

PRELIMINARY AND FINAL LAND DEVELOPMENT PLAN FOR CALVERT HILL

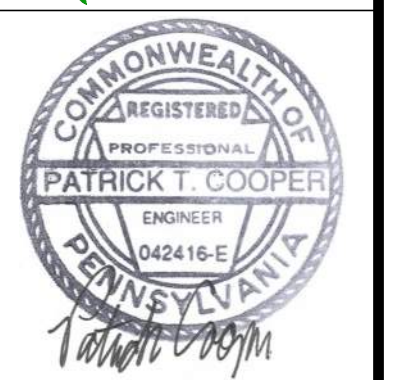
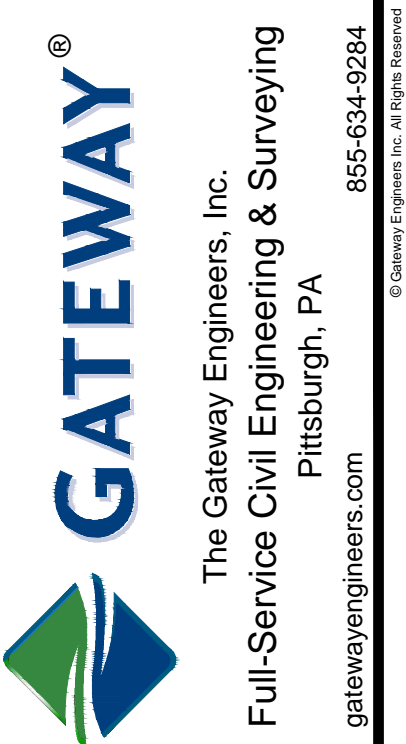
A PLANNED COMMUNITY
971 BEAVER GRADE ROAD CORAOPOLIS, PA 15108

PREPARED FOR:
CHARTER HOMES AT CALVERT HILL
1190 DILLERVILLE ROAD
LANCASTER, PA 17601

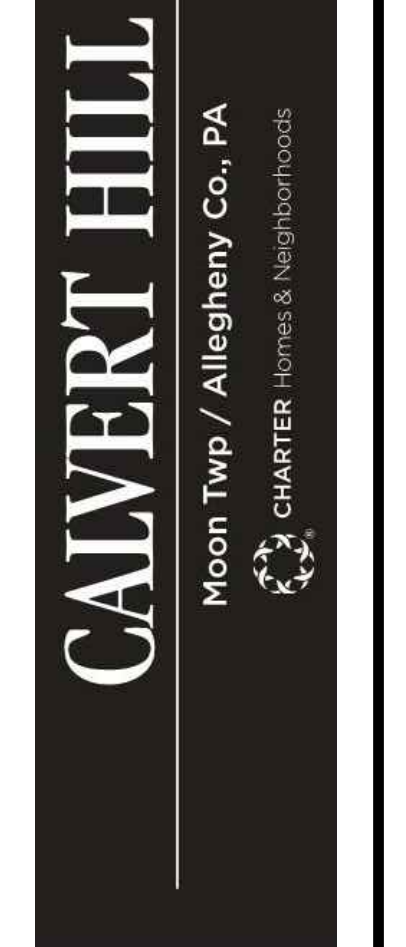
LIST OF UTILITIES	
DUQUESNE LIGHT COMPANY 214 MEADOWLARK LANE ALTIQUIPPA, PA 15001 CONTACT: TOM HAMILTON PHONE:	
COLUMBIA GAS OF PA 350 KENTUCKY AVENUE ROCHESTER, PA 15047 CONTACT: JERRY LITZENBERG PHONE:	
PEOPLES GAS COMPANY 1315 GRINGO ROAD ALTIQUIPPA, PA 15001 CONTACT: LANE ECHEMENT PHONE:	
BUCKEYE PIPELINE COMPANY 469 MOON CLINTON ROAD CORAOPOLIS, PA 15108 CONTACT: TIM BLOCK PHONE:	
COMCAST 1530 CHHARTIERS AVENUE PITTSBURGH, PA 15204 CONTACT: JERRY FREEMAN PHONE:	
VERIZON PENNSYLVANIA 1300 CUDDY LANE CUDDY, PA 15031 CONTACT: TIM WESTOVER PHONE: 412-914-2229	
MOON TOWNSHIP MUNICIPAL AUTHORITY 1700 BEAVER GRADE ROAD MOON TOWNSHIP, PA 15108 CONTACT: DEBBIE WALKER PHONE:	
<p>CALL BEFORE YOU DIG ! PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL</p> <p>Pennsylvania One Call System, Inc. 8-1-1 POCS Serial No. 20142200148</p>	



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REVISION RECORD		
No.	Date	REVISION PER TOWNSHIP COMMENTS
01	10/07/2015	REVISED PER TOWNSHIP COMMENTS
02	10/30/2015	REVISED STORM SEWER AND PCSM LAYOUT
04	11/04/2015	RESUBMISSION TO TOWNSHIP
05	-	-
06	-	-
07	-	-
08	-	-

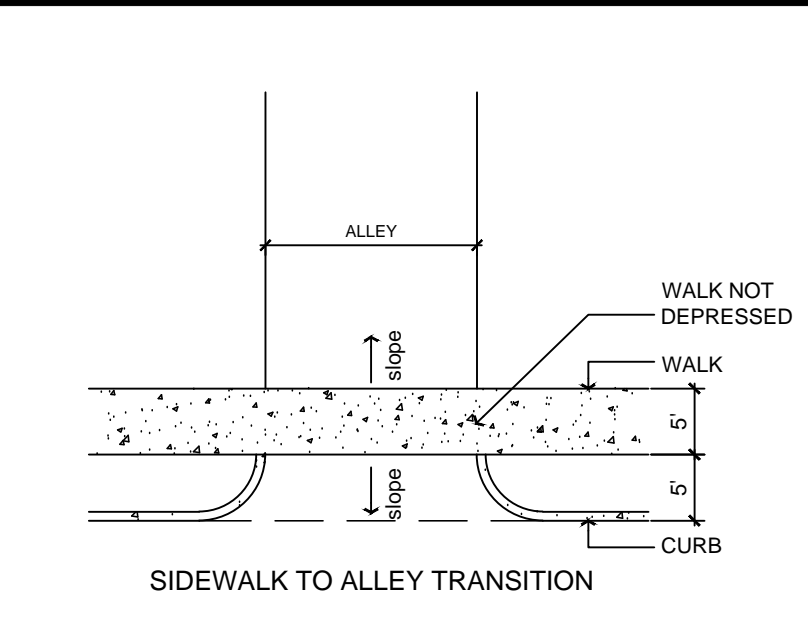


LAND DEVELOPMENT PLAN FOR CALVERT HILL
971 BEAVER GRADE ROAD CORAOPOLIS, PA 15108
A PLANNED COMMUNITY
PREPARED FOR:
CHARTER HOMES AT CALVERT HILL
1190 DILLERVILLE ROAD
LANCASTER, PA 17601

COVER SHEET

Project Number: 18833-0006
Drawing Scale: N.T.S.
Date Issued: SEPT. 2015
Index Number: --
Drawn By: PML
Checked By: DMH
Project Manager: DMH

CS



SITE LEGEND

1	MOON TOWNSHIP STD. DETAIL R-2-7 PRECAST CONCRETE MANHOLE
1	PROPOSED 48" SANITARY MANHOLE
3	PROPOSED CLEANOUT
2	PROPOSED TYPE M INLET
15	PROPOSED WALL
14	PROPOSED POST AND WIRE AG. FENCE
3	PROPOSED FLUSH CURB
15	6" THICK CONCRETE PAVEMENT
15	PROPOSED MULTIPURPOSE WALKING AND BIKING TRAIL DETAIL S-6
15	PROPOSED SIDEWALK
8	MOON TOWNSHIP STANDARD CONCRETE SIDEWALK DETAIL R-6
10	MOON TOWNSHIP STD. DETAIL R-2 ROADWAY PAVING MATERIAL
11	PROPOSED PAVEMENT PATCH
2	PROPOSED SIGN
2	PROPOSED PARKING COUNT

- SITE PLAN NOTES:**
- CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR THE EXACT LOCATION OF UTILITY ENTRANCES, BUILDING DIMENSIONS, ROOF LEAKERS, EXIT DOORS, EXIT RAMPS AND PORCHES.
 - ALL DIMENSIONS ARE TO BUILDING FACE, FACE OF CURB OR EDGE OF SIDEWALK UNLESS NOTED OTHERWISE.
 - CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS FOR THE INSTALLATION OF SIGNAGE AND PAVEMENT MARKINGS AS SHOWN ON THE CONSTRUCTION PLANS.
 - ALL DIMENSIONS OVERSIDE SCALED DIMENSIONS.
 - ALL NEW MATERIALS AND CONSTRUCTION METHODS MUST MEET PADOT PUBLICATION 408 STANDARDS.
 - CONTRACTOR TO WORK AROUND EXISTING UTILITIES. IF ADJUSTMENTS ARE NECESSARY, WORK WILL BE CONSIDERED INCIDENTAL.
 - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE NECESSARY SAFETY MEASURES TO SECURE THE SITE DURING CONSTRUCTION ACTIVITIES.
 - THE GATEWAY ENGINEERS, INC. IS NOT RESPONSIBLE TO INSPECT JOB SITES TO ENSURE COMPLIANCE WITH OCCUPATIONAL SAFETY HEALTH ADMINISTRATION (OSHA) STANDARDS.
 - TACK COAT SHALL BE REQUIRED IN PARKING LOTS ARE NOT COMPLETED WITHIN 3 DAYS OF EACH OTHER. TACK COAT VERTICAL SURFACES ALONG SAW CUT LIMITS.
 - ALL NON LANDSCAPED ISLANDS SHALL BE PAINTED WITH STRIPES 4" WIDE AT 40' AND 2 FEET C.C. UNLESS OTHERWISE SPECIFIED. USE ALKYD RESIN TYPE, READY MIX COMPLYING WITH ASHTO M281, TYPE I COLOR WHITE.
 - WITHIN THE LIMITS OF THE PROPOSED DRIVEWAYS THE CONTRACTOR SHALL SAW CUT AND REMOVE THE EXISTING PAVEMENT AND THE EXISTING CURB AND SHOULDER. THE CURB SECTION OF THE PROPOSED DRIVEWAYS SHALL BE DEPRESSED ACROSS THE LIMITS OF EACH DRIVEWAY. THE PROPOSED CURB SHALL MATCH INTO THE EXISTING PAVEMENT AT ALL DRIVEWAY LOCATIONS. THE CONTRACTOR SHALL CLEAN CONTACT SURFACES OF ALL EXISTING PAVEMENTS BEFORE PLACEMENT OF PROPOSED ADJACENT PAVEMENT. ALL JOINTS SHALL BE SEALED WITH A 4-INCH STRIP OF PG 64-22.
 - THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH PA DOT PUBLICATION 213 "WORK ZONE TRAFFIC CONTROL" (LATEST REVISION), AND AS REQUIRED BY LOCAL AGENCIES WHEN WORKING IN AND/OR ALONG STREETS, ROADS, HIGHWAYS, ETC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL AND COORDINATION WITH LOCAL AND/OR STATE AGENCIES REGARDING THE NEED, EXTENT, AND CONDITIONS ASSOCIATED WITH INSTALLING AND MAINTAINING TRAFFIC CONTROL MEASURES.
 - INTERIOR DRIVEWAY AND SIDEWALK LOCATION ARE APPROXIMATE AND MAY BE RELOCATED DURING CONSTRUCTION.
 - THIS PLAN CONTemplates THE CREATION OF UNITS AND COMMON ELEMENTS UNDER THE PENNSYLVANIA UNIFORM PLANNED COMMUNITY ACT, 68 P.S.A. § 5101 ET SEQ., AS AMENDED. FOR THE MULTIFAMILY (TOWNHOUSE) DWELLINGS, A SEPARATE UNIT WILL BE ESTABLISHED FOR EACH TOWNHOUSE DWELLING, WITH THE UNIT LINES MATCHING THE FOOTPRINT OF EACH TOWNHOUSE DWELLING AND EACH UNIT COMPRISING THE FOOTPRINT LAND AREA AND THE IMPROVEMENTS LOCATED THEREON. COMMON ELEMENTS OF THE PLANNED COMMUNITY SHALL CONSIST OF ALL LAND AREAS AND IMPROVEMENTS THEREON, OUTSIDE OF THE UNITS. IN APPROVING THIS PLAN, THE TOWNSHIP APPROVES THE CREATION OF SUCH PLANNED COMMUNITY UNITS AND COMMON ELEMENTS VIA EXECUTION AND RECORDATION OF A DECLARATION OF PLANNED COMMUNITY PURSUANT TO THE PENNSYLVANIA UNIFORM PLANNED ACT, 68 P.S.A. § 5101 ET SEQ., AS AMENDED.
 - UNDER SAID SECTION 2234(H)(8)(b), DEVELOPER IS PROPOSING TO PA \$80 PER DWELLING UNIT IN LIEU OF RECREATION LAND, REDUCED TO \$40 PER DWELLING UNIT. THE DEVELOPER SHALL BE SET FORTH ON THE PERMITS OF THE PROPERTY AS SHALL BE SET FORTH ON THE APPROVED ENGINEER'S COST ESTIMATE FOR THE DEVELOPMENT.

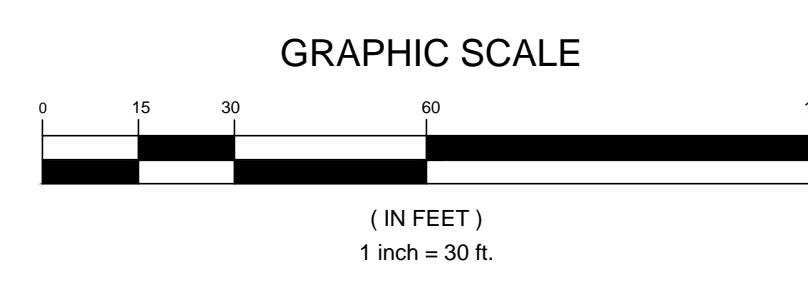
ZONING REQUIREMENTS

SITE ZONING: C-1 / CARNOT VILLAGE OVERLAY DISTRICT
USE: TOWNHOUSE

	TOWNSHIP STANDARD	REQUIRED	PROVIDED
LOT AREA	10,000 S.F. MIN.		330,298.98 S.F.
LOT FRONTAGE	65'		517' +/-
IMPERVIOUS COVERAGE	80%		53% (3.78 AC)
BUILDING HEIGHT	40'		NOT TO EXCEED 40'
BUILDING COVERAGE	50%		22.5%
BUILDING SEPARATION			>30'
BUILDING DENSITY			56
FRONT YARD			
REAR YARD			53' +/-
REAR YARD			30'
SIDE YARD			111' +/-
SIDE YARD			10'
SIDE YARD			41' +/-
PARKING (TOWNHOUSE 1.5 / DWELLING UNIT + 0.5 / UNIT FOR VISITOR PARKING)			
TOTAL	56 UNITS x 1.5 = 84 MIN.		2 INTEGRAL SPACES / UNIT = 112 UNITS HAVE OPTION FOR 3RD PARKING BAY
VISITOR PARKING	56 UNITS x 0.5 = 28 MIN.		28
ADA ACCESSIBLE		2 MIN.	2

DENSITY CALCULATION:
8 Dwelling Units/ Acre x (6.29 + 0.54 x 1.29) = 56 Units

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8-1-1
POCS Serial No. 20142200148



GATEWAY
The Gateway Engineers, Inc.
Full-Service Civil Engineering & Surveying
Pittsburgh, PA
gatewayengineers.com

COMMONWEALTH OF PENNSYLVANIA
PROFESSIONAL ENGINEER
PATRICK T. COOPER
No. 10416
Exp. 12/31/2015

REVISION RECORD

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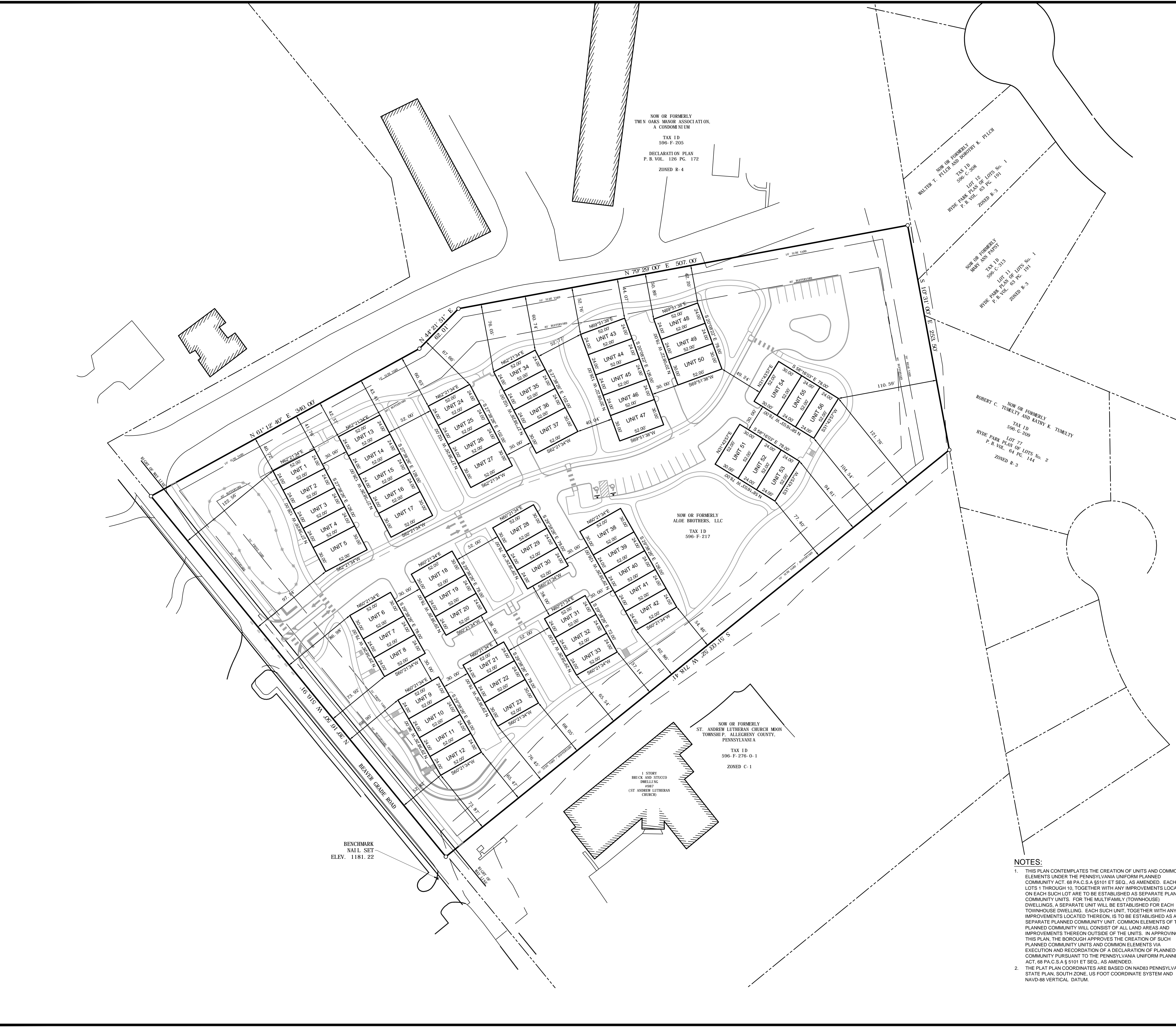
CALLVERT HILL
Moon Twp / Allegheny Co., PA
CHARTER - Homes & Neighborhoods

SITE PLAN

Project Number: 18833-0006
Drawing Scale: 1" = 30'
Date Issued: SEPT, 2015
Index Number: -
Drawn By: PML
Checked By: DMH
Project Manager: DMH

C101

Plan & Elevation: C:\Projects\18833\18833-006_C102_PLAT_PLAN.dwg
 Plot Date: 11/20/15 11:19 AM
 User: M.L. Lyons
 Scale: 1"=50'
 15.01



NOW OR FORMERLY
 TWIN OAKS MANOR ASSOCIATION,
 A CONDOMINIUM
 TAX ID
 596-F-205
 DECLARATION PLAN
 P. R. VOL. 126 PG. 172
 ZONED R-4

NOW OR FORMERLY
 WALTER T. PETER AND ROBERTY K. PETER
 TAX ID
 596-C-308
 HYDE PARK PLAY LOT No. 1
 P. R. VOL. 03 PG. 104
 ZONED R-3

NOW OR FORMERLY
 ANDY AND ROBERTY
 TAX ID
 596-C-313
 HYDE PARK PLAY LOT No. 1
 P. R. VOL. 03 PG. 104
 ZONED R-3

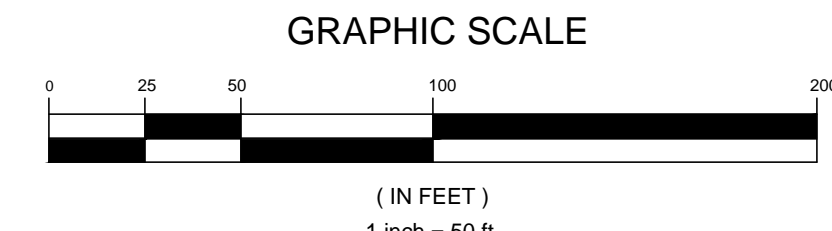
NOW OR FORMERLY
 ROBERT C. TUMBLEY AND KATHY K. TUMBLEY
 TAX ID
 596-C-209
 HYDE PARK PLAY LOT No. 2
 P. R. VOL. 04 PG. 144
 ZONED R-3

NOW OR FORMERLY
 ALICE BROTHERS, LLC
 TAX ID
 596-F-217

NOW OR FORMERLY
 ST. ANDREW LUTHERAN CHURCH MOON
 TOWNSHIP, ALLEGHENY COUNTY,
 PENNSYLVANIA
 TAX ID
 596-F-276-0-1
 ZONED C-1

1 STORY
 BRICK AND STUCCO
 DWELLING
 496
 (ST. ANDREW LUTHERAN
 CHURCH)

BENCHMARK
 NAIL SET
 ELEV. 1181.22

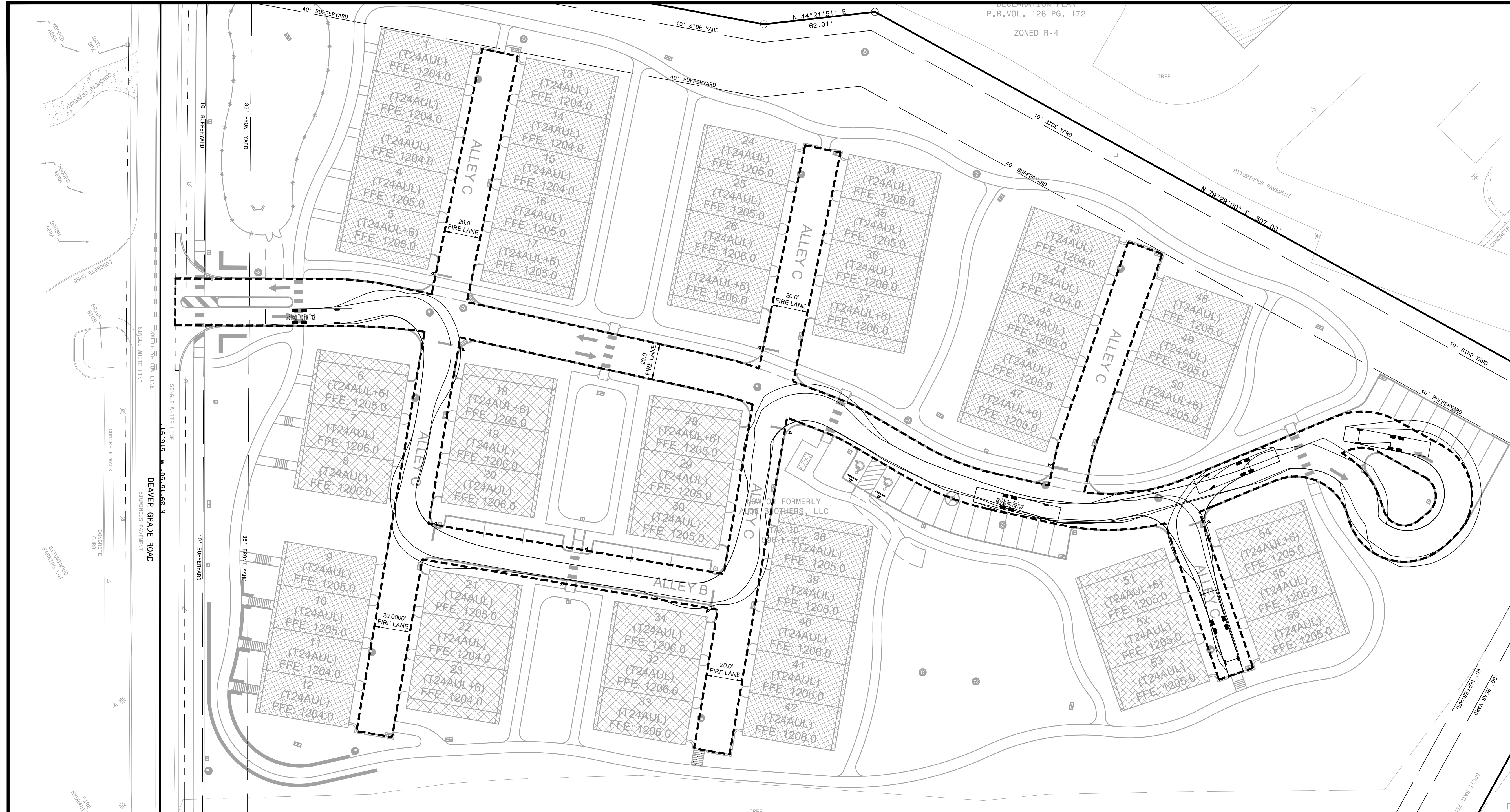


NOTES:
 1. THIS PLAN CONTEMPLATES THE CREATION OF UNITS AND COMMON ELEMENTS UNDER THE PENNSYLVANIA UNIFORM PLANNED COMMUNITY ACT, 68 P.A.C.S.A §5101 ET SEQ., AS AMENDED. EACH OF LOTS 1 THROUGH 10, TOGETHER WITH ANY IMPROVEMENTS LOCATED ON EACH SUCH LOT ARE TO BE ESTABLISHED AS SEPARATE PLANNED COMMUNITY UNITS. FOR THE MULTIFAMILY (TOWNHOUSE) DWELLINGS, A SEPARATE UNIT WILL BE ESTABLISHED FOR EACH TOWNHOUSE DWELLING. EACH SUCH UNIT, TOGETHER WITH ANY IMPROVEMENTS LOCATED THEREON, IS TO BE ESTABLISHED AS A SEPARATE PLANNED COMMUNITY UNIT. COMMON ELEMENTS OF THE PLANNED COMMUNITY WILL CONSIST OF ALL LAND AREAS AND IMPROVEMENTS THEREON OUTSIDE OF THE UNITS. IN APPROVING THIS PLAN, THE BOROUGH APPROVES THE CREATION OF SUCH PLANNED COMMUNITY UNITS AND COMMON ELEMENTS VIA EXECUTION AND RECORDATION OF A DECLARATION OF PLANNED COMMUNITY PURSUANT TO THE PENNSYLVANIA UNIFORM PLANNED ACT, 68 P.A.C.S.A § 5101 ET SEQ., AS AMENDED.
 2. THE PLAT PLAN COORDINATES ARE BASED ON NAD83 PENNSYLVANIA STATE PLAN, SOUTH ZONE, US FOOT COORDINATE SYSTEM AND NAVD-88 VERTICAL DATUM.

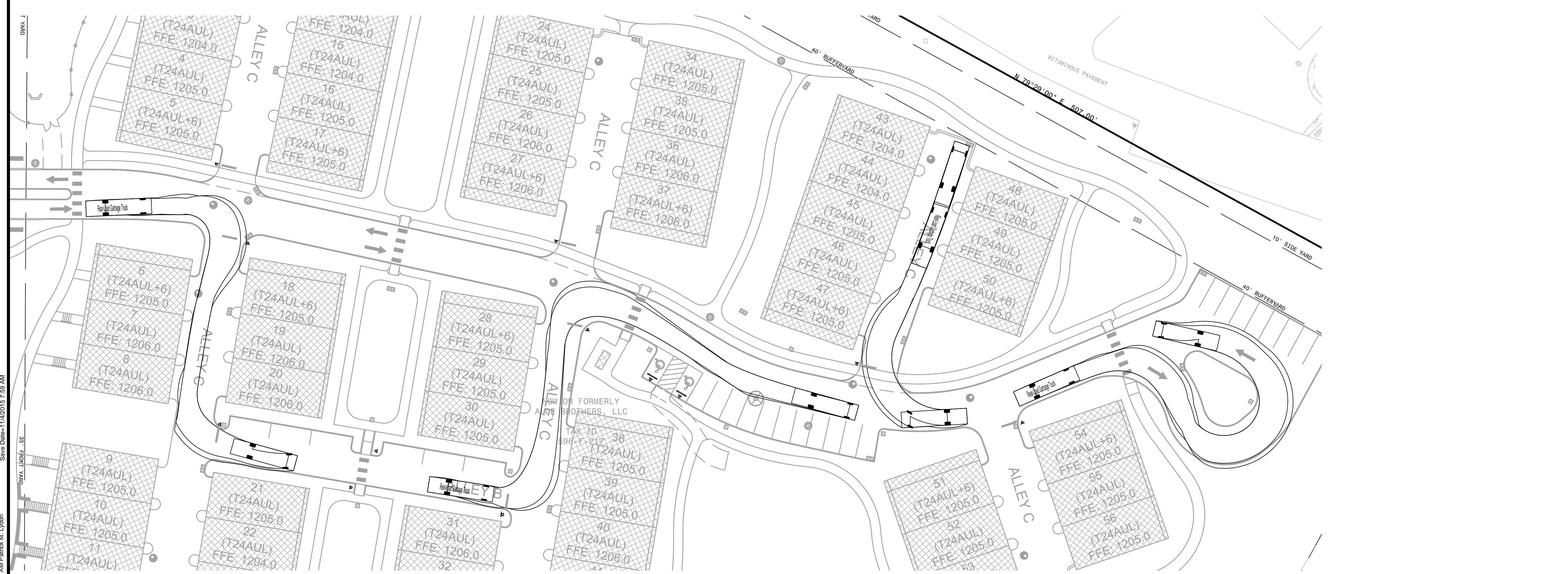
The Gateway Engineers, Inc.
 Full-Service Civil Engineering & Surveying
 400 Holiday Drive, Suite 300, Pittsburgh, PA 15220
 gatewayengineers.com 855-634-9284

**CALVERT HILL
 LOT DECLARATION PLAT**
 SITUATE IN
**CORAOPOLIS
 ALLEGHENY COUNTY, PA**
 MADE FOR
CHARTER HOMES AT CALVERT HILL

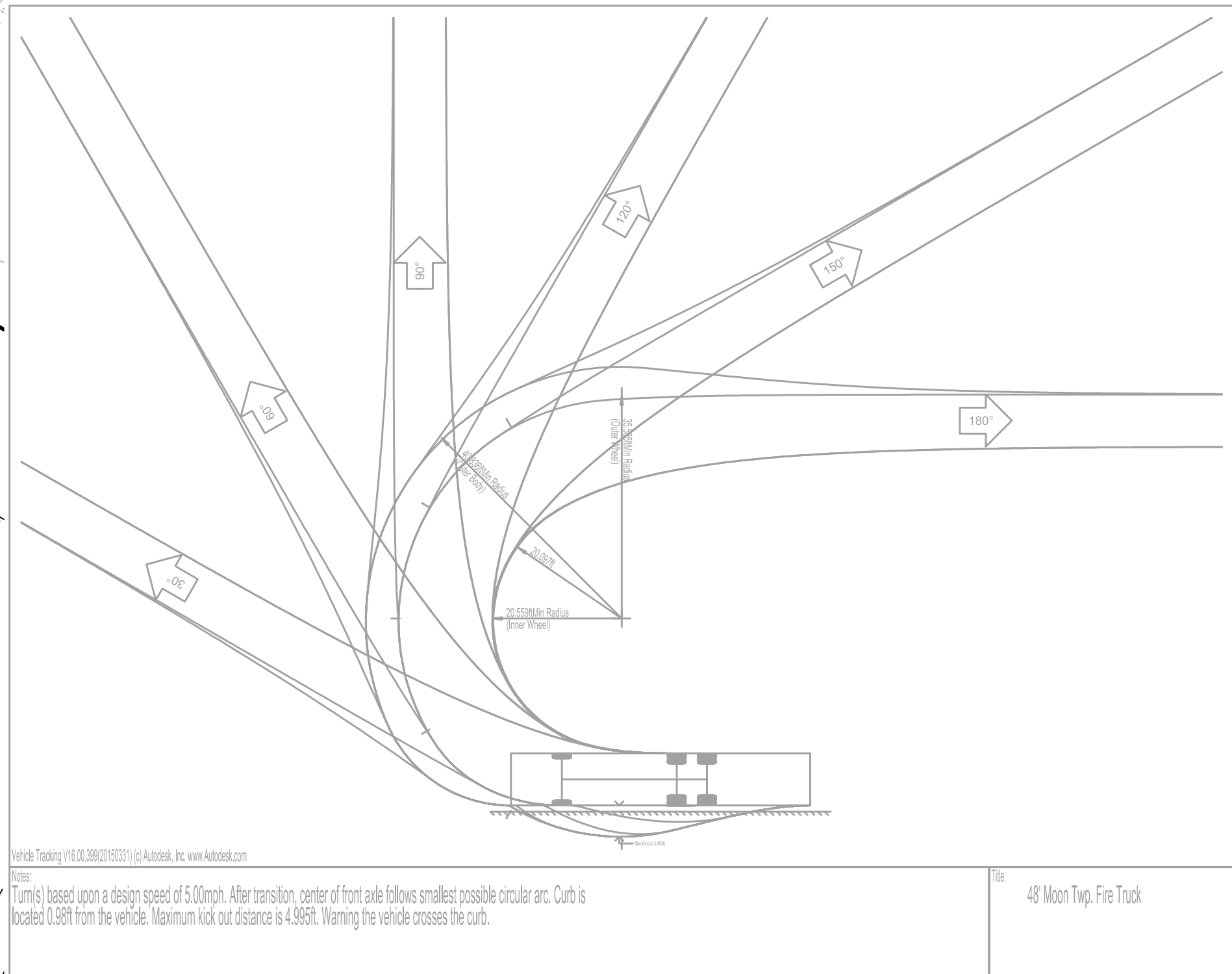
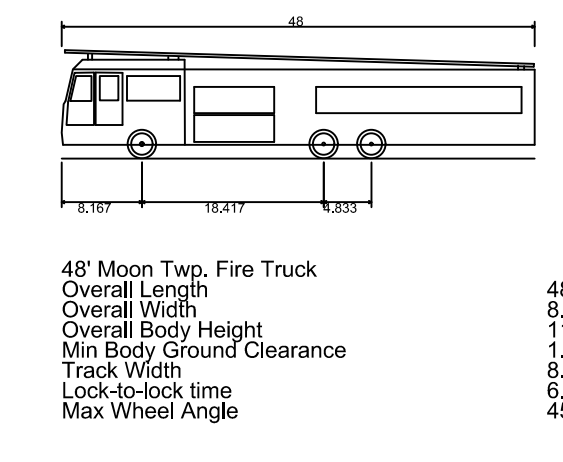
PM: DMH	DB: LPW	CB: PTC	SCALE: 1" = 50'
Date: 2015-10-07			Job Number: C-18833-0006
Dwg No:			



