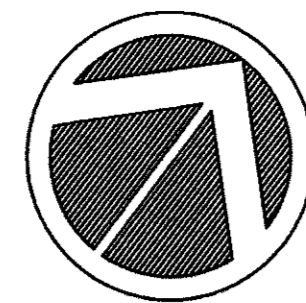
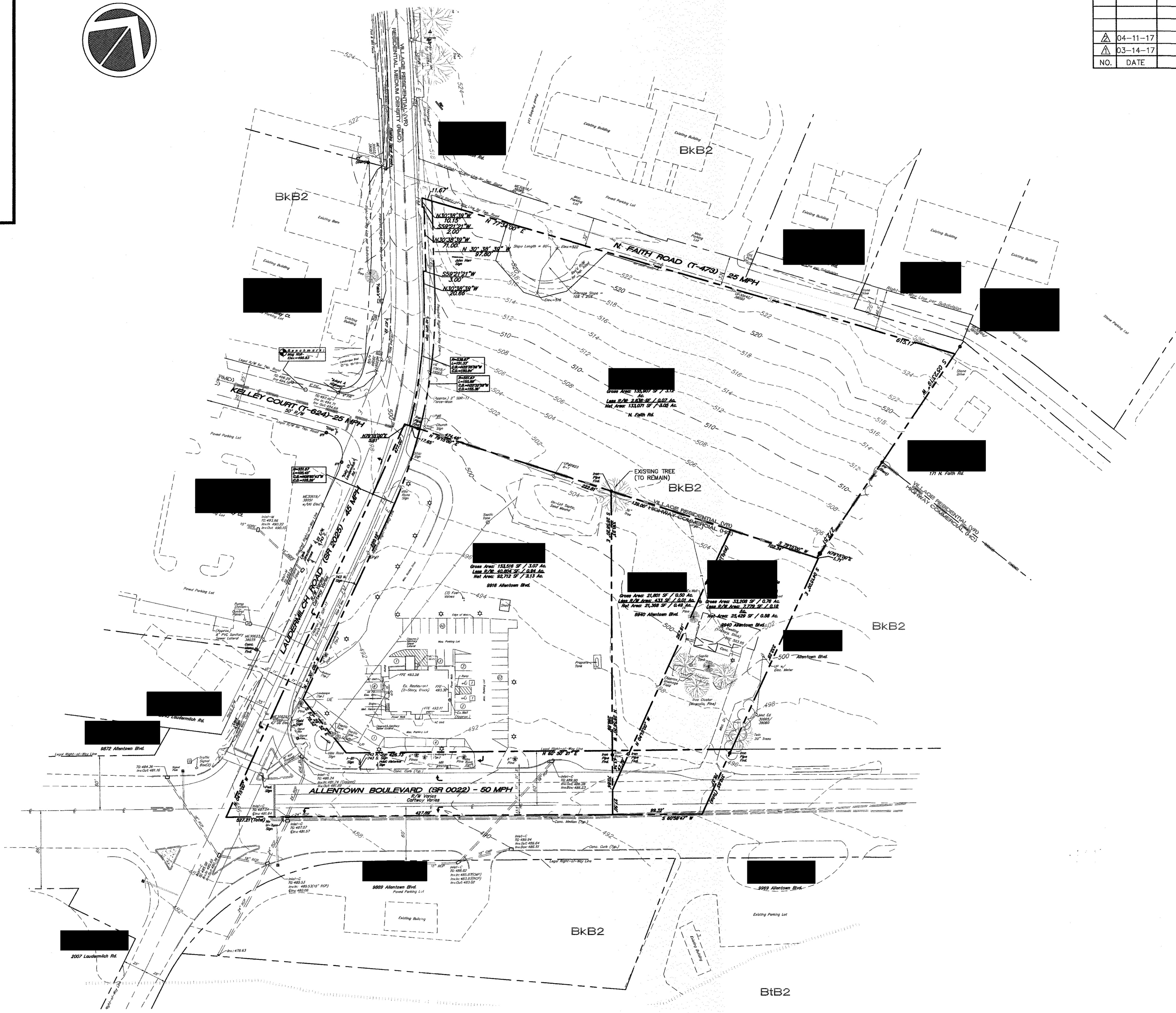


LEGEND	
	Property Line
	Adjoinder Property Line
	Existing Right-of-way
	Existing Curb
	Existing Edge Of Pavement
	Existing Contour
	Existing Light Pole
	Existing Cleanout
	Existing Utility Pole & Guy Wire
	Existing Septic
	Existing Well
	Existing Street Sign
	Existing Handicap Parking Space
	Existing Storm Sewer Pipe & Inlet
	Existing Fence Line
	Existing Telecommunications Line
	Existing Overhead Electric Line
	Existing Road Centerline
	Number Of Handicap Parking Spaces
	Number Of Parking Spaces
	Finished Floor Elevation



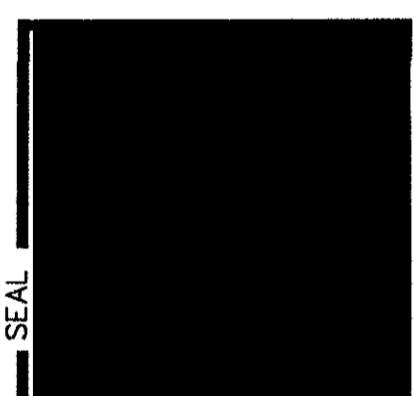
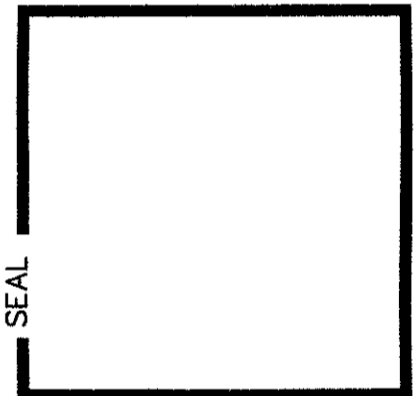
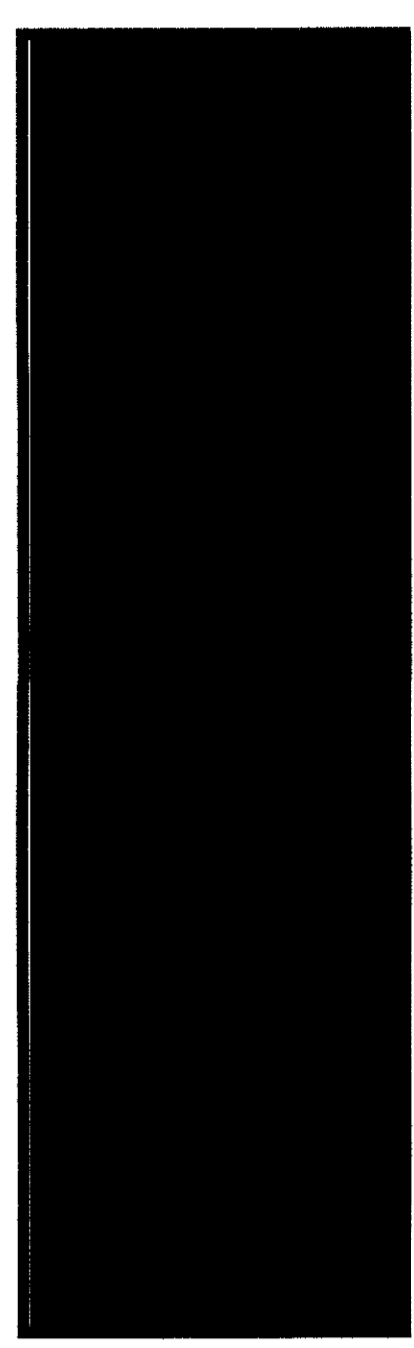
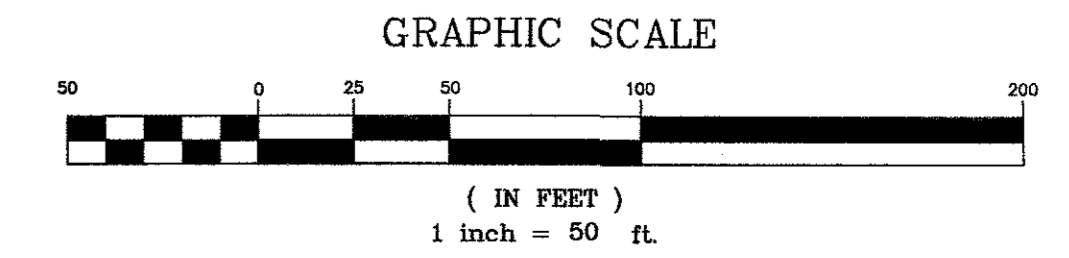
**GENERAL NOTES**

- EXISTING FEATURES DEPICTED BY FIELD SURVEY PERFORMED BY [REDACTED] ARE LOCATED ALONG KELLEY COURT AS MAG NAILS SET IN THE SHOULDER PROJECT DATUM IS THE U.S.G.S. NATIONAL GEODETIC VERTICAL DATUM OF 1988.
- NO EVIDENCE OF CURRENT EARTH MOVING WORK OR BUILDING CONSTRUCTION WAS OBSERVED DURING FIELD SURVEY.
- NO EVIDENCE OF STREET CONSTRUCTION WAS OBSERVED DURING FIELD SURVEY.
- NO EVIDENCE OF SITE USE AS A SOLID WASTE DUMP, SUMP, OR SANITARY LANDFILL WAS OBSERVED DURING FIELD SURVEY.
- THE SITE DOES NOT LIE WITHIN THE 100 YEAR FLOOD PLAIN AS DETERMINED BY FEDERAL EMERGENCY MANAGEMENT AGENCY AS TAKEN FROM FLOOD INSURANCE RATE MAP PANEL MAP NUMBER 42043C03570 BEARING AN EFFECTIVE DATE OF AUGUST 02, 2012.
- ALL UNDERGROUND UTILITIES ARE SHOWN PER FIELD SURVEY AND PER PA ONE-CALL #20142831599 & 20142832089. THE UTILITIES LOCATION ARE CONSIDERED TO BE APPROXIMATE AND SHOULD BE FIELD VERIFIED PRIOR TO EXCAVATION.
- THERE IS NO EVIDENCE OF WELLS OR ON LOT SEWAGE SYSTEMS ON ANY ADJOINING PROPERTY WITHIN 50' OF THE SITE OR WITHIN 75' OF PROPOSED STORMWATER BASINS.



DESIGN :	TGW		
DRAWN :	TGW		
CHECKED :	TGW		
DATE :	04-11-2017		
NO.	DATE	DESCRIPTION	BY
△	04-11-17	PER TOWNSHIP ENGINEER COMMENT LETTER DATED 03-23-17	TGW
△	03-14-17	PER TOWNSHIP ENGINEER COMMENT LETTER DATED 1-20-17	GDC

SOIL SYMBOL	SOIL DESCRIPTION	SLOPE (%)	DEPTH TO HIGH WATER TABLE PER S.C.S. SOIL SURVEY	DEPTH TO BEDROCK PER S.C.S. SOIL SURVEY	HYDROLOGIC SOIL GROUP
BKB2	Berks Shaly Silt Loam	3-8	6'+	2-3.5'	B



PRELIMINARY/FINAL SUBDIVISION AND LAND DEVELOPMENT PLAN  
 EXISTING FEATURES PLAN  
 EAST HANOVER TOWNSHIP, DAUPHIN COUNTY, PENNSYLVANIA

PROJECT NO.	314059
SURVEY BOOK :	
SCALE :	1" = 50'
DWG FILE :	Y:\14\314059\DWG\314059.dwg
SHEET	2 of 15

LEGEND	
	Property Line
	Existing Building Setback Line
	Existing Edge Of Concrete
	Existing Curb
	Existing Edge Of Pavement
	Existing Easement Lines
	Existing Contour
	Existing Spot Elevation
	Existing Water Meter
	Existing Water Valve
	Existing Fire Hydrant
	Existing Gas Valve
	Existing Electric Line W/ Utility Pole
	Existing Utility Pole Guy Wire
	Existing Electric Manhole
	Existing Sanitary Sewer Run
	Existing Sanitary Sewer Clean-out
	Existing Storm Sewer Run
	Existing Storm Sewer Manhole
	Existing Fence
	Existing Light Post
	Existing Sign
	Existing Monitor Well
	Existing Property Corner Found
	Existing Soils Boundary
	PROPOSED EDGE OF PAVEMENT
	PROPOSED CURB
	PROPOSED STORM SEWER LINE AND INLET
	PROPOSED RIP RAP APRON
	PROPOSED SANITARY SEWER MAIN AND MANHOLE
	PROPOSED SANITARY SEWER LATERAL; CLEANOUT
	PROPOSED WATER LINE W/ HYDRANT
	PROPOSED CONTOUR
	PROPOSED SPOT ELEVATION
	B.C.=BOTTOM OF CURB
	H.P.=HIGH POINT
	PROPOSED SIDEWALK; HC RAMP
	RIGHT OF WAY AREA TO BE DEDICATED
	INFILTRATION BASIN FLOOR SEEDING
	P300 MATTING

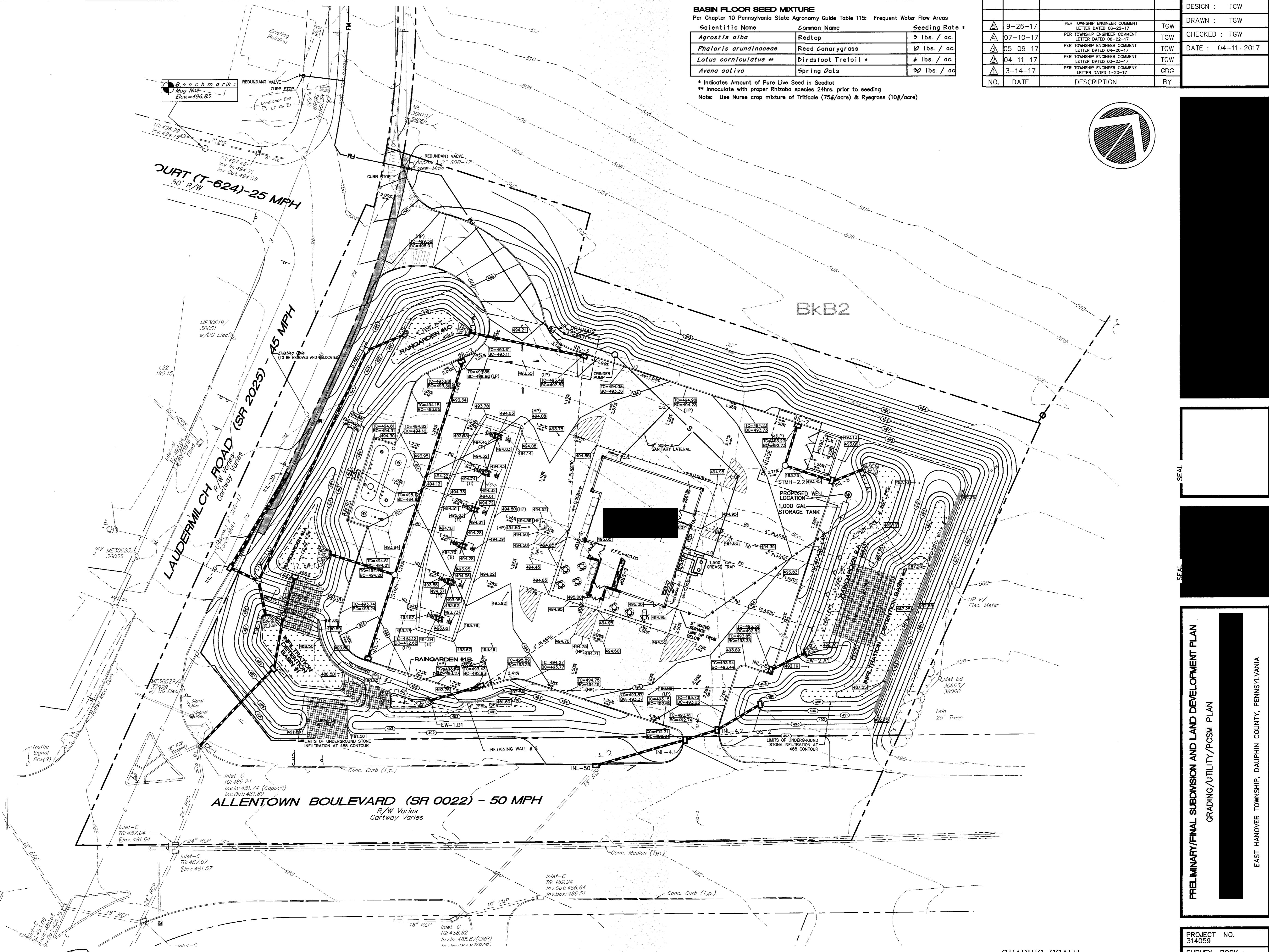
- NOTES:**
- ALL SPOT ELEVATIONS ARE REFERENCED TO THE FINISHED GROUND SURFACE UNLESS OTHERWISE NOTED. ALL ELEVATIONS SHOWN ARE REFERENCED TO A BENCHMARK AND SHALL BE VERIFIED BY THE CONTRACTOR AT GRADEWORKING.
  - THE CONTRACTOR SHALL REFERENCE DETAILED BUILDING PLANS FOR EXACT BUILDING DIMENSIONS, ELEVATIONS, AND UTILITY SERVICE POINTS.
  - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BID AND PERFORM ALL UTILITY WORK IN COMPLIANCE TO ALL APPLICABLE LOCAL AND STATE CODES AND REGULATIONS.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES ASSOCIATED WITH THE INSTALLATION, INSPECTION, TESTING AND FINAL ACCEPTANCE OF ALL PROPOSED UTILITIES CONSTRUCTION.
  - CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY COMPANY ON THE ADDITION, REMOVAL AND/OR RELOCATION OF UTILITIES AND UTILITY POLES AND THE EXTENSION OF ALL PROPOSED UTILITIES TO MEET PROJECT REQUIREMENTS.
  - ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE RESPECTIVE UTILITY COMPANY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ALL UTILITIES ARE INSTALLED CORRECTLY TO MEET PROJECT REQUIREMENTS IF THEY ARE NOT PERFORMED BY THE CONTRACTOR OR NOT.
  - AN AS-BUILT DRAWING OF NEW UTILITY SERVICES SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE OWNER UPON COMPLETION OF THE PROJECT.
  - CONDUIT LOCATIONS TO Pylon SIGNS AND SITE LIGHT POLES TO BE COORDINATED WITH [REDACTED]
  - CONTRACTOR SHALL PROVIDE A 1500 GALLON GREASE TRAP WITH T-PIPE IN OUTFLOW CHAMBER INSTALLED IN ACCORDANCE WITH 2008 INTERNATIONAL BUILDING CODE OR MOST CURRENT. ALL SANITARY SEWER PIPE SHALL BE 300-36 PIP UNLESS OTHERWISE NOTED.
  - CONTRACTOR SHALL COORDINATE WITH [REDACTED] ON CONDUIT ROUTE TO STORE FROM THE TRANSFORMER AND/OR SERVICE UTILITY POLE FOR TELEPHONE AND ELECTRICAL SERVICE.
  - SEWAGE DISPOSAL FOR THE LOT IS TO BE PROVIDED BY CONNECTING TO THE PUBLIC SEWER SYSTEM. CONNECTION TO THE SYSTEM IS REQUIRED. WORK TO BE IN ACCORDANCE WITH 2008 INTERNATIONAL PLUMBING CODE OR MOST CURRENT.
  - CONTRACTOR SHALL PROVIDE 1" ELECTRICAL CONDUIT WITH PULL WIRE FROM STORE TO REAR OF DUMPSTER WALL. EXTEND THRU DUMPSTER WALL AND PARTIALLY UP WIDE BACK WALL FACE AND CAP. COORDINATE WITH [REDACTED]
  - ALL CONDUIT BENDS SHALL BE LONG SNEEPS.
  - SEWER AND WATER LINES SHALL HAVE A MINIMUM OF 18 INCHES VERTICAL SEPARATION, OR THE SEWER OR WATER MAIN SHALL BE CONCRETE ENCASED IN THE AREA WHERE THE 18 INCH SEPARATION CANNOT BE MAINTAINED.
  - CONTRACTOR TO CONTACT UTILITY COMPANIES AND COORDINATE UTILITY CONNECTIONS.
  - ALL STORM SEWER PIPING, UNDERGROUND ROOF DRAINS, AND CONNECTIONS TO BE WATER-TIGHT.
  - CONTRACTOR SHALL COORDINATE PUMP ISLAND ROOF CANOPY DRAIN CONNECTION TO THE MAIN COLLECTOR PIPE WITH [REDACTED] AND PROVIDE NECESSARY FITTINGS TO MAKE THE CONNECTION.
  - UTILITY AND DOWNSPOUT CONNECTION LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS WITH THE OWNER / ARCHITECT PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL COMPLY AT ALL TIMES WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, PROVISIONS, AND POLICES GOVERNING SAFETY AND HEALTH, INCLUDING THE FEDERAL CONSTRUCTION SAFETY ACT (PUBLIC LAW 91-593), FEDERAL REGISTER, CHAPTER XVI, PART 1926 OF TITLE 29 REGULATIONS, OCCUPATIONAL SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION, AND SUBSEQUENT PUBLICATIONS UPDATING THESE REGULATIONS.
  - REFER TO H.O.P. DRAWING PREPARED BY TRAFFIC PLANNING & DESIGN, INC., FOR CONSTRUCTION OF IMPROVEMENTS ON LAUDERMILCH ROAD AND ALLENTOWN BOULEVARD.
  - ALL SITE WORK SHALL BE DONE IN ACCORDANCE WITH THE PLANS PREPARED BY [REDACTED] AND THE CURRENT REQUIREMENTS OF EAST HANOVER TOWNSHIP, THE APPLICABLE SECTIONS OF PENNDOT STANDARD SPECIFICATIONS FOR ROADWAY CONSTRUCTION, AND ALL OTHER PERTINENT FEDERAL AND STATE LAWS.
  - THE CONTRACTOR SHALL COMPLY AT ALL TIMES WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, PROVISIONS, AND POLICES GOVERNING SAFETY AND HEALTH, INCLUDING THE FEDERAL CONSTRUCTION SAFETY ACT (PUBLIC LAW 91-593), 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 NOTIFY PA ONE CALL AT 1-800-242-7176. 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.
  - ALL EXISTING TREES, VEGETATION, PAVEMENTS, CONCRETE FOUNDATIONS, STRUCTURES AND ORGANIC TOPSOIL SHALL BE STRIPPED AND REMOVED FROM NEW CONSTRUCTION AREAS UNLESS NOTED OTHERWISE.
  - ALL SLOPES SHALL BE 2:1 (HORIZONTAL:VERTICAL) MAXIMUM UNLESS NOTED OTHERWISE.
  - AN AS-BUILT DRAWING OF NEW UTILITY SERVICES MUST BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE OWNER UPON COMPLETION OF THE PROJECT.
  - ALL AREAS NOT PAVED SHALL BE TOPSOILED, SEEDED, MULCHED OR LANDSCAPED UNLESS OTHERWISE NOTED IN THE CONSTRUCTION DRAWINGS, SITE SPECIFICATIONS OR INSTRUCTED BY THE OWNER.
  - CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT PREPARED BY ADVANTAGE ENGINEERS PRIOR TO INITIATION OF ANY EARTHWORK ACTIVITY.
  - CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION.

