FILL ALL LIFTING HOLES WITH NON-SHRINK GROUT.
5. PROVIDE 2 RINGS OF PREFORMED BUTYL RUBBER SEALING COMPOUND (INSIDE & OUTSIDE) AT ALL MANHOLE JOINTS.
6. COAT INTERIOR WITH NSF APPROVED EPOXY, 20-MIL DFT & EXTERIOR WITH BITUMASTIC, 20-MIL DFT. INTERIOR COLOR: WHITE EXTERIOR COLOR: BLACK
7. CONTRACTOR SHALL VERIFY O.D. OF PIPES SCHEDULED FOR REPLACEMENT PRIOR TO ORDERING OF COUPLINGS.



* FOR SDR 35 PVC PIPE USE REPAIR COUPLING SLEEVE. ALL OTHER PIPE USE ROMAC 501 COUPLING OR APPROVED EQUAL.

SECTION

REVISION	DATE

EAST WHITELAND TOWNSHIP
STANDARD DETAIL - SEWER SYSTEM
PRECAST INSERTION MANHOLE OVER EXISTING SEWER
ARRO
Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303
DATE: 5/9/13
DETAIL: 1A
DWG. NAME 1031000sd01A

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires three working days notice
Serial Numbers:
20141642689

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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHARLES A. DOBSON NO.PE-049197-E

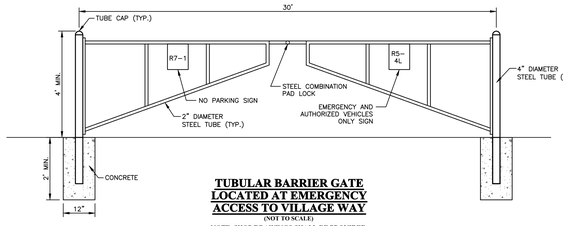
No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 Inch = 50'

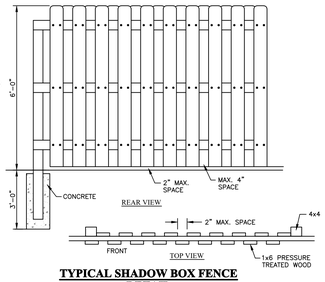
Date: 1/30/2015
Scale: AS NOTED
Drawn by: TAH
Checked by: CAD
Project No. 10383

CONSTRUCTION DETAILS
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

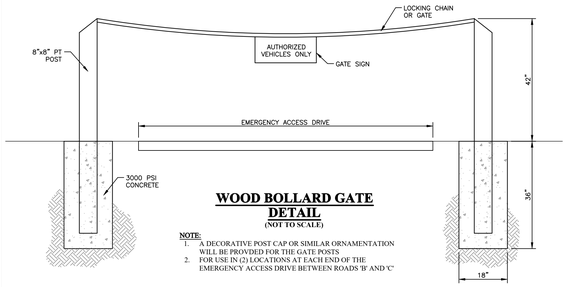


TUBULAR BARRIER GATE LOCATED AT EMERGENCY ACCESS TO VILLAGE WAY
(NOT TO SCALE)

NOTE: SHOP DRAWINGS SHALL BE PROVIDED FOR ALL GATES, INCLUDING CONCRETE MIX DESIGN, COLOR & REINFORCING DETAILS.

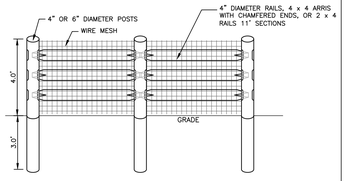


TYPICAL SHADOW BOX FENCE DETAIL
(NOT TO SCALE)



WOOD BOLLARD GATE DETAIL
(NOT TO SCALE)

NOTE:
1. A DECORATIVE POST CAP OR SIMILAR ORNAMENTATION WILL BE PROVIDED FOR THE GATE POSTS
2. FOR USE IN (2) LOCATIONS AT EACH END OF THE EMERGENCY ACCESS DRIVE BETWEEN ROADS 'B' AND 'C'

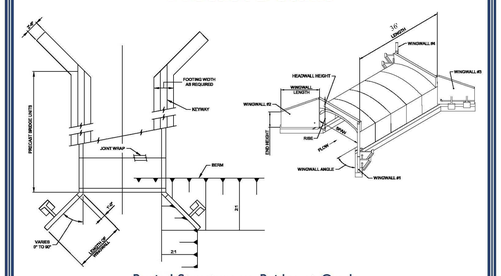


POST & RAIL FENCE
(NOT TO SCALE)

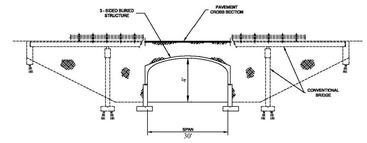
NOTES
1. UNTREATED WOOD MATERIALS SUCH AS WHITE OAK OR TAMARACK CAN LAST UP TO 10 YEARS; CYPRESS, REDWOOD, AND SASSAFRAS UP TO 15 YEARS; RED AND WHITE CEDAR UP TO 20 YEARS; AND BLACK LOCUST AND OSAGE ORANGE UP TO 25 YEARS. WEATHER AND INSECT PRESERVATIVE TREATMENTS CAN EXTEND THE USEFUL LIFE TO 25 TO 30 YEARS FOR MOST SPECIES.
2. FASTENERS SHOULD BE MADE OF NONCORROSIVE MATERIALS SUCH AS ALUMINUM ALLOYS OR STAINLESS STEEL; HIGH QUALITY DIPPED GALVANIZED STEEL IS ACCEPTABLE. METAL FLANGES, CLEATS, BOLTS, AND SCREWS ARE PREFERABLE TO COMMON NAILS.

CONTECH ENGINEERED SOLUTIONS

Precast Details

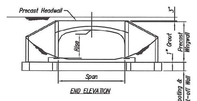


Buried Structure vs. Bridge-at-Grade

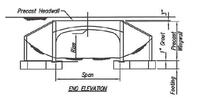


DESIGN SPECIFICATIONS
AASHTO:
Standard Specifications for Highway Bridges - Section 16.8
LRFD Bridge Design Specifications - Section 12.14
MANUFACTURING SPECIFICATIONS
ASTM C1504

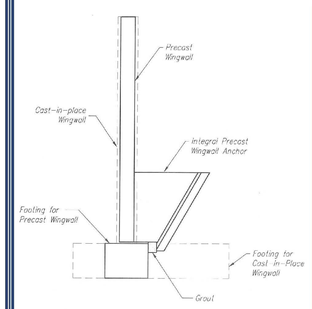
CON SPAN BRIDGE SYSTEMS BEBO Arch Systems



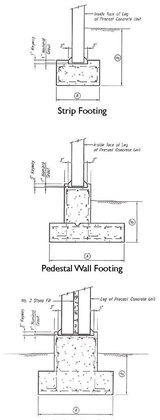
Base Slab



Strip Footing

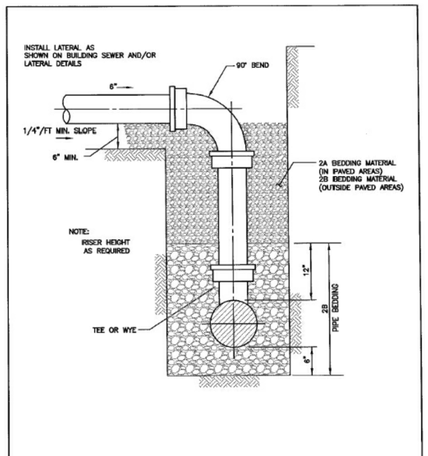


Footing Details



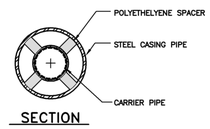
Significant Economic Advantages are Gained from Precast Wingwalls through:

- Narrower Footings
- Thinner Walls
- Reduced Excavation

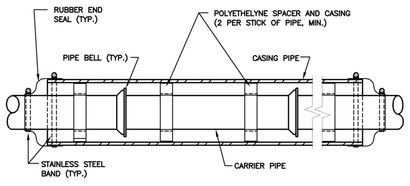


REVISION	DATE	EAST WHITELAND TOWNSHIP STANDARD DETAIL - SEWER SYSTEM VERTICAL RISER LATERAL CONNECTION	ARRO Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303 DATE: 5/9/13 DETAIL: 20

DWG. NAME 1031000ed20



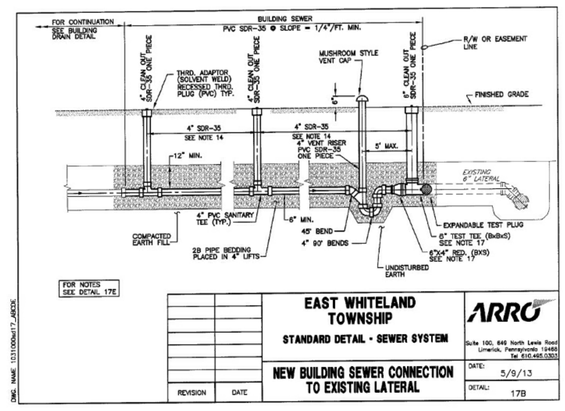
SECTION



ELEVATION

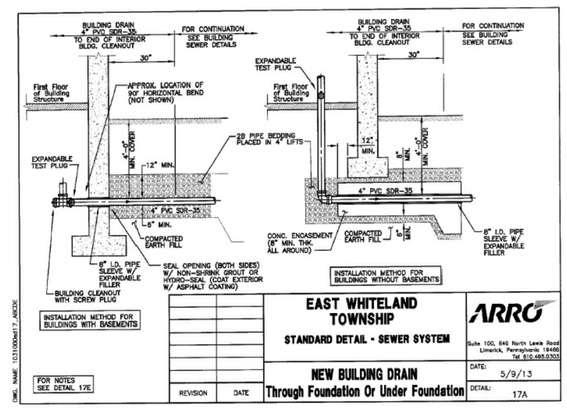
REVISION	DATE	EAST WHITELAND TOWNSHIP STANDARD DETAIL - SEWER SYSTEM STANDARD CASING CRADLE	ARRO Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303 DATE: 5/9/13 DETAIL: 4

DWG. NAME 1031000sd04



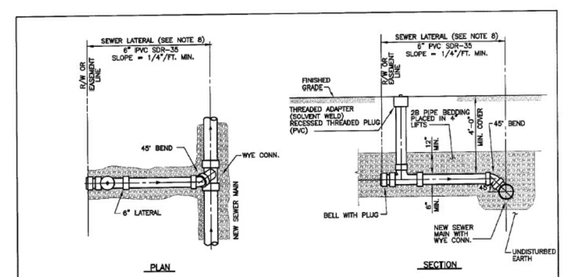
REVISION	DATE	EAST WHITELAND TOWNSHIP STANDARD DETAIL - SEWER SYSTEM NEW BUILDING SEWER CONNECTION TO EXISTING LATERAL	ARRO Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303 DATE: 5/9/13 DETAIL: 17B

DWG. NAME 1031000ed17.ARCDE



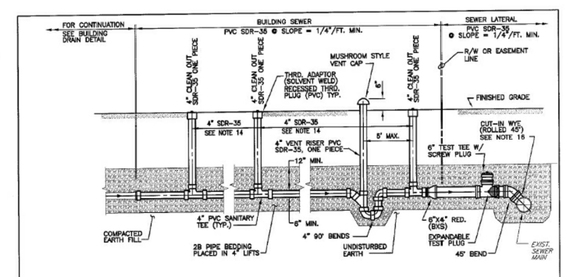
REVISION	DATE	EAST WHITELAND TOWNSHIP STANDARD DETAIL - SEWER SYSTEM NEW BUILDING DRAIN Through Foundation Or Under Foundation	ARRO Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303 DATE: 5/9/13 DETAIL: 17A

DWG. NAME 1031000ed17.ARCDE



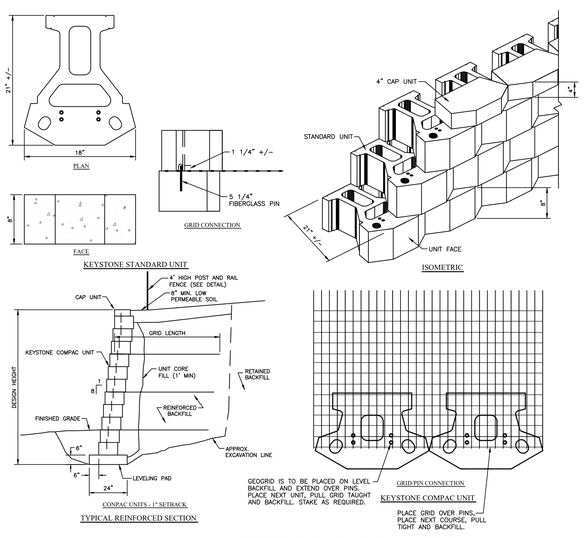
REVISION	DATE	EAST WHITELAND TOWNSHIP STANDARD DETAIL - SEWER SYSTEM NEW LATERAL AND SEWER MAIN	ARRO Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303 DATE: 5/9/13 DETAIL: 17D