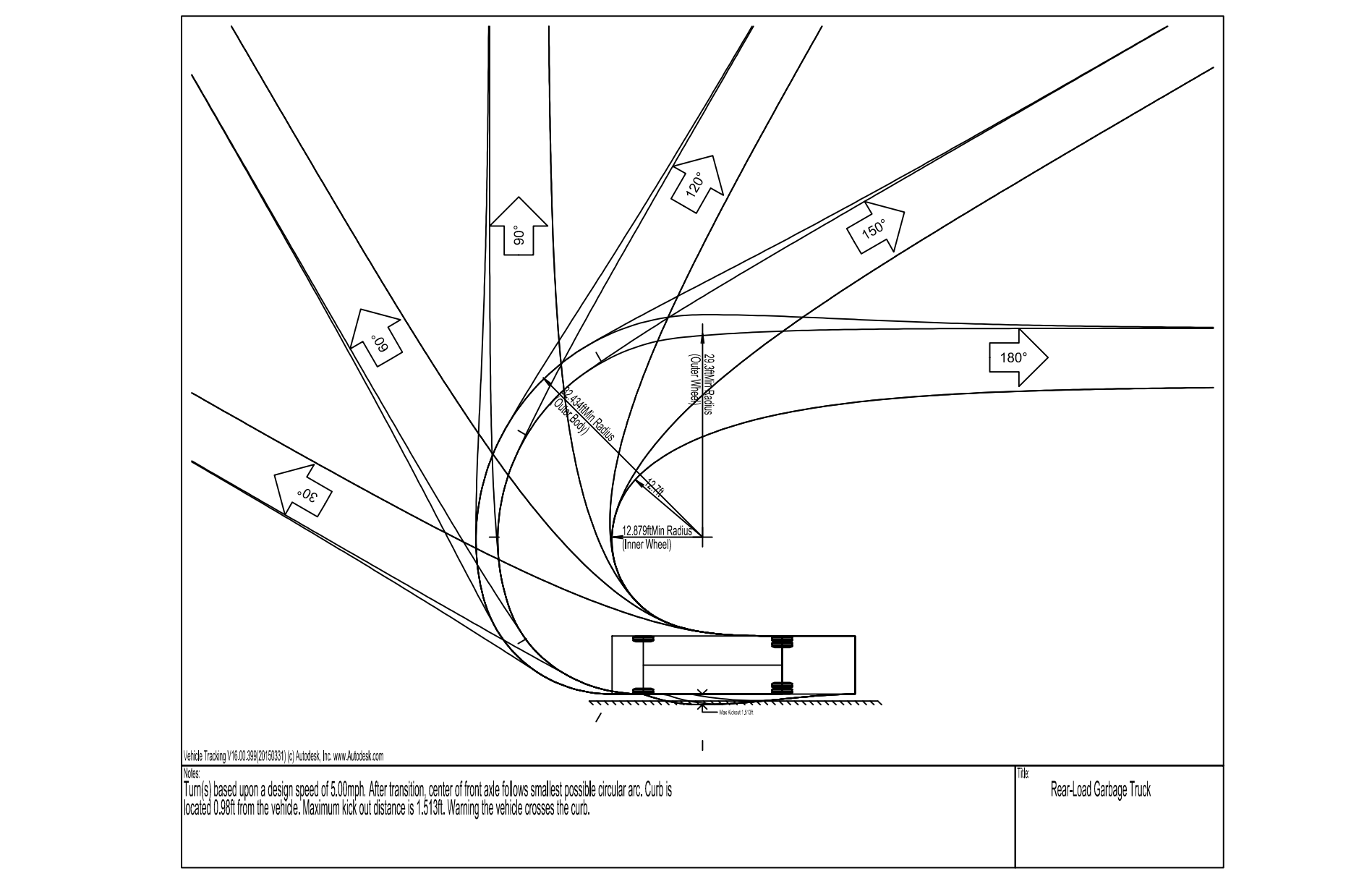
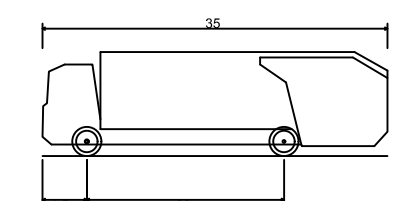
48' FIRE TRUCK CIRCULATION (102' LADDER)



GARBAGE TRUCK CIRCULATION

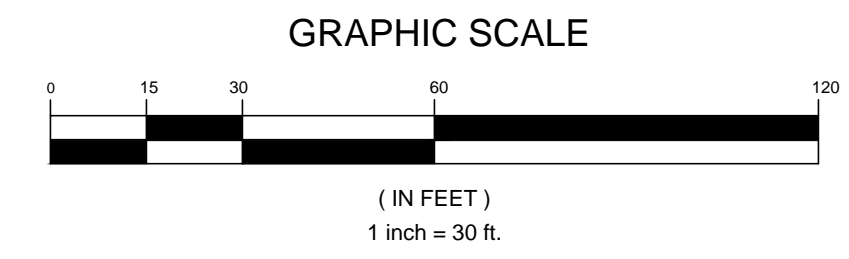


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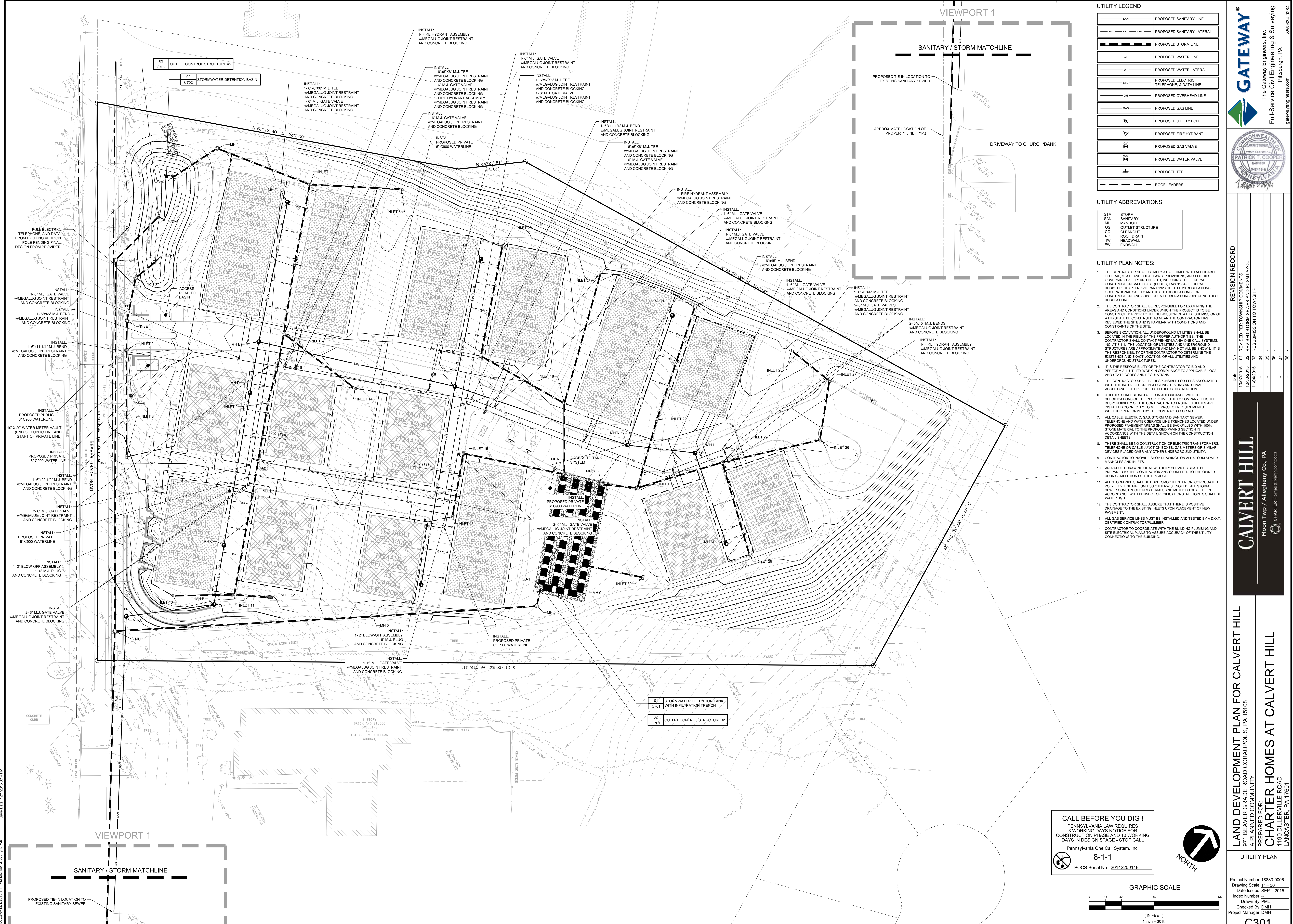
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TURNING EXHIBIT

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 Checked By: DMH
 Project Manager: DMH

C103



UTILITY LEGEND

— SAN —	PROPOSED SANITARY LINE
— SAN — SAN — SAN —	PROPOSED SANITARY LATERAL
— ST —	PROPOSED STORM LINE
— WL —	PROPOSED WATER LINE
— WL —	PROPOSED WATER LATERAL
— ETD —	PROPOSED ELECTRIC, TELEPHONE, & DATA LINE
— OH —	PROPOSED OVERHEAD LINE
— GAS —	PROPOSED GAS LINE
— U —	PROPOSED UTILITY POLE
— F —	PROPOSED FIRE HYDRANT
— V —	PROPOSED GAS VALVE
— V —	PROPOSED WATER VALVE
— T —	PROPOSED TEE
— RL —	ROOF LEADERS

UTILITY ABBREVIATIONS

STM	STORM
SAN	SANITARY
MH	MANHOLE
OS	OUTLET STRUCTURE
CD	CLEANOUT
RD	ROOF DRAIN
HW	HEADWALL
EW	ENDWALL

- UTILITY PLAN NOTES:**
- THE CONTRACTOR SHALL COMPLY AT ALL TIMES WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, PROVISIONS, AND POLICIES GOVERNING SAFETY AND HEALTH INCLUDING THE FEDERAL CONSTRUCTION SAFETY ACT (PUBLIC LAW 91-54), FEDERAL REGISTER, CHAPTER XVI, PART 1926 OF TITLE 29 REGULATIONS, OCCUPATIONAL SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION, AND SUBSEQUENT PUBLICATIONS UPDATING THESE REGULATIONS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING THE AREAS AND CONDITIONS UNDER WHICH THE PROJECT IS TO BE CONSTRUCTED PRIOR TO THE SUBMISSION OF A BID. SUBMISSION OF A BID SHALL BE CONSTRUED TO MEAN THE CONTRACTOR HAS REVIEWED THE SITE AND IS FAMILIAR WITH CONDITIONS AND CONSTRAINTS OF THE SITE.
 - BEFORE EXCAVATION, ALL UNDERGROUND UTILITIES SHALL BE LOCATED IN THE FIELD BY THE PROPER AUTHORITIES. THE CONTRACTOR SHALL CONTACT PENNSYLVANIA ONE CALL SYSTEMS, INC. AT 811. THE LOCATION OF UTILITIES AND UNDERGROUND STRUCTURES ARE APPROXIMATE AND MAY NOT ALL BE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND EXACT LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BID AND PERFORM ALL UTILITY WORK IN COMPLIANCE TO APPLICABLE LOCAL AND STATE CODES AND REGULATIONS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR FEES ASSOCIATED WITH THE INSTALLATION, INSPECTING, TESTING AND FINAL ACCEPTANCE OF PROPOSED UTILITIES CONSTRUCTION.
 - UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE RESPECTIVE UTILITY COMPANY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE UTILITIES ARE INSTALLED CORRECTLY TO MEET PROJECT REQUIREMENTS WHETHER PERFORMED BY THE CONTRACTOR OR NOT.
 - ALL CABLE, ELECTRIC, GAS, STORM AND SANITARY SEWER, TELEPHONE AND WATER SERVICE LINE TRENCHES LOCATED UNDER PROPOSED PAVEMENT AREAS SHALL BE BACKFILLED WITH 100% STONE MATERIAL TO THE PROPOSED FINISH SURFACE IN ACCORDANCE WITH THE DETAIL SHOWN ON THE CONSTRUCTION DETAIL SHEETS.
 - THERE SHALL BE NO CONSTRUCTION OF ELECTRIC TRANSFORMERS, TELEPHONE OR CABLE JUNCTION BOXES, GAS METERS OR SIMILAR DEVICES PLACED OVER ANY OTHER UNDERGROUND UTILITY.
 - CONTRACTOR TO PROVIDE SHOP DRAWINGS ON ALL STORM SEWER MANHOLES AND INLETS.
 - AN AS-BUILT DRAWING OF NEW UTILITY SERVICES SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE OWNER UPON COMPLETION OF THE PROJECT.
 - ALL STORM PIPE SHALL BE HDPE, SMOOTH INTERIOR, CORRUGATED POLYETHYLENE PIPE UNLESS OTHERWISE NOTED. ALL STORM SEWER CONSTRUCTION MATERIALS AND METHODS SHALL BE IN ACCORDANCE WITH PENNDOT SPECIFICATIONS. ALL JOINTS SHALL BE WATERTIGHT.
 - THE CONTRACTOR SHALL ASSURE THAT THERE IS POSITIVE DRAINAGE TO THE EXISTING INLETS UPON PLACEMENT OF NEW PAVEMENT.
 - ALL GAS SERVICE LINES MUST BE INSTALLED AND TESTED BY A D.O.T. CERTIFIED CONTRACTOR PLUMBER.
 - CONTRACTOR TO COORDINATE WITH THE BUILDING PLUMBING AND SITE ELECTRICAL PLANS TO ASSURE ACCURACY OF THE UTILITY CONNECTIONS TO THE BUILDING.

GATEWAY
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COMMONWEALTH OF PENNSYLVANIA
PROFESSIONAL ENGINEER
PATRICK T. COOPER
No. 11010
Exp. 12/31/2015

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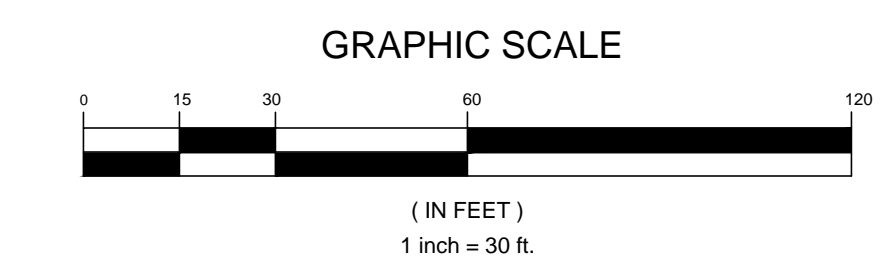
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P:\18 & Fitzmaurice\18833\18833-0006\Road\Conc'd\18833-0006_Sheet\18833-0006_C300 UTILITY.dwg
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 Saved Date: 10/20/2015 3:14 PM

Label	Symbol	Arrangement	Qty	LEF	(MANUFAC)	Description	Am. Watts
DP2	[Symbol]	SINGLE	11	0.60	U.S. ARCHITECTURAL LIGHTING	COL18 48V LED-NM 500 FT XX H80C-18-300 XX	14.8
DP3	[Symbol]	SINGLE	4	0.60	U.S. ARCHITECTURAL LIGHTING	COL18 48V LED-NM 500 FT XX H80C-18-300 XX	6.7

Calculation Summary	Avg	Max	Min	Avg/Min	Max/Min
PARKING LOT 1	1.20	5.4	0.6	3.32	3.00
PARKING LOT 2	1.48	5.1	0.6	2.47	8.30
PARKING LOT 3	1.37	2.8	0.6	1.71	2.50
PROPERTY LINE	0.60	8.1	0.6	N.A.	N.A.
WALKWAY	1.35	4.8	0.6	3.00	10.00

- NOTES:
- All light levels are at grade.
 - Lumen output is based on average rated lumen output over the life of the LEDs.
 - Mounting height shown per location is from grade to fixture aperture.
 - Light levels are calculated based on direct fixture contribution only.
 - Results are based on information provided to L&M. Changes to location, fixture, wattage will affect final results.
 - Lighting to conform to Department Light Standards.

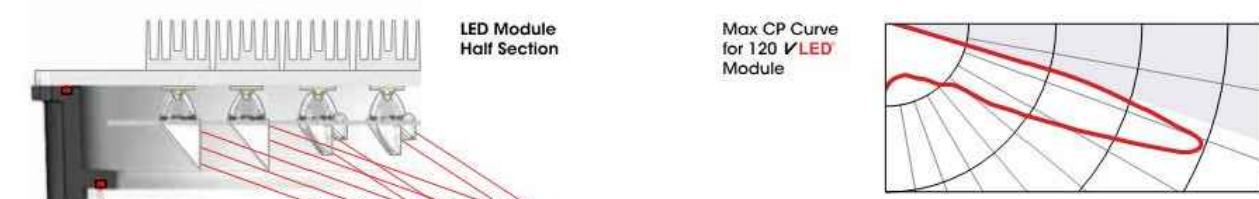
LIGHTING PLAN PRODUCED BY LAFACE & MCGOVERN ASSOCIATES, INC.
CONTACT: ZANE LEEPER (412) 854-1200

V-LED Optics

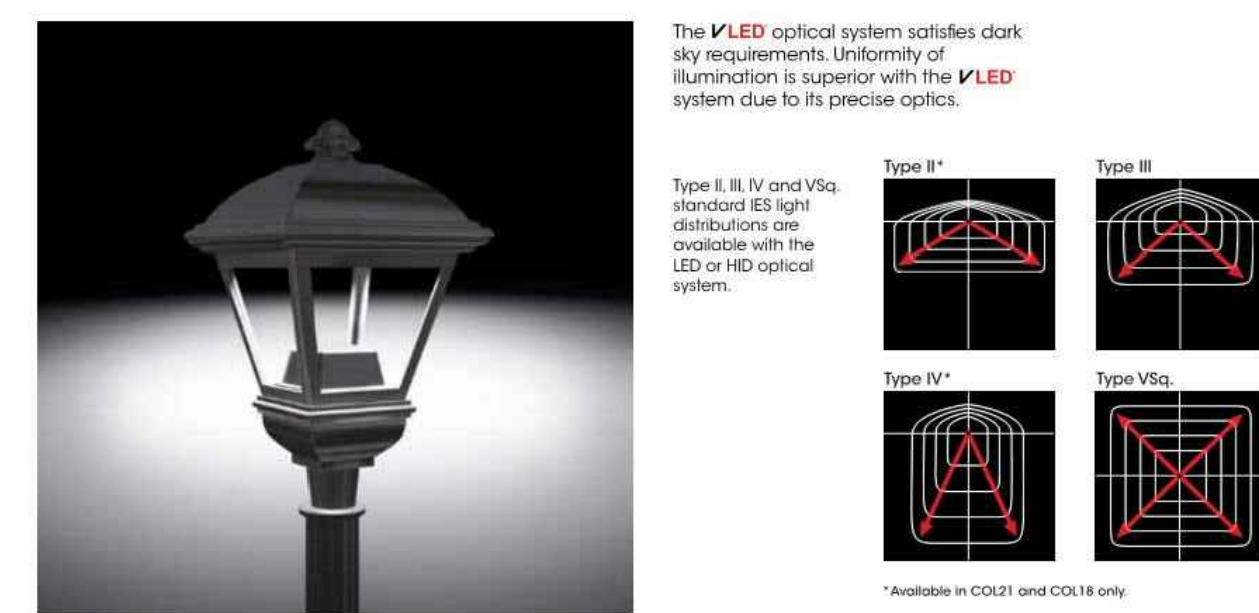
Patent Pending. See V-LED Catalog for a complete presentation on the V-LED System.



Sun Valley Lighting's V-LED system is innovative and unique. It is a self-contained module that is completely sealed from the elements to an IP67 rating. The module consists of a precision cast aluminum machined housing with integrated heat sink that protects the internal components such as the LEDs and the V-LED Reflector Prism. A tempered glass lens allows light to pass while keeping contaminants from depositing on the optical components performance.



The V-LED system uses a three stage optical beam for precise control and distribution of the raw LED light. Capture 100% of the raw LED light. Collimate all of the light downward and vector the light outward to the area to be illuminated.



1) SUN VALLEY LTD. www.sunvalley.com

COL - Clear Glass Lens

HID Order Information



Spec/Order Example: COL18/HR-1/150PSM/120/1/RA170041

MODEL	OPTICS	LAMP/BALLAST MODE	WATTS	TYPE	VOLTS	ARM MOUNT	FINISH	STANDARD	OPTIONS
COL21	TYPE I HR-1	COL21	120	ASPH	120	1	RAL-9005T	STANDARD	HOUR BOX SHIELD... HS
			120	SPS	120				
			120	SPS	120				
			120	SPS	120				
COL18	TYPE I HR-1	COL18	120	ASPH	120	2	RAL-9005T	STANDARD	HOUR BOX SHIELD... HS
			120	SPS	120				
			120	SPS	120				
			120	SPS	120				
COL12	TYPE I HR-1	COL12	120	ASPH	120	3	RAL-9005T	STANDARD	HOUR BOX SHIELD... HS
			120	SPS	120				
			120	SPS	120				
			120	SPS	120				

1) SUN VALLEY LTD. www.sunvalley.com

Lamp / Electrical Guide (Continued)

LAMP	WATTS	TYPE	INITIAL LUMENS	LIFE (HOURS)	ANSI CODE	TEMP	CIRCUIT TYPE	SYSTEM WATTS	VOLTS	MAX INTR AMP	MFL FUSE AMPS
FLUORESCENT	42	CLP	6 Pin Triple Tube G24q base	3,000	20,000	OF		46	120	0.38	
LED	26	LED	24 LED Optical Module - 350mA	1,616	70,000		-40°F	28	120	0.26	
LED	55	LED	48 LED Optical Module - 350mA	3,219	70,000		-40°F	55	120	0.50	
LED	76	LED	48 LED Optical Module - 525mA	4,557	70,000		-40°F	76	120	0.70	
LED	69	LED	64 LED Optical Module - 350mA	3,999	70,000		-40°F	69	120	0.68	
LED	103	LED	64 LED Optical Module - 125mA	8,561	140,000		-40°F	103	120	0.94	
LED	85	LED	80 LED Optical Module - 350mA	4,572	70,000		-40°F	85	120	0.78	
LED	126	LED	80 LED Optical Module - 525mA	6,408	70,000		-40°F	126	120	1.16	
LED	109	LED	100 LED Optical Module - 350mA	10,644	110,000		-40°F	109	120	1.00	
LED	160	LED	100 LED Optical Module - 525mA	7,862	70,000		-40°F	160	120	1.66	
LED	130	LED	120 LED Optical Module - 350mA	6,819	70,000		-40°F	130	120	1.19	
LED	192	LED	120 LED Optical Module - 525mA	9,454	70,000		-40°F	192	120	1.76	

- NOTES:
- U.S. Architectural Lighting's Lamp and Electrical Guide is for reference only. Always consult lamp and ballast manufacturer's data for exact technical specifications.
 - All LED Lumen values shown are approximate in the vertical position and may vary from one manufacturer to another.
 - For 120V circuits, also check ANSI for the highest starting, operating, or starting circuit currents. For CWA circuits, the figure is operating current.
 - Lumen values for LED Modules vary according to the distributor type and those also vary.

WARNING: No fixture must be installed in accordance with local codes or the National Electrical Code. Failure to do so may result in serious personal injury.



GATEWAY
The Gateway Engineers, Inc.
Full-Service Civil Engineering & Surveying
Pittsburgh, PA
gatewayengineers.com
856-634-9284

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
PATRICK T. COOPER
No. 042416-E
Exp. 12/31/2015

Date	No.	REVISION RECORD
10/07/2015	01	REVISED PER TOWNSHIP COMMENTS
10/30/2015	02	REVISED STORM SEWER AND PCSM LAYOUT
11/04/2015	03	RESUBMISSION TO TOWNSHIP
	04	
	05	
	06	
	07	
	08	

LAND DEVELOPMENT PLAN FOR CALVERT HILL
971 BEAVER GRADE ROAD CORAOPOLIS, PA 15108
A PLANNED COMMUNITY

PREPARED FOR:
CHARTER HOMES AT CALVERT HILL
1180 DILLERVILLE ROAD
LANCASTER, PA 17601

PHOTOMETRIC PLAN

Project Number: 18833-0006
Drawing Scale: 1" = 30'
Date Issued: SEPT. 2015
Index Number: --
Drawn By: PML
Checked By: DMH
Project Manager: DMH

C302

811
Know what's below.
Call before you dig.
Serial No. 20142200148

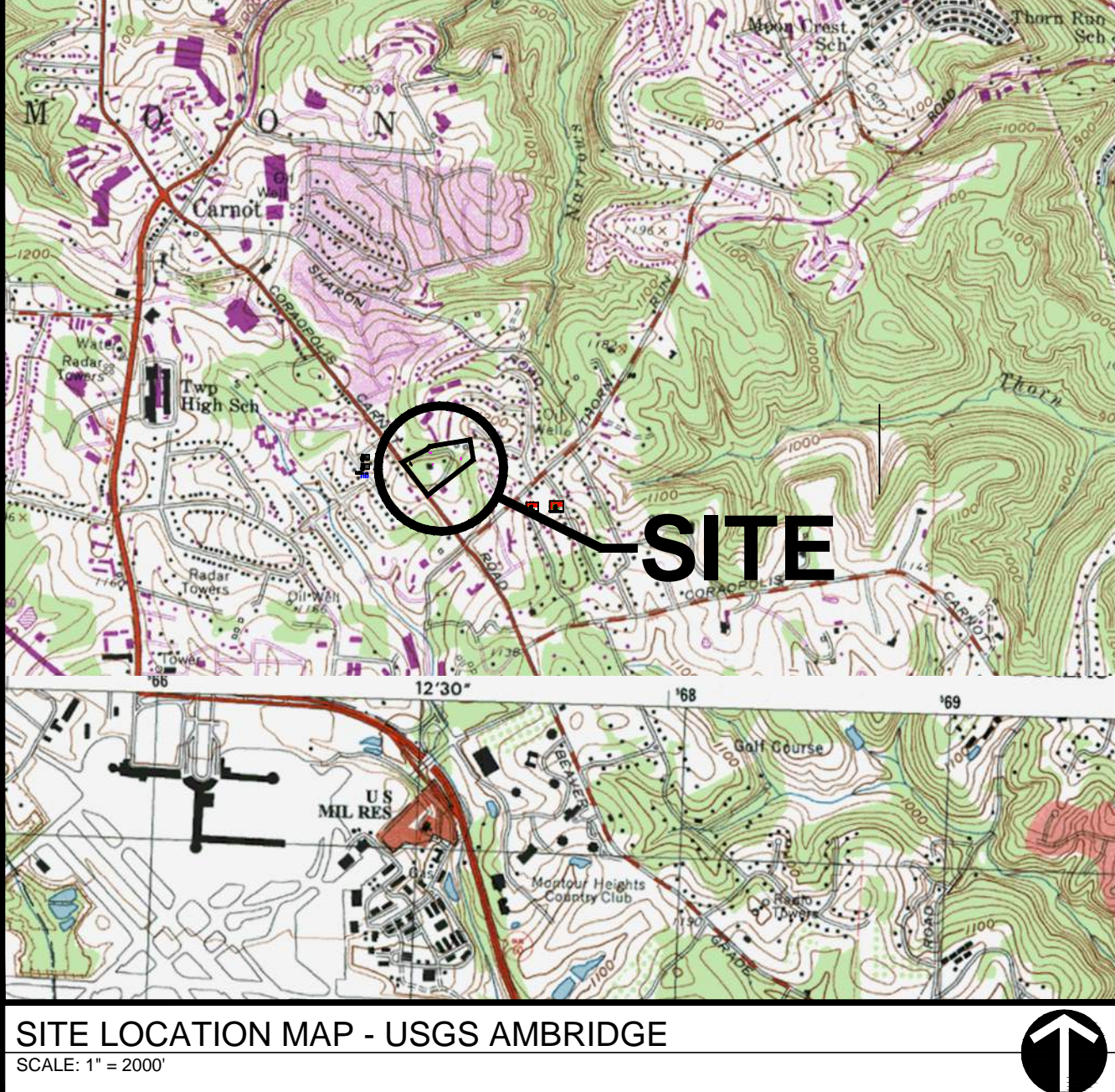
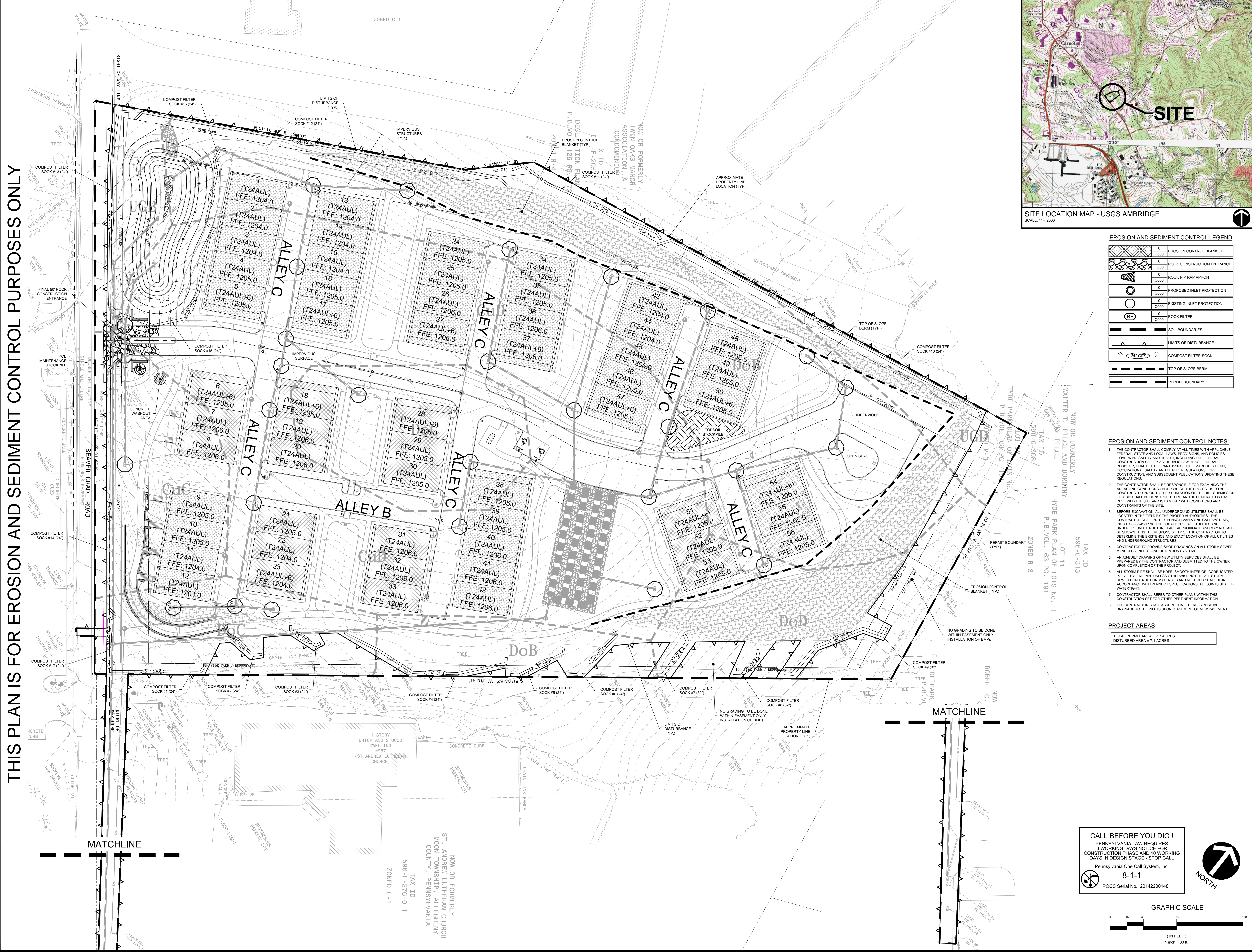
NORTH

GRAPHIC SCALE
1 inch = 30 ft

Plot 6 - Photometric Plan for Calvert Hill, Beaver Grade Road Coraopolis, Pa. Project No. 18833-0006, C302 LIGHTING.dwg
Plot Date: 10/20/2015 11:20 AM Plotter: M.L. Loran
Scale: 1/8" = 1'-0" Plot Size: 11.00 x 17.00

THIS PLAN IS FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY

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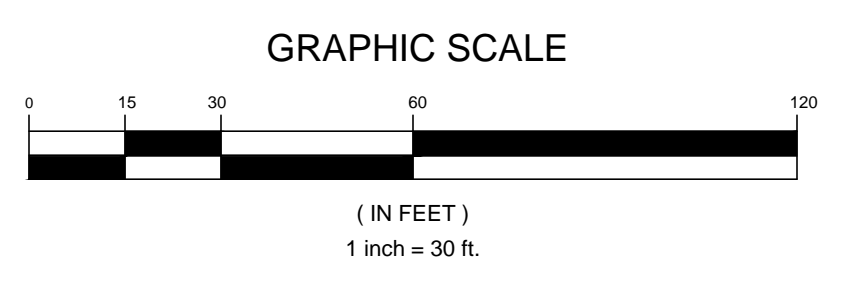
EROSION AND SEDIMENT CONTROL LEGEND

[Symbol]	0	EROSION CONTROL BLANKET
[Symbol]	0	ROCK CONSTRUCTION ENTRANCE
[Symbol]	0	ROCK RIP RAP APRON
[Symbol]	0	PROPOSED INLET PROTECTION
[Symbol]	0	EXISTING INLET PROTECTION
[Symbol]	0	ROCK FILTER
[Symbol]	0	SOIL BOUNDARIES
[Symbol]	0	LIMITS OF DISTURBANCE
[Symbol]	0	COMPOST FILTER SOCK
[Symbol]	0	TOP OF SLOPE BERM
[Symbol]	0	PERMIT BOUNDARY

- EROSION AND SEDIMENT CONTROL NOTES:**
- THE CONTRACTOR SHALL COMPLY AT ALL TIMES WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, PROVISIONS, AND POLICIES GOVERNING SAFETY AND HEALTH, INCLUDING THE FEDERAL CONSTRUCTION SAFETY ACT, PUBLIC LAW 91-594, FEDERAL REGISTER, CHAPTER XVII, PART 102 OF TITLE 29 REGULATIONS, OCCUPATIONAL SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION, AND SUBSEQUENT PUBLICATIONS UPDATING THESE REGULATIONS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING THE AREAS AND CONDITIONS UNDER WHICH THE PROJECT IS TO BE CONSTRUCTED PRIOR TO THE SUBMISSION OF THE BID. SUBMISSION OF A BID SHALL BE CONSIDERED TO MEAN THE CONTRACTOR HAS REVIEWED THE SITE AND IS FAMILIAR WITH CONDITIONS AND CONSTRAINTS OF THE SITE.
 - BEFORE EXCAVATION, ALL UNDERGROUND UTILITIES SHALL BE LOCATED IN THE FIELD BY THE PROPER AUTHORITIES. THE CONTRACTOR SHALL NOTIFY PENNSYLVANIA ONE CALL SYSTEMS, INC. AT 1-800-445-7776. THE LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES ARE APPROXIMATE AND MAY NOT ALL BE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND EXACT LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES.
 - CONTRACTOR TO PROVIDE SHOP DRAWINGS ON ALL STORM SEWER MANHOLES, INLETS, AND DETENTION SYSTEMS.
 - AN AS-BUILT DRAWING OF NEW UTILITY SERVICES SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE OWNER UPON COMPLETION OF THE PROJECT.
 - ALL STORM PIPE SHALL BE HDPE, SMOOTH INTERIOR, CORRUGATED POLYETHYLENE PIPE UNLESS OTHERWISE NOTED. ALL STORM SEWER CONSTRUCTION MATERIALS AND METHODS SHALL BE IN ACCORDANCE WITH PERMIT SPECIFICATIONS. ALL JOINTS SHALL BE WATERTIGHT.
 - CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION.
 - THE CONTRACTOR SHALL ASSURE THAT THERE IS POSITIVE DRAINAGE TO THE INLETS UPON PLACEMENT OF NEW PAVEMENT.