**BASIN FLOOR SEED MIXTURE**  
Per Chapter 10 Pennsylvania State Agronomy Guide Table 115: Frequent Water Flow Areas

Scientific Name	Common Name	Seeding Rate *
<i>Agrostis alba</i>	Redtop	9 lbs. / ac.
<i>Phalaris arundinacea</i>	Reed Canarygrass	10 lbs. / ac.
<i>Lotus corniculatus</i> **	Pirsdfoot Trefoil *	6 lbs. / ac.
<i>Avena sativa</i>	Spring Oats	20 lbs. / ac.

\* Indicates Amount of Pure Live Seed in Seedlot  
\*\* Inoculate with proper Rhizobia species 24hrs. prior to seeding  
Note: Use Nurse crop mixture of Triticale (75#/acre) & Ryegrass (10#/acre)

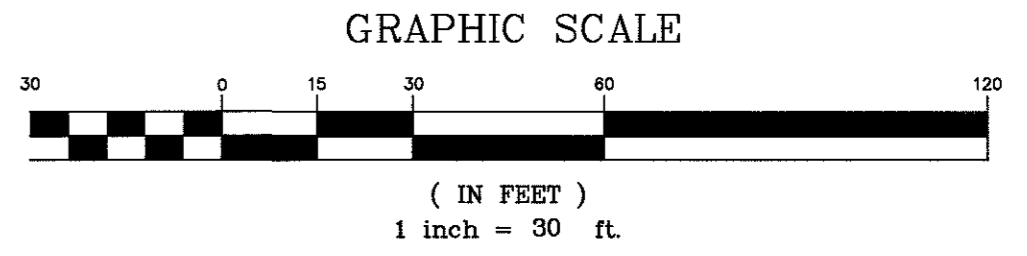
NO.	DATE	DESCRIPTION	BY
9-26-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 06-22-17	TGW
07-10-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 06-22-17	TGW
05-09-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 04-20-17	TGW
04-11-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 03-23-17	TGW
3-14-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 1-20-17	GDG



DESIGN : TGW  
DRAWN : TGW  
CHECKED : TGW  
DATE : 04-11-2017

PRELIMINARY/FINAL SUBDIVISION AND LAND DEVELOPMENT PLAN  
GRADING/UTILITY/PCSM PLAN  
EAST HANOVER TOWNSHIP, DAUPHIN COUNTY, PENNSYLVANIA

PROJECT NO. 314059  
SURVEY BOOK :  
SCALE : 1" = 30'  
DWG FILE Y:\2014\314059.dwg  
SHEET 6 of 15



**LEGEND**

	Property Line
	Existing Building Setback Line
	Existing Edge of Concrete
	Existing Curb
	Existing Edge of Pavement
	Existing Easement Lines
	Existing Contour
	Existing Spot Elevation
	Existing Water Meter
	Existing Water Valve
	Existing Fire Hydrant
	Existing Gas Valve
	Existing Electric Line W/ Utility Pole
	Existing Utility Pole Guy Wire
	Existing Electric Manhole
	Existing Sanitary Sewer Run
	Existing Sanitary Sewer Clean-out
	Existing Storm Sewer Run
	Existing Storm Sewer Manhole
	Existing Fence
	Existing Light Post
	Existing Sign
	Existing Monitor Well
	Existing Property Corner Found
	Existing Soils Boundary
	PROPOSED EDGE OF PAVEMENT
	PROPOSED CURB
	PROPOSED BUILDING SETBACK LINE
	PROPOSED CONC. MONUMENT
	PROPOSED IRON PIN
	PROPOSED STORM SEWER LINE AND INLET
	PROPOSED RIP RAP APRON
	PROPOSED SANITARY SEWER MAIN AND MANHOLE
	PROPOSED SANITARY SEWER LATERAL CLEANOUT
	PROPOSED WATER LINE W/ HYDRANT
	PROPOSED SIDEWALK; HC RAMP
	RIGHT OF WAY AREA TO BE DEDICATED
	P300 MATTING

**GENERAL NOTES**

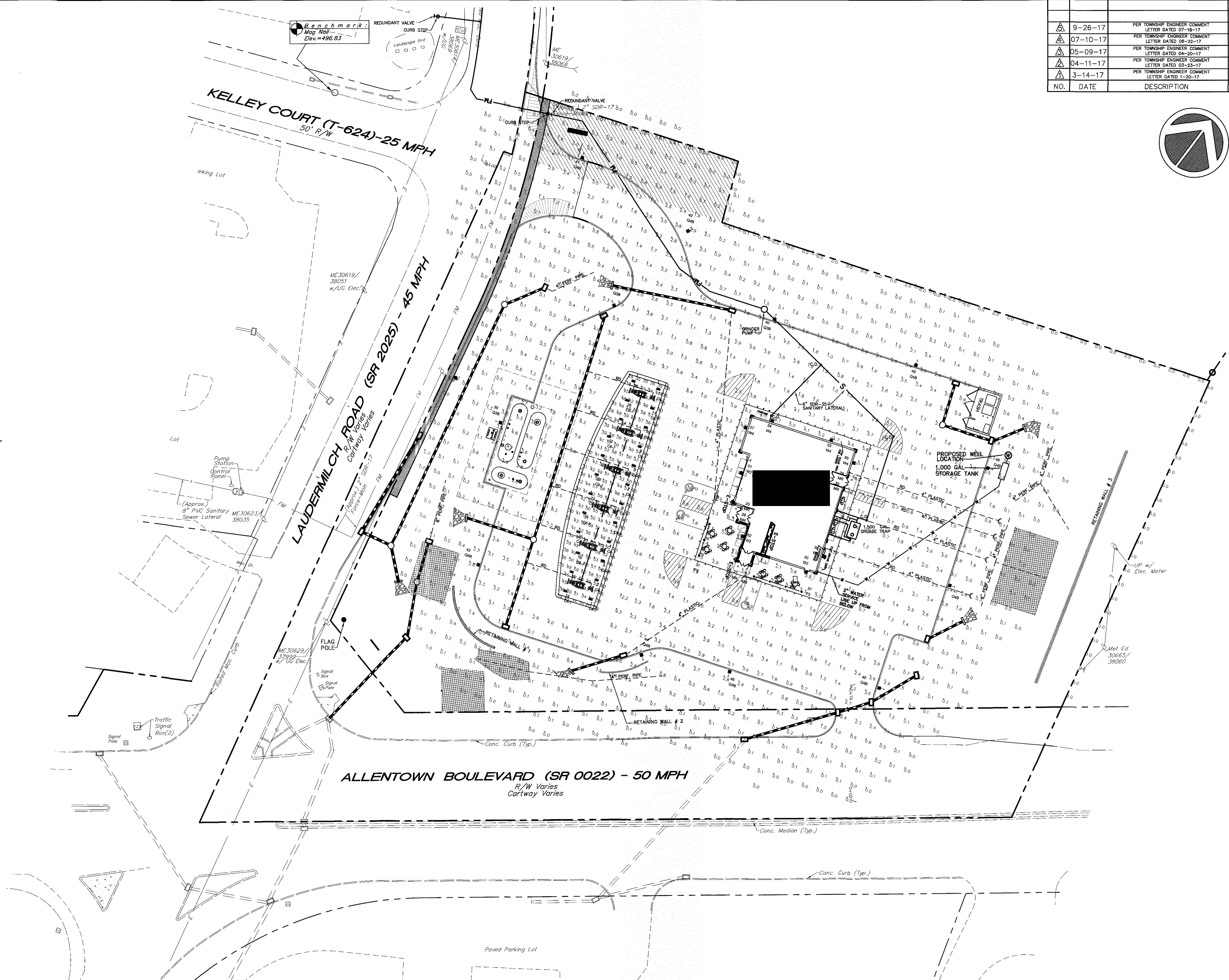
1. POST-APPROVAL ALTERATION TO LIGHTING PLANS OR INTENDED SUBSTITUTIONS FOR APPROVED LIGHTING EQUIPMENT SHALL BE SUBMITTED TO TOWNSHIP FOR REVIEW AND APPROVAL.
2. THE TOWNSHIP RESERVES THE RIGHT TO CONDUCT POST-INSTALLATION NIGHTTIME INSPECTIONS TO VERIFY COMPLIANCE WITH THE ORDINANCE REQUIREMENTS AND APPROVED LIGHTING PLAN COMMITMENTS AND, IF DEEMED APPROPRIATE BY THE TOWNSHIP, TO REQUIRE REMEDIAL ACTION AT NO EXPENSE TO TOWNSHIP.
3. ALL EXTERIOR LIGHTING SHALL MEET IESNA FULL CUT-OFF CRITERIA UNLESS OTHERWISE APPROVED BY THE TOWNSHIP.

LUM. NO.	LABEL	MTG. HT.	LUM. NO.	LABEL	MTG. HT.
1	MR	11.33	29	MR	11.33
2	MR	11.33	30	MR	11.33
3	CB7	16	31	P3	3
4	CB7	16	32	P3	3
5	CB7	16	33	P3	3
6	CB7	16	34	P3	3
7	CB7	16	35	P3	3
8	CB7	16	36	P3	3
9	CB7	16	37	P3	3
10	CB7	16	38	Q2B	20
11	CB7	16	39	Q2B	20
12	CB7	16	40	Q2B	20
13	CB7	16	41	Q4B	20
14	CB7	16	42	Q4B	20
15	CB7	16	43	Q4B	20
16	CB7	16	44	Q4B	20
17	CB7	16	45	Q4B	20
18	CB7	16	46	Q4B	20
19	CB7	16	47	Q4B	20
20	CB7	16	48	Q4B	20
21	CB7	16	49	Q4B	20
22	CB7	16	50	W2	9.33
23	CB7	16	51	W2	11.33
24	CB7	16	52	W2	11.33
25	MR	11.33	53	WA	12
26	MR	11.33	54	WA	12
27	MR	11.33	55	WA	12
28	MR	11.33	56	WA	12
			57	WA	12

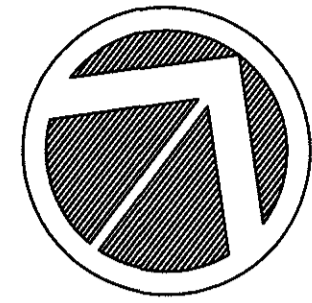
LABEL	AVG	MAX	MIN	AVGMIN	MAXMIN
BUILDING PERIMETER	4.88	24.7	1.2	4.05	20.58
PAVED AREA	2.04	12.9	0.6	4.23	21.50
PROPERTY LINE	0.02	0.1	0.0	N/A	N/A
UNCOVERED AREA	0.00	4.5	0.0	N/A	N/A
UNDER CANOPY	48.28	63	29	1.80	2.17

NOTE:  
\*ALL AREA FIGURES ON 17 FT. POLES MOUNTED ON 3 FT. CONCRETE BASES

SYMBOL	QTY	LABEL	ARRANGEMENT	LUMENS	LF	ARR. WATTS	TOTAL WATTS	MANUFACTURER	DESCRIPTION
MR	4	MR	SINGLE	1051	1.00	50	200	GE LIGHTING	CAN200-FR-EM-06-1A-09-170
P3	7	P3	SINGLE	1748	1.00	21.5	150.6	CHAI INC.	MR18 SOW CAN LIGHT (BY OTHERS)
Q2B	3	Q2B	SINGLE	9188	1.00	88	268	CHAI INC.	Q20-0A R2 + OSO A NM 3ME B 57X-UL BZ + OSO-BLBMF
Q4B	9	Q4B	SINGLE	3920	1.00	36	177	CHAI INC.	Q20-0A R2 + OSO A NM 3ME B 57X-UL BZ + OSO-BLBMF
W2	3	W2	SINGLE	247	1.00	1.5	10.5	CHAI INC.	REC-EDG-WA-NM-A-UL-BZ-25
WA	5	WA	SINGLE	2893	1.00	60	340	CHAI INC.	REC-EDG-WA-NM-A-UL-BZ-25



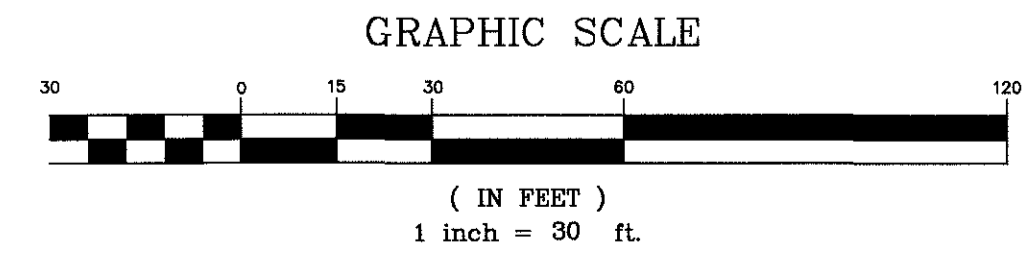
NO.	DATE	DESCRIPTION	BY
9-26-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 07-18-17	TGW
07-10-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 06-22-17	TGW
05-09-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 04-20-17	TGW
04-11-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 03-23-17	TGW
3-14-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 1-20-17	DGD



DESIGN : TGW  
DRAWN : TGW  
CHECKED : TGW  
DATE : 04-11-2017

PRELIMINARY/FINAL SUBMISSION AND LAND DEVELOPMENT PLAN  
LIGHTING PLAN  
EAST HANOVER TOWNSHIP, DAUPHIN COUNTY, PENNSYLVANIA

PROJECT NO. 314059  
SURVEY BOOK :  
SCALE : 1" = 30'  
DWG FILE: Y:\2014\314059.dwg  
SHEET 7 of 15



**LEGEND**

- Property Line
- Existing Building Setback Line
- Existing Edge Of Concrete
- Existing Edge Of Pave
- Existing Easement Lines
- 710
- 710.1
- Existing Contour
- Existing Spot Elevation
- Existing Water Meter
- Existing Water Valve
- Existing Fire Hydrant
- Existing Gas Valve
- Existing Electric Line W/ Utility Pole
- Existing Utility Pole Guy Wire
- Existing Electric Manhole
- Existing Sanitary Sewer Run
- Existing Sanitary Sewer Clean-out
- Existing Storm Sewer Run
- Existing Storm Sewer Manhole
- Existing Fence
- Existing Light Post
- Existing Sign
- Existing Monitor Well
- Existing Property Corner Found
- Existing Soils Boundary

- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- PROPOSED STORM SEWER LINE AND INLET
- PROPOSED RIP RAP APRON
- PROPOSED SANITARY SEWER MAIN AND MANHOLE
- PROPOSED SANITARY SEWER LATERAL; CLEANOUT
- PROPOSED WATER LINE W/ HYDRANT
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION B.C.=BOTTOM OF CURB H.P.=HIGH POINT
- PROPOSED SIDEWALK; HC RAMP
- RIGHT OF WAY AREA TO BE DEDICATED
- INFILTRATION BASIN FLOOR SEEDING
- F300 MATTING

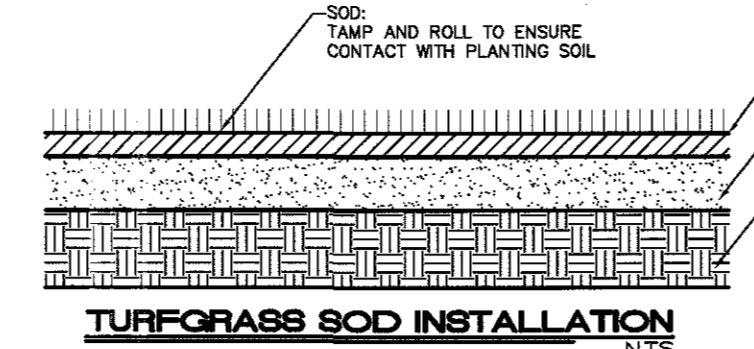
**BIO-RETENTION POND FLOOR SEED MIXTURE**  
Per Chapter 10 Pennsylvania State Agronomy Guide Table 115: Frequent Water Flow Areas

Scientific Name	Common Name	Seeding Rate *
<i>Agrostis alba</i>	Redtop	9 lbs. / ac.
<i>Phalaris arundinacea</i>	Reed canarygrass	10 lbs. / ac.
<i>Lolium corniculatus</i>	Birdfoot Trefoil	4 lbs. / ac.
<i>Avena sativa</i>	Spring Oats	30 lbs. / ac.

