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*SHEETS 1- 18 TO BE RECORDED

PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN

FOR

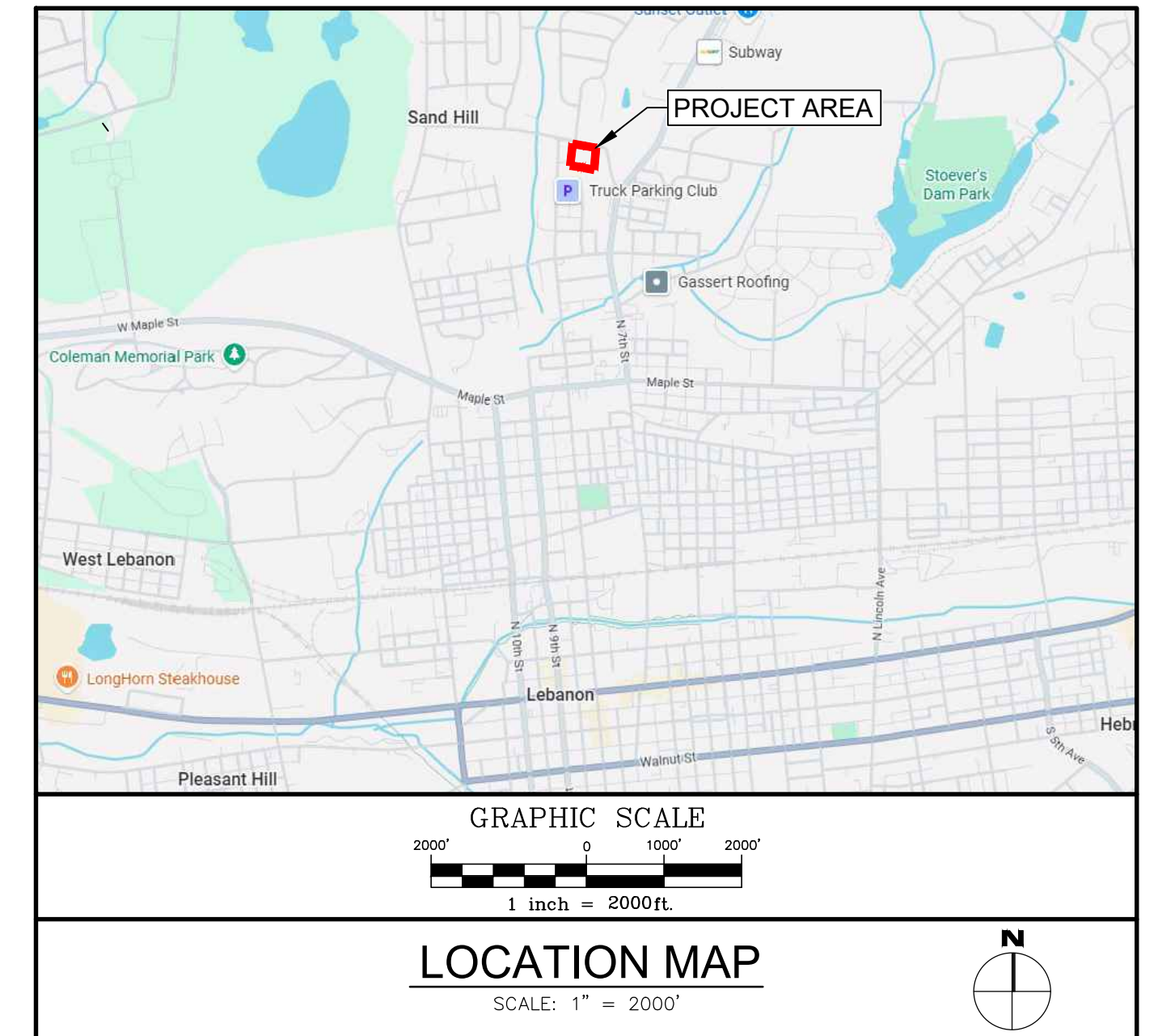
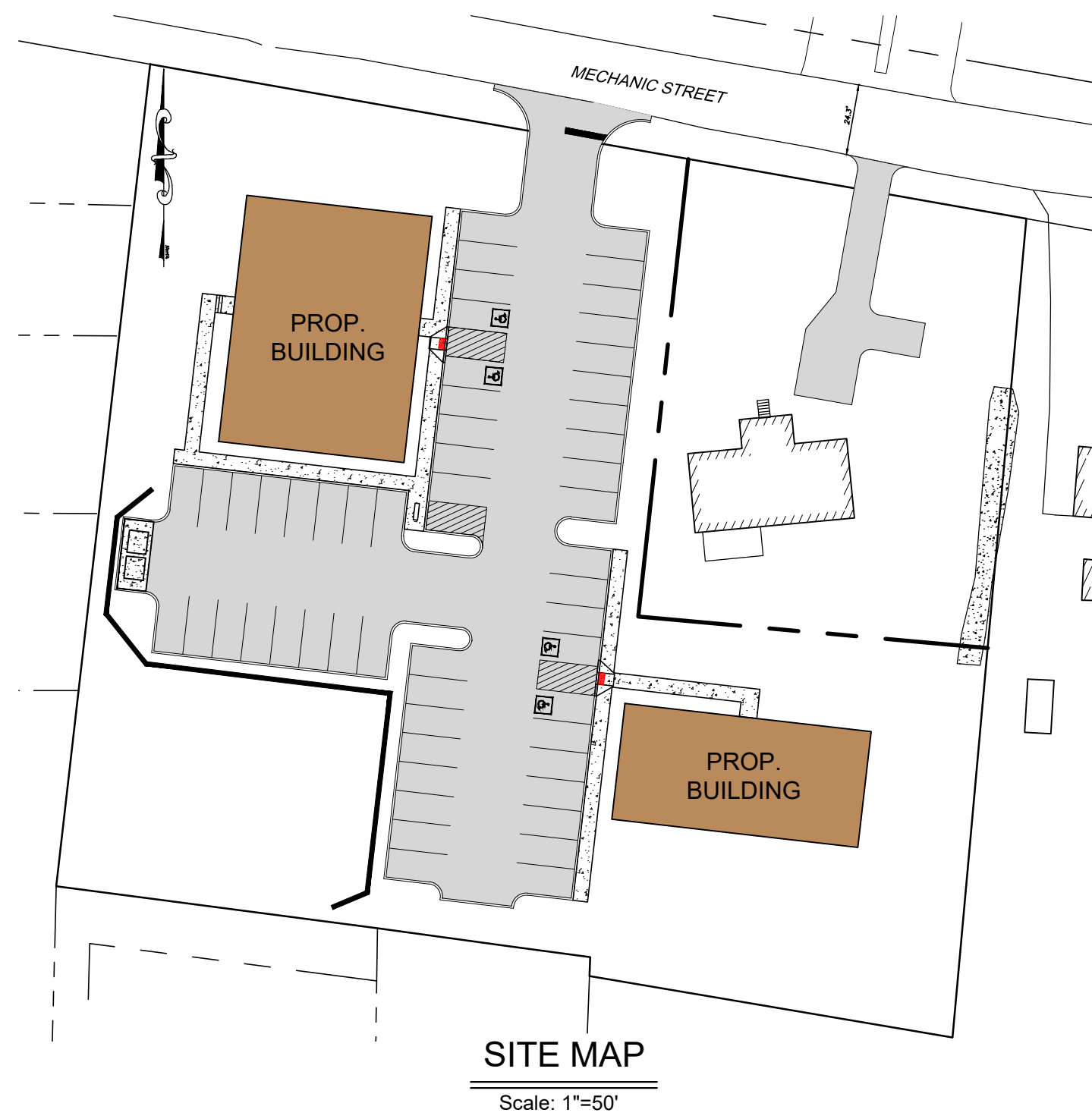
LCW HOLDING, LLC APARTMENT COMPLEX

OWNER: LCW HOLDINGS, LLC

LOCATED IN
NORTH LEBANON TOWNSHIP
LEBANON COUNTY PENNSYLVANIA

MARCH 16, 2026

REVISION	DATE	BY



OWNER	SOURCE OF TITLE
LCW HOLDINGS, LLC 610 WATER ST. EPHRATA, PA, 17522 PHONE: 717-466-1685 CONTACT: LANDON WEAVER EMAIL: Landonw@lcwholdingsgroup.com	CURRENT DEED BOOK: 2361-7430 PIN: 27-2337625-376120-0000 DEED ACRES: 1.00 AC. CURRENT DEED BOOK: 2361-7430 PIN: 27-2337717-376123-0000 DEED ACRES: 1.00 AC.

ZONING COMPLIANCE CHART		
NORTH LEBANON TOWNSHIP: ZONING DISTRICT: "HIGH DENSITY RESIDENTIAL (R-2)" (PUBLIC WATER AND SEWER) SINGLE-FAMILY DETACHED NON-CLUSTER		
	REQUIRED	PROPOSED
MIN. LOT AREA	9,000 SF.	0.42 ACRES (18,187.71 S.F.)
MIN. LOT WIDTH		
- AT STREET LINE	85'	120'
- AT BUILDING LINE	85'	120'
MAX. LOT COVERAGE	40% MAX.	9.2%
FRONT YARD SETBACK		
-BUILDING	30' MIN.	80'
SIDE YARD SETBACK		
-BUILDING	10' MIN.	11'
REAR YARD SETBACK		
-BUILDING	30' MIN.	30'
MAX BUILDING HEIGHT	2.5 STORIES AND 35'	<35'

GARDEN APARTMENTS		
ZONING DISTRICT: "HIGH DENSITY RESIDENTIAL (R-2)" (PUBLIC WATER AND SEWER)		
	REQUIRED	PROPOSED
MIN. LOT AREA	24,000SF	1.57 ACRES (68,303.78 S.F.)
MIN. LOT WIDTH	25'	309'
MAX. LOT COVERAGE	40% MAX.	12.9%
FRONT YARD SETBACK		
-BUILDING	30' MIN.	30'
-ACCESSORY BUILDING	N/A	
SIDE YARD SETBACK		
-BUILDING	30' MIN.	37'
-ACCESSORY BUILDING	N/A	
REAR YARD SETBACK		
-BUILDING	30' MIN.	54'
-ACCESSORY BUILDING	N/A	
MAX BUILDING HEIGHT	2.5 STORIES AND 35'	<35'
MAX BUILDING DENSITY	12 UNITS/GROSS ACRE	11.47 UNITS (18 UNITS/1.57 AC)

PARKING DATA	
GARDEN APARTMENTS:	REQUIREMENT: 3 SPACES PER DWELLING UNIT
TOTAL UNITS:	18
REQUIRED SPACES:	54
PROVIDED SPACES:	54

COMMON OPEN SPACE DATA	
COMMON OPEN SPACE AREA:	0.28 ACRES = 18.2% (10% REQUIRED)
0.28 ACRES OF THE COMMON OPEN SPACE IS CONTINUOUS.	

SITE DATA	
SITE AREA:	2.0 AC.
SITE ZONING:	R2 - HIGH DENSITY RESIDENTIAL
EXISTING USE:	RESIDENTIAL
PROPOSED USE:	GARDEN APARTMENTS
SOURCE OF WATER:	EXISTING PUBLIC WATER
SOURCE OF SEWER:	EXISTING PUBLIC SEWER

OWNERS CERTIFICATION AND ACKNOWLEDGMENT
COMMONWEALTH OF PENNSYLVANIA)
COUNTY OF _____)

ON THIS, THE _____ DAY OF _____, 2026, BEFORE ME, A NOTARY PUBLIC, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED _____ KNOWN TO ME (OR SATISFACTORILY PROVEN) TO BE THE PERSON(S) WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSE AND SAY THAT HE/THEY ARE THE OWNERS OF THE PROPERTY SHOWN ON THIS PLAN, THAT THE PLAN THEREOF WAS MADE AT HIS/HER DIRECTION, THAT HE/THEY ACKNOWLEDGE THE SAME TO BE HIS/HER ACT AND PLAN AND DESIRES THE SAME TO BE RECORDED, AND THAT ALL STREETS AND OTHER PROPERTY IDENTIFIED AS PROPOSED PUBLIC PROPERTY (EXCEPTING THOSE AREAS LABELED "NOT FOR DEDICATION") ARE HEREBY DEDICATED TO PUBLIC USE.

Name/Title _____ DATE _____

NOTARY PUBLIC

LEBANON COUNTY PLANNING DEPARTMENT

REVIEWED _____ DATE _____

CERTIFICATION OF PLAN ACCURACY

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THE PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE NORTH LEBANON TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE AND THE NORTH LEBANON TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

I, ETHAN J. GEHENIO, CERTIFY THAT THE PROPOSED DETENTION BASIN IS UNDERLAIN BY LIMESTONE.

ETHAN J. GEHENIO, P.E. _____ DATE _____

CERTIFICATION OF SURVEY ACCURACY

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THE SURVEY SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE NORTH LEBANON TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCES.

JASON E. CHERNICH, P.L.S. _____ DATE _____

NORTH LEBANON TOWNSHIP SUPERVISORS

AT A MEETING HELD ON _____, 2026, THE BOARD OF SUPERVISORS OF NORTH LEBANON TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA APPROVED THE FINAL LAND DEVELOPMENT PLAN FOR THE PROPERTY AS SHOWN HEREON. NO OTHER PLAN OR PLANS SHALL BE RECOGNIZED. APPROVAL INCLUDES ALL DOCUMENTATION, INCLUDING THE COMMENTS OR REQUIREMENTS OF OFFICIAL REVIEWING INDIVIDUALS OR AGENCIES. APPROVAL IS BASED ON COMPLIANCE WITH APPLICABLE ORDINANCES, RULES AND REGULATIONS, AND SHALL NOT BE CONSTRUED AS A GUARANTEE TO ANY PERSON OR ORGANIZATION THAT THE DESIGN OF ANY PART OF THE PLAN WILL FUNCTION AS ANTICIPATED UNDER ANY OR ALL CONDITIONS OR SITUATIONS. ADDITIONALLY, THAT BY REVIEW AND/OR APPROVAL OF THE PLAN, THE TOWNSHIP EXPRESSLY DECLINES THE ASSUMPTION OF LIABILITY ERRORS, OMISSIONS OR MISTAKES IN JUDGEMENT IN THE DESIGN, ENGINEERING, CONSTRUCTION, OR EXPECTED FUNCTION OF THE MATTERS REVIEWED AND/OR APPROVED.

APPROVED _____ DATE _____

APPROVED _____ DATE _____

APPROVED _____ DATE _____

NORTH LEBANON TOWNSHIP PLANNING COMMISSION

AT A MEETING HELD ON _____, 2026, THE PLANNING COMMISSION OF NORTH LEBANON TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA REVIEWED THIS PLAN AND A COPY OF THE REVIEW COMMENTS IS ON FILE IN THE TOWNSHIP OFFICE.

CHAIRMAN OR VICE CHAIRMAN _____ DATE _____

NORTH LEBANON TOWNSHIP ENGINEER

REVIEWED BY THE NORTH LEBANON TOWNSHIP ENGINEER THIS DAY OF _____, 2026.

REVIEWED _____ DATE _____



LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER
- EXISTING STORMWATER
- EXISTING WATERLINE
- EXISTING GASLINE
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS
- EXISTING TREELINE
- EXISTING BUILDING SETBACK LINES
- EXISTING ZONING BOUNDARY
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SOILS

SOIL DATA

SYMBOL	NAME	SLOPE	HSG
Beb	BEDINGTON SHALY SILT LOAM	3-8%	B

BY	DATE	REVISION

BY	DATE	REVISION

EXISTING CONDITIONS PLAN

PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN

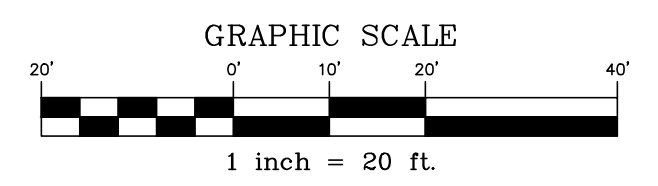
For
LCW HOLDINGS, LLC APARTMENT COMPLEX

located in
North Lebanon Township
Lebanon County, Pennsylvania

SEI ENGINEERING SURVEYING

279 N. ZINNS MILL ROAD, LEBANON, PA 17042
717-272-7110 WWW.STECKRECK.NET

FIELD CREW: MOD, JEC
BASE MAP: JEC
DRAWN: CDS
DESIGN: CDS
CHECKED: SAS
DATE: 3/16/26
SCALE: 1" = 20'
PROJECT # 2547-25-001





LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
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- EXISTING WATERLINE
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- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS
- EXISTING TREELINE
- EXISTING BUILDING SETBACK LINES
- EXISTING ZONING BOUNDARY
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- DEMO (TO BE REMOVED OR RELOCATED)

BY	DATE	REVISION

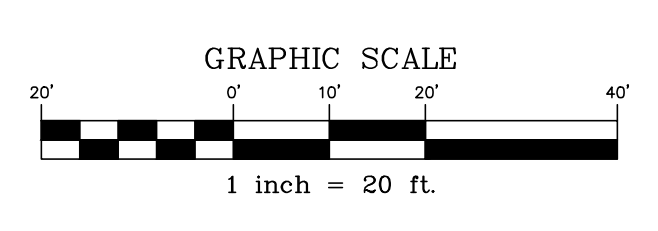
DEMOLITION PLAN

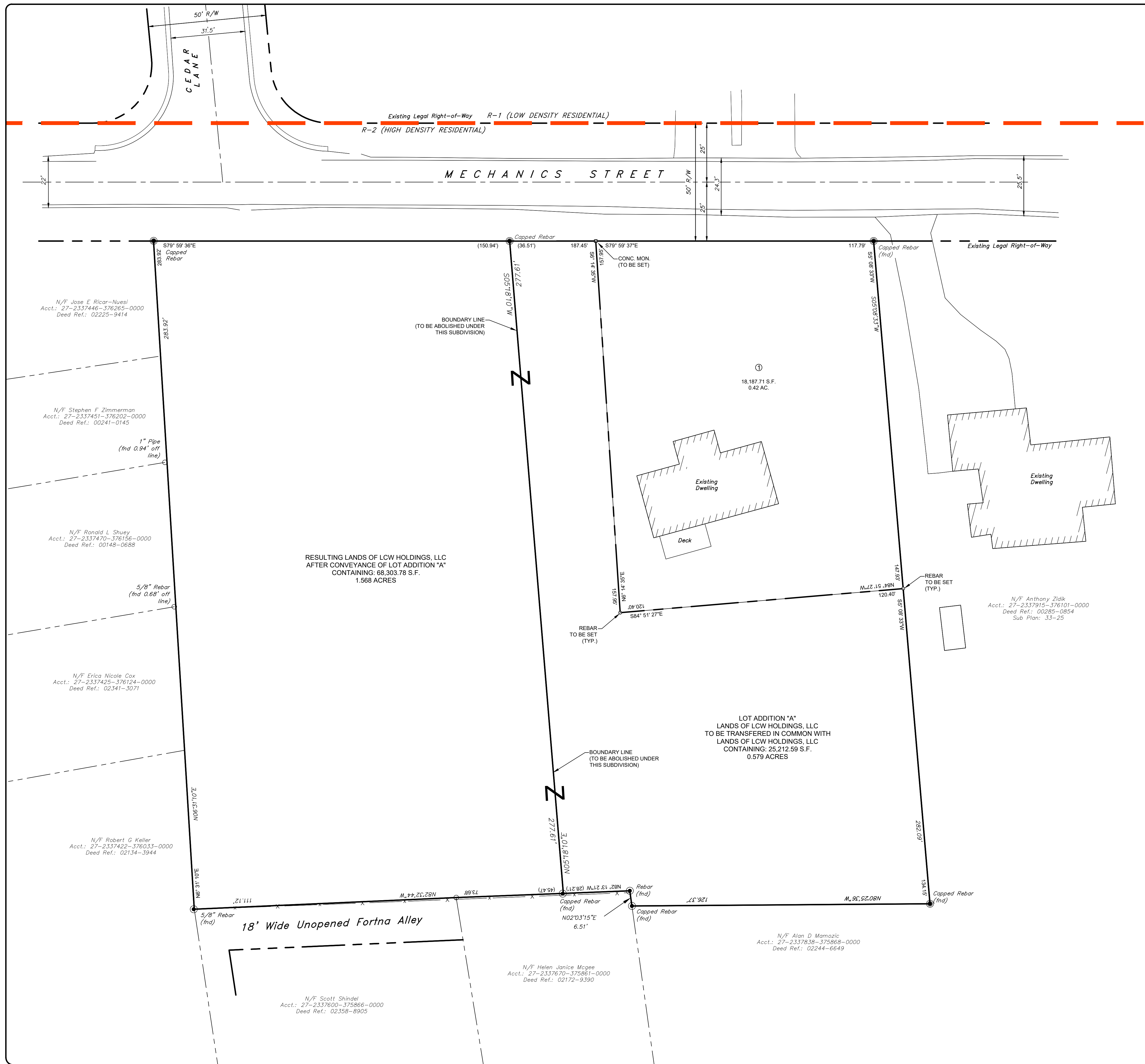
PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN
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LEGEND

EXISTING FEATURES

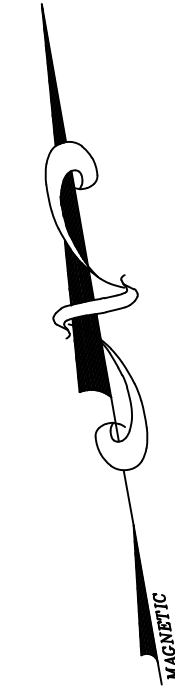
- EXISTING ADJOINER LINE
- - - - EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- - - - EXISTING RIGHT-OF-WAY
- EXISTING ZONING BOUNDARY

PROPOSED FEATURES

- - - - PROPOSED BUILDING SETBACK
- - - - PROPOSED BOUNDARY LINE AND CORNERS
- - - - PROPOSED RIGHT-OF-WAY
- - - - PROPOSED LOT DESIGNATION

REBAR CONCRETE MONUMENT

①



REVISION	DATE	BY

SUBDIVISION PLAN

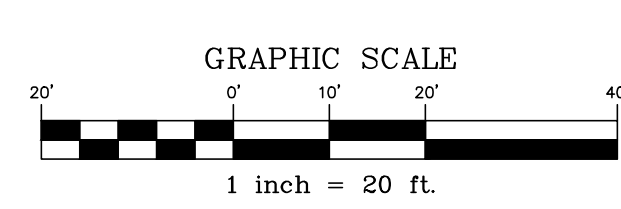
PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN
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Lebanon County, Pennsylvania

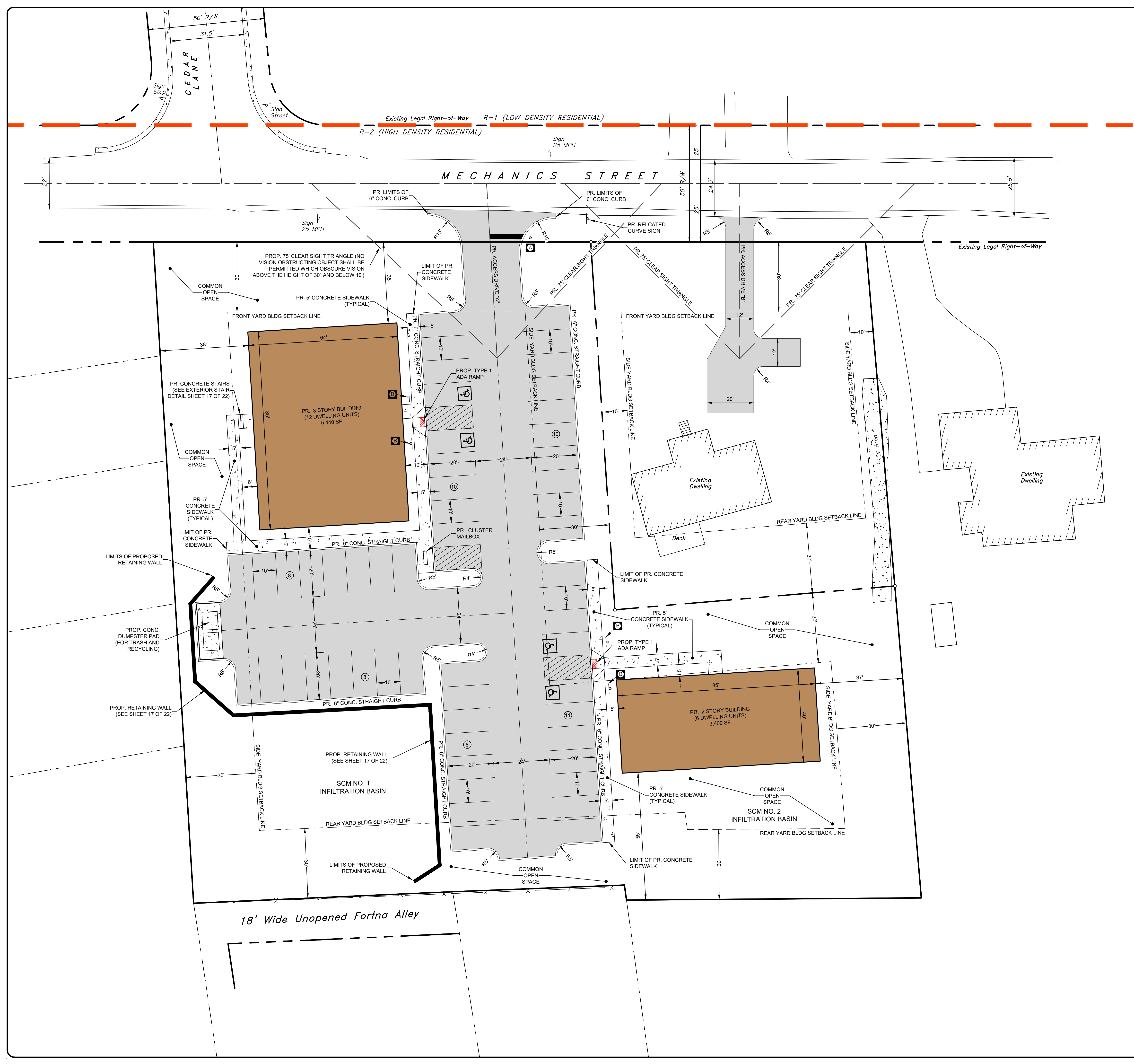
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LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- - - - - EXISTING RIGHT-OF-WAY LINE
- EXISTING ZONING BOUNDARY
- EXISTING SIGN

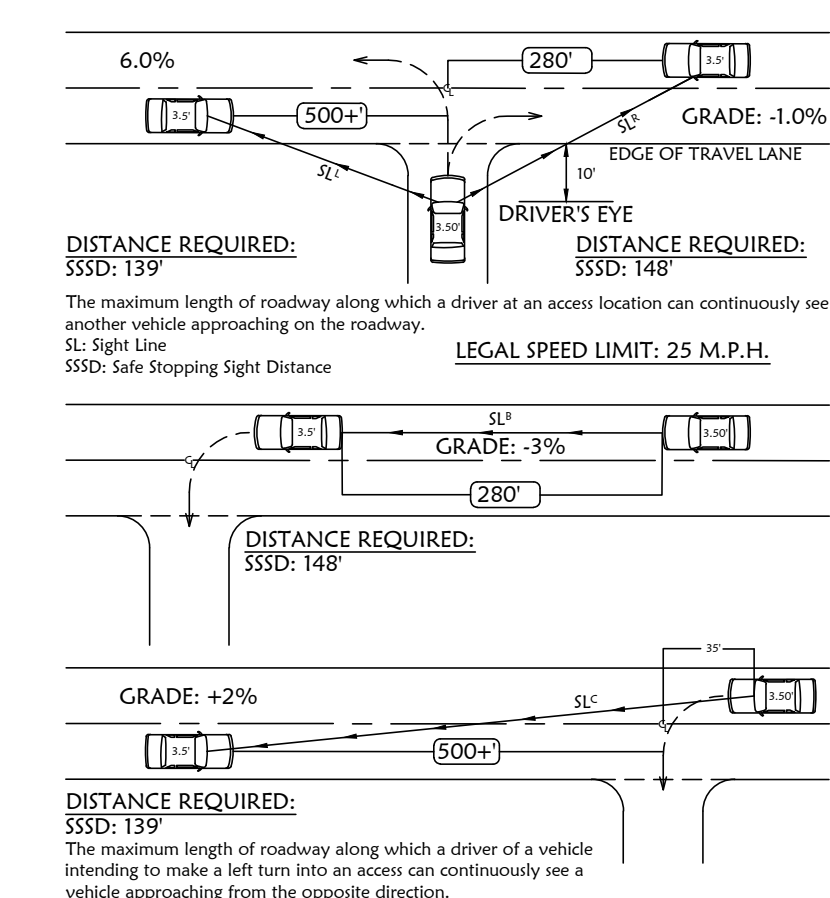
PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED RIGHT-OF-WAY
- PROPOSED ROAD CENTERLINE
- PROPOSED PAVING
- PROPOSED CONCRETE SIDEWALK
- PROPOSED SIGN
- PROPOSED STOP BAR

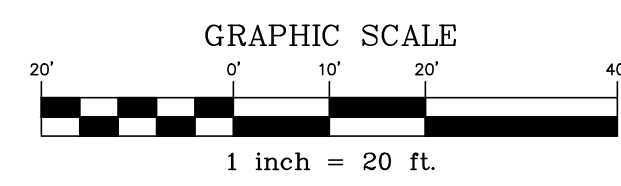
SIGNAGE LEGEND

SYMBOL	DESCRIPTION	SIZE	PA DOT DESIG.
ⓐ	STOP SIGN	30x30	R1-1
ⓑ	HANDICAP SIGN WITH VAN ACCESSIBLE SIGN	12X18 6X12	R7-8 R7-8B

NOTE:
 1. NO VISION OBSTRUCTING OBJECTS SHALL BE PERMITTED WHICH OBSCURE VISION ABOVE THE HEIGHT OF 30' AND BELOW 10' TO THE SIGHT DISTANCE.
 2. PROPOSED SIGNAGE SHALL BE OWNED BY THE APPLICANT



PROPOSED ACCESS DRIVE SIGHT DISTANCE
NO SCALE



BY	---
DATE	---
REVISION	---

BY	---
DATE	---
REVISION	---

LAYOUT PLAN

PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN
 For
LCW HOLDINGS, LLC APARTMENT COMPLEX
 located in
 North Lebanon Township
 Lebanon County, Pennsylvania



FIELD CREW:	MOD, JEC
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LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER
- EXISTING STORMWATER
- EXISTING WATERLINE
- EXISTING GASLINE
- EXISTING SIDEWALK/CONCRETE

PROPOSED FEATURES

- PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CONTOURS

PROPOSED EASEMENTS

- PROPOSED STORMWATER EASEMENTS

BY	
DATE	
REVISION	

BY	
DATE	
REVISION	

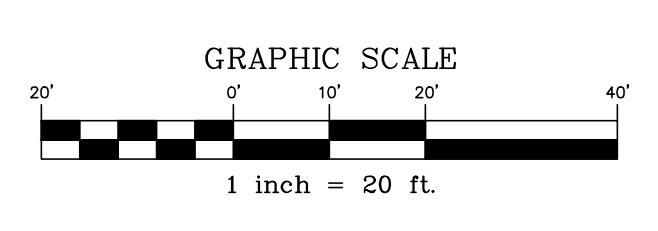
EASEMENT PLAN

PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN
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 Lebanon County, Pennsylvania

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279 N. ZINNS MILL ROAD, LEBANON, PA 17042
 717-272-7110
 WWW.STECKRECK.NET

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LEGEND

EXISTING FEATURES

- EXISTING ADJONER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER
- EXISTING STORMWATER
- EXISTING WATERLINE
- EXISTING GASLINE
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS
- EXISTING SOILS

SOIL DATA

SYMBOL	NAME	SLOPE	HSG
BeB	BEDINGTON SHALY SILT LOAM	3-8%	B

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK
- PROPOSED BOUNDARY LINE AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED FENCE
- PROPOSED SEWER
- PROPOSED STORMWATER
- PR. ELECTRIC SERVICE LINE
- PR. WATER SERVICE LINE
- PROPOSED DOMESTIC WATERLINE
- PROPOSED GASLINE
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED LIGHT POLE
- SOIL MEDIA SEEDED WITH ERNST SEEDS - RETENTION BASIN FLOOR MIX-LOW MAINTENANCE (ERNMX-126)
- INFILTRATION TEST
- NPDES BOUNDARY
- DISTURBANCE LIMITS

SCM CRITICAL STAGES

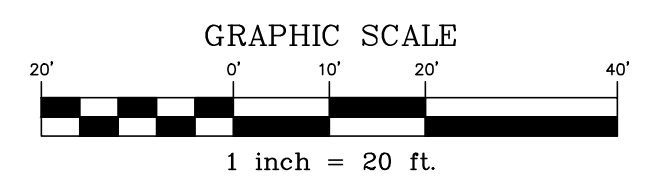
PER REQUIREMENTS OF THE PA DEP A LICENSED PROFESSIONAL OR DESIGNER MUST BE PRESENT FOR THE INSTALLATION OF ALL SCM AND STORMWATER CONTROLS. PLEASE CONTACT THE DESIGN PROFESSIONAL OR ENSURE A LICENSED PROFESSIONAL IS PRESENT BEFORE BEGINNING THE FOLLOWING CONSTRUCTION ACTIVITIES:

- PERMANENT SITE STABILIZATION
 - EXCAVATION / ROUGH GRADING
 - OUTLET PIPE, ANTI-SEEP COLLAR, CLAY CORE INSTALLATION
 - CONFIRMATION TESTING FOR INFILTRATION CAPACITY MUST BE COMPLETED TO VERIFY THAT INFILTRATION SCMS WILL PERFORM AS DESIGNED ANYTIME 1) THE AREA OF AN INFILTRATION SCM HAS NOT BEEN PROTECTED AS DETERMINED BY A LICENSED PROFESSIONAL OR DEP/CDD, AND 2) AN EAS BMP WILL BE CONVERTED TO A POSM SCM AND USED FOR INFILTRATION
 - UNDERDRAIN AND SOIL MEDIA INSTALLATION
 - FINAL SEEDING
- SCM NO. 2
 - EXCAVATION / ROUGH GRADING
 - OUTLET PIPE, ANTI-SEEP COLLAR, CLAY CORE INSTALLATION
 - UNDERDRAIN AND SOIL MEDIA INSTALLATION
 - FINAL SEEDING

• THE PERMITTEE MUST SUBMIT A SCM CONSTRUCTION CERTIFICATION FORM FOR EACH STRUCTURAL SCM, WITHIN 30 DAYS OF COMPLETION. THE FORM MUST BE SIGNED BY A LICENSED PROFESSIONAL WHO OBSERVED THE CONSTRUCTION OF EACH SCM.