PROJECT AREAS
 TOTAL PERMIT AREA = 7.7 ACRES
 DISTURBED AREA = 7.1 ACRES

CALL BEFORE YOU DIG!
 PENNSYLVANIA LAW REQUIRES
 3 WORKING DAYS NOTICE FOR
 CONSTRUCTION PHASE AND 10 WORKING
 DAYS IN DESIGN STAGE - STOP CALL
 Pennsylvania One Call System, Inc.
 8-1-1
 POCSSerial No. 20142200148



REVISION RECORD

Date	No.	Revised Per	Township Comments
10/07/2015	01	10/07/2015	PCSSM LAYOUT
11/04/2015	03	11/04/2015	RESUBMISSION TO TOWNSHIP
	04		
	05		
	06		
	07		
	08		

CALVERT HILL
 Moon Twp / Allegheny Co., PA
 CHARTER HOMES & Neighbors

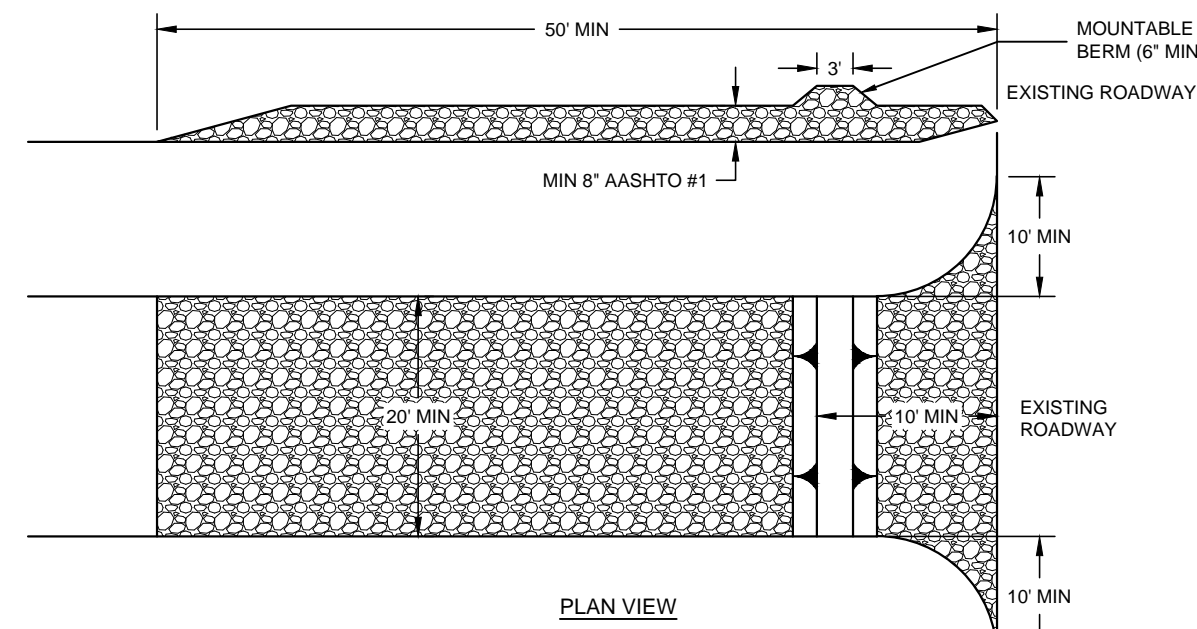
LAND DEVELOPMENT PLAN FOR CALVERT HILL
 971 BEAVER GRADE ROAD CORAOPOLIS, PA 15108
 A PLANNED COMMUNITY
CHARTER HOMES AT CALVERT HILL
 1180 DILLERVILLE ROAD
 LANCASTER, PA 17601

Project Number: 18833-0006
 Drawing Scale: 1" = 30'
 Date Issued: SEPT. 2015
 Index Number: -
 Drawn By: PML
 Checked By: DMH
 Project Manager: DMH

C402

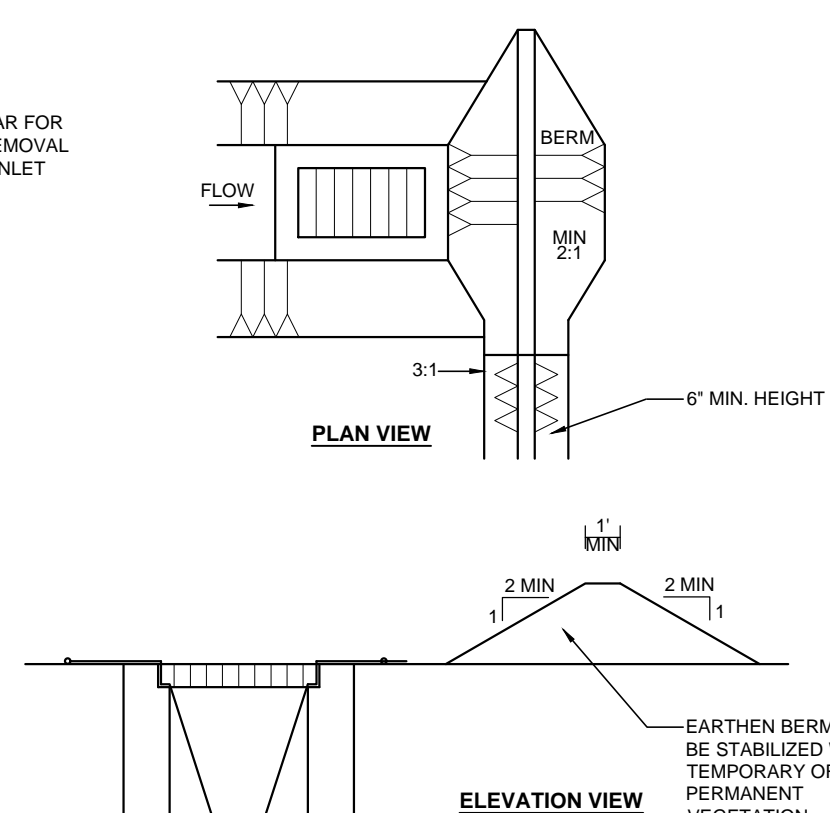
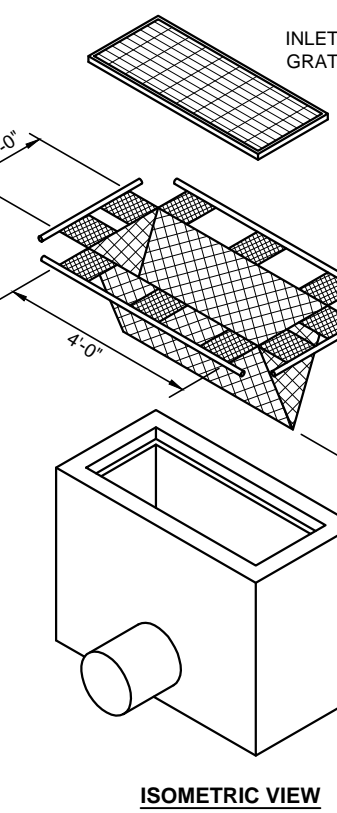
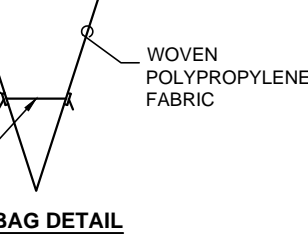
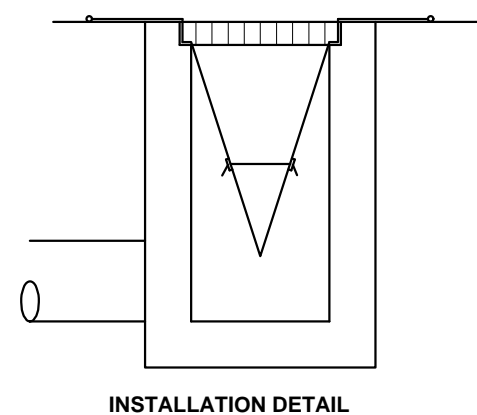
STANDARD EROSION AND SEDIMENT CONTROL PLAN NOTES

- ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
- AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
- AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
- AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
- CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPs SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
- AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
- ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 2601.1 ET SEQ., 371.1, AND 267.1 ET. SEC. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM 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.
- ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
- VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY FROM THE PROJECT SITE ONTO PUBLIC ROADS.
- 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 RETENING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- A LOG SHOWING DATES THAT E&S BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE PROVIDED UPON REQUEST OF THE REGULATORY AGENCY.
- 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 SWEEP INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
- ALL SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
- AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 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.
- 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. REFER TO GEOTECHNICAL REPORT AND CROSS SECTIONS.
- ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
- FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
- FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
- ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE 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.
- PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
- E&S BMPs SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE INSPECTING AUTHORITY FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE BMPs.
- 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.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE INSPECTING AUTHORITY TO TO SCHEDULE A FINAL INSPECTION.
- FAILURE TO CORRECTLY INSTALL E&S BMPs, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPs MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING 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.
- 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.
- 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.
- SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING POTENTIAL TO CLOG THE BASIN/TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS.
- SEDIMENT BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES.
- ANY DAMAGE THAT OCCURS IN WHOLE OR IN PART AS A RESULT OF BASIN OR TRAP DISCHARGE SHALL BE IMMEDIATELY REPAIRED BY THE PERMITTEE IN A PERMANENT MANNER SATISFACTORY TO THE MUNICIPALITY, LOCAL CONSERVATION DISTRICT, AND THE OWNER OF THE DAMAGED PROPERTY.
- UPON REQUEST, THE APPLICANT OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT (RECORD DRAWING) FOR ANY SEDIMENT BASIN OR TRAP TO THE INSPECTING AUTHORITY OR THE DEPARTMENT.
- EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER WITHIN 50 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.
- FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN MAXIMUM 10" LAYERED LIFTS AT 90% DENSITY.



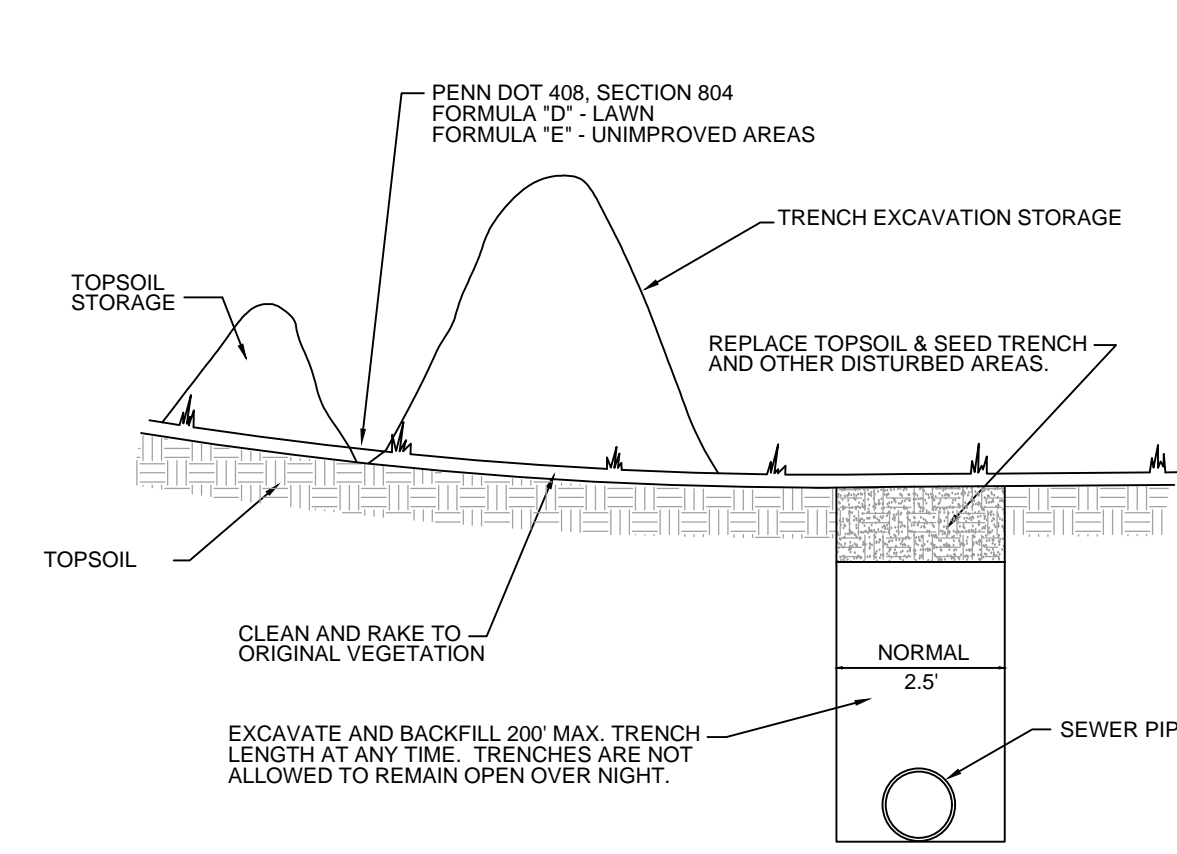
NOTES:
 1. TOPSOIL SHOULD BE REMOVED PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE.
 2. EXTEND ROCK OVER WIDTH OF ENTRANCE.
 3. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
 4. MOUNTABLE BERM SHOULD BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED. PIPE TO BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.
MAINTENANCE:
 1. 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.
 2. 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' INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK, WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO THE ROADWAY DITCHES, CULVERTS, OR OTHER DRAINAGE WAY IS NOT ACCEPTABLE.

01	ROCK CONSTRUCTION ENTRANCE
C403	- N.T.S.



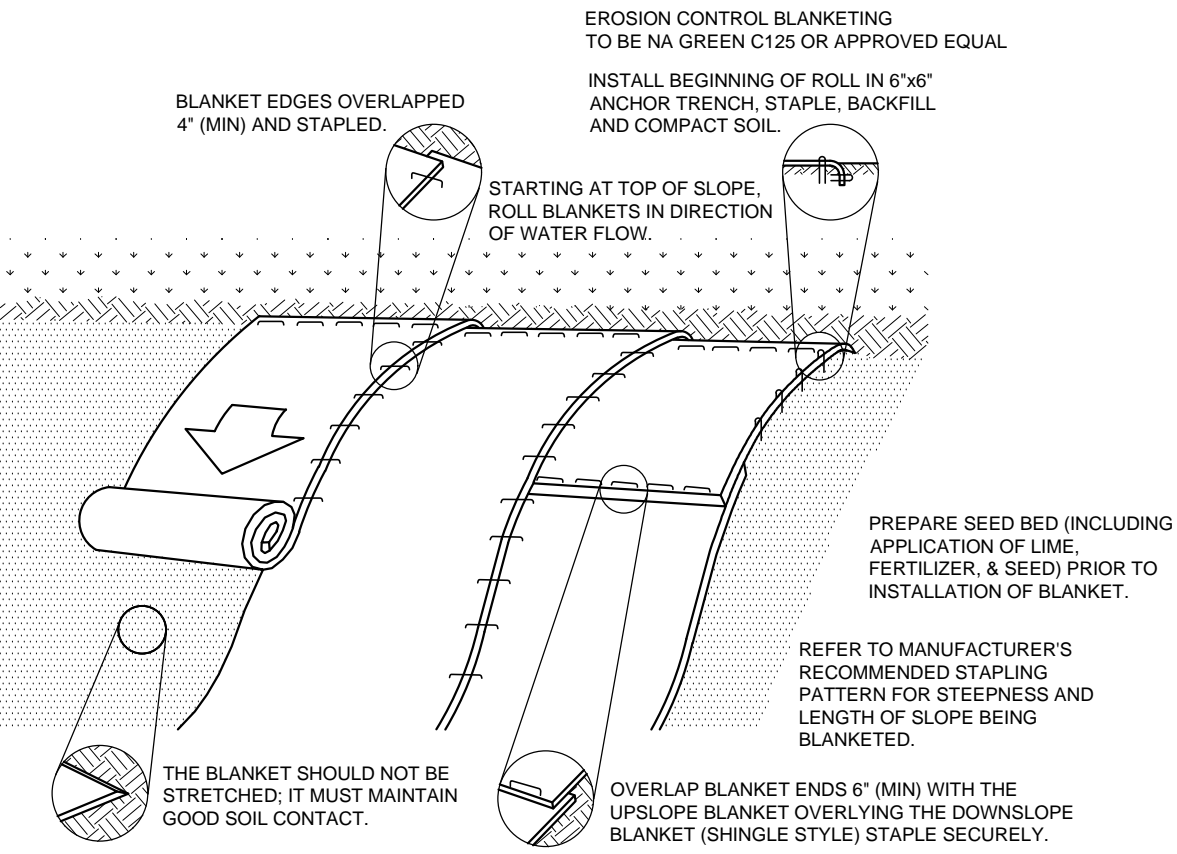
NOTES:
 1. MAXIMUM DRAINAGE AREA = 1/2 ACRE.
 2. INLET PROTECTION SHALL NOT BE REQUIRED FOR INLETS TRIBUTARY TO A SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.
 3. ROLLED EARTHEN BERM IN ROADWAYS SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.
 4. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.
 5. INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

04	FILTER BAG INLET PROTECTION
C403	TYPE M INLET/YARD DRAIN - N.T.S.



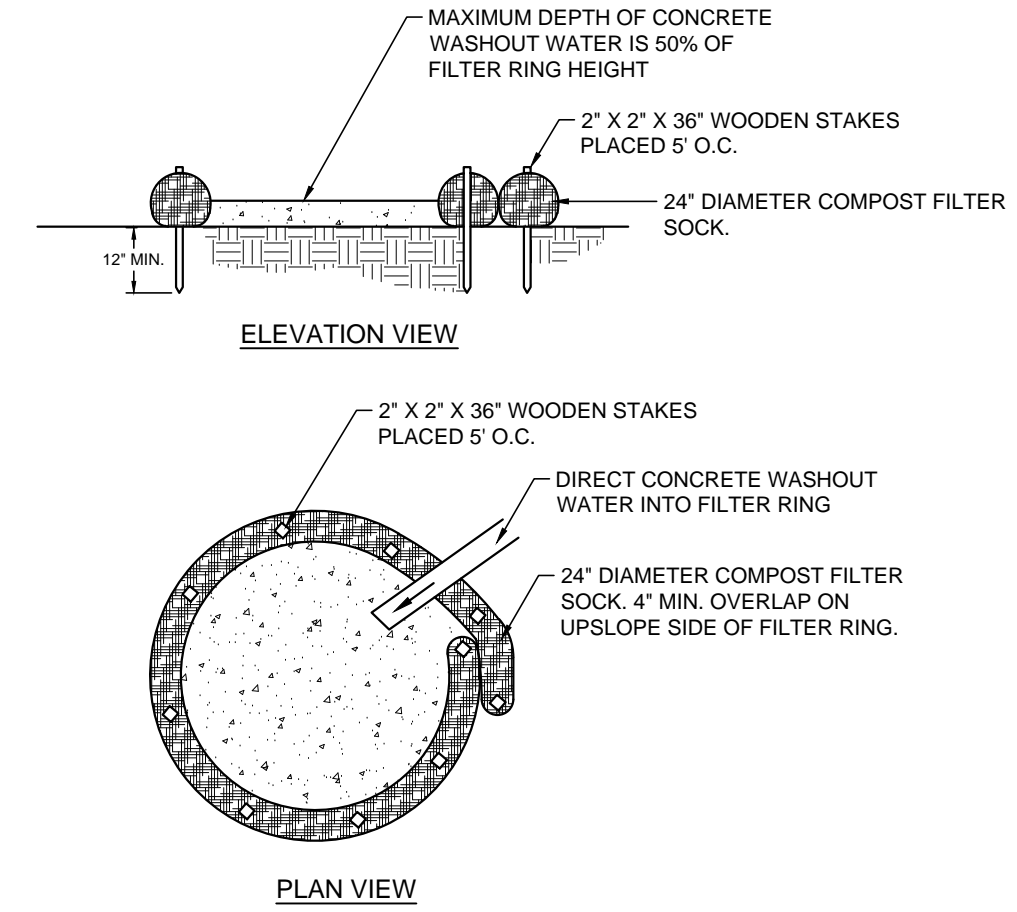
NOTE: SEEDING IN DISTURBED AREAS SHALL BE IN ACCORDANCE WITH PENN DOT FORM 408, SECTION 804 FOR LAIN FORMULA "D" FOR LAIN AREAS AND FORMULA "E" FOR UNIMPROVED AREAS. MULCHING OR PROTECTIVE NETTING REQUIRED WHERE SURFACE IS SUBJECT TO IMMEDIATE EROSION.

02	EROSION CONTROL MEASURES
C403	FOR SEWER TRENCHES - N.T.S.



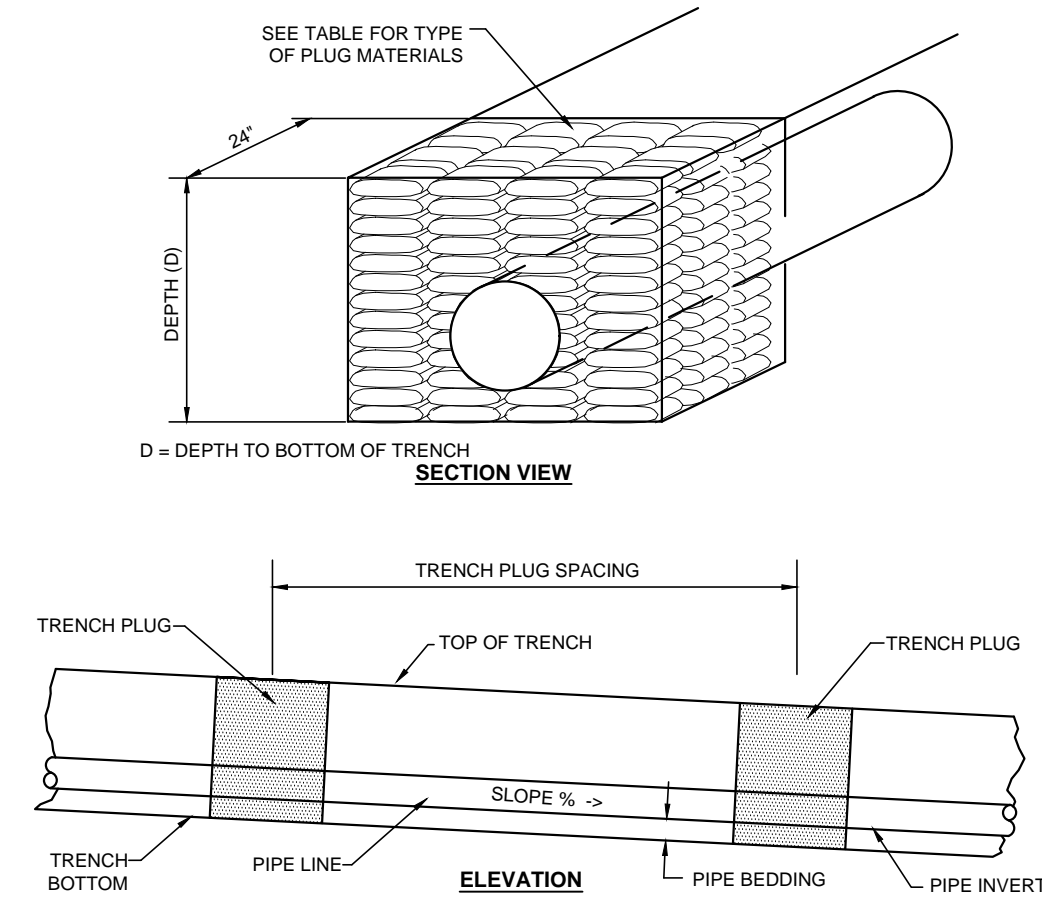
NOTES:
 1. TREES AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.
 2. PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.
 3. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.
 4. BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.
 5. STAPLING OF THE BLANKET SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
 6. BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 15 CALENDAR DAYS.

05	EROSION CONTROL BLANKET
C403	INSTALLATION - N.T.S.



NOTES:
 1. INSTALL ON FLAT GRADE FOR OPTIMAL PERFORMANCE.
 2. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.
 3. A SUITABLE IMPERVIOUS GEOMEMBRANE LINER SHALL BE PLACED AT THE LOCATION PRIOR TO THE INSTALLING THE SOCKS.

03	COMPOST FILTER SOCK
C403	CONCRETE WASHOUT - N.T.S.



REQUIRED SPACING AND MATERIALS FOR TRENCH PLUGS		
TRENCH SLOPE (%)	SPACING (F&W)	PLUG MATERIAL
< 5	-	-
5 - 15	500	EARTH FILLED BAGS**
15 - 25	300	EARTH FILLED BAGS**
25 - 35	200	EARTH FILLED BAGS**
35 - 100	100	EARTH FILLED BAGS**
Over 100	50	CEMENT FILLED BAGS (WETTED) OR MORTARED STONE

NOTES:
 1. TRENCH PLUGS ARE REQUIRED AT ALL STREAM, RIVER, OR WATER-BODY CROSSINGS REGARDLESS OF TRENCH SLOPE.
 2. OTHERWISE NOT REQUIRED AT SLOPES LESS THAN 5%.
 3. TOPSOIL MAY NOT BE USED TO FILL BAGS.

06	TYPICAL TRENCH PLUG
C403	INSTALLATION - N.T.S.

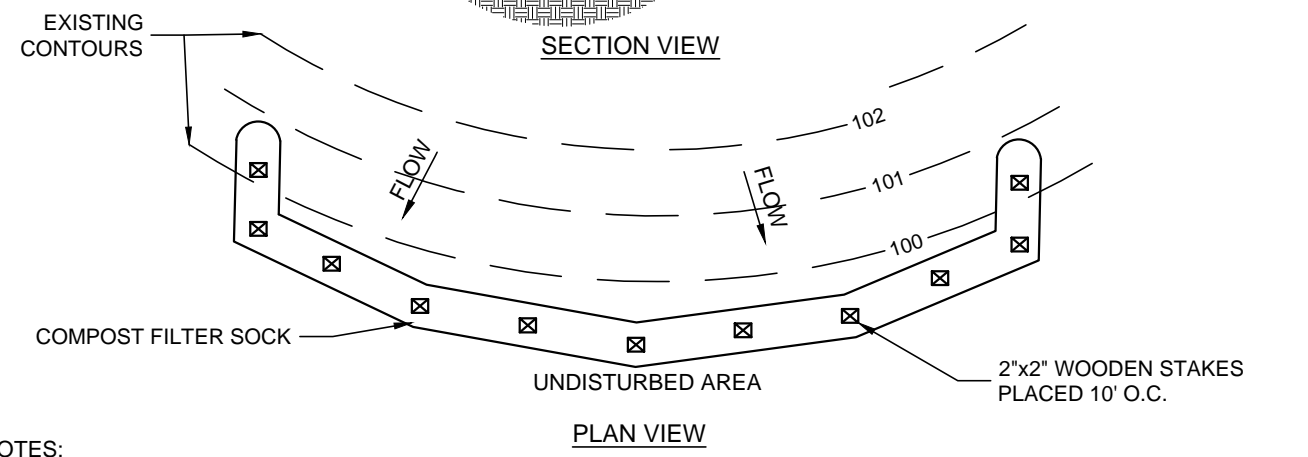
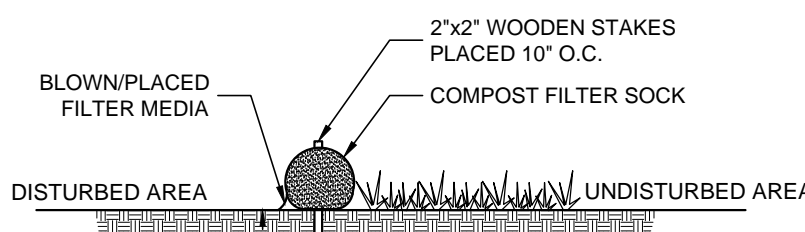
CONSTRUCTION SEQUENCE

THE CALVERT HILL DEVELOPMENT PROJECT WILL CONSIST OF THE CONSTRUCTION OF A TOWNHOUSE DEVELOPMENT, STORMWATER MANAGEMENT FACILITIES, UTILITY INSTALLATION, AND EAS SMP'S. ALL EAS FACILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED EAS/SWM PLAN AND THE DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL DATED MARCH 2010 OR LATEST VERSION.

A GENERALIZED CONSTRUCTION SEQUENCE IS PROVIDED BELOW. THE CONSTRUCTION SEQUENCE IS INTENDED TO PROVIDE A GENERAL COURSE OF ACTION IN ORDER TO CONFORM TO THE APPLICABLE REGULATORY AGENCY REQUIREMENTS FOR TEMPORARY AND PERMANENT SOIL EROSION AND SEDIMENT POLLUTION CONTROL. ALL NECESSARY PARTS FOR PROPER AND COMPLETE EXECUTION OF WORK PERTAINING TO THIS PLAN, WHETHER SPECIFICALLY MENTIONED OR NOT, ARE TO BE PERFORMED BY THE CONTRACTOR. IT IS NOT INTENDED THAT THE DRAWINGS AND THIS REPORT SHOW EVERY DETAILED PIECE OF MATERIAL OR EQUIPMENT. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS LISTED IN THIS SECTION. THE CONTRACTOR MAY BE REQUIRED TO ALTER CONTROLS BASED ON EFFECTIVENESS OF CONTROLS OR DIFFERING CONDITIONS ENCOUNTERED.

NOTE: UPON COMPLETION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY, THE SITE SHALL BE IMMEDIATELY STABILIZED OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND DISCHARGE OF SEDIMENT. ALL DISTURBED AREAS WHICH ARE NOT TO BE FURTHER DISTURBED SHALL BE IMMEDIATELY SEEDED PER THE PERMANENT SEEDING SPECIFICATIONS. DISTURBED AREAS LEFT IDLE FOR MORE THAN 4 DAYS SHOULD BE TEMPORARILY SEEDED AND MULCHED. CONTACT ALLEGHENY COUNTY CONSERVATION DISTRICT FOR A PRE-CONSTRUCTION MEETING PRIOR TO ANY EARTHWORK.