\* Indicates Amount of Pure Live Seed in Seedlot  
\*\* Inoculate with proper Rhizobia species 24hrs. prior to seeding  
Note: Use Nurse crop mixture of Triticale (75#/acre) & Ryegrass (10#/acre)

**LEGEND**

- CANOPY TREE REQUIRED PER SEC. 618.8 - PROPERTY LINE BUFFER (HIGH INTENSITY ALONG NORTHERN BOUNDARY AND LOW INTENSITY ALONG REMAINING BOUNDARIES)
- ORNAMENTAL TREE REQUIRED PER SEC. 618.8 - PROPERTY LINE BUFFER (HIGH INTENSITY ALONG NORTHERN BOUNDARY AND LOW INTENSITY ALONG REMAINING BOUNDARIES)
- EVERGREEN TREE REQUIRED PER SEC. 618.8 - PROPERTY LINE BUFFER (HIGH INTENSITY ALONG NORTHERN BOUNDARY)
- SHRUB (OR GRASS PLANTING) REQUIRED PER SEC. 618.8 - PROPERTY LINE BUFFER (HIGH INTENSITY ALONG NORTHERN BOUNDARY) AND PER SEC. 618.9 - SITE ELEMENT SCREENING
- TREE REQUIRED PER SEC. 618.10.1 - PARKING LOT PERIMETER LANDSCAPING
- TREE REQUIRED PER SEC. 618.10.2 - ONE TREE FOR EVERY REQUIRED INTERNAL PLANTING ISLAND
- TREE REQUIRED PER SEC. 618.10.4 - ONE TREE FOR EVERY 5 PARKING STALLS
- TREE REQUIRED PER SEC. 618.7 - STREET TREES - ONE TREE EVERY 50' ALONG R/W



**LANDSCAPE PLANTING NOTES**

- STREET TREES, SHADE TREES, AND CANOPY TREES SHALL BE A MINIMUM OF TWO AND ONE-HALF INCHES (2 1/2") DBH, AND THEY SHALL BE A MINIMUM OF EIGHT FEET (8') IN HEIGHT.
- EVERGREEN TREES FOR SCREENING PURPOSES SHALL BE A MINIMUM OF EIGHT FEET (8') IN HEIGHT.
- FLOWERING OR ORNAMENTAL TREES SHALL BE A MINIMUM OF TWO INCHES (2") DBH AND THEY SHALL BE A MINIMUM OF EIGHT FEET (8') IN HEIGHT.
- SHRUBS SHALL BE A MINIMUM OF TWO FEET (2') IN HEIGHT WHEN USED FOR GENERAL LANDSCAPING PURPOSES. WHEN USED FOR BUFFERING OR SCREENING, SHRUBS SHALL BE A MINIMUM OF THREE FEET (3') IN HEIGHT.
- ALL SHRUBS/GRASSES ARE TO BE PLANTED THREE FEET (3') ON CENTER (OC).

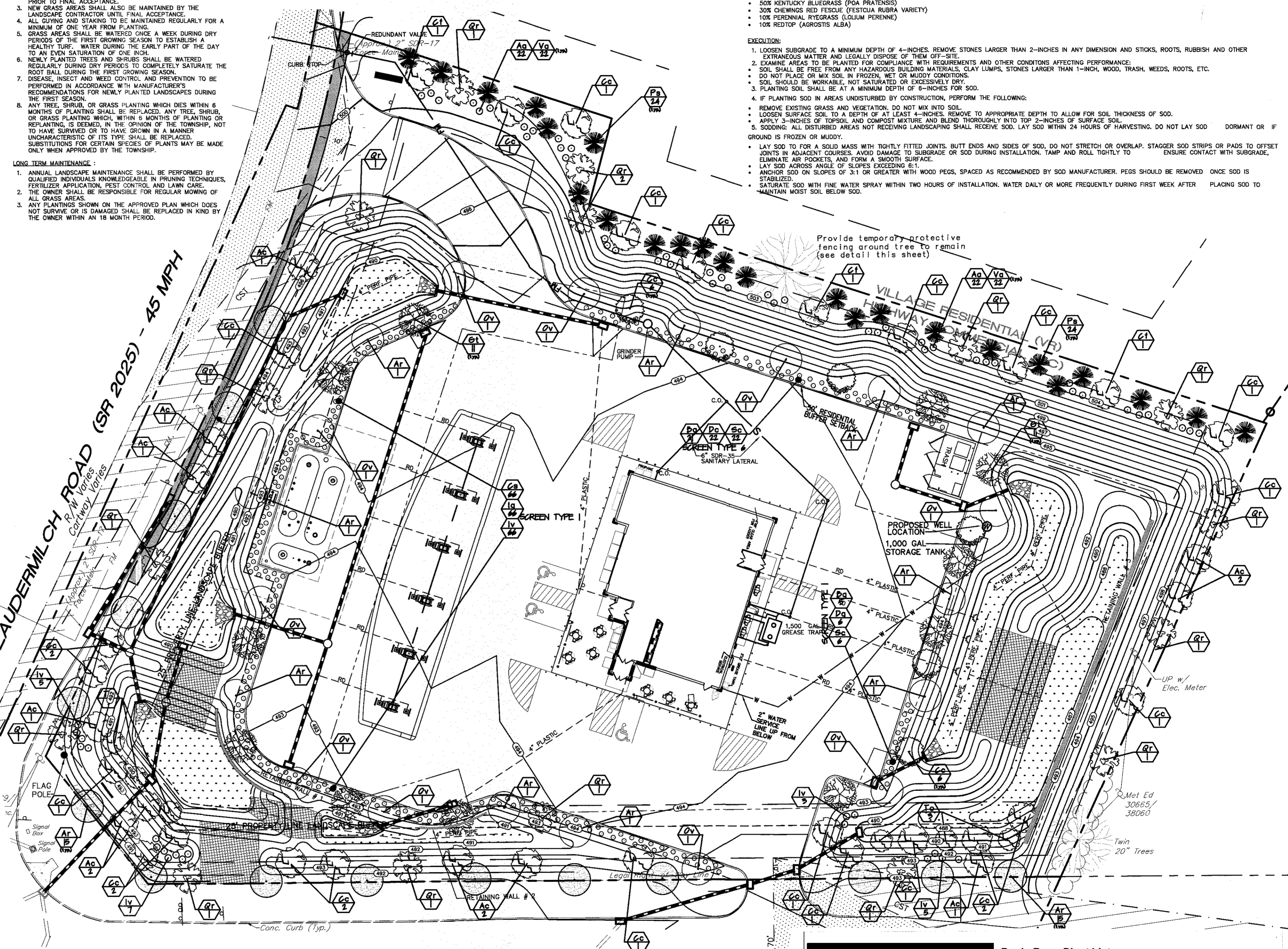
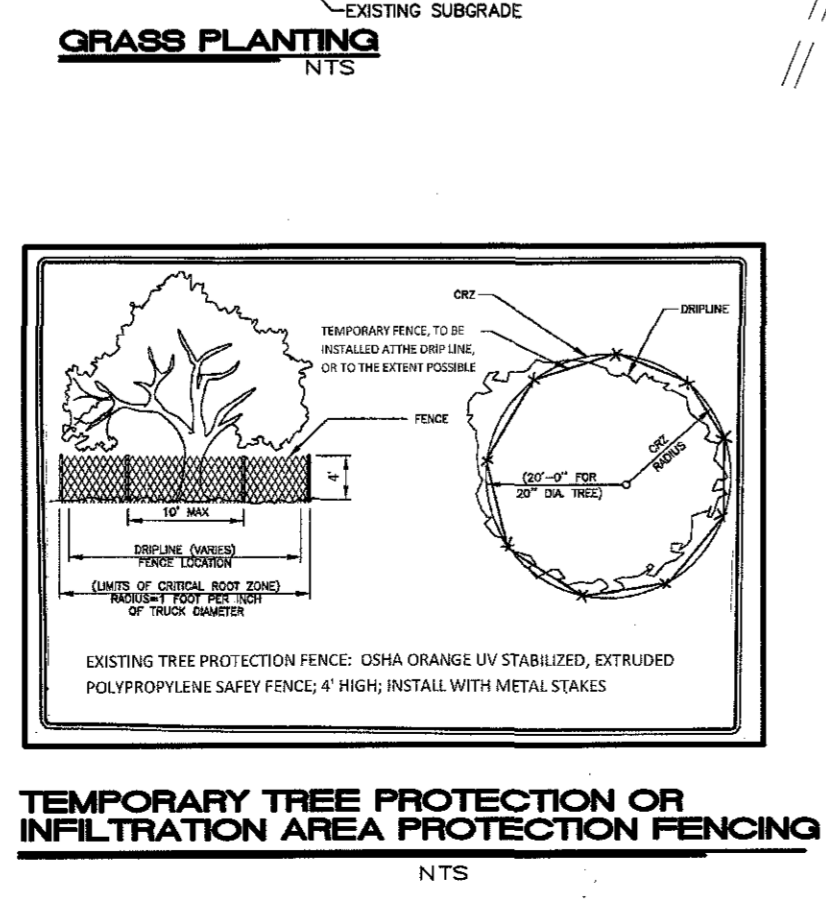
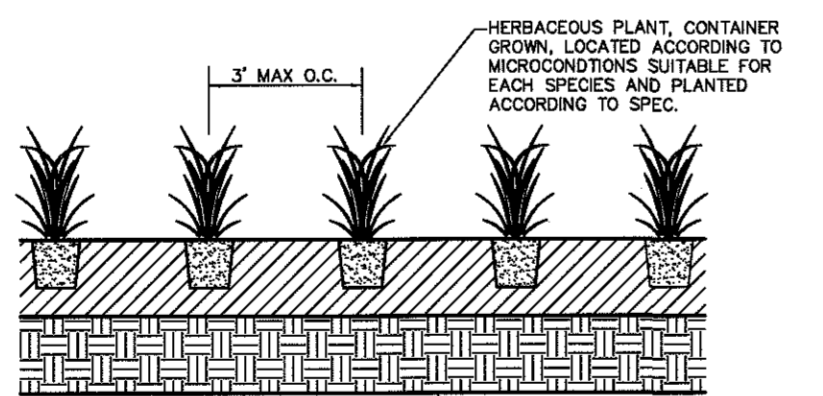
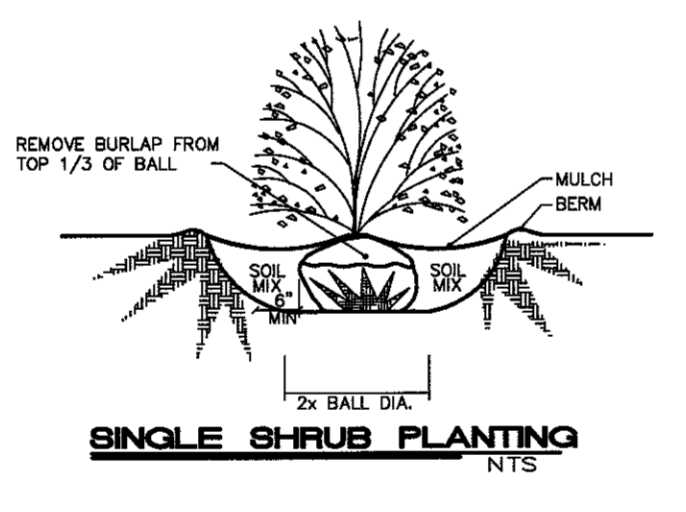
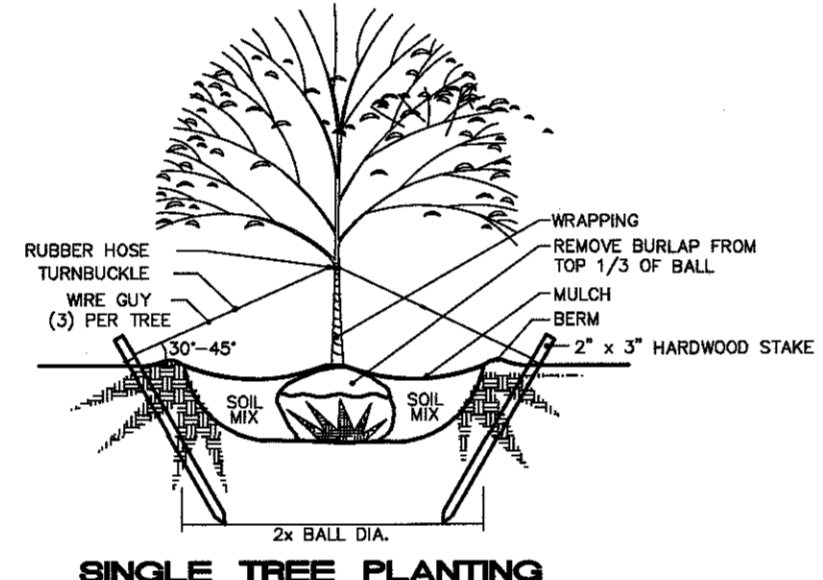
**TURFGRASS SOD:**

- TURFGRASS SOD:**
- HARVEST, DELIVER, STORE, AND HANDLE SOD IN ACCORDANCE WITH TPI GUIDELINES AND REGULATIONS. DELIVER SOD IN TIME FOR PLANTING WITHIN 24 HOURS OH HARVESTING. PROTECT SOD FROM BREAKING, DAMAGING, AND DRYING.
  - PROVIDE VIABLE SOD OF UNIFORM DENSITY, TEXTURE AND COLOR, STRONGLY ROOTED AND CAPABLE OF VIGOROUS GROWTH AND DEVELOPMENT WHEN PLANTED.
  - TURFGRASS SPECIES: SOD OF GRASS SPECIES AS FOLLOWS WITH NOT LESS THAN 95% GERMINATION, NOT LESS THAN 85% PURE SEED, AND NOT MORE THAN 1% WEED SEED.
    - A. FULL SUN: KENTUCKY BLUEGRASS (POA PRATENSIS), MINIMUM OF 3 CULTIVARS.
    - B. SUN AND PARTIAL SHADE: PROPORTIONED AS FOLLOWS:
      - 50% KENTUCKY BLUEGRASS (POA PRATENSIS)
      - 30% CHEWING BIRD FESCUE (FESTUCA RUBRA VARIETY)
      - 10% PERENNIAL RYEGRASS (LOLIUM PERENNE)
      - 10% REDTOP (AGROSTIS ALBA)

- EXECUTION:**
- LOOSEN SUBGRADE TO A MINIMUM DEPTH OF 4-INCHES; REMOVE STONES LARGER THAN 2-INCHES IN ANY DIMENSION AND STICKS, ROOTS, RUBBISH AND OTHER EXTRANEOUS WATER AND LEGALLY DISPOSE OF THEM OFF-SITE.
  - EXAMINE AREAS TO BE PLANTED FOR COMPLIANCE WITH REQUIREMENTS AND OTHER CONDITIONS AFFECTING PERFORMANCE.
  - SOIL SHALL BE FREE FROM ANY HAZARDOUS BUILDING MATERIALS, CLAY LUMPS, STONES LARGER THAN 1-INCH WOOD, TRASH, WEEDS, ROOTS, ETC. DO NOT PLACE OR MIX SOIL IN FROZEN, WET OR MUDDY CONDITIONS.
  - SOIL SHOULD BE WORKABLE, NOT SATURATED OR EXCESSIVELY DRY.
  - PLANTING SOIL SHALL BE AT A MINIMUM DEPTH OF 8-INCHES FOR SOD.
  - IF PLANTING SOD IN AREAS UNDISTURBED BY CONSTRUCTION, PERFORM THE FOLLOWING:
    - REMOVE EXISTING GRASS AND VEGETATION; DO NOT MIX INTO SOIL.
    - LOOSEN SURFACE SOIL TO A DEPTH OF AT LEAST 4-INCHES; REMOVE TO APPROPRIATE DEPTH TO ALLOW FOR SOIL THICKNESS OF SOD.
    - APPLY 3-INCHES OF TOPSOIL AND COMPOST MIXTURE AND BLEND THOROUGHLY INTO TOP 2-INCHES OF SURFACE SOIL.
    - SOODING: ALL DISTURBED AREAS NOT RECEIVING LANDSCAPING SHALL RECEIVE SOD. LAY SOD WITHIN 24 HOURS OF HARVESTING. DO NOT LAY SOD DORMANT OR IF GROUND IS FROZEN OR MUDDY.
    - LAY SOD TO FOR A SOLID MASS WITH TIGHTLY FITTED JOINTS; BUT ENDS AND SIDES OF SOD, DO NOT STRETCH OR OVERLAP. STAGGER SOD STRIPS OR PADS TO GETSET JOINTS IN ADJACENT COURSES; AVOID DAMAGE TO SUBGRADE OR SOD DURING INSTALLATION. TAMP AND ROLL TIGHTLY TO ENSURE CONTACT WITH SUBGRADE. ELIMINATE AIR POCKETS, AND FORM A SMOOTH SURFACE.
    - LAY SOD ACROSS ANGLE OF SLOPES EXCEEDING 6:1.
    - ANCHOR SOD ON SLOPES OF 3:1 OR GREATER WITH WOOD PEGS, SPACED AS RECOMMENDED BY SOD MANUFACTURER. PEGS SHOULD BE REMOVED ONCE SOD IS STABILIZED.
    - SATURATE SOD WITH FINE WATER SPRAY WITHIN TWO HOURS OF INSTALLATION. WATER DAILY OR MORE FREQUENTLY DURING FIRST WEEK AFTER PLACING SOD TO MAINTAIN MOIST SOIL BELOW SOD.

**- Landscape Plant List**

Key	Botanical Name	Common Name	Qty
Ar	<i>Acer rubrum</i>	Red Maple	15
<b>Total</b>			<b>15</b>
<b>B(a). Property Buffer Line-High Intensity-Northern Border</b>			
<b>Canopy Trees</b>			
Qr	<i>Quercus rubra</i>	Red Oak	5
<b>Ornamental Trees</b>			
Cc	<i>Cercis canadensis</i>	Eastern Redbud	7
Cf	<i>Cornus florida</i>	Flowering Dogwood	3
<b>Evergreen Trees</b>			
Ps	<i>Pinus strobus</i>	Eastern White Pine	24
<b>Shrubs</b>			
Aa	<i>Aronia arbutifolia</i>	Red Chokeberry	22
Va	<i>Viburnum acerfolium</i>	Mapleleaf Viburnum	22
<b>Total</b>			<b>83</b>
<b>B(b). Property Buffer Line-Low Intensity-Remaining Boundary</b>			
<b>Canopy Trees</b>			
Qr	<i>Quercus rubra</i>	Red Oak	11
<b>Ornamental Trees</b>			
Ac	<i>Amelanchier canadensis</i>	Shadblow Serviceberry	9
Cc	<i>Cercis canadensis</i>	Eastern Redbud	10
<b>Total</b>			<b>30</b>
<b>C. Site Element Screening (Type 1)</b>			
<b>Grasses/Shrubs</b>			
Bg	<i>Bouteloua gracilis</i> 'Blonde Ambition'	Blue grama	5
Dc	<i>Deschampsia cespitosa</i>	Tufted hairgrass	6
Sc	<i>Schizachyrium scoparium</i>	Little Bluestem	6
Cs	<i>Cornus Sericea</i>	Redosier Dogwood	66
Ig	<i>Ilex Glabra</i>	Inkberry	66
Iv	<i>Itea Virginica</i>	Virginia Sweetspire	66
<b>Total</b>			<b>215</b>
<b>D. Site Element Screening (Type 6)</b>			
<b>Grasses</b>			
Bg	<i>Bouteloua gracilis</i> 'Blonde Ambition'	Blue grama	21
Dc	<i>Deschampsia cespitosa</i>	Tufted hairgrass	22
Sc	<i>Schizachyrium scoparium</i>	Little Bluestem	22
<b>Total</b>			<b>65</b>
<b>E. Parking Lot Perimeter</b>			
<b>Trees</b>			
Ar	<i>Acer rubrum</i>	Red Maple	10
Ov	<i>Ostrya virginiana</i>	American Hophornbeam	10
<b>Total</b>			<b>20</b>
<b>F. Internal Planting Islands</b>			
<b>Trees</b>			
Cc	<i>Cercis canadensis</i>	Eastern Redbud	6
<b>Total</b>			<b>6</b>
<b>G. Additional Parking Lot Landscape for sites w/ more than 50 stalls</b>			
<b>Herbaceous Planting</b>			
Gt	<i>Gleditsia tricanthos</i> "Inermis"	Thornless Honey Locust	11
<b>Total</b>			<b>11</b>