ROOF LEADER NOTE

ALL DOWNSPOUTS AND ROOF LEADER PIPES SHALL BE LOCATED AS REQUIRED TO REFLECT THE DRAINAGE DIVIDES DEPICTED ON THE DRAINAGE AREA MAPS.



BY	DATE	REVISION

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
 PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN
 For
LCW HOLDINGS, LLC APARTMENT COMPLEX
 North Lebanon Township
 Lebanon County, Pennsylvania

SEI ENGINEERING SURVEYING
 279 N. ZINNS MILL ROAD, LEBANON, PA 17042
 717-272-7110 WWW.STECKRECK.NET

FIELD CREW:	MOD, JEC
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PROJECT #	2547-25-001

POST CONSTRUCTION STORMWATER MANAGEMENT NARRATIVE
754 MECHANIC STREET

THIS NARRATIVE IS INTENDED TO ACCOMPANY THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN FOR THE PROJECT LOCATED AT 754 MECHANIC STREET IN NORTH LEBANON TOWNSHIP, LEBANON COUNTY. THIS NARRATIVE SHALL BE CONSIDERED A PART OF THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN.

PROJECT DESCRIPTION

THE TOTAL AREA OF THE EXISTING PARCELS TO BE DEVELOPED IS 1.99 ACRES. THE SITE AREA AND EARTH DISTURBANCE AS PART OF THIS PROJECT IS 2.00 ACRES, WHICH INCLUDES DISTURBANCE WITHIN THE MECHANIC STREET RIGHT-OF-WAY. THE SITE IS COMPRISED OF TWO PARCELS. THE EASTERN PARCEL CONTAINS AN EXISTING RESIDENTIAL DWELLING AND DRIVEWAY WHILE THE WESTERN PARCEL IS UNDEVELOPED. BASED ON GOOGLE EARTH HISTORICAL IMAGERY, THE SITE HAS BEEN IN ITS CURRENT CONDITION SINCE 2005. BASED ON PENNPLOT HISTORICAL IMAGERY, THE SITE APPEARS TO HAVE BEEN AGRICULTURAL, DATING BACK TO THE 1950'S. THE SITE IS BORDERED TO THE NORTH BY MECHANIC STREET, TO THE EAST AND WEST BY RESIDENTIAL PROPERTIES, AND TO THE SOUTH BY RESIDENTIAL PROPERTIES AND A WOODED PROPERTY. PROPOSED IMPROVEMENTS INCLUDE THE CONSTRUCTION OF TWO APARTMENT BUILDINGS TOTALING 18 UNITS, PARKING LOTS, DRIVEWAY OFF MECHANIC STREET, CONNECTION TO PUBLIC WATER AND SEWER, AND ASSOCIATED STORMWATER MANAGEMENT FACILITIES. THE ANTICIPATED SITE DISTURBANCE SHALL INCLUDE GRADING AS WELL AS AN ADDITIONAL IMPERVIOUS AREA WHICH WILL BE TREATED ON-SITE BY STORMWATER CONTROL MEASURES (SCMS). ONE (1) INFILTRATION BASIN (SCM NO. 1) AND ONE (1) RAIN GARDEN/BIORETENTION FACILITY (SCM NO. 2) ARE PROPOSED TO MANAGE THE SITE RUNOFF. STORMWATER RUNOFF FROM THE SITE WILL EVENTUALLY REACH AN UNT TO THE BRANDYWINE CREEK AND THE BRANDYWINE CREEK. BOTH SURFACE WATERS ARE DESIGNATED AS TROUT STOCKED FISHERY (TSF). THE UNT TO BRANDYWINE CREEK AND BRANDYWINE CREEK ARE IMPAIRED ACCORDING TO CATEGORY 4 OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR AQUATIC LIFE: URBAN RUNOFF/STORM SEWERS FLOW REGIME MODIFICATION. BOTH SURFACE WATERS ARE ALSO IMPAIRED ACCORDING TO CATEGORY 5 OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR RECREATIONAL SOURCE UNKNOWN - PATHOGENS.

CALCULATIONS

POST CONSTRUCTION STORMWATER MANAGEMENT FACILITIES WERE DESIGNED IN ACCORDANCE WITH THE STANDARDS ESTABLISHED IN THE PENNSYLVANIA STORMWATER MANAGEMENT BMP MANUAL (PA DEP BUREAU OF WATERSHED MANAGEMENT, DECEMBER 2006), AND THE NORTH LEBANON TOWNSHIP STORMWATER MANAGEMENT ORDINANCE (SWMO).

HYDROLOGY

A STORMWATER MANAGEMENT CONTROL SYSTEM IS PROPOSED TO MINIMIZE THE ADDITIONAL RUNOFF VOLUME GENERATED BY THE PROPOSED IMPROVEMENTS AND TO CONTROL THE FLOW TO A RATE LESSER THAN OR EQUAL TO THE PRE-DEVELOPMENT RUNOFF. FOLLOWING THE REQUIREMENTS OF THE PA CODE CHAPTER 102.8 AND THE NORTH LEBANON TOWNSHIP SWMO, IN ORDER TO PROVIDE WATER QUALITY, VOLUME CONTROL, AND RATE CONTROL, THE SITE WILL BE SERVED BY TWO (2) STRUCTURAL SCMS. THE SCMS ARE DESIGNED TO MANAGE THE POST-DEVELOPMENT DISCHARGE RATE TO A RATE EQUAL OR LOWER THAN THE PRE-DEVELOPMENT RATE AND TO MANAGE THE 24-HOUR VOLUME INCREASE THROUGH INFILTRATION AND EVAPOTRANSPIRATION. THE CURVE NUMBERS ARE TAKEN FROM TR-55. SUPPORTING CALCULATIONS CAN BE SEEN IN THE DEP PCSM SPREADSHEETS.

PER THE NORTH LEBANON TOWNSHIP SWMO, POST-DEVELOPMENT DISCHARGE FLOW RATES MUST MEET THE FOLLOWING CRITERIA.

Table with 2 columns: Pre-Developed and Past Developed. Rows for 2-year, 5-year, 10-year, 25-year, and 100-year return periods.

THE RATIONAL METHOD WITH A CRITICAL DURATION ANALYSIS WAS USED TO DETERMINE PEAK FLOW RATES FROM THE SITE. THE RESULTING POST DEVELOPMENT RUNOFF FLOW RATES HAVE BEEN REDUCED TO REQUIRE PRE-DEVELOPMENT RELEASE RATES AS SHOWN IN THE TABLES ABOVE AND FURTHER ILLUSTRATED IN THE FLOW SUMMARY TABLE LATER IN THIS REPORT. HYDROCAD V10.2 SOFTWARE WAS USED TO PERFORM ALL ROUTING CALCULATIONS.

THERMAL IMPACTS ANALYSIS

ALL EXISTING RUNOFF CURRENTLY LEAVES THE SITE UN-DETAINED WITH NO TREATMENT OF THIS RUNOFF IN ANY WAY. TWO (2) STRUCTURAL SCMS ARE PROPOSED TO TREAT THE MAJORITY OF THE DISTURBED SITE AND PROPOSED IMPERVIOUS AREAS. RUNOFF REACHING THE STRUCTURAL SCMS WILL BE COOLED BY THE VEGETATION IN THE BASIN BOTTOM BEFORE BEING FILTERED THROUGH AN SOIL MEDIA AND INFILTRATED INTO THE GROUND. SHADE TREES ARE ALSO PROPOSED IN AND AROUND THE PARKING LOTS TO PROVIDE TEMPERATURE RELIEF FOR RUNOFF THAT FLOWS OVER THE IMPERVIOUS SURFACES.

WATER QUALITY AND NON-DISCHARGE ANALYSIS

THE SITE HAS BEEN DESIGNED TO MEET THE NPDES REQUIREMENTS AS CALCULATED IN THE DEP PCSM SPREADSHEET - QUALITY. THROUGH THE IMPLEMENTATION OF THE STRUCTURAL SCMS, THE WATER QUALITY REQUIREMENTS HAVE BEEN MET FOR THIS SITE. PLEASE SEE THE STANDARD DEP PCSM SPREADSHEETS FOR A MORE IN-DEPTH DESCRIPTION OF HOW THE REQUIREMENTS ARE MET FOR THIS SITE.

PROPOSED STORMWATER CONTROL MEASURES

- INFILTRATION BASIN - ONE (1) INFILTRATION BASIN WILL BE UTILIZED TO PROMOTE INFILTRATION, EVAPORATION, AND EVAPOTRANSPIRATION AND MANAGE FLOW VOLUME, AND WATER QUALITY LEAVING THE SITE.
- RAIN GARDEN/BIORETENTION - ONE (1) RAIN GARDEN/BIORETENTION FACILITY WILL BE UTILIZED TO PROMOTE INFILTRATION, EVAPORATION, AND EVAPOTRANSPIRATION AND MANAGE FLOW VOLUME, AND WATER QUALITY LEAVING THE SITE.

OFFSITE DISCHARGE ANALYSIS

THE FOLLOWING IS AN EXCERPT FROM THE PA DEP FAQ SHEET LABELED CHAPTER 102 OFF-SITE DISCHARGES OF STORMWATER TO NON-SURFACE WATERS (JANUARY 2, 2019). FAQ #2 STATES, "PERSONS PROPOSING TO DISCHARGE MUST HAVE THE LEGAL AUTHORITY TO DISCHARGE THEIR STORMWATER EITHER THROUGH EITHER A COMMON LAW EASEMENT OR AN EXPRESS EASEMENT. FOR SITES THAT DISCHARGE TO EXISTING SWALES, DITCHES, STORM SEWERS OR SIMILAR STRUCTURES WHERE THE DISCHARGE ACTIVITY WILL NOT RESULT IN A CHANGE IN VOLUME OR RATE OF STORMWATER RUNOFF (FOR ALL STORM EVENTS), THE EXISTING COMMON LAW EASEMENT COULD BE RELIED UPON."

THE SITE DISCHARGES TO ALL POINTS IN A SIMILAR MANNER AND AT A RATE THAT IS LESS THAN PRE-DEVELOPMENT FOR ALL STORM EVENTS.

DP 001 - DISCHARGES IN A SHEET FLOW NEAR THE SOUTHWESTERN PROPERTY CORNER. RUNOFF FROM DP 001 EVENTUALLY REACHES AN UNT TO THE BRANDYWINE CREEK.

DP 002 - DISCHARGES IN A SHEET FLOW NEAR THE SOUTHEASTERN PROPERTY CORNER. RUNOFF FROM DP 002 EVENTUALLY REACHES THE BRANDYWINE CREEK.

CHAPTER 102.8 (B) ANALYSIS

THE DOWNSTREAM STREAM CHANNELS ARE PROTECTED BY THE FLOW REDUCTION PROVIDED BY THE PROPOSED STORMWATER MANAGEMENT FACILITIES. THE STRUCTURAL SCMS WILL ALLOW FOR REDUCED FLOW AND THEREFORE THE DOWNSTREAM CHANNEL WILL NOT BE NEGATIVELY IMPACTED. THE SAME FLOW REDUCTION AND WATER QUALITY BENEFITS PROVIDED BY THE STRUCTURAL SCMS WILL SERVE TO PROTECT ANY EXISTING DRAINAGE FEATURES AND DOWNSTREAM VEGETATION.

SOIL INFORMATION AND GEOLOGY

THE FOLLOWING SOILS ARE FOUND WITHIN OR ADJACENT TO THE AREA TO BE DISTURBED BY EARTH MOVING ACTIVITIES. THESE SOILS CAN ERODE WHEN DISTURBED. EROSION WILL BE CONTROLLED WITH STANDARD EROSION CONTROLS SUCH AS FILTER SOCK, SLOPE/STABILIZATION MATTING, RIPRAP OUTLET PROTECTION, ROCK CONSTRUCTION ENTRANCE, CONCRETE WASHOUT, AND A SEDIMENT TRAP.

Table with 4 columns: Map Symbol, Soil Name, Slope, Hydrologic Group. Row 1: Bc3, Bedington shaly silt loam, 3-5%, B.

*IF SOILS ARE BOLD, THEY ARE DISTURBED DURING CONSTRUCTION ON THIS PROJECT.

THE PA DEP'S EMAPPA DOES NOT IDENTIFY ANY KARST FEATURES WITHIN OR IMMEDIATELY ADJACENT TO THE PROJECT SITE. THE SITE IS UNDERLAIN BY THE GRAYWACKE OF HAMBURG SEQUENCE (GRAYWACKE) AND THE HAMBURG SEQUENCE (SHALE, SILTSTONE, GRAYWACKE). THESE BEDROCK FORMATIONS DO NOT CARBONATE ROCK AND AS SUCH THE RISK FOR KARST ACTIVITY IS CONSIDERED LOW. SHOULD A GEOTECHNICAL HAZARD BE ENCOUNTERED DURING CONSTRUCTION, THE GEOTECHNICAL ENGINEER WILL BE IMMEDIATELY CONTACTED AND REQUIRED TO OVERSEE ANY MITIGATION MEASURES.

BEDINGTON SOILS - THE BEDINGTON SERIES CONSISTS OF VERY DEEP, WELL DRAINED SOILS. BEDINGTON SOILS FORMED IN RESIDUUM FROM DARK BROWN, GRAY AND OLIVE CLAY, SEDIMENTARY, SILTSTONE AND SHALE, WITH SOME SANDSTONE INTERBEDS. THEY ARE ON NEARLY LEVEL TO STEEP CONVEX UPLANDS AND ON THE SIDESLOPES OF HILLS AND RIDGES. PERMEABILITY IS MODERATE. MEAN ANNUAL PRECIPITATION IS 42 INCHES. MEAN ANNUAL TEMPERATURE IS 52 DEGREES F. BEDINGTON SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS AND CORROSIVE TO CONCRETE. THIS SOIL MAY ALSO BE SUBJECT TO DROUGHT AND MAY BE EASILY ERODIBLE. BEDINGTON SOILS MAY ALSO BE SUSCEPTIBLE TO HYDRIC INCLUSIONS, SLOW PERCOLATION, FROST ACTION, AND A POOR SOURCE OF TOPSOIL.

SOIL USE LIMITATIONS AND RESOLUTIONS

- CUT-BANK CAVING: ALL APPLICABLE OSHA STANDARDS AND REGULATIONS SHALL BE IMPLEMENTED AT ALL TIMES DURING TRENCHING AND EXCAVATION OPERATIONS.
• CORROSION OF CONCRETE: ALL UNDERGROUND FOUNDATIONS AND STRUCTURES SHALL BE PROPERLY PROTECTED AGAINST CORROSION, WHICH MAY INCLUDE COATING THESE STRUCTURES WITH CORROSION-RESISTANT MATERIAL.
• DROUGHT: VEGETATION MAY REQUIRE FREQUENT WATERING DURING ESTABLISHMENT.
• EASILY ERODIBLE: EROSION AND SEDIMENT POLLUTION CONTROLS WILL BE IMPLEMENTED TO AVOID THE TRANSPORTATION OF SEDIMENT-LADEN WATER OFF-SITE. THE MAXIMUM PROPOSED SLOPE IS 3:1 ON THE SITE.
• HYDRIC SOILS/HYDRIC INCLUSIONS: NO WETLANDS ARE LOCATED ON SITE.
• SLOW PERCOLATION: INFILTRATION TESTING HAS BEEN CONDUCTED AND YIELDED ADEQUATE RATES WITHIN THE PROPOSED SCMS. ADEQUATE PRECAUTIONS WILL BE TAKEN TO ENSURE THAT THE PCSM SCMS INFILTRATE WITHIN THE REQUIRED TIME PERIOD, INCLUDING POST-CONSTRUCTION INFILTRATION TESTING.
• FROST ACTION: THE PROJECT'S IMPERVIOUS SURFACES SHALL BE GRADED AT A MINIMUM OF 1% IN ONE DIRECTION, SO THAT WATER WILL NOT COLLECT ON THE SURFACE AND CAUSE DAMAGE DURING FREEZE/THAW CYCLES. CRACKS WHICH DEVELOP IN THE IMPERVIOUS SURFACES SHALL BE PROMPTLY SEALED.
• POOR SOURCE OF TOPSOIL: THE ADEQUACY OF THE TOPSOIL WILL BE EVALUATED UPON THE COMMENCEMENT OF EXCAVATION, AS MUCH OF THE SITE IS CURRENTLY GRASS AND THERE IS A SIGNIFICANT AMOUNT OF PROPOSED IMPERVIOUS AREA. ONSITE TOPSOIL IS EXPECTED TO BE SUFFICIENT.

INFILTRATION TESTING REQUIREMENTS

INFILTRATION TESTING HAS BEEN COMPLETED BY DAVID HORVAT, S.E.O. REFER TO THE INFILTRATION TEST RESULTS PROVIDED AS AN APPENDIX TO THE PCSM REPORT.

OWNERSHIP, OPERATIONS AND MAINTENANCE

SHORT-TERM OWNERSHIP, OPERATIONS AND MAINTENANCE OF THE PCSM SCMS IS THE RESPONSIBILITY OF THE CONTRACTOR (UNKNOWN AT THIS TIME), WHO SHALL BE LISTED AS THE CO-PERMITTEE ON THE NPDES PERMIT. LONG-TERM OWNERSHIP, OPERATIONS AND MAINTENANCE OF THE PCSM SCMS IS THE RESPONSIBILITY OF THE PROPERTY OWNER HEREIN IDENTIFIED AS LCW HOLDINGS, LLC.

OPERATION & MAINTENANCE

SCM NO. 1 & SCM NO. 2 (INFILTRATION BASIN / RAIN GARDEN/BIORETENTION)

- 1. CONSTRUCTION MATERIALS SHOULD NEVER BE STORED ON THE INFILTRATION SURFACE OR SURFACE OF AN INFILTRATING SCM.
2. DO NOT DRIVE HEAVY EQUIPMENT (OVER TWO TONS) ON SCM SURFCE.
3. WATER SHOULD NEVER UNLESS 0.25 INCH OF RAINFALL HAS OCCURRED UNTIL PLANTS BECOME ESTABLISHED (MINIMUM ONE GROWING SEASON).
4. WATER DURING PERIODS OF EXTENDED DROUGHT.
5. WHILE VEGETATION IS BEING ESTABLISHED, PRUNING AND WEEDING MAY BE REQUIRED.
6. INSPECT ANNUALLY AND AFTER EXTREME EVENTS GREATER THAN OR EQUAL TO THE 2-YEAR/24-HOUR STORM.
7. ANNUAL MAINTENANCE IS REQUIRED TO REMOVE LEAVES AND TO REPAIR ANY CLOGGED SOIL AREAS.
8. ANNUALLY OR AS NEEDED CUT GRASSES, AND PRUNE SHRUBS AND TREES TO MAINTAIN APPEARANCE AND FUNCTIONALITY. REPLACE DISEASED OR DEAD PLANTS, RAKE AND REMOVE CUTTINGS AND LEAVES.
9. REMOVE WEEDS AND INVASIVE PLANTS.
10. IF SPECIFIC SPECIES MORTALITY IS REOCCURRING, ASSESS CAUSE AND REPLACE WITH APPROPRIATE ALTERNATE SPECIES.
11. REMOVE LITTER, TRASH, AND DEBRIS FROM SCM SURFACE, SIDE SLOPES, INFLOW AND OUTFLOW POINTS, STRUCTURES, AND SURROUNDING AREA.
12. MAINTAIN ALL COMPONENTS.
13. CATCH BASINS AND INLETS (UPGRADIENT OF INFILTRATION FACILITY) SHOULD BE INSPECTED AND CLEANED AT LEAST TWO TIMES PER YEAR AND AFTER MAJOR RUNOFF EVENTS (> 1-INCH RAINFALL DEPTH).
14. THE VEGETATION ALONG THE SURFACE OF THE INFILTRATION FACILITY SHALL BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS SHALL BE RE-VEGETATED AS SOON AS POSSIBLE.
15. VEHICLES SHOULD NOT BE PARKED OR DRIVEN OVER AN INFILTRATION AREA, AND CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS.
16. INSPECT THE FACILITY AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN 72 HOURS. MOSQUITOES SHOULD NOT BE A PROBLEM IF THE WATER DRAINS IN 72 HOURS. MOSQUITOES REQUIRE A CONSIDERABLY LONG BREEDING PERIOD WITH RELATIVE HUMIDITY.
17. ALSO INSPECT FOR ACCUMULATION OF SEDIMENT, DAMAGE TO OUTLET CONTROL STRUCTURES, EROSION CONTROL MEASURES, SIGNS OF WATER CONTAMINATION/SPILLS, AND SLOPE STABILITY IN THE BERMS.
18. THE SEED MIXTURE PLANTED IN THE BOTTOM OF THE BASINS SHALL BE MOWED DOWN TO A HEIGHT OF 8-INCHES WHEN IT REACHES A HEIGHT OF 24-INCHES DURING THE FIRST FULL GROWING SEASON ONLY. IN ALL SUBSEQUENT YEARS, ANY MATERIAL STILL STANDING FROM THE PREVIOUS GROWING SEASON SHALL BE MOWED IN EARLY SPRING TO A HEIGHT OF 2-INCHES PRIOR TO THE CURRENT YEAR'S GROWTH REACHING A HEIGHT OF 2-INCHES. THE SEED MIXTURE SHALL NOT BE MOWED AGAIN UNTIL THE FOLLOWING SPRING. IN ALL INSTANCES, CLIPPINGS SHALL BE COMPOSED OR TAKEN TO AN APPROVED YARD WASTE RECYCLING FACILITY.
19. REMOVE ACCUMULATED SEDIMENT FROM FACILITY AS REQUIRED. RESTORE ORIGINAL CROSS SECTION AND INFILTRATION RATE.
20. SHOULD ANY INFILTRATION FACILITY FAIL TO DEWATER WITHIN A 72-HOUR TIME PERIOD THE OWNER SHALL INVESTIGATE ALTERNATIVE SOLUTIONS.
ALTERNATIVES INCLUDE:
- REPLACE THE ENGINEERED SOIL LAYER AND / OR THE UNDERDRAIN SYSTEM. THE ENGINEERED SOIL LAYER SHOULD BE REMOVED, THE SOIL LAYER AT THE BOTTOM OF THE ENGINEERED SOIL SHALL BE SCARIFIED. THE ENGINEERED SOIL LAYER SHALL BE REPLACED PER THE PCSM PLAN DETAILS.
- CONDUCT AN INVESTIGATION BY A QUALIFIED INDIVIDUAL IN ORDER TO DETERMINE THE CAUSE OF FAILURE AND MAKE A DETERMINATION AS TO THE BEST COURSE OF ACTION AS TO RETURN THE SITE TO THE STANDARDS OF THE LOCAL MUNICIPALITY AND THE PA DEP.

OVERALL PCSM CONSTRUCTION SEQUENCE

- 1. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARED, PCSM PLAN PREPARED, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE OF THE COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING.
2. UPON INSTALLATION OF PERIMETER E&S CONTROLS (SEE CONSTRUCTION SEQUENCE), INSTALL SEDIMENT TRAP 1.
3. ROUGH GRADE THE SITE AND INSTALL THE RETAINING WALLS AND UTILITIES.
4. AFTER THE IMPROVEMENTS ARE CONSTRUCTED ADD TOPSOIL TO THE POST-CONSTRUCTION PERVIOUS AREAS TO BE PERMANENTLY STABILIZED.
5. AFTER STABILIZATION OF THE SITE AREA, INSTALL SCM NO. 2 AND CONVERT SEDIMENT TRAP 1 TO A PERMANENT SURFACE SCM AS SEEN ON THE PCSM PLAN AND DETAILS. CARE SHOULD BE TAKEN TO MINIMIZE SOIL COMPACTION IN THESE AREAS BEFORE AND AFTER CONSTRUCTION. SUCCESS HAS BEEN ACHIEVED WITH MINIMAL COMPACTION UTILIZING A "ROCK SLINGER".
6. APPLY THE SPECIFIED PERMANENT STABILIZATION ACROSS THE SITE.

NPDES PERMIT NOTES

- 1. PERMITTEE'S REQUESTING A RENEWAL OF COVERAGE UNDER GENERAL PERMIT MUST SUBMIT TO THE COUNTY CONSERVATION DISTRICT AN ADMINISTRATIVELY COMPLETE AND ACCEPTABLE NOI, AT LEAST 90 DAYS PRIOR TO THE EXPIRATION DATE OF THE COVERAGE.
2. PERMITTEE'S REQUESTING A RENEWAL OF COVERAGE UNDER INDIVIDUAL PERMIT MUST SUBMIT TO THE COUNTY CONSERVATION DISTRICT AN ADMINISTRATIVELY COMPLETE AND ACCEPTABLE NOI, AT LEAST 180 DAYS PRIOR TO THE EXPIRATION DATE OF THE COVERAGE.
3. SITE INSPECTIONS AND MONITORING REPORTS - THE PERMITTEE SHALL COMPLY WITH ALL OF THE MONITORING AND REPORTING REQUIREMENTS, AS OUTLINED IN THE NPDES PERMIT. THE PERMITTEE SHALL ENSURE THAT SITE INSPECTIONS ARE CONDUCTED AT LEAST WEEKLY AND AFTER EACH MEASURABLE PRECIPITATION EVENT BY QUALIFIED PERSONNEL. A WRITTEN REPORT SHALL BE KEPT FOR EACH INSPECTION.
4. THE DEP "VISUAL INSPECTION CHECKLIST" SHOULD BE COMPLETED FOR EACH INSPECTION AND SHOULD BE AVAILABLE ON-SITE FOR INSPECTION BY DEP OR COUNTY CONSERVATION DISTRICT PERSONNEL.
5. AFTER ALL EARTHMOVING ACTIVITY HAS CEASED AND THE ENTIRE PERMITTED AREA IS PERMANENTLY STABILIZED, THE PERMITTEE MUST SUBMIT A NOTICE OF TERMINATION TO THE LOCAL COUNTY CONSERVATION DISTRICT TO CLOSE OUT THE PERMIT. ALLOWING THE NPDES PERMIT TO EXPIRE IS DETERMINED TO BE A VIOLATION OF THE NPDES PERMIT.

SCM CRITICAL STAGES

PER REQUIREMENTS OF THE PA DEP A LICENSED PROFESSIONAL OR DESIGNEE MUST BE PRESENT FOR THE INSTALLATION OF ALL SCM AND STORMWATER CONTROLS. PLEASE CONTACT THE DESIGN PROFESSIONAL OR ENSURE A LICENSED PROFESSIONAL IS PRESENT BEFORE BEGINNING THE FOLLOWING CONSTRUCTION ACTIVITIES:

- PERMANENT SITE STABILIZATION
• SCM NO. 1
o EXCAVATION / ROUGH GRADING
o OUTLET PIPE, ANTI-SEEP COLLAR, CLAY CORE INSTALLATION
o CONFIRMATION TESTING FOR INFILTRATION CAPACITY MUST BE COMPLETED TO VERIFY THAT INFILTRATION SCMS WILL PERFORM AS DESIGNED ANYTIME 1) THE AREA OF AN INFILTRATION SCM HAS NOT BEEN PROTECTED AS DETERMINED BY A LICENSED PROFESSIONAL OR DEP/CD, AND 2) AN E&S BMP WILL BE CONVERTED TO A PCSM SCM AND USED FOR INFILTRATION
o UNDERDRAIN AND SOIL MEDIA INSTALLATION
o FINAL SEEDING
• SCM NO. 2
o EXCAVATION / ROUGH GRADING
o OUTLET PIPE, ANTI-SEEP COLLAR, CLAY CORE INSTALLATION
o UNDERDRAIN AND SOIL MEDIA INSTALLATION
o FINAL SEEDING
• THE PERMITTEE MUST SUBMIT A SCM CONSTRUCTION CERTIFICATION FORM FOR EACH STRUCTURAL SCM, WITHIN 30 DAYS OF COMPLETION. THE FORM MUST BE SIGNED BY A LICENSED PROFESSIONAL WHO OBSERVED THE CONSTRUCTION OF EACH SCM.

PROJECT WASTES NOTES

THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES ON OR OFF THE SITE. THESE BUILDING WASTES INCLUDE, BUT ARE NOT LIMITED TO EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, EXISTING ON-SITE REFUSE, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENTS SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET SEQ. NO BUILDING MATERIALS OR WASTES SHALL BE BURIED, BURNED, DUMPED OR DISCHARGED AT THE SITE. WASTE MATERIALS WITH OR FROM THE POST CONSTRUCTION STORMWATER MANAGEMENT (PCSM) BEST MANAGEMENT PRACTICES (BMP'S):

- SEDIMENT DEPOSITED AND ACCUMULATED IN PCSM SCMS SHALL BE REMOVED FROM THE SCM AND DISPOSED OF PROPERLY.
• CUTTINGS AND TRIMMINGS FROM PCSM SCMS SHALL BE DISPOSED OF IN A LOCAL COMPOSTING FACILITY.
• LITTER CLEANED FROM PCSM SCMS SHALL BE DISPOSED OF IN A TRASH RECEPTACLE FOR PICK UP BY THE LOCAL REFUSE HAULER.

STAGING OF EARTHMOVING

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING STAGING OF EARTHMOVING ACTIVITIES. EACH STAGE SHALL BE COMPLETED BEFORE A SUBSEQUENT STAGE IS INITIATED.

CONSTRUCTION OF THE SITE IMPROVEMENTS IS EXPECTED TO BEGIN IN THE FALL OF 2026. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. CONSTRUCTION WILL PROCEED IN A TIMELY MANNER IN ORDER TO LIMIT THE POTENTIAL FOR ACCELERATED EROSION AND SEDIMENTATION. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES THAT HAVE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMMEDIATELY APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION. SHOULD ANY SINKHOLES OR GROUNDWATER SOURCES BE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE GEOTECHNICAL ENGINEER IMMEDIATELY. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING, GRUBBING AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. ANY DEVIATION FROM THE FOLLOWING SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT.