DWG. NAME 1031000ed17.ARCDE



REVISION	DATE	EAST WHITELAND TOWNSHIP STANDARD DETAIL - SEWER SYSTEM NEW BUILDING SEWER & LATERAL CONNECTION TO EXISTING MAIN	ARRO Suite 100, 649 North Lewis Road Limerick, Pennsylvania 19468 Tel 610.495.0303 DATE: 5/9/13 DETAIL: 17C

DWG. NAME 1031000ed17.ARCDE



KEYSTONE STANDARD WALL DETAILS
(NOT TO SCALE)

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
P.A. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689
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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHARLES A. DOBSON NO.PE-049187-E

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

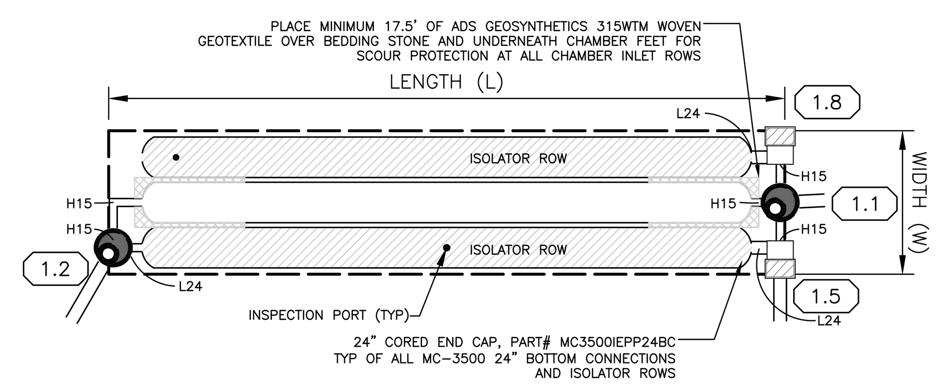
PRELIMINARY LAND DEVELOPMENT PLAN

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 Inch = 50'

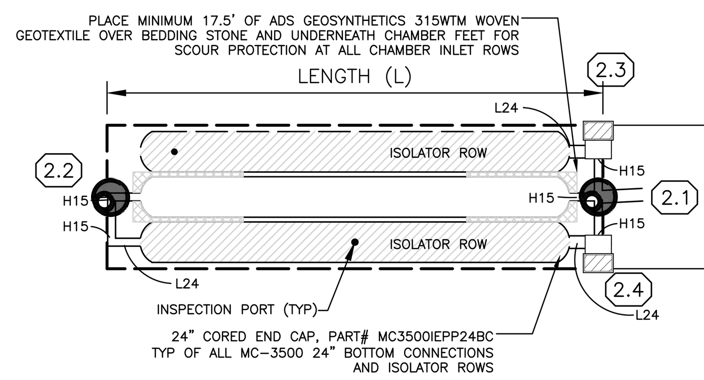
Date: 1/30/2015
Scale: AS NOTED
Drawn by: TAH
Checked by: CAD
Project No. 10383