**ALLENTOWN BOULEVARD (SR 0022) - 50 MPH**

- LANDSCAPE NOTES**
- SUMMARY: FURNISH ALL LABOR, MATERIALS, SERVICES, EQUIPMENT, AND OTHER NECESSARY ITEMS REQUIRED FOR ESTABLISHING LANDSCAPED AREA IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND THESE LANDSCAPE NOTES.
  - SOIL PH SHALL BE DETERMINED BY ELECTRONIC OR CHEMICAL SOIL TEST; PH SHALL BE ADJUSTED AS REQUIRED FOR SPECIFIC PLANT MATERIAL TO BE GROWN.
  - THE SUBGRADE IN PLANTING AREAS SHALL BE LOOSENED AND MIXED TO A DEPTH OF THREE INCHES (3") AND LIGHTLY COMPACTED. DISTRIBUTE TOPSOIL OVER AREAS TO BE PLANTED TO A MINIMUM DEPTH OF SIX INCHES (6").
  - SHRUBS AND TREES CONTRACTOR SHALL INSTALL ALL SHRUBS AND TREES AS RECOMMENDED BY AN EXPLORED LOCAL ANN/PMA - CERTIFIED NURSERY, UNLESS NOTED OTHERWISE ON DRAWINGS. THE SITE STANDS WARRANTY IS FOR ONE (1) YEAR PERIOD, COMMENCING ON THE DATE OF FINAL PAYMENT. PLANTS SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE WARRANTY PERIOD.
  - SHRUBS AND TREES SHALL BE PLANTED IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLAN SET. IF EXCESSIVE ROCK OR STONE IS ENCOUNTERED WHILE DIGGING PLANTING HOLES, THE CONTRACTOR SHALL REPLACE THE DISTURBED MATERIAL WITH SATISFACTORY BANKFILL AT NO ADDITIONAL COST.
  - THE LANDSCAPE CONTRACTOR SHALL REVIEW THE ENTIRE SET OF THE CONTRACT DRAWINGS TO BECOME AWARE OF ANY POSSIBLE CONFLICTS WITH UTILITIES AND DETERMINE MEASURES REQUIRED TO PROTECT EXISTING AND PROPOSED UTILITIES.
  - ANY NYLON ROPE USED IN BALLING THE TREE MUST BE CUT AND REMOVED FROM THE ROOT BALL.
  - IF PLANT QUANTITIES ON THE PLANT SCHEDULE DO NOT CONFORM TO THE PLANTING PLAN, THE PLANTING PLAN SHALL TAKE PRECEDENCE. NO FEWER PLANTS MAY BE INSTALLED WITHOUT PRIOR APPROVAL BY THE OWNER.
  - ON-SITE LANDSCAPING SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION AT ALL TIMES BY THE CONTRACTOR UNTIL THE OWNER OR THEIR DELEGATED REPRESENTATIVE HAS INSPECTED AND ACCEPTED ALL LANDSCAPE IMPROVEMENTS AT THE BEGINNING OF THE ONE-YEAR WARRANTY PERIOD. ONCE ACCEPTED, DURING THE ONE-YEAR WARRANTY PERIOD, LANDSCAPING IN ACCORDANCE WITH THE CARE AND MAINTENANCE SCHEDULE PROVIDED TO THE OWNER BY THE LANDSCAPE CONTRACTOR.
  - INSPECTION BY THE LANDSCAPE CONTRACTOR OF ALL PLANT MATERIAL SHALL OCCUR SEASONALLY DURING THE WARRANTY PERIOD. IF THE OWNER HAS FOLLOWED THE CARE AND MAINTENANCE SCHEDULE AND PLANT MATERIAL HAS BECOME DISEASED, IS DYING, OR IS DEAD, THE CONTRACTOR IS NOT RESPONSIBLE FOR REPLACING THE DISEASED, DYING, OR DEAD PLANT MATERIAL.
  - IF THE CONTRACTOR BELIEVES A REPLACEMENT PLANT WILL NOT GROW BECAUSE OF IDENTIFIED ENVIRONMENTAL CONDITIONS, THEN THE CONTRACTOR MAY REPLACE THE ORIGINALLY SPECIFIED PLANT WITH A SIMILAR SPECIES THAT MEETS THE DESIGN INTENT, UPON PRIOR APPROVAL BY THE OWNER.

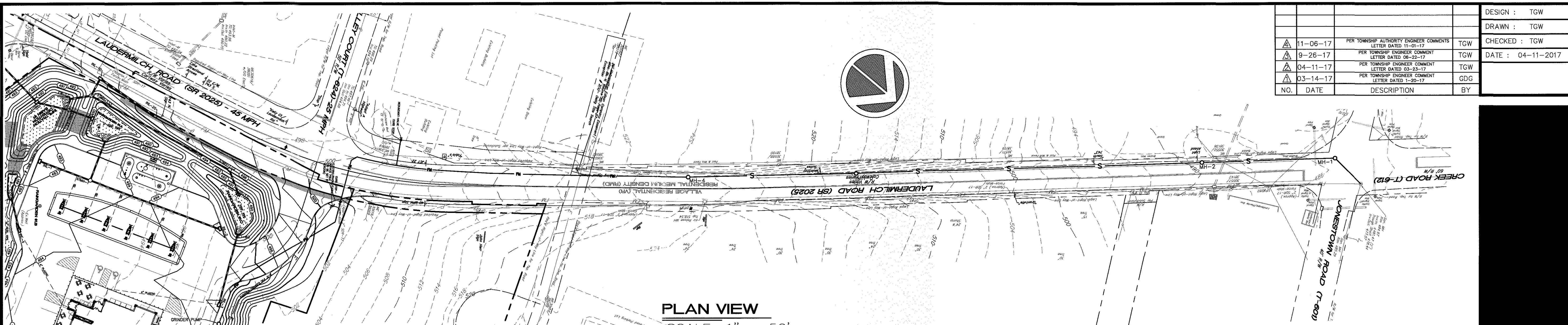
**- Basin Berm Plant List**

Key	Botanical Name	Common Name	Qty
Ac	<i>Amelanchier canadensis</i>	Shadblow Serviceberry	2
Cc	<i>Cercis canadensis</i>	Eastern Redbud	2
<b>Evergreen Trees</b>			
To	<i>Thuja occidentalis</i>	Eastern Arborvitae	3
<b>Shrubs</b>			
Iv	<i>Itea virginica</i>	Virginia sweetspire	12
<b>Total</b>			<b>19</b>
<b>Basin -2 Berm Plants</b>			
<b>Trees</b>			
Cc	<i>Cercis canadensis</i>	Eastern Redbud	4
<b>Evergreen Trees</b>			
To	<i>Thuja occidentalis</i>	Eastern Arborvitae	3
<b>Shrubs</b>			
Iv	<i>Itea virginica</i>	Virginia sweetspire	8
<b>Total</b>			<b>15</b>

DESIGN : TGW  
DRAWN : TGW  
CHECKED : TGW  
DATE : 04-11-17

NO.	DATE	DESCRIPTION	BY
9-26-17	PER TOWNSHIP ENGINEER COMMENT LETTER DATED 08-22-17	TGW	
07-10-17	PER TOWNSHIP ENGINEER COMMENT LETTER DATED 06-22-17	TGW	
05-09-17	PER TOWNSHIP ENGINEER COMMENT LETTER DATED 04-20-17	TGW	
04-11-17	PER TOWNSHIP ENGINEER COMMENT LETTER DATED 03-23-17	TGW	
3-14-17	PER TOWNSHIP ENGINEER COMMENT LETTER DATED 1-20-17	GDG	

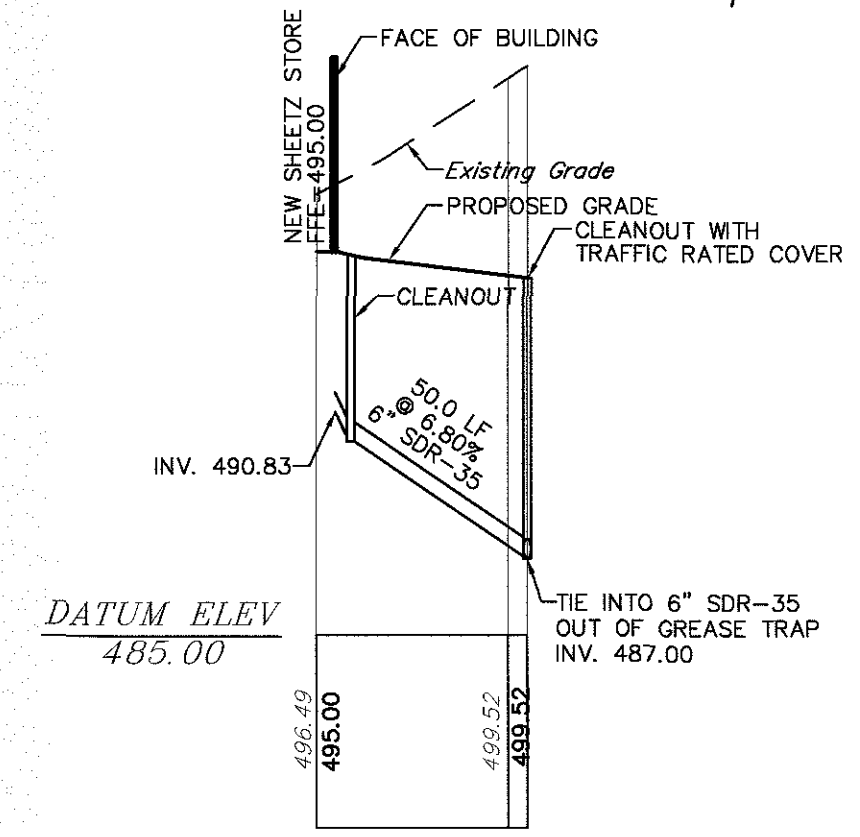
PRELIMINARY/FINAL SUBDIVISION AND LAND DEVELOPMENT PLAN  
LANDSCAPE PLAN  
EAST HANOVER TOWNSHIP, DAUPHIN COUNTY, PENNSYLVANIA



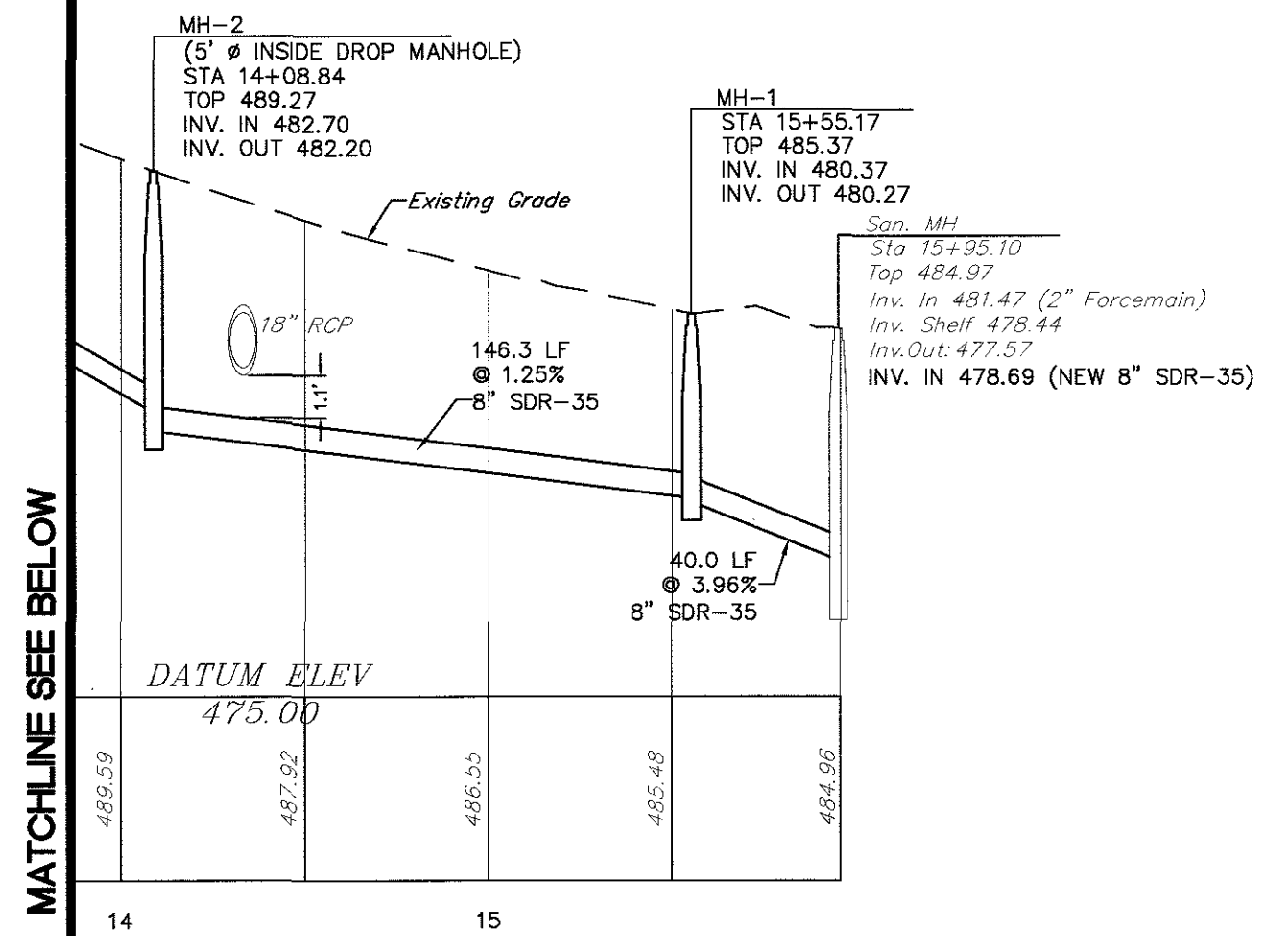
**PLAN VIEW**  
SCALE: 1" = 50'

NO.	DATE	DESCRIPTION	BY
11-06-17		PER TOWNSHIP AUTHORITY ENGINEER COMMENTS LETTER DATED 11-01-17	TGW
9-26-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 09-22-17	TGW
04-11-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 03-23-17	TGW
03-14-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 1-20-17	GDG

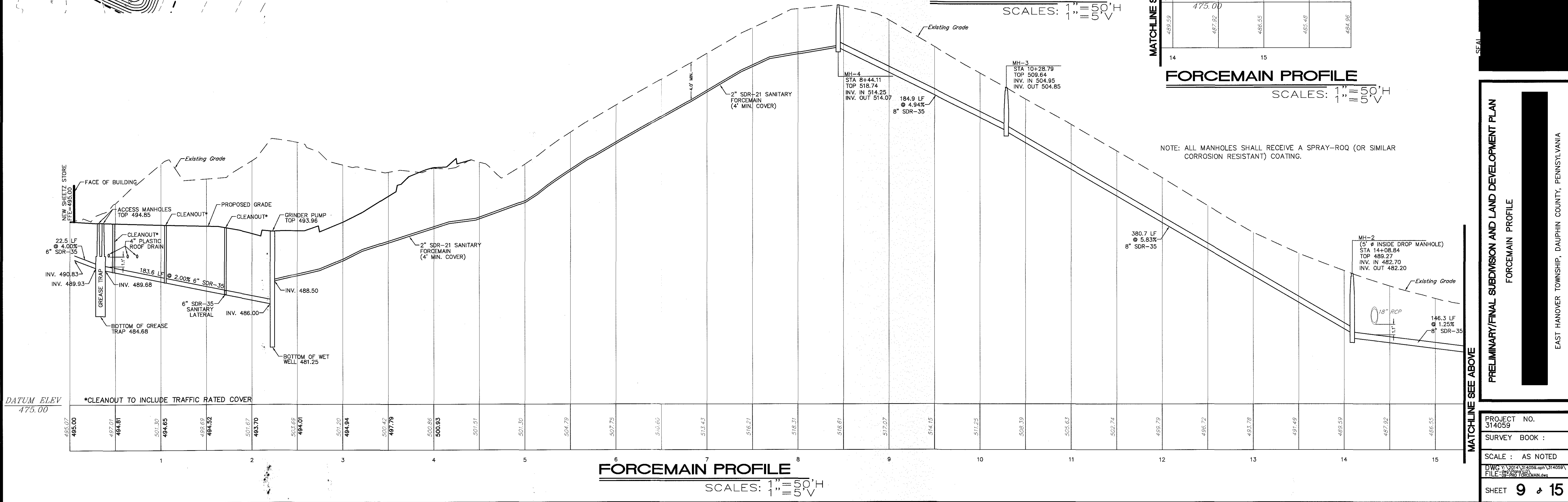
DESIGN :	TGW
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CHECKED :	TGW
DATE :	04-11-2017



**SANITARY LATERAL**  
SCALES: 1" = 50' H



**FORCEMAIN PROFILE**  
SCALES: 1" = 50' H



**FORCEMAIN PROFILE**  
SCALES: 1" = 50' H

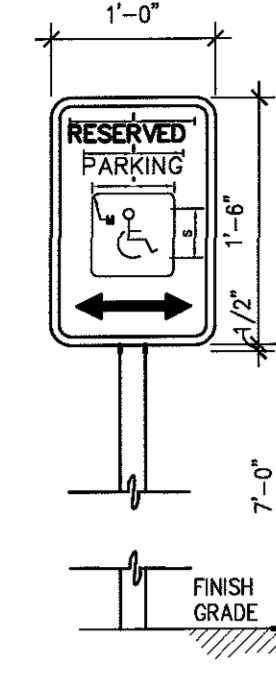
NOTE: ALL MANHOLES SHALL RECEIVE A SPRAY-ROQ (OR SIMILAR CORROSION RESISTANT) COATING.