FOR ANY PROPERTY CONTAINING A POST-CONSTRUCTION STORMWATER CONTROL MEASURE (SCM), THE PERMITTED OR CO-PERMITTEE SHALL RECORD AN INSTRUMENT WITH THE RECORDER OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE SCM AND THE RELATED OBLIGATIONS IN THE ORDINARY COURSE OF A TITLE SEARCH OF THE SUBJECT PROPERTY. THE RECORDED INSTRUMENT MUST IDENTIFY THE SCM(S), PROVIDE FOR NECESSARY ACCESS RELATED TO THE LONG-TERM OPERATION AND MAINTENANCE OF SCMS AND PROVIDE NOTICE THAT THE RESPONSIBILITY FOR LONG-TERM OPERATION AND MAINTENANCE OF THE SCM(S) IS A COVENANT THAT RUNS THE LAND THAT IS BINDING UPON AND ENFORCEABLE BY SUBSEQUENT GRANTEEES, AND PROVIDE PROOF OF FILING WITH THE NOTICE OF TERMINATION UNDER §102.7(b)(9) (RELATING TO PERMIT

TERMINATION). INSTRUMENT RECORDINGS ARE REQUIRED ON ALL LOTS WHERE ONE OR MORE SCMS WILL BE LOCATED AND SUBJECT TO LONG-TERM OPERATION AND MAINTENANCE. INSTRUMENT RECORDINGS ARE REQUIRED TO BE SUBMITTED TO THE LEBANON COUNTY CONSERVATION DISTRICT WITHIN 45 DAYS OF NPDES PERMIT AUTHORIZATION OR PRIOR TO SCHEDULING THE PRE-CONSTRUCTION MEETING.

SEQUENCE OF CONSTRUCTION

- 1. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE CONTRACTOR SHALL INVITE ALL SUB-CONTRACTORS, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE CIVIL ENGINEER, AND A REPRESENTATIVE OF THE LOCAL COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING. PERIMETER E&S CONTROLS MAY BE INSTALLED PRIOR TO THE PRE-CONSTRUCTION MEETING.
2. AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
3. 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 DEP PRIOR TO IMPLEMENTATION.
4. INSTALL ROCK CONSTRUCTION ENTRANCE AS SHOWN ON THE ATTACHED PLAN.
5. THE LIMITS OF DISTURBANCE (LOD) SHOULD BE MARKED PRIOR TO DISTURBANCE ACTIVITIES (I.E. SURVEY STAKES, POSTS & ROPE, CONSTRUCTION FENCE, ETC.)
6. LOCATE, STAKE, AND FLAG ALL AREAS MARKED AS PCSM SCMS. REFER TO PCSM PLAN FOR ADDITIONAL INFORMATION AND LOCATION OF PCSM SCMS. THESE AREAS SHOULD NOT BE COMPACTED DURING CONSTRUCTION. NO CONSTRUCTION TRAFFIC SHALL OCCUR IN THESE AREAS EXCEPT AS NECESSARY FOR EXCAVATION/GRADING.
7. INSTALL ALL PERIMETER SILT SOCK ON THE SITE LOCATIONS 1-27 AS INDICATED ON THE ATTACHED PLAN. SILT SOCK IS TO BE INSTALLED ALONG THE CONTOUR, AT A LEVEL GRADE. THE SILT SOCK SHOULD BE POSITIONED IN SUCH A WAY AS TO PREVENT ANY SEDIMENT FROM LEAVING THE SITE. SEDIMENT ACCUMULATING TO HALF THE HEIGHT OF THE SILT SOCK SHALL BE REMOVED IN ORDER TO RESTORE THE SEDIMENT STORAGE CAPACITY OF THESE AREAS. IN THE CASE OF A FAILURE OF THE SILT SOCK DUE TO HIGH FLOWS, A NEW SECTION OF SILT SOCK SHALL BE INSTALLED ACROSS THE FAILED PORTION OF THE SILT SOCK. AT NO POINT SHALL UN-STABILIZED AREA DRAIN OFFSITE UNCONTROLLED. THE SILT SOCK AT LOCATIONS 28-29 IS TO ENSURE SEDIMENTATION OF THE BASIN BOTTOM AREA DOES NOT OCCUR AND SHOULD BE INSTALLED DURING THE INSTALLATION OF THE PERMANENT SCMS ONCE THE SOIL MEDIA HAS BEEN INSTALLED.
8. UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT.
9. INSTALL SEDIMENT TRAP 1 WHICH WILL SERVE AS A SEDIMENT REMOVAL FACILITY DURING CONSTRUCTION AND BE CONVERTED TO A PERMANENT SCM UPON TRIBUTARY STABILIZATION. DISTURB ONLY THE MINIMUM AREA NECESSARY TO INSTALL THE SEDIMENT TRAP. THE SEDIMENT TRAP MUST BE CONSTRUCTED PRIOR TO ANY MAJOR EARTH DISTURBANCE, STRIPPING, OR CLEARING. INSTALL THE OUTLET PIPE ALONG WITH THE ASSOCIATED OUTLET STRUCTURE AND DOWNSTREAM LEVEL SPREADER. CONSTRUCT IMPERVIOUS CLAY CORE, ANTI-SEEP COLLARS, AND BACKFILL EMBANKMENT, COMPACTING TO 95% MAX DRY DENSITY. INSTALL NORTH AMERICAN GREEN S200 SLOPE PROTECTION AT EMERGENCY SPILLWAY. INSTALL SEED IN THE INTERIOR SLOPES AND BERMS OF FACILITY. INSTALL CLEAN OUT STAKE, TURBIDITY BARRIER, AND SKIMMER. REFER TO THE E&S SHEETS FOR ADDITIONAL DETAIL. A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING SEDIMENT BASIN EXCAVATION AND INSTALLATION OF THE OUTLET PIPES, ANTI-SEEP COLLARS, AND CLAY CORES.
10. CLEAR AND STRIP TOPSOIL AND PLACE ON THE TOPSOIL STOCKPILE AS SHOWN ON THE ATTACHED PLAN AND IN ACCORDANCE WITH PLAN DETAILS. INSTALL SILT SOCK BELOW TOPSOIL STOCKPILE AS SHOWN ON THE ATTACHED PLAN. TOPSOIL STOCKPILES MAY ONLY BE MOVED OR RE-LOCATED AS NECESSARY DURING EARTHMOVING OPERATIONS WITH APPROVAL FROM THE LOCAL CONSERVATION DISTRICT.
11. IF SOIL IS TAKEN TO OR BORROWED FROM ANOTHER CONSTRUCTION SITE, SAID SITE MUST HAVE AN APPROVED E&S PLAN.
12. INSTALL THE RETAINING WALL.
13. ROUGH GRADE THE DISTURBED AREA. INSTALL SLOPE LINING ON ALL AREAS INDICATED ON THE PLAN.
14. INSTALL WATER, SANITARY SEWER, STORM SEWER, AND ALL OTHER UTILITIES AT THIS TIME. DURING AND FOLLOWING STORM EVENTS PROVIDE A MEANS TO DIVERT SPILLWAYS. SPILL MATERIAL FROM EXCAVATION OF THE TRENCHES SHALL BE PLACED ON THE UP-SLOPE SIDE OF THE TRENCH. THE LENGTH OF OPEN TRENCH SHALL BE LIMITED TO THAT WHICH WILL BE BACKFILLED THE SAME DAY, AND ANY AFFECTED BMP'S SHALL BE IMMEDIATELY STABILIZED AND REPAIRED. THE TOPSOIL EXCAVATED FROM THE TRENCH SHALL BE CAREFULLY REMOVED AND STOCKPILED SEPARATELY FROM THE SUBSOIL. THE TOPSOIL SHALL BE RESTORED TO THE GRADED AREAS TO PRE-CONSTRUCTION CONDITIONS. WATER PUMPED FROM PITS AND TRENCHES SHALL BE FILTERED BY MEANS OF A FILTER BAG. IMMEDIATELY AFTER TRENCHES HAVE BEEN BACKFILLED, FINE-GRADE AREA.
15. INSTALL THE STONE SUB-BASE FOR THE DRIVEWAY, PARKING LOTS, AND CONCRETE SLABS (WHERE REQUIRED) PER PLAN REQUIREMENTS.
16. CONSTRUCT THE PROPOSED BUILDINGS AND ATTACH UTILITIES (ROOF DRAINS, SANITARY CONNECTIONS, WATER CONNECTIONS, ETC.)
17. UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES WILL EXCEED 4 DAYS, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES.
18. FINE GRADE ANY REMAINING AREAS AS SHOWN ON THE GRADING PLAN. DURING THIS TIME, FRAME EARTH MOVING EQUIPMENT WILL BE EMPLOYED TO REMOVE TOPSOIL AND EXCESS "FILL" MATERIAL, IF ANY EXISTS. SPREAD A MINIMUM OF 6 INCHES OF TOPSOIL ON FRESHLY GRADED AREAS. REFER TO THE TOPSOIL APPLICATION NOTES ON THE PLAN. FINAL PASSES DURING FINE GRADING SHALL BE MADE AT RIGHT ANGLES TO THE SLOPES. PREPARE THE REMAINDER OF THE DISTURBED AREA FOR PERMANENT STABILIZATION. SEEDED SHALL BE PREPARED IN ACCORDANCE WITH ACCEPTED PRACTICES. EACH SEED MIXTURE SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RATES AND INSTRUCTIONS.
19. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
20. PAVE THE REQUIRED AREAS. IF EARTHMOVING ACTIVITIES CEASE FOR FOUR (4) DAYS OR MORE TEMPORARY STABILIZATION SHALL BE APPLIED.
21. ANY SEDIMENT DEPOSITED WITHIN STORM SEWER CONVEYANCE PIPES SHALL BE REMOVED PRIOR TO COMPLETION OF THE PROJECT AND PRIOR TO CONVERSION OF THE SEDIMENT BASIN/TRAPS TO PERMANENT SCMS. ANY WATER PUMPED FROM THE SEDIMENT REMOVAL FACILITIES OR OTHER AREA OF THE SITE SHALL BE PUMPED THROUGH A FILTER BAG AND THE COLLECTED SEDIMENT SHALL BE DISPOSED OF PROPERLY. ALL AREAS DISTURBED DURING THIS PROCESS SHALL BE STABILIZED IMMEDIATELY THROUGH SEEDING AND MULCHING. THE COUNTY CONSERVATION DISTRICT SHOULD BE CONTACTED PRIOR TO CONVERSION OR REMOVAL OF ANY E&S BMP'S AND MAY REQUIRE A SITE INSPECTION. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS ONCE THE SITE IS COMPLETELY STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS) WITH APPROVAL OF THE COUNTY CONSERVATION DISTRICT.
22. UPON STABILIZATION OF ALL TRIBUTARY DISTURBED AREAS, MODIFY SEDIMENT TRAP 1 AS REQUIRED TO INSTALL SCM 1 AS SHOWN ON THE PCSM PLAN. REMOVE TURBIDITY BARRIER, CLEANOUT STAKE, AND SKIMMER. THE FACILITY SHALL BE OVER-EXCAVATED AND SCARIFIED FOR SOIL MEDIA PLACEMENT IN ACCORDANCE WITH THE PLAN DETAIL. THE EXCAVATOR SHOULD AVOID EXCAVATING TO THE FINAL DESIGN ELEVATION. THE SOIL MEDIA BLEND IS READY TO BE PLACED. THIS WILL MINIMIZE THE EXPOSURE OF SUBGRADE SOIL AND AID IN REDUCING COMPACTION. CONFIRMATION TESTING FOR INFILTRATION CAPACITY MUST BE COMPLETED TO VERIFY THAT INFILTRATION SCMS WILL PERFORM AS DESIGNED ANYTIME 1) THE AREA OF AN INFILTRATION SCM HAS NOT BEEN PROTECTED AS DETERMINED BY A LICENSED PROFESSIONAL OR DEP/CD, AND 2) AN E&S BMP WILL BE CONVERTED TO A PCSM SCM AND USED FOR INFILTRATION. CONFIRMATION TESTING IS A CRITICAL STAGE OF SCM CONSTRUCTION THAT MUST BE OVERSEEN BY A LICENSED PROFESSIONAL OR DESIGNEE. DURING OVER-EXCAVATION OF THE SCM BOTTOM, INSTALL THE UNDERDRAIN SYSTEM. PLACE THE SOIL MEDIA TO THE SPECIFIED ELEVATION WITHIN THE SCM. INSTALL THE SILT SOCK AROUND THE BASIN BOTTOM IMMEDIATELY AFTER SOIL MEDIA PLACEMENT TO PREVENT ANY POTENTIAL SEDIMENTATION. ANY SOIL COMPACTION SHOULD BE AVOIDED IN THE BASIN BOTTOM. WHEN SEEDING THE BASIN MIXES BE SURE TO HAND RAKE THE SEED INTO THE SOIL. A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING EXCAVATION/SCARIFICATION, CONFIRMATION INFILTRATION TESTING, INSTALLATION OF THE UNDERDRAIN SYSTEM AND SOIL MEDIA, AND FINAL GRADING/SEEDING.
23. UPON STABILIZATION OF ALL TRIBUTARY DISTURBED AREAS, EXCAVATE AS REQUIRED TO INSTALL SCM NO. 2. INSTALL THE OUTLET PIPE ALONG WITH THE ASSOCIATED OUTLET STRUCTURE AND DOWNSTREAM LEVEL SPREADER. CONSTRUCT IMPERVIOUS CLAY CORE, ANTI-SEEP COLLARS, AND BACKFILL EMBANKMENT, COMPACTING TO 95% MAX DRY DENSITY. THE FACILITY SHALL BE OVER-EXCAVATED AND SCARIFIED FOR SOIL MEDIA PLACEMENT IN ACCORDANCE WITH THE PLAN DETAIL. THE EXCAVATOR SHOULD AVOID EXCAVATING TO THE FINAL DESIGN INVERT UNTIL THE SOIL MEDIA BLEND IS READY TO BE PLACED. THIS WILL MINIMIZE THE EXPOSURE OF SUBGRADE SOIL AND AID IN REDUCING COMPACTION. DURING OVER-EXCAVATION OF THE SCM BOTTOM, INSTALL THE UNDERDRAIN SYSTEM. PLACE THE SOIL MEDIA TO THE SPECIFIED ELEVATION WITHIN THE SCM. INSTALL THE SILT SOCK AROUND THE BASIN BOTTOM IMMEDIATELY AFTER SOIL MEDIA PLACEMENT TO PREVENT ANY POTENTIAL SEDIMENTATION. ANY SOIL COMPACTION SHOULD BE AVOIDED IN THE BASIN BOTTOM. WHEN SEEDING THE BASIN MIXES BE SURE TO HAND RAKE THE SEED INTO THE SOIL. A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING EXCAVATION/SCARIFICATION, CONFIRMATION INFILTRATION TESTING, INSTALLATION OF THE OUTLET PIPES, ANTI-SEEP COLLARS, AND CLAY CORES, UNDERDRAIN SYSTEM, SOIL MEDIA, AND FINAL GRADING/SEEDING.
24. THE PERMITTEE MUST SUBMIT A SCM CONSTRUCTION CERTIFICATION FORM FOR EACH STRUCTURAL SCM, WITHIN 30 DAYS OF COMPLETION. THE FORM MUST BE SIGNED BY A LICENSED PROFESSIONAL WHO OBSERVED THE CONSTRUCTION OF EACH SCM.
25. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THESE BUILDING WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY.

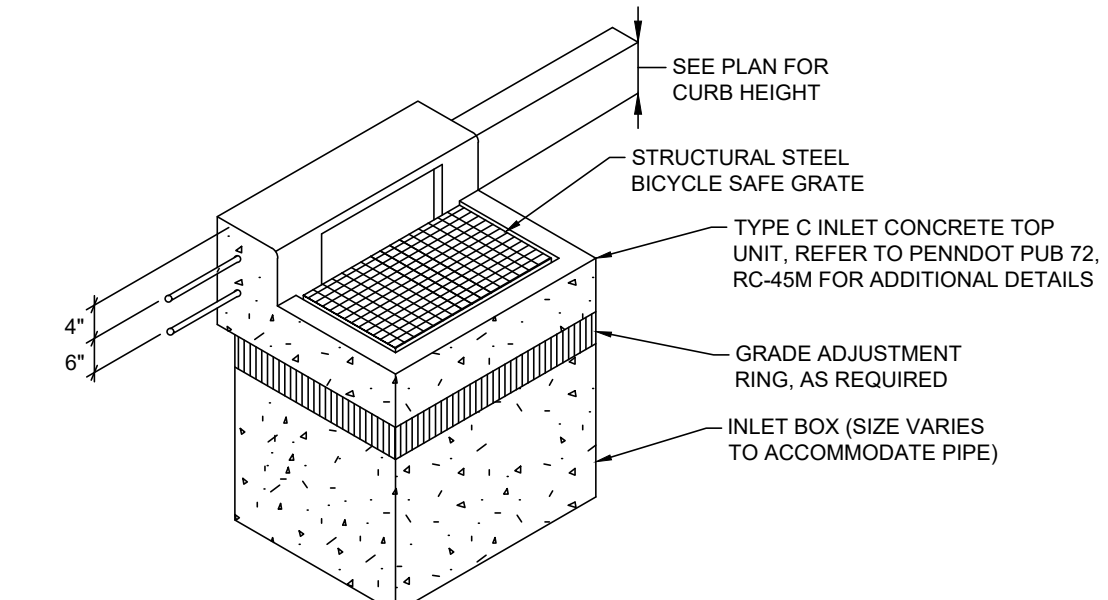
26. WITHIN 30 DAYS AFTER THE COMPLETION OF EARTH DISTURBANCE ACTIVITIES AUTHORIZED BY THE NPDES PERMIT, INCLUDING THE PERMANENT STABILIZATION OF THE SITE AND PROPER INSTALLATION OF PCSM SCMS IN ACCORDANCE WITH THE APPROVED PCSM PLAN, OR UPON SUBMISSION OF THE NOI IF SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THE APPROVED E&S AND PCSM PLANS. COMPLETION CERTIFICATES ARE NEEDED TO ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT AND THE APPROVED E&S AND PCSM PLANS.

Table with 2 columns: DATE, BY. Rows for REVISION 1 through 5.

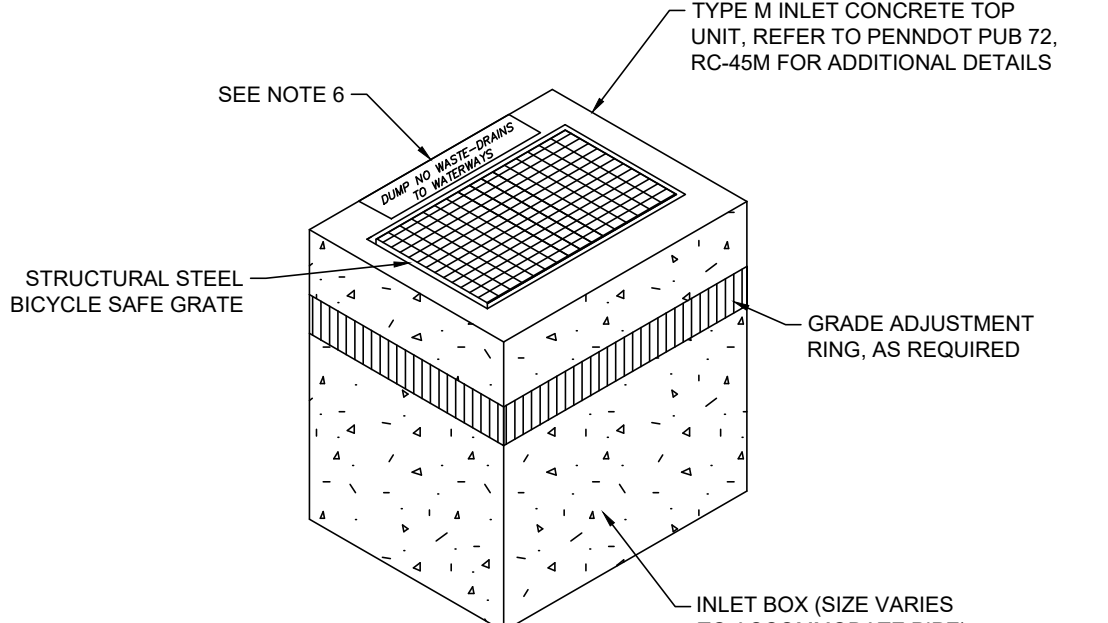
POST CONSTRUCTION STORMWATER MANAGEMENT NOTES
PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN
for
LCW HOLDINGS, LLC APARTMENT COMPLEX
located in
North Lebanon Township
Lebanon County, Pennsylvania



Table with 2 columns: FIELD CREW, BASE MAP, DRAWN, DESIGN, CHECKED, DATE, SCALE, PROJECT #.



PA DOT TYPE 'C' INLET



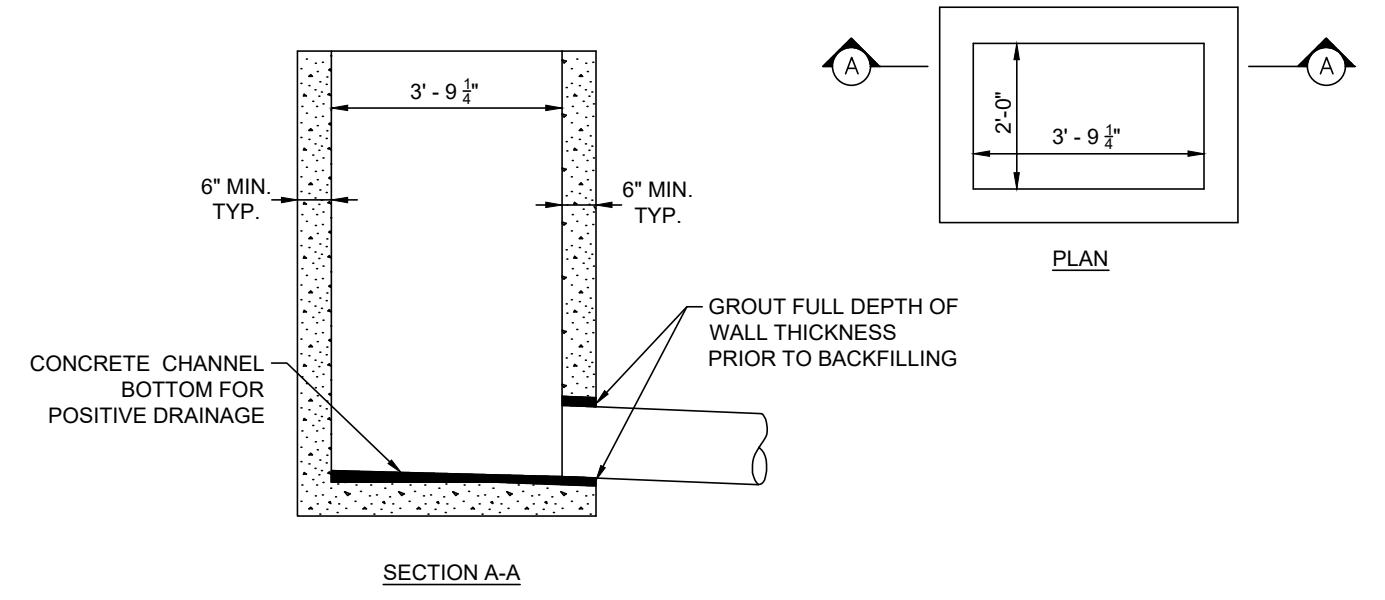
PA DOT TYPE 'M' INLET

NOTES:

1. ALL INLET TOPS SHALL BE PRECAST CONCRETE.
2. CONCRETE TOP UNITS WHICH SEAT THE GRATE DIRECTLY WITHIN THE UNIT SHALL UTILIZE 1-1/4" X 1-1/4" ANGLES EMBEDDED IN THE CONCRETE AS A BEARING AREA FOR THE GRATE.
3. THIS STANDARD DEPICTS THE SHAPE AND DIMENSIONS REQUIRED FOR UNIFORMITY AND COMPATIBILITY. IT IS NOT INTENDED TO SHOW THE DETAILS REQUIRED FOR MANUFACTURING AND HANDLING. ONLY THOSE ITEMS WHICH ARE SUPPLIED BY AN APPROVED MANUFACTURER AS LISTED IN PA BULLETIN NO. 15 WILL BE PERMITTED.
4. THE SELECTION OF COMPONENTS TO ACHIEVE A SPECIFIED INLET TYPE IS THE CONTRACTOR'S RESPONSIBILITY.
5. PIPES SHALL BE LOCATED AS REQUIRED.
6. GRADE ADJUSTMENT RINGS MAY BE OF MASONRY OR PRECAST CONCRETE CONSTRUCTION, AS APPROVED.
7. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PENNDOT PUB. 408, SECTION 605 & PUB. 72, RC-45M.
8. ALL INLETS OVER FOUR (4) FEET IN DEPTH SHALL BE PROVIDED WITH STEPS FOR ACCESSIBILITY.
9. ALL INLETS SHALL BE CONSTRUCTED WITH CONCRETE FLOW CHANNELS CAST IN-PLACE IN THE BOTTOM OF EACH INLET, EXCEPT THE LAST TWO INLETS BEFORE A STORM SEWER OUTFALL SHALL BE CONSTRUCTED WITH A MINIMUM 12" SUMP TO CATCH DEBRIS. INLET SUMPS SHALL HAVE VEEHOLES.

PENNDOT STORMWATER INLET TOPS (TYPE C & M)

NO SCALE

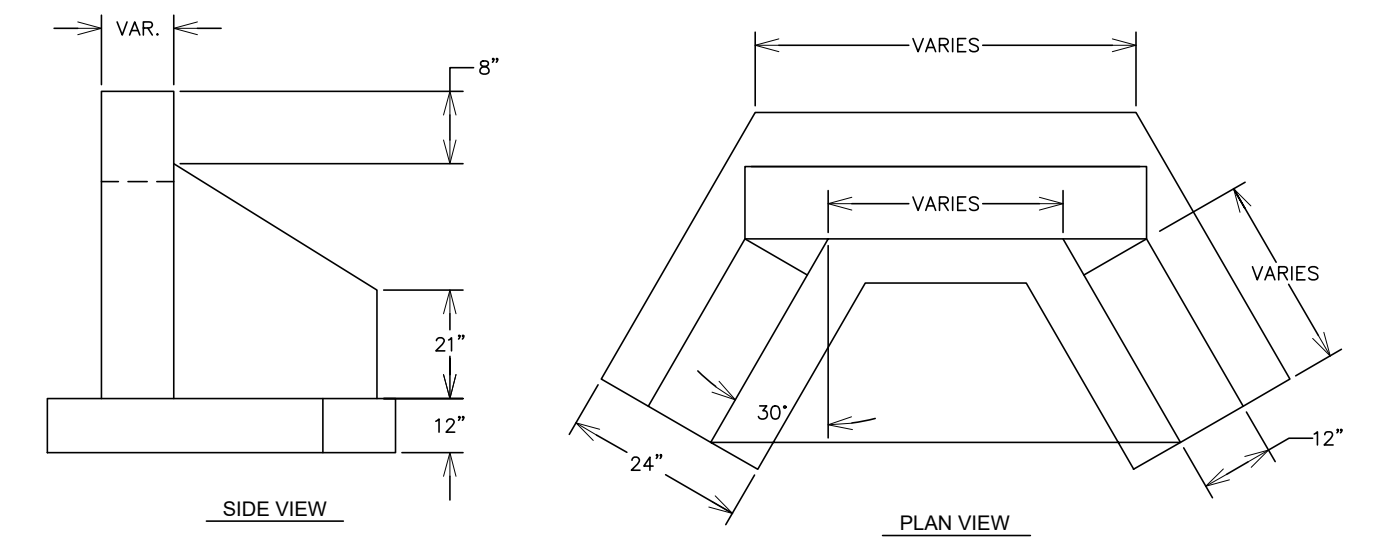


STANDARD INLET BOX

- NOTES:
1. ALL INLET BOXES SHALL BE PRECAST CONCRETE.
 2. ALL INLETS OVER FOUR (4) FEET IN DEPTH SHALL BE PROVIDED WITH STEPS FOR ACCESSIBILITY.
 3. ALL DRAINAGE STRUCTURES SHALL HAVE POURED-IN-PLACE CONCRETE CHANNEL BOTTOM, UNLESS OTHERWISE NOTED.
 4. ALL STORMWATER INLET BOXES SHALL CONFORM TO CURRENT PENNDOT PUB. 72, RC-46M STANDARDS. CONTRACTOR SHALL VERIFY INLET BOX SIZING BASED ON PIPE SIZES AND ALIGNMENT PRIOR TO ORDERING PRECAST STRUCTURES.

STANDARD INLET BOX

NO SCALE

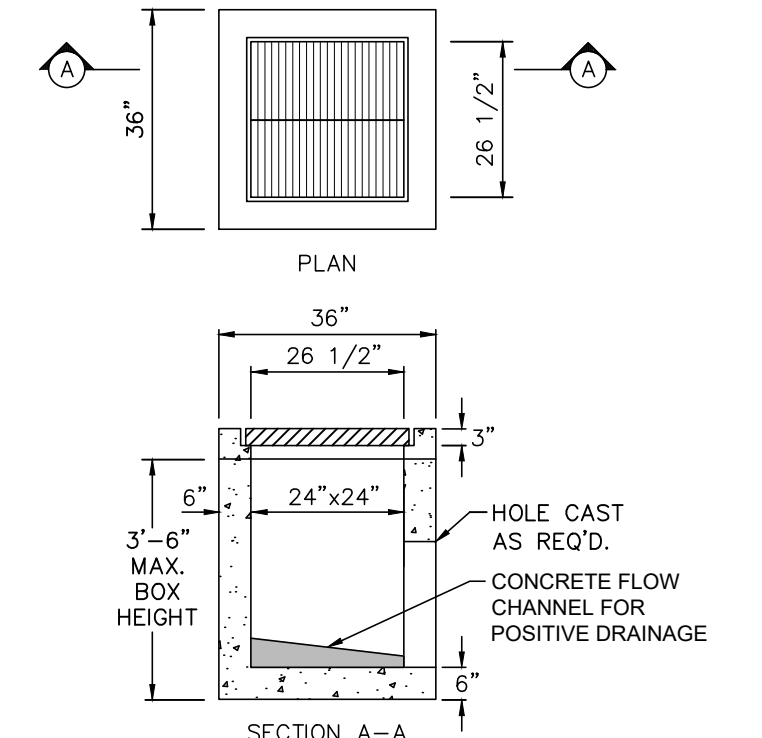


TYPE DW ENDWALL DETAIL

- NOTES:
1. ALL TYPE DW ENDWALLS SHALL CONFORM TO THE CURRENT PENNDOT RC-31M DRAWINGS.
 2. ALL DIMENSIONS THAT ARE IDENTIFIED AS VARIES ARE CUSTOM BASED ON THE SIZE OF THE PIPE. SEE PENNDOT PUBLICATION 72, RC-31M FOR EXACT DIMENSIONS.
 3. MAXIMUM PIPE SIZE = 48" SCLCPP.