- STAKE OUT LIMIT OF DISTURBANCE FOR GRADING OPERATIONS. IN ADDITION, ORANGE CONSTRUCTION FENCE SHALL BE PLACED AROUND ANY AND ALL ENVIRONMENTAL FEATURES TO BE PROTECTED ON THE SITE.
- INSTALL INITIAL ROCK CONSTRUCTION ENTRANCE ALONG EXISTING DRIVE FROM BEAVER GRADE ROAD AS SHOWN ON THE PLAN DRAWINGS, IN ACCORDANCE WITH THE CONSTRUCTION DETAIL.
- CLEAN AND GRUB AND INSTALL ALL COMPOST FILTER SOCK DOWNSLOPE OF AREAS PROPOSED FOR SHOWN IN THE LOCATIONS SHOWN ON THE PLAN AND IN ACCORDANCE WITH THE CONSTRUCTION DETAIL.
- CLEAN AND GRUB IN LOCATIONS OF PROPOSED BUILDING, PARKING, AND STORMWATER FACILITIES. STRIP TOPSOIL AND STOCKPILE IN AREAS AS INDICATED ON THE PLANS.
- BEGIN CONSTRUCTION OF PROPOSED STORM SEWERS AND DETENTION TANK. AS EACH NEW INLET IS INSTALLED, IMMEDIATELY INSTALL INLET PROTECTION ON THE NEW STRUCTURE, AS INDICATED ON THE PLAN AND SHOWN ON THE CONSTRUCTION DETAIL. REFER TO THE UTILITY LINE INSTALLATION REQUIREMENTS BELOW FOR STORM SEWER INSTALLATION. A LICENSED ENGINEER SHALL BE CONTACTED AND PRESENT ON SITE TO OVERSEE THE INSTALLATION OF THE UNDERGROUND DETENTION TANK. REFER TO THE SEQUENCE BELOW FOR UNDERGROUND DETENTION TANKS INSTALLATION.
 - PROTECT INFILTRATION TRENCH AREA FROM COMPACTION PRIOR TO INSTALLATION.
 - AFTER INSTALLATION, PREVENT SEDIMENT LOADING WATER FROM ENTERING INLETS AND PIPES.
 - INSTALL AND MAINTAIN PROPER CONTROL AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.
 - EXCAVATE INFILTRATION TRENCH BOTTOM TO A UNIFORM, LEVEL UNCOMPACTED SUBGRADE FREE FROM ROCKS AND DEBRIS. DO NOT REMOVE INLET PROTECTION OR OTHER EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.
 - PLACE UNIFORM AGGREGATE IN 8-INCH LIFTS, LIGHTLY COMPACTING BETWEEN LIFTS.
 - INSTALL CONTINUOUSLY PERFORATED PIPS, AS INDICATED ON PLANS, BACKFILL WITH UNIFORM AGGREGATE, CLEAN-WASHED AGGREGATE IN 8-INCH LIFTS, LIGHTLY COMPACTING BETWEEN LIFTS.
 - FOLD AND SECURE NONWOVEN GEOTEXTILE OVER INFILTRATION TRENCH, WITH MINIMUM OVERLAP OF 16-INCHES.
 - PLACE 6-INCH LIFT OF APPROVED TOPSOIL OVER INFILTRATION TRENCH, AS INDICATED ON PLANS.
 - SEED AND STABILIZE TOPSOIL.
 - DO NOT REMOVE INLET PROTECTION OR OTHER EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.
 - ANY SEDIMENT THAT ENTERS INLETS DURING CONSTRUCTION IS TO BE REMOVED WITHIN 24 HOURS.
- BEGIN CONSTRUCTION OF DETENTION BASIN BY:
 - CONSTRUCT ACCESS ROAD TO BASIN AND BEGIN GRADING THE BASIN AS SHOWN ON THE PLANS AND DETAILS PROVIDED. VERIFY SOIL FROM THE EXCAVATION OF BASIN FOR SUITABILITY AS EMBANKMENT MATERIAL. GEOTECHNICAL ENGINEER SHOULD VERIFY SOIL CAPABILITIES. EMBANKMENTS SHOULD BE CONSTRUCTED PER GEOTECHNICAL RECOMMENDATIONS.
 - PRIOR TO BUILDING THE EMBANKMENT, INSTALL STORM SEWER PERMANENT OUTLET STRUCTURE, OUTLET PIPE, ANTI-SEEP COLLARS, AND 4" UNDERDRAIN. A LICENSED PROFESSIONAL IS TO BE PRESENT DURING THIS PROCESS AND MUST BE GIVEN AT LEAST 3 DAYS NOTICE PRIOR TO INSPECTION.
 - AS SOON AS EMBANKMENT AND CUT SLOPES ARE BROUGHT TO FINAL GRADE, PERMANENTLY SEED AND MULCH TO PROMOTE EARLY STABILIZATION.
 - INSTALL EMERGENCY SPILLWAY WITH THE PROPER LINING AS SPECIFIED ON PLANS.
 - ANY SEDIMENT THAT ENTERS THE BASIN DURING CONSTRUCTION IS TO BE REMOVED WITHIN 24 HOURS.
- BEGIN DEMOLITION OF EXISTING FEATURES TO BE REMOVED ON SITE. REFER TO THE EXISTING CONDITIONS AND DEMOLITION PLAN. CONSTRUCTION WASTE MATERIALS MUST BE DISPOSED OF PROPERLY AT A DEP APPROVED WASTE SITE.
- REMOVE INITIAL ROCK CONSTRUCTION ENTRANCE AND INSTALL FINAL AS SHOWN ON THE PLAN DRAWINGS, IN ACCORDANCE WITH THE CONSTRUCTION DETAIL.
- BEGIN CUT AND FILL OPERATIONS FOR THE SITE FROM BEAVER. DURING GRADING OPERATIONS, THE FILL SLOPES SHALL BE GRADED BACK DOWN FROM THE END OF EACH DAY SO THAT RUNOFF IS DIRECTED AWAY FROM THE CUT AND FILL SLOPES. AS SLOPE AREAS ARE BROUGHT TO FINAL GRADE, INSTALL EROSION CONTROL BLANKETING ON CUT AND FILL SLOPES, AS INDICATED ON THE PLAN AND IN ACCORDANCE WITH THE CONSTRUCTION DETAIL. AS SOON AS PROPOSED FILL SLOPES ARE BROUGHT TO FINAL GRADE, IMMEDIATELY SEED AND MULCH IN REGULAR 16 VERTICAL INCREMENTS TO PROMOTE EARLY STABILIZATION.
- REMOVE COMPOST FILTER SOCKS AS NECESSARY WHEN GRADING OPERATIONS REACH THEIR LOCATION ALONG THE PROPOSED ACCESS ROAD TOE OF SLOPE.
- AS FINAL SLOPES ARE ESTABLISHED, SEED AND MULCH FOR STABILIZATION.
- COMPLETE THE TOP OF SLOPE. CONSTRUCT 2' WIDE TOP OF SLOPE BERM IN THE LOCATIONS SHOWN ON THE PLAN, IN ACCORDANCE WITH THE DETAILS PROVIDED ON THE PLAN.
- BEGIN CONSTRUCTION OF THE PROPOSED TOWNHOUSE BUILDINGS.
- BEGIN INSTALLATION OF PROPOSED INLETS AND ASSOCIATED STORM SEWERS, AS INDICATED ON THE PLAN AND SHOWN ON THE CONSTRUCTION DETAIL. REFER TO THE UTILITY LINE INSTALLATION REQUIREMENTS BELOW.
- INSTALL THE SITE SERVICE UTILITIES (SEWER, GAS, WATER, AND ELECTRIC) AS SHOWN ON THE PLAN. REFER TO THE UTILITY LINE INSTALLATION REQUIREMENTS BELOW.
- BEGIN FINE GRADING OPERATIONS IN PREPARATION OF INSTALLATION OF PAVING AND PREPARE AREAS FOR PAVING IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS. INSTALL THE CONCRETE WASHOUT AREA AS SHOWN ON THE PLAN, IN ACCORDANCE WITH THE CONSTRUCTION DETAIL. PRIOR TO ANY CONCRETE POUR, INCLUDING NEW CURBS, SIDEWALK AND BUILDING FOUNDATIONS.
- COMPLETE REMAINERS OF THE FINE GRADING OPERATIONS IN PREPARATION OF SITE PAVING. SITE PAVING WILL INCLUDE ALL DRIVE AISLES AROUND THE PROPOSED BUILDINGS, CURBS, AND SIDEWALKS. BEGIN PAVING OPERATIONS, INSTALL SITE FURNISHINGS, IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS.
- REMOVE THE ROCK CONSTRUCTION ENTRANCE AS PAVING IS COMPLETED.
- SEED AND MULCH ALL DISTURBED AREAS, USING THE SPECIFIED SEEDING REQUIREMENTS FOUND ON THE DETAILED PLAN. ALL DISTURBED AREAS MUST BE TEMPORARILY STABILIZED IF REMAINING IDLE OR ANTICIPATED TO REMAIN IDLE. NO MORE THAN 15,000 SQUARE FEET OF DISTURBED AREA MAY REACH FINAL GRADE BEFORE INITIATING SEEDING AND MULCHING OPERATIONS.
- RESEED ALL DISTURBED AREAS IF 70% PERENNIAL VEGETATIVE COVER IS NOT ESTABLISHED AFTER 30 DAYS.



- NOTES:
- SOCK FABRIC SHALL MEET THE STANDARDS OF TABLE 4.1.
 - 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. MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON FIGURE 4.2. STRAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
 - TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
 - 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.
 - SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
 - BIO-DEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTO-DEGRADABLE SOCKS AFTER ONE YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
 - UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STRAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE SOCK SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.
 - SILT SOCK FABRIC MATERIAL SHALL BE MULTI-FILAMENT POLYPROPYLENE (MFPF), MINIMUM FUNCTIONAL LONGEVITY ONE YEAR.

TABLE 4.1 COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

MATERIAL TYPE	3 mil HDPE	5 mil HDPE	5 mil HDPE	MULTI-FILAMENT POLYPROPYLENE (MFPF)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (HMFPF)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	BIO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12", 16", 18"	12", 16", 18"	12", 16", 18"	12", 16", 18"	12", 16", 18"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	3/8"
TENSILE STRENGTH		26 PSI	26 PSI	44 PSI	202 PSI
ULTRAVIOLET STABILITY	23% AT 1000 HR.	23% AT 1000 HR.	100% AT 1000 HR.	100% AT 1000 HR.	
% ORO. STRENGTH (ASTM G-155)					
MINIMAL FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS
TWO-PLY SYSTEMS					
INNER CONTAINMENT NETTING	HDPE BIAXIAL NET				
	CONTINUOUSLY WOUND				
	FUSION-WELDED JUNCTURES				
OUTER FILTRATION MESH	3/4" x 3/4" MAX. APERTURE SIZE				
	COMPOSITE POLYPROPYLENE FABRIC				
	(WOVEN LAYER AND NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH)				
SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS.					

TABLE 4.2 COMPOST STANDARDS

ORGANIC MATTER CONTENT	20% - 100% (DRY WEIGHT BASIS)
ORGANIC FIBER	FIBROUS AND ELONGATED
pH	5.5 - 8.5
MOISTURE CONTENT	30% - 60%
PARTICLE SIZE	3/8" - 5/8" (PASS THRU 3/8" SIEVE)
SOLUBLE SALT CONCENTRATION	5.0 gsm (milligram) MAXIMUM

Final Condition (Worst Case)

SOCK NO.	DIA. IN.	LOCATION	SLOPE PERCENT	SLOPE LENGTH ABOVE BARRIER (FT)
1	24"	South corner below fill slope	20.0%	90
2	24"	South corner below fill slope	50.0%	18
3	24"	South corner below fill slope	50.0%	10
4	24"	Southeast limits below cut slope	20.0%	30
5	24"	Southeast limits below cut slope	18.0%	34
6	24"	Southeast limits below cut slope	17.0%	30
7	32"	East corner below fill slope	50.0%	60
8	32"	East corner below fill slope	50.0%	50
9	32"	East corner below fill slope	50.0%	65
10	24"	North limits below fill slope	50.0%	30
11	24"	North limits below fill slope	50.0%	35
12	24"	Northwest corner below fill slope	50.0%	33
13	24"	West limits below stormwater basin	33.0%	25
14	24"	South limits below fill slope	50.0%	25
15	24"	Northwest corner between basin and townhouses	5.0%	50
16	24"	Northwest corner between basin and townhouses	5.0%	50
17	24"	South limits below fill slope	50.0%	25

02
C404 COMPOST FILTER SOCK
- N.T.S.

TEMPORARY SEEDING SPECIFICATIONS:

- LIMESTONE** RAW, GROUND AGRICULTURAL LIMESTONE CONTAINING MORE THAN 90 PERCENT CALCIUM CARBONATES (ADJUST pH LEVELS TO 6.5 TO 7.0). APPLY AT A RATE OF 1 TON/AC, UNLESS OTHERWISE INDICATED BY SOIL TESTS.
- COMMERCIAL FERTILIZER** IN ABSENCE OF A SOIL TEST, USE 1000 LB/AC OF 10-20-20 (23 LB/1000 SF) MIXED INTO SEEDBED PRIOR TO SEEDING, OR IN A TANK WITH SEED WHEN HYDROSEEDING.
- MULCH** CLEAN OAT OR WHEAT STRAW SHALL BE FREE FROM MATURE SEED-BEARING STALKS OR ROOTS OF PROHIBITED OR NOXIOUS WEEDS AS DEFINED BY THE PENNSYLVANIA SEED ACT 1947. APPLY AT A RATE OF 139 POUNDS PER 1,000 SQUARE FEET (3 TONS PER ACRE). PRECAUTIONS SHALL BE TAKEN TO STABILIZE MULCH UNTIL THE VEGETATIVE COVER IS ESTABLISHED.
- SEED MIXTURE** SEED MIXTURE SHALL BEAR A GUARANTEED STATEMENT OF ANALYSIS AND SHALL BE COMPOSED OF THE FOLLOWING VARIETIES AND MIXED IN THE PROPORTIONS SPECIFIED.
- | TEMPORARY SEED MIXTURE | PROPORTION BY WEIGHT | MINIMUM PURITY | MINIMUM GERMINATION |
|------------------------|----------------------|----------------|---------------------|
| RYEGRASS VAR. KENTUCKY | 100% | 98% | 90% |
- THREE PERCENT REDTOP MAY BE ADDED TO THE LAWN MIXTURE ON SLOPE AREAS OR FOR LATE SPRING OR LATE FALL SEEDING.
- SEEDING RATE** TEMPORARY SEEDING SHALL BE APPLIED AT THE RATE OF TEN (10) POUNDS PER ONE THOUSAND (1,000) SQUARE YARDS.
- NOTES** ALL AREAS TO BE SEEDED SHALL BE LOOSENEED TO A DEPTH OF AT LEAST TWO INCHES BY MECHANICAL MEANS, OR AS APPROVED BY THE LANDSCAPE ARCHITECT.
- MULCH SEEDED AREAS IMMEDIATELY AFTER SEEDING.
- SEED ALL DISTURBED AREAS WITH THE TEMPORARY SEED MIXTURE EXCEPT THOSE AREAS SHOWN TO BE SEEDED WITH STEEP SLOPE MIXTURE, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

PERMANENT SEEDING SPECIFICATIONS:

- MATERIALS:** 6" (MINIMUM) TOPSOIL SHALL BE REQUIRED ON ALL LAWN AREAS.
- LIMESTONE** RAW, GROUND AGRICULTURAL LIMESTONE CONTAINING MORE THAN 90 PERCENT CALCIUM CARBONATES (ADJUST pH LEVELS TO 6.5 TO 7.0). APPLY AT A RATE OF 6 TON/AC (275 LB/1,000 SF), UNLESS OTHERWISE INDICATED BY SOIL TESTS.
- COMMERCIAL FERTILIZER** IN ABSENCE OF A SOIL TEST, USE 1000 LB/AC OF 10-20-20 (23 LB/1000 SF) MIXED INTO SEEDBED PRIOR TO SEEDING, OR IN A TANK WITH SEED WHEN HYDROSEEDING.
- INOCULANT** INOCULANT FOR TREATING LEGUMINOUS SEEDS SHALL BE A STANDARD COMMERCIAL PRODUCT CONSISTING OF A SUITABLE CARRIER CONTAINING A CULTURE OF NITROGEN FIXING BACTERIA SPECIFIC FOR SEEDS TO BE INOCULATED. INOCULANT SHALL NOT BE USED LATER THAN DATE INDICATED ON THE CONTAINER.
- MULCH** CLEAN OAT OR WHEAT STRAW SHALL BE FREE FROM MATURE SEED-BEARING STALKS OR ROOTS OF PROHIBITED OR NOXIOUS WEEDS AS DEFINED BY THE PENNSYLVANIA SEED ACT 1947. APPLY AT A RATE OF 139 POUNDS PER 1,000 SQUARE FEET (3 TONS PER ACRE). PRECAUTIONS SHALL BE TAKEN TO STABILIZE MULCH UNTIL THE VEGETATIVE COVER IS ESTABLISHED.
- SEED MIXTURE** SEED MIXTURE SHALL BEAR A GUARANTEED STATEMENT OF ANALYSIS AND SHALL BE COMPOSED OF THE FOLLOWING VARIETIES AND MIXED IN PROPORTIONS SPECIFIED.
- | PERMANENT SEEDING MIXTURE (PADOT FORMULA #) | PROPORTION BY WEIGHT | MINIMUM PURITY | MINIMUM GERMINATION |
|---|----------------------|----------------|---------------------|
| PERENNIAL RYEGRASS MIXTURE (LULIAM PERENNIS) - A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 50% OF THE TOTAL RYEGRASS COMPONENT. | 20% | 98% | 90% |
| CREeping RED FESCUE OR CHEWINGS FESCUE | 30% | 98% | 85% |
| KENTUCKY BLUEGRASS MIXTURE (POA PRATENSIS) - A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 50% OF THE TOTAL BLUEGRASS COMPONENT. | 50% | 98% | 80% |
- PERMANENT SEEDING** PERMANENT SEEDING SHALL BE APPLIED AT A RATE OF 21 POUNDS PER 1,000 SQUARE YARDS.
- PREPARATION OF SEEDING** GRADE AS NECESSARY TO BRING SUBGRADE TO A TRUE, SMOOTH SLOPE PARALLEL TO AND SIX INCHES BELOW PROPOSED FINISH GRADE. PLACE MULTIPLE ROWS OVER SPECIFIED AREAS TO A DEPTH SUFFICIENTLY GREATER THAN SIX (6) OR EIGHT (8) INCHES SO THAT AFTER SETTLEMENT AND LIGHT ROLLING, THE COMPLETE WORK WILL CONFORM TO LINES, GRADES AND ELEVATIONS SHOWN.
- FERTILIZER AND AGRICULTURAL LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE SOIL BY ROTOTILLING OR OTHER METHOD TO A MINIMUM DEPTH OF FOUR (4) INCHES. THE ENTIRE SURFACE SHALL THEN BE REGRADDED AND ROLLED. AREAS TO BE SEEDED SHALL THEN BE LOOSENEED TO A DEPTH OF TWO (2) INCHES. SEEDING SHALL BE DONE IN TWO SEPARATE OPERATIONS, THE SECOND SEEDING SHALL BE DONE IMMEDIATELY AFTER THE FIRST AND AT RIGHT ANGLES TO THE FIRST SEEDING AND LIGHTLY RAKE INTO THE SOIL. MULCH SEEDED AREAS IMMEDIATELY AFTER SEEDING.

STEEP SLOPE SEEDING SPECIFICATIONS:

- MATERIALS:** 3" (MINIMUM) TOPSOIL SHALL BE REQUIRED ON SLOPES STEEPER THAN 3:1.
- LIMESTONE** RAW, GROUND AGRICULTURAL LIMESTONE CONTAINING MORE THAN 90 PERCENT CALCIUM CARBONATES (ADJUST pH LEVELS TO BETWEEN 6.5 TO 7.0). APPLY AT A RATE OF 6 TONS PER ACRE (275 POUNDS PER 1,000 SQUARE FEET), UNLESS INDICATED OTHERWISE BY SOIL TESTS.
- COMMERCIAL FERTILIZER** IN THE ABSENCE OF A SOIL TEST, USE 1000 POUNDS 10-20-20 (23 POUNDS PER 1000 SQUARE FEET) MIXED INTO SEEDBED PRIOR TO SEEDING, OR IN A TANK WITH SEED WHEN HYDROSEEDING.
- INOCULANT** INOCULANT FOR TREATING LEGUMINOUS SEEDS SHALL BE A STANDARD COMMERCIAL PRODUCT CONSISTING OF A SUITABLE CARRIER CONTAINING A CULTURE OF NITROGEN FIXING BACTERIA SPECIFIC FOR SEEDS TO BE INOCULATED. INOCULANT SHALL NOT BE USED LATER THAN DATE INDICATED ON THE CONTAINER. IF A HYDRAULIC METHOD OF APPLICATION IS USED, INCREASE INOCULANT FOUR (4) TIMES NORMAL APPLICATION RATES.
- MULCH** CLEAN OAT OR WHEAT STRAW SHALL BE FREE FROM MATURE SEED-BEARING STALKS OR ROOTS OF PROHIBITED OR NOXIOUS WEEDS AS DEFINED BY THE PENNSYLVANIA SEED ACT OF 1947. APPLY AT A RATE OF 139 POUNDS PER 1,000 SQUARE FEET (3 TONS PER ACRE). PRECAUTIONS SHALL BE TAKEN TO STABILIZE MULCH UNTIL THE VEGETATIVE COVER IS ESTABLISHED. STRAW SHALL BE CRIMPED, TACKLED, NETTED OR OTHERWISE ANCHORED TO THE GROUND.
- SEED MIXTURE** SEED MIXTURE SHALL BEAR A GUARANTEED STATEMENT OF ANALYSIS AND SHALL BE COMPOSED OF THE FOLLOWING VARIETIES AND MIXED IN PROPORTIONS SPECIFIED.
- | STEep SLOPE SEED MIXTURE (PADOT TYPE #) | PROPORTION BY WEIGHT | MINIMUM PURITY | MINIMUM GERMINATION |
|--|----------------------|----------------|---------------------|
| TALL FESCUE (FESTUCA ARUNDINACEA VAR. KENTUCKY 31) | 70.0% | 98% | 85% |
| BIRDSFOOT TREFOIL MIXTURE (LOTUS CORNICULATUS) - A MIXTURE OF 1/2 VIKING AND 1/2 EITHER EMPIRE, NORCEN OR LEO. | 20.0% | 98% | 80% |
| REdTOP (ARGRISOSTIS ALBA) | 10.0% | 92% | 80% |
- * MINIMUM 20% HARDEEED AND 60% NORMAL SPROUTS.
- SEEDING RATES** STEEP SLOPE SEEDING SHALL BE APPLIED AT A RATE OF ELEVEN (11) POUNDS PER ONE THOUSAND (1,000) SQUARE YARDS.
- ALL AREAS TO BE SEEDED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF AT LEAST THREE INCHES PARALLEL TO CONTOURS BY MECHANICAL MEANS AS APPROVED BY THE LANDSCAPE ARCHITECT. THE COMMERCIAL FERTILIZER AND AGRICULTURAL GROUND LIMESTONE MAY BE SPREAD EVENLY ON AREAS TO BE SEEDED PRIOR TO TILLAGE AND INCORPORATED INTO THE SOIL AT THE SAME TIME.
- MULCH SEEDED AREAS IMMEDIATELY AFTER SEEDING.
- SEEDING** SEED ALL SLOPES STEEPER THAN 3:1 WITH STEEP SLOPE MIX UNLESS NOTED OTHERWISE ON THE DRAWINGS.

MAINTENANCE SCHEDULE

CONTROL MEASURE	INSPECT	PROBLEMS TO LOOK FOR	POSSIBLE REMEDIES
VEGETATION	WEEKLY AND AFTER EVERY RUNOFF EVENT	SEDIMENT AT TOE OF SLOPE RILLS AND GULLIES FORMING BARE SOIL PATCHES	CHECK FOR TOP-OF-SLOPE DIVERSION AND INSTALL IF NEEDED. FILL RILLS AND REGRADE GULLIED SLOPES. RESEED, FERTILIZE, AND MULCH BARE AREAS.
ROCK CONSTRUCTION ENTRANCES	WEEKLY AND AFTER EVERY RUNOFF EVENT	SINK HOLES OR RUTS SEDIMENT ON PUBLIC ROADWAY	ADD ROCK TO BRING TO SPECIFIED DIMENSIONS. SWEEP MATERIAL BACK TO PROJECT SITE. DO NOT WASH ROADWAY WITH WATER.
COMPOST FILTER SOCK	WEEKLY AND AFTER EVERY RUNOFF EVENT	SEDIMENT ACCUMULATION ON UPSTREAM SIDE PONDING WATER	REMOVE SEDIMENT WHEN LEVEL REACHES HALF OF THE EFFECTIVE HEIGHT. REMOVE SEDIMENT OR ADD ADDITIONAL SILT-BOX TO REDUCE SLOPE LENGTH.
INLET PROTECTION	WEEKLY AND AFTER EVERY RUNOFF EVENT	SEDIMENT ACCUMULATION SEDIMENT ACCUMULATED IN INLET FILTER BAG TO 1/2 FULL RUNOFF ESCAPING AROUND BARRIER FILTER BAG TORN OR DAMAGED	REMOVE SEDIMENT AND DISPOSE ON SITE. CLEAN AND/OR REPLACE BAG. REBUILD BARRIER. REPLACE BAG.
SLOPE BLANKET	WEEKLY AND AFTER EVERY RUNOFF EVENT	LOSS OF PROTECTIVE LINING TORN PUNCHED FABRIC	RESHAPE AS NECESSARY AND REPLACE FABRIC. OVERLAP WITH CONTINUOUS PIECE OF MATTING. SECURELY ANCHOR WITH PROPER STAPLES.
CONCRETE WASHOUT FACILITY	DAILY	DAMAGED OR LEAKING WASHOUT ACCUMULATION OF MATERIALS (75% CAPACITY)	DEACTIVATED AND REPAIRED OR REPLACED AS NECESSARY. PLASTIC LINES SHOULD BE REPLACED WITH EACH CLEANING.

CLEAN FILL AND ENVIRONMENTAL DUE DILIGENCE:

THE NPDES PERMIT COVERS THE MOVING, DEPOSITING, STOCKPILING, OR STORING OF SOIL, ROCK OR EARTH MATERIALS. IF THE SITE WILL NEED TO HAVE FILL IMPORTED FROM AN OFF-SITE LOCATION, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND THE DETERMINATION OF CLEAN FILL WILL RESIDE WITH THE CONTRACTOR RESPONSIBLE FOR EARTHMOVING OPERATIONS.

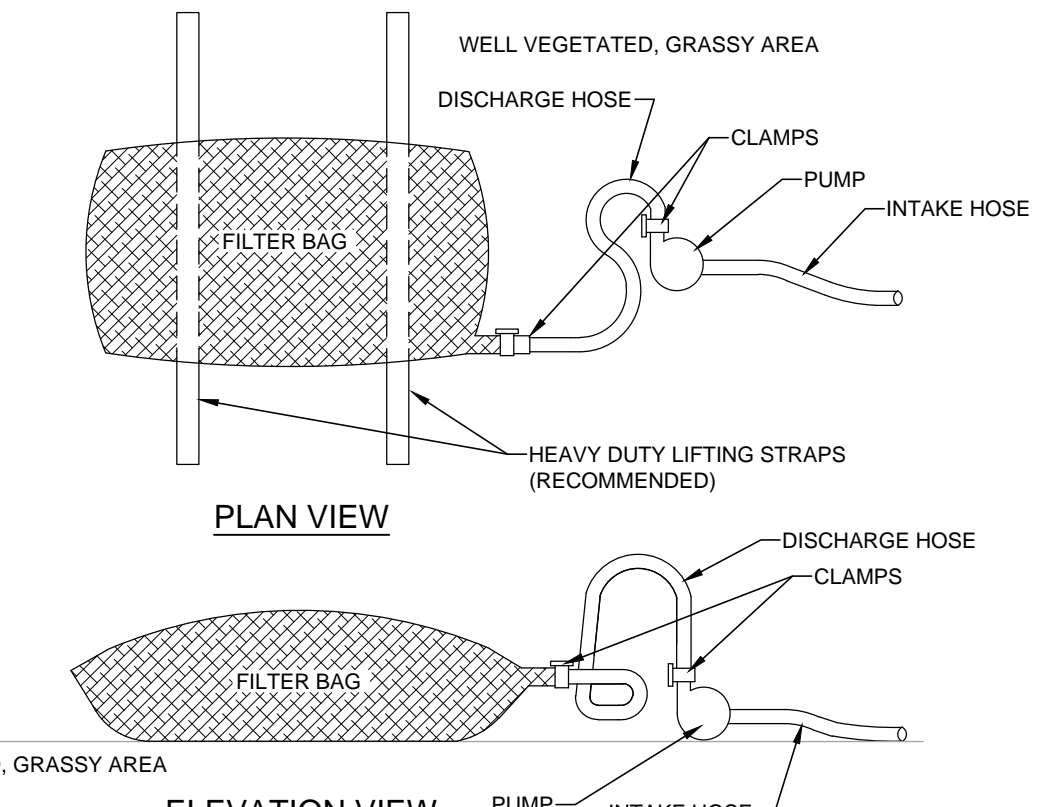
ENVIRONMENTAL DUE DILIGENCE MEANS PERFORMING INVESTIGATIVE TECHNIQUES FOR THE IMPORTED MATERIAL. THIS INCLUDES, BUT IS NOT LIMITED TO: VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANDBOX MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, AND ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE, IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) POLICY MANAGEMENT OF FILL. FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEP MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA CODE, CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE.

CLEAN FILL IS DEFINED AS UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. THE TERM USE ASPHALT DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.

04
C404 CLEAN FILL AND ENVIRONMENTAL
DUE DILIGENCE

05
C404 MAINTENANCE SCHEDULE

01
C404 PUMPED WATER FILTER BAG
- N.T.S.



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

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4832	205 LB
FUNCTIONURE	ASTM D-3853	110 LB
MULLEN BURST	ASTM D-3798	350 PSI
UV RESISTANCE	ASTM D-4355	70%
A08 % RETAINED	ASTM D-4751	80 SIEVE

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

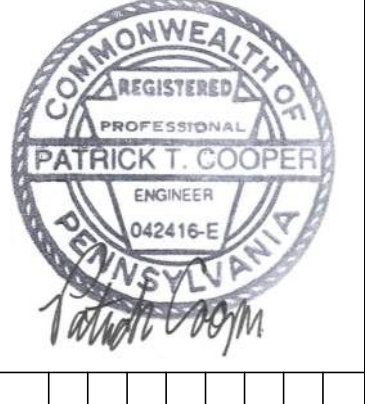
BAGS SHALL BE LOCATED IN WELL VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS, WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS SHALL BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER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

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

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

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

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



REVISION RECORD

No.	Date	Description
01	10/07/2015	REVISED PER TOWNSHIP COMMENTS
02	10/09/2015	REVISED STORM SEWER AND PCSM LAYOUT
03	11/04/2015	RESUBMISSION TO TOWNSHIP
04	01/08/2016	
05	01/07/2016	
06	01/07/2016	
07	01/07/2016	
08	01/07/2016	

CALVERT HILL
Moon Twp / Allegheny Co., PA
CHARTER HOMES & NEIGHBORHOODS

LAND DEVELOPMENT PLAN FOR CALVERT HILL
971 BEAVER GRADE ROAD CORAOPOLIS, PA 15108
A PLANNED COMMUNITY

PREPARED FOR:
CHARTER HOMES AT CALVERT HILL
1190 DILLERVILLE ROAD
LANCASTER, PA 17601

EROSION AND SEDIMENT CONTROL DETAILS

Project Number: 19933-0006
Drawing Scale: N.T.S.
Date Issued: SEPT. 2015
Index Number: --
Drawn By: PML
Checked By: DMH
Project Manager: DMH

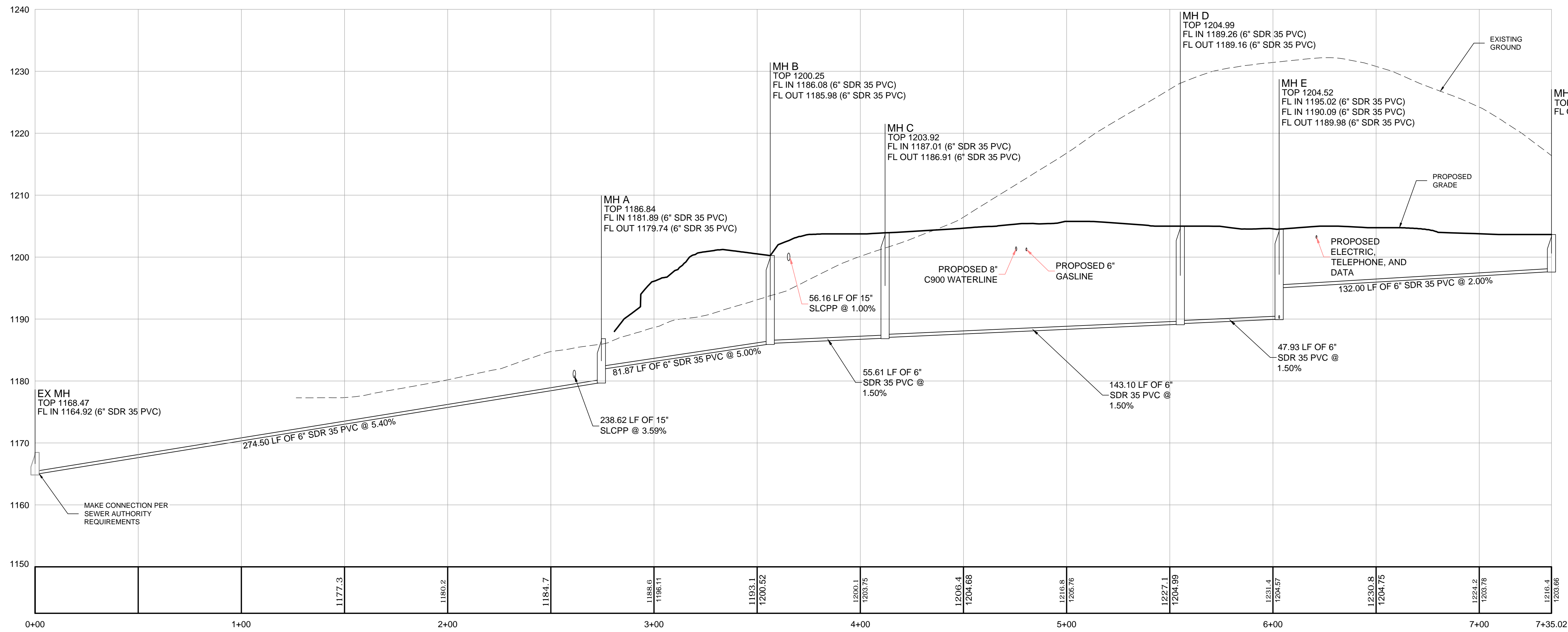
C404

PROFILE NOTES:

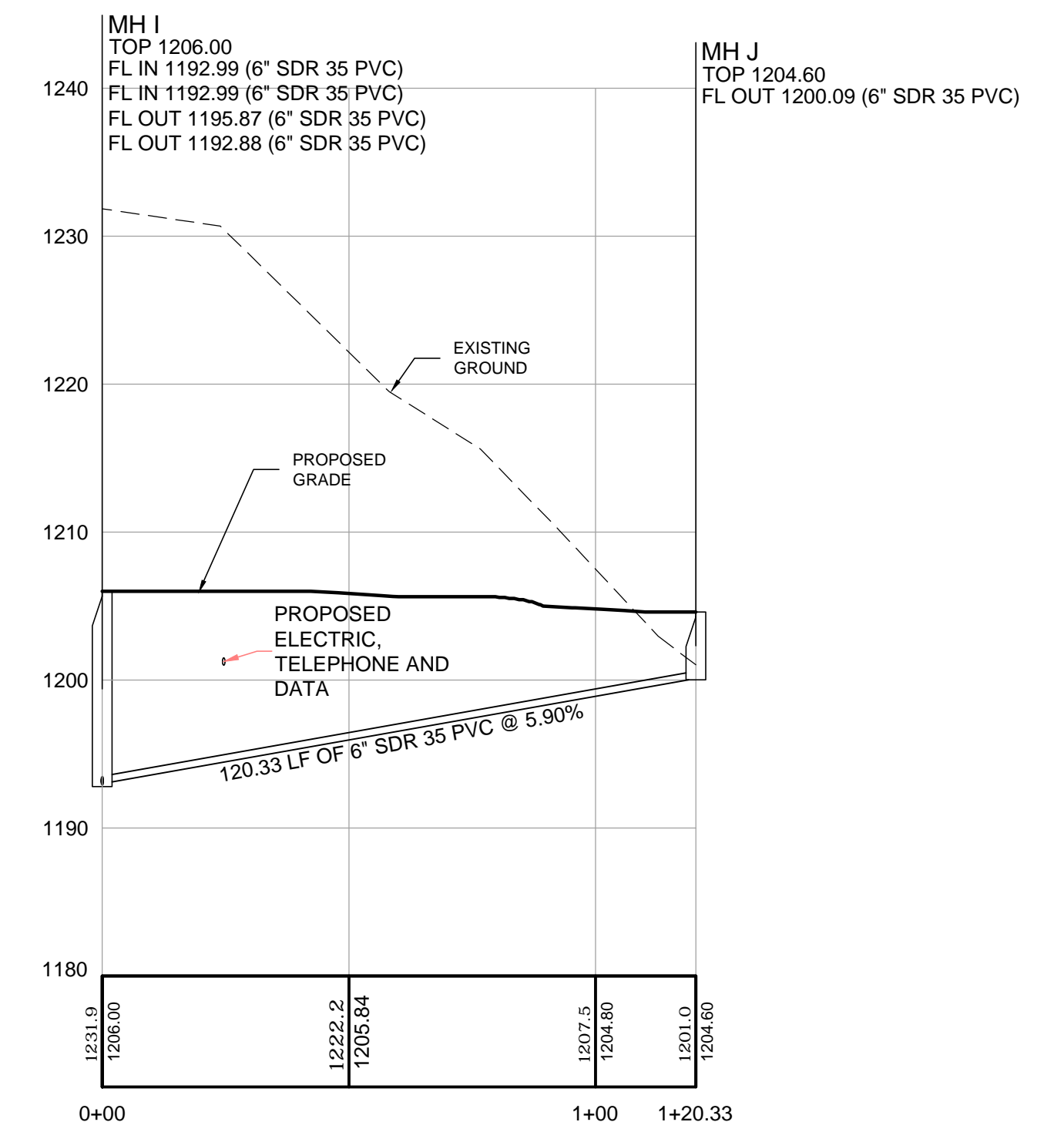
1. THE LENGTHS (LF) SHOWN ON THIS PLAN ARE CENTERLINE STRUCTURE TO CENTERLINE STRUCTURE, AND DO NOT ACCOUNT FOR SLOPES OR DEFINE ACTUAL LENGTHS OF PIPE.