CONSTRUCTION DETAILS FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

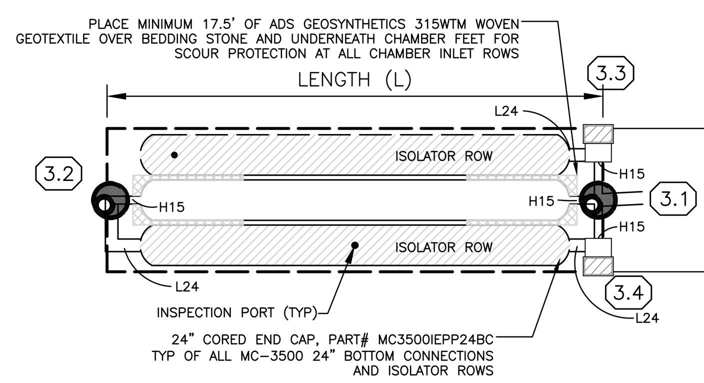
SHEET 37 OF 43



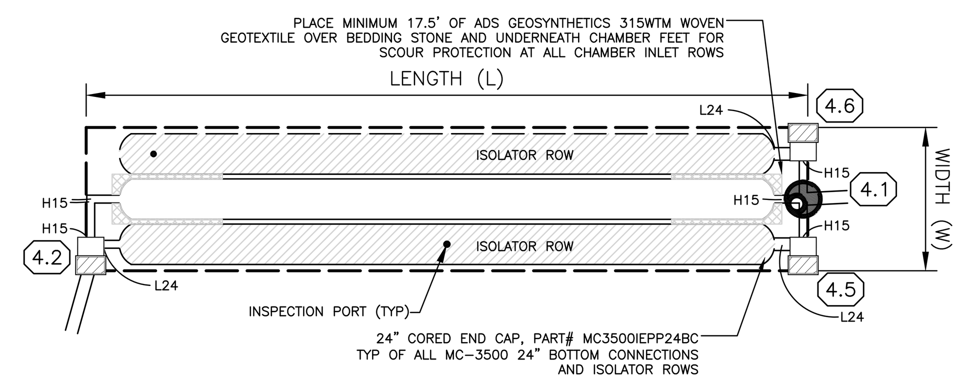
SSDEDB #1



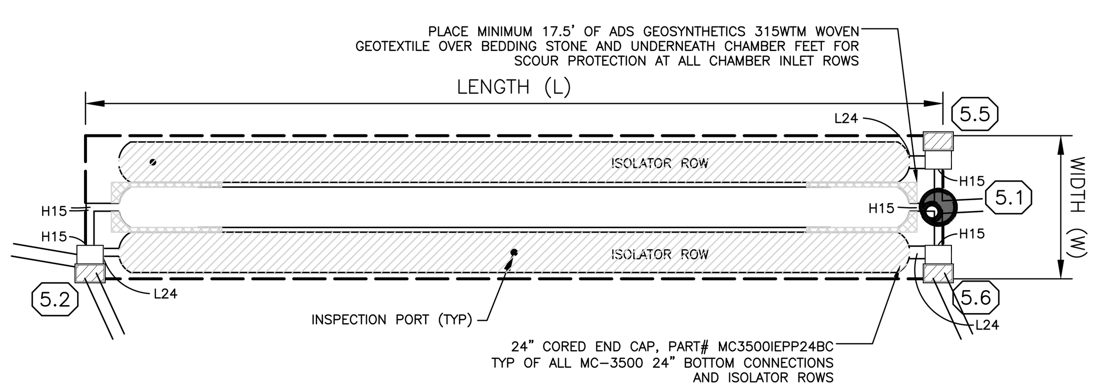
SSDEDB #2



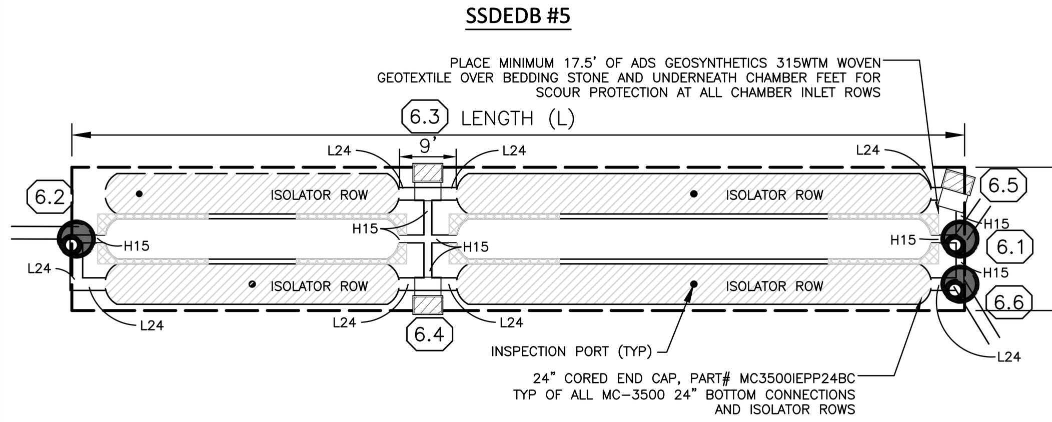
SSDEDB #3



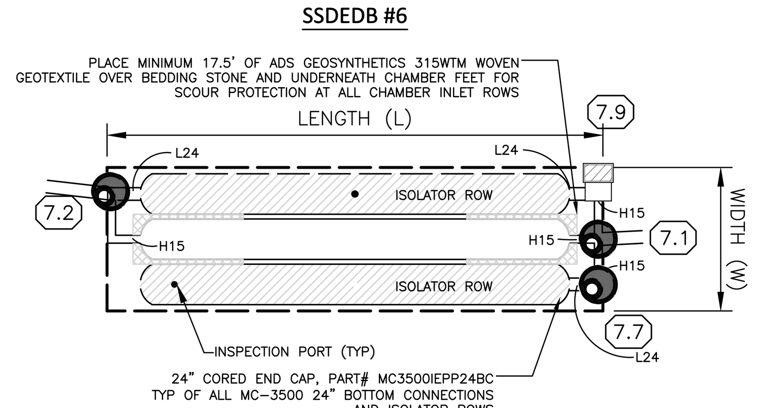
SSDEDB #4



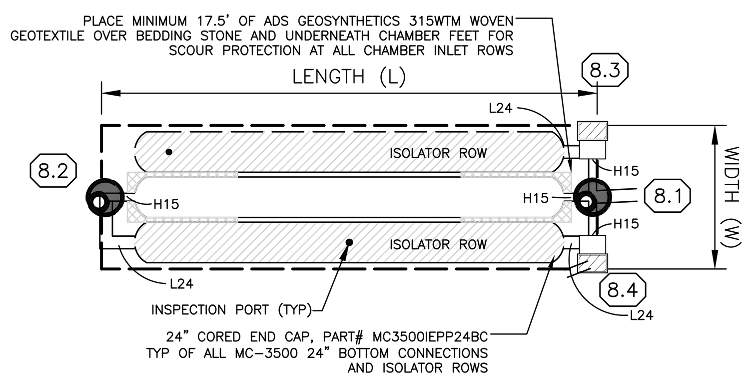
SSDEDB #5



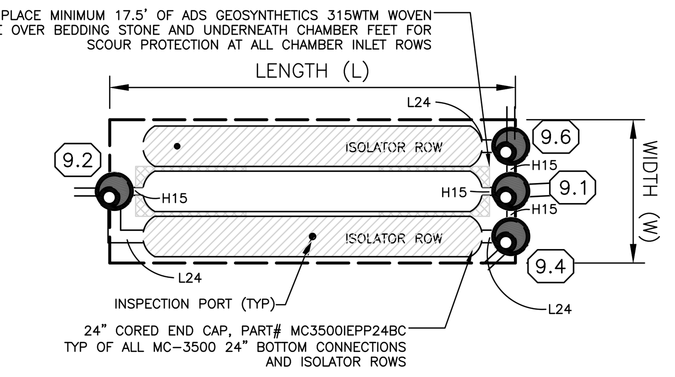
SSDEDB #6



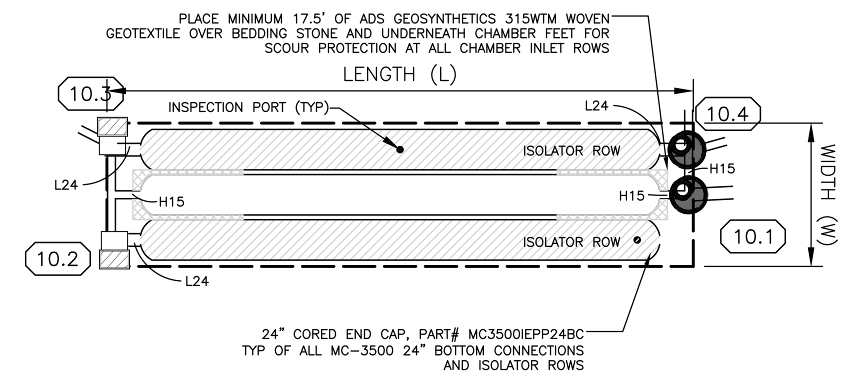
SSDEDB #7



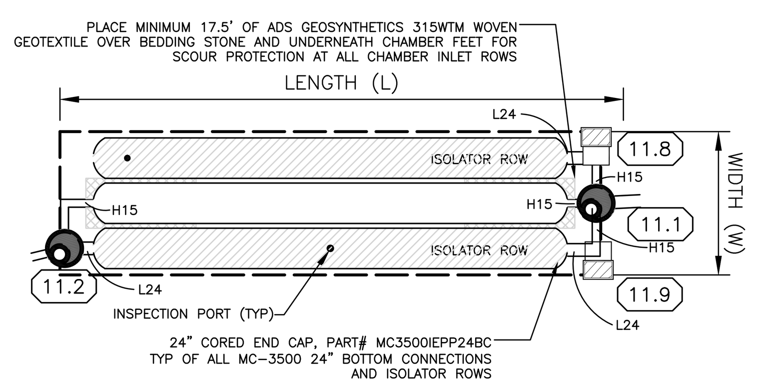
SSDEDB #8



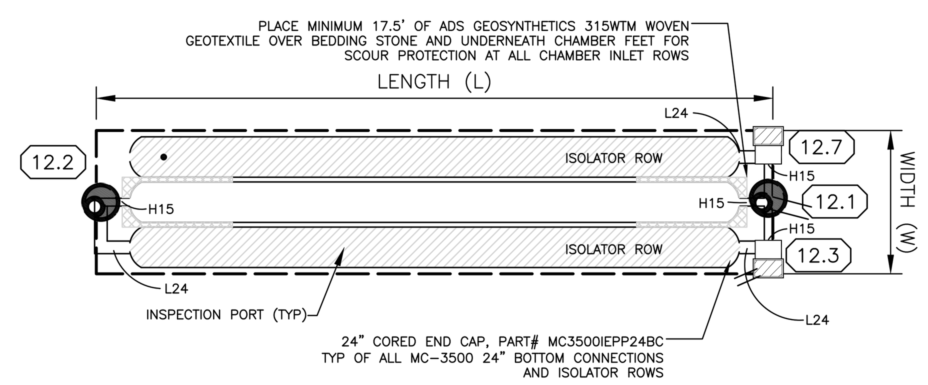
SSDEDB #9



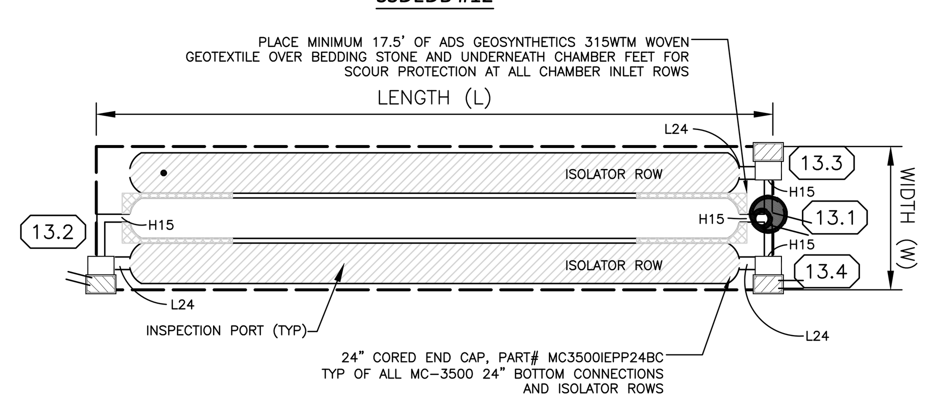
SSDEDB #10



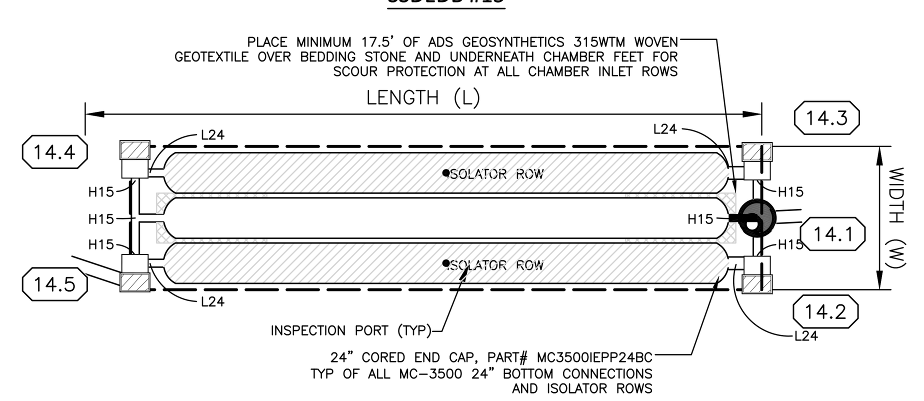
SSDEDB #11



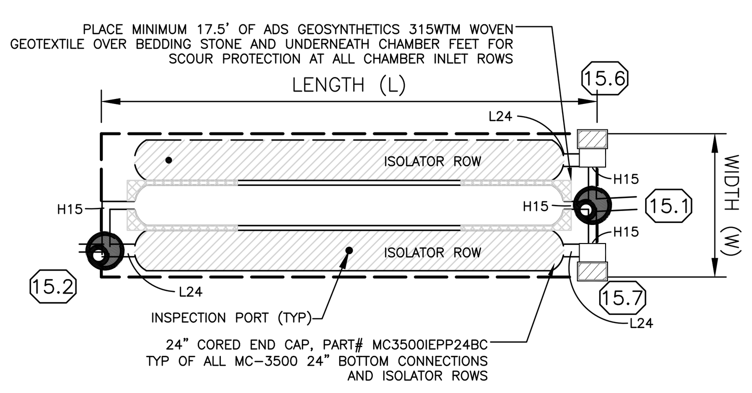
SSDEDB #12



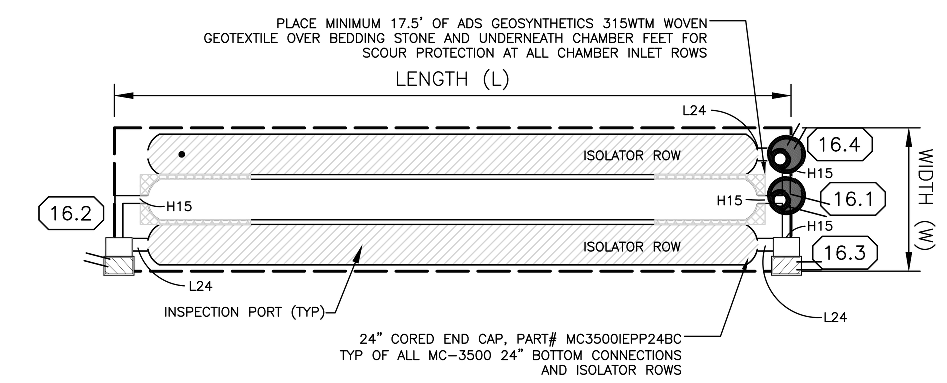
SSDEDB #13



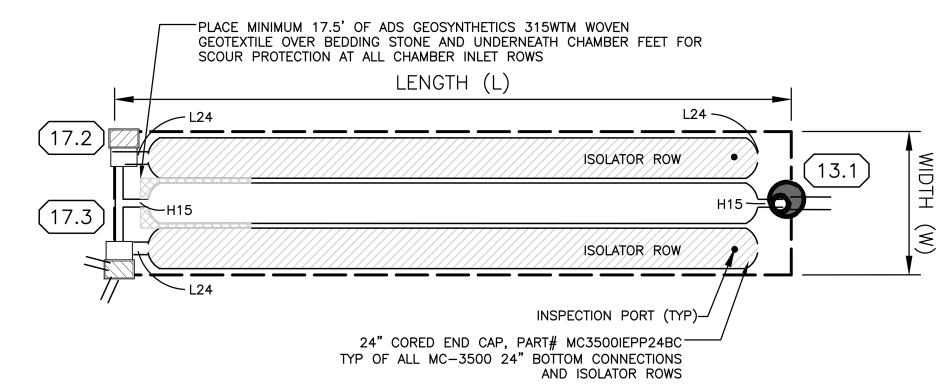
SSDEDB #14



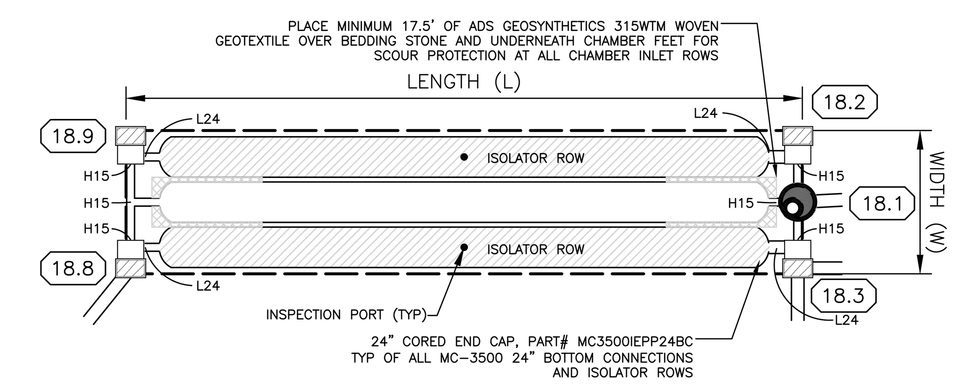
SSDEDB #15



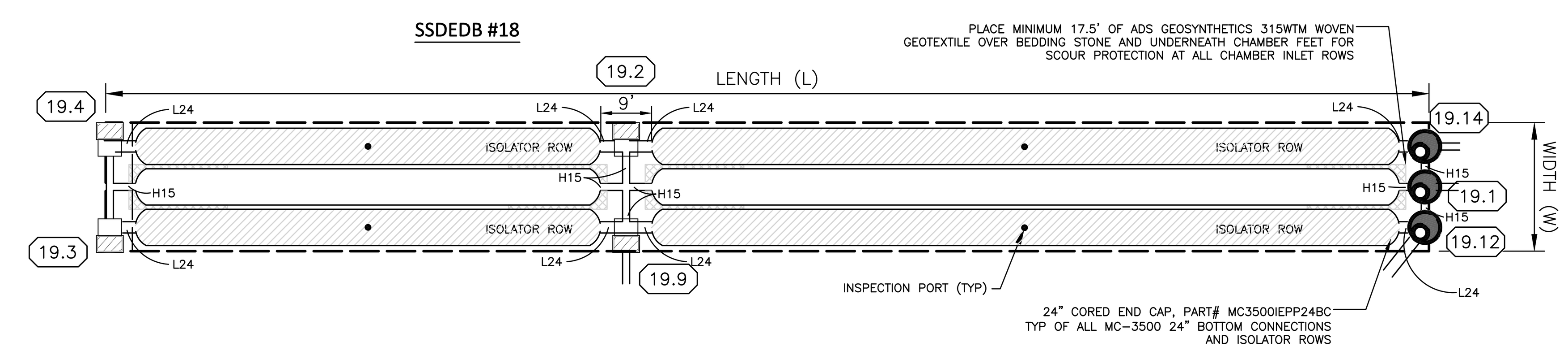
SSDEDB #16



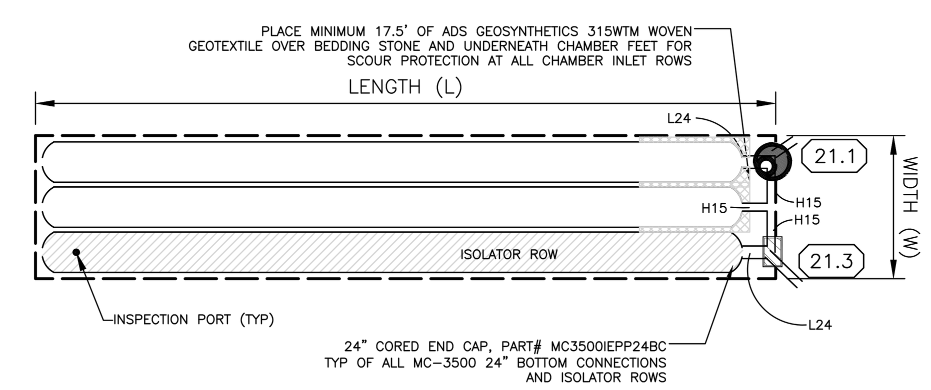
SSDEDB #17



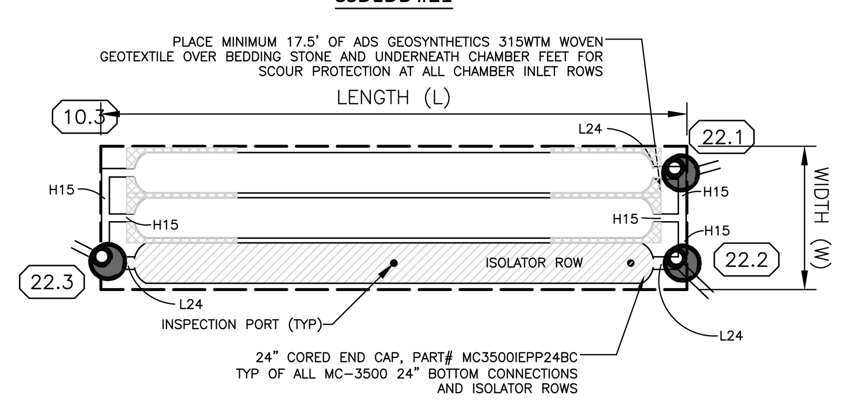
SSDEDB #18



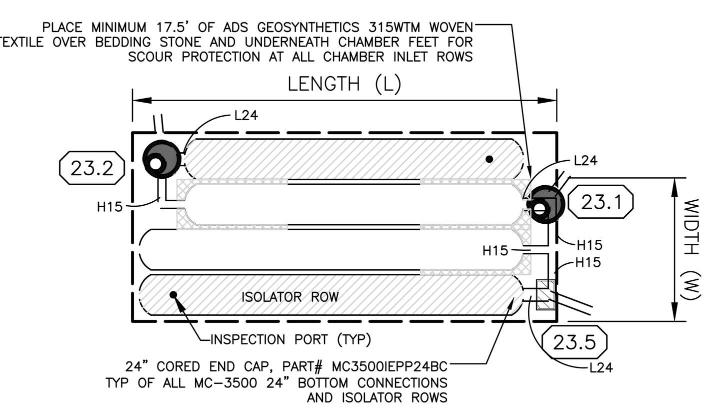
SSDEDB #6



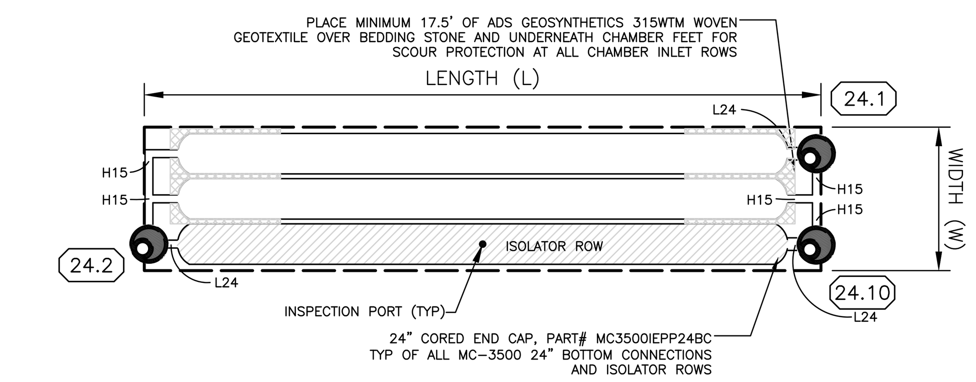
SSDEDB #21



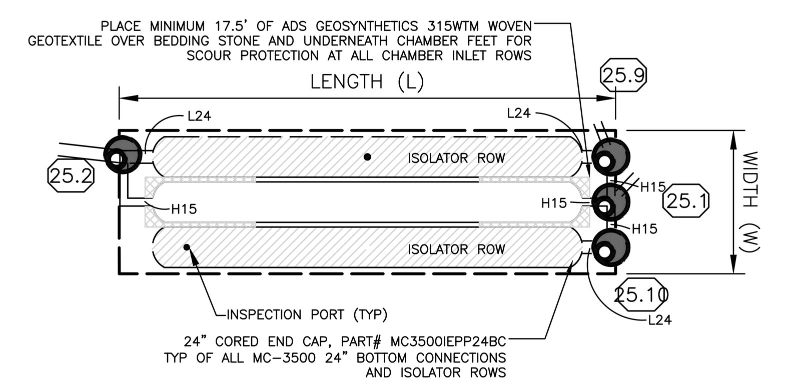
SSDEDB #22



SSDEDB #23



SSDEDB #24



SSDEDB #7

BMP	NUMBER OF MC-3500 CHAMBERS	NUMBER OF MC-3500 ENDCAPS	NUMBER OF ROWS	NUMBER OF CHAMBERS PER ROW	BED LENGTH (FT)	BED WIDTH (FT)	SYSTEM VOLUME (CF)	BED INVERTS						TOP OF BED	OUTLET STRUCTURE #
								INVERT OF STONE	INVERT OF UNITS	INVERT LOW 24" (L24)	INVERT LOW 15" (L15)	INVERT HIGH 15" (H15)	INVERT OF STRUCTURES		
SSDEDB #1	39	6	3	13	102.22'	22.75'	7,261 CF	476.00	476.75	476.92	476.88	478.70	474.00	481.50	1.1
SSDEDB #2	27	6	3	9	73.54'	22.75'	5,114 CF	472.90	473.65	473.82	473.78	475.60	470.90	478.40	2.1
SSDEDB #3	27	6	3	9	73.54'	22.75'	5,114 CF	467.90	468.65	468.82	468.78	470.60	465.90	473.40	3.1
SSDEDB #4	42	6	3	14	109.39'	22.75'	7,798 CF	451.70	452.45	452.62	452.58	454.40	449.70	457.20	4.1
SSDEDB #5	51	6	3	17	130.90'	22.75'	9,409 CF	447.50	448.25	448.42	448.38	450.20	445.50	453.00	5.1
SSDEDB #6	48	12	3	16	139.78	22.75'	9,154 CF	446.85	447.60	447.77	447.73	449.55	444.85	452.35	6.1
SSDEDB #7	27	6	3	9	73.54'	22.75'	5,114 CF	443.95	444.70	444.87	444.83	446.65	441.95	449.45	7.1
SSDEDB #8	27	6	3	9	73.54'	22.75'	5,114 CF	437.00	437.75	437.92	437.88	439.70	435.00	442.50	8.1
SSDEDB #9	21	6	3	7	59.20'	22.75'	4,040 CF	429.10	429.85	430.02	429.98	431.80	427.10	434.60	9.1
SSDEDB #10	33	6	3	11	87.88'	22.75'	6,187 CF	414.95	415.70	415.87	415.83	417.65	412.95	420.45	10.1