TYPE DW ENDWALL DETAIL

NO SCALE



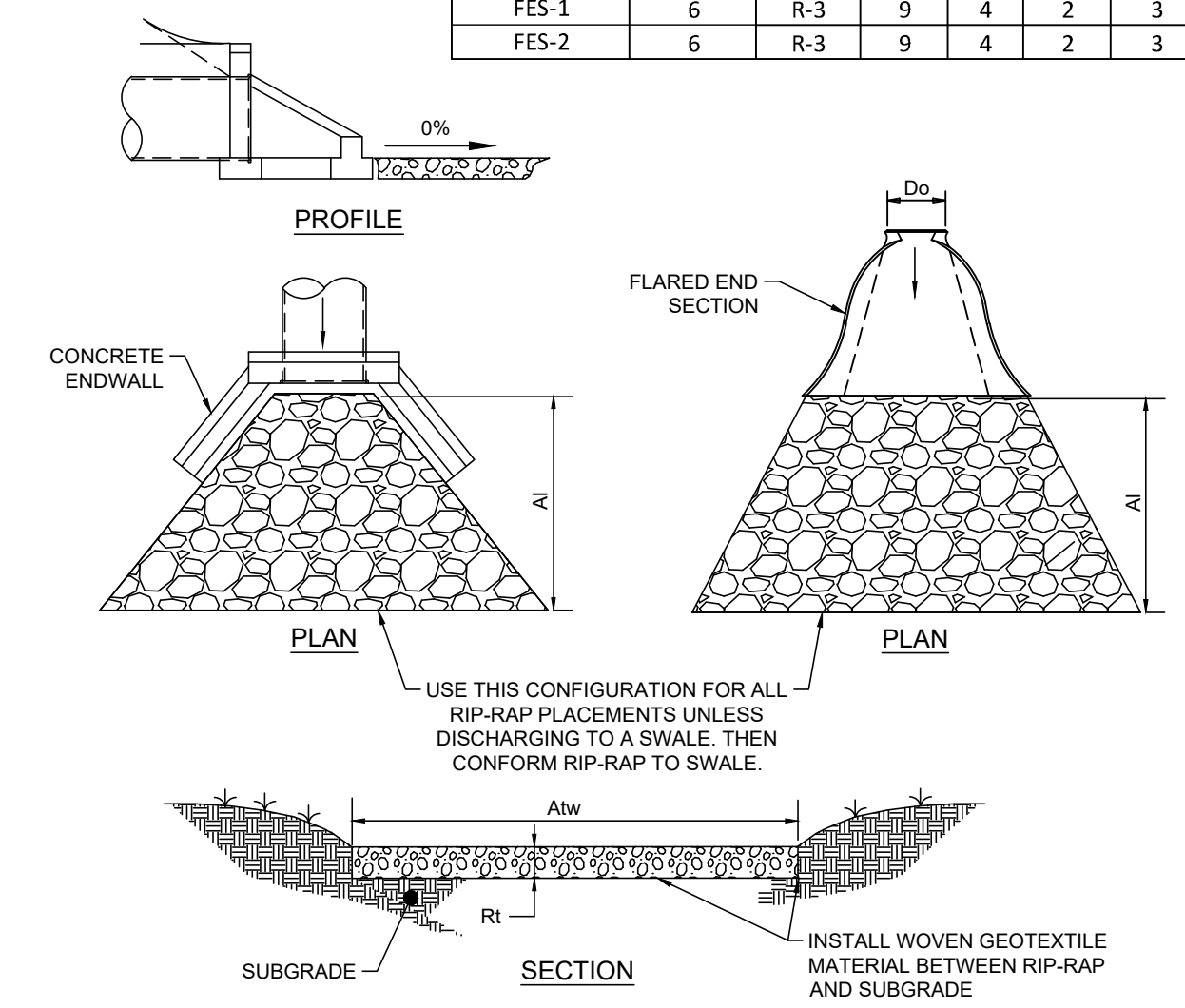
TYPE A INLET BOX

- NOTES:
1. ALL INLETS OVER FOUR (4) FEET IN DEPTH SHALL BE PROVIDED WITH STEPS FOR ACCESSIBILITY.
 2. ALL INLETS SHALL BE CONSTRUCTED WITH CONCRETE FLOW CHANNELS CAST-IN-PLACE IN THE BOTTOM OF EACH INLET.
 3. INLET TOPS SHALL BE PRECAST CONCRETE TOP UNITS CONFORMING TO PENNDOT PUB. 72 RC-45M.
 4. INLET BOXES SHALL BE PRECAST CONCRETE CONFORMING TO PENNDOT PUB. 72 RC-46M.

TYPE A INLET BOX

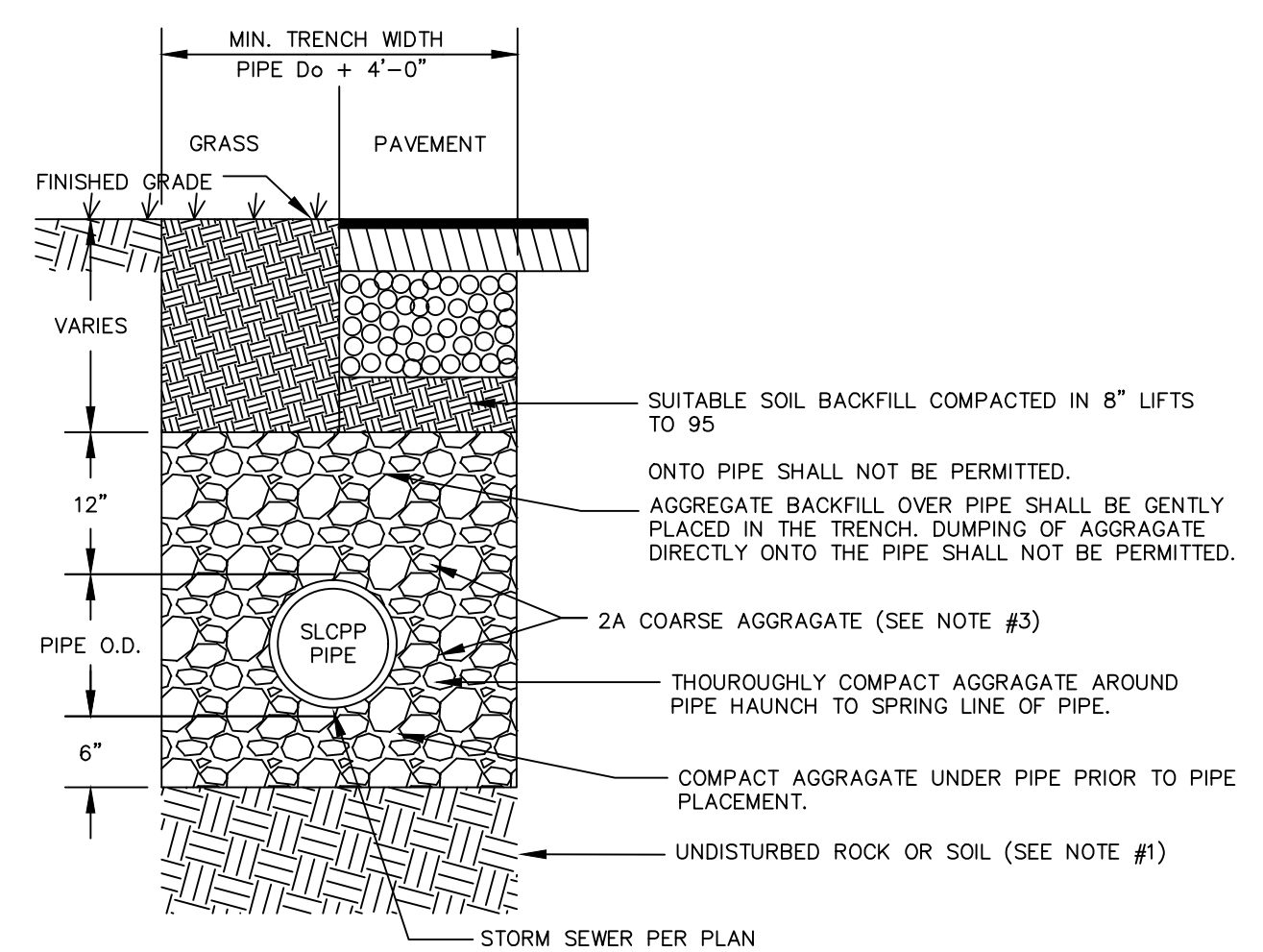
NO SCALE

PIPE NO.	PIPE DIA. Do (in.)	RIPRAP SIZE	Rt (in)	Al (ft)	Alw (ft)	Atw (ft)
EW-1	12	R-4	18	4	3	5
EW-2	12	R-4	18	4	3	5
FES-1	6	R-3	9	4	2	3
FES-2	6	R-3	9	4	2	3



FLARED END SECTION/ENDWALL RIP RAP DETAIL

NO SCALE

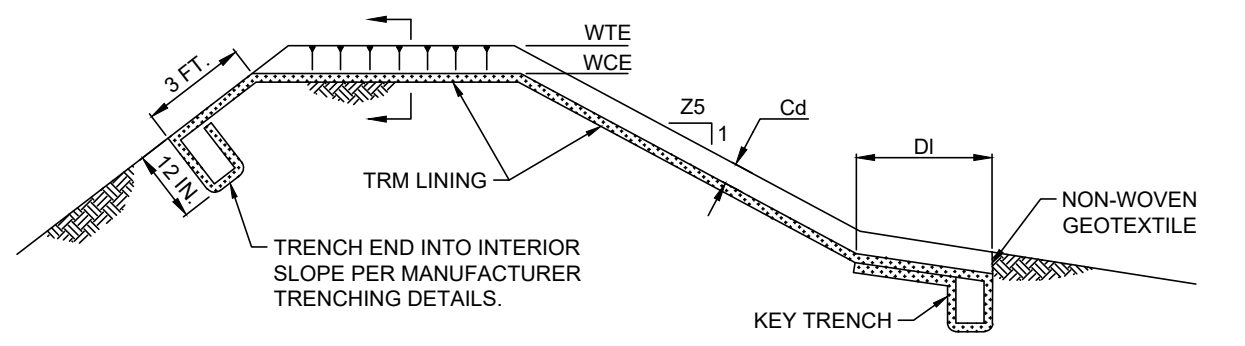


TYPICAL TRENCH DETAIL FOR SCLCPP INSTALLATION

- NOTE:
1. USE #2A AGGREGATE COMPACTED IN 4 INCH LIFTS AS NECESSARY TO FILL ANY EXCAVATED UNSUITABLE MATERIALS.
 2. ALL PIPE INSTALLATIONS SHALL HAVE STRAIGHT ALIGNMENTS BETWEEN DRAINAGE STRUCTURES.
 3. NOT TO BE USED FOR OUTLET PIPES BASIN EMBANKMENTS.
 4. ALL TRENCHING SHALL CONFORM TO THE CURRENT PENNDOT RC-30M DRAWINGS.

TYPICAL TRENCH DETAIL FOR SCLCPP INSTALLATION

NO SCALE

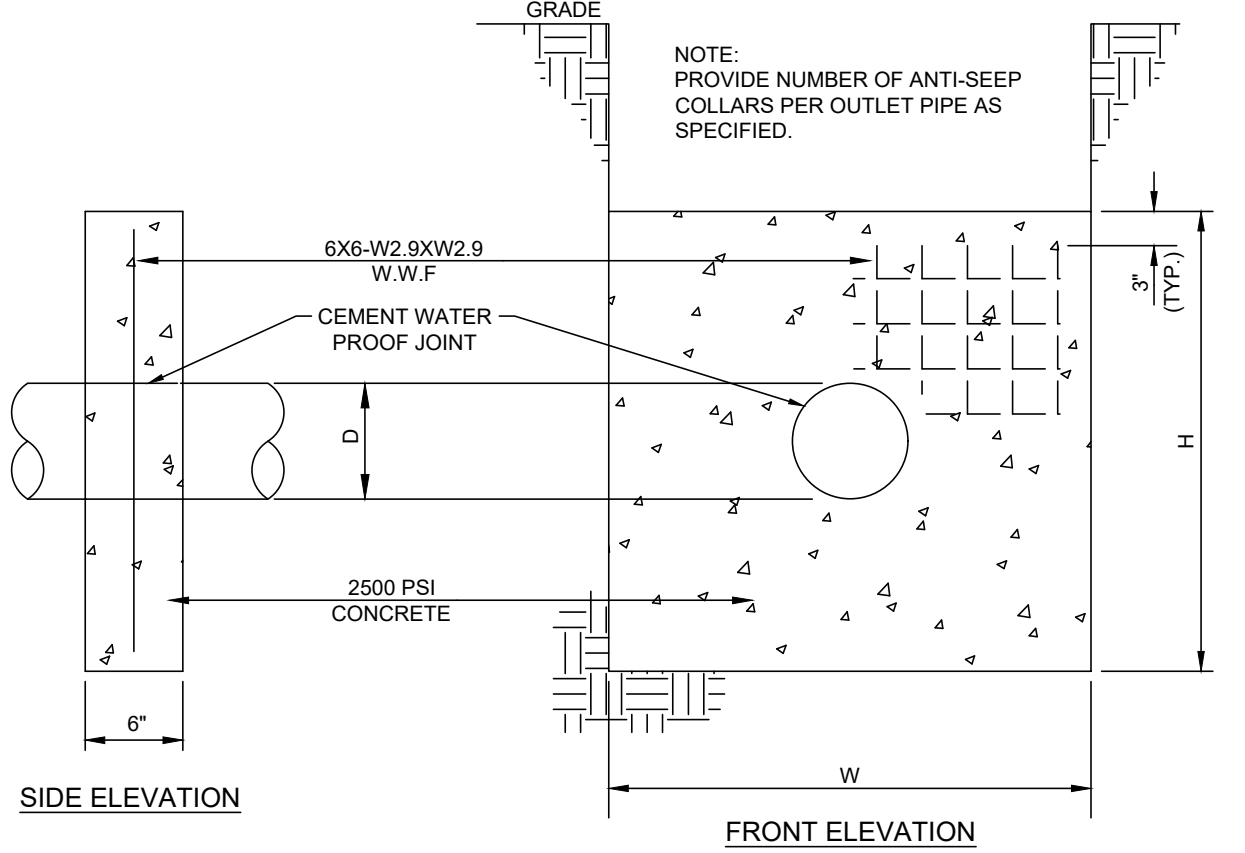


EMERGENCY SPILLWAY DETAIL

SCM NO.	WEIR		LINING		CHANNEL		DISSIPATOR		RIPRAP THICK. DRI (IN)				
	Z3 (FT)	Z4 (FT)	TRM TYPE	STAPLE PATTERN	Z5 (FT)	DEPTH (FT)	LENGTH (FT)	WIDTH (FT)					
1	3	3	583.17	582.00	80	S200	E	N/A	N/A	15	N/A	N/A	N/A

EMERGENCY SPILLWAY DETAIL

NO SCALE

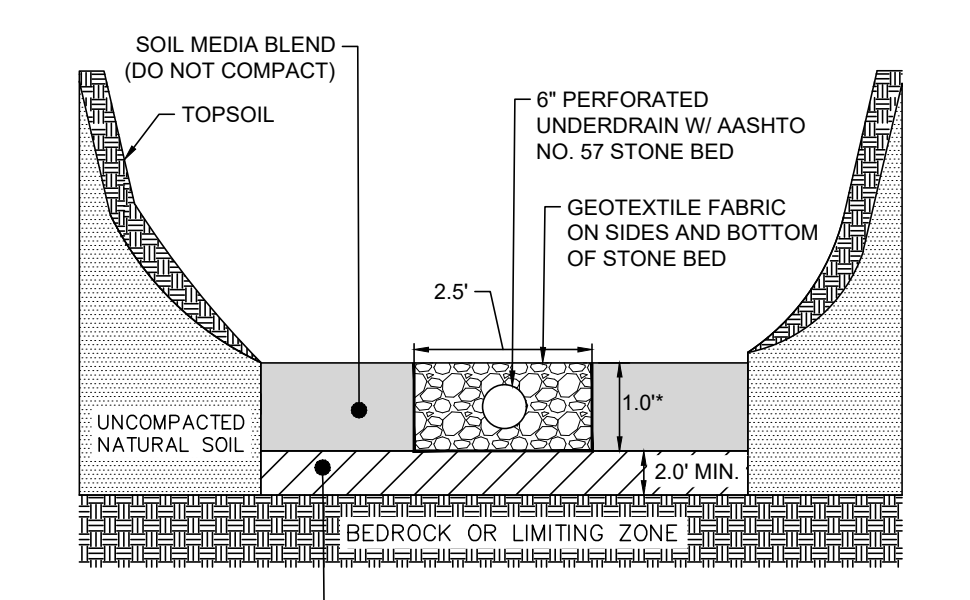


CONCRETE ANTI-SEEP COLLAR DETAIL

SCM NO.	W	H	D	# OF COLLARS
1	3.21'	3.21'	12"	2
2	2.47'	2.47'	12"	2

CONCRETE ANTI-SEEP COLLAR DETAIL

NO SCALE



SCM NO. 1 & 2 BOTTOM TYPICAL CROSS SECTION DETAIL

NO SCALE

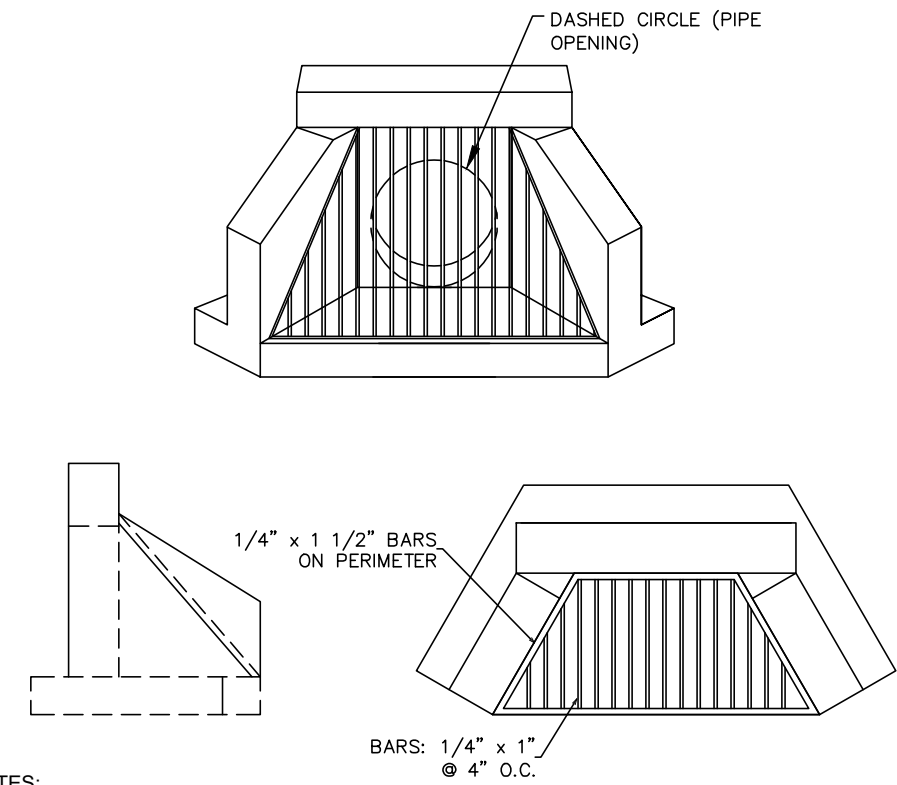
Soil Types for Soil Media, based on USDA Classification	Ranges of USDA Particle Size Percentages						Estimated Infiltration Rates (in/hr)
	Sand		Silt		Clay		
	Min	Max	Min	Max	Min	Max	
Sand, Loamy Sand, Sandy Loam, Loam	50	100	0	50	0	20	0.5

SOIL MEDIA SHALL MEET THE SPECIFICATIONS IN THE TABLE ABOVE AND SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER. NATIVE ON-SITE SOILS MAY BE UTILIZED IF THE FINAL BLEND MEETS THE REQUIRED COMPOSITION.

SAND USED IN ENGINEERED SOILS SHALL BE SILICA SAND MEETING THE SPECIFICATIONS IDENTIFIED IN AASHTO M-6 OR ASTM C-33 FOR SILICA CONCRETE SAND, CALCIUM CARBONATE, MAGNESIUM CARBONATE, AND/OR DIABASE SUBSTITUTIONS ARE NOT ACCEPTABLE. NEITHER STONE DUST NOR #10 SCREENINGS MAY BE SUBSTITUTED FOR SAND.

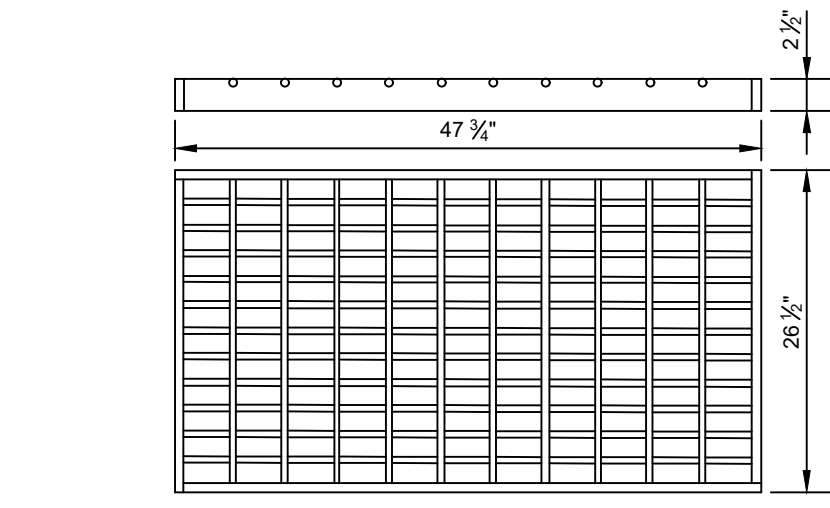
SCM NO. 1 & 2 BOTTOM TYPICAL CROSS SECTION DETAIL

NO SCALE



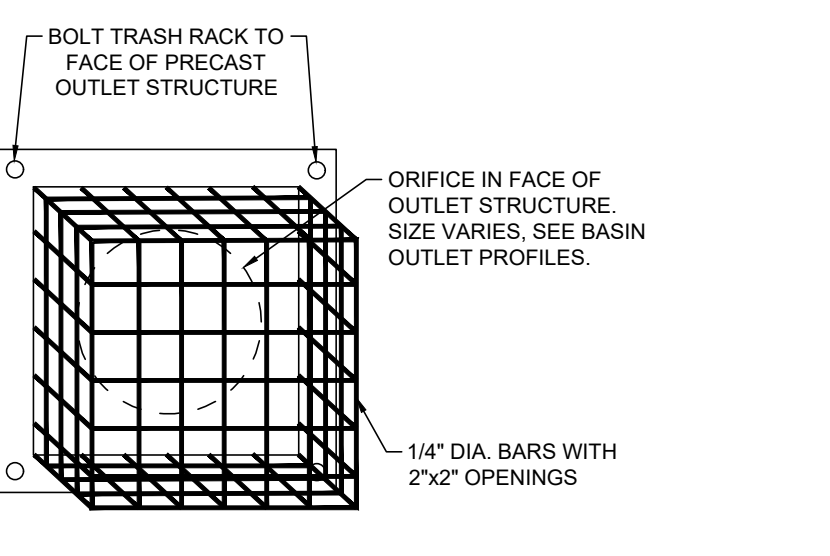
TYPE DW ENDWALL TRASH RACK DETAIL

NO SCALE



STRUCTURAL STEEL GRATE-BICYCLE SAFE

NO SCALE



ORIFICE TRASH RACK DETAIL

NO SCALE

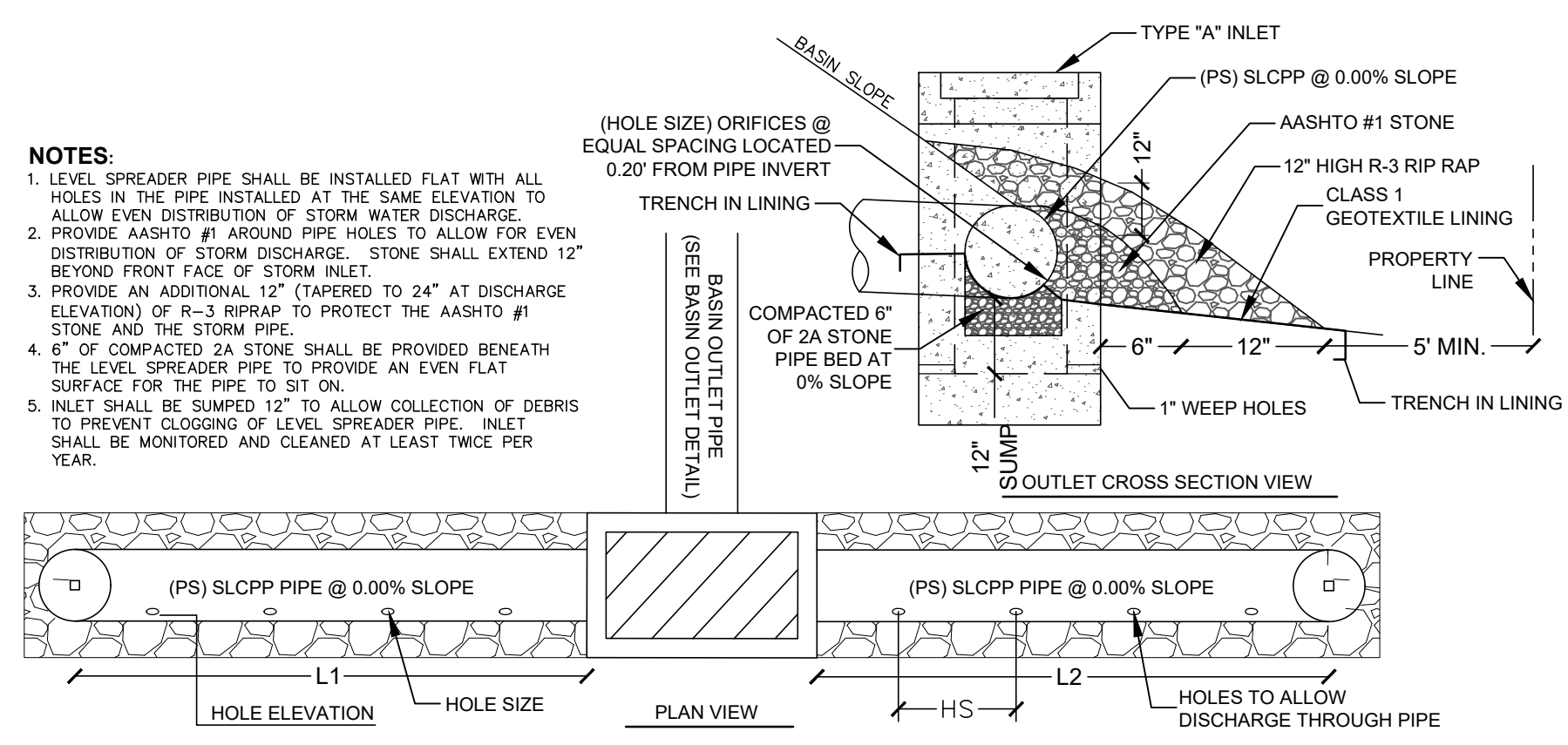
BY	
DATE	
REVISION	

BY	
DATE	
REVISION	

POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
 PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN
 For
LCW HOLDINGS, LLC APARTMENT COMPLEX
 located in
 North Lebanon Township
 Lebanon County, Pennsylvania

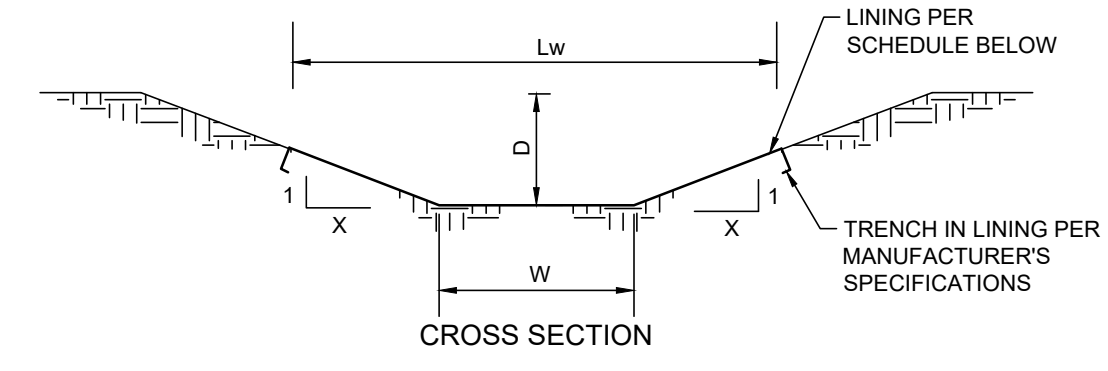
SEI ENGINEERING SURVEYING
 279 N. ZINNS MILL ROAD, LEBANON, PA 17042
 717-272-7110 WWW.STECKRECK.NET

FIELD CREW:	MOD, JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/16/26
SCALE:	AS NOTED
PROJECT	#2547-25-001

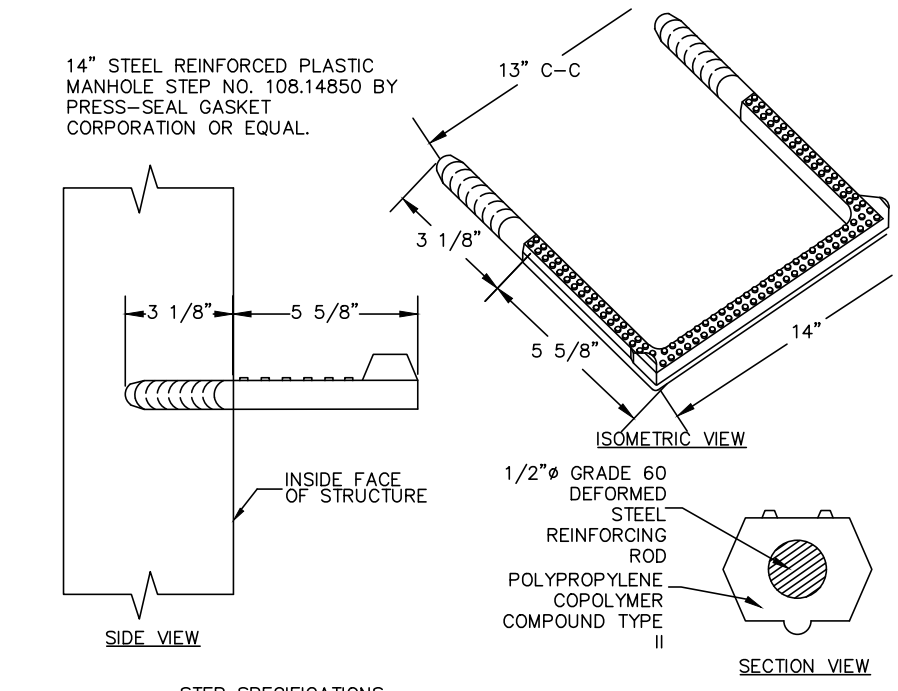


SCM NO.	OUTLET	PIPE SIZE (PS)	HOLE SIZE	HOLE ELEVATION	HOLE SPACING (HS)	# OF HOLES	L1	L2	TOTAL LENGTH (L1+L2)
1	1	12"	1.5"	578.20'	0.284'	81	16'	7'	23'
2	2	12"	1"	589.70'	0.421'	24	5'	5'	10'