PROFILE STRUCTURE ABBREVIATIONS

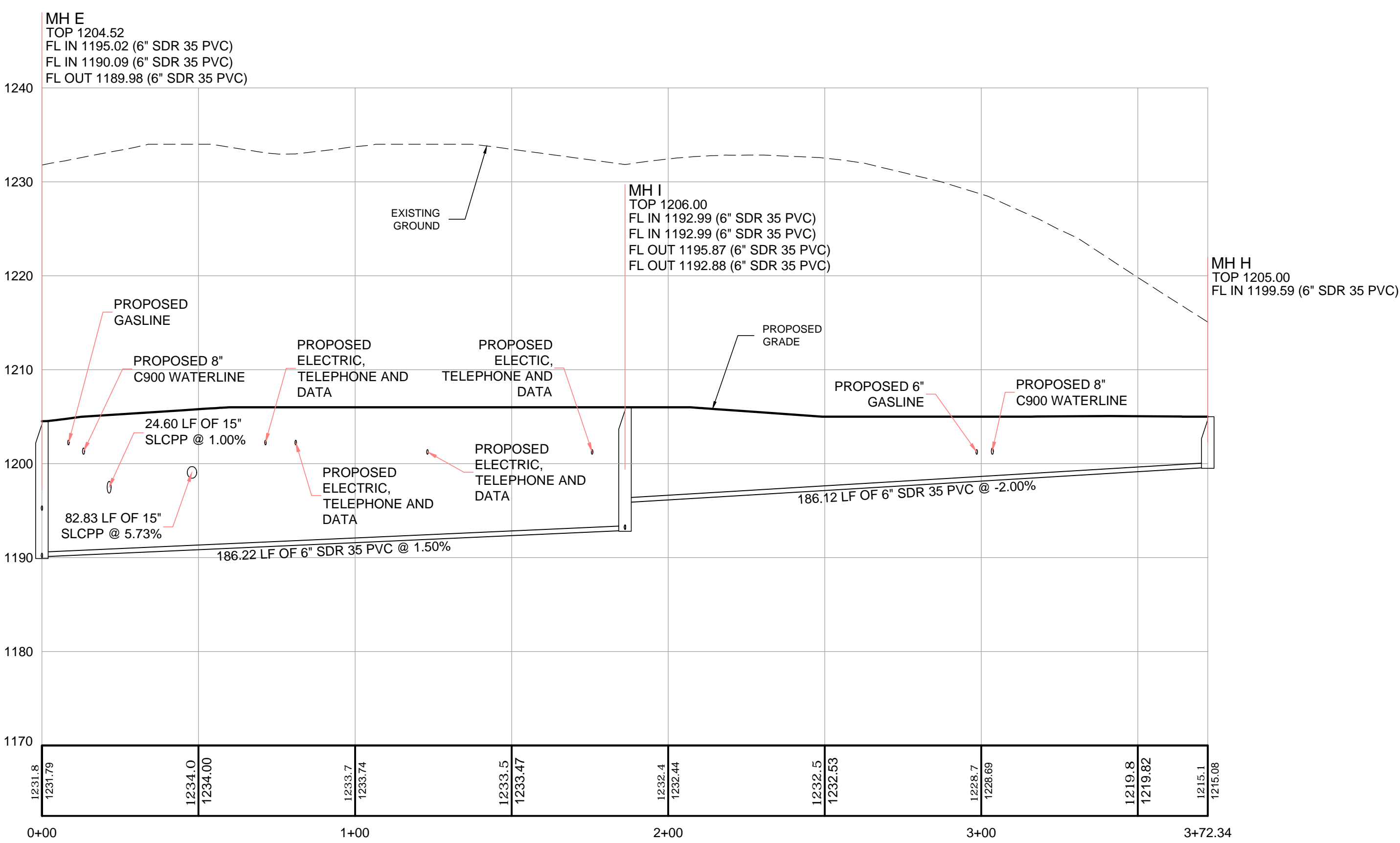
STM	STORM
SAN	SANITARY
MH	MANHOLE
OS	OUTLET STRUCTURE
CO	CLEANOUT
HV	HEADWALL
EW	ENDWALL



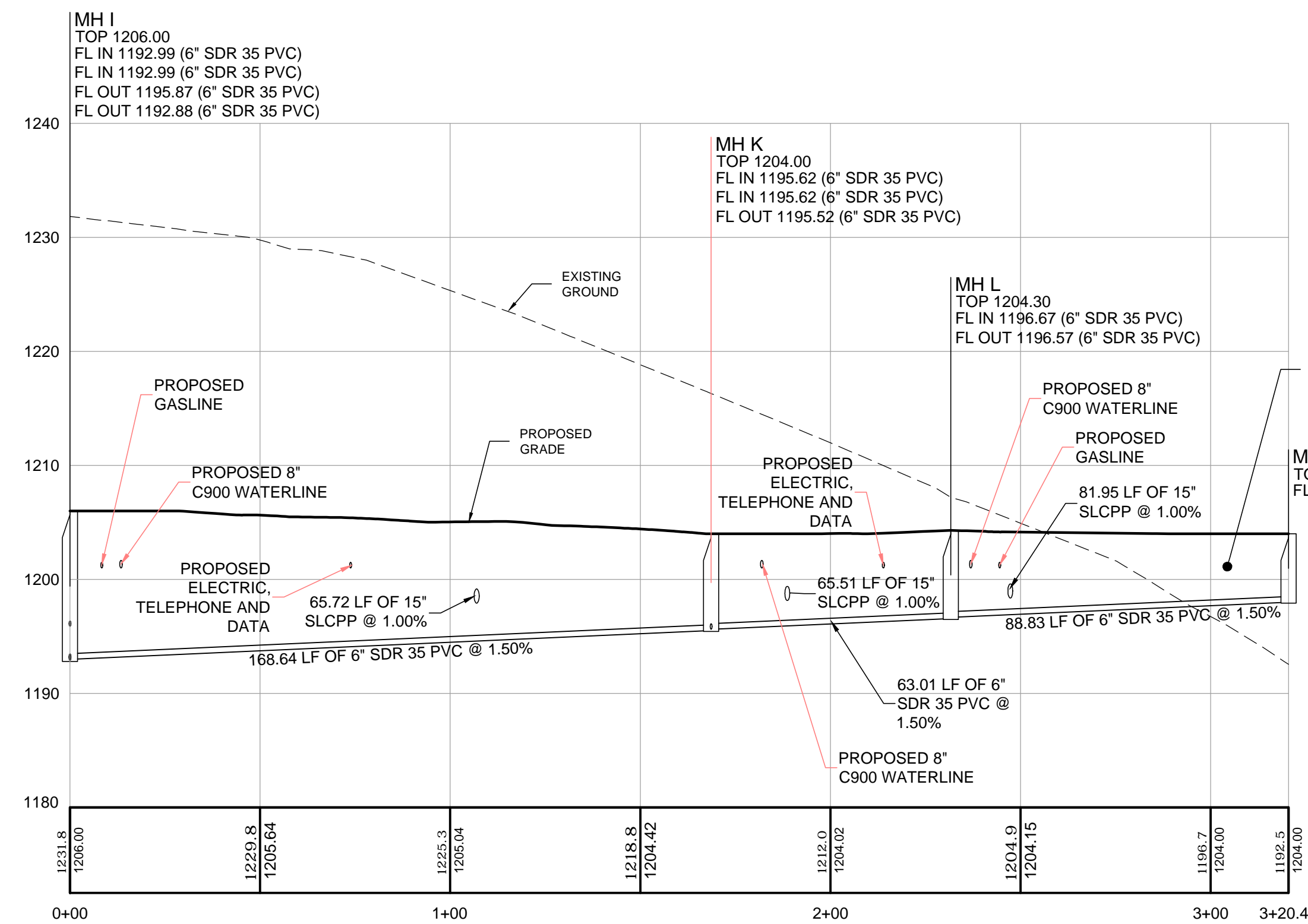
EX SAN MH Through SAN MH F PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



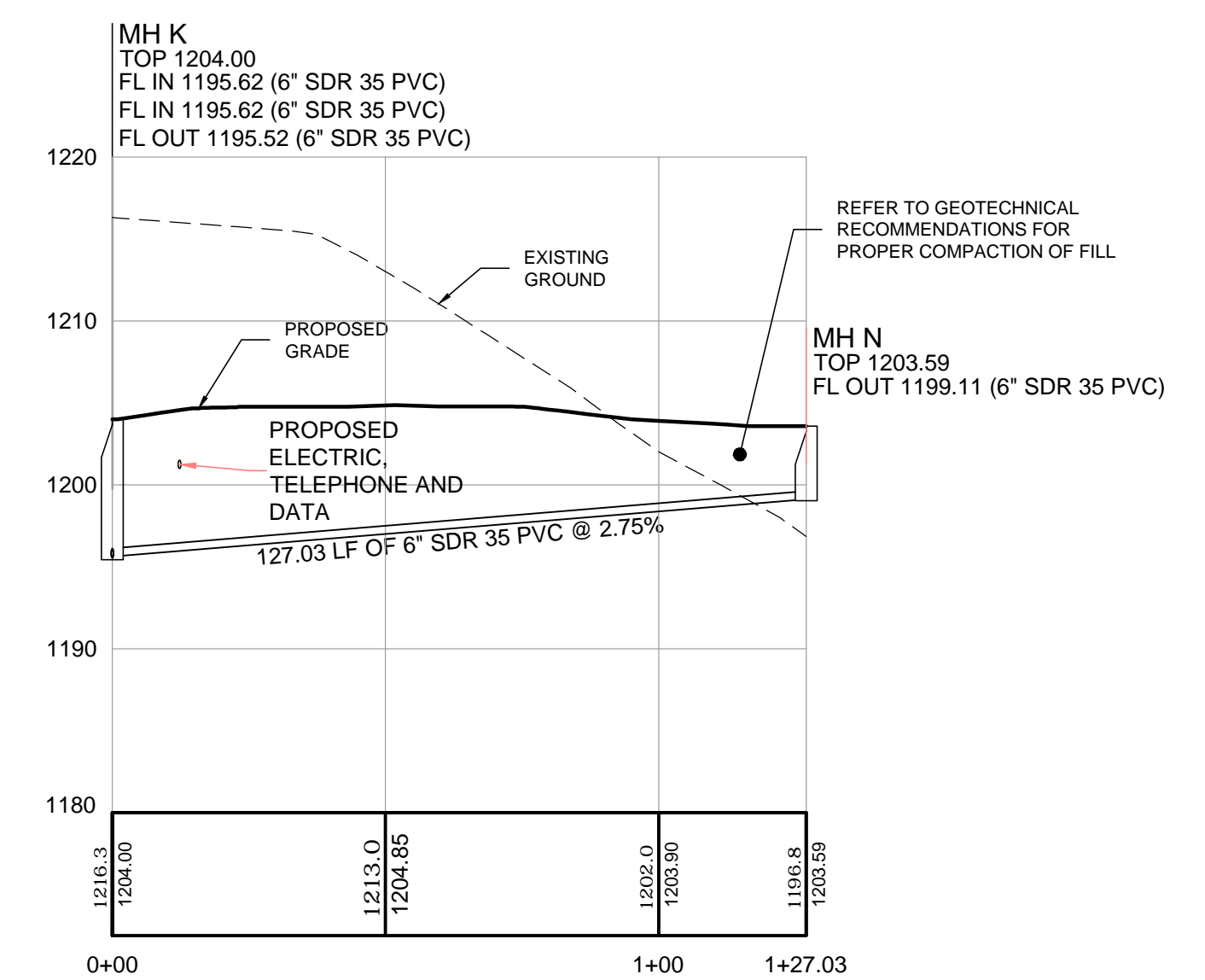
SAN MH I Through SAN MH J PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



SAN MH E Through SAN MH N PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



MH I TO MH M PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



MH K TO MH N PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



REVISION RECORD

No.	Date	REVISION PER TOWNSHIP COMMENTS
01	10/07/2015	ISSUE FOR PERM LAYOUT
02	10/07/2015	RESUBMISSION TO TOWNSHIP
03	11/04/2015	
04		
05		
06		
07		
08		



LAND DEVELOPMENT PLAN FOR CALVERT HILL
971 BEAVER GRADE ROAD CORAOPOLIS, PA 15108
A PLANNED COMMUNITY
PREPARED FOR:
CHARTER HOMES AT CALVERT HILL
1180 DILLERVILLE ROAD
LANCASTER, PA 17601

SANITARY PROFILES

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS IN DESIGN STAGE - STOP CALL
Pennsylvania One Call System, Inc.
8-1-1
POCS Serial No. 20142200148

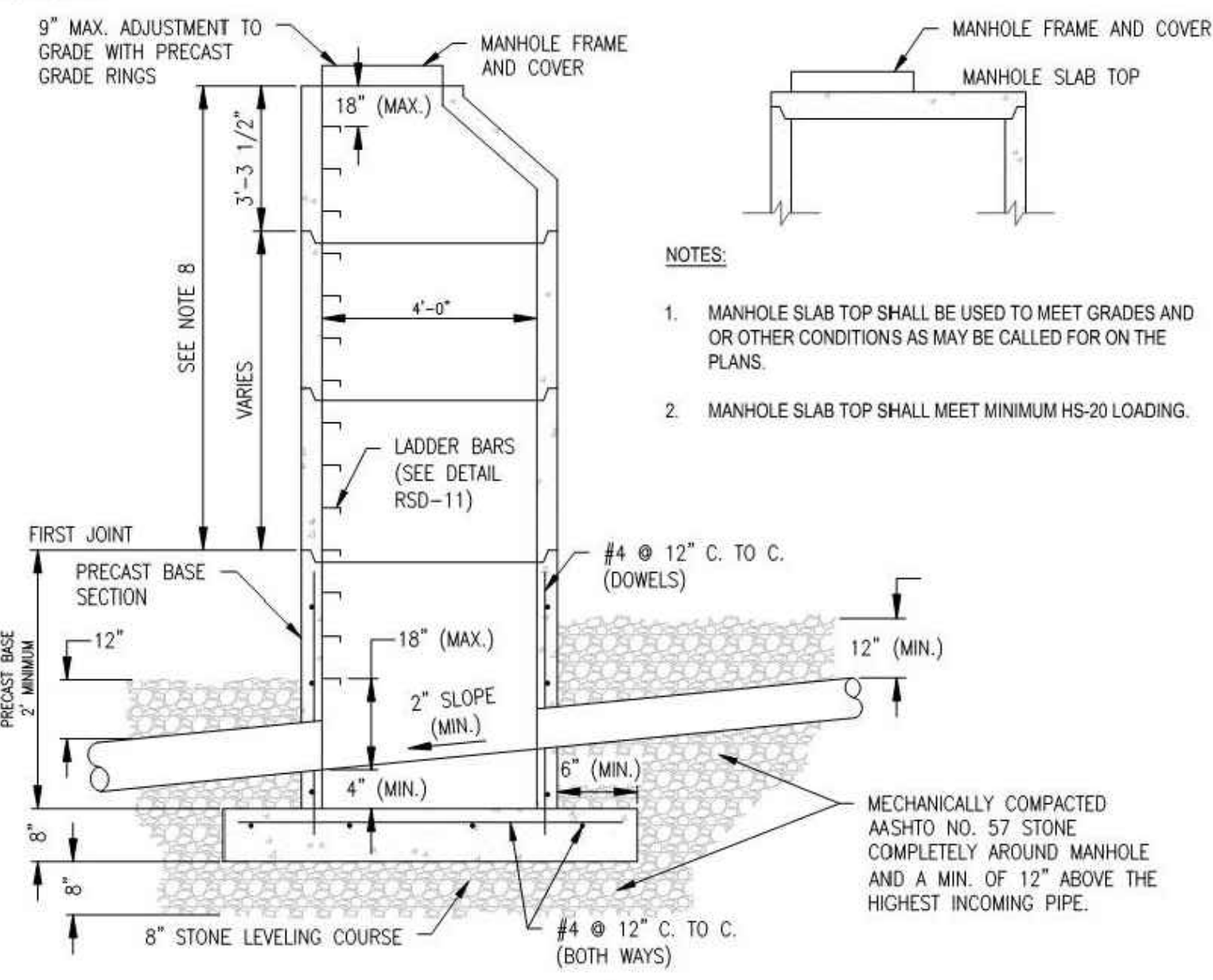
Project Number: 18933-0006
Drawing Scale: AS NOTED
Date Issued: SEPT, 2015
Index Number: -
Drawn By: PML
Checked By: DMH
Project Manager: DMH

C501

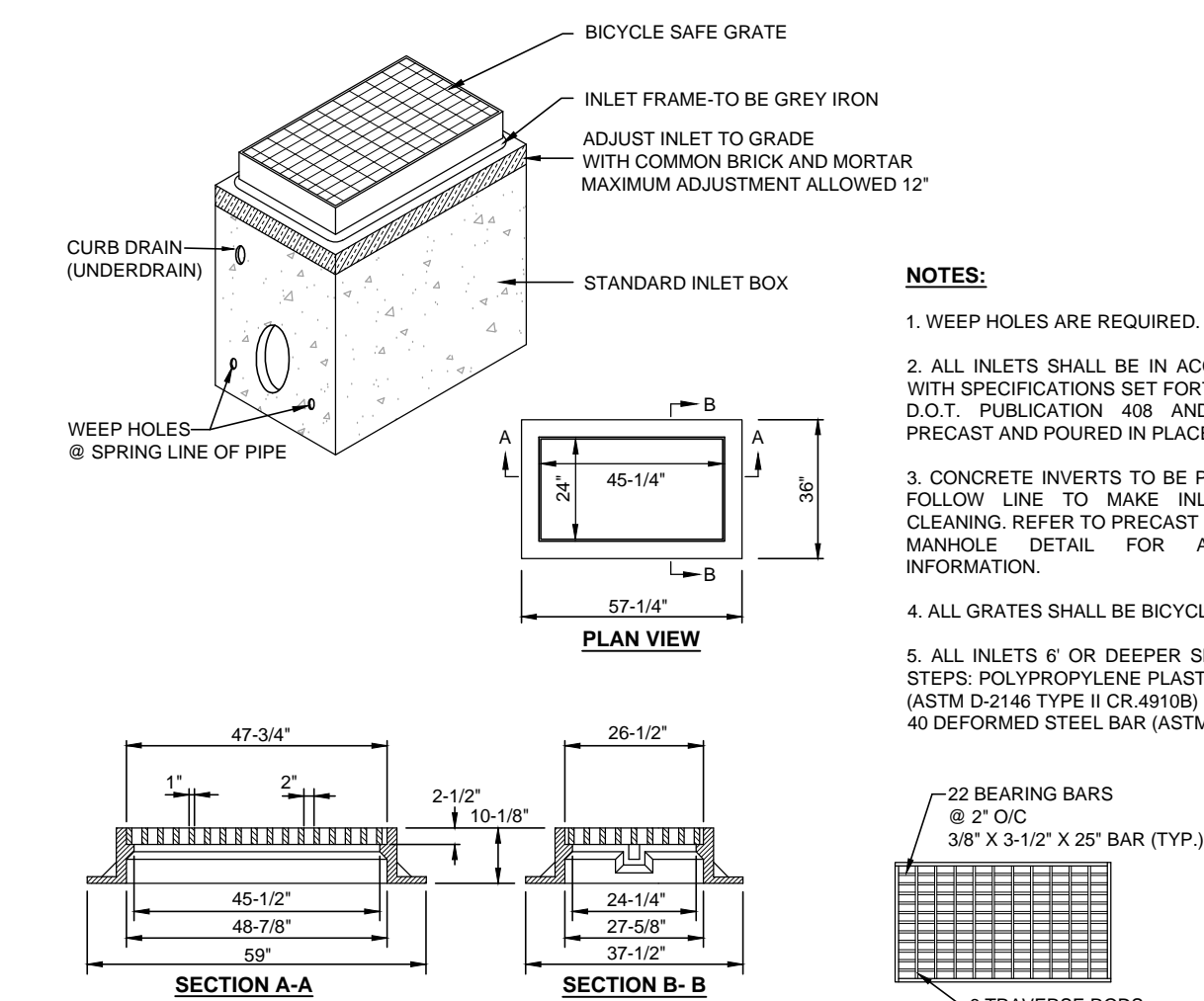
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 Plot Date: 10/10/2015 2:23 PM
 User: DMH

NOTES:

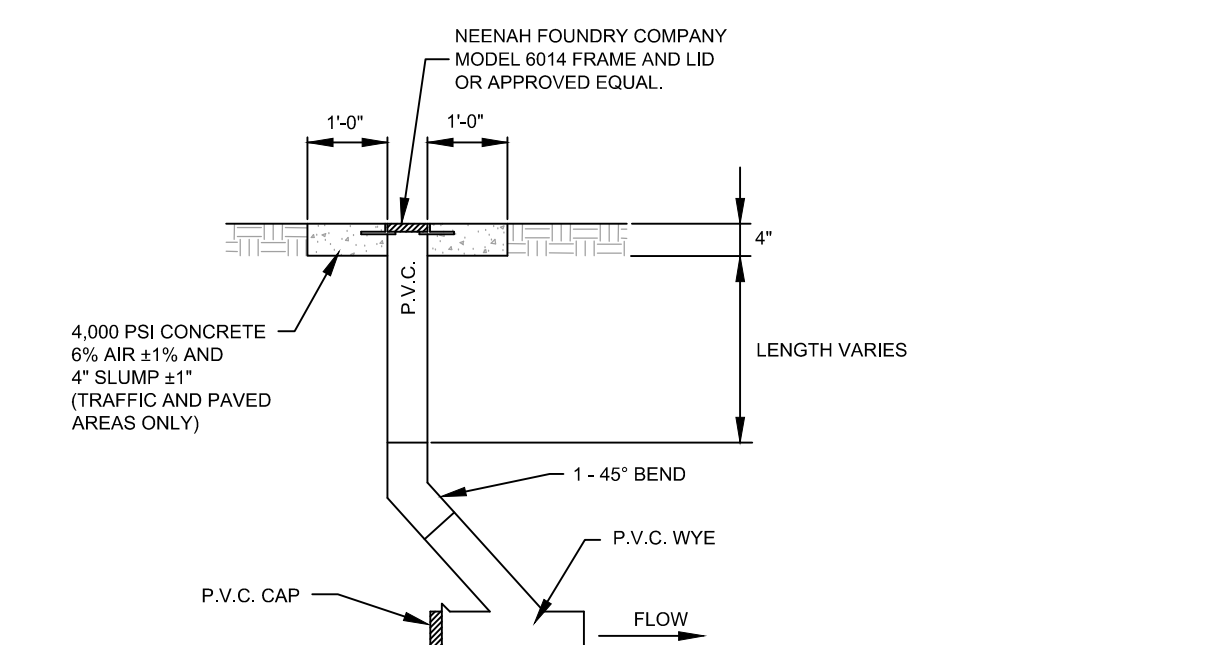
- ALL CONCRETE SHALL BE 4000 PSI, 5% AIR ENTRAINED PORTLAND CEMENT CONCRETE.
- MANHOLE BARREL JOINTS TO BE SEALED WITH 1" DIA. FLEXIBLE BUTYL RUBBER JOINT SEALANT, USE 1/2" DIA. FOR FRAME AND COVER.
- FRAME AND COVER TO BE ANCHORED WITH 2-3/4" DIA. S.S. ANCHOR BOLTS SET 8 INCHES INTO CONCRETE.
- LIFTING HOLES TO BE POINTED WITH NON-SHRINK GROUT AND LEFT WATER TIGHT, NEAT, AND SMOOTH.
- MAXIMUM ADJUSTMENT TO FINISHED GRADE USING PRECAST GRADE RINGS SHALL NOT EXCEED 9 INCHES (9").
- MANHOLES SHALL CONFORM TO PennDOT PUBLICATION 408, SECTION 714 AND PennDOT PUBLICATION 72, RC-38M.
- MANHOLE INVERT SHALL BE CONCRETE TO THE SPRING LINE OF THE PIPE WITH SIDES SLOPING 12" TO 1'-0" TO INSIDE FACE OF PRECAST BASE SECTION.
- IF THIS VERTICAL DIMENSION IS 3'-3" OR LESS, USE PRECAST SLAB TOP DESIGNED TO MEET LOAD CONDITIONS.
- PROVIDE PennDOT CERTIFICATE ON ALL MATERIALS USED ON THE SITE.
- STORM SEWER DROP CONNECTIONS FROM INVERT OF OUTFLOW PIPE TO INVERT OF INFLOW PIPES SHALL BE A MAXIMUM OF 2 FT.



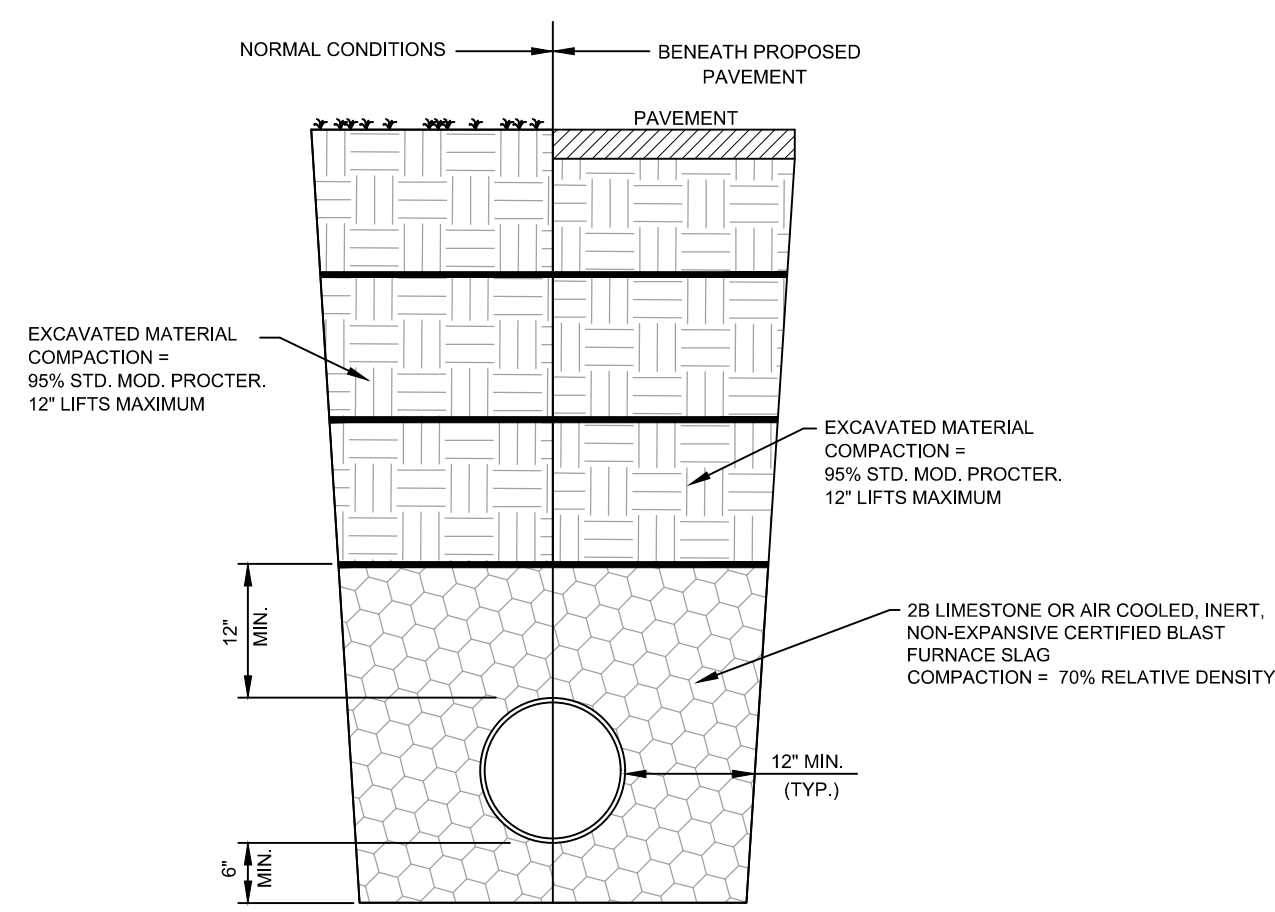
1 MOON TOWNSHIP STD. DETAIL RSD-7 PRECAST CONCRETE MANHOLE
C601



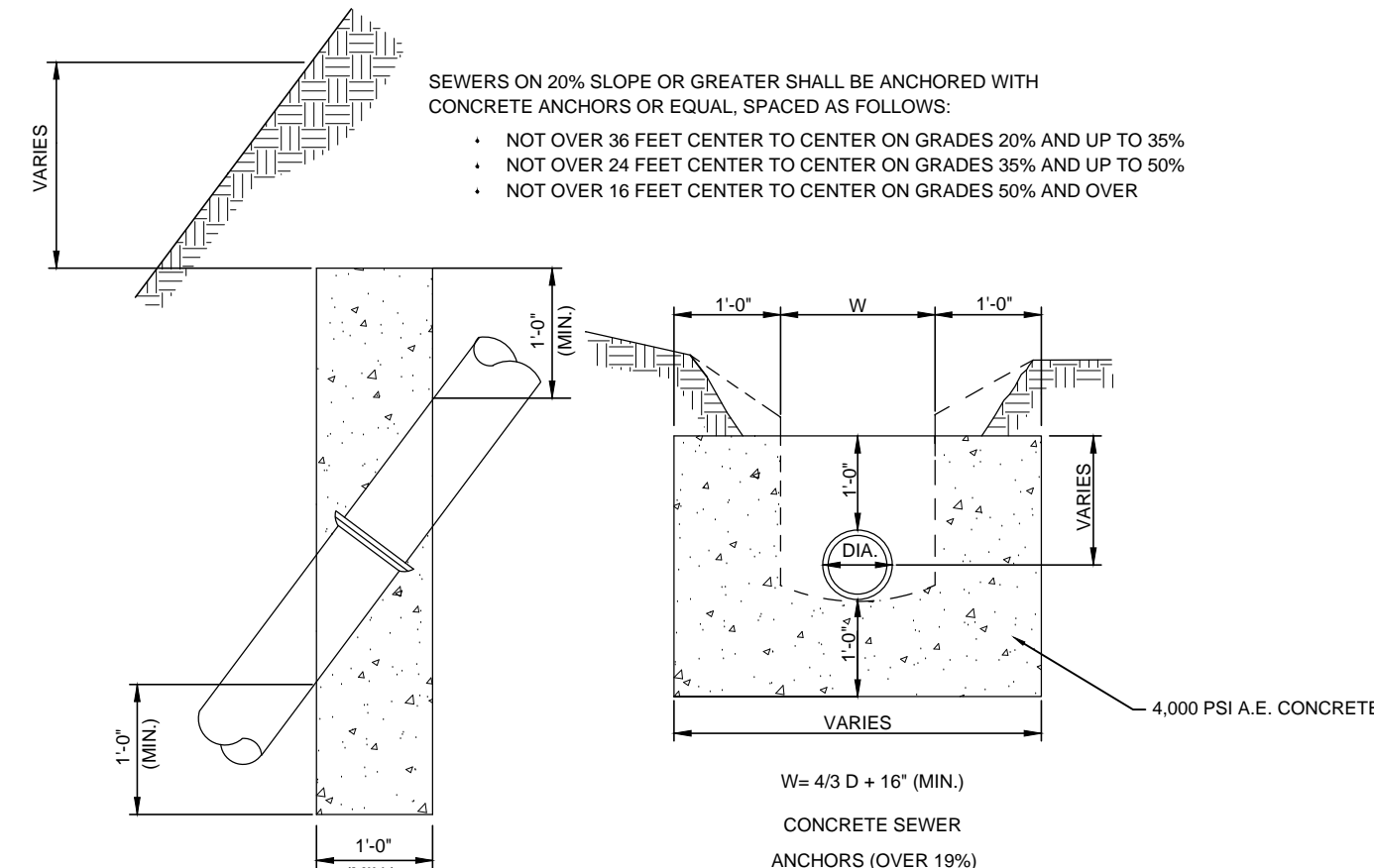
2 STORM INLET (TYPE M)
C601



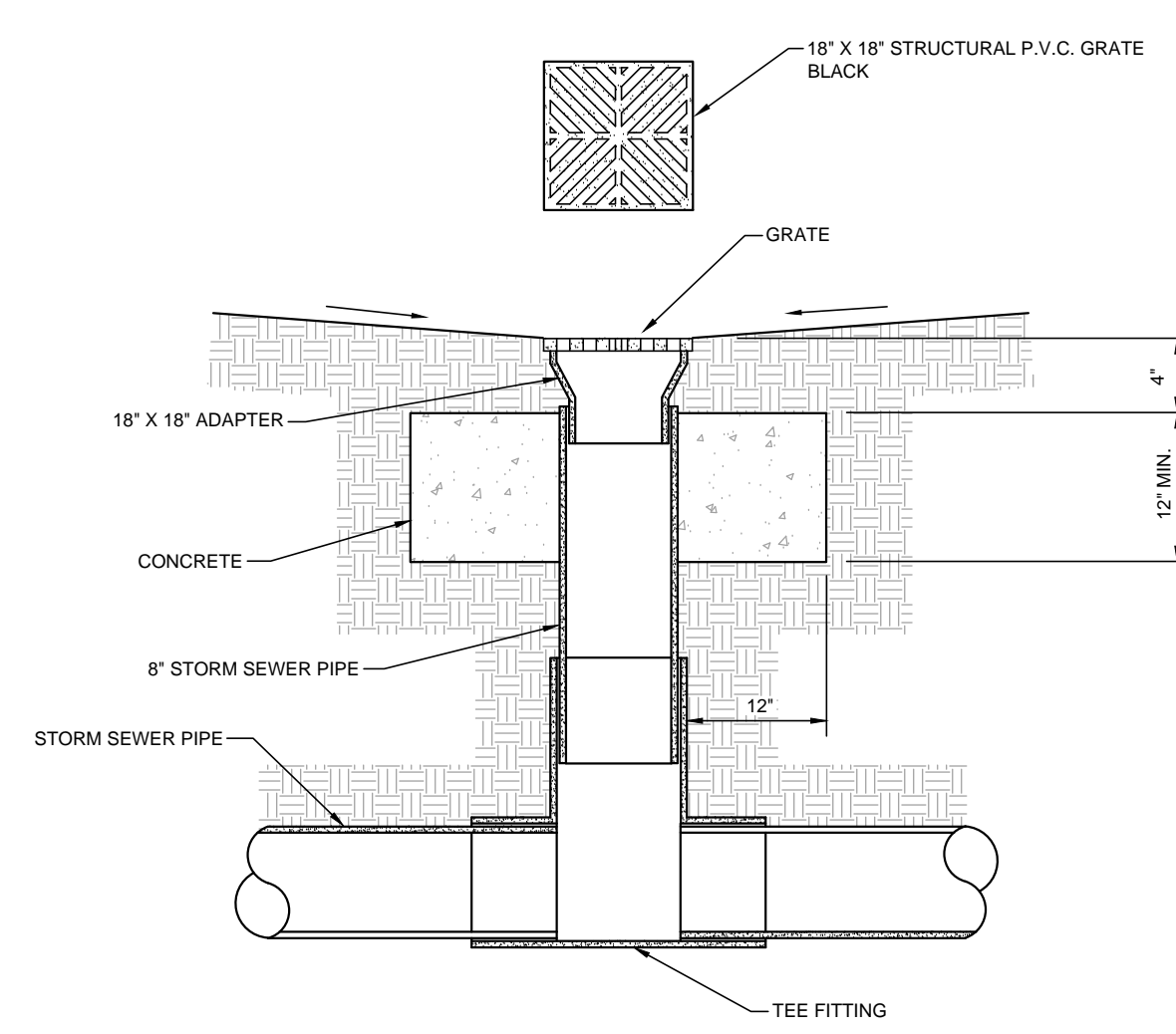
3 CLEANOUT
C601



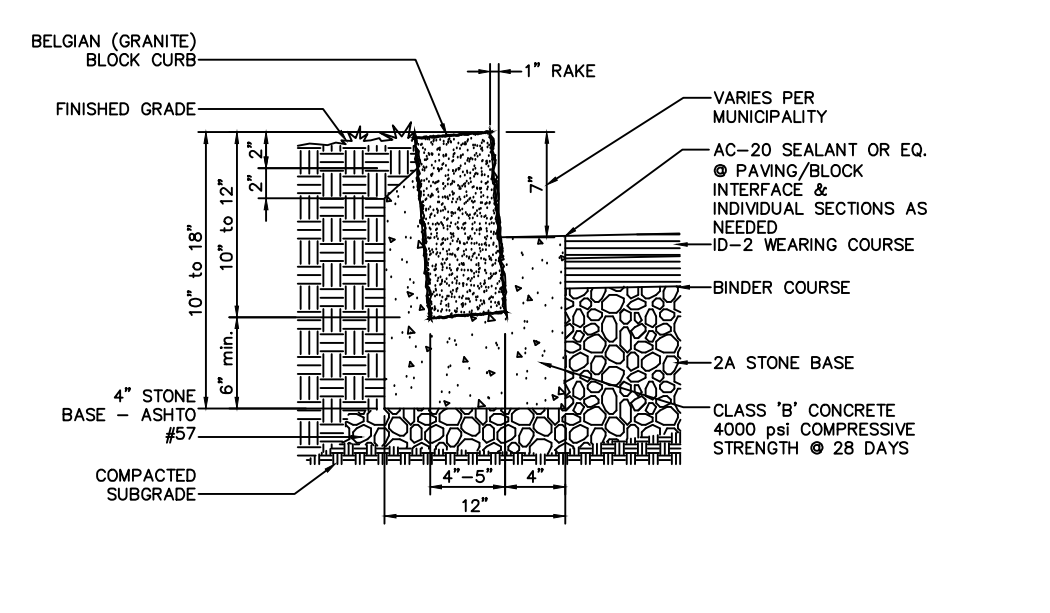
4 UNDERGROUND PIPE OR CONDUIT BACKFILL
C601