SSDEDB #11	30	6	3	10	80.71'	22.75'	5,651 CF	416.10	416.85	417.02	416.98	418.80	414.10	421.60	11.1
SSDEDB #12	39	6	3	13	102.22'	22.75'	7,261 CF	413.80	414.55	414.72	414.68	416.50	411.80	419.30	12.1
SSDEDB #13	39	6	3	13	102.22'	22.75'	7,261 CF	411.80	412.55	412.72	412.68	414.50	409.80	417.30	13.1
SSDEDB #14	36	6	3	12	95.05'	22.75'	6,724 CF	398.80	399.55	399.72	399.68	401.50	396.80	404.30	14.1
SSDEDB #15	27	6	3	9	73.54'	22.75'	5,114 CF	397.95	398.70	398.87	398.83	400.65	395.95	403.45	15.1
SSDEDB #16	39	6	3	13	102.22'	22.75'	7,261 CF	393.00	393.75	393.92	393.88	395.70	391.00	398.50	16.1
SSDEDB #17	39	6	3	13	102.22'	22.75'	7,261 CF	392.15	392.90	393.07	393.03	394.85	390.15	397.65	17.1
SSDEDB #18	39	6	3	13	102.22'	22.75'	7,261 CF	387.00	387.75	387.92	387.88	389.70	385.00	392.50	18.1
SSDEDB #19	87	12	3	29	236.11	22.75'	16,133 CF	385.50	386.25	386.42	386.38	388.20	383.50	391.00	19.1
SSDEDB #21	45	6	3	15	116.56'	22.75'	8,335 CF	471.00	471.75	471.92	471.88	473.70	469.00	476.50	21.1
SSDEDB #22	33	6	3	11	87.88'	22.75'	6,187 CF	450.80	451.55	451.72	451.68	453.50	448.80	456.30	22.1
SSDEDB #23	30	8	4	SEE DETAIL	67.33	29.92'	5,650 CF	444.80	445.55	445.72	445.68	447.50	442.80	450.30	23.1
SSDEDB #24	39	6	3	13	102.22'	22.75'	7,261 CF	415.80	416.55	416.72	416.68	418.50	413.80	421.30	24.1
SSDEDB #25	27	6	3	9	73.54'	22.75'	5,114 CF	405.30	406.05	406.22	406.18	408.00	403.30	410.80	25.1

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

PENNSYLVANIA ONE CALL SYSTEM · 1-800-242-1776 · CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires three working days notice
Serial Numbers:
20141642689

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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA · REGISTERED PROFESSIONAL ENGINEER · CHARLES A. DOBSON · NO.PE-049197-E

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY LAND DEVELOPMENT PLAN

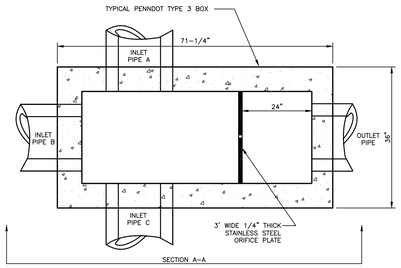
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 Inch = 50'

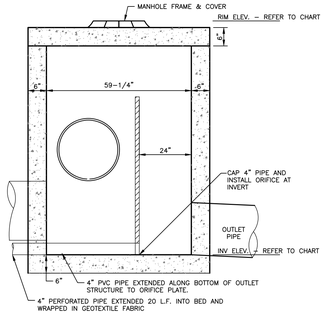
Date: 1/30/2015
Scale: AS NOTED
Drawn by: TAH
Checked by: CAD
Project No. **10383**

CONSTRUCTION DETAILS FOR

MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

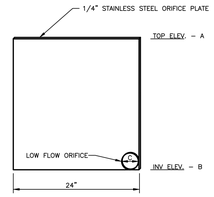
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA





SECTION A-A

OUTLET STRUCTURE DETAIL



ORIFICE PLATE DETAIL

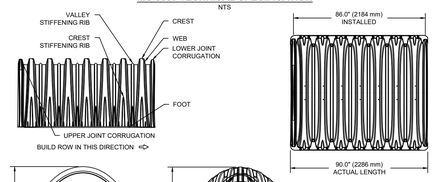
NOTES:
1. REFER TO THE STORMWATER RECHARGE BED DATA TABLE FOR ELEVATIONS ON EACH BED.
2. ORIFICE PLATE TO BE ATTACHED TO INLET BOX WALLS WITH STAINLESS STEEL ANCHORS
3. ORIFICE PLATE TO BE SEALED TO INLET BOX WALL WITH FLEXIBLE BITUMASTIC ROPE CAULK