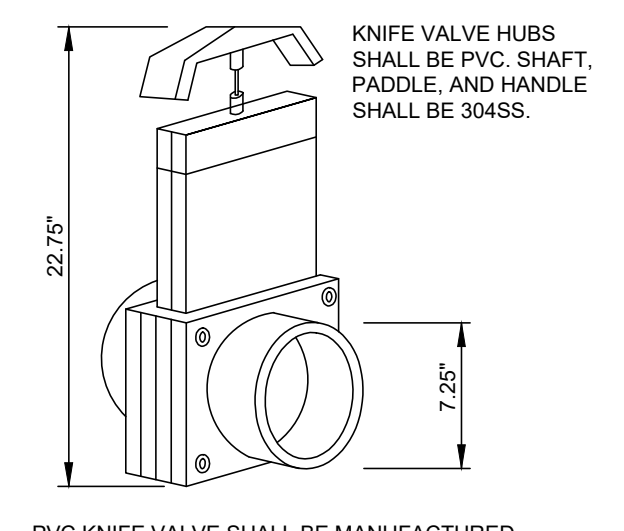
LEVEL SPREADER DETAIL
NO SCALE



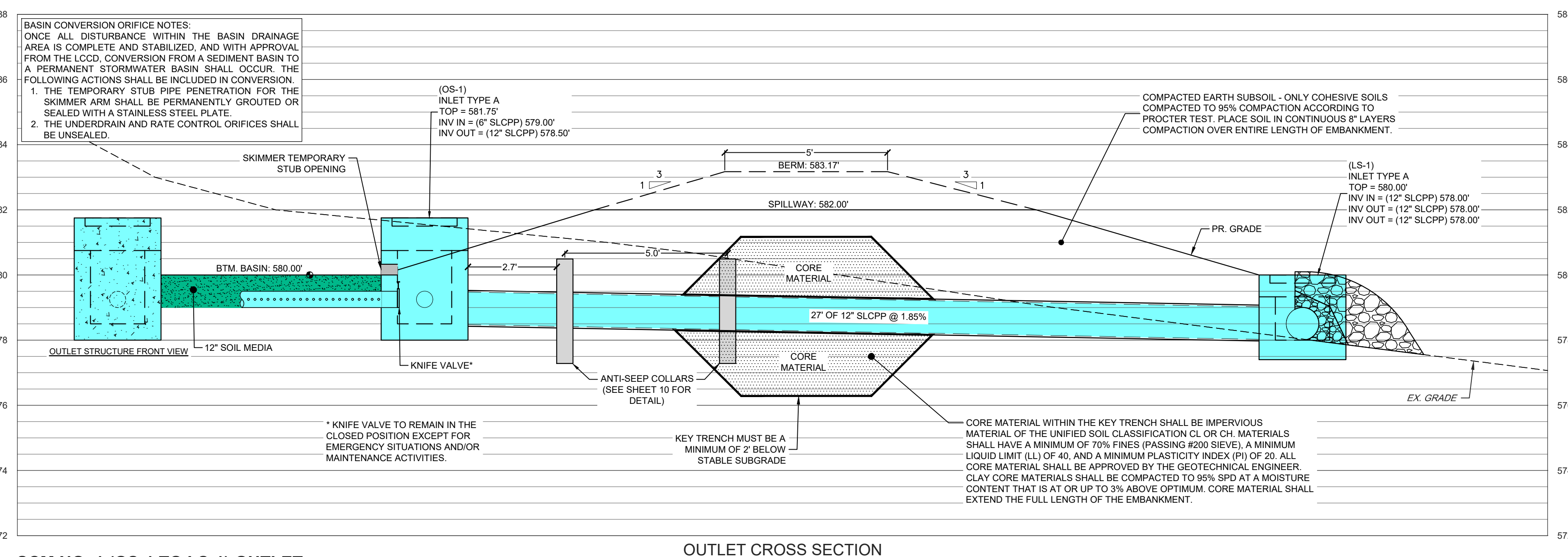
SWALE DETAIL
NO SCALE



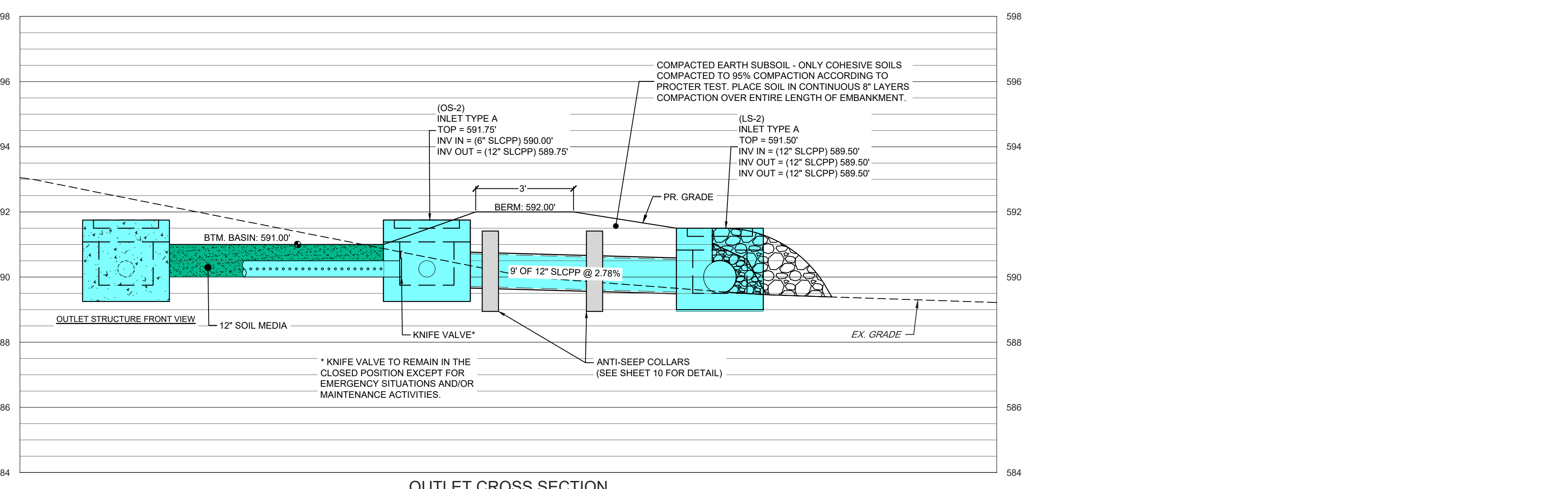
STEEL REINFORCED PLASTIC STEP
NOT TO SCALE



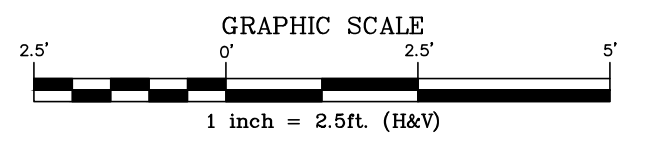
6" PVC KNIFE VALVE DETAIL
NO SCALE



SCM NO. 1 (OS-1 TO LS-1) OUTLET
SCALE: 1" = 2.5'



SCM NO. 2 (OS-2 TO LS-2) OUTLET
SCALE: 1" = 2.5'



POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN
For
LCW HOLDINGS, LLC APARTMENT COMPLEX
located in
North Lebanon Township
Lebanon County, Pennsylvania

SEI ENGINEERING SURVEYING
279 N. ZINNS MILL ROAD, LEBANON, PA 17042
717-272-7110 WWW.STECKRECK.NET

FIELD CREW:	MOD, JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/16/26
SCALE:	1" = 2.5'
PROJECT #	2547-25-001



LEGEND

EXISTING FEATURES	
	EXISTING ADJOINER LINE
	EXISTING BOUNDARY LINE AND CORNERS
	EXISTING EDGE OF PAVEMENT AND CURB LINE
	EXISTING RIGHT-OF-WAY
	EXISTING FENCE
	EXISTING SEWER
	EXISTING STORMWATER
	EXISTING WATERLINE
	EXISTING GASLINE
	EXISTING SIDEWALK/CONCRETE
	EXISTING CONTOURS
	EXISTING SOILS
PROPOSED FEATURES	
	PROPOSED BUILDING SETBACK
	PROPOSED BOUNDARY LINE AND CORNERS
	PROPOSED EDGE OF PAVEMENT AND CURB LINE
	PROPOSED RIGHT-OF-WAY
	PROPOSED FENCE
	PROPOSED SEWER
	PROPOSED STORMWATER
	PROPOSED DOMESTIC WATERLINE
	PROPOSED GASLINE
	PROPOSED CONCRETE/SIDEWALK
	PROPOSED CONTOURS

DATE	BY

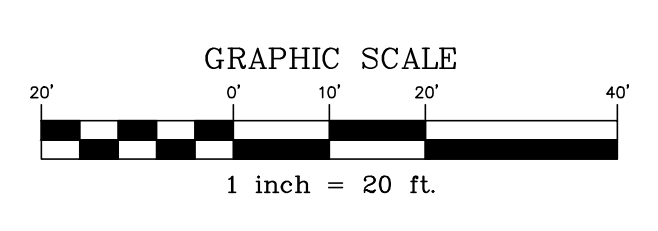
REVISION

GRADING PLAN

PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN
For
LCW HOLDINGS, LLC APARTMENT COMPLEX
located in
North Lebanon Township
Lebanon County, Pennsylvania



FIELD CREW: MOD, JEC
BASE MAP: JEC
DRAWN: CDS
DESIGN: CDS
CHECKED: SAS
DATE: 3/16/26
SCALE: 1" = 20'
PROJECT # 2547-25-001





LEGEND

EXISTING FEATURES	
	EXISTING ADJOINER LINE
	EXISTING BOUNDARY LINE AND CORNERS
	EXISTING EDGE OF PAVEMENT AND CURB LINE
	EXISTING RIGHT-OF-WAY LINE
	EXISTING ZONING BOUNDARY
	EXISTING SEWER
	EXISTING STORMWATER
	EXISTING WATERLINE
	EXISTING GASLINE
	EXISTING SIDEWALK/CONCRETE
PROPOSED FEATURES	
	PROPOSED BOUNDARY LINE AND CORNERS
	PROPOSED RIGHT-OF-WAY
	PROPOSED ROAD CENTERLINE
	PROPOSED ROADWAY PAVING
	PROPOSED CONCRETE SIDEWALK
	PROPOSED EDGE OF PAVEMENT AND CURB LINE
	PROPOSED STORMWATER
	PROPOSED GASLINE
	PROPOSED SANITARY SEWER
	PROPOSED WATERLINE

BY	
DATE	
REVISION	

BY	
DATE	
REVISION	

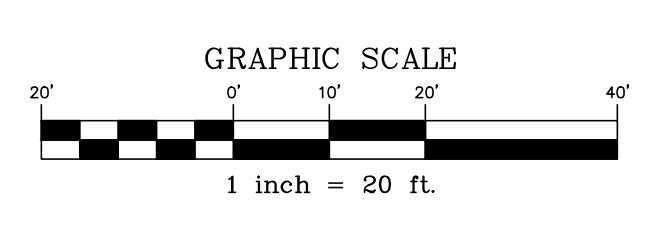
UTILITY PLAN

PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN
For
LCW HOLDINGS, LLC APARTMENT COMPLEX
located in
North Lebanon Township
Lebanon County, Pennsylvania

SEI
ENGINEERING
SURVEYING

279 N. ZINNS MILL ROAD, LEBANON, PA 17042
717-272-7110
WWW.STECKRECK.NET

FIELD CREW:	MOD, JEC
BASE MAP:	JEC
DRAWN:	CDS
DESIGN:	CDS
CHECKED:	SAS
DATE:	3/16/26
SCALE:	1" = 20'
PROJECT #	2547-25-001





KEY	QUANTITY	SIZE	BOTANICAL NAME	COMMON NAME
AG	6	2'-2.5' CAL	GINKGO BILOBA	AUTUMN GOLD
CS	6	24'-36"	CORNUS STOLONIFERA 'ARCTIC FIRE'	RED TWIG DOGWOOD
AR	3	24'-36"	ACER RUBRUM	RED MAPLE
RR	12	24'-48"	RHODODENDRON X 'RAMAPO' (H-1)	RHODODENDRON
WF	7	15'-18"	WEIGELA FLORIDA 'BRAMWELL'	FINE WINE WIGELLA
PO	7	6"	PICEA OMORICA 'BRUNING'	BRUNING'S SERBIAN SPRUCE
QB	1	2" CAL	QUERCUS X BIMUNDORUM	SKINNY GENES OAK
CC	4	2" CAL	CARPINUS CAROLINIANA	AMERICAN HORNBEAM

GENERAL LANDSCAPE NOTES (BY LANDSCAPE CONTRACTOR)

1. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL UTILITIES AND SHALL ASSUME RESPONSIBILITY FOR DAMAGE TO UTILITIES AND PROPERTY AS A RESULT OF HIS WORK.
2. ALL PLANT MATERIAL IS TO BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF INSTALLATION AND ACCEPTANCE BY OWNER.
3. PLANT MATERIAL SHALL BE TRUE TO SPECIES AND VARIETY AND SHALL CONFORM TO MEASUREMENTS AND MINIMUM STANDARDS AS SET FORTH IN THE PLANT SCHEDULE.
4. ALL PLANTING BEDS ARE TO BE MULCHED WITH A MINIMUM OF 3" OF SHREDDED AGED HARDWOOD BARK MULCH.
5. THE CONTRACTOR IS TO PROVIDE ADDITIONAL TOPSOIL AS NEEDED FOR PLANTING OPERATIONS.
6. ALL TREES ARE TO BE STAKED AND GUYED ACCORDING TO THE PLANTING DETAILS AND ACCEPTED PROFESSIONAL NURSERYMAN'S STANDARDS. TREES WITH LESS THAN A 3" CALIPER SHALL BE PROPERLY STAKED AND MORE THAN A 3" CALIPER PROPERLY GUYED.
7. THE CONTRACTOR SHALL REMOVE WIRE BASKETS AND NYLON BURLAP OR ROPE FROM THE ROOT BALL OF ALL PLANT MATERIAL.
8. APPLY A 50/50 MIX OF CHPCO RONSTAR 6 AND PENNANT 56 TO SOIL SURFACE IN MULCHED AREAS PRIOR TO MULCHING. APPLY AT A RATE OF 7 POUNDS PER 1000 SF.
9. PLACE "WEED BLOCK" WATER PERMEABLE FILTRATION FABRIC UNDER MULCHED AREAS EXCEPT FOR AREAS OF GROUND COVER (I.E. IVY AND VINCA) AND PERENNIAL BEDS.
10. LANDSCAPE CONTRACTOR SHALL COORDINATE HIS/HER WORK WITH ALL OTHER CONTRACTORS ON SITE.
11. ALL AREAS OTHER THAN PLANTING BED AREAS SHALL BE CONSIDERED LAWN AREAS.
12. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE TO CLEAN AND REMOVE/DISPOSE FROM THE SITE ALL DEBRIS THAT IS A PART OF THE LANDSCAPE CONTRACTOR'S OPERATION.
13. THE CONTRACTOR SHALL INSTALL ORANGE PLASTIC CONSTRUCTION FENCE AROUND EXISTING MATURE TREES TO PREVENT ROOT ZONE COMPACTION AND DAMAGE TO TRUNKS AND BRANCHES. THE FENCING SHALL BE INSTALLED TO PREVENT DAMAGE AT A MINIMUM OF 2/3 OF THE DIAMETER OF THE TREE CANOPY.

SHORT-TERM MAINTENANCE

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING PLANT MATERIAL AND LAWN AREAS BEFORE, DURING, AND AFTER INSTALLATION UNTIL ACCEPTANCE OF PLANTINGS BY THE OWNER.
2. NEW LAWN AREAS SHALL BE MAINTAINED BY THE LANDSCAPE CONTRACTOR UNTIL FINAL ACCEPTANCE.
3. NEWLY INSTALLED PLANTINGS SHALL BE SELECTIVELY PRUNED, IF NECESSARY TO PROVIDE A NEAT AND UNIFORM APPEARANCE. ANY DEAD OR BROKEN BRANCHES SHALL BE REMOVED. ALL NOTICEABLY DISEASED OR DAMAGED PLANT MATERIAL SHALL BE REMOVED AND REPLACED PRIOR TO FINAL ACCEPTANCE.
4. LAWN AREAS SHALL BE WATERED ONCE WEEKLY DURING DRY PERIODS OF THE FIRST GROWING SEASON TO ESTABLISH A HEALTHY TURFGRASS. WATERING SHOULD OCCUR DURING THE EARLY PART OF THE DAY TO AN EVEN SATURATION DEPTH OF ONE (1) INCH.
5. ALL GUYING AND STAKING SHALL BE MAINTAINED REGULARLY TO ASSURE PLANT STABILIZATION AND STRAIGHT, UNIFORM GROWTH FOR AT LEAST THE FIRST YEAR FOLLOWING THE DATE OF PLANTING.
6. NEWLY PLANTED TREES AND SHRUBS SHALL BE WATERED REGULARLY DURING ANY DRY PERIODS TO COMPLETELY SATURATE THE ROOT BALL DURING THE FIRST GROWING SEASON.
7. ALL PLANT MATERIAL SHALL BE TRUE TO SPECIES AND VARIETY AND SHALL CONFORM TO MEASUREMENTS AND MINIMUM STANDARDS AS SET FORTH IN THE PLANT SCHEDULE.
8. DISEASE, INSECT AND PREVENTION SHOULD BE PERFORMED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS FOR NEWLY PLANTED LANDSCAPES DURING THE FIRST SEASON.
9. ALL PLANT MATERIAL IS TO BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF INSTALLATION AND ACCEPTANCE BY THE OWNER.

LONG-TERM MAINTENANCE

1. A QUALIFIED LANDSCAPE CONTRACTOR KNOWLEDGEABLE IN PRUNING TECHNIQUES, FERTILIZER APPLICATION, PEST CONTROL, AND LAWN CARE SHALL PERFORM ANNUAL LANDSCAPE MAINTENANCE.
2. THE OWNER SHALL BE RESPONSIBLE FOR REGULAR MOWING OF ALL LAWN AREAS.
3. ANY PLANT MATERIAL SHOWN ON THE APPROVED LANDSCAPE PLAN THAT DOES NOT SURVIVE OR IS DAMAGED SHALL BE REPLACED IN KIND BY THE OWNER WITHIN A SIX-MONTH PERIOD.

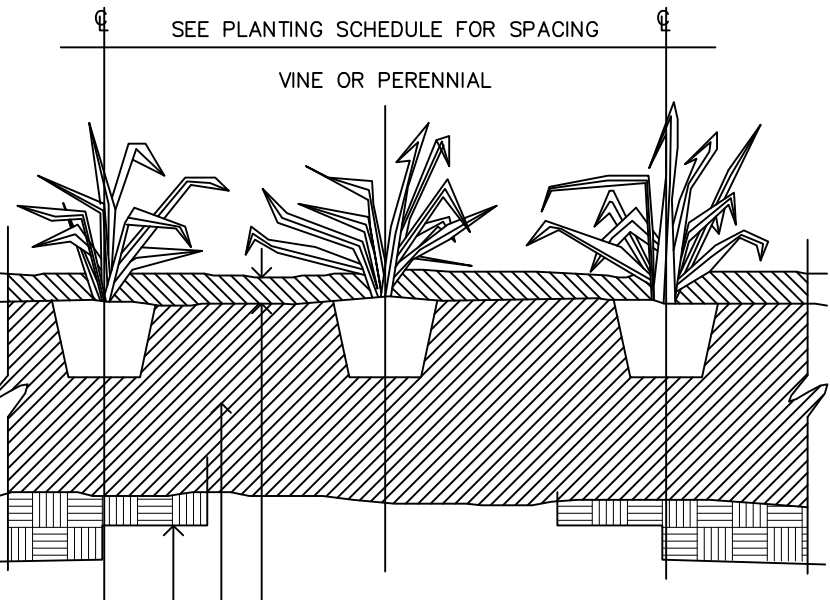
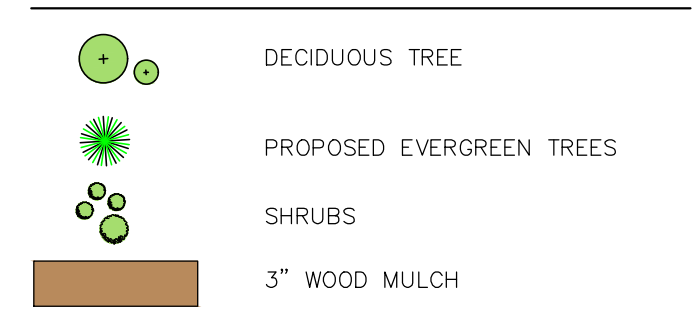
SEEDING NOTES

1. ALL TOPSOIL SHALL BE FREE OF STONES, LUMPS, PLANTS, ROOTS, AND OTHER DEBRIS OVER 1-1/2". TOPSOIL SHALL BE FREE OF WEEDS, WEED SEEDS, AND TOXIC SUBSTANCES THAT ARE HARMFUL TO PLANT GROWTH.
2. TOPSOIL SHALL BE FRIABLE LOAMY SOIL (AS CLASSIFIED BY THE U.S. DEPARTMENT OF AGRICULTURE, HANDBOOK NO. 18, SOIL SURVEY MANUAL), FREE OF SUBSOIL, ROOTS, GRASS, AND FOREIGN MATTER WITH AN ACIDITY RANGE OF 5.5 TO 7.5 AND CONTAINING A MINIMUM OF 3% AND A MAXIMUM OF 10% ORGANIC MATTER. NO MORE THAN 10% BY WEIGHT SHALL BE LARGER THAN A NO. 10 U.S. STANDARD SIEVE TO THE EXTENT THAT ON-SITE MATERIAL MEETS THE REQUIREMENTS, SUCH MATERIAL MAY BE USED FOR TOPSOIL.
3. SOIL AMENDMENTS: TOPSOIL AMENDMENTS SHALL BE DETERMINED BY SOIL TESTS AND SHALL BE MADE BASED UPON THE DOMINANT VARIETY IN THE SEED MIX. WHERE SOIL TESTS INDICATE THAT THE TOPSOIL IS SUITABLE AS TESTED, NO ADDITIONAL AMENDMENTS ARE REQUIRED.
4. FERTILIZER: ALL FERTILIZER SHALL BE UNIFORM IN COMPOSITION, FREE FLOWING, AN SUITABLE FOR APPLICATION BY MECHANICAL SPREADERS. ALL FERTILIZERS SHALL BE ORGANIC IN COMPOSITION.
5. LIME: LIME MATERIAL SHALL BE GROUND OR PULVERIZED LIMESTONE CONTAINING AT LEAST 50% TOTAL OXIDES, CALCIUM OXIDE PLUS MAGNESIUM OXIDE. LIMESTONE SHALL BE GROUND TO SUCH FINENESS THAT AT LEAST 50% WILL PASS THROUGH A 100-MESH SIEVE AND NOT LESS THAN 90% WILL PASS THROUGH A 20-MESH SIEVE.
6. MULCHING MATERIALS:
 - A. STRAW FREE OF ROT, MILDEW, NOXIOUS WEED SEEDS, AND SHALL BE SMALL GRAINED, SUCH AS WHEAT OR BARLEY, APPLY AT A RATE TO LIGHTLY COVER SOIL, APPROXIMATELY 100 LBS. PER 1,000 SF.
 - B. CELLULOSE FIBER: PREPARED CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE. THE MATERIAL SHALL BE UNIFORM IN SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER, AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. OTHER MULCHES, SUCH AS RECYCLED PAPER AND WOOD BLEND, RECYCLED PAPER, AND BINDING ACCESSORIES MAY BE UTILIZED AT THE CONTRACTOR'S DISCRETION.

PLANTING NOTES

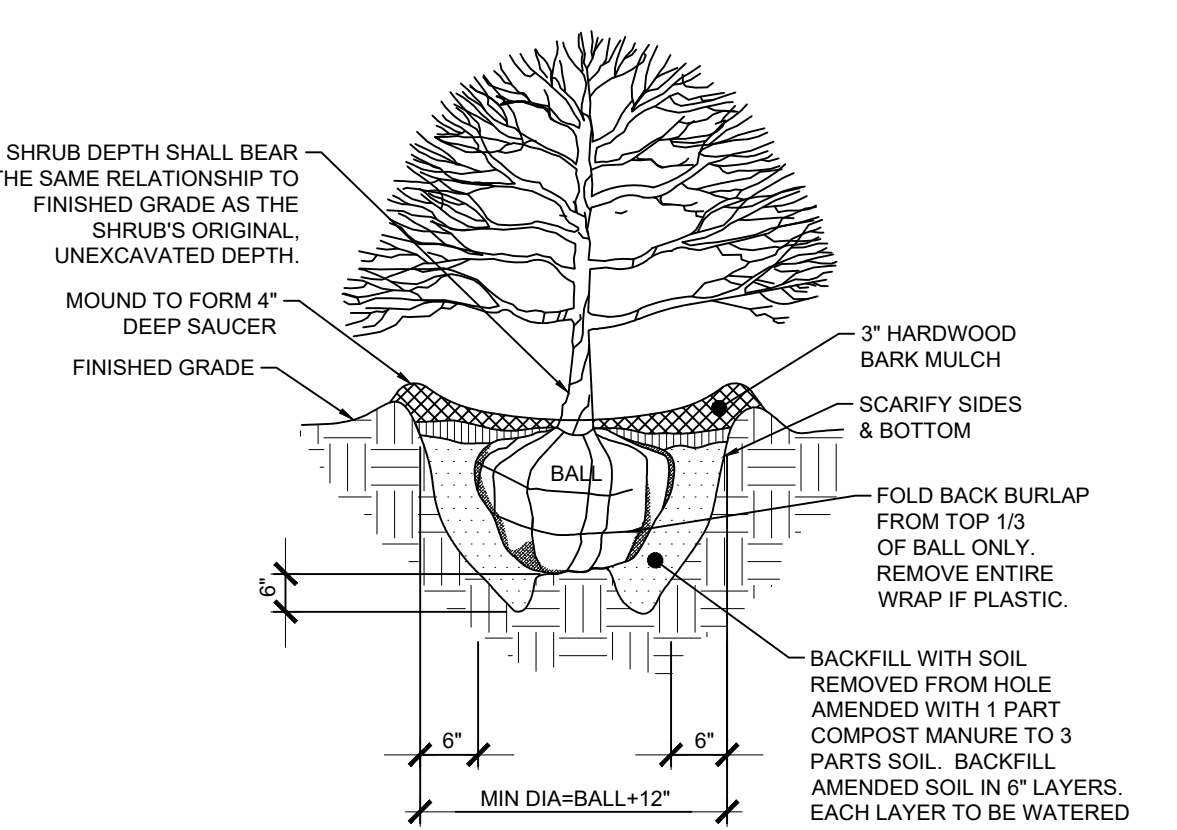
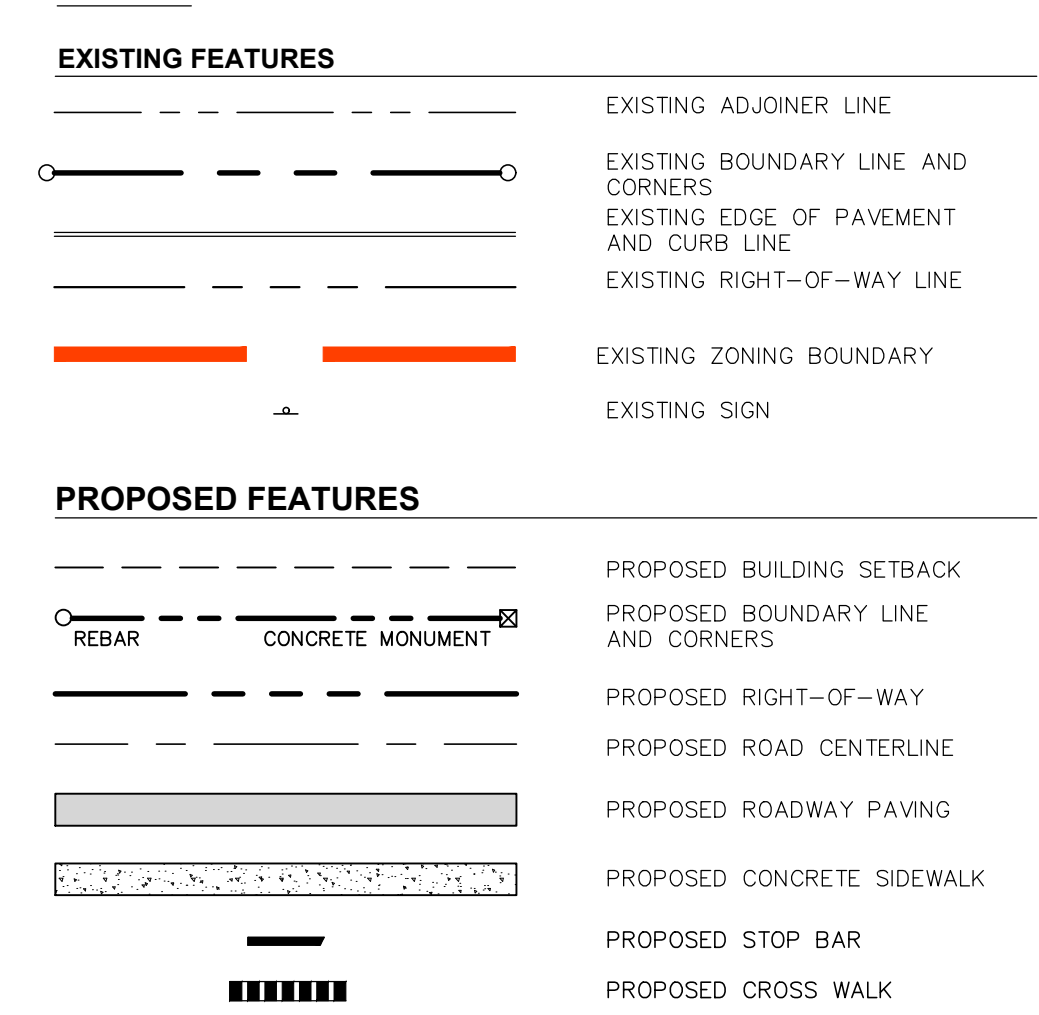
1. ALL PLANT MATERIAL SHALL CONFORM TO THE LATEST EDITION OF THE AMERICA STANDARD FOR NURSERY STOCK, AND 2601-NURSERY STOCK.
2. ALL PLANT MATERIAL SHALL BE PROVIDED FROM NURSERIES THAT HAVE BEEN STATE CERTIFIED BY STATE PLANT INSPECTORS.
3. THE CALIPER OF THE TRUNK, MEASURED AT A HEIGHT OF SIX (6) INCHES ABOVE THE ROOT BALL (BREAST HEIGHT) SHALL BE A MINIMUM OF 1.5" FOR ALL TREES.
4. A CIRCULAR MULCH BED SHALL BE INSTALLED AT THE BASE OF EACH TREE. EACH MULCH BED SHALL HAVE A DIAMETER OF AT LEAST TWICE THAT OF THE ROOT BALL.
5. CONTRACTOR SHALL PERFORM SOIL TESTS AS NEEDED TO INSURE SOIL CONDITIONS ARE SUITABLE FOR PLANT GROWTH AND NOUR. SINCE MANY OF THE PLANTED AREAS ARE LOCATED IN AREAS WHERE PAVING PREVIOUSLY EXISTING, OVER COMPACTION MUST BE ADDRESSED IN THESE AREAS. IT WILL BE THE CONTRACTORS RESPONSIBILITY TO PROPERLY PREPARE ALL PLANTING AREAS PRIOR TO PLANT INSTALLATION.