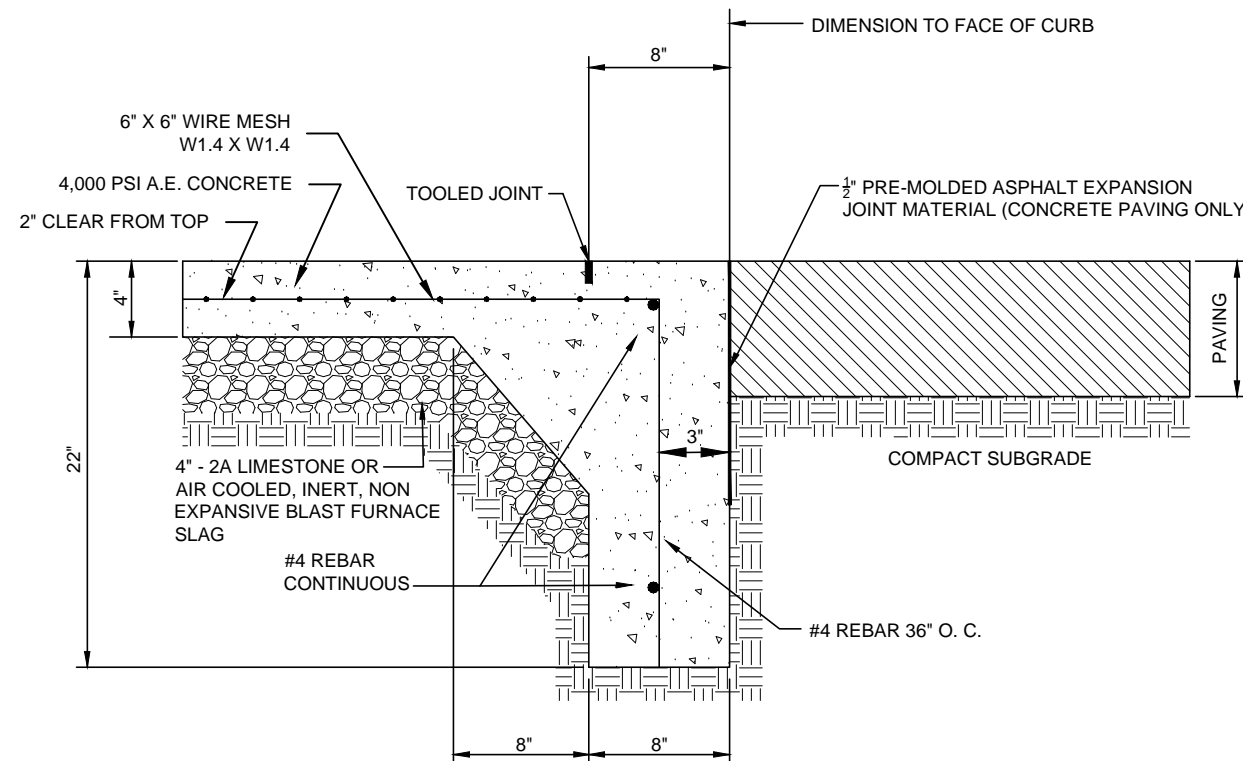
5 CONCRETE SEWER ANCHORS
C601



6 YARD DRAIN
C601

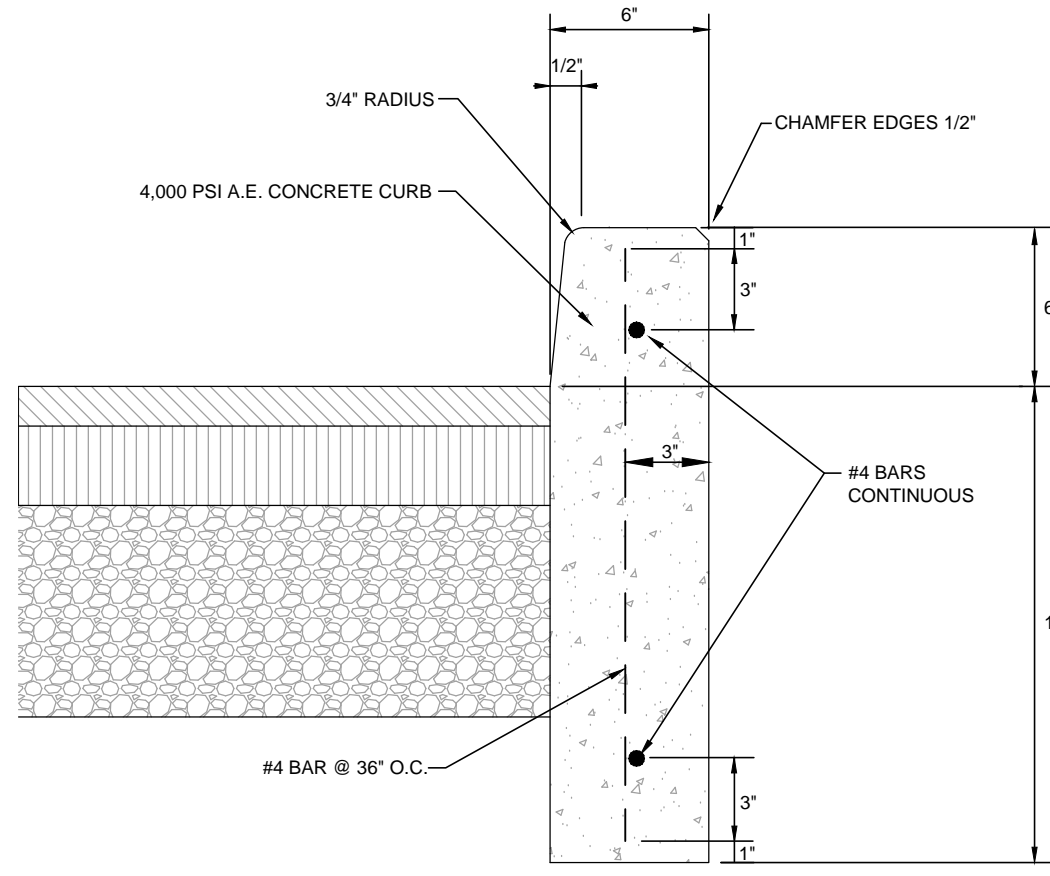


7 BELGIAN BLOCK CURB
C601



- NOTES:**
- ALL CURBS AND WALKS SHALL BE MONOLITHIC POURED. SCORE JOINTS IN VERTICAL CURB SURFACE TO ALIGN WITH WALKWAY JOINTS.
 - CONTRACTOR SHALL PLACE A TOOLED JOINT AS PER SITE PLAN.
 - THE CONCRETE SHALL BE TREATED WITH A TWO-COAT APPLICATION OF SEALTIGHT CS-309-25 OR APPROVED EQUAL. AFTER 7 DAYS, THE CONCRETE SHALL BE TREATED WITH SEALTIGHT T14H OR APPROVED EQUAL. THE TEMPERATURE FOR APPLICATION TO THE CONCRETE SURFACE MUST BE 40°F AND RISING.

8 FLUSH INTEGRAL CURB AND SIDEWALK
C601



- NOTES:**
- PROVIDE EXPANSION JOINTS @ 20'-0" O.C.
 - PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 630 FOR PLAN CEMENT CONCRETE CURB AND DEPRESSED CURB SECTION 646 FOR PLAN CEMENT CONCRETE CURB GUTTER.
 - CHANGES IN DESIGN MUST BE APPROVED BY ENGINEER PRIOR TO CONSTRUCTION IF CONTRACTOR CHOOSES TO PROVIDE EXTRUDED CURB.

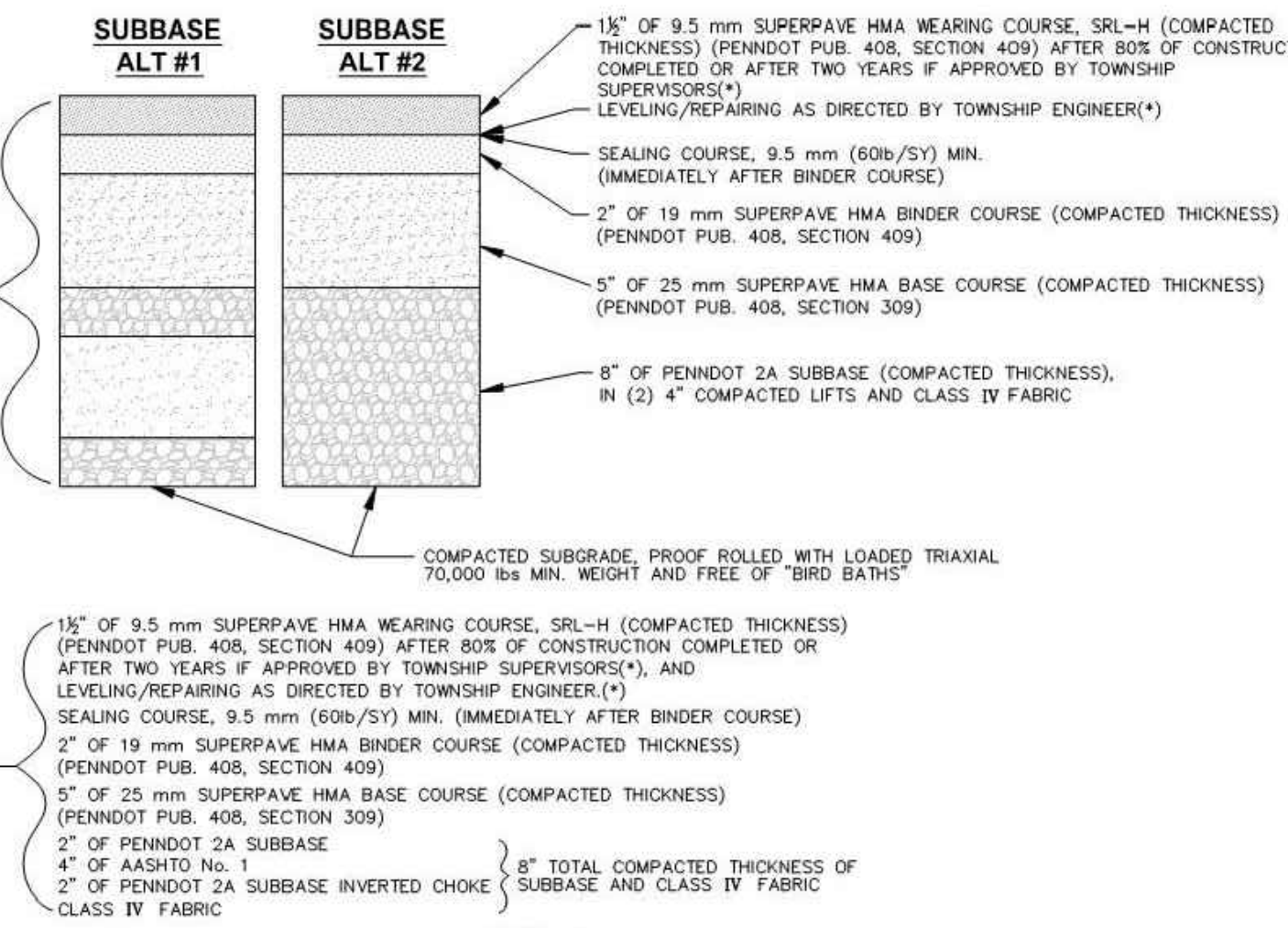
9 TYPICAL 6" DEEP SET CONCRETE CURB
C601

ROADWAY CLASSIFICATION

MAJOR COLLECTOR	80' R/W	CARTWAY 18" CURB	5' SIDEWALK
LOCAL	62' R/W	CARTWAY 18" CURB	5' SIDEWALK
SERVICE	50' R/W	CARTWAY 18" CURB	5' SIDEWALK

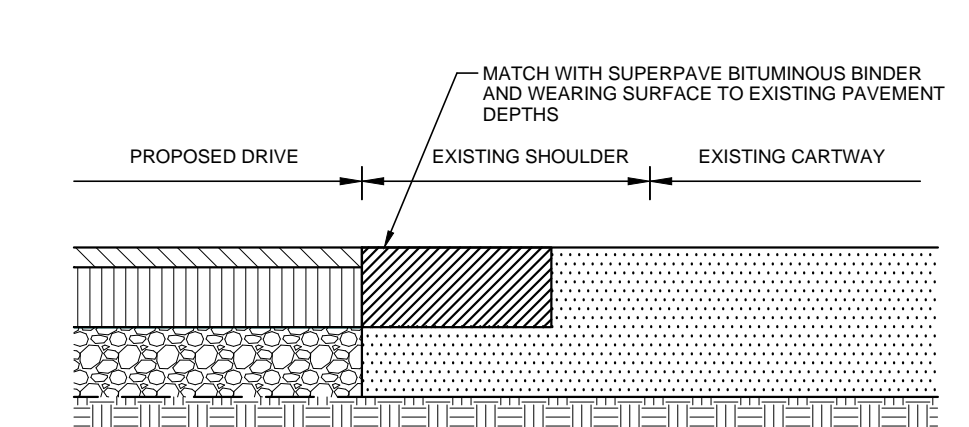
SEE NOTE NO. 4 FOR CARTWAY WIDTH

STANDARD (SERVICE AND LOCAL CLASSIFICATION ONLY) ()**

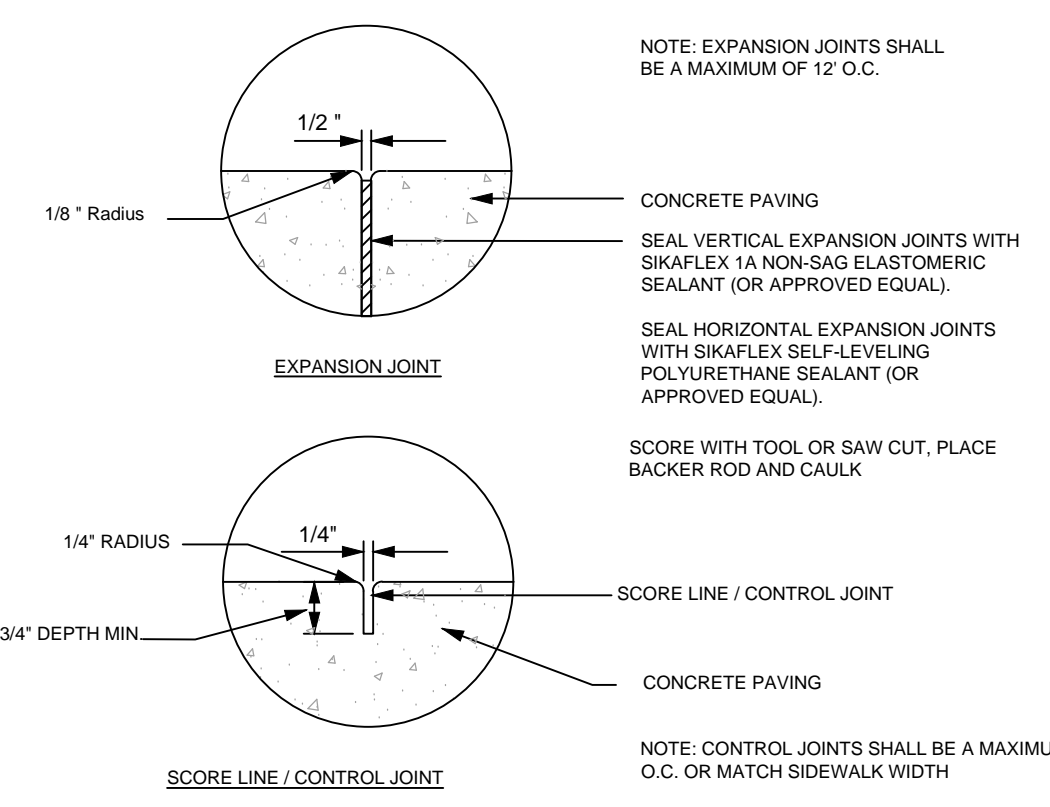


- NOTES:**
- ALL THICKNESS AS LISTED ARE COMPACTED THICKNESS TO DENSITY AS LISTED IN PENNDOT PUBLICATION 408.
 - SUBBASE ALTERNATE TO BE DETERMINED AND APPROVED BY THE TOWNSHIP ENGINEER BASED ON FIELD CONDITIONS.
 - ALL INLETS AND MANHOLES MUST BE ADJUSTED FOR PROFILE AND CROSS SLOPE PRIOR TO INSTALLING FINAL WEARING SURFACE. INITIAL SUPERPAVE HMA WEARING COURSE MUST BE FINISHED WITH ALL INLETS AND MANHOLES. FINAL ADJUSTMENTS TO BE COMPLETED PRIOR TO FINAL WEARING SURFACE INSTALLATION. KEYWAYS AROUND STRUCTURES WILL NOT BE PERMITTED.
 - THE TOWNSHIP TRAFFIC ENGINEER SHALL REVIEW THE TRAFFIC REPORT AND RECOMMEND THE CARTWAY WIDTH AND NUMBER OF LANES TO BE PROVIDED, WITH NO EXCEPTIONS FOR ROADWAY CLASSIFICATION. FOR TWO LANE SECTIONS, A 32' MINIMUM CARTWAY SHALL BE PROVIDED. FOR THREE LANE SECTIONS, A 34' MINIMUM CARTWAY SHALL BE PROVIDED AND FOR FOUR LANE SECTIONS, A MINIMUM 45' CARTWAY SHALL BE PROVIDED. THE ABOVE CARTWAY WIDTHS ARE TO BE MAINTAINED AS MINIMUMS.
 - AS DIRECTED BY TOWNSHIP ENGINEER, ALL UNLEEN AREAS, SETTLED AREAS, AREAS DAMAGED BY UTILITY COMPANIES AND/OR OTHER BROKEN OR UNFIT AREAS SHALL BE REPAIRED AND LEVELLED WITH SUPERPAVE HMA WEARING COURSE PRIOR TO THE FINAL SUPERPAVE HMA WEARING COURSE APPLICATION, INSTALLED ON THE ENTIRE ROADWAY.
 - (**) FOR MAJOR AND COLLECTOR CLASSIFICATIONS, SUBMIT PAVEMENT DESIGN BASED UPON AVERAGE DAILY TRAFFIC AND ESAL LOADING COUNTS.

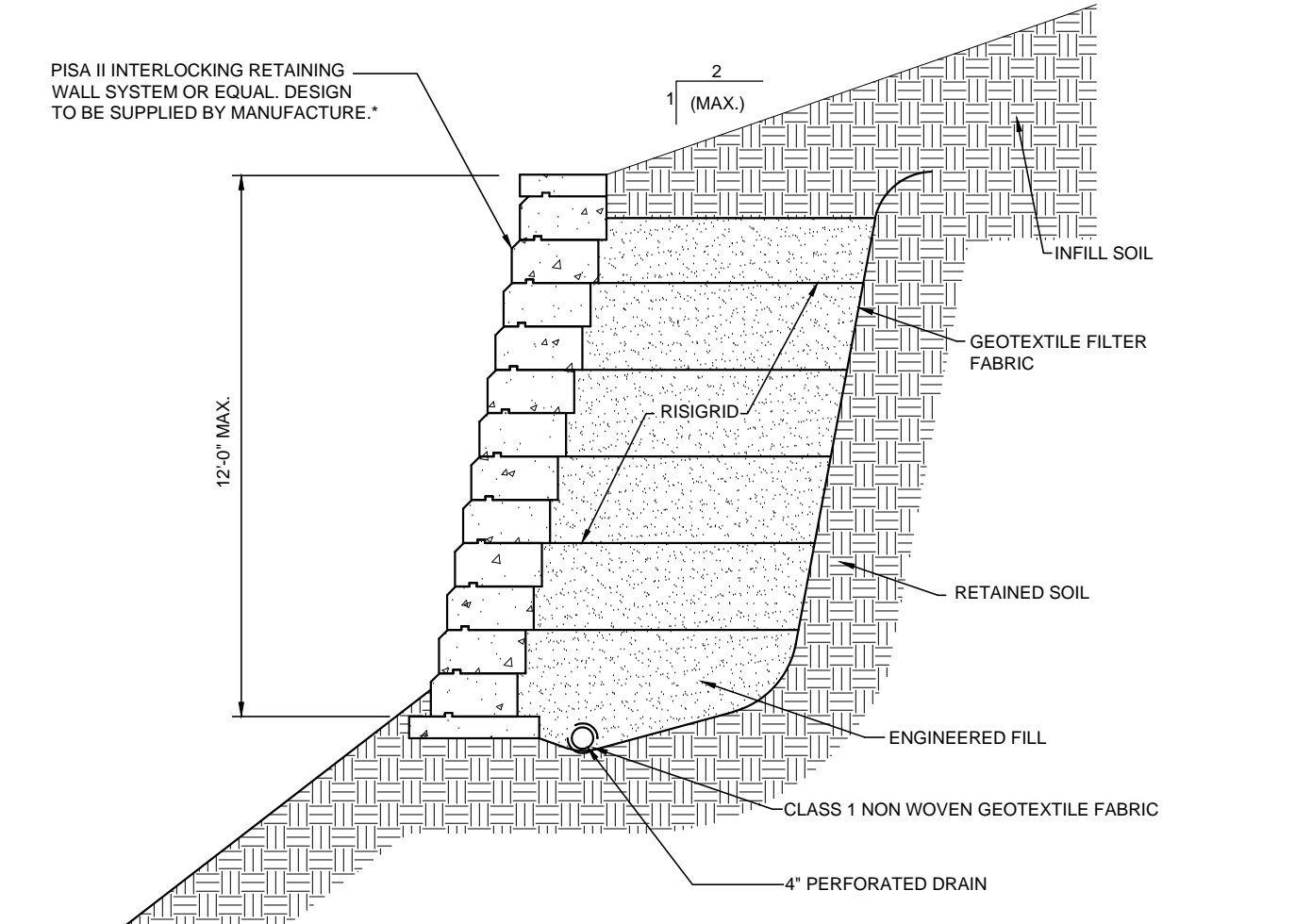
10 MOON TOWNSHIP STD. DETAIL R-2 ROADWAY PAVING MATERIALS
C601



11 PAVEMENT PATCH
C601

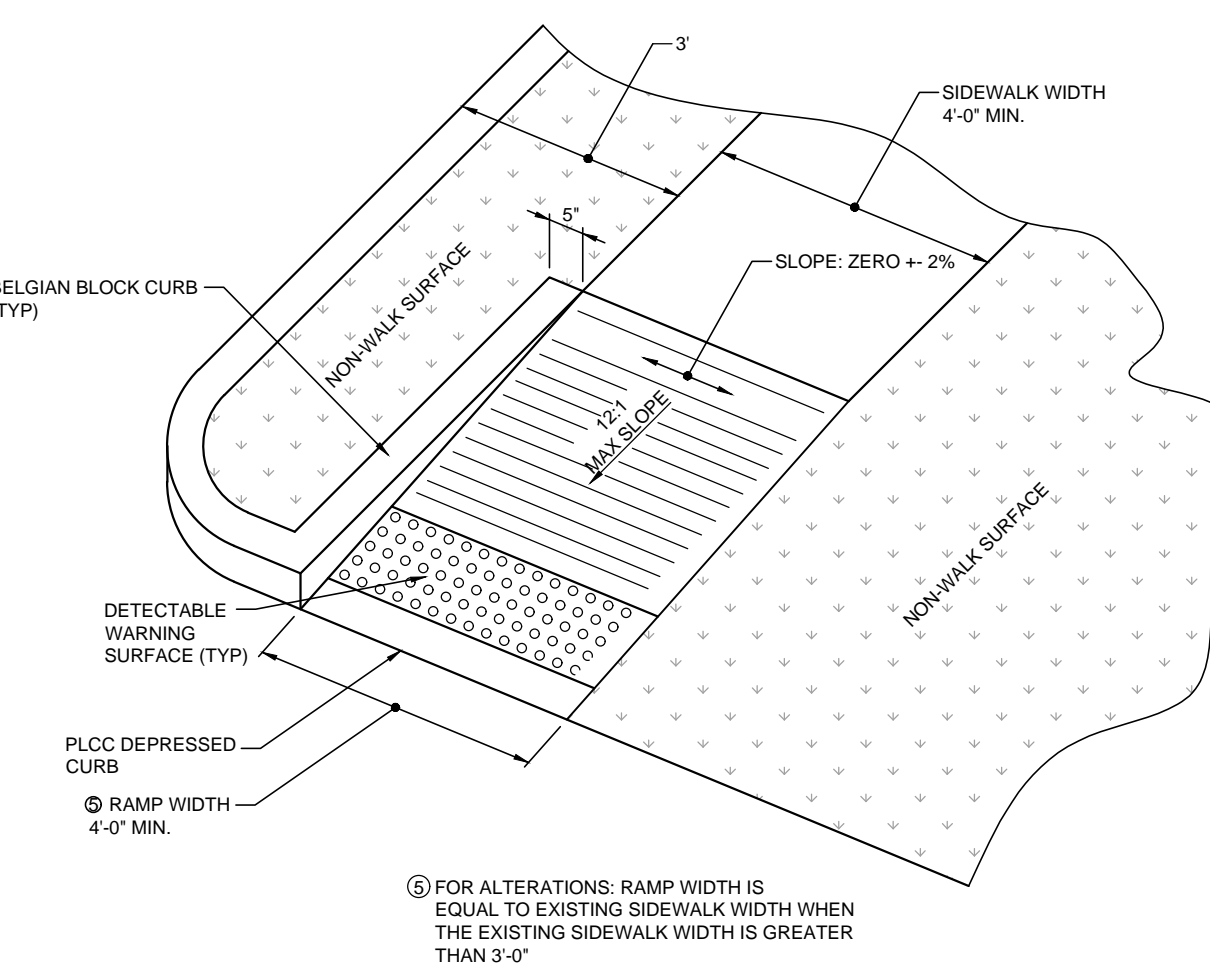


12 CONCRETE EXPANSION / SCORE LINE / CONTROL JOINT
C601

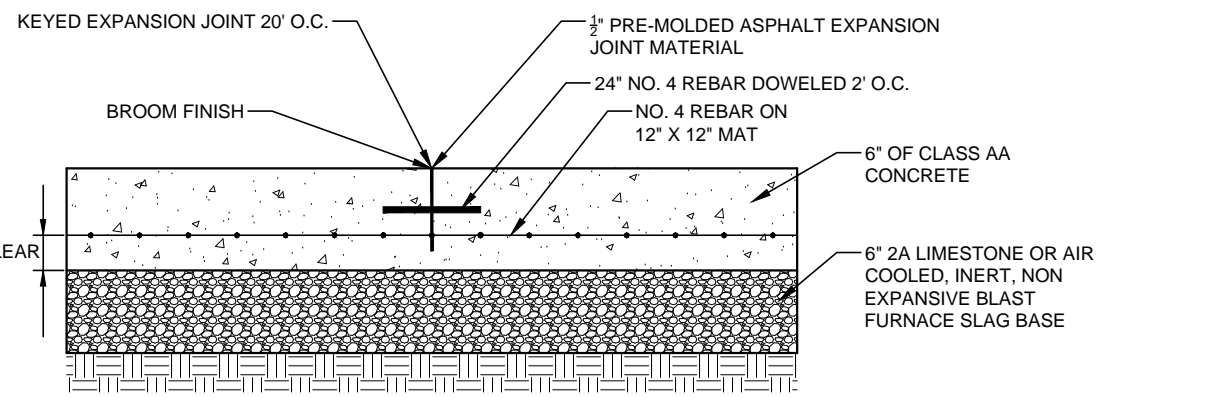


- NOTE:**
- THIS DETAIL IS SCHEMATIC IN NATURE. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING ACTUAL WALL DESIGN, SEALED BY A REGISTERED PROFESSIONAL ENGINEER TO THE OWNER PRIOR TO CONSTRUCTION.
 - ARCHITECT AND/OR OWNER TO SELECT COLOR.

13 RETAINING WALL
C601



14 TYPE 4 CURB RAMP (PARALLEL) (RC-67M)
C601



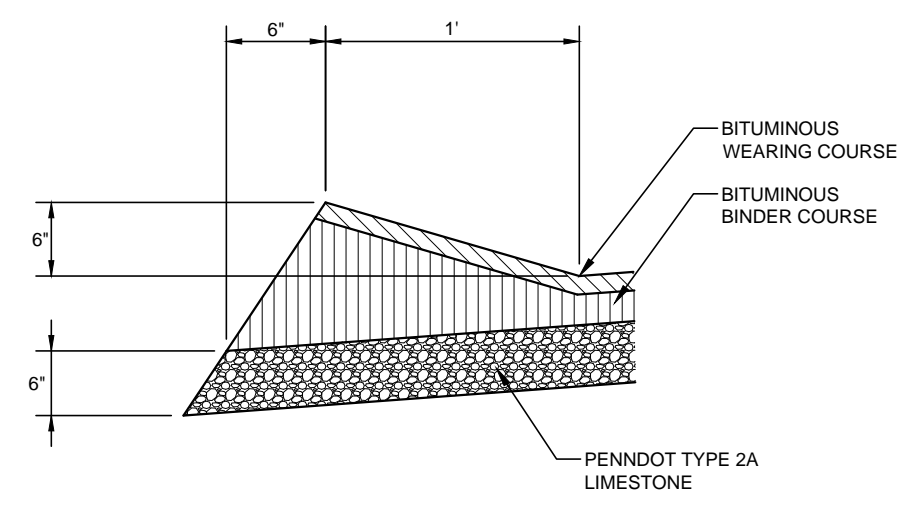
- NOTE:**
- CONTRACTOR SHALL PLACE A TOOLED JOINT AT EVERY 9' O.C.
 - THE CONCRETE SHALL BE TREATED WITH A TWO-COAT APPLICATION OF SEALTIGHT CS-309-25 OR APPROVED EQUAL. AFTER 7 DAYS, THE CONCRETE SHALL BE TREATED WITH SEALTIGHT T14H OR APPROVED EQUAL. THE TEMPERATURE FOR APPLICATION TO THE CONCRETE SURFACE MUST BE 40°F RISING.

15 6" THICK CONCRETE PAVEMENT
C601



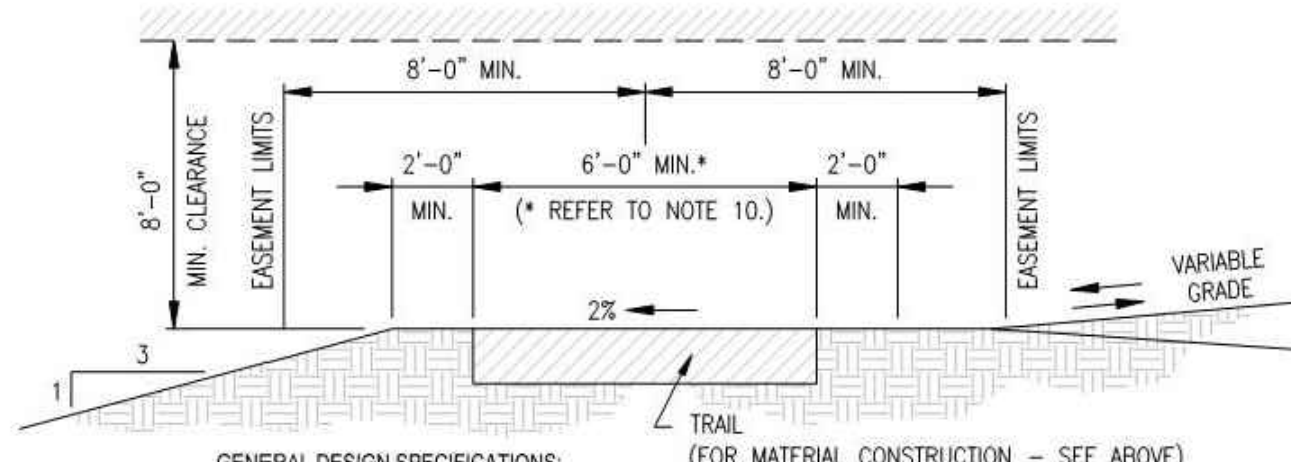
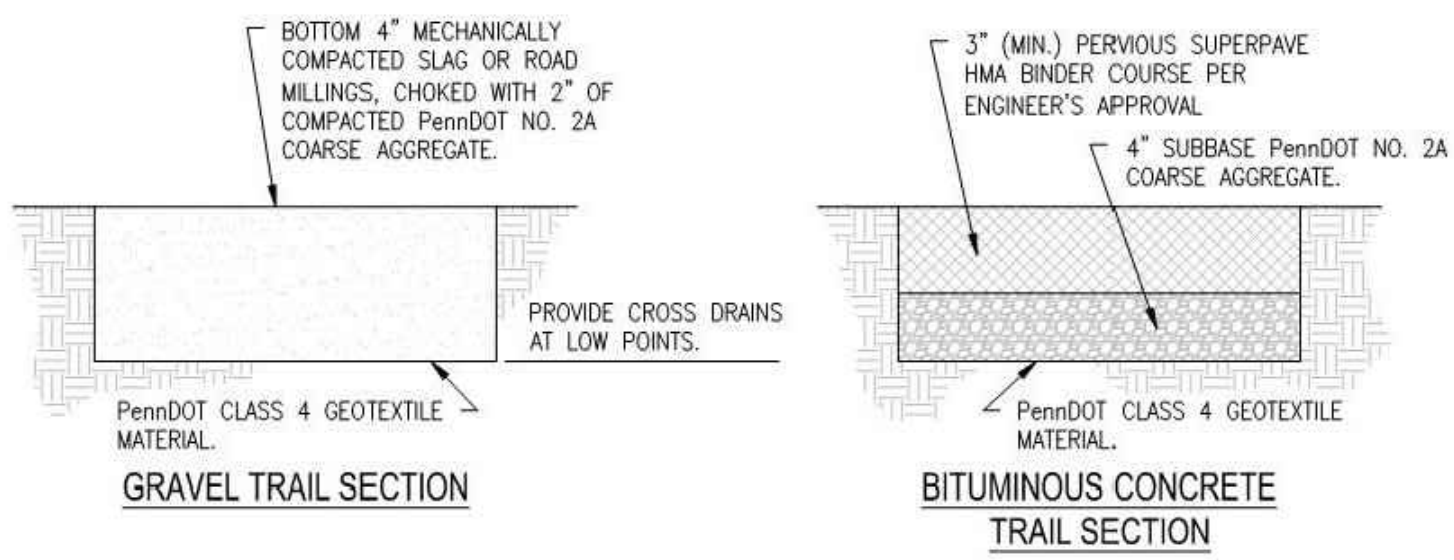
REVISION RECORD

Date	No.	REVISION PER TOWNSHIP COMMENTS
10/07/2015	01	REVISED PER TOWNSHIP COMMENTS
10/30/2015	02	REVISED STORM SEWER AND PCSM LAYOUT
11/02/2015	03	RESUBMISSION TO TOWNSHIP
	04	
	05	
	06	
	07	
	08	



- NOTES:**
- ONCE THE FINAL WEARING COURSE OF BITUMINOUS PAVING IS PLACED, THE CONTRACTOR SHALL SEAL THE GUTTER LINE WITH P-88-22 ASPHALT CEMENT BY OVERLAPPING 3" ONTO THE WEDGE CURB AND THE EXTENDING 2" ONTO THE CARTWAY IN ACCORDANCE WITH PENNDOT PUBLICATION 408.
 - SUBGRADE DRAINS MAY BE REQUIRED BY WHERE UNDERGROUND WATER IS ENCOUNTERED.
 - IF THE SUBBASE IS NOT INSTALLED BY NOVEMBER 1ST, THE BITUMINOUS MUST BE DELAYED UNTIL THE NEXT PAVING SEASON.
 - CONSTRUCTION MATERIALS AND INSTALLATION MUST CONFORM WITH PENNDOT 408.
 - SEE APPLICABLE MUNICIPALITY OR AUTHORITY STANDARD DETAIL.