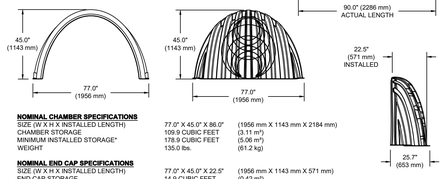
OUTLET STRUCTURE DETAIL DATA TABLE

BMP	STRUCTURE #	INVERT ELEVATION	RIM ELEVATION	INLET PIPE A		INLET PIPE B		INLET PIPE C		OUTLET PIPE		ORIFICE PLATE		LOW FLOW ORIFICE
				PIPE SIZE / MATERIAL	INVERT	PIPE SIZE / MATERIAL	INVERT	PIPE SIZE / MATERIAL	INVERT	PIPE SIZE / MATERIAL	INVERT	A TOP ELEVATION	B BOTTOM ELEVATION	C DIAMETER
SSDEDB #1	1.1	476.00	483.67	15" HDPE	478.70	15" HDPE	476.88	15" HDPE	478.70	15" HDPE	476.00	481.50	476.00	1.00"
SSDEDB #2	2.1	472.90	480.77	15" HDPE	475.60	15" HDPE	473.78	15" HDPE	475.60	15" HDPE	472.90	478.00	472.90	1.00"
SSDEDB #3	3.1	467.90	474.99	15" HDPE	470.60	15" HDPE	468.78	15" HDPE	470.60	15" HDPE	467.90	473.00	467.90	2.00"
SSDEDB #4	4.1	451.70	459.45	15" HDPE	454.40	15" HDPE	452.58	15" HDPE	454.40	15" HDPE	451.70	457.00	451.70	1.00"
SSDEDB #5	5.1	447.75	455.51	15" HDPE	450.45	15" HDPE	448.63	15" HDPE	450.45	15" HDPE	447.75	452.80	447.75	2.00"
SSDEDB #6	6.1	446.85	455.98	15" HDPE	449.55	15" HDPE	447.73	15" HDPE	449.55	24" HDPE	446.85	450.60	446.85	2.00"
SSDEDB #7	7.1	443.95	451.67	15" HDPE	446.65	15" HDPE	444.83	15" HDPE	446.65	15" HDPE	443.95	448.90	443.95	1.00"
SSDEDB #8	8.1	437.00	444.94	15" HDPE	439.70	15" HDPE	437.88	15" HDPE	439.70	15" HDPE	437.00	441.90	437.00	1.00"
SSDEDB #9	9.1	429.10	436.49	15" HDPE	431.80	15" HDPE	429.98	15" HDPE	431.80	15" HDPE	429.10	434.30	429.10	2.00"
SSDEDB #10	10.1	414.95	423.65	15" HDPE	417.65	15" HDPE	415.83	NA	NA	15" HDPE	414.95	420.00	414.95	2.00"
SSDEDB #11	11.1	416.10	424.02	15" HDPE	418.80	15" HDPE	416.98	15" HDPE	418.80	15" HDPE	416.10	421.10	416.10	1.00"
SSDEDB #12	12.1	413.80	421.5200	15" HDPE	416.50	15" HDPE	414.68	15" HDPE	416.50	15" HDPE	413.80	418.65	413.80	1.50"
SSDEDB #13	13.1	411.80	419.65	15" HDPE	414.50	15" HDPE	412.68	15" HDPE	414.50	15" HDPE	411.80	416.35	411.80	2.00"
SSDEDB #14	14.1	398.80	405.89	15" HDPE	401.50	15" HDPE	399.68	15" HDPE	401.50	15" HDPE	398.80	403.50	398.80	3.00"
SSDEDB #15	15.1	397.95	405.81	15" HDPE	400.65	15" HDPE	398.83	15" HDPE	400.65	15" HDPE	397.95	402.70	397.95	1.00"
SSDEDB #16	16.1	393.00	401.19	15" HDPE	395.70	15" HDPE	393.88	15" HDPE	395.70	15" HDPE	393.00	398.25	393.00	1.50"
SSDEDB #17	17.1	392.15	401.17	NA	NA	15" HDPE	393.03	NA	NA	18" HDPE	392.15	396.25	392.15	3.00"
SSDEDB #18	18.1	387.00	395.21	15" HDPE	389.70	15" HDPE	387.88	15" HDPE	389.70	15" HDPE	387.00	391.50	387.00	1.25"
SSDEDB #19	19.1	385.50	394.27	15" HDPE	388.20	15" HDPE	386.38	15" HDPE	388.20	18" HDPE	385.50	389.30	385.50	2.00"
SSDEDB #21	21.1	471.00	478.32	NA	NA	15" HDPE	471.88	15" HDPE	473.70	15" HDPE	471.00	475.25	471.00	2.00"
SSDEDB #22	22.1	450.80	459.07	NA	NA	15" HDPE	451.68	15" HDPE	453.50	15" HDPE	450.80	455.15	450.80	2.00"
SSDEDB #23	23.1	444.80	452.03	NA	NA	15" HDPE	445.68	15" HDPE	447.50	15" HDPE	444.80	449.10	444.80	2.00"
SSDEDB #24	24.1	415.80	427.28	NA	NA	15" HDPE	416.68	15" HDPE	418.50	15" HDPE	415.80	420.00	415.80	2.00"
SSDEDB #25	25.1	405.30	413.24	15" HDPE	408.00	15" HDPE	406.18	15" HDPE	408.00	24" HDPE	405.30	409.25	405.30	1.50"

MC-3500 TECHNICAL SPECIFICATION

NTS





NOMINAL CHAMBER SPECIFICATIONS
SIZE (W X H X INSTALLED LENGTH) 77.0" X 45.0" X 86.0" (1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE 109.9 CUBIC FEET (3.11 m^3)
MINIMUM INSTALLED STORAGE* 178.9 CUBIC FEET (5.06 m^3)
WEIGHT 135.0 lbs. (61.2 kg)

NOMINAL END CAP SPECIFICATIONS
SIZE (W X H X INSTALLED LENGTH) 77.0" X 45.0" X 22.5" (1956 mm X 1143 mm X 571 mm)
END CAP STORAGE 14.9 CUBIC FEET (0.42 m^3)
MINIMUM INSTALLED STORAGE* 46.0 CUBIC FEET (1.30 m^3)
WEIGHT 50.0 lbs. (22.7 kg)

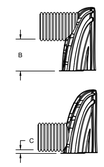
*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION AND BETWEEN CHAMBERS, 12" (305 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18BC		---	1.77" (45 mm)
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24BC		---	2.06" (52 mm)
MC3500IEPP30BC	30" (750 mm)	---	

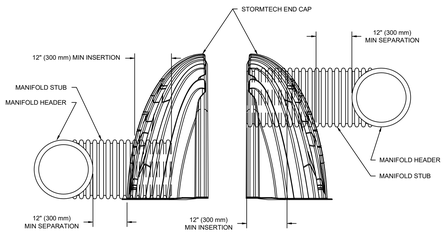
NOTE: ALL DIMENSIONS ARE NOMINAL

CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS.
CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm)
THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.



MC-SERIES END CAP INSERTION DETAIL

NTS

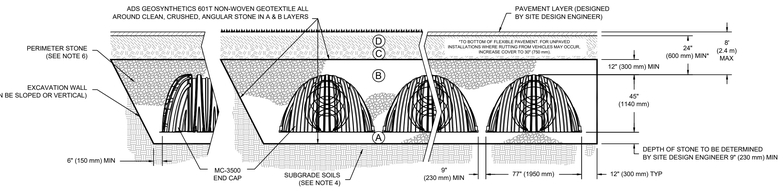


NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

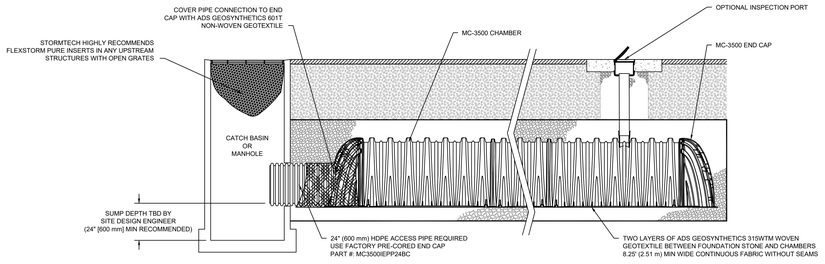
	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. [2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



NOTES:

1. MC-3500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
5. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
6. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.



MC-3500 ISOLATOR ROW DETAIL

NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

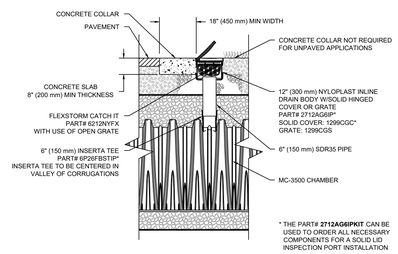
STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



MC-3500 6" INSPECTION PORT DETAIL

NTS

COPYRIGHT
Inland Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of Inland Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of Inland Design, LLC. Any reuse without written permission, verification, consent or adaptation by Inland Design, LLC for the specific purpose intended will be at the third party's sole risk and without liability or legal exposure to Inland Design, LLC the third party shall further indemnify and hold harmless Inland Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689
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. **Phone: (484) 947-2928**
West Chester, PA 19382 **Fax: (484) 947-2946**
www.InLandDesign.net **Info@InLandDesign.net**
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHARLES A. DOBSON MC-PE-040187-E

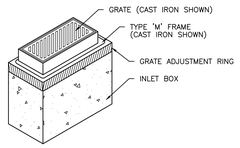
No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 Inch = 50'

Date:	1/30/2015
Scale:	AS NOTED
Drawn by:	TAH
Checked by:	CAD
Project No.	10383

CONSTRUCTION DETAILS
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

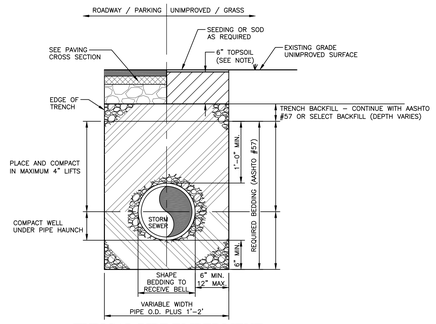


TYPE M INLET DETAIL

(NOT TO SCALE)

NOTES

1. CONSTRUCTION REQUIREMENTS:
   - A. CONSTRUCT IN ACCORDANCE WITH: PENNDOT PUBLICATION 408 SPECIFICATIONS, SECTIONS 605, 606, 714. AND AS MODIFIED HEREIN.
   - B. MINIMUM CONCRETE CLASS: CAST-IN-PLACE CLASS A PRECAST CLASS AA
   - C. PROVIDE STEEL REINFORCEMENT IN ACCORDANCE WITH SEC. 709. PROVIDE MINIMUM YIELD STRENTH OF 60,000 PSI.
   - D. CLEAR COVER FOR STEEL:
     - WALLS - CAST-IN-PLACE: 2"; PRECAST 1 1/2"
     - FOOTINGS - CAST-IN-PLACE: 2 1/2" (TOP BARS); 2" (BOTTOM BARS); 2" (SIDE COVER); PRECAST: 1" (TOP BARS); 1 1/2" (BOTTOM BARS); 1 1/2" (SIDE COVER)
     - SLABS - CAST-IN-PLACE: 2" (TOP AND BOTTOM BARS)
2. 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)
   - * "PRECSTBX" 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-H INLET
3. 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 DISIGNATED FOR INSTALLATION IN SHOULDER SWALE AREAS.
4. THE SECTION COMPONENTS TO ACHIEVE A SPECIFIED INLET ASSEMBLY IS THE CONTRACTOR'S RESPONSIBILITY.
5. USE PRECAST CONCRETE OR STEEL GRADE ADJUSTMENT RINGS WHEN REQUIRED.
6. 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).
7. SUB-BASE DRAIN OPENINGS WILL BE PROVIDED WHERE DIRECTED BY THE TOWNSHIP ENGINEER.



TYPICAL PIPE EMBEDMENT & TRENCH DETAIL

(STORM SEWER - RCP & HDPE)

(NOT TO SCALE)

HDPE PIPE SHALL BE SMOOTH BORE AND CONFORM TO ASTM D1248, ASTM D2414, ASTM M252 AND ASTM 294

TABLE A

2:1 EMBANKMENT SLOPES

PIPE DIAMETER	SKEW= 90° TO 60° θ = 30°			SKEW= 55° θ = 35°			SKEW= 50° θ = 40°			SKEW= 45° θ = 45°			SKEW= 40° θ = 50°			SKEW= 30° θ = 60°			SKEW= 20° θ = 70°			SKEW= 10° θ = 80°				
d	L	S	W_1	L	S	W_1	L	S	W_1	L	S	W_1	L	S	W_1	L	S	W_1	L	S	W_1	L	S	W_1	W_2	A
(in.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(in.)
36	5.8	0	4.6	6.0	.33	4.9	6.2	.5	5.2	6.5	.67	5.7	7.0	.75	6.2	8.3	1.33	8.0	11.1	1.75	11.7	19.6	5.0	23.0	4.6	12
42	6.3	0	5.8	6.6	.33	6.1	6.9	.5	6.5	7.3	.67	7.1	7.8	.75	7.8	9.3	1.33	10.0	12.5	1.75	14.6	22.5	5.0	28.8	5.8	12
48	6.9	0	6.9	7.2	.33	7.3	7.5	.5	7.8	8.0	.67	8.5	8.5	.75	9.4	10.3	1.33	12.0	14.0	1.75	17.5	25.3	5.0	34.6	6.9	12
54	7.5	0	8.0	7.8	.33	8.5	8.2	.5	9.1	8.7	.67	9.9	9.3	.75	10.9	11.3	1.33	14.0	15.5	1.75	20.5	28.2	5.0	40.3	8.0	12
60	8.1	0	9.2	8.4	.33	9.8	8.8	.5	10.4	9.4	.67	11.3	10.1	.75	12.5	12.3	1.33	16.0	16.9	1.75	23.4	31.1	5.0	46.0	9.2	15
72	9.2	0	11.5	9.6	.33	12.2	10.1	.5	13.0	10.8	.67	14.1	11.7	.75	15.6	14.3	1.33	20.0	19.8	1.75	29.2	36.9	5.0	57.6	11.5	15