PLANT SYMBOL LEGEND

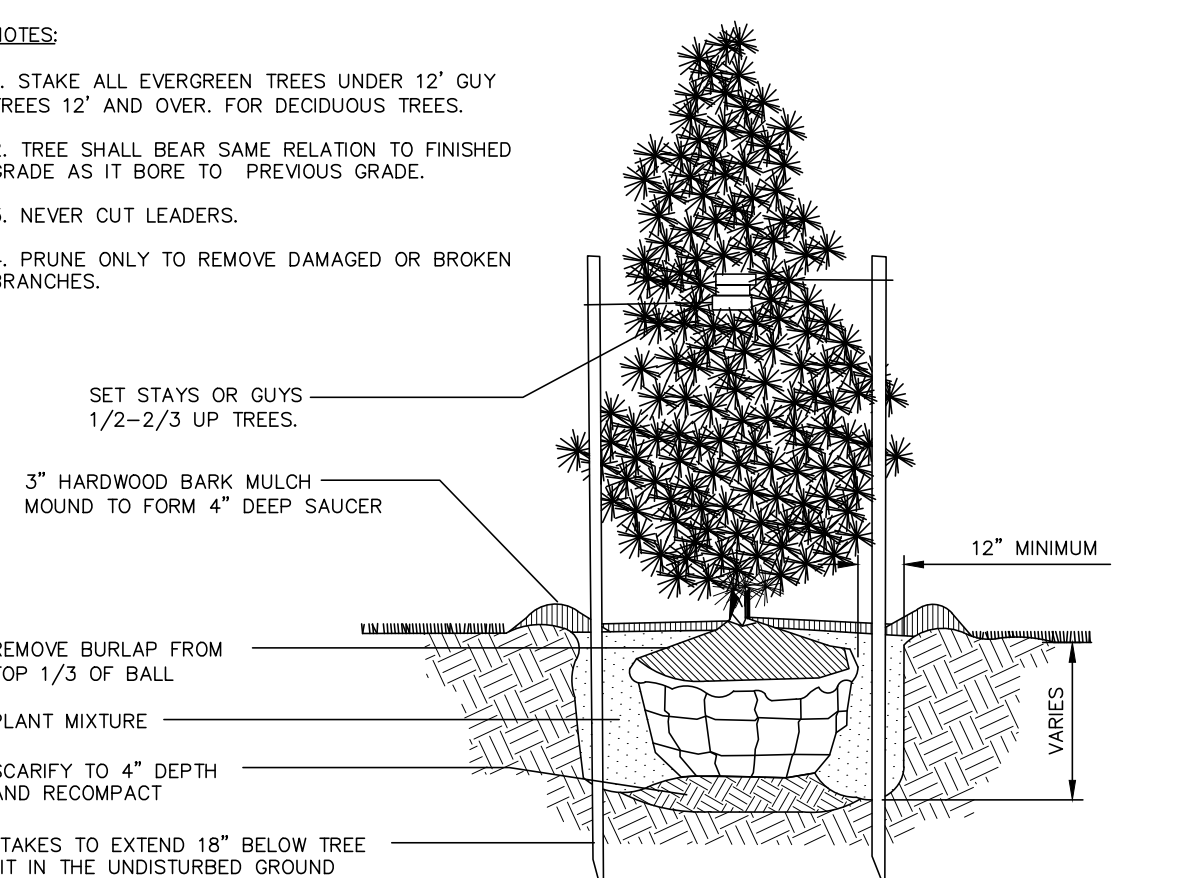


GROUND COVER PLANTING DETAIL
NO SCALE

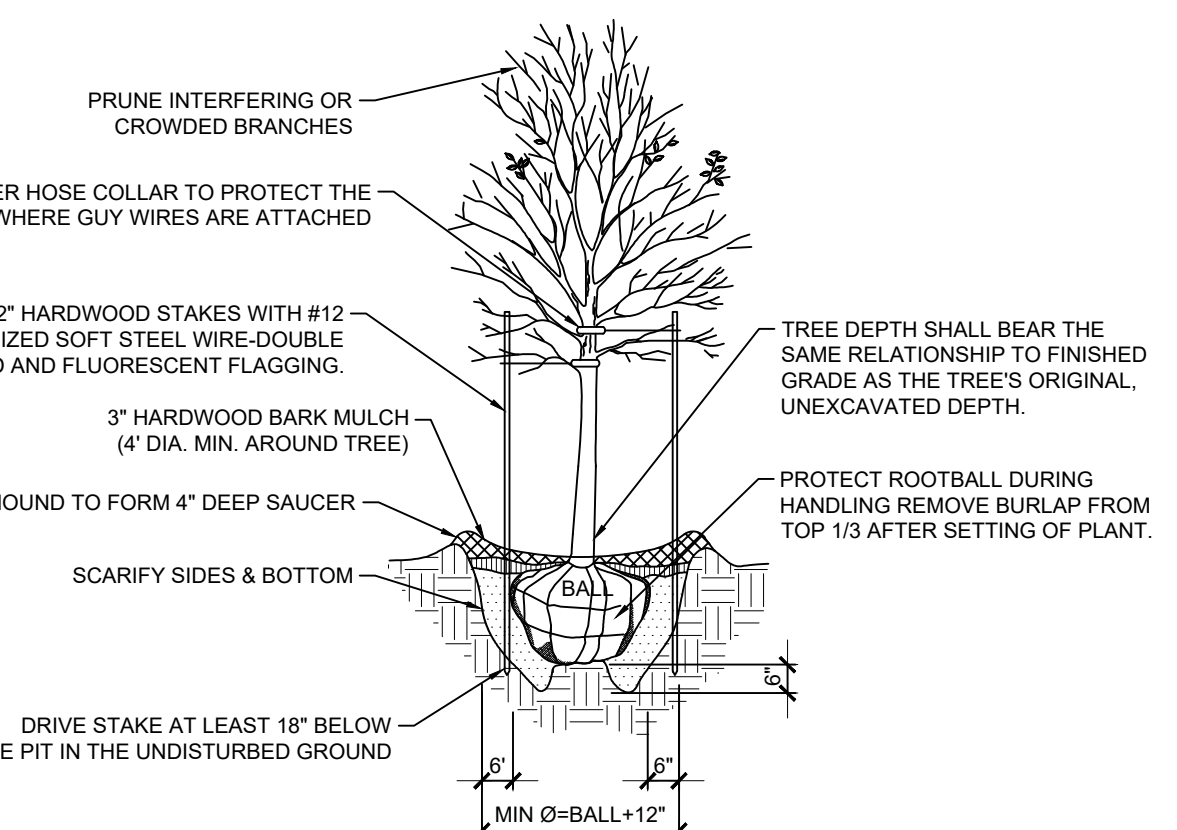
LEGEND



SHRUB PLANTING DETAIL
NO SCALE



EVERGREEN TREE PLANTING DETAIL
NO SCALE



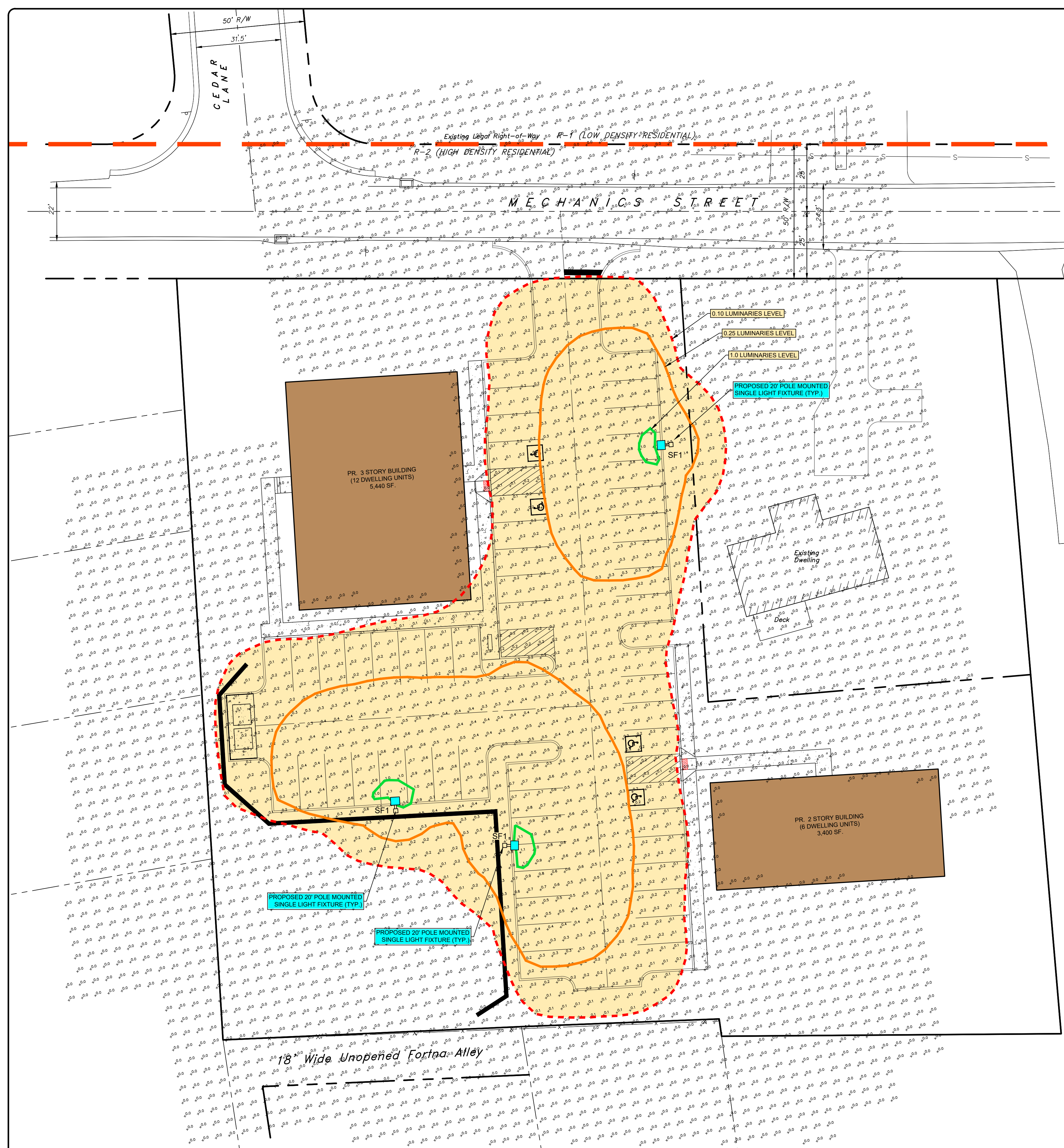
DECIDUOUS TREE PLANTING DETAIL
NO SCALE

NO.	DATE	BY	REVISION

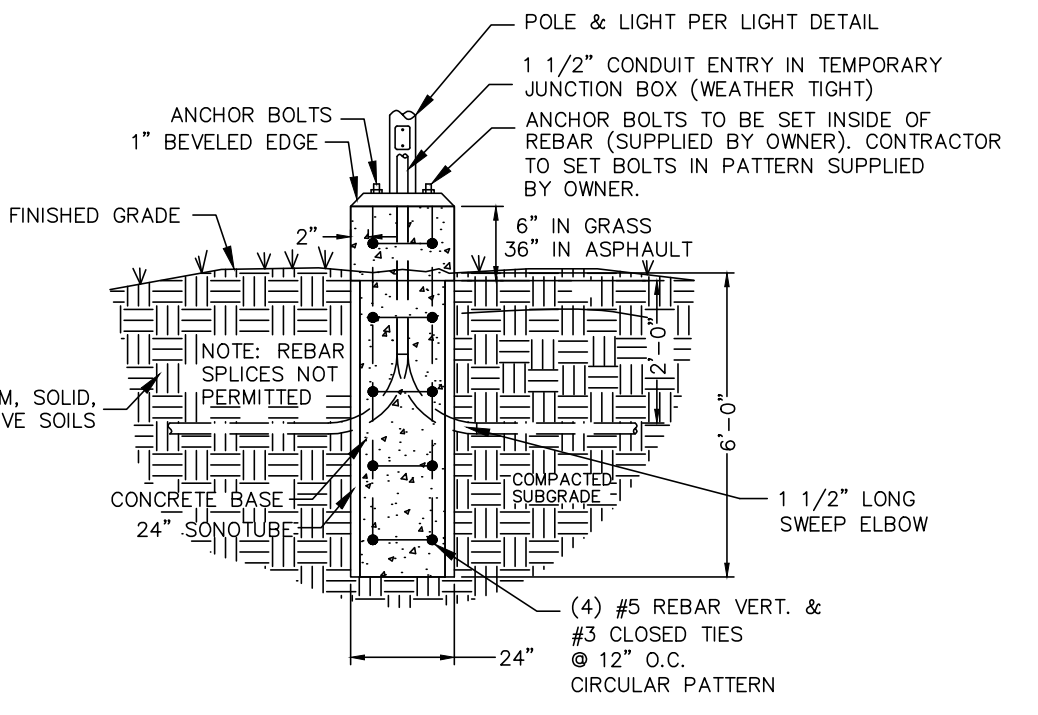
LANDSCAPING PLAN
PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN
for
LCW HOLDINGS, LLC APARTMENT COMPLEX
located in
North Lebanon Township
Lebanon County, Pennsylvania

SEI ENGINEERING SURVEYING
279 N. ZINNS MILL ROAD, LEBANON, PA 17042
717-272-7110 WWW.SEIENR.COM

FIELD CREW: MOD, JEC
BASE MAP: JEC
DRAWN: CDS
DESIGN: CDS
CHECKED: SAS
DATE: 3/16/26
SCALE: 1" = 20'
PROJECT # 2547-25-001

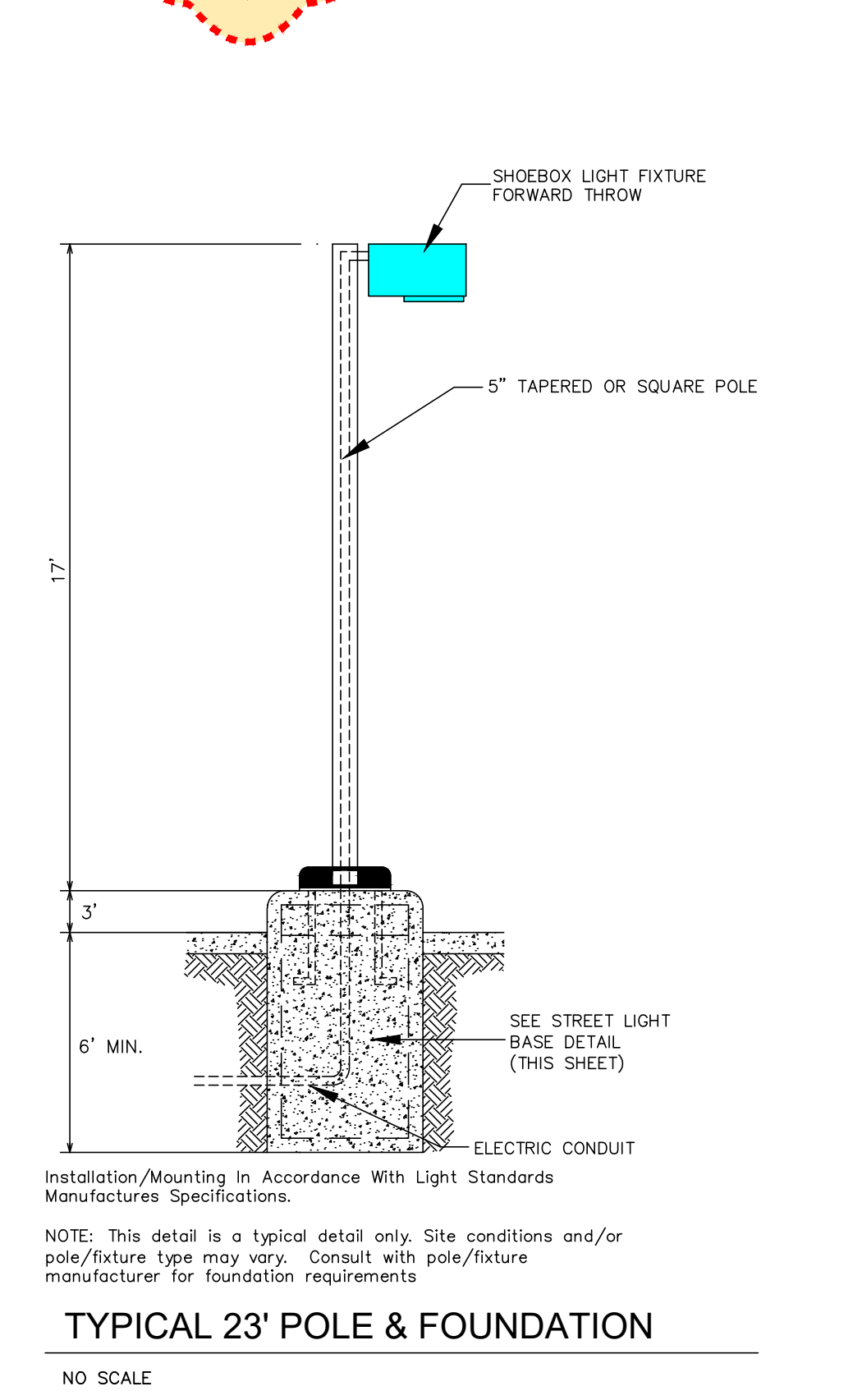


LIGHTING NOTES
 BASED ON THE INFORMATION PROVIDED, ALL DIMENSIONS AND LUMINAIRE LOCATIONS SHOWN REPRESENT RECOMMENDED POSITIONS. THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING OR FUTURE FIELD CONDITIONS.
 THIS LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS UTILIZING CURRENT INDUSTRY STANDARD LAMP RATINGS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS AND OTHER VARIABLE FIELD CONDITIONS.



LEGEND

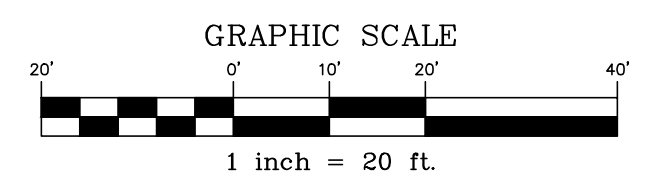
EXISTING FEATURES	
---	EXISTING ADJOINER LINE
---	EXISTING BOUNDARY LINE AND CORNERS
---	EXISTING EDGE OF PAVEMENT AND CURB LINE
---	EXISTING RIGHT-OF-WAY LINE
---	EXISTING ZONING BOUNDARY
---	EXISTING SIGN
PROPOSED FEATURES	
---	PROPOSED BOUNDARY LINE AND CORNERS
---	PROPOSED RIGHT-OF-WAY
---	PROPOSED ROAD CENTERLINE
---	PROPOSED EDGE OF PAVEMENT AND CURB LINE
---	PROPOSED CONCRETE SIDEWALK
---	PR. SINGLE LIGHT POST
---	PROPOSED LIGHT LUMINAIRE LEVELS



Schedule

Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lamp	Wattage
SF1	SF1	3	LITHONIA LIGHTING	DSXW1 LED P4 35K 70CRI T4M HS	5000 3500K 70CRI TYPE 4 MEDIUM	28.7 W LED	28.7

NOTE: DIFFERENT LIGHT MANUFACTURERS WITH EQUIVALENT LIGHT SPECIFICATIONS MAY BE CHOSEN (BY OWNER.)



BY	DATE	REVISION

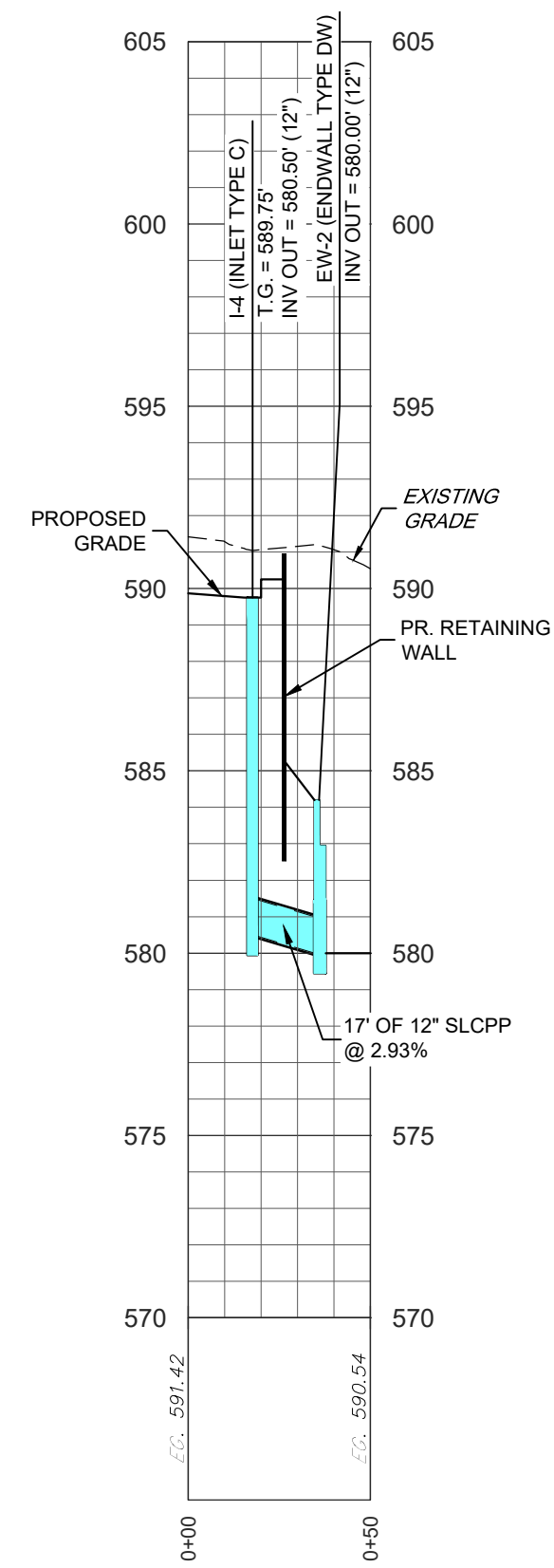
BY	DATE	REVISION

LIGHTING PLAN

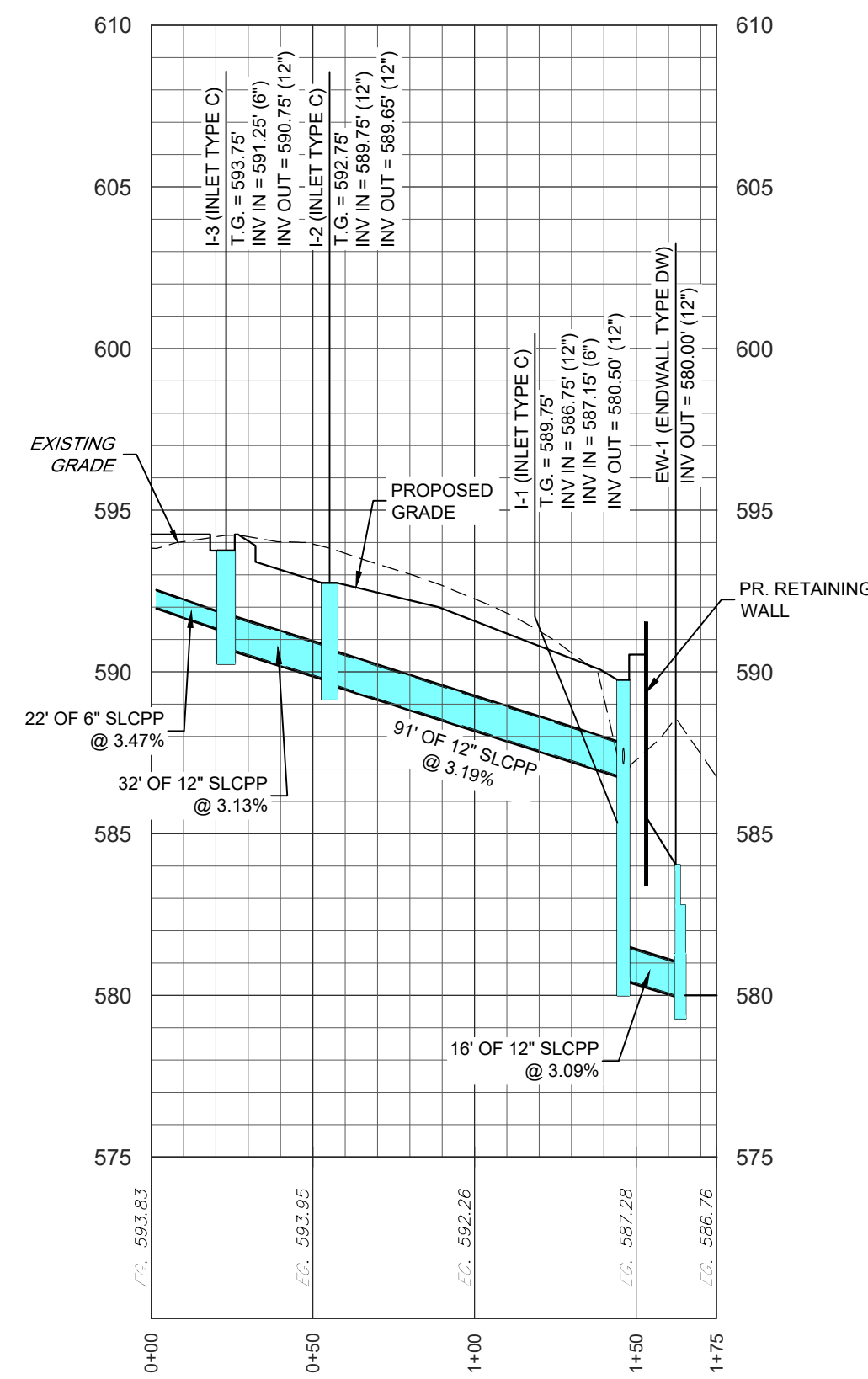
PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN
 For
LCW HOLDINGS, LLC APARTMENT COMPLEX
 located in
 North Lebanon Township
 Lebanon County, Pennsylvania

SEE ENGINEERING SURVEYING
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 717-272-7110 WWW.STECKRECK.NET

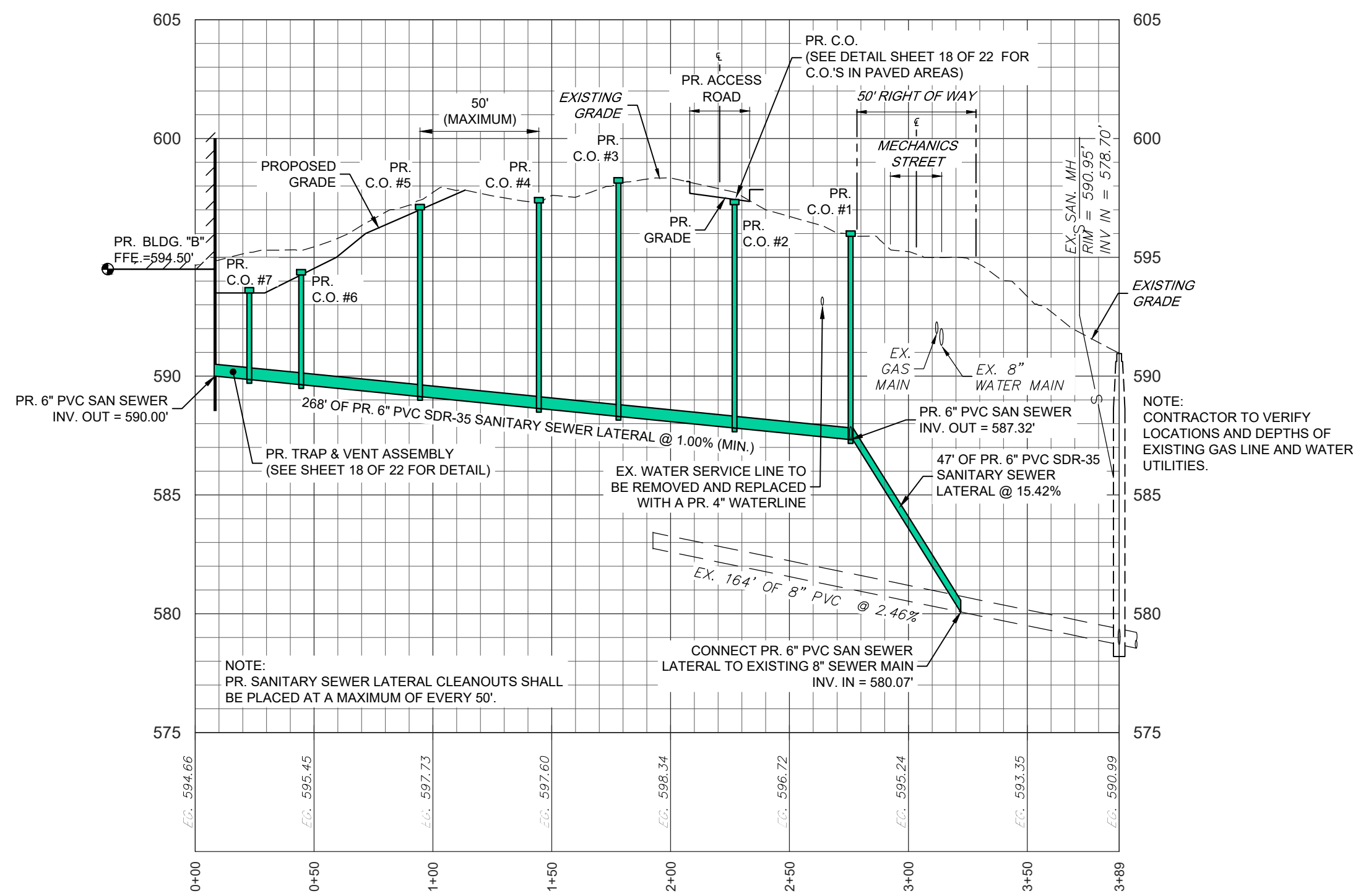
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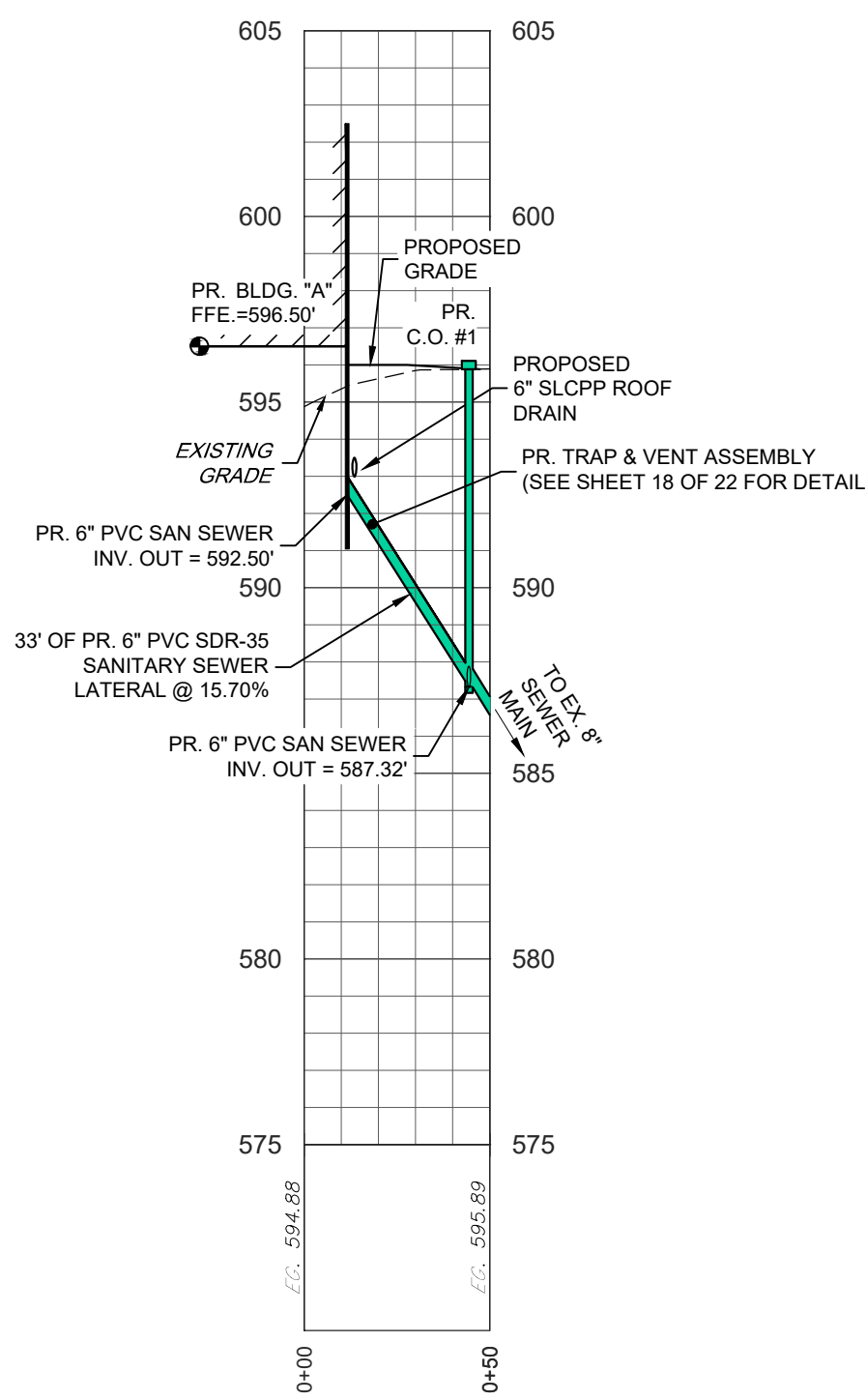
STORMWATER - I-4 TO EW-2 PROFILE