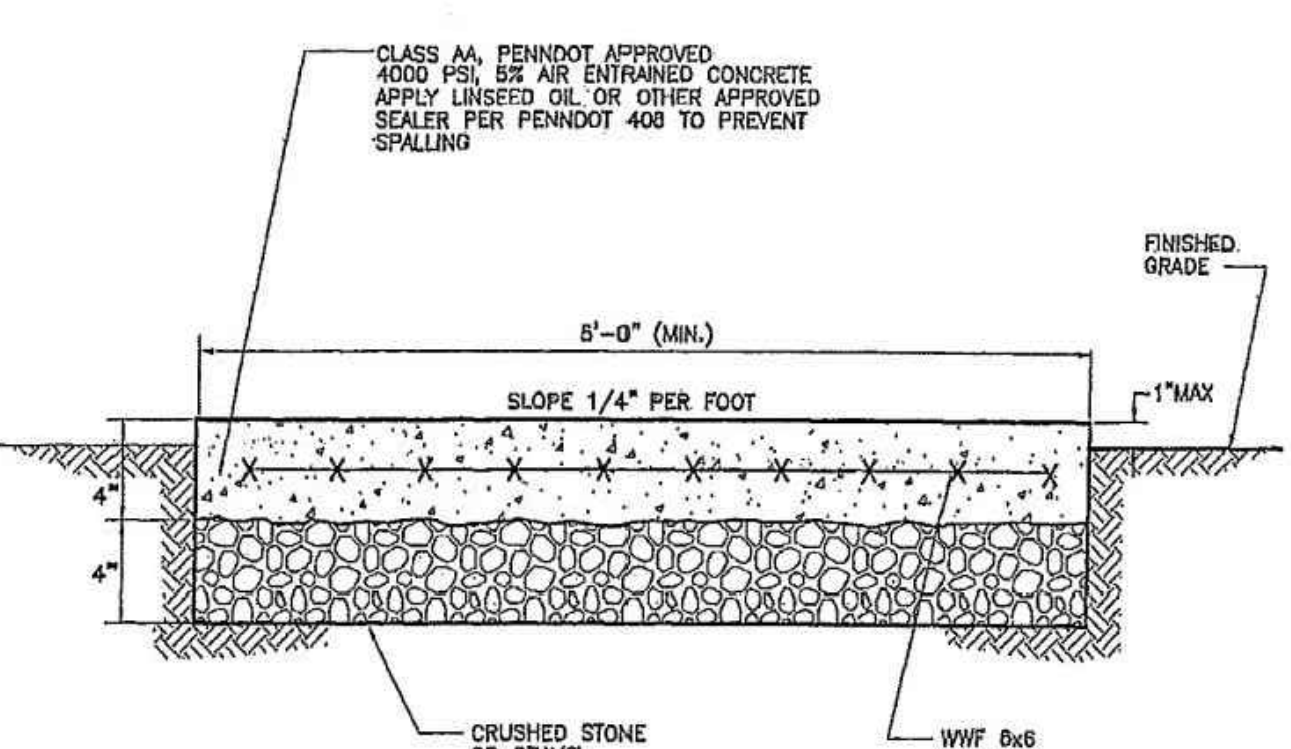
1
C602 ASPHALT WEDGE CURB



7
C602 CONCRETE WHEEL STOP

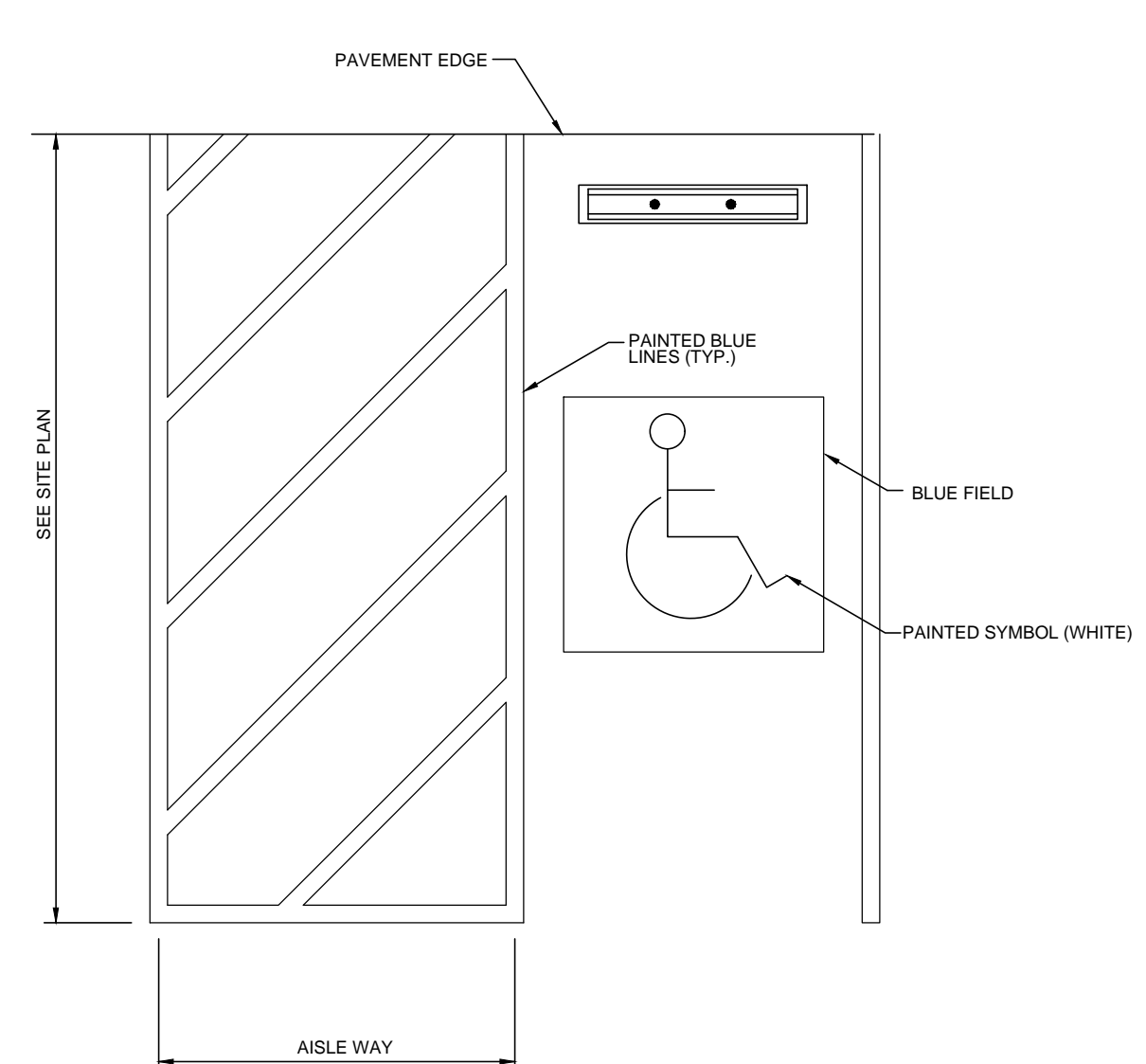
- GENERAL DESIGN SPECIFICATIONS:**
- TRAIL WIDTH 6' (MIN.)
 - TRAIL EASEMENT WIDTH 10' (MIN.) EASEMENT TO FOLLOW E TRAIL
 - TRAIL MARKERS PROVIDED EVERY 600' (MAX.) (OR AT LOCATIONS DESIGNATED BY TOWNSHIP)
 - TRAIL SIGHT DISTANCE 50' (MIN) EACH DIRECTION
 - TRAIL MUST BE CONSTRUCTED WITH SMOOTH CONVEX SURFACE TO PREVENT WATER FROM PONDING AND ICE FORMATION.
 - REMOVE TREES AND PRESERVE NATURAL GROUND COVER WITHIN 2' ADJACENT TO TRAIL TO LIMIT SOIL EROSION. TRAIL CONSTRUCTION MUST CONFORM TO CURRENT PADEP AND ACCO STANDARDS FOR EROSION CONTROL.
 - TRAILS AND TRAIL EASEMENTS MUST MATCH TO TRAILS AND TRAIL EASEMENTS ON ADJOINING PROPERTIES.
 - TRAIL GRADES:
 - 0-5% DESIRED
 - 5-6% FOR 800 LF (MAX.)
 - 6-7% FOR 400 LF (MAX.)
 - 7-8% FOR 200 LF (MAX.)
 - 8-9% FOR 100 LF (MAX.)
 - 9-10% FOR 50 LF (MAX.)
 - 10-15% FOR 50 LF (MAX.)
 - >15% NOT ACCEPTABLE
 - PROVIDE EXECUTED AND RECORDED EASEMENT FOR TRAIL TO TOWNSHIP.
 - THE TRAIL WIDTH SHALL BE INCREASED AS NECESSARY, BASED UPON PEDESTRIAN TRAFFIC VOLUMES AS DETERMINED BY THE TOWNSHIP.

4
C602 MULTI-PURPOSE WALKING AND BIKING TRAIL DETAIL S-6

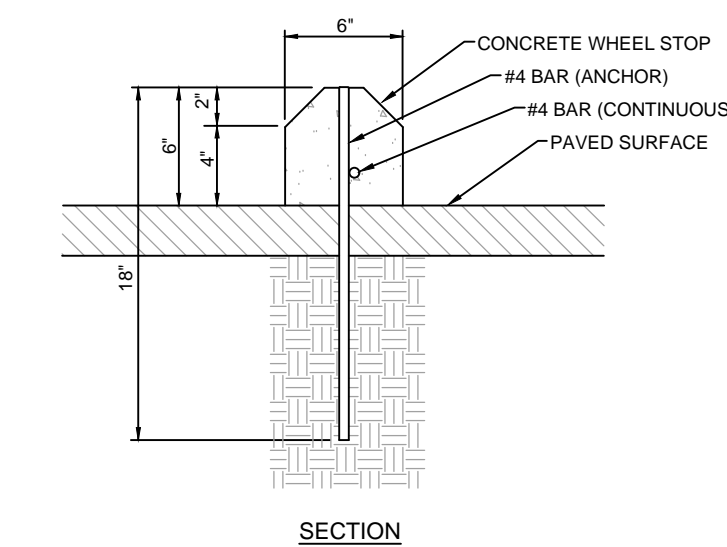
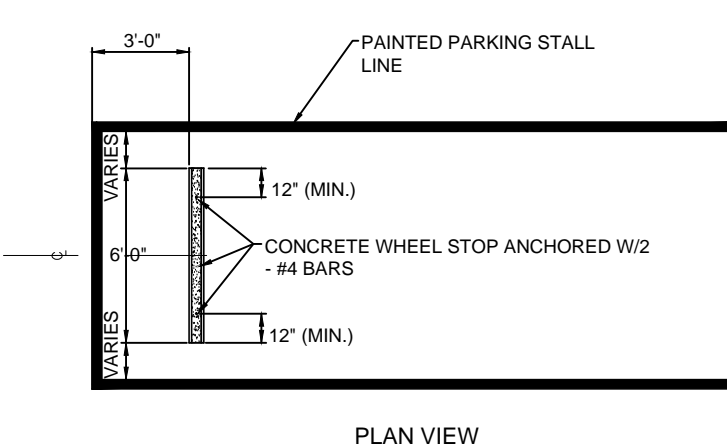


- NOTES:**
- WALK SHALL BE CROSS SCORED EVERY FIVE FEET (5'). 1/2" PREFORMED EXPANSION JOINTS EVERY 50 FEET. WALK SHALL HAVE TROWELED EDGES WITH A STIFF BROOM FINISH.
 - IF A DRIVEWAY IS TO BE CONSTRUCTED OVER A SIDEWALK, THE CONCRETE SHALL BE PLACED AT 6" DEPTH. SEE DETAIL R-5.
 - PROVIDE TWO (2) No. 4 DOWELS AT PROPERTY LINES.
 - PREPARATORY WORK ON REINFORCEMENT MUST BE INSPECTED BY TOWNSHIP PRIOR TO POURING OF CONCRETE.

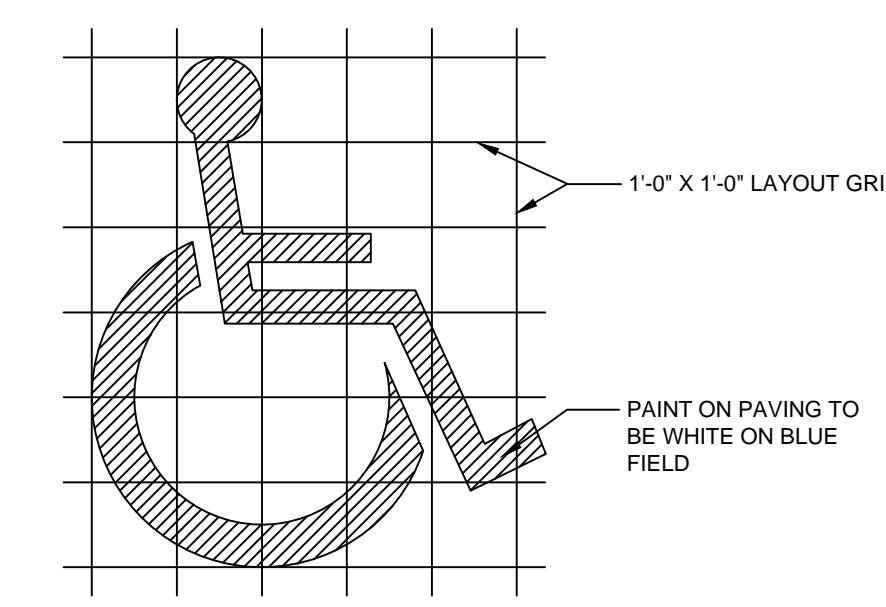
5
C602 MOON TOWNSHIP STANDARD CONCRETE SIDEWALK DETAIL R-6



6
C602 TYPICAL ADA PARKING STALL



7
C602 CONCRETE WHEEL STOP



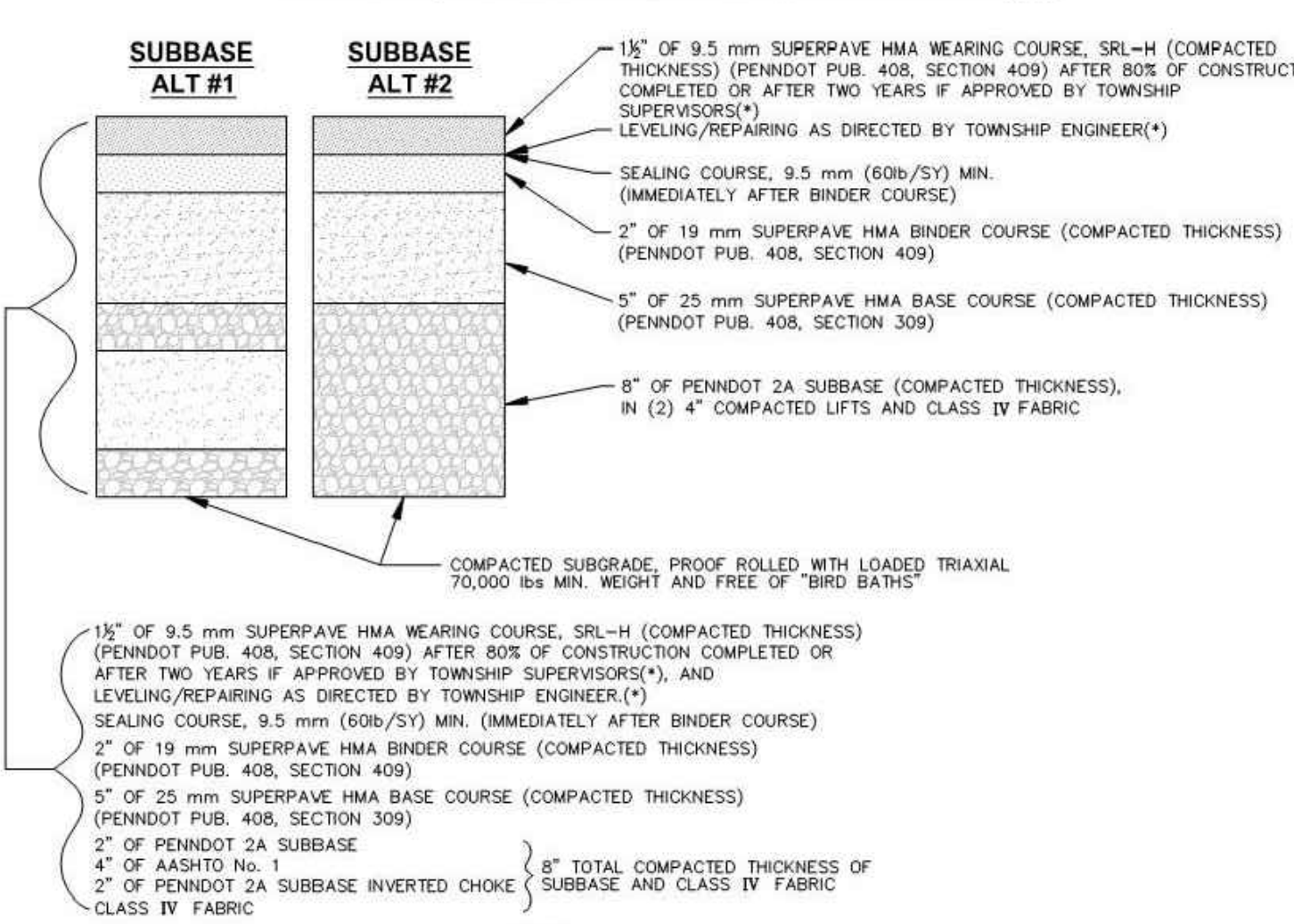
8
C602 ADA PARKING LOGO

ROADWAY CLASSIFICATION

MAJOR COLLECTOR	80' R/W	CARTWAY 18" CURB	5' SIDEWALK
LOCAL	62' R/W	CARTWAY 18" CURB	5' SIDEWALK
SERVICE	50' R/W	CARTWAY 18" CURB	5' SIDEWALK

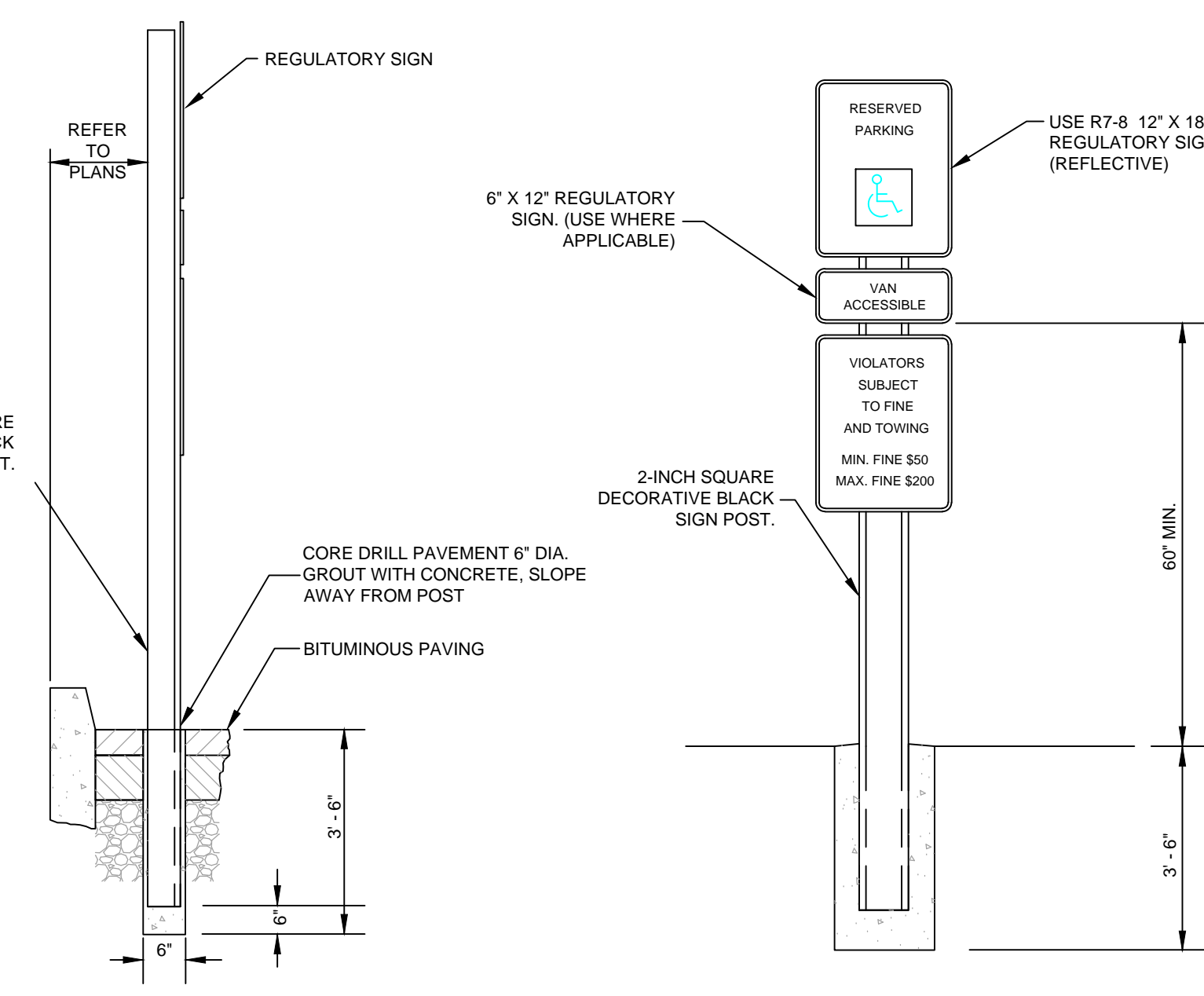
SEE NOTE No. 4 FOR CARTWAY WIDTH

STANDARD (SERVICE AND LOCAL CLASSIFICATION ONLY) ()**

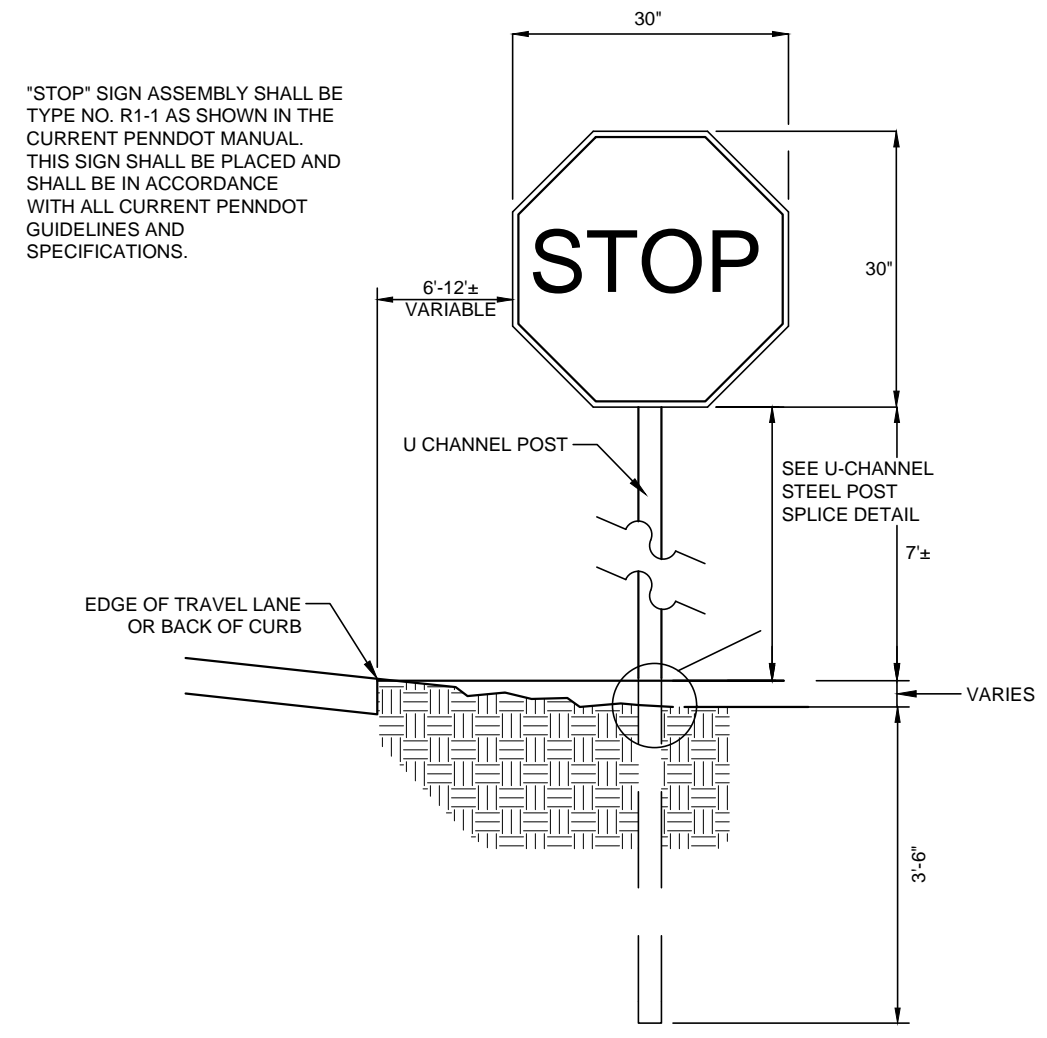


- NOTES:**
- ALL THICKNESS AS LISTED ARE COMPACTED THICKNESS TO DENSITY AS LISTED IN PENNDOT PUBLICATION 408.
 - SUBBASE ALTERNATE TO BE DETERMINED AND APPROVED BY THE TOWNSHIP ENGINEER BASED ON FIELD CONDITIONS.
 - ALL INLETS AND MANHOLES MUST BE ADJUSTED FOR PROFILE AND CROSS SLOPE PRIOR TO INSTALLING FINAL WEARING SURFACE. INITIAL SUPERPAVE HMA WEARING COURSE MUST FINISH FLUSH WITH ALL INLETS AND MANHOLES. FINAL ADJUSTMENTS TO BE COMPLETE PRIOR TO FINAL WEARING SURFACE INSTALLATION. SETWAYS AROUND STRUCTURES WILL NOT BE PERMITTED.
 - THE TOWNSHIP TRAFFIC ENGINEER SHALL REVIEW THE TRAFFIC REPORT AND RECOMMEND THE CARTWAY WIDTH AND NUMBER OF LANES TO BE PROVIDED, WITH NO EXCEPTIONS FOR ROADWAY CLASSIFICATION FOR TWO LANE SECTIONS. A 33' MINIMUM CARTWAY SHALL BE PROVIDED. FOR THREE LANE SECTIONS, A 34' MINIMUM CARTWAY SHALL BE PROVIDED AND FOR FOUR LANE SECTIONS, A MINIMUM 45' CARTWAY SHALL BE PROVIDED. THE ABOVE CARTWAY WIDTHS ARE TO BE MAINTAINED AS MINIMUMS.
 - AS DIRECTED BY TOWNSHIP ENGINEER, ALL UNSEEN AREAS, SETTLED AREAS, AREAS DAMAGED BY UTILITY COMPANIES AND/OR OTHER BROKEN OR UNSEEN AREAS SHALL BE REPAIRED AND LEVELED WITH SUPERPAVE HMA WEARING COURSE PRIOR TO THE FINAL SUPERPAVE HMA WEARING COURSE APPLICATION, INSTALLED ON THE ENTIRE ROADWAY.
- (**) FOR MAJOR AND COLLECTOR CLASSIFICATIONS, SUBMIT PAVEMENT DESIGN BASED UPON AVERAGE DAILY TRAFFIC AND ESAL LOADING COUNTS.

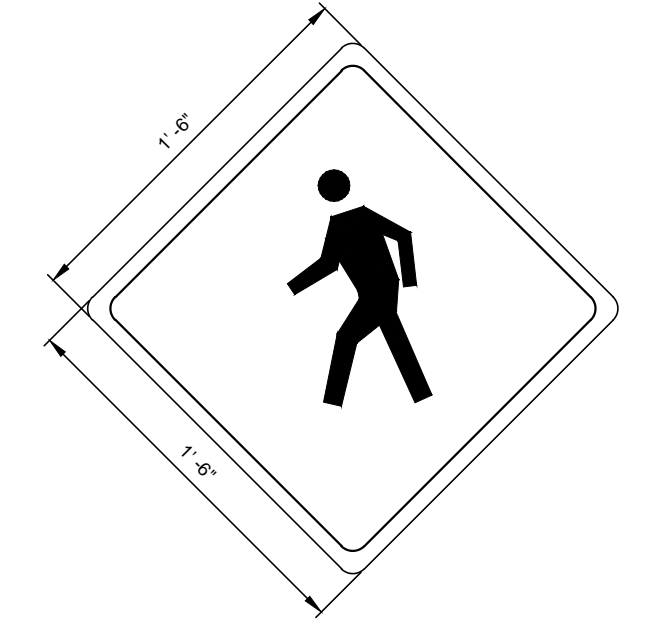
9
C602 MOON TOWNSHIP STD. DETAIL R-2 ROADWAY PAVING MATERIALS



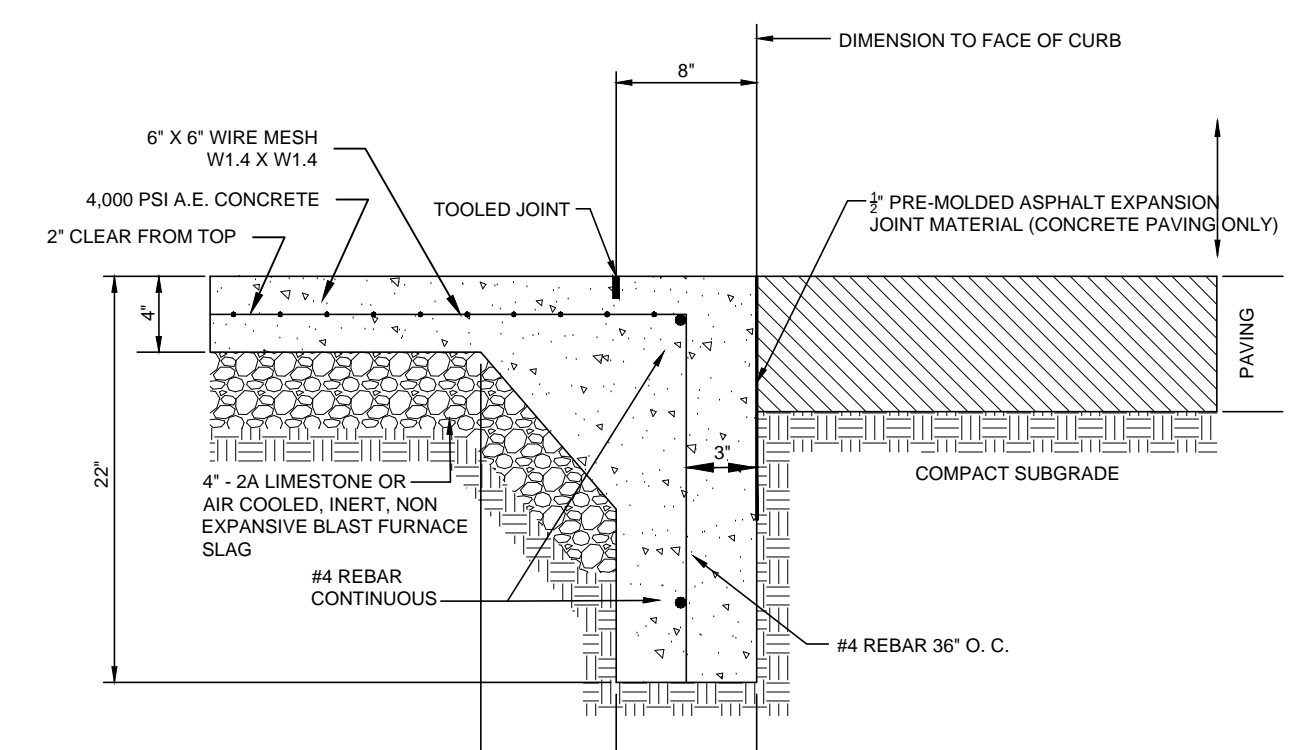
10
C602 ADA PARKING SIGN



11
C602 STOP SIGN

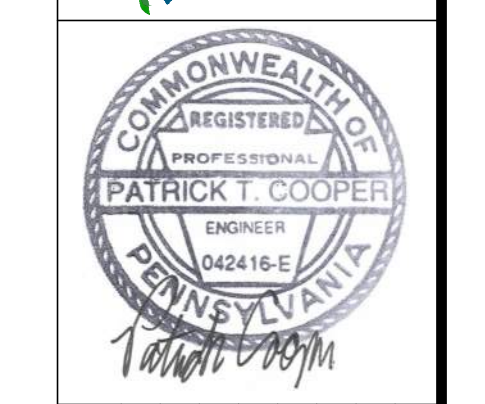


12
C602 PEDESTRIAN CROSSING SIGN



- NOTES:**
- ALL CURBS AND WALKS SHALL BE MONOLITHIC POURS, SCORE JOINTS IN VERTICAL CURB SURFACE TO ALIGN WITH WALKWAY JOINTS.
 - CONTRACTOR SHALL PLACE A TOWELED JOINT AS PER SITE PLAN.
 - THE CONCRETE SHALL BE TREATED WITH A TWO-COAT APPLICATION OF SEALIGHT CS-309-25 OR APPROVED EQUAL. AFTER 7 DAYS, THE CONCRETE SHALL BE TREATED WITH SEALIGHT TRM OR APPROVED EQUAL. THE TEMPERATURE FOR APPLICATION TO THE CONCRETE SURFACE MUST BE 40°F AND RISING.