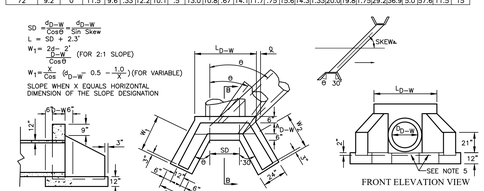
$$SD = \frac{\phi_{D-W}}{\cos\theta} - \frac{\phi_{D-W}}{\sin\ \text{Skew}}$$

$$L = SD + 2.3'$$

$$W_1 = 2(z - \frac{2'}{\cos\theta}) \quad \text{(FOR 2:1 SLOPE)}$$

$$W_1 = \frac{X}{\cos\ (\phi_{D-W}\ 0.5 - \frac{1.0}{X})} \text{(FOR VARIABLE)}$$

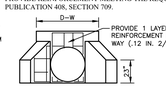
SLOPE WHEN X EQUALS HORIZONTAL DIMENSION OF THE SLOPE DESIGNATION



1. PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408 SPECIFICATIONS, SECTION SECTION 714.
2. THIS STANDARD DEPICTS THE SHAPE AND DIMENSIONS REQUIRED FOR UNIFORMITY AND COMPATABILITY. IT DOES NOT INCLUDE DETAILS REQUIRED FOR MANUFACTURING AND HANDLING PRECAST UNITS. ONLY ITEMS SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15 WILL BE PERMITTED.
3. CHAMFER EXPOSED EDGES ONE INCH.
4. PROVIDE PIPE OPENING SIZE IN PRECAST UNITS AT LEAST 2 INCHES BUT NOT MORE THAN 4 INCHES LARGER THAN THE OUTSIDE DIAMETER OF THE PIPE.
5. PROVIDE NON-SHRINK EPOXY GROUT THROUGHOUT THE CONTACT SURFACE WHEN CONNECTING WING AND HEADWALL SECTION TO BASE SECTION. PROVIDE JOINT SEALANT MATERIAL ALONG INTERFACE BETWEEN WING AND HEADWALL SECTION AND BASE SECTION.
6. PROVIDE REINFORCEMENT MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 709.

PIPE DIAMETER	L
18" & 21"	5'
24" & 27"	7'
30" & 33"	9'

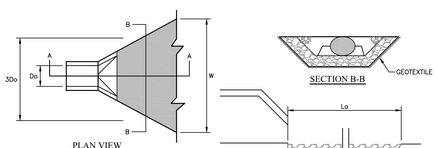
FRONT ELEVATION VIEW
BASE SECTION FOR TYPE D-W



FRONT ELEVATION VIEW
HEAD & WINGWALL SEC. FOR TYPE D-W

TYPE D-W ENDWALL

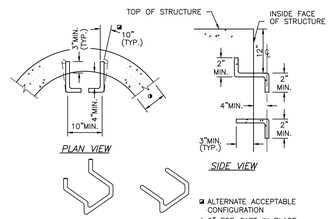
(NOT TO SCALE)



RIPRAP APRON OUTLET PROTECTION

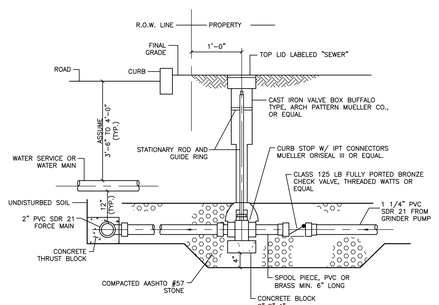
(NOT TO SCALE)

OUTLET NO.#	RIPRAP SIZE	Lo (ft.)	W (ft.)	3Do (ft.)	DEPTH (ft.)	Do (in.)
ENDWALL #6A	R–4	12	18	6.0	2.0	24"
ENDWALL #10A	R–4	8	12	3.75	1.25	15"
ENDWALL #17A	R–5	20	29	9.0	3.0	36"



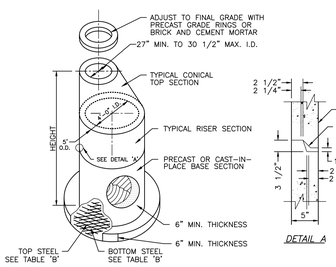
STRUCTURE LADDER RUNGS

N.T.S.



SERVICE VALVE DETAIL

(NOT TO SCALE)



PRECAST STORM SEWER MANHOLE

N.T.S.

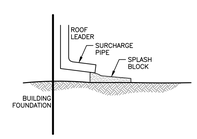
NOTES

1. Precast manholes meeting the requirements of publication 408 specifications, section 605.2(C), may be substituted for type 'A' and 'B' manholes.
2. 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.

TABLE B

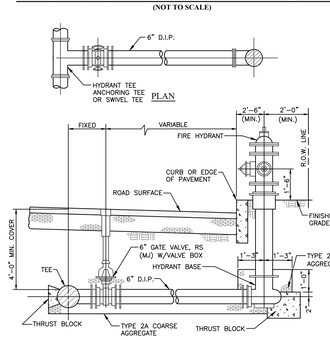
Precast Manhole Height	Top Steel Requirements	Bottom Steel Requirements
< 30'-0"	#5 Bars @ 12" C_L To C_L or 0.18 In^2/Ft. WWF *	#4 Bars @ 12" C_L To C_L or 0.28 In^2/Ft. WWF *
> 30'-0" To 60'-0"	#6 Bars @ 12" C_L To C_L or 0.15 In^2/Ft. WWF *	#4 Bars @ 6" C_L To C_L or 0.24 In^2/Ft. WWF *

* Provide Welded Wire Fabric Meeting the Requirements of Publication 408 Specifications, Section 709.3.



TYPICAL DOWNSPOUT CONFIGURATION DETAIL

(NOT TO SCALE)



NOTE: DRAIN HOLE IN HYDRANT MUST NOT BE OBSTRUCTED WITH CONCRETE.

FIRE HYDRANT

(NOT TO SCALE)

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. In the event of unauthorized reuse by others, the user agrees to compensate InLand Design, LLC for the specific project intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE-CALL SYSTEM, INC. 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

InLand Design

Civil Engineers, Surveyors & Land Development Consultants

16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net

Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL CHARLES A. DOBSON ENGINEER VOLTE-CHARTER-E PENNSYLVANIA

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

GRAPHIC SCALE

50 0 25 50 100 200

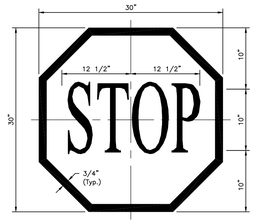
(IN FEET)
1 Inch = 50'

Date: 1/30/2015
Scale: AS NOTED
Drawn by: TAH
Checked by: CAD
Project No. 10383

CONSTRUCTION DETAILS FOR

MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA



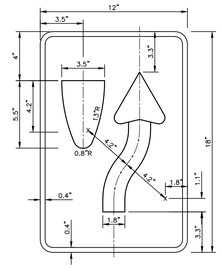
COLOR: LEGEND AND BORDER BACKGROUND — WHITE (REFLECTORIZED) RED (REFLECTORIZED)

STOP SIGN (R1-1)
(NOT TO SCALE)

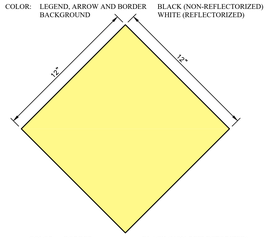
SIGN SIZE	SERIES LINES			MARGIN	BORDER	BLANK STD.
	1	2	3			
24x30	E	E	E	3/8	5/8	B5-3024

COLOR: LEGEND AND BORDER BACKGROUND — WHITE (REFLECTORIZED) RED (REFLECTORIZED)

SPEED LIMIT SIGN (R2-1)
(NOT TO SCALE)



COLOR: LEGEND, ARROW AND BORDER BACKGROUND — BLACK (NON-REFLECTORIZED) WHITE (REFLECTORIZED)



COLOR: BORDER BACKGROUND — BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

KEEP RIGHT SIGN (R4-7) WITH WARNING DIAMOND (W16-1)
(NOT TO SCALE)
BOTH SIGNS TO BE MOUNTED ON THE SAME POST.

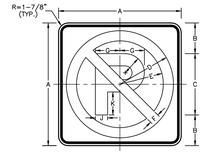
TYPICAL SREET SIGN DETAIL
(NOT TO SCALE)

NOTES:

1. THE SIGN SHALL BE MADE OF EXTRUDED ALUMINUM, WHITE IN COLOR, WITH FOUR-INCH REFLECTORIZED BLACK LETTERS, SHALL MEASURE A MINIMUM OF 24 INCHES IN LENGTH, AND SHALL BE EQUIPPED WITH VANDAL-PROOF MOUNTING HARDWARE.
2. THE POST ON WHICH THE SIGN SHALL BE MOUNTED SHALL BE GALVANIZED STEEL, MEASURING 2 1/2 INCHES IN OUTSIDE DIAMETER, AND SHALL BE A MINIMUM OF 10 FEET IN LENGTH.
3. THE SIGN SHALL BE INSTALLED AT LEAST SIX FEET FROM THE EDGE OF THE CARTWAY SURFACE OF THE STREET WHERE NO CURB EXISTS, AND ON STREETS PROVIDED WITH CURBING, AT LEAST TWO FEET BACK FROM THE REAR EDGE OF THE CURB.
4. THE SIGN SHALL BE CONNECTED TO THE TOP OF THE POST, AND SHALL HAVE AN INSTALLED MINIMUM HEIGHT OF SEVEN FEET MEASURED FROM GROUND LEVEL.
5. STREET NAMES SHALL BE APPROVED BY THE BOARD AND DUPLICATION SHALL BE AVOIDED UNLESS AS A CONTINUATION OF AN EXISTING STREET OR PROJECTION OF SAME. WITH RESPECT TO CULS-DE-SAC, THE DEVELOPER SHALL INSTALL AT EACH STREET INTERSECTION NEAREST THE BULB OF THE CUL-DE-SAC A "DEAD END" OR "NO OUTLET" SIGN.

COLOR: LEGEND AND BORDER: BACKGROUND — BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

W14-2 "NO OUTLET" SIGN DETAIL
NOT TO SCALE



COLOR: SYMBOL AND BORDER CIRCLE AND DIAGONAL BACK GROUND — BLACK (NON-REFLECTORIZED) RED (REFLECTORIZED)* WHITE (REFLECTORIZED)*

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		MARGIN	BORDER	BLANK STD.
	A	B			
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	5/8	B3-24
36x36	3 30/64	6 3/4	E(m)	5/8	7/8	B3-36

NO PARKING SIGN (R7-1)
NOT TO SCALE

COLOR: LEGEND AND BORDER - BLACK (NON-REFLECTORIZED) BACKGROUND - WHITE (REFLECTORIZED)

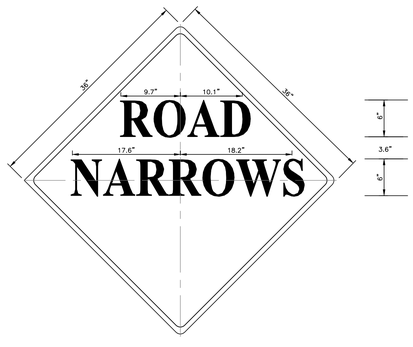
SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	
24x30	24	30	3	2 1/2	2	9 9/16	2 3/32	10 1/16	7 23/32	4 3/16	

SIGN SIZE	SERIES LINES					MARGIN	BORDER	BLANK STD.
	1	2	3	4	5			
24x30	C	C	C	C	C	3/8	5/8	B5-3024

EMERGENCY AND AUTHORIZED VEHICLES ONLY SIGN (R5-4L
(NOT TO SCALE)

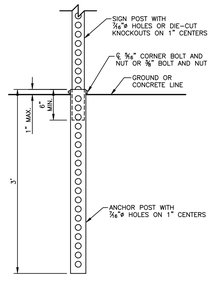
COLOR: LEGEND AND BORDER BACKGROUND — BLACK (NON-REFLECTORIZED) WHITE (REFLECTORIZED)

ALL TRAFFIC MUST TURN RIGHT SIGN (R3-7-1R)
(NOT TO SCALE)



COLOR: LEGEND AND BORDER BACKGROUND — BLACK (NON-REFLECTORIZED) YELLOW (REFLECTORIZED)

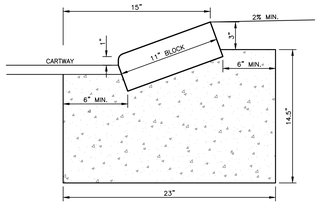
ROAD NARROWS SIGN (W5-1)
(NOT TO SCALE)



SIGN POST DETAIL
(NOT TO SCALE)

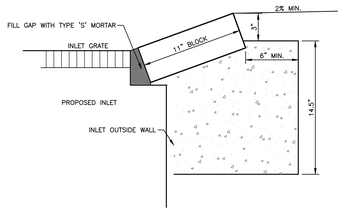
NOTES:

1. MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH PUB. 408.
2. SIGN POSTS AND SPLICE SLEEVES SHALL HAVE 9/16" DIAMETER HOLES OR DIE-CUT KNOCKOUTS ON 1" CENTERS ON ALL FOUR SIDES. ANCHOR POSTS AND ANCHOR SLEEVES SHALL HAVE 9/16" DIAMETER HOLES 1" CENTERS ON ALL FOUR SIDES.
3. BOLTS AND NUTS SHALL BE ASTM A 307, GRADE B.
4. DRIVE RIVETS MAY BE USED TO FASTEN SIGN BLANKS TO THE SIGN POST.
5. ALL SIGNS SHALL BE MOUNTED AT A HEIGHT OF 9 FT. PER PENNDOT STANDARDS.
6. ALL SIGNS SHALL HAVE BREAK-AWAY MOUNTS PER PENNDOT STANDARDS.