PRELIMINARY/FINAL SUBMISSION AND LAND DEVELOPMENT PLAN  
 FORCEMAIN PROFILE  
 EAST HANOVER TOWNSHIP, DAUPHIN COUNTY, PENNSYLVANIA

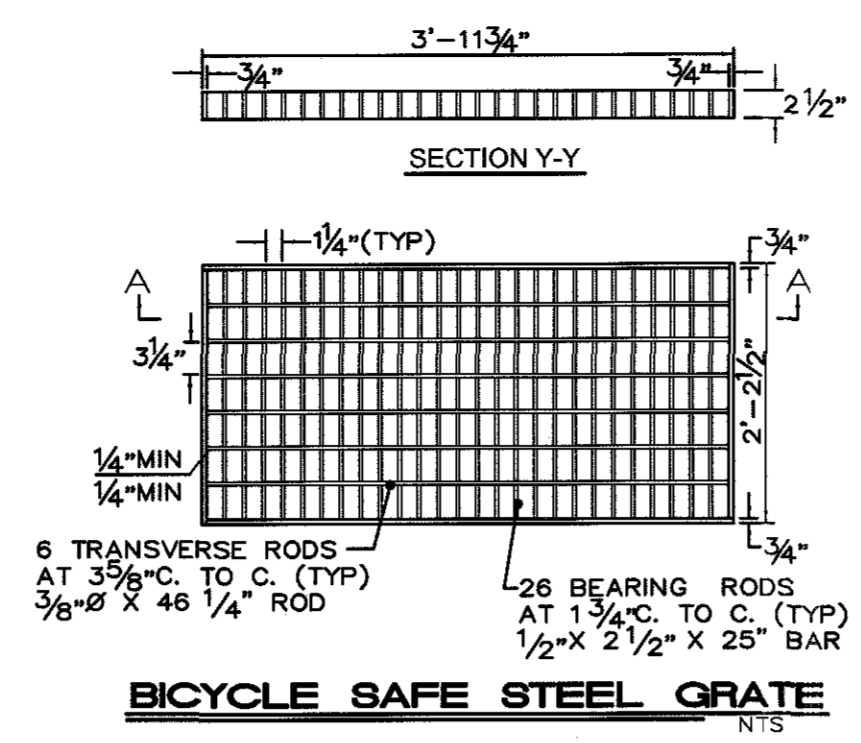
PROJECT NO.	114059
SURVEY BOOK :	
SCALE :	AS NOTED
DWG. FILE :	2017-04-11-14059.dwg
SHEET	9 of 15

DESIGN :	TGW
DRAWN :	TGW
CHECKED :	TGW
DATE :	04-11-2017

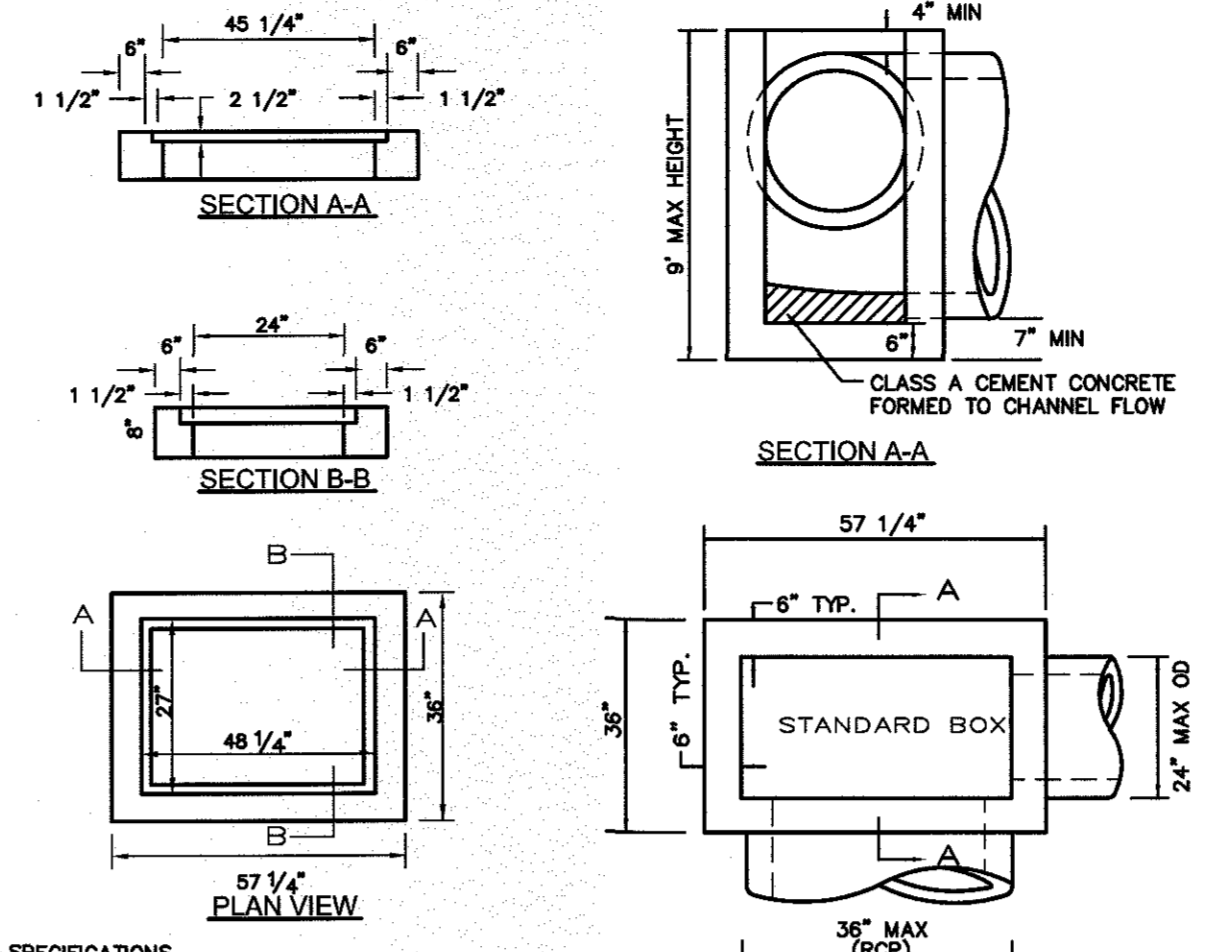
- NOTES:
- ALL SIGNAGE TO BE FROM LATEST EDITION OF MUTCD(2009).
  - TOP PORTION OF SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER.
  - BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.
  - FINE NOTIFICATION SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.
  - CONTRACTOR SHALL VERIFY FINE AMOUNT AND ORDINANCE NUMBER.
  - ONE (1) SIGN REQUIRED FOR EACH ACCESSIBLE PARKING SPACE.
  - INSTALLED HEIGHT OF SIGN SHALL BE IN ACCORDANCE WITH SECTION 24-23 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. (MUTCD)



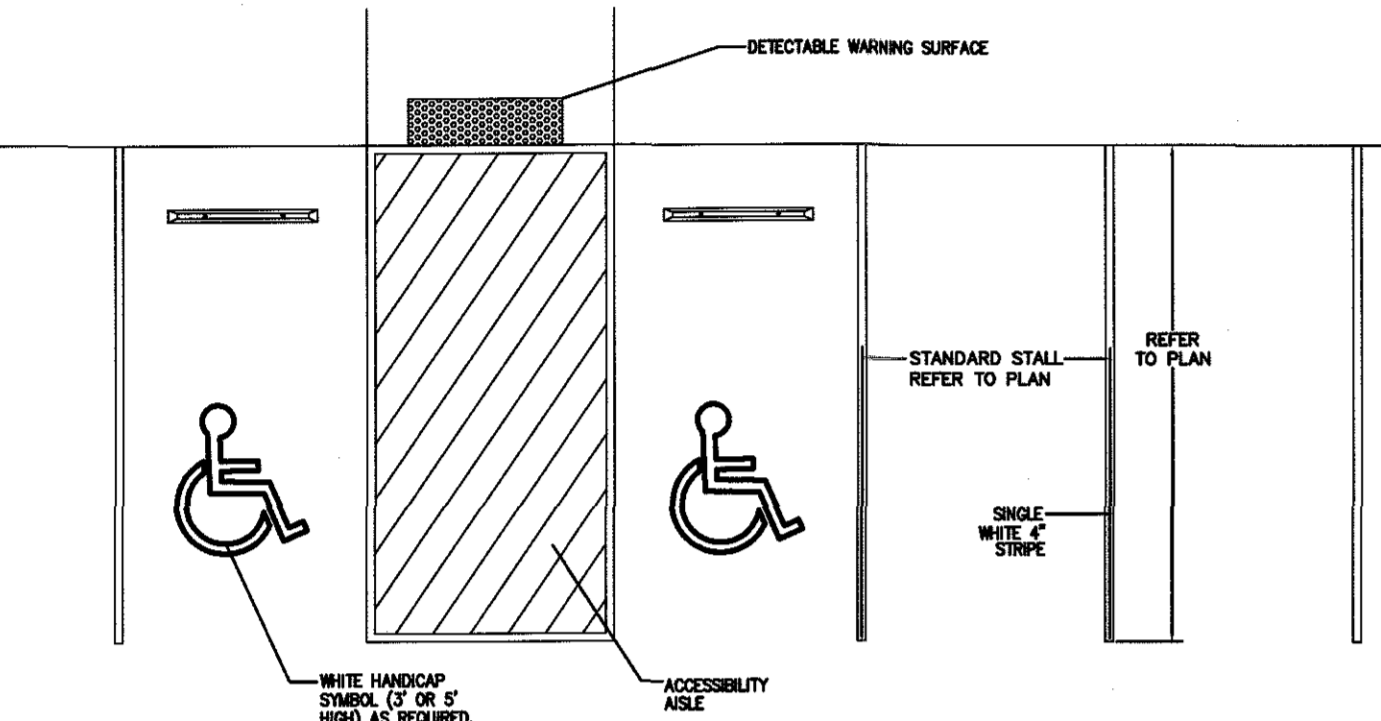
**HANDICAP PARKING SIGN**  
NTS



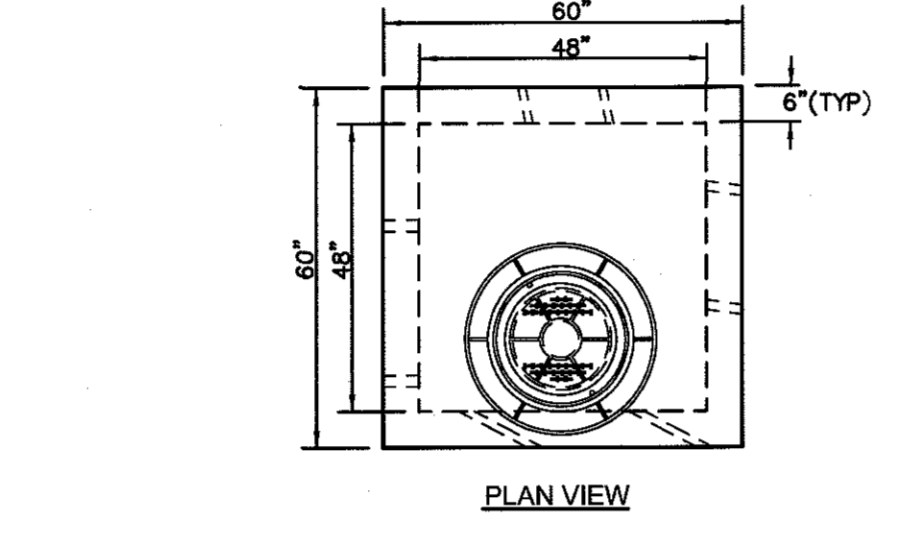
**BICYCLE SAFE STEEL GRATE**  
NTS



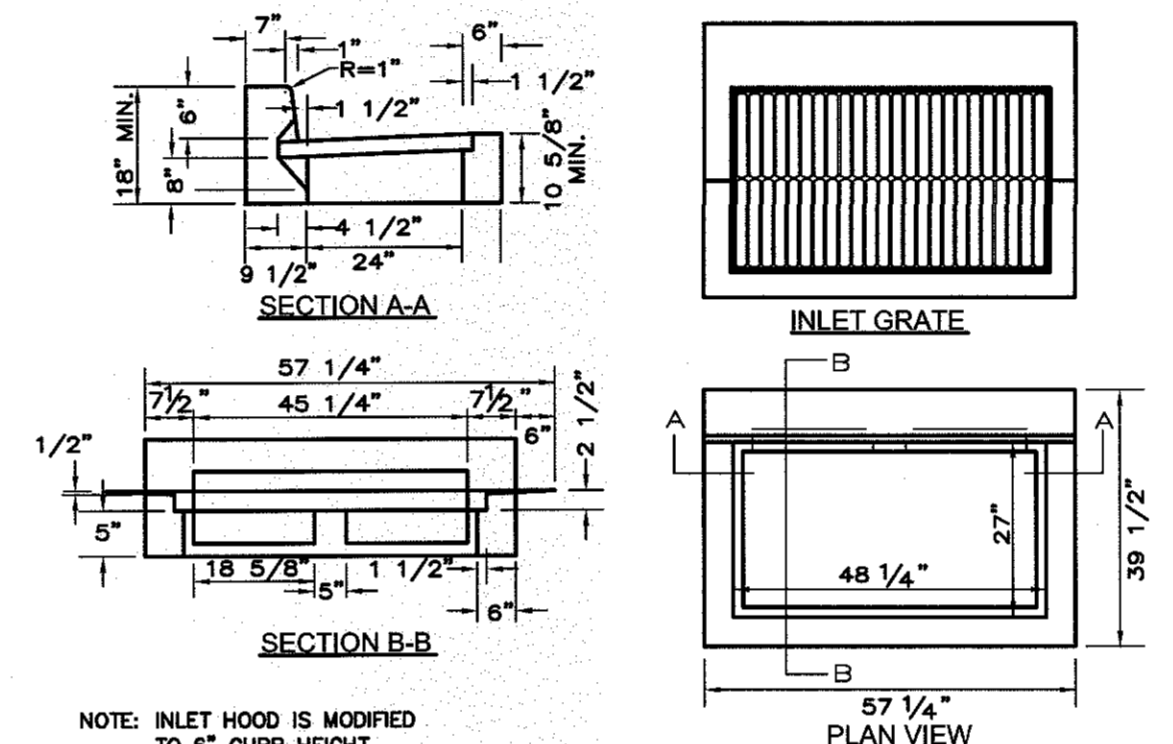
**TYPE 'M' INLET**  
NTS



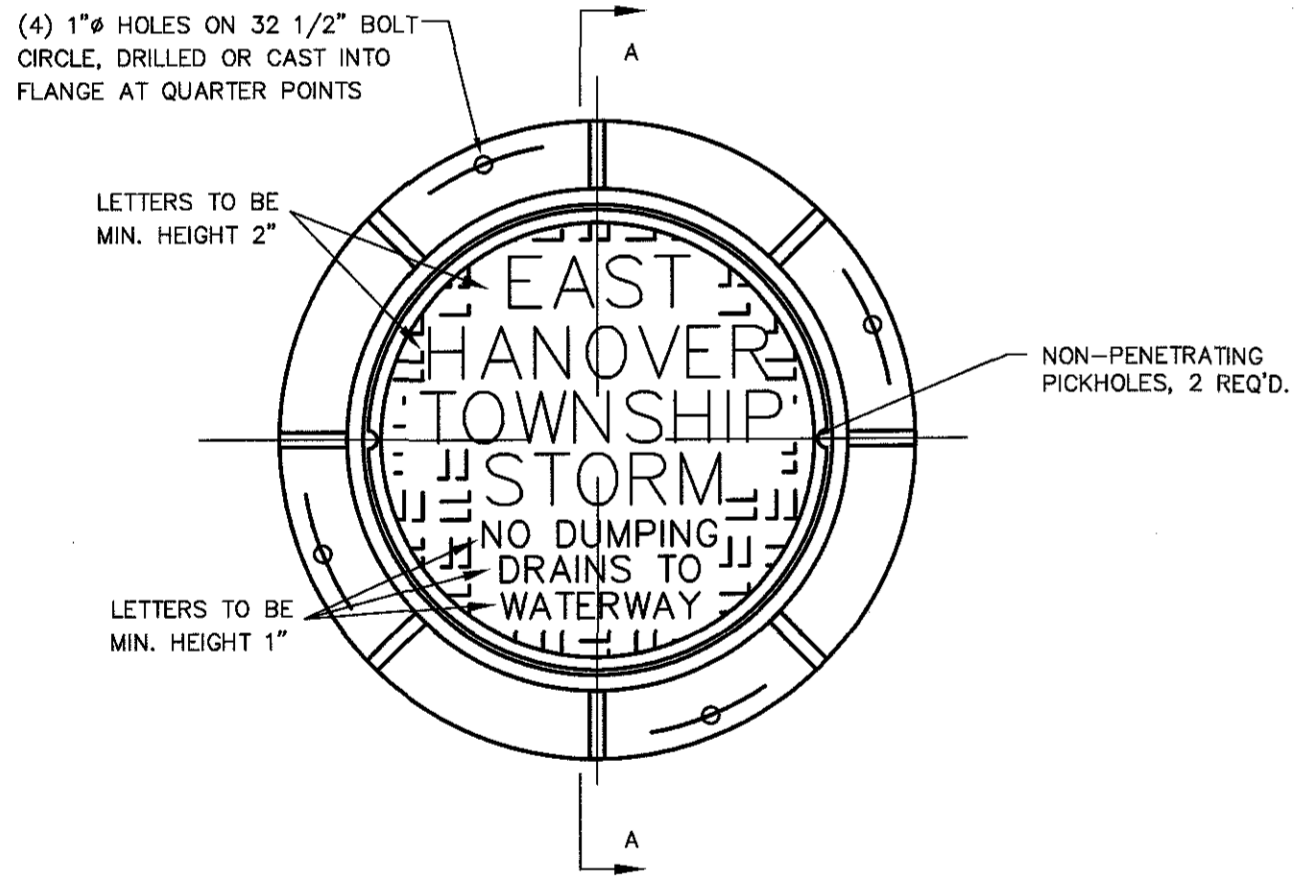
**HANDICAP PARKING SPACE MARKING DETAIL**  
NTS



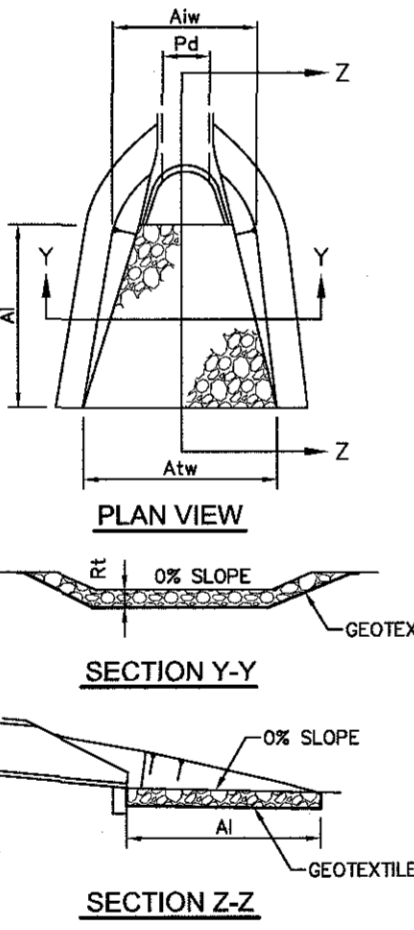
**4'x4' PRECAST CONCRETE MANHOLE**  
NTS



**TYPE 'C' INLET**  
NTS

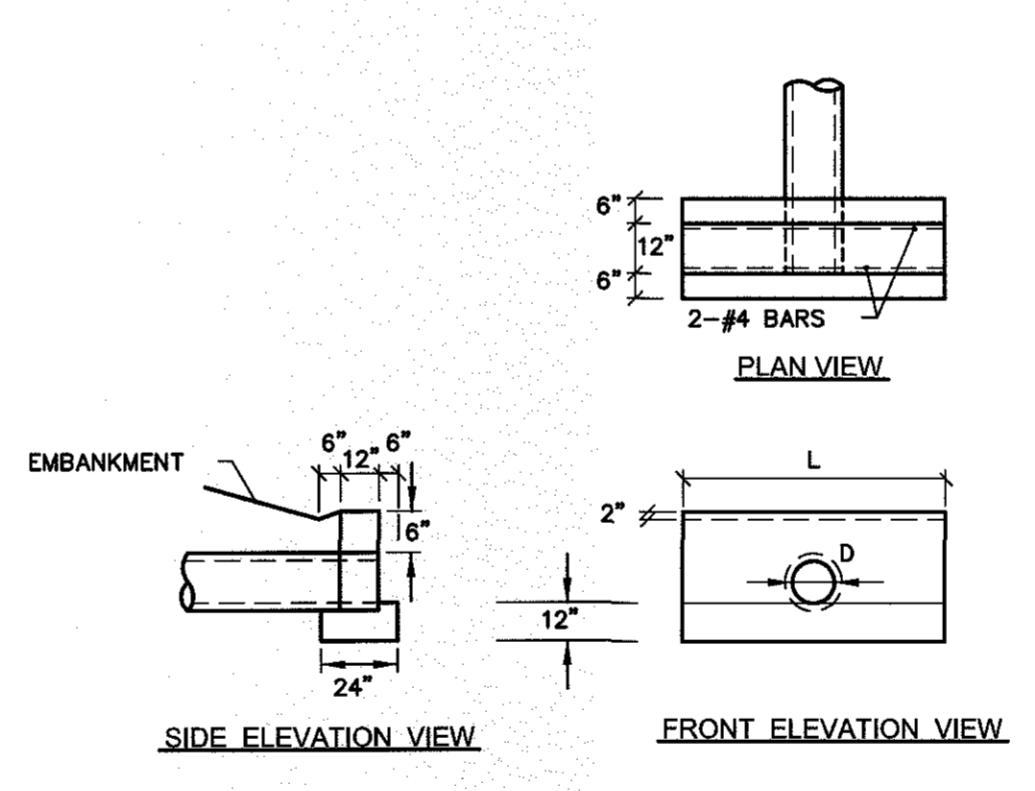


**PLAN VIEW**



**SWM BASIN PERMANENT EMERGENCY SPILLWAY DETAIL**  
NTS

BASIN	TOP OF BERM ELEV.	CREST ELEV.	LENGTH (L)
RG-1.A	493.15	492.50	25'
RG-1.B	493.00	491.50	15'
RG-1.C	493.00	491.50	10'
INF/DET-1	493.00	491.50	25'