3
C602 FLUSH INTEGRAL CURB AND SIDEWALK



REVISION RECORD

No.	Date	REVISION PER TOWNSHIP COMMENTS
01	10/07/2015	REVISED PER TOWNSHIP COMMENTS
02	10/30/2015	REVISED STORM SEWER AND PCSM LAYOUT
03	11/04/2015	RESUBMISSION TO TOWNSHIP
04	01	
05	01	
06	01	
07	01	
08	01	

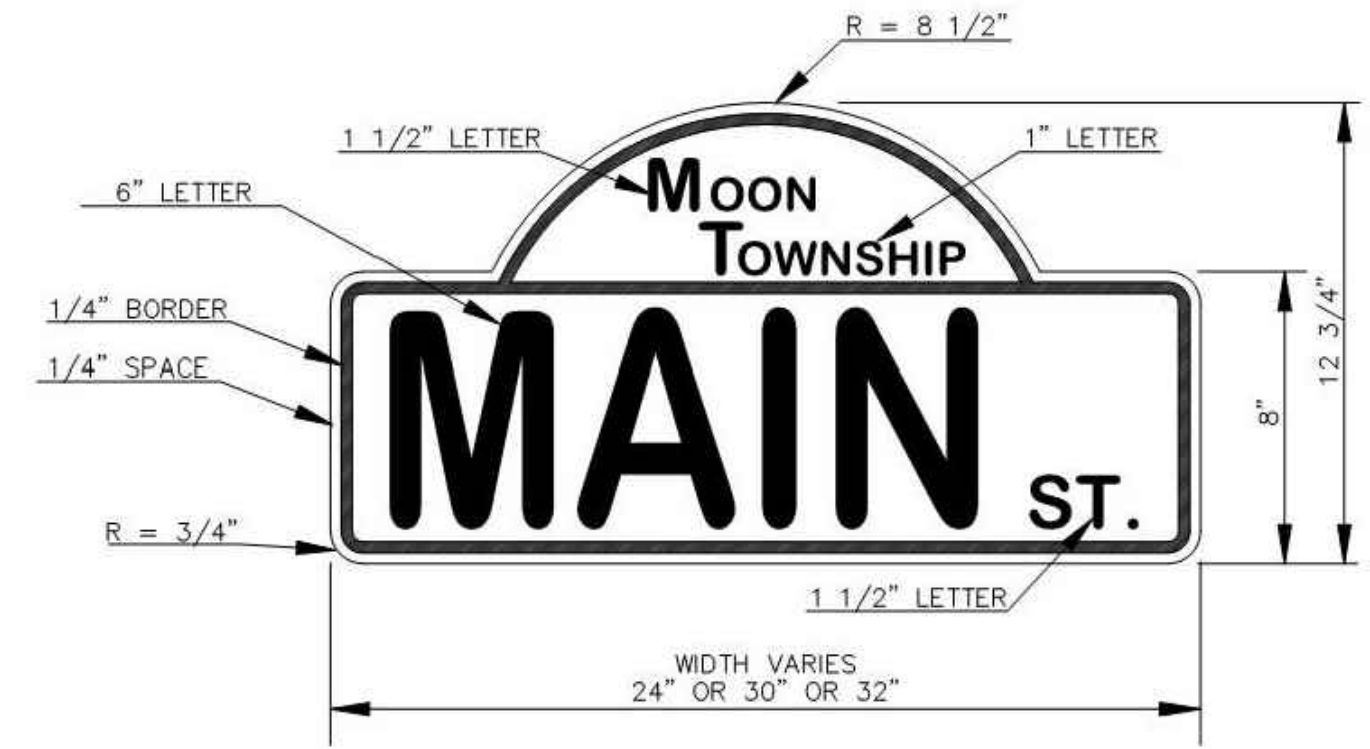
CALVERT HILL
Moon Twp / Allegheny Co., PA
CHAIRMAN: James S. Hays
LANCASTER, PA 17601

LAND DEVELOPMENT PLAN FOR CALVERT HILL
971 BEAVER GRADE ROAD CORAOPOLIS, PA 15108
A PLANNED COMMUNITY
PREPARED FOR:
CHARTER HOMES AT CALVERT HILL
1190 DILLERVILLE ROAD
LANCASTER, PA 17601

CONSTRUCTION DETAILS

Project Number: 18933-0006
Drawing Scale: 1/8" = 1'-0"
Date Issued: SEPT. 2015
Index Number: --
Drawn By: PML
Checked By: NMO
Project Manager: DMH

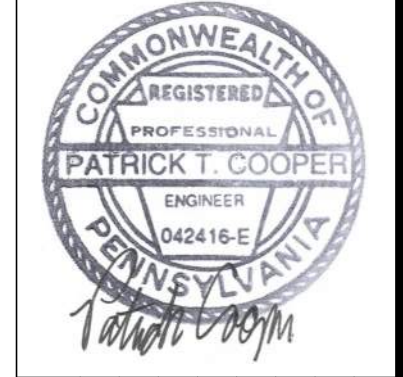
C602



NOTES

- ① STREET SIGNS SHALL BE PROVIDED BY THE TOWNSHIP AT THE DEVELOPER'S EXPENSE.
- ② SIGNS SHALL BE 1/8" THICK ALUMINUM
- ③ SIGN BACKGROUND SHALL BE PRESSURE SENSITIVE WHITE HIGH INTENSITY REFLECTIVE SHEETING.
- ④ LETTERING AND BORDERING SHALL BE PRESSURE SENSITIVE BLACK GLOSS REFLECTIVE SHEETING.
- ⑤ FONT SHALL BE ARIAL BOLD.
- ⑥ POSTS SHALL BE ROUND, 10 FOOT LONG, 2 3/8" IN DIAMETER, 13 GAUGE SIDE WALLS. POSTS SHALL BE POWDER COATED IN GLOSS BLACK.
- ⑦ POSTS SHALL BE CONCRETED INTO THE GROUND, 7 1/2 FEET TO THE BOTTOM OF THE L-BRACKET.
- ⑧ L-BRACKETS SHALL BE AN "S" SCROLL, 22 OR 29 INCHES FLAT LUGS, PAINTED BLACK. THE L-BRACKETS SHALL BE PURCHASED THROUGH TAPCO TRAFFIC & PARKING CONTROL COMPANY; 262-814-7000
- ⑨ FINIAL SHALL BE GLENCOE CAP, PAINTED BLACK, SIZED FOR 2 3/8" POLE. PURCHASED THROUGH TAPCO TRAFFIC & PARKING CONTROL COMPANY; 262-814-7000

1	MOON TOWNSHIP STD. DETAIL R-7
C603	STREET SIGN



REVISION RECORD

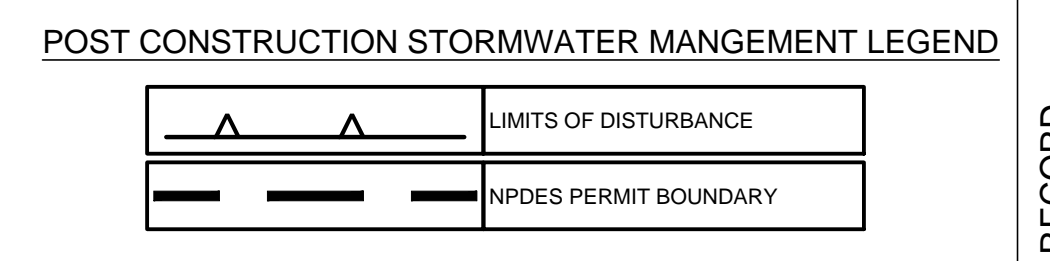
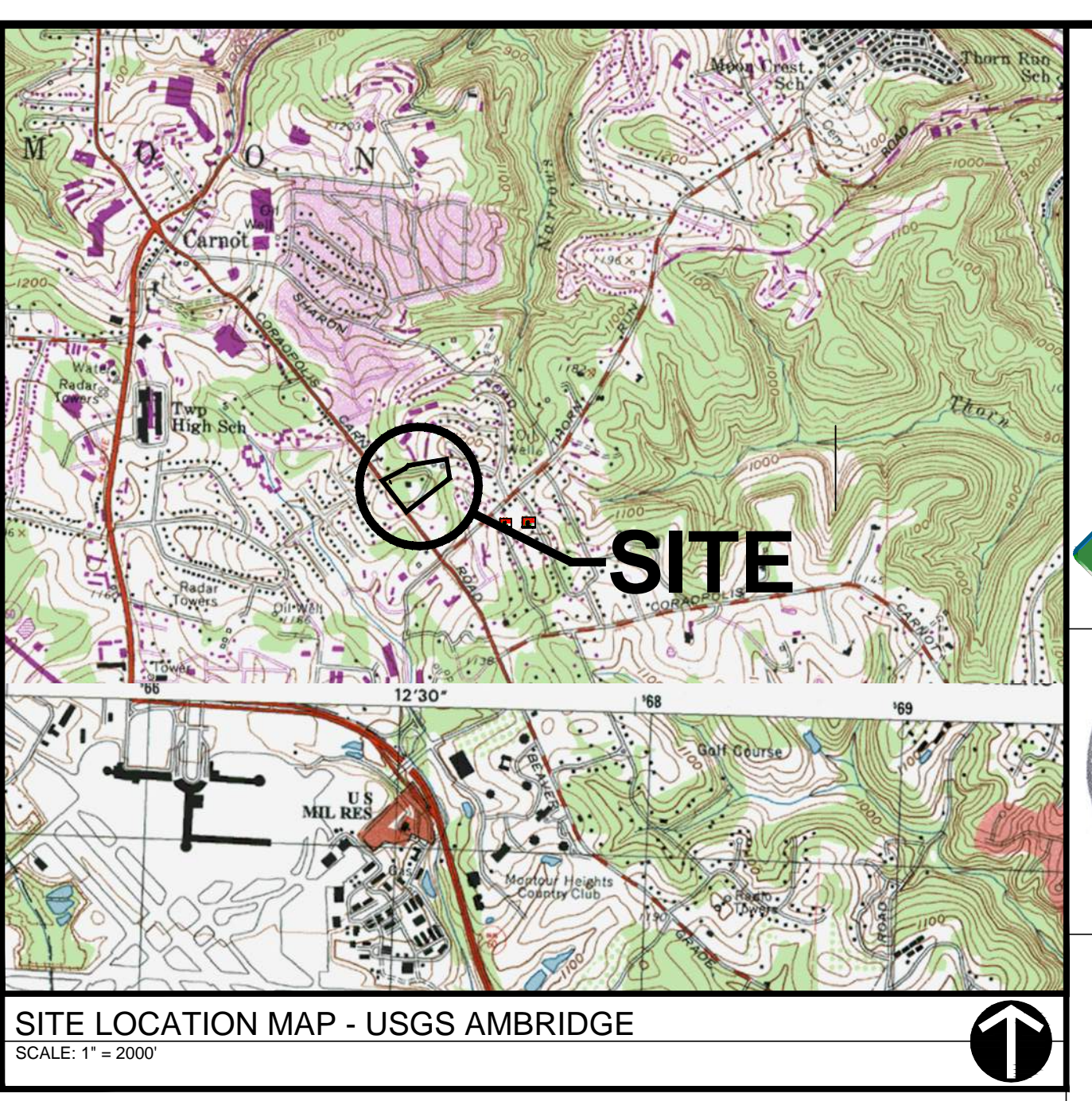
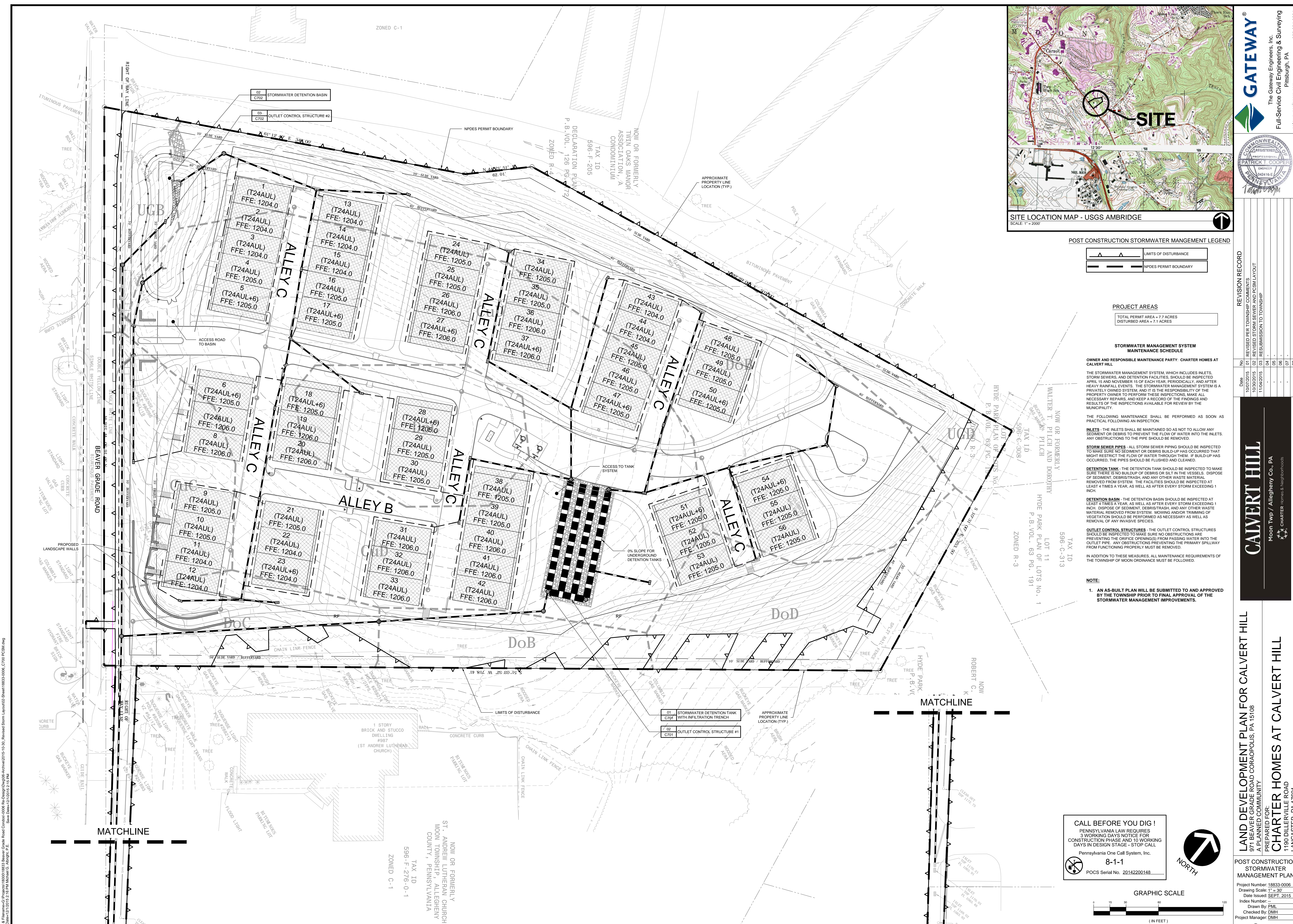
Date	No.	Description
10/07/2015	01	REVISED PER TOWNSHIP COMMENTS
10/30/2015	02	REVISED STORM SEWER AND PCSM LAYOUT
11/04/2015	04	RESUBMISSION TO TOWNSHIP
	05	
	06	
	07	
	08	

CALVERT HILL
 Moon Twp / Allegheny Co., PA
 CHARTER HOMES & NEIGHBORHOODS

LAND DEVELOPMENT PLAN FOR CALVERT HILL
 971 BEAVER GRADE ROAD CORAOPOLIS, PA 15108
 A PLANNED COMMUNITY
 PREPARED FOR:
CHARTER HOMES AT CALVERT HILL
 1190 DILLERVILLE ROAD
 LANCASTER, PA 17601

CONSTRUCTION DETAILS

Project Number:	18833-0006
Drawing Scale:	N.T.S.
Date Issued:	SEPT. 2015
Index Number:	--
Drawn By:	PMJ
Checked By:	NMO
Project Manager:	DMH



PROJECT AREAS
 TOTAL PERMIT AREA = 7.7 ACRES
 DISTURBED AREA = 7.1 ACRES

STORMWATER MANAGEMENT SYSTEM MAINTENANCE SCHEDULE

OWNER AND RESPONSIBLE MAINTENANCE PARTY: CHARTER HOMES AT CALVERT HILL

THE STORMWATER MANAGEMENT SYSTEM, WHICH INCLUDES INLETS, STORM SEWERS, AND DETENTION FACILITIES, SHOULD BE INSPECTED APRIL 15 AND NOVEMBER 15 OF EACH YEAR, PERIODICALLY, AND AFTER HEAVY RAINFALL EVENTS. THE STORMWATER MANAGEMENT SYSTEM IS A PRIVATELY OWNED SYSTEM, AND IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO PERFORM THESE INSPECTIONS, MAKE ALL NECESSARY REPAIRS, AND KEEP A RECORD OF THE FINDINGS AND RESULTS OF THE INSPECTIONS AVAILABLE FOR REVIEW BY THE MUNICIPALITY.

THE FOLLOWING MAINTENANCE SHALL BE PERFORMED AS SOON AS PRACTICAL FOLLOWING AN INSPECTION:

INLETS: THE INLETS SHALL BE MAINTAINED SO AS NOT TO ALLOW ANY SEDIMENT OR DEBRIS TO PREVENT THE FLOW OF WATER INTO THE INLETS. ANY OBSTRUCTIONS TO THE PIPE SHOULD BE REMOVED.

STORM SEWER PIPES: ALL STORM SEWER PIPING SHOULD BE INSPECTED TO MAKE SURE NO SEDIMENT OR DEBRIS BUILD-UP HAS OCCURRED THAT MIGHT RESTRICT THE FLOW OF WATER THROUGH THEM. IF BUILD-UP HAS OCCURRED, THE PIPES SHOULD BE FLUSHED AND CLEANED.

DETENTION TANK: THE DETENTION TANK SHOULD BE INSPECTED TO MAKE SURE THERE IS NO BUILD-UP OF DEBRIS OR SILT IN THE VESSELS. DISPOSE OF SEDIMENT, DEBRIS/TRASH, AND ANY OTHER WASTE MATERIAL REMOVED FROM SYSTEM. MOVING AND/OR TRIMMING OF VEGETATION SHOULD BE PERFORMED AS NECESSARY AS WELL AS REMOVAL OF ANY INVASIVE SPECIES.

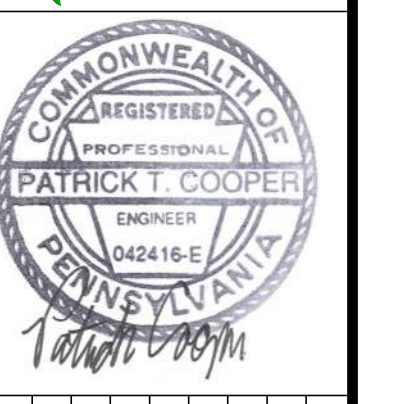
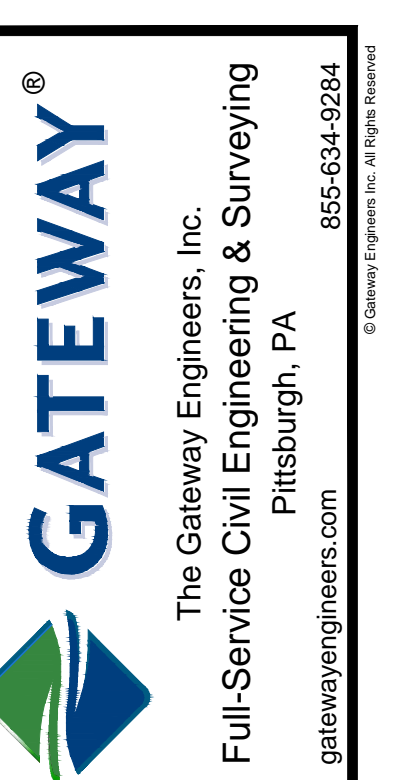
DETENTION BASIN: THE DETENTION BASIN SHOULD BE INSPECTED AT LEAST 4 TIMES A YEAR, AS WELL AS AFTER EVERY STORM EXCEEDING 1 INCH. DISPOSE OF SEDIMENT, DEBRIS/TRASH, AND ANY OTHER WASTE MATERIAL REMOVED FROM SYSTEM. MOVING AND/OR TRIMMING OF VEGETATION SHOULD BE PERFORMED AS NECESSARY AS WELL AS REMOVAL OF ANY INVASIVE SPECIES.

OUTLET CONTROL STRUCTURES: THE OUTLET CONTROL STRUCTURES SHOULD BE INSPECTED TO MAKE SURE NO OBSTRUCTIONS ARE PREVENTING THE ORIFICE OPENINGS FROM PASSING WATER INTO THE OUTLET PIPE. ANY OBSTRUCTIONS PREVENTING THE PRIMARY SPILLWAY FROM FUNCTIONING PROPERLY MUST BE REMOVED.

IN ADDITION TO THESE MEASURES, ALL MAINTENANCE REQUIREMENTS OF THE TOWNSHIP OF MOON ORDINANCE MUST BE FOLLOWED.

NOTE:

1. AN AS-BUILT PLAN WILL BE SUBMITTED TO AND APPROVED BY THE TOWNSHIP PRIOR TO FINAL APPROVAL OF THE STORMWATER MANAGEMENT IMPROVEMENTS.



REVISION RECORD

DATE	NO.	REVISION
10/07/2015	01	REVISED PER TOWNSHIP COMMENTS
10/07/2015	02	REVISED PER TOWNSHIP COMMENTS
11/04/2015	03	RESUBMISSION TO TOWNSHIP
	04	
	05	
	06	
	07	
	08	

CALVERT HILL
 Moon Twp / Allegheny Co., PA
 CHARTER HOMES & NEIGHBORHOODS

LAND DEVELOPMENT PLAN FOR CALVERT HILL
 971 BEAVER GRADE ROAD CORAOPOLIS, PA 15108
 A PLANNED COMMUNITY

CHARTER HOMES AT CALVERT HILL
 1180 DILLERVILLE ROAD
 LANCASTER, PA 17601

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
 Project Number: 18833-0006
 Drawing Scale: 1" = 30'
 Date Issued: SEPT. 2015
 Index Number: -
 Drawn By: PML
 Checked By: DMH
 Project Manager: DMH

C700

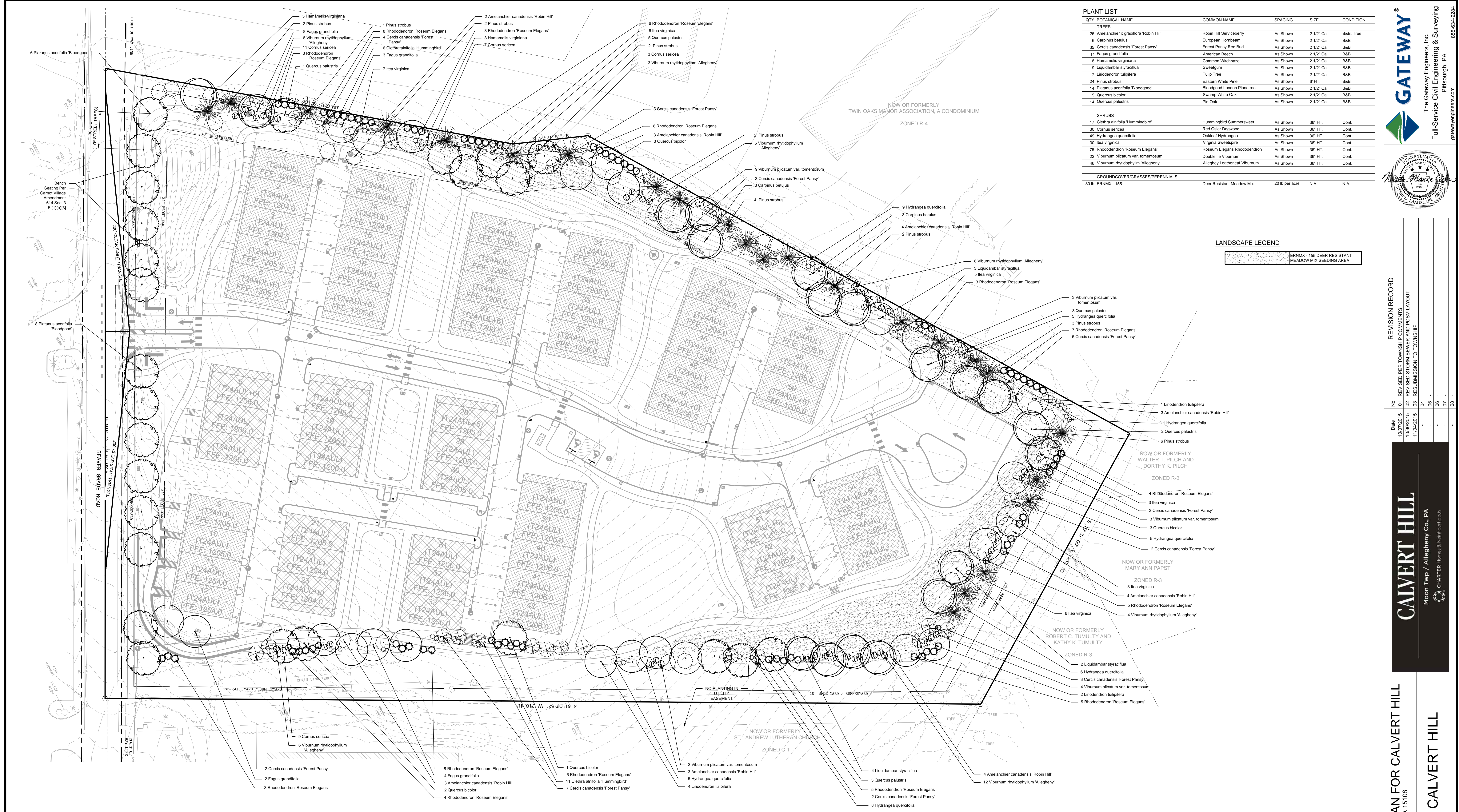
CALL BEFORE YOU DIG!
 PENNSYLVANIA LAW REQUIRES
 3 WORKING DAYS NOTICE FOR
 CONSTRUCTION PHASE AND 10 WORKING
 DAYS IN DESIGN STAGE - STOP CALL

Prepared for:
 Pennsylvania One Call System, Inc.
 8-1-1
 POCSSerial No. 20142200148

GRAPHIC SCALE
 (IN FEET)
 1 inch = 30 ft.

NORTH

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QTY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	CONDITION
TREES					
26	Amelanchier x grandiflora 'Robin Hill'	Robin Hill Serviceberry	As Shown	2 1/2' Cal.	B&B Tree
6	Carpinus betulus	European Hornbeam	As Shown	2 1/2' Cal.	B&B
35	Cercis canadensis 'Forest Pansy'	Forest Pansy Red Bud	As Shown	2 1/2' Cal.	B&B
11	Fagus grandifolia	American Beech	As Shown	2 1/2' Cal.	B&B
8	Hamamelis virginiana	Common Witchhazel	As Shown	2 1/2' Cal.	B&B
9	Liquidambar styraciflua	Sweetgum	As Shown	2 1/2' Cal.	B&B
7	Liriodendron tulipifera	Tulip Tree	As Shown	2 1/2' Cal.	B&B
24	Pinus strobus	Eastern White Pine	As Shown	6' HT.	B&B
14	Platanus acerifolia 'Bloodgood'	Bloodgood London Planetree	As Shown	2 1/2' Cal.	B&B
9	Quercus bicolor	Swamp White Oak	As Shown	2 1/2' Cal.	B&B
14	Quercus palustris	Pin Oak	As Shown	2 1/2' Cal.	B&B
SHRUBS					
17	Clethra alnifolia 'Hummingbird'	Hummingbird Summersweet	As Shown	36' HT.	Cont.
30	Cornus sericea	Red Osier Dogwood	As Shown	36' HT.	Cont.
49	Hydrangea quercifolia	Oakleaf Hydrangea	As Shown	36' HT.	Cont.
30	Itea virginica	Virginia Sweetgum	As Shown	36' HT.	Cont.
75	Rhododendron 'Roseum Elegans'	Roseum Elegans Rhododendron	As Shown	36' HT.	Cont.
22	Viburnum plicatum var. tomentosum	Doublefile Viburnum	As Shown	36' HT.	Cont.
46	Viburnum rhytidophyllum 'Allegheny'	Allegheny Leatherleaf Viburnum	As Shown	36' HT.	Cont.
GROUNDCOVER/GRASSES/PERENNIALS					
30.0	ERNMX - 155	Deer Resistant Meadow Mix	20 lb per acre	N.A.	N.A.

LANDSCAPE LEGEND	
[Pattern]	ERNMX - 155 DEER RESISTANT MEADOW MIX SEEDING AREA

- REVISION RECORD**
- | No. | Date | REVISION |
|-----|------------|-------------------------------|
| 01 | 10/07/2015 | REVISED PER TOWNSHIP COMMENTS |
| 02 | 10/14/2015 | PCBM LAYOUT |
| 03 | 11/04/2015 | RESUBMISSION TO TOWNSHIP |
| 04 | - | - |
| 05 | - | - |
| 06 | - | - |
| 07 | - | - |
| 08 | - | - |

GATEWAY
The Gateway Engineers, Inc.
Full-Service Civil Engineering & Surveying
Pittsburgh, PA
gatewayengineers.com

REVISION RECORD

No.	Date	REVISION
01	10/07/2015	REVISED PER TOWNSHIP COMMENTS
02	10/14/2015	PCBM LAYOUT
03	11/04/2015	RESUBMISSION TO TOWNSHIP
04	-	-
05	-	-
06	-	-
07	-	-
08	-	-

CALVERT HILL
Moon Twp / Allegheny Co., PA
CHARTER HOMES & NEIGHBORHOODS

LAND DEVELOPMENT PLAN FOR CALVERT HILL
971 BEAVER GRADE ROAD CORAOPOLIS, PA 15108
A PLANNED COMMUNITY
PREPARED FOR:
CHARTER HOMES AT CALVERT HILL
1180 DILLERVILLE ROAD
LANCASTER, PA 17601

LANDSCAPE PLAN
Project Number: 18833-0006
Drawing Scale: 1"=30'-0"
Date Issued: SEPT, 2015
Index Number: -
Drawn By: JCF
Checked By: DMH
Project Manager: DMH
L101

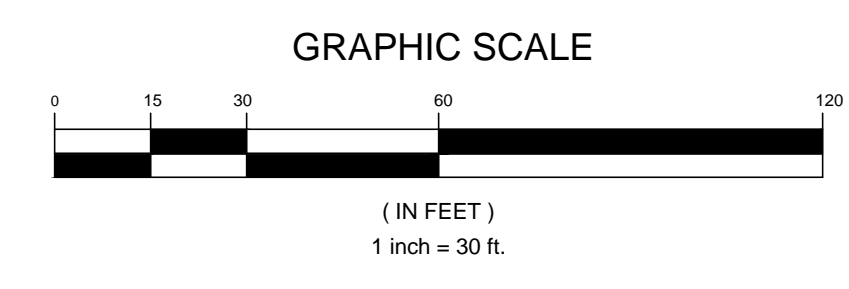
MOON TOWNSHIP LANDSCAPE REQUIREMENTS:

- §27-214.C. BUFFERYARD TYPE 1 IS REQUIRED ALONG THE NORTHERN PROPERTY LINE.
3 SHADE TREES, 2 EVERGREEN TREES, 4 ORNAMENTAL TREES AND 16 SHRUBS ARE REQUIRED PER 100' 822' / 100' = 8 UNITS REQUIRED.
PROVIDED: 27 SHADE TREES, 19 EVERGREEN TREES, 36 ORNAMENTAL TREES AND 144 SHRUBS
- §27-214.C. BUFFERYARD TYPE 1 IS REQUIRED ALONG THE EASTERN PROPERTY LINE.
3 SHADE TREES, 2 EVERGREEN TREES, 4 ORNAMENTAL TREES AND 16 SHRUBS ARE REQUIRED PER 100' 225' / 100' = 3 UNITS REQUIRED.
PROVIDED: 9 SHADE TREES, 6 EVERGREEN TREES, 12 ORNAMENTAL TREES AND 48 SHRUBS
- §27-214.C. BUFFERYARD TYPE 3 IS REQUIRED ALONG THE SOUTHERN PROPERTY LINE.
3 SHADE TREES, 3 ORNAMENTAL TREES AND 11 SHRUBS ARE REQUIRED PER 100' 655' / 100' = 7 UNITS REQUIRED.
PROVIDED: 21 SHADE TREES, 21 ORNAMENTAL TREES AND 77 SHRUBS
- §27-215.0. STREET TREES SHALL BE PLANTED AT A SPACING OF 30'-30' ON CENTER ALONG STREETS. STREET TREES HAVE BEEN PROPOSED AT A SPACING OF 30 FEET ON CENTER ALONG BEAVER GRADE ROAD.
5. §27-303.6.B. 10% OF THE LOT SHALL BE LANDSCAPED IN ACCORDANCE WITH THE REQUIREMENTS OF §217-214 AND §217-215.
PROVIDED: 43% OF THE LOT SHALL BE LANDSCAPED.
- §27-303.6.C. A 10' WIDE BUFFER SHALL BE PROVIDED ALONG THE FRONTAGE OF THE PARCEL IN THE CARNOT VILLAGE OVERLAY DISTRICT AND PLANTED WITH STREET TREES.
PROVIDED:

LANDSCAPE NOTE:

1. THE LANDSCAPING AND OTHER AMENITIES DEPICTED ON THIS LANDSCAPE PLAN ARE INTENDED TO DEMONSTRATE MATERIAL COMPLIANCE WITH SECTION 27-214 & 27-215 OF THE ZONING ORDINANCE OF MOON TOWNSHIP AND TO SERVE AS A GENERAL GUIDE. ALL LOCATIONS ARE APPROXIMATE AND WILL BE SUBJECT TO ADJUSTMENTS AND MODIFICATIONS BY THE DEVELOPER TO FIT ACTUAL SITE CONDITIONS, RESOLVE CONFLICTS (ESPECIALLY WITH UTILITIES) AND TO IMPROVE DESIGN AND AESTHETICS. SPECIFIC LOCATION, SPECIES, AND OTHER DETAILS DEPICTED ON THE LANDSCAPE PLAN MAY BE ALTERED AND/OR SUBSTITUTED PROVIDED THAT THE MINIMUM REQUIREMENTS OF APPLICABLE ORDINANCES ARE MET.

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Pennsylvania One Call System, Inc.
8-1-1
POCS Serial No. 20142200148



BUFFERYARD REQUIREMENTS PER §27-214.C										
LOCATION	TYPE	LENGTH (LF)	SHADE TREES		EVERGREEN TREES		ORNAMENTAL TREES		SHRUBS	
			REQUIRED	PROPOSED	REQUIRED	PROPOSED	REQUIRED	PROPOSED	REQUIRED	PROPOSED
REQUIRED										
	1	PER 100'	3	2	4	2	4	16	16	
	3	PER 100'	3	2	NA	2	3	11	11	
PROVIDED										
	NORTH	1	822'	27	27	18	18	36	36	144
	SOUTH	1	225'	9	9	6	6	12	12	48
	EAST	3	655'	21	21	NA	NA	21	21	77

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