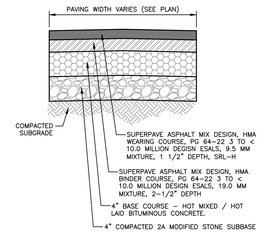


BELGIAN BLOCK MOUNTABLE CURB
(NOT TO SCALE)

1. MOUNTABLE BELGIAN BLOCK CURB TO BE USED IN BLVD. ISLANDS AND ALONG ALL PRIVATE ROADS
2. CONCRETE TO BE 3000 PSI CLASS A CONCRETE

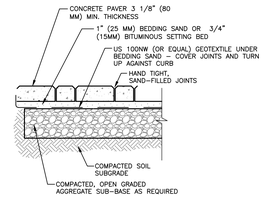


BELGIAN BLOCK AT INLET DETAIL
(NOT TO SCALE)



PAVING DETAIL
(NOT TO SCALE)

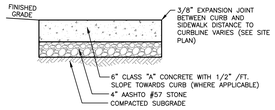
NOTE: THE MATERIALS AND CONSTRUCTION METHODS SHALL BE IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF SECTION 305, "BITUMINOUS CONCRETE BASE COURSE," PADOT PUBLICATION 408, AS AMENDED. THE BASE COURSE SHALL BE ROLLED WITH VIBRATORY ROLLER.



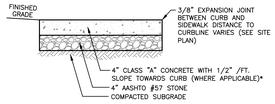
PAVER DETAIL
(NOT TO SCALE)

NOTE:

1. TO BE USED FOR PROPOSED DRIVEWAYS
2. BASE THICKNESS AND REINFORCING VARIES WITH TRAFFIC, CLIMATE, AND SUBGRADE CONDITIONS.

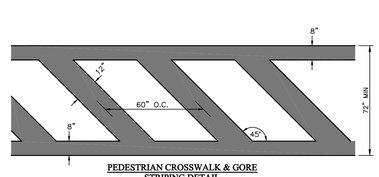


TYPICAL SIDEWALK SECTION WITHIN AREA OF DRIVEWAYS
(NOT TO SCALE)

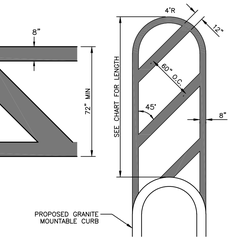


TYPICAL SIDEWALK SECTION
(NOT TO SCALE)

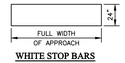
* – INCREASE CONCRETE THICKNESS TO 6" IN THE LOCATIONS OF PROPOSED DRIVEWAYS.



PEDESTRIAN CROSSWALK & GORE STRIPING DETAIL



TRANSVERSE MEDIAN MARKING



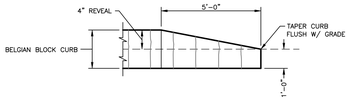
WHITE STOP BARS

PAVEMENT STRIPING DETAILS
(NOT TO SCALE)

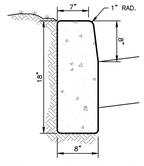
NOTE: ALL CROSSWALK, GORE & TRANSVERSE MEDIAN STRIPING SHALL BE HOT THERMOPLASTIC.

MALIN ROAD

BEGINNING STATION	ENDING STATION	TOTAL LENGTH
1+66	1+90	24 FT.
2+27	2+36	9 FT.
3+28	3+50	22 FT.
3+87	4+27	40 FT.
5+22	5+38	16 FT.
5+96	6+20	24 FT.
7+03	7+18	15 FT.
7+94	8+21	27 FT.
8+34	8+48	14 FT.
9+10	9+34	24 FT.
10+17	10+27	10 FT.



GRANITE CURB END TREATMENT DETAIL
NOT TO SCALE



STRAIGHT CONCRETE CURB DETAIL
NOT TO SCALE

NOTES:

1. CONCRETE TO BE CLASS A 3500 PSI 28-DAY STRENGTH AIR ENTRAINED.
2. SLOPE TOP SURFACE OF CURB BACK TO FRONT AT 1/4" PER FOOT
3. CURB TO BE CONSTRUCTED IN 10' SECTIONS WITH STEEL PLATE SEPARATIONS, STEEL PLATES TO BE REMOVED AFTER CONCRETE SETS UP. EXPANSION JOINTS OF 3/4" BITUMINOUS IMPREGNATED FELT TO BE INSTALLED EVERY 30 FEET.

COPYRIGHT

InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall Further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
CHARLES A. DOBSON
NO.PE-048187-E

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 Inch = 50'

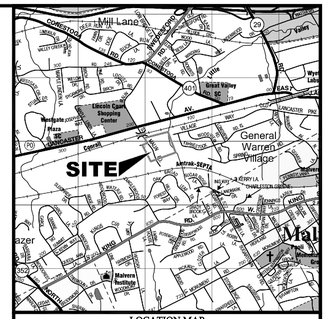
Date:	1/30/2015
Scale:	AS NOTED
Drawn by:	TAH
Checked by:	CAD
Project No.	10383

CONSTRUCTION DETAILS FOR

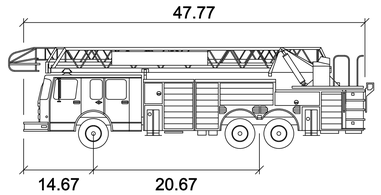
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355

EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SHEET **41** OF 43



LOCATION MAP
SCALE: 1" = 2000'



East Whiteland Fire Truck

	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT LINE

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
P.A. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHARLES A. DOBSON 062-E-044197-E

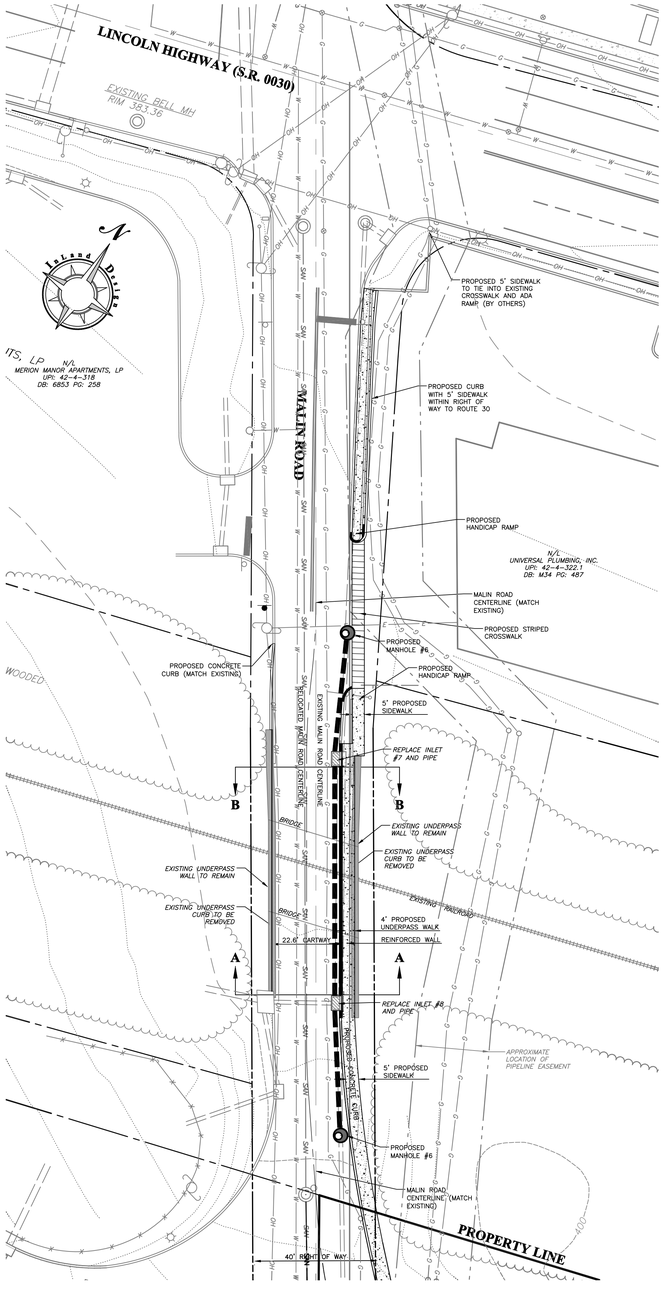
No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

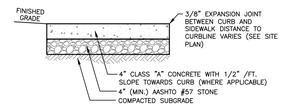
PRELIMINARY
LAND DEVELOPMENT PLAN

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50'

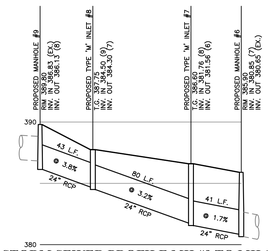
Date:	1/30/2015
Scale:	1" = 50'
Drawn by:	TAH
Checked by:	CAD
Project No.	10383

EMERGENCY VEHICLE TURNING TEMPLATE PLAN
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

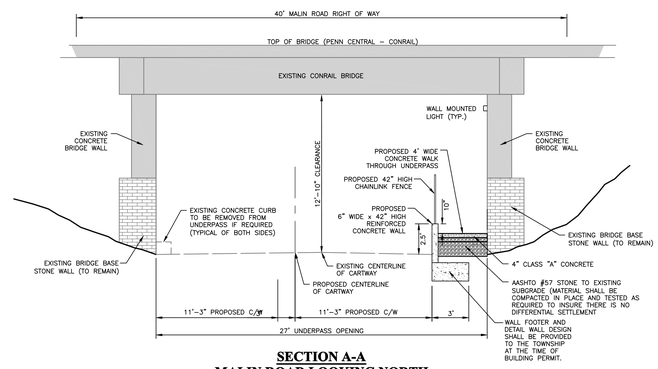




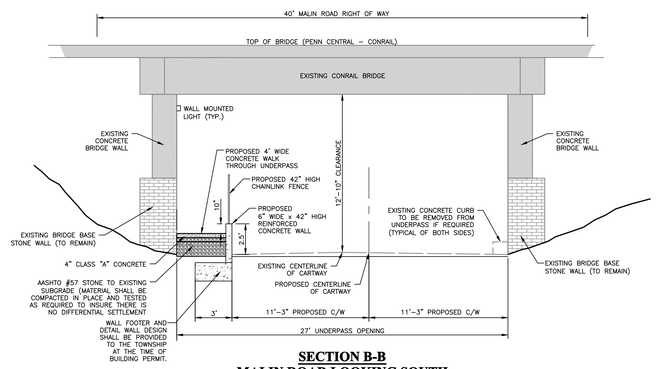
TYPICAL SIDEWALK SECTION
(NOT TO SCALE)



STORM SEWER PROFILE MH #9 TO MH #6
PIPE REPLACEMENT
SCALE: HORZ. 1"=50'
VERT. 1"=5'



SECTION A-A
MALIN ROAD LOOKING NORTH
SCALE: 1" = 5'



SECTION B-B
MALIN ROAD LOOKING SOUTH
SCALE: 1" = 5'

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689
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
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

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

Date: 1/30/2015
Scale: 1" = 100'
Drawn by: TAH
Checked by: CAD
Project No. 10383

UNDERPASS WALKWAY
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

KEY MAP
1" = 800'

SOILS DESCRIPTION

SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S.H.W.T.	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLIC SOIL GROUP
CtA	CONESTOGA SILT LOAM	0% - 3%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	1	B
CtB	CONESTOGA SILT LOAM	3% - 8%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
MaB	MANOR LOAM	3% - 8%	HIGH (ABOUT 9.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	2e	B
MaD	MANOR LOAM	15% - 25%	HIGH (ABOUT 9.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	4e	B
MaE	MANOR LOAM	25% - 35%	HIGH (ABOUT 9.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	6e	B
UrgB	URBAN LAND-CONESTOGA COMPLEX	0% - 8%	MODERATE (ABOUT 7.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
UrgD	URBAN LAND-CONESTOGA COMPLEX	8% - 25%	MODERATE (ABOUT 7.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	4e	B
UugD	URBAN LAND-UDORTHENTS, SCHIST AND GNEISS COMPLEX	8% - 25%	MODERATE (ABOUT 6.8 INCHES)	WELL DRAINED	ABOUT 60 INCHES	20 TO 70 INCHES	7e	B

GEOLOGY DESCRIPTION - ENTIRE SITE

SYMBOL	GEOLOGICAL AGE	MAIN ROCK TYPE	DESCRIPTION
Xo	LOWER PALEOZOIC	ALBITE-CHLORITE SCHIST	THE OCTORARO FORMATION IS A PHYLLITE THAT CONTAINS SOME SCHIST, HORNBLENDE GNEISS, AND GRANITIZED MEMBERS.

LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- FLOOD PLAIN LINE
- ZONING BOUNDARY LINE
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING TREELINE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WELL
- EXISTING WATER VALVE
- EXISTING SIGN
- TEST PIT LOCATION
- EXISTING FENCE LINE
- SOILS LINE AND DESCRIPTION
- EXISTING WETLANDS MODIFIED BY ACOE
- EXISTING WETLANDS
- EXISTING STORM STRUCTURES & PIPE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING DRIVEWAY
- EXISTING STONE DRIVE
- EXISTING CONCRETE SIDEWALK
- EXISTING WALL
- EXISTING SANITARY LATERAL
- EXISTING SANITARY FORCE MAIN
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL
- EXISTING RAIL ROAD TRACKS
- CONTAMINATED AREAS (TO BE REMEDIATED)
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT LINE
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED WELL
- PROPOSED WATER VALVE
- PROPOSED STOP BAR
- PROPOSED SIGN
- PROPOSED FIRE HYDRANT
- PROPOSED FENCE LINE
- PROPOSED STORM STRUCTURES & PIPE
- PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB LINE
- PROPOSED 5' CURB TAPER
- PROPOSED ROAD / PAVING
- PROPOSED DRIVEWAY
- PROPOSED CONCRETE SIDEWALK
- PROPOSED SEGMENTAL WALL
- PROPOSED SANITARY LATERAL
- PROPOSED SANITARY FORCE MAIN
- PROPOSED WATER LINE
- PROPOSED ELECTRIC LINE
- PROPOSED GAS LINE
- PROPOSED TELEPHONE LINE
- PROPOSED PHASE LINE
- PROPOSED CLEAR SITE TRIANGLE
- PROPOSED PAVERS
- PROPOSED STREET LIGHT

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any reuse without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689

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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

InLand Design
Civil Engineers, Surveyors & Land Development Consultants
16 Hagerty Blvd.
West Chester, PA 19382
www.InLandDesign.net
Phone: (484) 947-2928
Fax: (484) 947-2946
Info@InLandDesign.net

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHARLES A. DOBSON NO. PE-049195-E

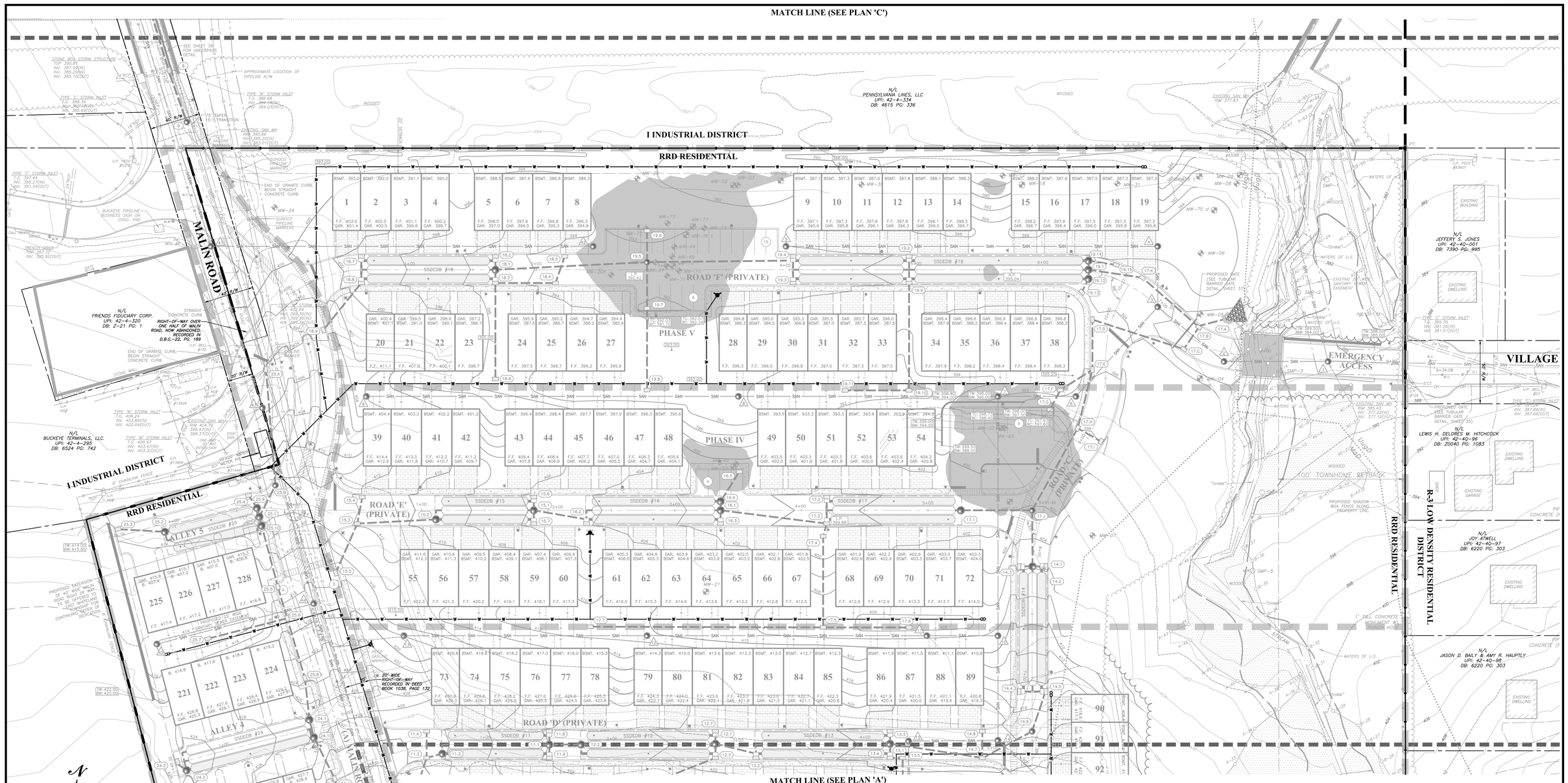
No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

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

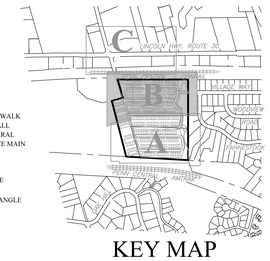
Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

GRADING & UTILITY PLAN 'A'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA



LEGEND

- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- FLOOD PLAIN LINE
- ZONING BOUNDARY LINE
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING TREELINE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WELL
- EXISTING WATER VALVE
- EXISTING SIGN
- TEST PIT LOCATION
- EXISTING FENCE LINE
- SOILS LINE AND DESCRIPTION
- EXISTING WETLANDS MODIFIED BY ACOE
- EXISTING WETLANDS
- EXISTING STORM STRUCTURES & PIPE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING ROAD CENTERLINE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING DRIVEWAY
- EXISTING STONE DRIVE
- EXISTING CONCRETE SIDEWALK
- EXISTING WALL
- EXISTING SANITARY LATERAL
- EXISTING SANITARY FORCE MAIN
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- EXISTING WATERS OF THE U.S.
- EXISTING WETLANDS
- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL
- EXISTING RAIL ROAD TRACKS
- CONTAMINATED AREAS (TO BE REMEDIATED)
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT LINE
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED WELL
- PROPOSED WATER VALVE
- PROPOSED STOP BAR
- PROPOSED SIGN
- PROPOSED FIRE HYDRANT
- PROPOSED FENCE LINE
- PROPOSED STORM STRUCTURES & PIPE
- PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB LINE
- PROPOSED 5' CURB TAPER
- PROPOSED ROAD / PAVING
- PROPOSED DRIVEWAY
- PROPOSED CONCRETE SIDEWALK
- PROPOSED SEGMENTAL WALL
- PROPOSED SANITARY LATERAL
- PROPOSED SANITARY FORCE MAIN
- PROPOSED WATER LINE
- PROPOSED ELECTRIC LINE
- PROPOSED GAS LINE
- PROPOSED TELEPHONE LINE
- PROPOSED PHASE LINE
- PROPOSED CLEAR SITE TRIANGLE
- PROPOSED PAVERS
- PROPOSED STREET LIGHT



KEY MAP
1" = 800'

SOILS DESCRIPTION

SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S.H.W.T.	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLIC SOIL GROUP
CrA	CONESTOGA SILT LOAM	0% - 3%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	1	B
CrB	CONESTOGA SILT LOAM	3% - 8%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
MaB	MANOR LOAM	3% - 8%	HIGH (ABOUT 9.6 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	2e	B
MaD	MANOR LOAM	15% - 25%	HIGH (ABOUT 9.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	4e	B
MaE	MANOR LOAM	25% - 35%	HIGH (ABOUT 9.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	72 TO 99 INCHES	6e	B
UrgB	URBAN LAND-CONESTOGA COMPLEX	0% - 8%	MODERATE (ABOUT 7.4 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	2e	B
UrgD	URBAN LAND-CONESTOGA COMPLEX	8% - 25%	MODERATE (ABOUT 7.5 INCHES)	WELL DRAINED	MORE THAN 80 INCHES	60 TO 99 INCHES	4e	B
UugD	URBAN LAND-UDORTHENTS, SCHIST AND GNEISS COMPLEX	8% - 25%	MODERATE (ABOUT 6.8 INCHES)	WELL DRAINED	ABOUT 60 INCHES	20 TO 70 INCHES	7e	B

GEOLOGY DESCRIPTION - ENTIRE SITE

SYMBOL	GEOLOGICAL AGE	MAIN ROCK TYPE	DESCRIPTION
Xo	LOWER PALEOZOIC	ALBITE-CHLORITE SCHIST	THE OCTORARO FORMATION IS A PHYLLITE THAT CONTAINS SOME SCHIST, HORNBLENDE GNEISS, AND GRANITIZED MEMBERS.

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be loaned, copied or reproduced in whole or in part, nor used for any other purpose without first obtaining the expressed written permission and consent of InLand Design, LLC. Any reuse without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA. act 172 of 1986 requires
three working days notice
Serial Numbers:
20141642689
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.

UPI: 42-4-321, 42-4-321.1 & 42-4-321.2

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

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHARLES A. DOBSON (ID.PE-049197-E)

No.	Date:	Description:
1	06/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED FEBRUARY 23, 2015
2	07/09/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JUNE 19, 2015
3	09/04/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED JULY 17, 2015
4	12/03/2015	REVISED PER TOWNSHIP ENGINEER REVIEW LETTER DATED SEPTEMBER 17, 2015
5	1/6/2017	REVISED PER DEP COMMENTS & TOWNSHIP REVIEW LETTER DATED JANUARY 6, 2016

PRELIMINARY
LAND DEVELOPMENT PLAN

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

Date: 1/30/2015
Scale: 1" = 30'
Drawn by: TAH
Checked by: CAD
Project No. 10383

GRADING & UTILITY PLAN 'B'
FOR
MALIN ROAD DEVELOPMENT
MALIN ROAD, MALVERN, PA 19355
EAST WHITELAND TOWNSHIP • CHESTER COUNTY • PENNSYLVANIA

SHEET **12** OF 43