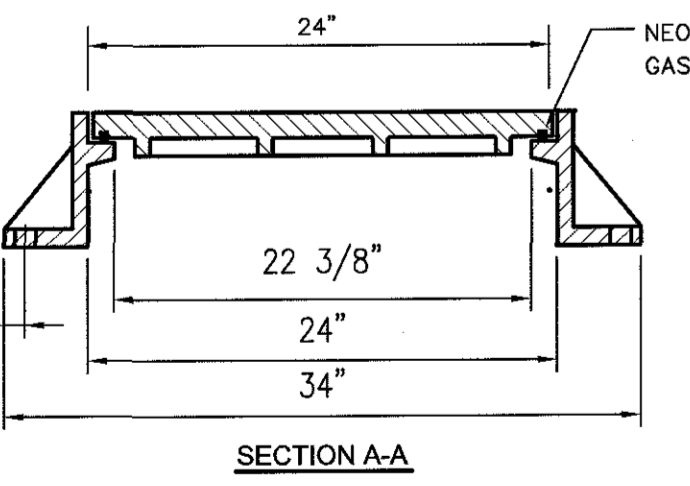
**PRECAST TYPE D ENDWALL**  
NTS

PIPE DIAMETER (INCHES)	LENGTH (FEET)
4	3
15	5

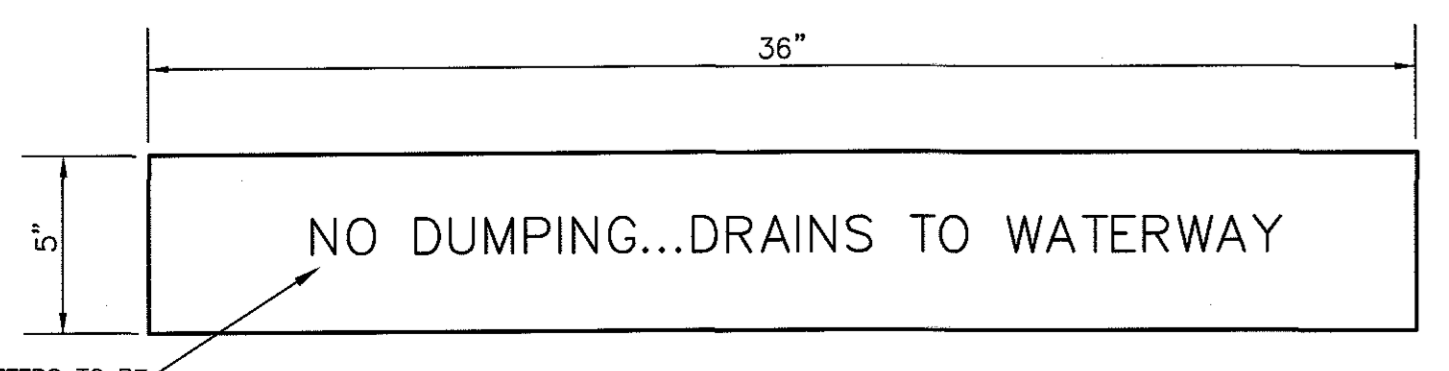
OUTLET NO.	PIPE DIA (IN)	RIPRAP SIZE R-1	RIPRAP THICK RT (IN)	RIPRAP LENGTH (FT)	APRON INITIAL WIDTH (FT)	APRON TERMINAL WIDTH (FT)
EW-1.1	15	4	9	10	3.8	13.8
EW-1.2	15	4	9	8	3.8	11.8
EW-1.B1	15	4	9	8	3.8	11.8
EW-1.C	15	4	9	8	3.8	11.8
EW-2.A1	15	4	9	11	3.8	13.8
EW-2.A2	15	4	9	8	3.8	11.8

- NOTES:
- ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.
  - ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

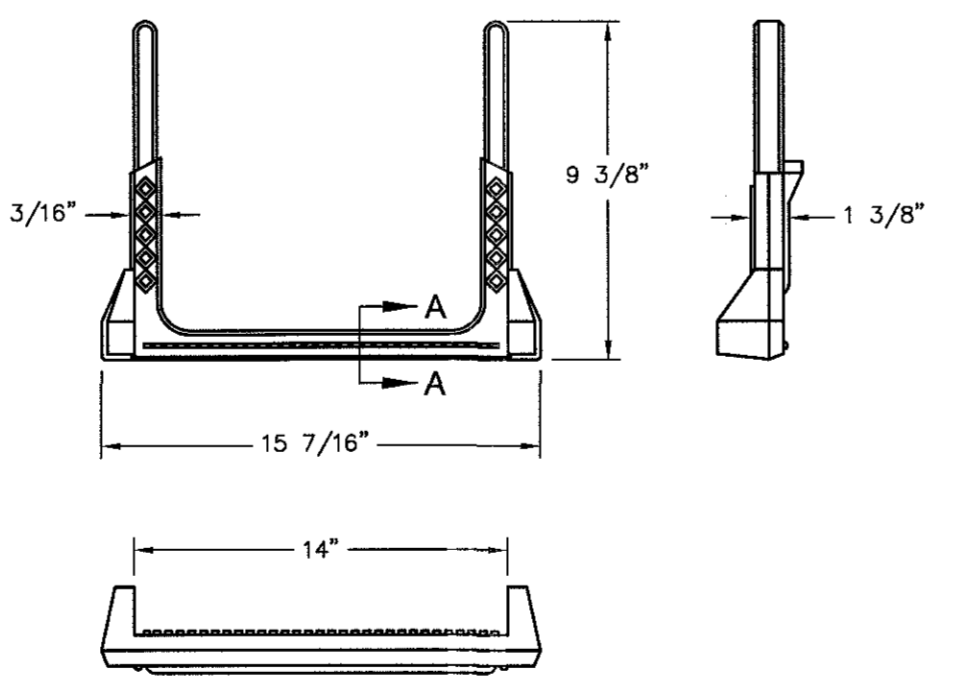
**STANDARD CONSTRUCTION DETAIL #9-1 RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL**  
NTS



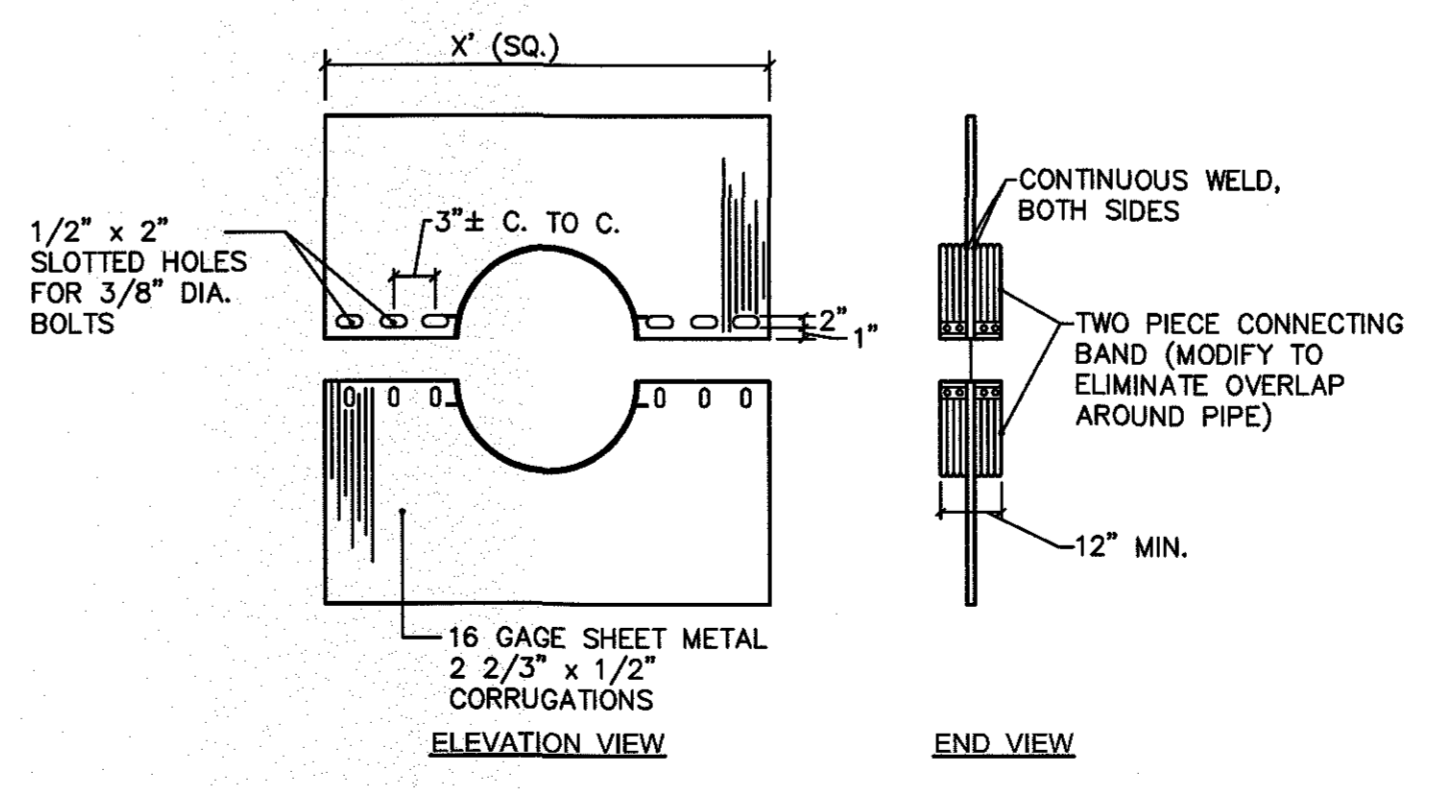
**STANDARD STORM SEWER MANHOLE FRAME + COVER**  
NTS



**'NO DUMPING PLATE' DETAIL**  
NTS



**MANHOLE STEP**  
NTS



**ANTI-SEEP COLLAR**  
NTS

BASIN OUTLET STRUCTURE	# OF COLLARS	MIN WIDTH W
RG-1.A	2	5.75'
RG-1.C	2	5.75'
OS-1	2	5.75'
OS-2	2	5.75'

**STORMWATER MANAGEMENT FACILITY OPERATION, OWNERSHIP AND MAINTENANCE PROGRAM**

The stormwater volume and quality control Best Management Practices (BMPs) constructed for the [redacted] will be maintained to function as designed, and shall implement the procedures described below. The developer [redacted] of the lot shall own and maintain the stormwater facilities.

The approved facilities are to be permanent, and can only be removed or altered after approval by one or more of the following entities which may have jurisdiction: East Hanover Township; and/or PA D.E.P.

- The following facilities shall require regular inspection and maintenance:
- Stormwater inlets, infiltration/detention and conveyance pipes and outlet controls
  - Stormwater pipe outlets
  - Rain gardens

- Additional maintenance required:
- Street sweeping of asphalt pavement

Inspection requirements for all facilities:

- The owner shall complete a visual inspection of the facilities at a minimum once every 12 months for the first five year and once every three years thereafter or during or immediately after the cessation of a major storm event.
- The owner is responsible to submit a report to East Hanover Township within one month following completion of an inspection. The report will present documentation regarding the condition of BMPs, and recommend any necessary repairs. Any needed repairs shall commence within 60 days of the report issuance date.
- The owner shall immediately notify East Hanover Township prior to initiating any "major" repair activities (such repairs that may be required as a result of settlement, sinkholes, seeps, structural cracking, foundation movement). All "major" repairs shall be conducted under the direction and supervision of a qualified engineer, geologist, and/or hydrogeologist.

Inspection and maintenance procedures for each facility shall be conducted as follows:

**1. Stormwater inlets, detention and conveyance pipes and outlet controls**

- General objectives of inspection and maintenance is to prevent clogging of inlet grates, pipes and outlet control orifices, over accumulation of sediment within pipes, inlets and manholes, standing water and structural failure.
- Inspection Procedures:**
- Inspection shall involve an examination of on-lot stormwater management system(s) for debris deposition (such debris may include, but shall not be limited to aggregate material, leaves, grass clippings, and soil material), settlement, sinkholes, seeps, and structural cracking.
  - Inspect all pipe inlets and outlets and outlet control orifices within the inlet and manholes boxes. Also inspect all inlet grates. Any trash, debris or sediment which may cause clogging or standing water shall be removed.
  - Inspect general condition of inlets and manholes for cracking of concrete or settling.
  - Inspect pipe connections within inlet and manhole boxes for pipe displacement.
  - Inspect areas on the ground surface for asphalt settling over pipes.

**Maintenance Procedures:**

- All trash, debris and sediment causing clogging of pipes, outlet control orifices or inlets grates shall be removed by hand or with a hose or high pressure washer. Pipes shall be flushed when accumulated debris or sediment has reached a height of 0.2 x the pipe diameter.
- "Sumped" inlet boxes shall be cleaned when over half full with sediment or debris. Cleaning of the sumped inlets are usually conducted with a vac truck.
- Plastic Strout Oildebris hoods shall be washed with a hose or high pressure washer during the cleaning sequence of the inlet. The anti-siphon vent shall be flushed with water or air.
- Underground detention facilities shall be conducted per manufacturer specifications. Inflow and outflow points shall first be cleared of debris by a vacuum pump truck if necessary. The systems shall then be flushed with clean water. This procedure shall be repeated until no debris is evident.
- The owner shall contact a qualified engineer, geologist, and/or hydrogeologist if any of the following is observed as a result of inspection: structural damage to a facility (pipe, inlet, manhole), ground/asphalt settling, storm structure settling, pipe displacement, sinkhole development or seeping. Repair or replacement is necessary if significant damage has occurred in a way that results in a safety hazard, structurally unsoundness, or if the facilities are not substantially performing as it is intended per the original design. The owner or lessee shall keep a record of any repaired or replaced facility, including costs, dates, materials removed, materials placed, and the contractor's information.

**2. Stormwater pipe outlets**

General objectives of inspection and maintenance is to prevent erosion and sedimentation immediately down-slope of pipe outlets.

**Inspection Procedures:**

- Inspect all pipe outlets. Any trash, debris or sediment which may cause clogging or back up of water within the pipe shall be removed.
- Inspect general condition of endwalls for cracking of concrete or settling.
- Inspect area down-slope of pipe for erosion or settling of ground surface or displacement of stone from the rock apron.

**Maintenance Procedures:**

- All trash, debris and sediment causing back up of water within the pipes, shall be removed by hand or with a hose or high pressure washer.
- Excessive accumulation of debris or sediment down-slope of the pipe shall be removed if it has reached a height of 0.2 x the pipe diameter.
- Displaced stone within the rip-rap apron shall be replaced. If erosion is occurring within the area of the rip-rap apron or lawn areas further down-slope, these areas shall be re-established and brought to final grade with topsoil. Stone shall be placed within the rip-rap apron or, in the case of lawn areas, stabilized an appropriate grass seed mixture.
- The owner shall contact a qualified engineer, geologist, and/or hydrogeologist if any of the following is observed as a result of inspection: ground or concrete endwall settling, sinkhole development or excessive erosion. Repair or replacement is necessary if significant damage has occurred in a way that results in a safety hazard, structurally unsoundness, or if the facilities are not substantially performing as it is intended per the original design. The owner or lessee shall keep a record of any repaired or replaced facility, including costs, dates, materials removed, materials placed, and the contractor's information.

**Rain Gardens** General objectives of inspection and maintenance is to prevent long term standing water after rainfall events, prevent weeds and noxious plants and maintain low maintenance dense grasses. Also, conduct inspection and maintenance procedures for inlets and outflow pipes within the rain garden facilities as outlined above within the "Stormwater inlets, detention and conveyance pipes and outlet controls" section.

**Inspection Procedures:**

- Inspect facilities after major rainfall events for standing water which remains in the basin for over two (2) days.
- Inspect condition of grass cover. Grasses within the floor of the facility should be dense and maintained at a minimum length of 12'.
- Inspect floor of facility for the existence of ground settling or sinkholes.
- Inspect for the presence of trash, debris or sediment.

**Maintenance Procedures:**

- All trash, debris and sediment within the facility shall be removed.
- Areas where grass cover is sparse shall be filled, brought to final grade with a topsoil/sand/organic matter mixture and reseeded with the specified Conservation Seed Mixture or equivalent.
- If standing water remains in the facility for an extended period of time after a rainfall event, the PVC underdrain pipe entering the inlet box within the facility shall be flushed. If standing water remains following this procedure, the owner shall contact a qualified engineer, geologist, and/or hydrogeologist. The sand and stone filter medium beneath the facility floor may need to be removed and replaced as originally proposed on the approved Land Development Plan.
- The developer shall contact a qualified engineer, geologist, and/or hydrogeologist if any of the following is observed as a result of inspection: settling of the floor of the facility or sinkhole development. Repair or replacement is necessary if significant damage has occurred in a way that results in a safety hazard, structurally unsoundness, or if the facilities are not substantially performing as it is intended per the original design. The owner or lessee shall keep a record of any repaired or replaced facility, including costs, dates, materials removed, materials placed, and the contractor's information.

Additional maintenance required:

**4. Street Sweeping**

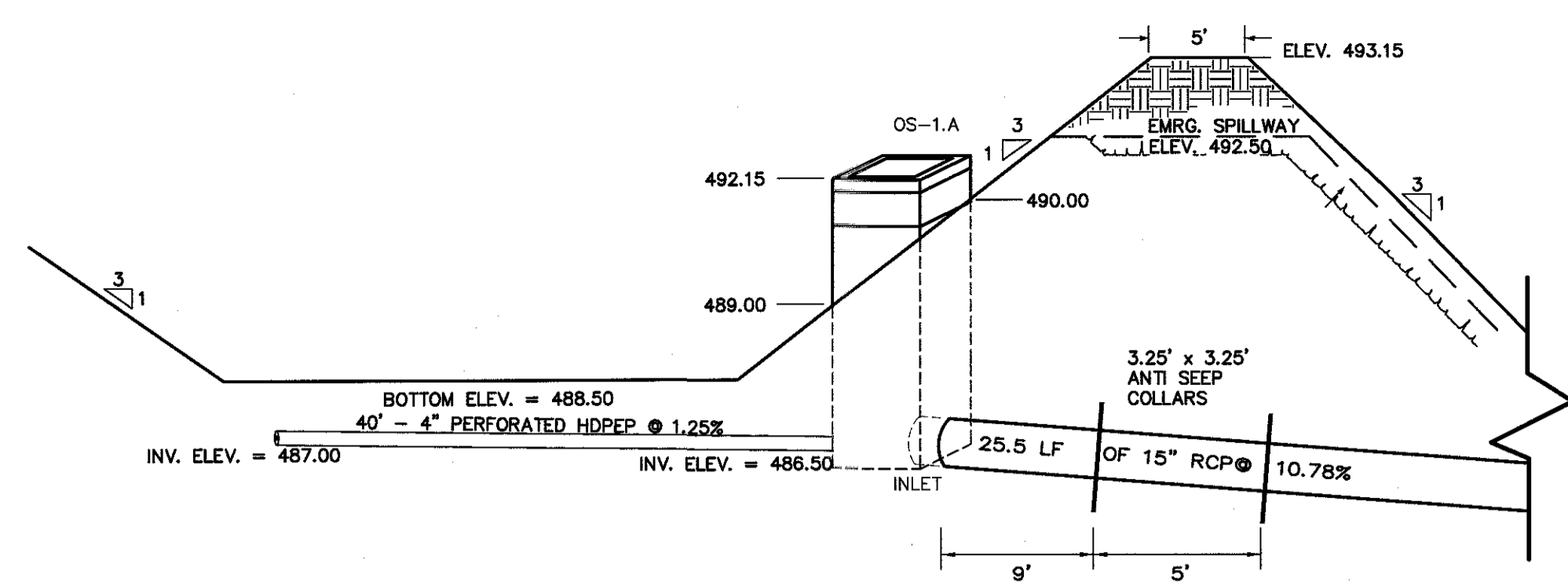
- Designate personnel to conduct inspections of the parking facilities on a regular basis
- Clean leaves, trash, sand and other debris from the parking lots regularly or as needed to prevent debris from reaching the drainage systems or stormwater detention systems.
- Provide street cleaning with a vacuum/sweeper twice a year (April and November) in dry weather
- Operate the vacuum/sweeper at the manufacturer's requested optimal speed to increase effectiveness.
- Regularly inspect paved areas for oil, fuel or other toxic spills and clean/remove.

PRELIMINARY/FINAL SUBMISSION AND LAND DEVELOPMENT PLAN  
 MISCELLANEOUS DETAILS  
 EAST HANOVER TOWNSHIP, DAUPHIN COUNTY, PENNSYLVANIA

PROJECT NO.	314059
SURVEY BOOK :	
SCALE :	AS NOTED
DWG FILE :	314059.dwg (1/16/2017)
SHEET	14 of 15

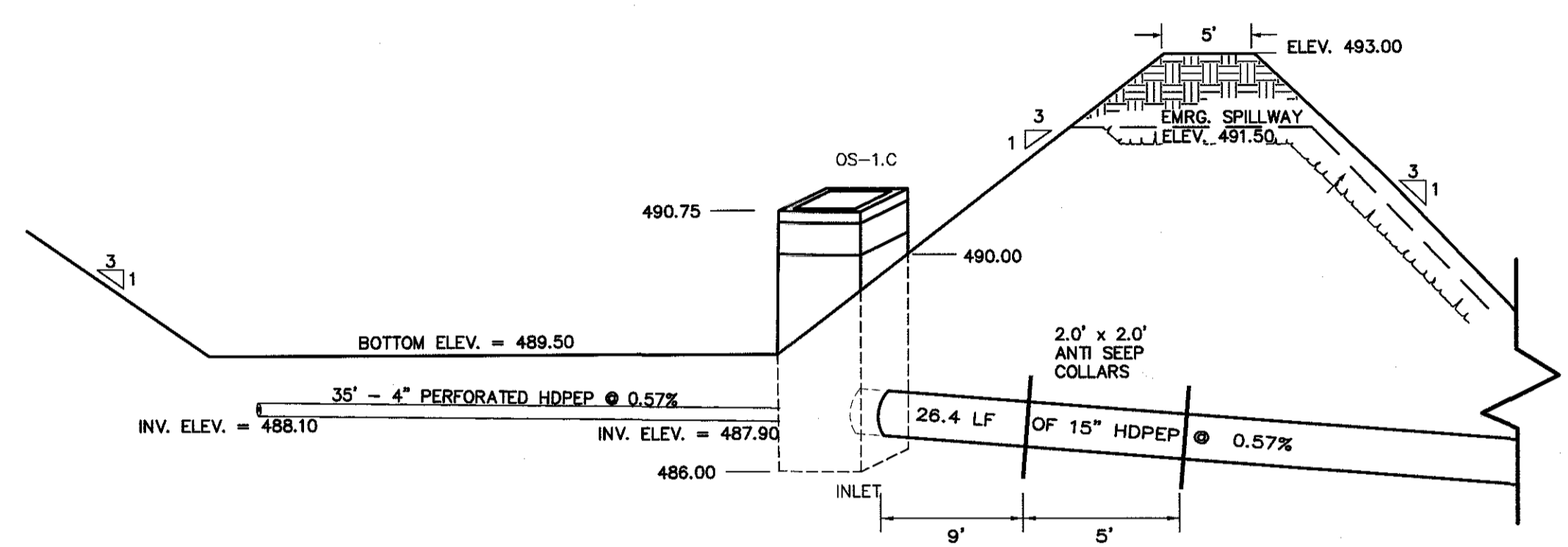
DESIGN :	TGW
DRAWN :	TGW
CHECKED :	TGW
DATE :	04-11-2017

NO.	DATE	DESCRIPTION	BY
9-26-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 07-18-17	TGW
07-10-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 06-22-17	TGW
05-09-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 04-20-17	TGW
04-11-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 03-23-17	TGW
03-14-17		PER TOWNSHIP ENGINEER COMMENT LETTER DATED 1-20-17	GDG



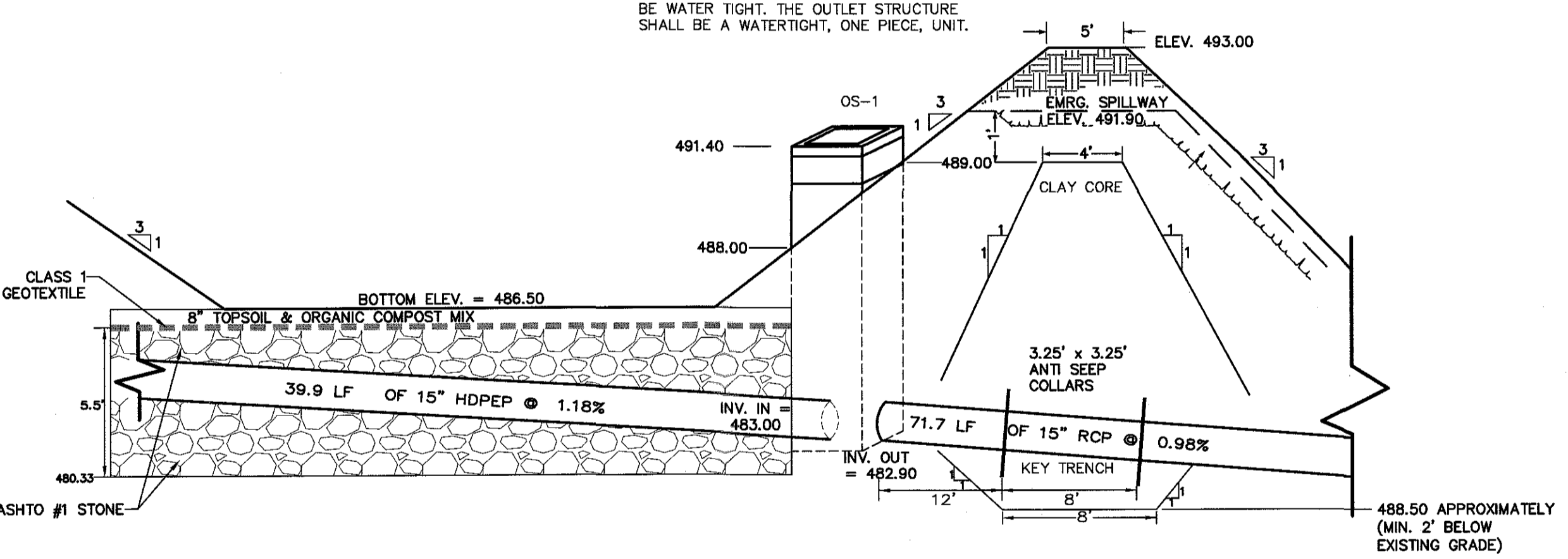
**RAIN GARDEN #1A DETAIL**  
NTS

NOTE:  
ALL PIPE AND STRUCTURE CONNECTIONS SHALL BE WATER TIGHT. THE OUTLET STRUCTURE SHALL BE A WATERTIGHT, ONE PIECE, UNIT.



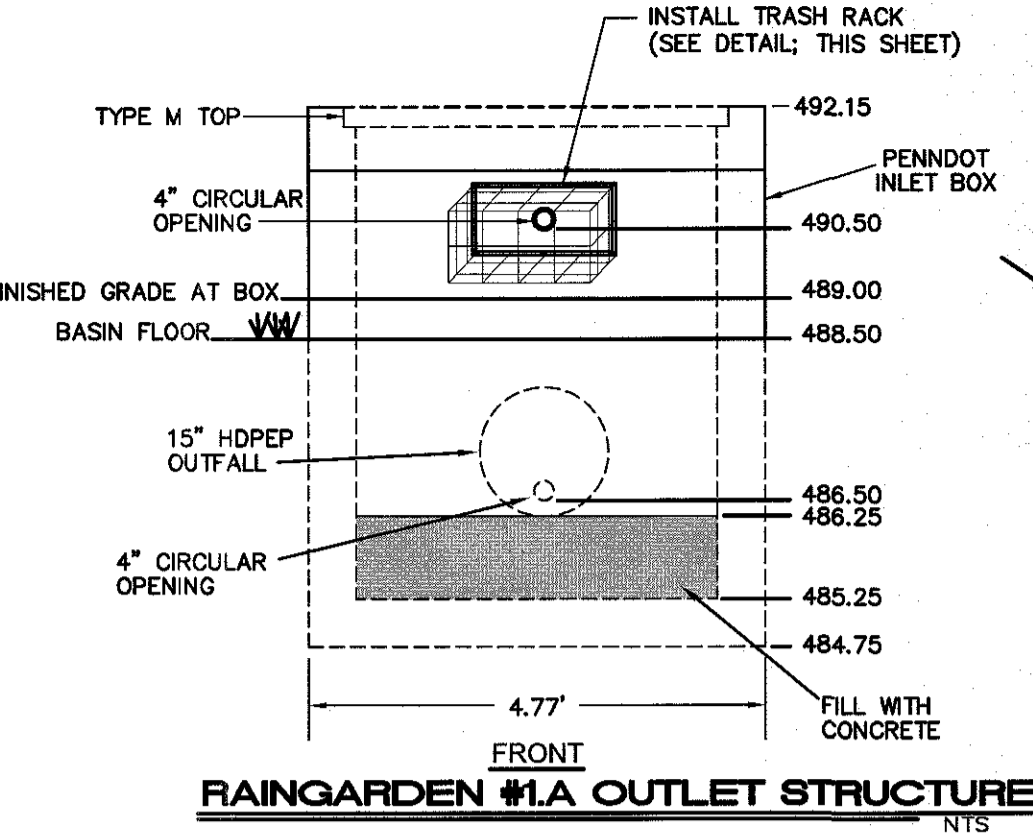
**RAIN GARDEN #1C DETAIL**  
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NOTE:  
ALL PIPE AND STRUCTURE CONNECTIONS SHALL BE WATER TIGHT. THE OUTLET STRUCTURE SHALL BE A WATERTIGHT, ONE PIECE, UNIT.

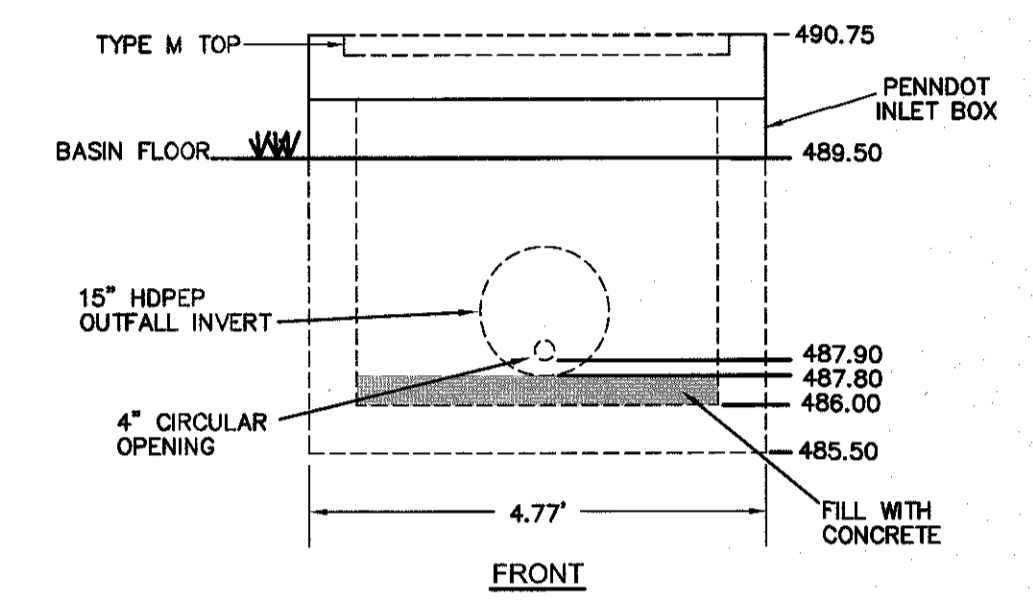


**INFILTRATION/DETENTION BASIN #1 DETAIL**  
NTS

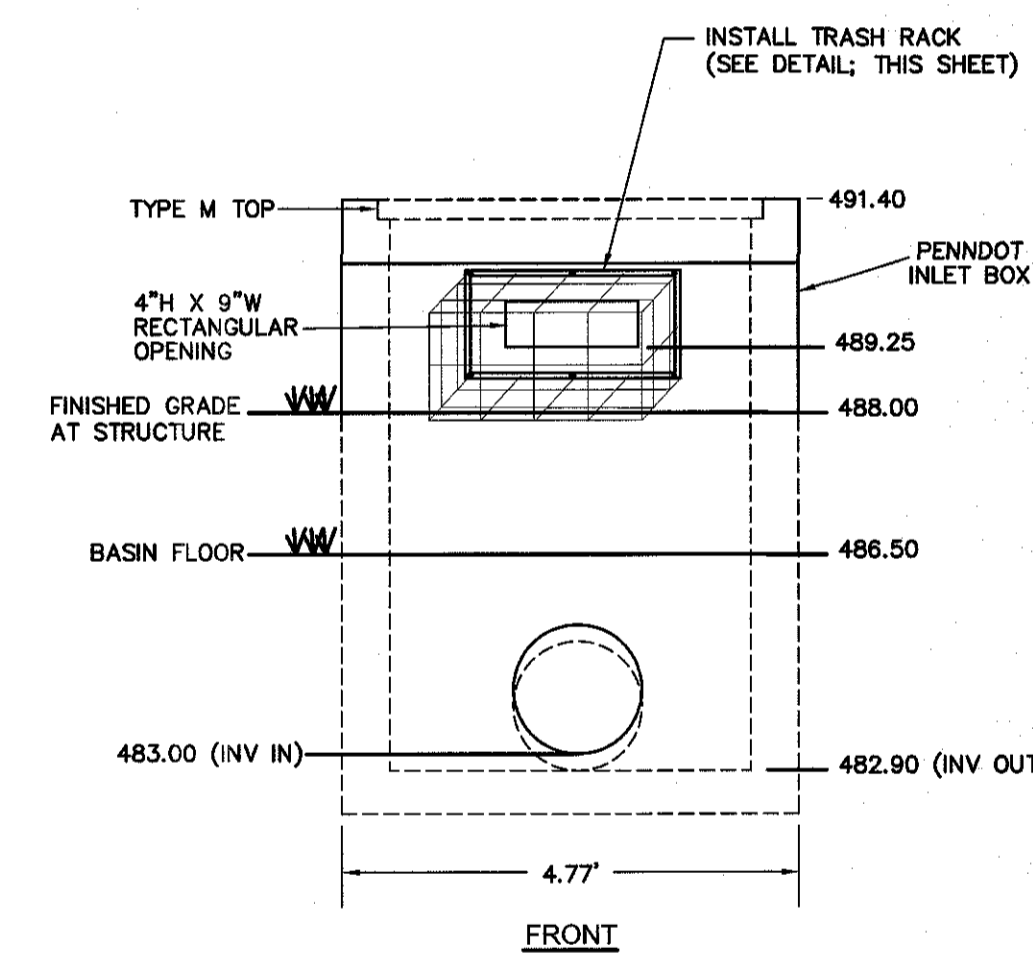
NOTES:  
1. ALL DETENTION BASIN EMBANKMENTS SHALL BE PLACED AT A MAXIMUM OF 8' LIFTS TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY AS ESTABLISHED BY ASTM D-1557.  
2. ALL PIPE AND STRUCTURE CONNECTIONS SHALL BE WATER TIGHT. THE OUTLET STRUCTURE SHALL BE A WATERTIGHT, ONE PIECE, UNIT.



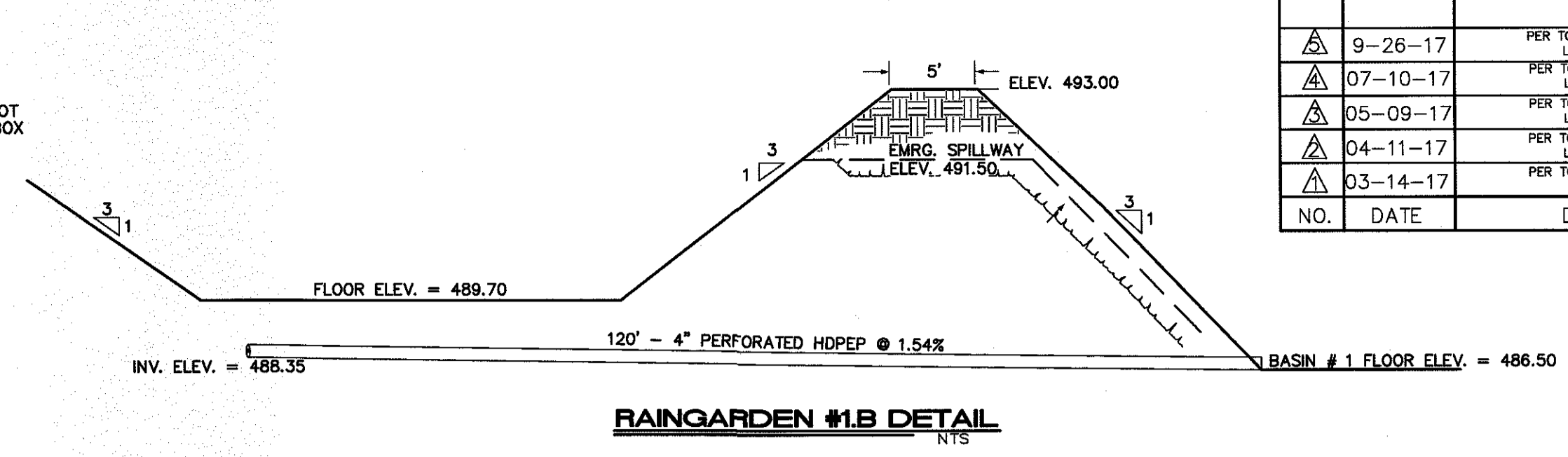
**RAIN GARDEN #1A OUTLET STRUCTURE**  
NTS



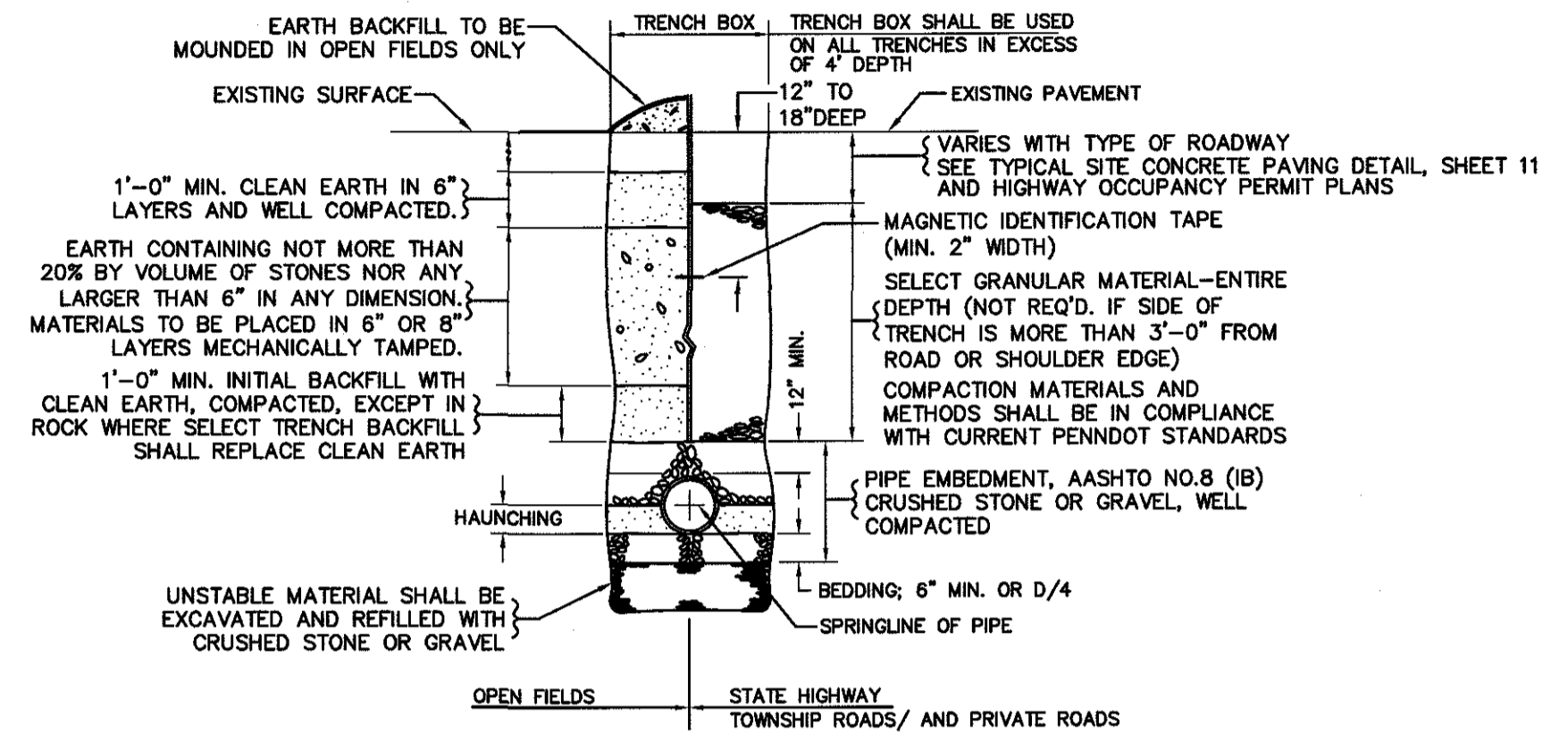
**RAIN GARDEN #1C OUTLET STRUCTURE**  
NTS



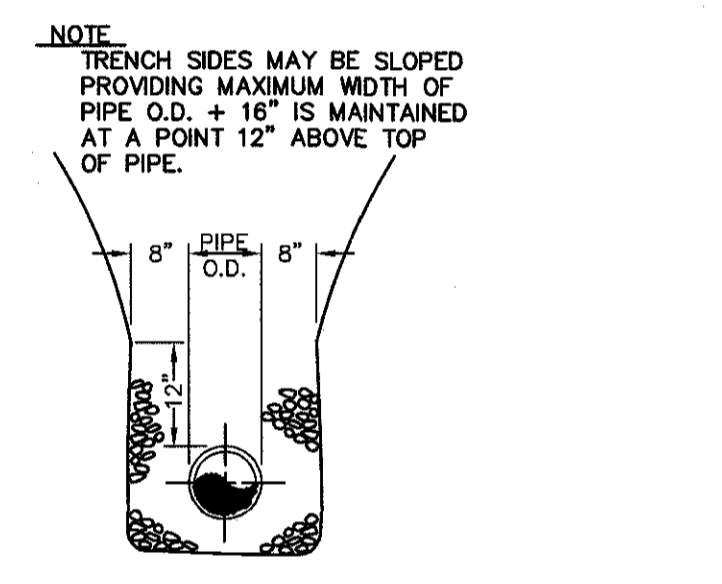
**DETENTION BASIN 1 OUTLET STRUCTURE**  
NTS



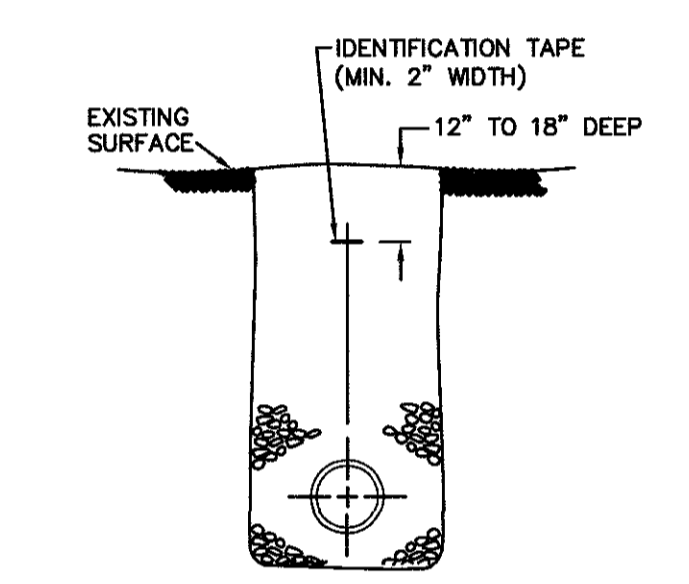
**RAIN GARDEN #1B DETAIL**  
NTS



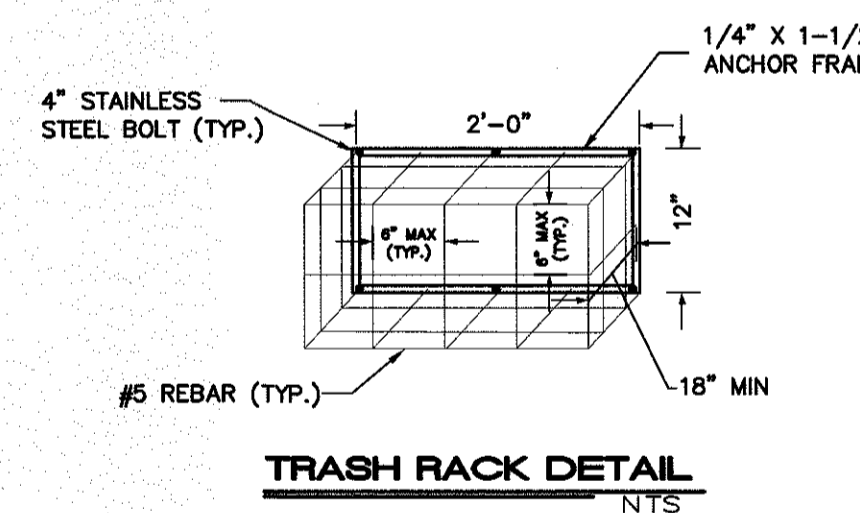
**TYPICAL METHOD OF PIPE EMBEDMENT PAVING AND BACKFILLING PIPE TRENCHES**  
NTS



**TYPICAL TRENCH WIDTH AT TOP OF PIPE**  
NTS

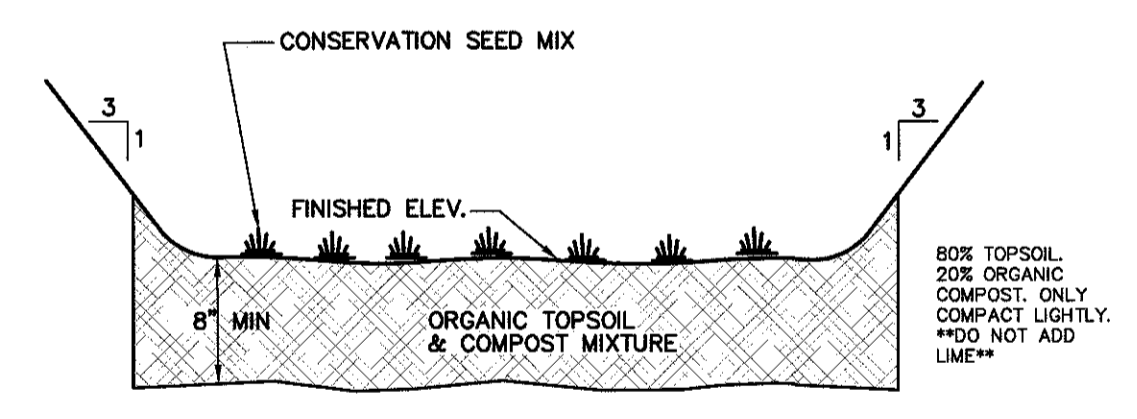


**IDENTIFICATION TAPE INSTALLATION**  
NTS



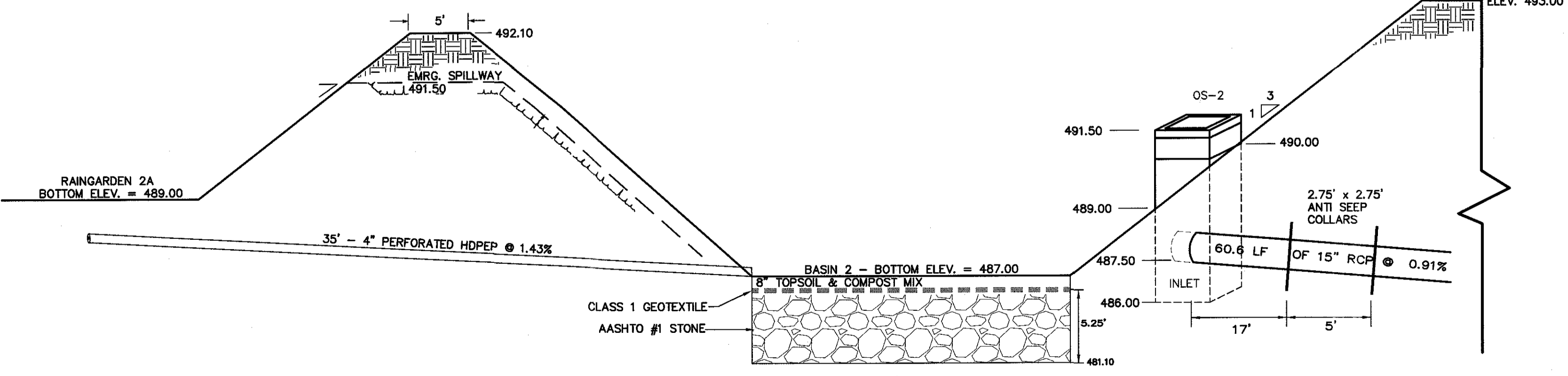
**TRASH RACK DETAIL**  
NTS

NOTES:  
1. ALL REBAR CROSSINGS SHALL BE WELDED.  
2. TRASH RACK TO BE MOUNTED TO OUTLET STRUCTURE WITH 4" BOLTS WITH CONCRETE ANCHORS AT A MAXIMUM OF 12" SPACING.  
3. ALL HARDWARE IS TO BE STAINLESS STEEL.  
4. TRASH RACK TO BE TRIPLE COATED WITH A RUST PROHIBITIVE COATING.



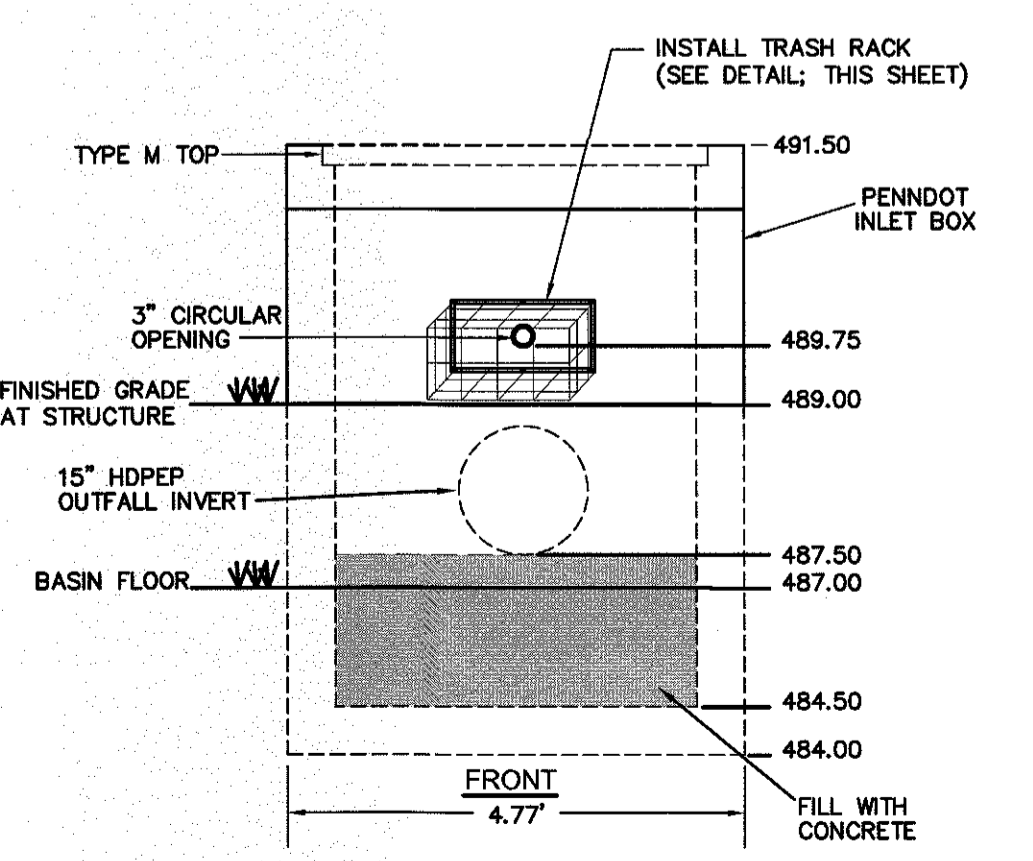
**SWM INFILTRATION BASIN AREA AMENDED SOIL MIXTURE DETAIL**  
NTS

NOTES:  
1. TO BE INSTALLED WITHIN INFILTRATION/INFILTRATION BASINS 1 AND 2.

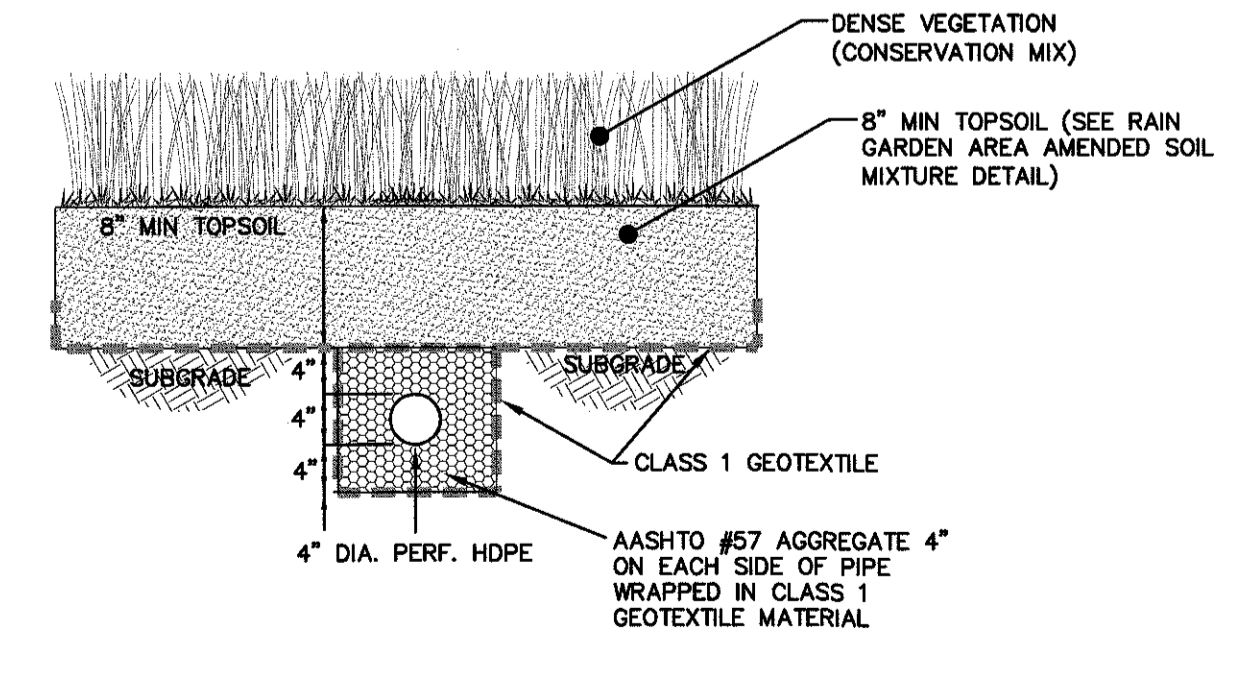


**RAIN GARDEN #2A AND INFILTRATION/DETENTION BASIN #2 DETAIL**  
NTS

NOTES:  
1. ALL DETENTION BASIN EMBANKMENTS SHALL BE PLACED AT A MAXIMUM OF 8' LIFTS TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY AS ESTABLISHED BY ASTM D-1557.  
2. ALL PIPE AND STRUCTURE CONNECTIONS SHALL BE WATER TIGHT. THE OUTLET STRUCTURE SHALL BE A WATERTIGHT, ONE PIECE, UNIT.



**DETENTION BASIN 2 OUTLET STRUCTURE**  
NTS



**RAIN GARDEN UNDERDRAIN DETAIL**  
NTS

RAIN GARDEN	FLOOR ELEV.	TOP OF BERM ELEV.	TOP OF GRATE ELEV.
1A	488.50	493.15	492.15
1B	489.70	493.00	N/A
1C	489.50	493.00	490.75
2A	489.00	492.10	N/A

SEAL

SEAL

PRELIMINARY/FINAL SUBDIVISION AND LAND DEVELOPMENT PLAN  
MISCELLANEOUS DETAILS  
EAST HANOVER TOWNSHIP, DAUPHIN COUNTY, PENNSYLVANIA

PROJECT NO.	314059
SURVEY BOOK :	
SCALE :	AS NOTED
DWG. NO.	15-14059-01
FILE :	15-14059-01
SHEET	15 of 15

**SOILS**

Legend for soil types and other site features.

**SOILS**

Legend for soil types and other site features.

**PLANTING LIST - SPECIFICATIONS**

PLANTING LIST - SPECIFICATIONS	COMMON NAME	SIZE/CONTAINER
AR 1	ARBOREUS	2" - 6" B&B
AR 2	ARBOREUS	2" - 6" B&B
AR 3	ARBOREUS	2" - 6" B&B
AR 4	ARBOREUS	2" - 6" B&B
AR 5	ARBOREUS	2" - 6" B&B
AR 6	ARBOREUS	2" - 6" B&B
AR 7	ARBOREUS	2" - 6" B&B
AR 8	ARBOREUS	2" - 6" B&B
AR 9	ARBOREUS	2" - 6" B&B
AR 10	ARBOREUS	2" - 6" B&B
AR 11	ARBOREUS	2" - 6" B&B
AR 12	ARBOREUS	2" - 6" B&B
AR 13	ARBOREUS	2" - 6" B&B
AR 14	ARBOREUS	2" - 6" B&B
AR 15	ARBOREUS	2" - 6" B&B
AR 16	ARBOREUS	2" - 6" B&B
AR 17	ARBOREUS	2" - 6" B&B
AR 18	ARBOREUS	2" - 6" B&B
AR 19	ARBOREUS	2" - 6" B&B
AR 20	ARBOREUS	2" - 6" B&B
AR 21	ARBOREUS	2" - 6" B&B
AR 22	ARBOREUS	2" - 6" B&B
AR 23	ARBOREUS	2" - 6" B&B
AR 24	ARBOREUS	2" - 6" B&B
AR 25	ARBOREUS	2" - 6" B&B
AR 26	ARBOREUS	2" - 6" B&B
AR 27	ARBOREUS	2" - 6" B&B
AR 28	ARBOREUS	2" - 6" B&B
AR 29	ARBOREUS	2" - 6" B&B
AR 30	ARBOREUS	2" - 6" B&B
AR 31	ARBOREUS	2" - 6" B&B
AR 32	ARBOREUS	2" - 6" B&B
AR 33	ARBOREUS	2" - 6" B&B
AR 34	ARBOREUS	2" - 6" B&B
AR 35	ARBOREUS	2" - 6" B&B
AR 36	ARBOREUS	2" - 6" B&B
AR 37	ARBOREUS	2" - 6" B&B
AR 38	ARBOREUS	2" - 6" B&B
AR 39	ARBOREUS	2" - 6" B&B
AR 40	ARBOREUS	2" - 6" B&B
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AR 60	ARBOREUS	2" - 6" B&B
AR 61	ARBOREUS	2" - 6" B&B
AR 62	ARBOREUS	2" - 6" B&B
AR 63	ARBOREUS	2" - 6" B&B
AR 64	ARBOREUS	2" - 6" B&B
AR 65	ARBOREUS	2" - 6" B&B
AR 66	ARBOREUS	2" - 6" B&B
AR 67	ARBOREUS	2" - 6" B&B
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AR 92	ARBOREUS	2" - 6" B&B
AR 93	ARBOREUS	2" - 6" B&B
AR 94	ARBOREUS	2" - 6" B&B
AR 95	ARBOREUS	2" - 6" B&B
AR 96	ARBOREUS	2" - 6" B&B
AR 97	ARBOREUS	2" - 6" B&B
AR 98	ARBOREUS	2" - 6" B&B
AR 99	ARBOREUS	2" - 6" B&B
AR 100	ARBOREUS	2" - 6" B&B

- NOTES**
1. STREET PAVEMENT SHALL BE PERFORMED BY THE DEVELOPER...
  2. ALL TREES SHALL BE MAINTAINED IN A HEALTHY CONDITION...
  3. ALL PLANTING SHALL BE PERFORMED IN COMPLIANCE...
  4. ALL PLANTING SHALL BE PERFORMED IN COMPLIANCE...