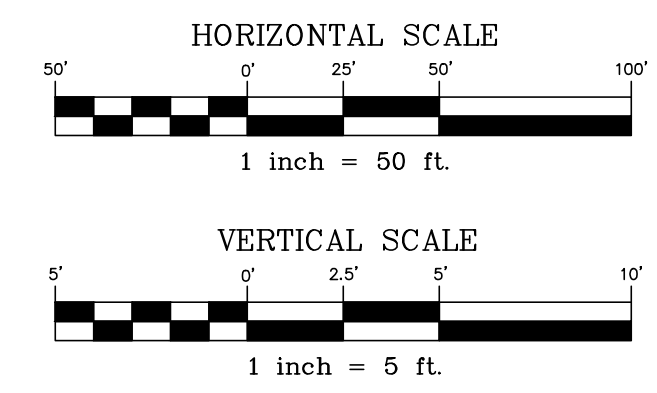
STORMWATER - I-3 TO EW-1 PROFILE



SANITARY SEWER - BUILDING B TO EX. SANITARY SEWER MAIN PROFILE



SANITARY SEWER - BUILDING A TO PR. CLEANOUT #1 PROFILE

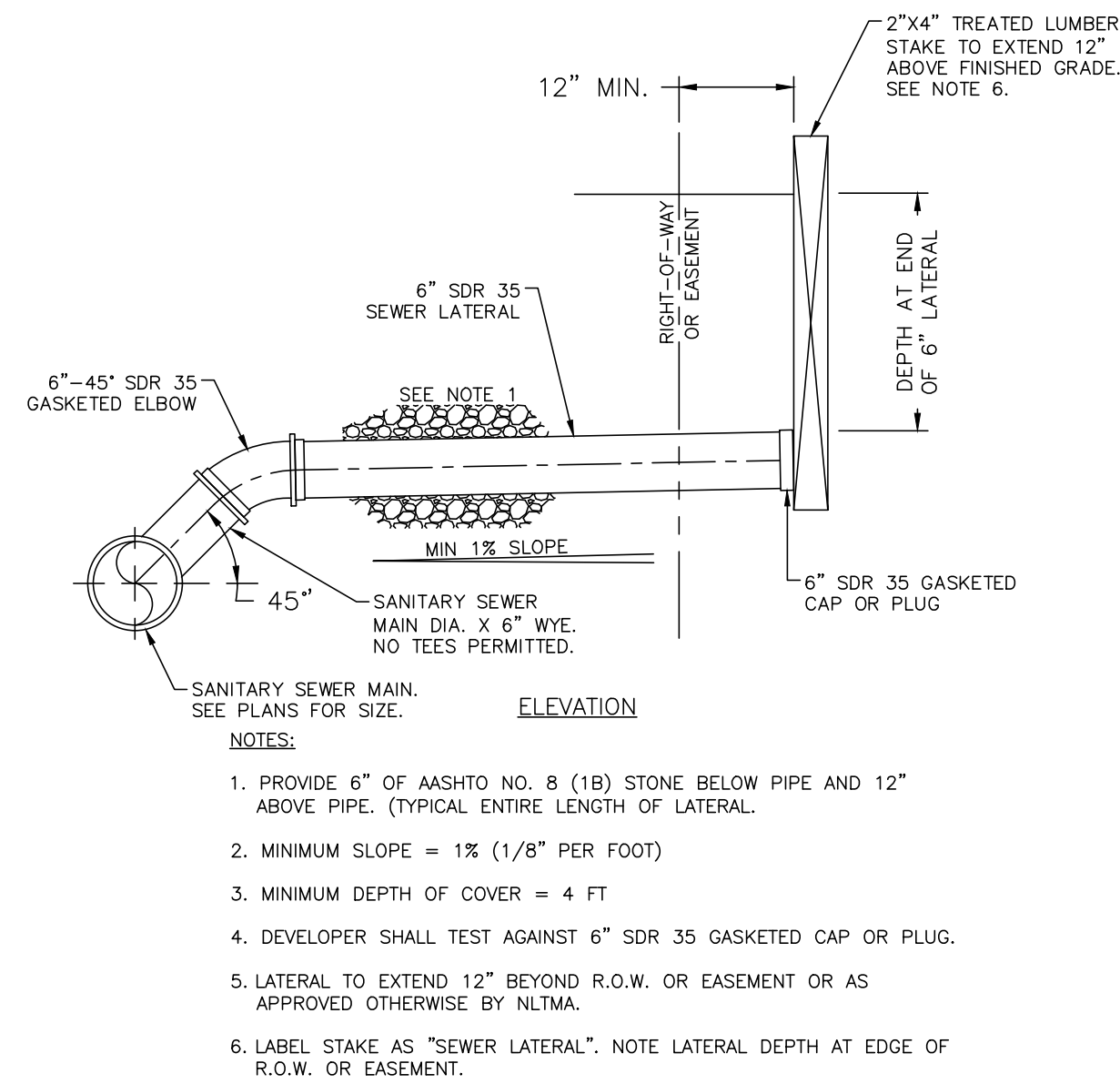


REVISION	DATE	BY

PROFILES
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 Lebanon County, Pennsylvania

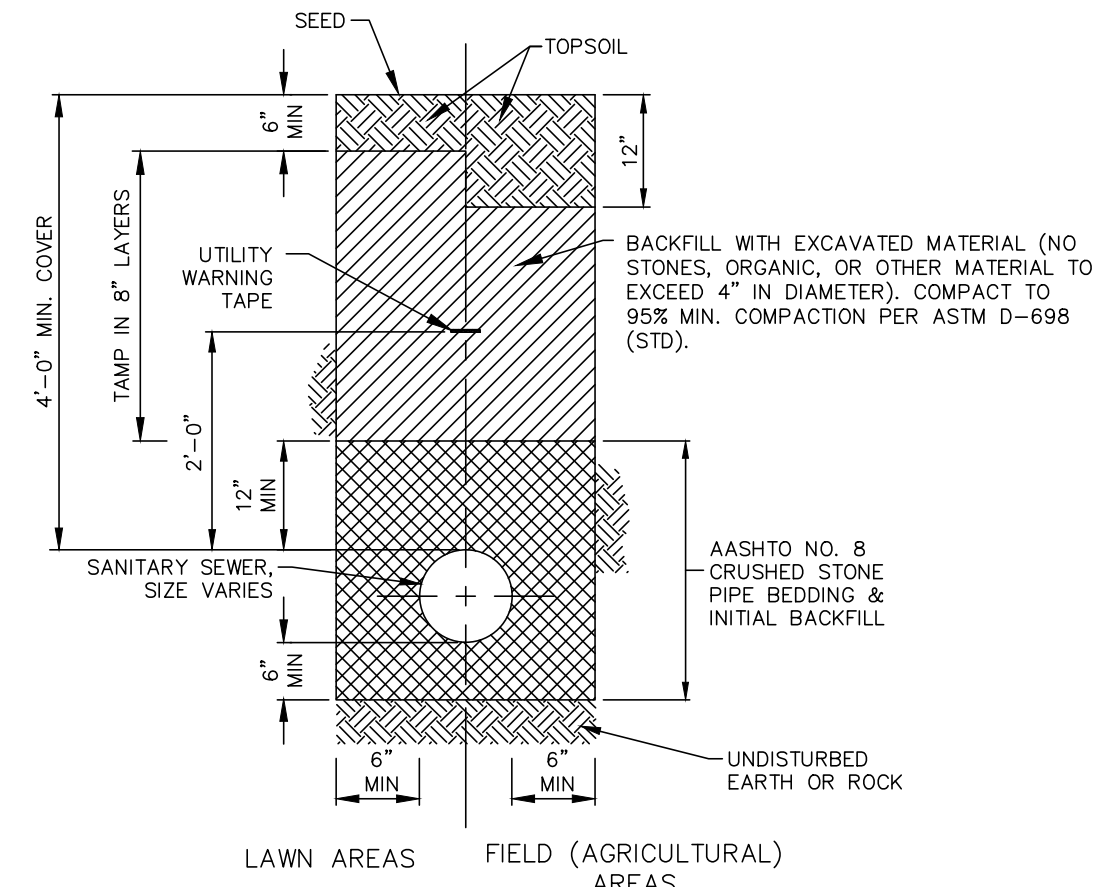
SEI ENGINEERING SURVEYING
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FIELD CREW:	MOD,JEC
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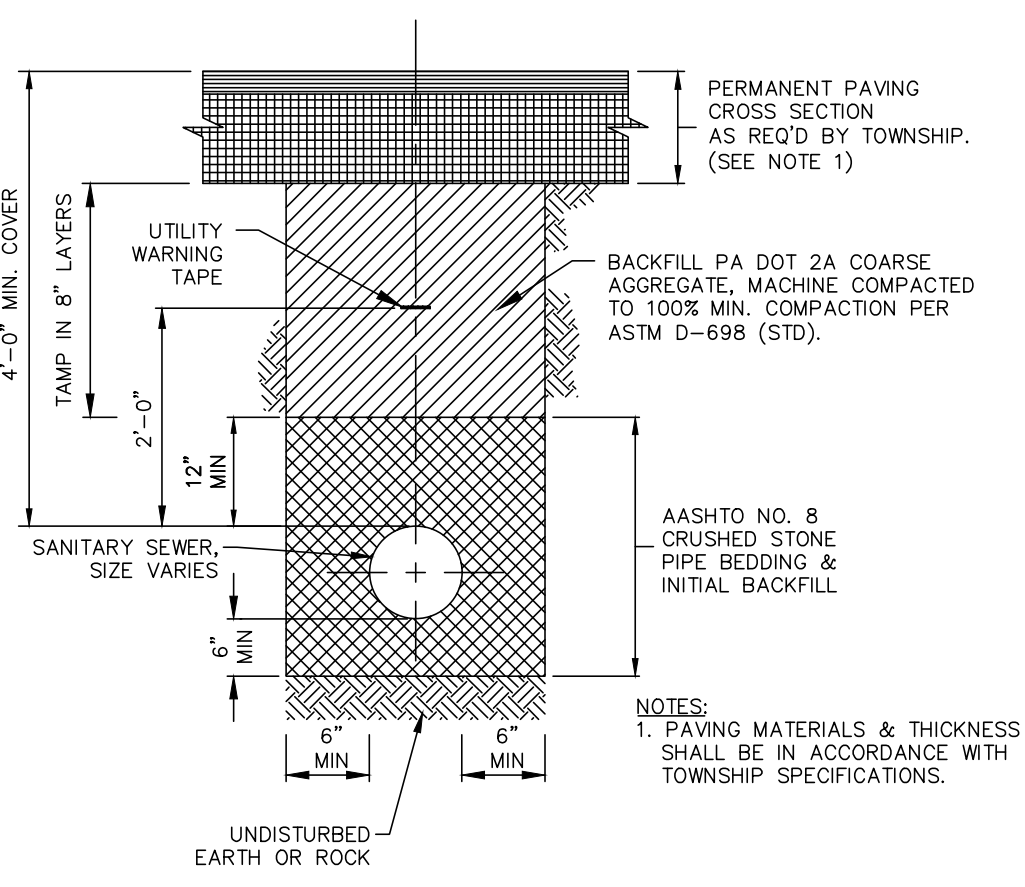
SEWER LATERAL INSTALLATION DETAIL

NO SCALE



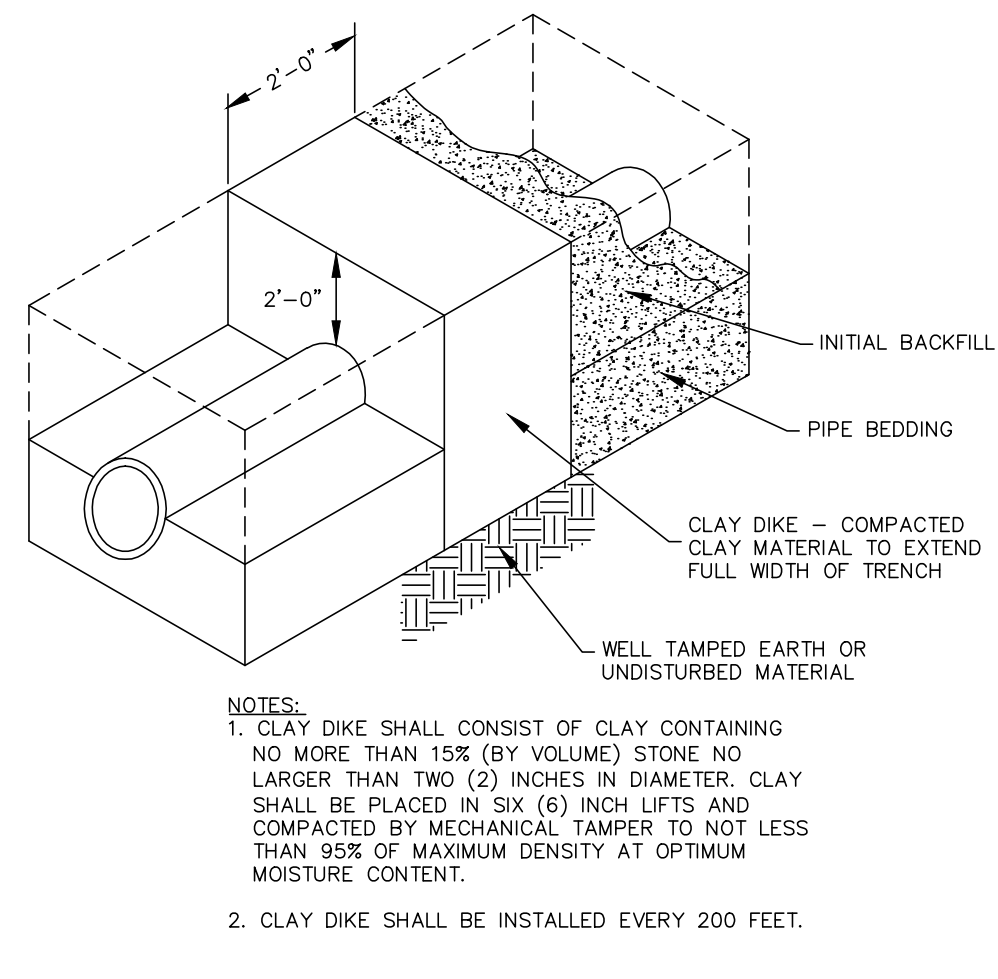
TRENCH RESTORATION (LAWN AREAS)

NO SCALE



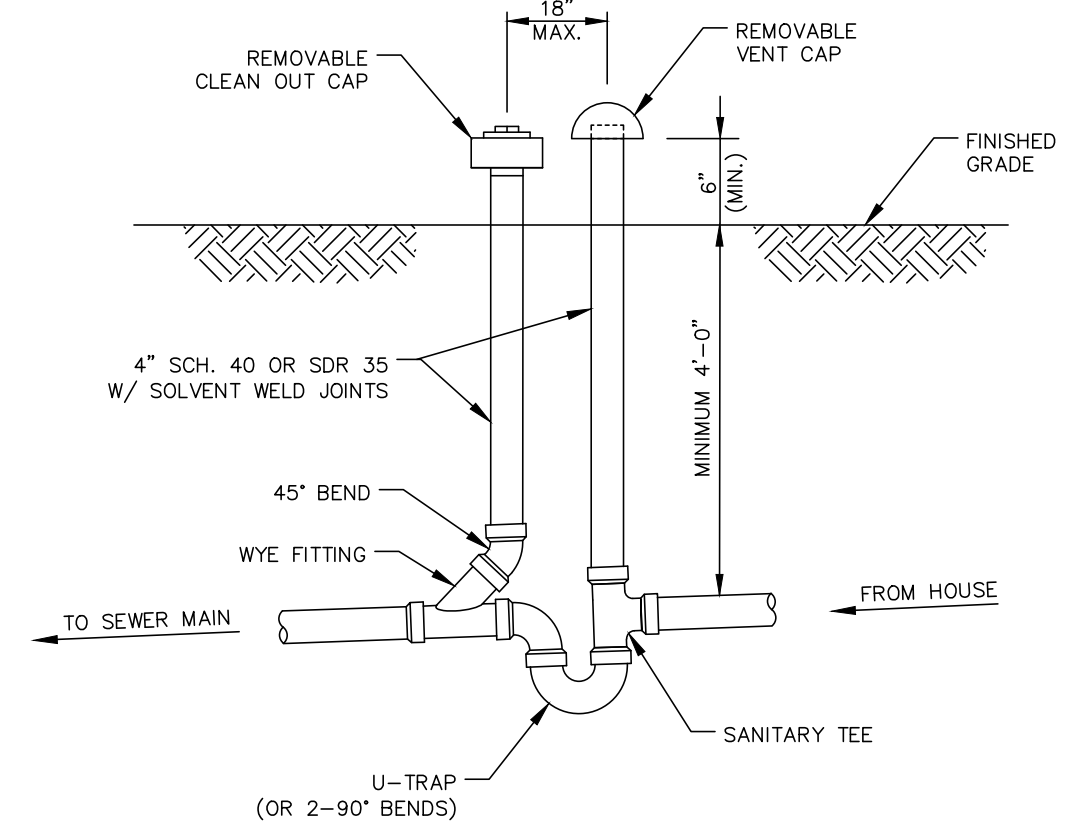
TRENCH RESTORATION (PAVED AREAS)

NO SCALE



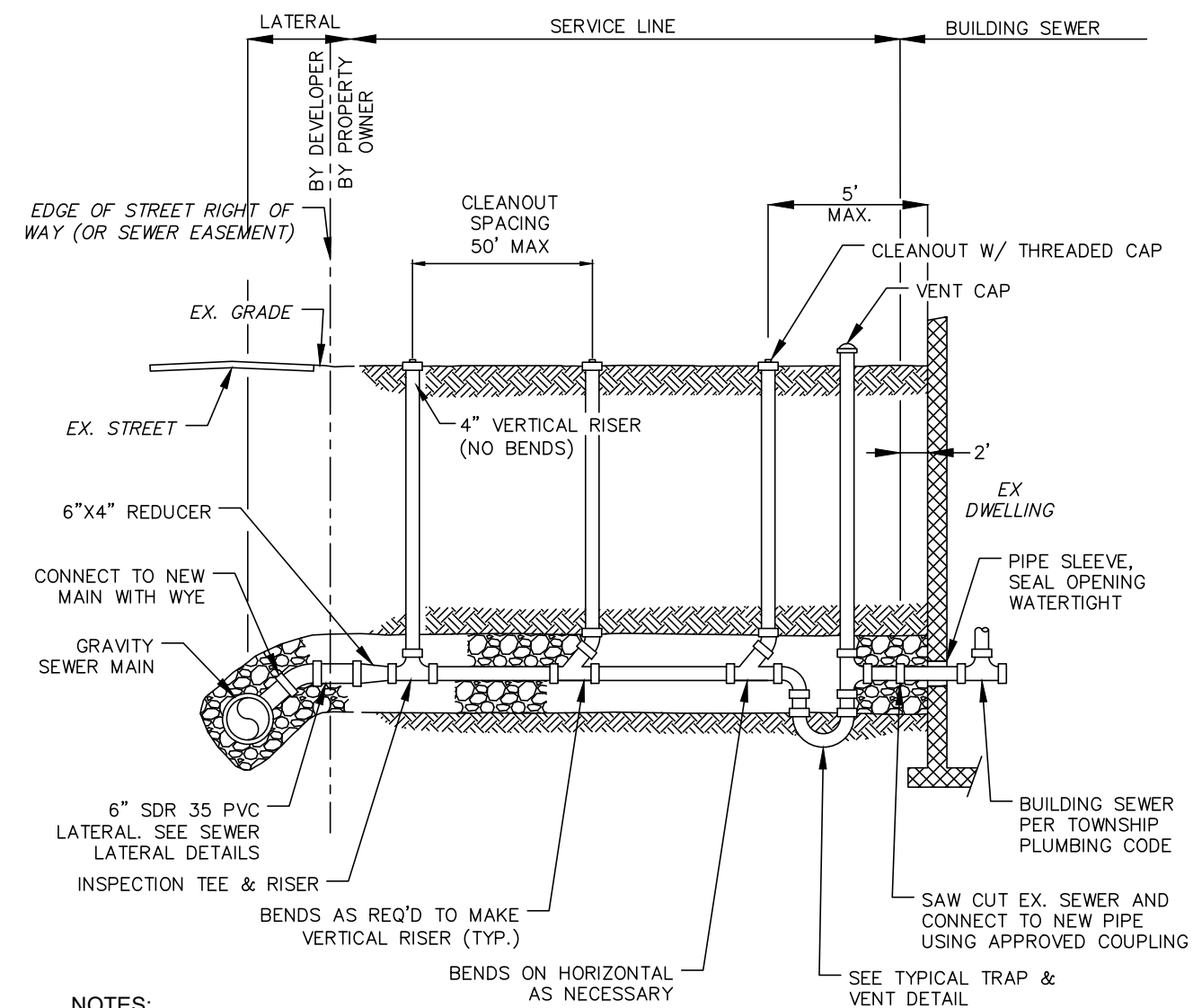
CLAY DIKE (TRENCH PLUG) DETAIL

NO SCALE



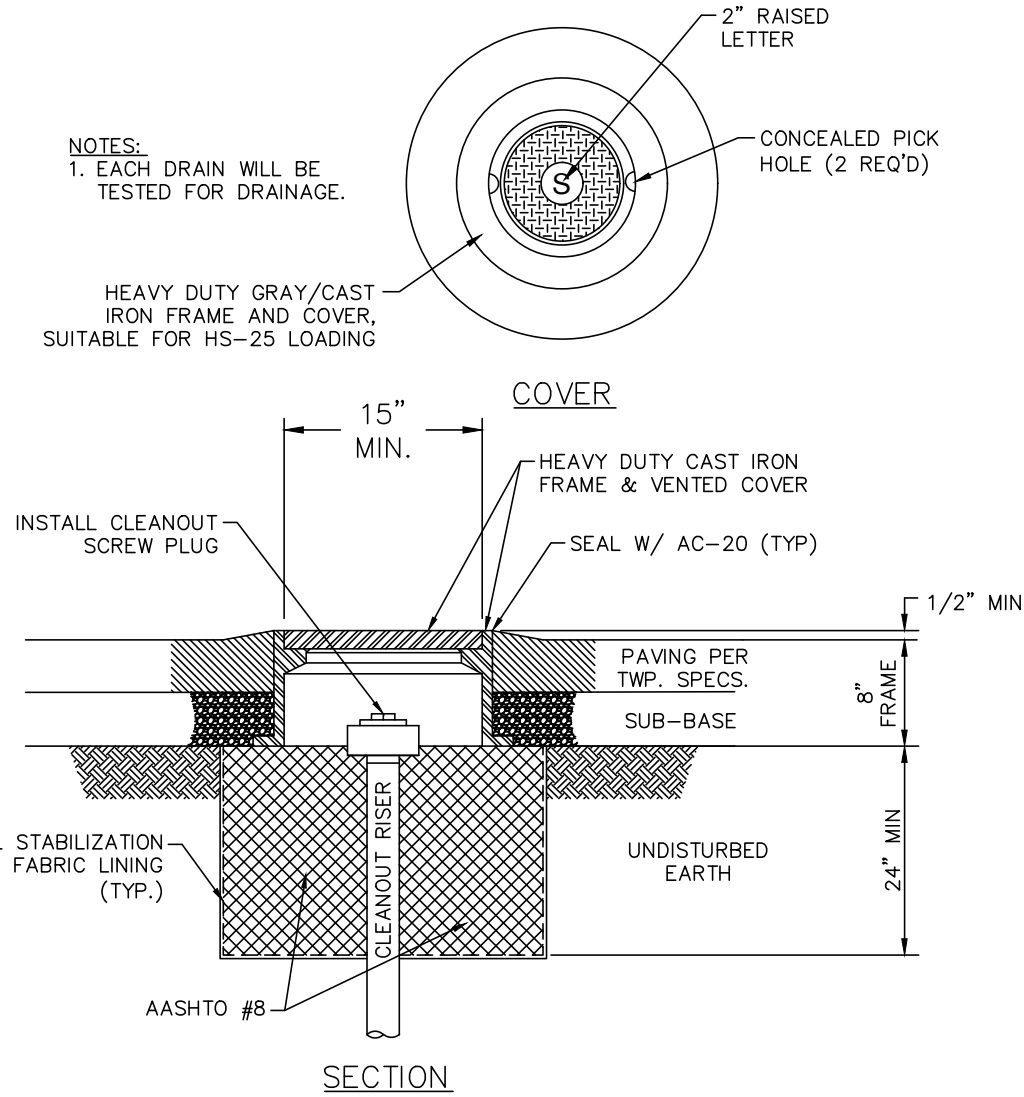
TYPICAL TRAP & VENT ASSEMBLY

NO SCALE



GRAVITY SERVICE LINE INSTALLATION DETAIL

NO SCALE



CLEANOUTS IN PAVED AREA DETAIL

NO SCALE

REVISION	DATE	BY

DETAILS

PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN

For
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PROJECT #	2547-25-001



LEGEND

EXISTING FEATURES

- EXISTING ADJOINER LINE
- EXISTING BOUNDARY LINE AND CORNERS
- EXISTING EDGE OF PAVEMENT AND CURB LINE
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE
- EXISTING SEWER
- EXISTING STORMWATER
- EXISTING WATERLINE
- EXISTING GASLINE
- EXISTING SIDEWALK/CONCRETE
- EXISTING CONTOURS
- EXISTING TREELINE
- EXISTING BUILDING SETBACK LINES
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SOILS

SOIL DATA			
SYMBOL	NAME	SLOPE	HSG
BbB	BEDINGTON SHALY SILT LOAM	3-8%	B

PROPOSED FEATURES

- PROPOSED BUILDING SETBACK AND CORNERS
- PROPOSED EDGE OF PAVEMENT AND CURB LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED FENCE
- PROPOSED STORMWATER
- PROPOSED GASLINE
- PROPOSED SANITARY SEWER
- PROPOSED WATERLINE
- PR. ELECTRIC SERVICE LINE
- PROPOSED CONCRETE/SIDEWALK
- PROPOSED CONTOURS
- PROPOSED TREELINE
- PROPOSED UTILITY POLE
- PROPOSED LIGHT POLE

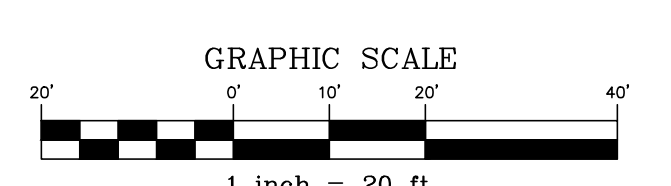
PROPOSED E&S FEATURES

- INLET PROTECTION
- ROCK CONST. ENTRANCE
- TOPSOIL STOCKPILE
- COMPOST FILTER SOCK
- NPDES BOUNDARY
- DISTURBANCE LIMITS

EROSION AND SEDIMENT CONTROL LIABILITY NOTE:
 FAILURE TO CORRECTLY INSTALL SEDIMENT CONTROL FACILITIES OR FAILURE TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE OR FAILURE TO TAKE CORRECTIVE ACTIONS TO IMMEDIATELY RESOLVE FAILURES OF SEDIMENT CONTROL FACILITIES MAY RESULT IN ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AS DEFINED IN SECTION 602 OF THE CLEAN STREAMS LAW OF PENNSYLVANIA. 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.

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 SWEEPED INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.

THESE PLANS INDICATE CRITICAL AREAS FOR EROSION AND SEDIMENT CONTROL PLACEMENT BUT DO NOT RELIEVE THE CONTRACTOR FROM PROVIDING ADDITIONAL CONTROLS AS SITE CONDITIONS WARRANT. THE ENVIRONMENTAL COMPLIANCE MANAGER FOR THE PROJECT AND OR CONSERVATION DISTRICT MAY DIRECT THE CONTRACTOR TO INSTALL E&S BMPs NOT DEPICTED ON THESE DRAWINGS IN ORDER TO PROTECT DOWN GRADIENT AREAS FROM EROSION AND SEDIMENTATION DURING CONSTRUCTION.



BY	DATE	REVISION

EROSION & SEDIMENTATION POLLUTION CONTROL PLAN
PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN
 For
LCW HOLDINGS, LLC APARTMENT COMPLEX
 located in
 North Lebanon Township
 Lebanon County, Pennsylvania



FIELD CREW: MOD,JEC
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PROJECT # 2547-25-001

EROSION AND SEDIMENT POLLUTION CONTROL NARRATIVE
754 MECHANIC STREET

THIS NARRATIVE IS INTENDED TO ACCOMPANY THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN FOR THE PROJECT LOCATED AT 754 MECHANIC STREET IN NORTH LEBANON TOWNSHIP, LEBANON COUNTY. THIS NARRATIVE SHALL BE CONSIDERED A PART OF THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN.

PROJECT DESCRIPTION

THE TOTAL AREA OF THE EXISTING PARCELS TO BE DEVELOPED IS 1.99 ACRES. THE SITE AREA AND EARTH DISTURBANCE AS PART OF THIS PROJECT IS 2.00 ACRES, WHICH INCLUDES DISTURBANCE WITHIN THE MECHANIC STREET RIGHT-OF-WAY. THE SITE IS COMPOSED OF TWO PARCELS. THE EASTERN PARCEL CONTAINS AN EXISTING RESIDENTIAL DWELLING AND DRIVEWAY WHILE THE WESTERN PARCEL IS UNDEVELOPED. BASED ON GOOGLE EARTH HISTORICAL IMAGERY, THE SITE HAS BEEN IN ITS CURRENT CONDITION SINCE 2005. BASED ON PENNITOP HISTORICAL IMAGERY, THE SITE APPEARS TO HAVE BEEN AGRICULTURAL, DATING BACK TO THE 1950'S. THE SITE IS BORDERED TO THE NORTH AND WEST BY RESIDENTIAL PROPERTIES, AND TO THE SOUTH BY RESIDENTIAL PROPERTIES AND A WOODED PROPERTY. PROPOSED IMPROVEMENTS INCLUDE THE CONSTRUCTION OF TWO APARTMENT BUILDINGS TOTALING 18 UNITS, PARKING LOTS, DRIVEWAY OFF MECHANIC STREET, CONNECTION TO PUBLIC WATER AND SEWER, AND ASSOCIATED STORMWATER MANAGEMENT FACILITIES. THE ANTICIPATED SITE DISTURBANCE SHALL INCLUDE GRADING AS WELL AS AN ADDITIONAL IMPERVIOUS AREA WHICH WILL BE TREATED ON-SITE BY STORMWATER CONTROL MEASURES (SCMS). ONE (1) INFILTRATION BASIN (SCM NO. 1) AND ONE (1) RAIN GARDEN/BIORETENTION FACILITY (SCM NO. 2) ARE PROPOSED TO MANAGE THE SITE RUNOFF. STORMWATER RUNOFF FROM THE SITE WILL EVENTUALLY REACH AN UNTO TO THE BRANDYWINE CREEK AND THE BRANDYWINE CREEK. BOTH SURFACE WATERS ARE DESIGNATED AS FROUNT STOCKED FISHERY (FS). THE UNTO TO BRANDYWINE CREEK AND BRANDYWINE CREEK ARE IMPAIRED ACCORDING TO CATEGORY 4 OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR AQUATIC LIFE: URBAN RUNOFF/STORM SEWERS - FLOW REGIME MODIFICATION. BOTH SURFACE WATERS ARE ALSO IMPAIRED ACCORDING TO CATEGORY 5 OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR RECREATIONAL. SOURCE UNKNOWN - PATHOGENS.

THERMAL IMPACTS ANALYSIS

ALL EXISTING RUNOFF CURRENTLY LEAVES THE SITE UN-DETAINED WITH NO TREATMENT OF THIS RUNOFF IN ANY WAY. TWO (2) STRUCTURAL SCMS ARE PROPOSED TO TREAT THE MAJORITY OF THE DISTURBED SITE AND PROPOSED IMPERVIOUS AREAS. RUNOFF REACHING THE STRUCTURAL SCMS WILL BE CAPTURED IN THE BASIN BOTTOM BEFORE BEING FILTERED THROUGH AN UNTO TO THE SOIL MEDIA AND INFILTRATED INTO THE GROUND. SHADE TREES ARE ALSO PROPOSED IN AND AROUND THE PARKING LOTS TO PROVIDE TEMPERATURE RELIEF FOR RUNOFF THAT FLOWS OVER THE IMPERVIOUS SURFACES.

DOWNSTREAM WATERCOURSE ANALYSIS

THE FOLLOWING IS AN EXCERPT FROM THE PA DEP FAQ SHEET LABELED *CHAPTER 102 OFF-SITE DISCHARGES OF STORMWATER TO NONSURFACE WATERS* (JANUARY 2, 2019). FAQ #2 STATES, "PERSONS PROPOSING TO DISCHARGE MUST HAVE THE LEGAL AUTHORITY TO DISCHARGE THEIR STORMWATER EITHER THROUGH AN EXPRESS EASEMENT OR IN ACCORDANCE WITH THE REVEGETATION OF DISTURBED AREAS. SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.

30. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.

31. FAILURE TO CORRECTLY INSTALL E&S BMP'S, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO CORRECTLY TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMP'S 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 ADDITIONAL CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR OR CRIMINAL PENALTIES FOR EACH VIOLATION.

32. 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.

33. ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIALS/WASTES.

34. 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.

35. CHANNELS HAVING RIPRAP, RENO MATTRESS, OR GABION LININGS MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.

36. 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 STRUCTURE. MATERIALS SHALL BE STABILIZED CONVEYED TO THE DEPARTMENT.

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75. SEDIMENT BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES.

20. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.

21. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.

22. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOO, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.

23. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.

24. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.

25. THE LOCAL CONSERVATION DISTRICT SHALL BE CONTACTED IF SEEPS OR SPRINGS ARE ENCOUNTERED DURING CONSTRUCTION AND THEY SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

26. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETITIVE EROSION AREAS AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.

27. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR. MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.

28. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.

29. E&S BMP'S SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.

30. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMP'S.

31. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP'S MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMP'S. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE TEMPORARY EROSION AND SEDIMENT BMP'S SHALL BE REACTIVATED THROUGH REVEGETATION OF DISTURBED AREAS. SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.

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57. FAILURE TO CORRECTLY INSTALL E&S BMP'S, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO CORRECTLY TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMP'S 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 ADDITIONAL CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR OR CRIMINAL PENALTIES FOR EACH VIOLATION.

58. 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.

59. ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIALS/WASTES.

60. 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.

61. CHANNELS HAVING RIPRAP, RENO MATTRESS, OR GABION LININGS MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.

62. 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 STRUCTURE. MATERIALS SHALL BE STABILIZED CONVEYED TO THE DEPARTMENT.

63. SEDIMENT BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES.

64. 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.

65. UPON REQUEST, THE APPLICANT OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT (RECORD DRAWING) FOR ANY SEDIMENT BASIN OR TRAP INSTALLED ON THE CONSTRUCTION DISTRICT OR THE DEPARTMENT.

66. 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.

67. 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 8" LAYERED LIFTS AT 95% DENSITY.

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69. FAILURE TO CORRECTLY INSTALL E&S BMP'S, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO CORRECTLY TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMP'S 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 ADDITIONAL CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR OR CRIMINAL PENALTIES FOR EACH VIOLATION.

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71. ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIALS/WASTES.

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73. CHANNELS HAVING RIPRAP, RENO MATTRESS, OR GABION LININGS MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.

74. 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 STRUCTURE. MATERIALS SHALL BE STABILIZED CONVEYED TO THE DEPARTMENT.

75. SEDIMENT BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES.

LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.

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

PERMANENT CONTROL MEASURES

1. PERMANENT GRASS / LEGUME COVER

a. ALL DISTURBED AREAS THAT ARE NOT PAVED SHALL BE PERMANENTLY STABILIZED WITH GRASS TO MINIMIZE EROSION. ALL SWALES SHALL BE PERMANENTLY SEEDDED AS REQUIRED IN ACCORDANCE WITH THE SEEDING SPECIFICATION SHOWN ON THE ATTACHED E&S PLAN.

b. PERMANENT LEGUME COVER SHALL BE APPLIED AS SPECIFIED IN ACCORDANCE WITH THE SEEDING SCHEDULE AND NOTES CONTAINED ON THE ATTACHED E&S PLAN.

2. SOO

a. SOO SHALL BE INSTALLED IN AREAS WHERE PERMANENT STABILIZATION WITH SEED ALONE IS DIFFICULT.

b. SOO MATERIALS AND INSTALLATION SHALL MEET THE APPROVAL OF THE LOCAL CONSERVATION DISTRICT.

3. RIP - RAP OUTLET PROTECTION

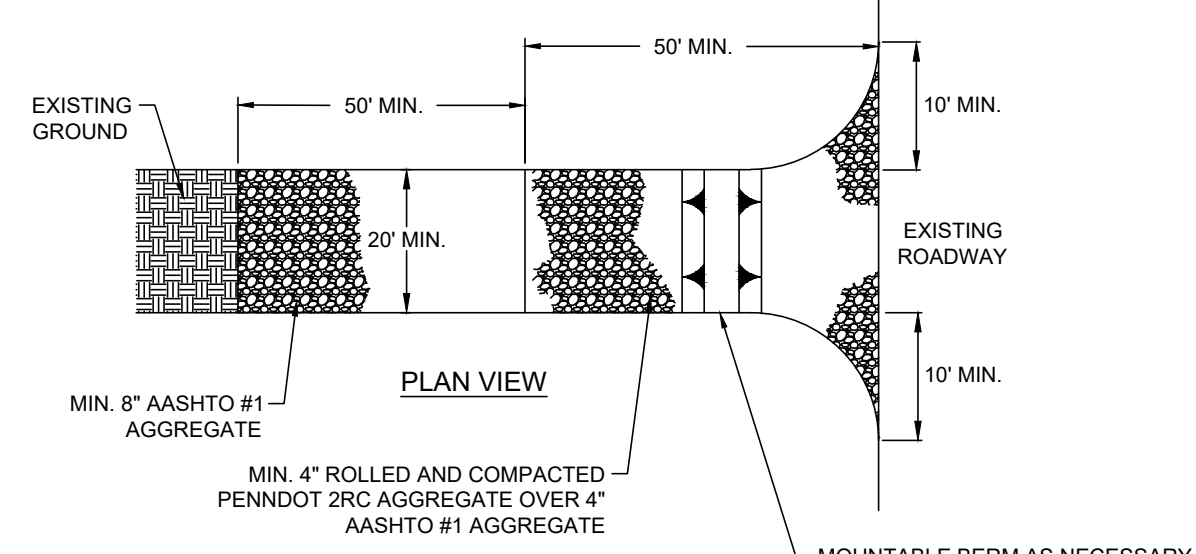
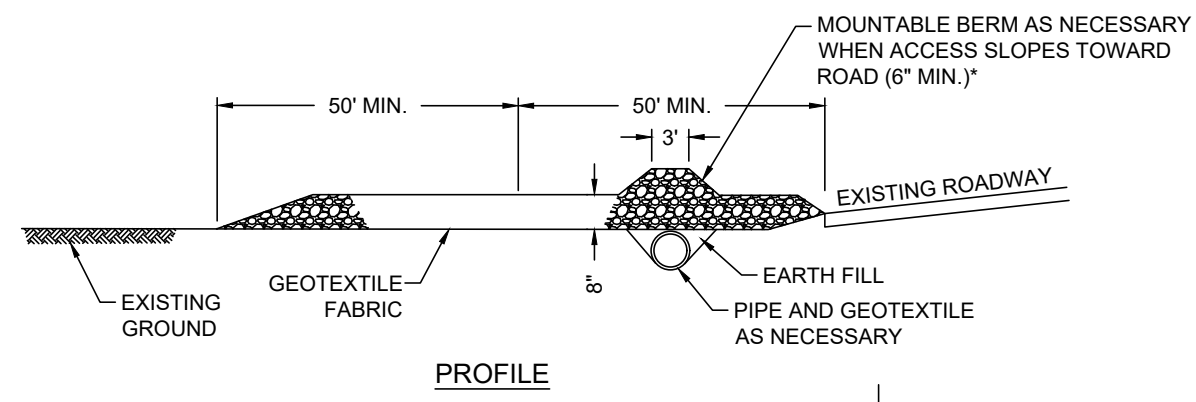
a. RIP-RAP SHALL BE USED AT ALL PIPE OUTLETS TO REDUCE THE OUTFLOW VELOCITY AND MINIMIZE EROSION POTENTIAL AT THE OUTLET PIPE.

b. RIP-RAP SHALL BE INSTALLED IN ACCORDANCE WITH THE DIMENSIONS AND MATERIALS SHOWN ON THE ATTACHED PLAN.

4. SWALES/SPILLWAYS/SLOPE LINING

a. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED.

b. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH, BACKFILL AND COMPACT THE TRENCH AFTER STAP

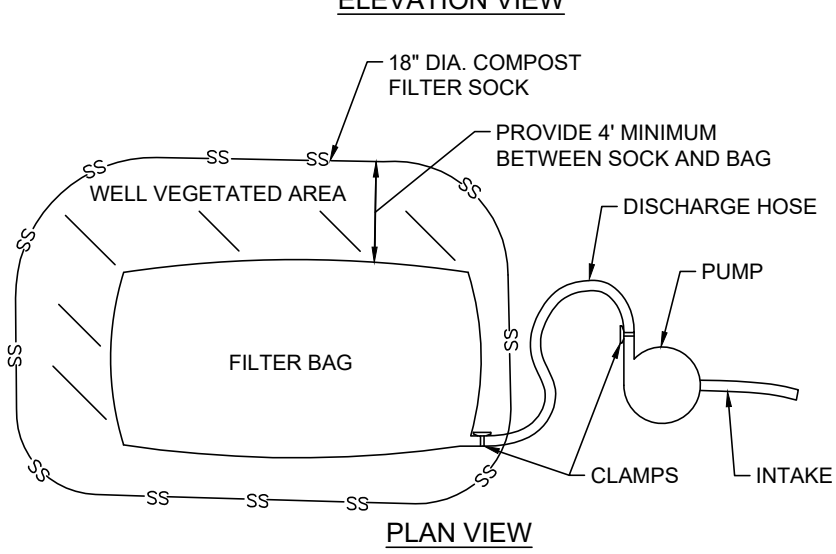
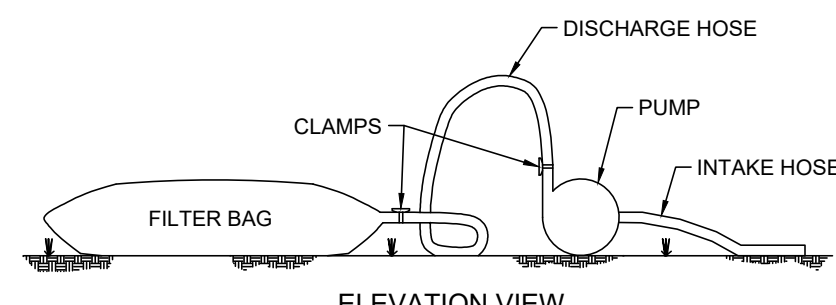


*MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

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

ALTERNATE ROCK CONSTRUCTION ENTRANCE

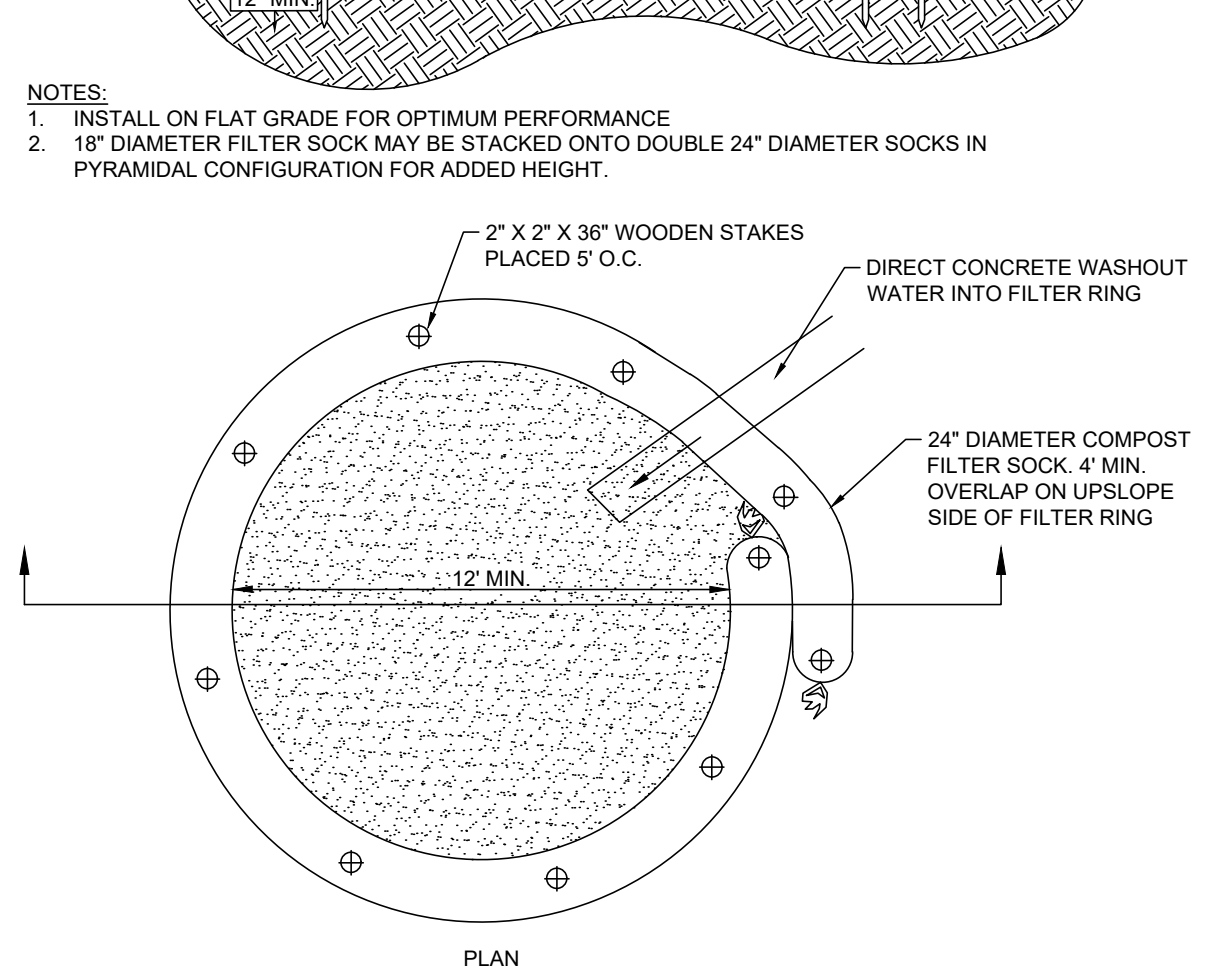
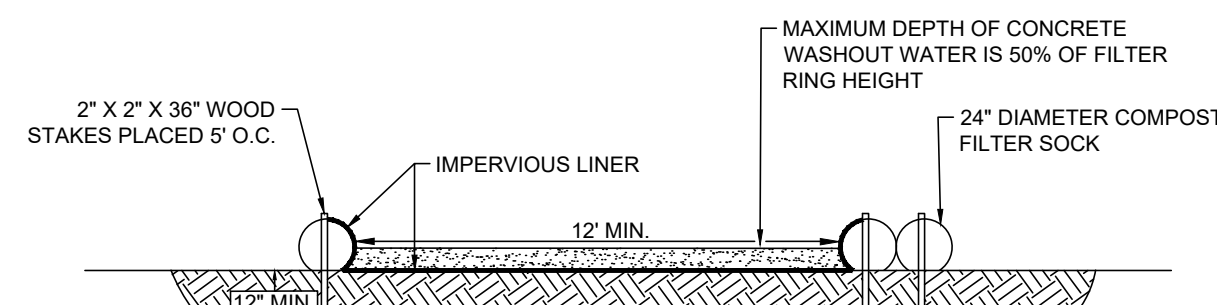
NO SCALE



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

PUMPED WATER FILTER BAG DETAIL

NO SCALE

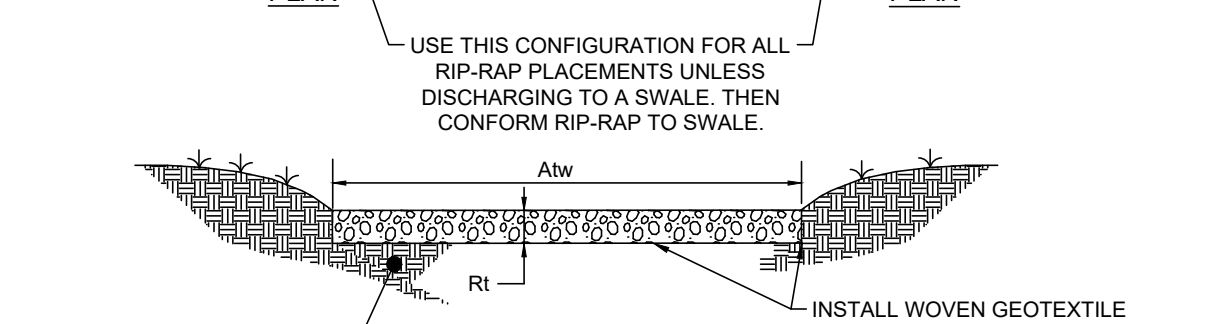
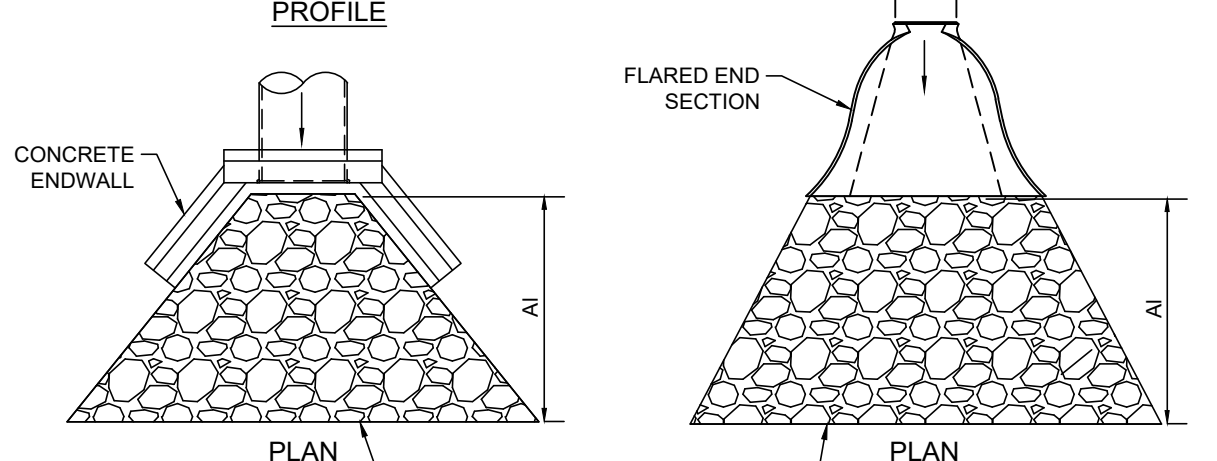


- NOTES:**
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
 2. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.

TYPICAL COMPOST SOCK WASHOUT INSTALLATION

NO SCALE

PIPE NO.	PIPE DIA. Do (in.)	RIPRAP SIZE	Rt (in)	At (ft)	Atw (ft)	Atw (ft)
EW-1	12	R-4	18	4	3	5
EW-2	12	R-4	18	4	3	5
FES-1	6	R-3	9	4	2	3
FES-2	6	R-3	9	4	2	3



- NOTES:**
1. USE THIS CONFIGURATION FOR ALL RIP-RAP PLACEMENTS UNLESS DISCHARGING TO A SWALE. THEN CONFORM RIP-RAP TO SWALE.
 2. INSTALL WOVEN GEOTEXTILE MATERIAL BETWEEN RIP-RAP AND SUBGRADE.

FLARED END SECTION/ENDWALL RIP RAP DETAIL

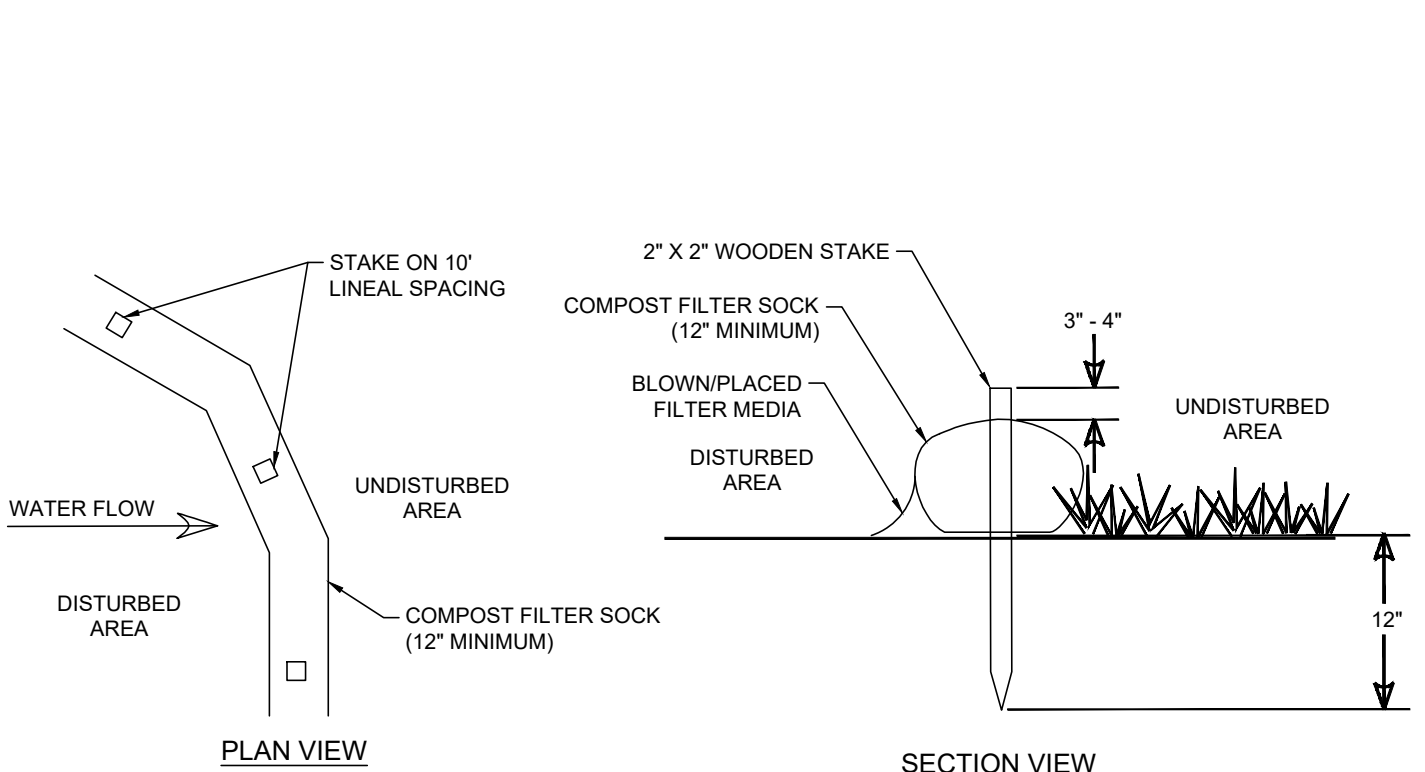
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APPLICATION	SPECIES	% BY WEIGHT	MINIMUM %		MAX % WEED SEED	SEEDING RATE LB/1000 YD ²	PLANTING SEASON	FERTILIZER FORMULA APPLICATION RATE	LIMING RATE
			PURITY	GERMINATION					
TEMPORARY SEEDINGS	ANNUAL RYEGRASS	100	97	90	0.15	10 (48)	MARCH 1 - AUGUST 15	10-10-10 100 LB/1000 YD ²	410 LB/1000 YD ²
	WINTER RYE	100	95	80	0.15	56 (271)	AUGUST 16 - OCTOBER 15	10-10-10 100 LB/1000 YD ²	410 LB/1000 YD ²
PERMANENT LAWNS	PERENNIAL RYEGRASS	20	97	90	0.10	8.5 (41.14)	MARCH 1 - JUNE 1 AND AUGUST 1 - OCTOBER 15	10-20-20 140 LB/1000 YD ²	800 LB/1000 YD ²
	CREEPING RED FESCUE OR CHEVINGS FESCUE	30	97	85	0.10	12.5 (60.5)			
	KENTUCKY BLUEGRASS	50	97	80	0.15	21.0 (101.64)			

- NOTES:**
1. PER MANUFACTURER'S SPECIFICATIONS. SEEDING RATE SHALL BE 20-40 LBS PER ACRE. OR 0.5-1 LB/1,000 SQ FT WITH A COVER CROP. FOR A COVER CROP USE ONE OF THE FOLLOWING:
 - GRAIN RYE (1 SEP TO 30 APR; 30 LBS/ACRE)
 - JAPANESE MILLET (1 MAY TO 31 AUG; 10 LBS/ACRE)
 - BARNYARD GRASS (1 MAY TO 31 AUG; 10 LBS/ACRE)
 2. LIMING AND FERTILIZER RATES SHALL BE REVISED IN ACCORDANCE WITH ANY SOIL TEST RESULTS.
 3. ALL SEEDED AREAS SHALL BE MULCHED WITH HAY OR STRAW APPLIED AT A RATE OF 3 TONS PER ACRE. MULCH TO BE ANCHORED WITH WOOD CELLULOSE FIBER AT A RATE OF 750 LBS PER ACRE.
 4. ALL DIVERSIONS, CHANNELS, SED TRAPS, AND STOCKPILES MUST BE STABILIZED IMMEDIATELY.

SEEDING & FERTILIZER SPECIFICATIONS

NO SCALE



- INSTALLATION NOTES:**
1. ALL MATERIAL TO MEET FILTERREX SPECIFICATIONS.
 2. FILTER SOCK COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.
 3. FILTER SOCK DEFLECTED FOR MINIMUM SLOPES. GREATER SLOPES MAY REQUIRE LARGER SOCKS PER THE ENGINEER.
 4. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.

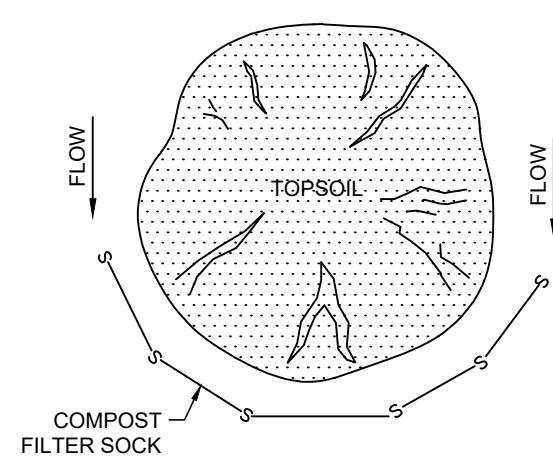
- MAINTENANCE NOTES:**
1. THE CONTRACTOR SHALL MAINTAIN THE FILTER SOCK IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED.
 2. IF THE FILTER SOCK HAS BEEN DAMAGED, IT SHALL BE REPLACED WITH A NEW SECTION OF FILTER SOCK SECURELY STAKED IMMEDIATELY UPSLOPE OF THE DAMAGED SECTION.
 3. THE CONTRACTOR SHALL REMOVE SEDIMENT AT THE BASE OF THE UPSLOPE SIDE OF THE FILTER SOCK WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE FILTER SOCK, OR AS DIRECTED BY THE LEBANON COUNTY CONSERVATION DISTRICT. ALTERNATIVELY, A NEW FILTER SOCK CAN BE PLACED ON TOP OF AND SLIGHTLY BEHIND THE ORIGINAL ONE CREATING MORE SEDIMENT STORAGE CAPACITY WITHOUT SOIL DISTURBANCE.
 4. FILTER SOCK SHALL BE MAINTAINED UNTIL DISTURBED AREA ABOVE THE DEVICE HAS BEEN PERMANENTLY STABILIZED AND CONSTRUCTION ACTIVITY HAS CEASED.
 5. THE FILTER MEDIA WILL BE DISPERSED ON SITE ONCE DISTURBED AREA HAS BEEN PERMANENTLY STABILIZED. CONSTRUCTION ACTIVITY HAS CEASED, OR AS DETERMINED BY THE LEBANON COUNTY CONSERVATION DISTRICT.
 6. FOR LONG-TERM SEDIMENT AND POLLUTION CONTROL APPLICATION, FILTER SOCK CAN BE SEEDED AT THE TIME OF INSTALLATION TO CREATE A VEGETATIVE FILTERING SYSTEM FOR PROLONGED AND INCREASED FILTRATION OF SEDIMENT AND SOLUBLE POLLUTANTS (CONTAINED VEGETATIVE FILTER STRIP). THE APPROPRIATE SEED MIX SHALL BE DETERMINED BY THE DESIGN PROFESSIONAL.

COMPOST FILTER SOCK DETAIL

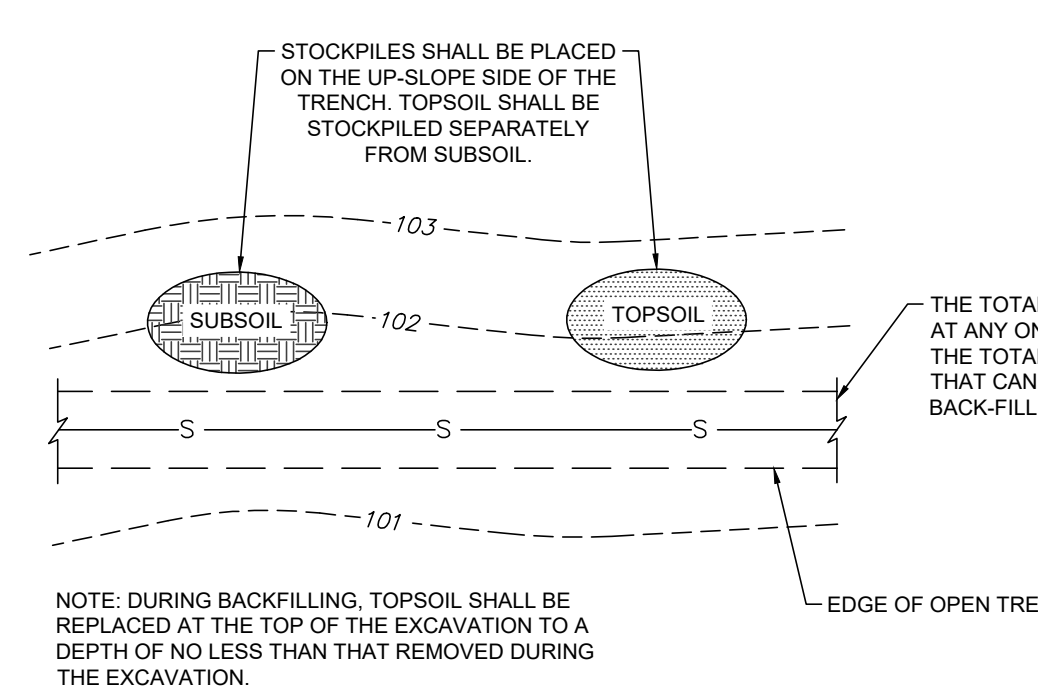
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TOPSOIL STOCKPILE

NO SCALE

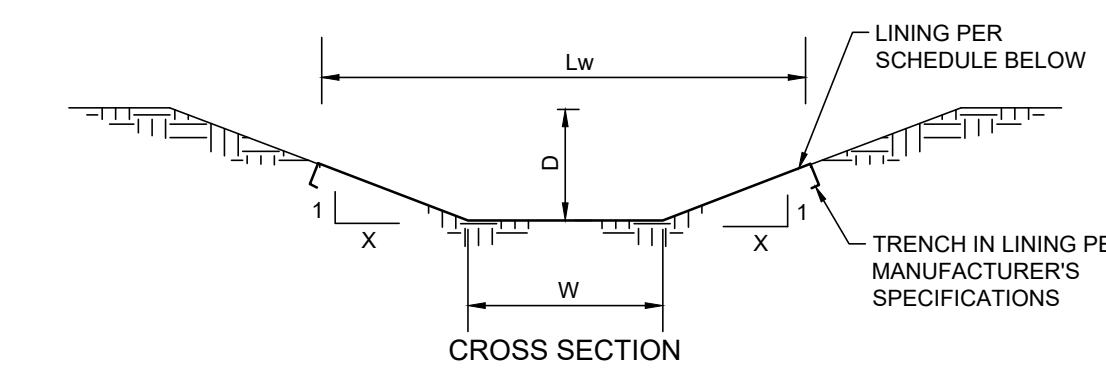


- NOTES:**
1. A STOCKPILE SHALL BE USED TO CONTAIN ALL STRIPPED TOPSOIL IN A LIMITED AREA IN ORDER TO KEEP DISTURBANCE TO A MINIMUM.
 2. STOCKPILES ARE TO BE STABILIZED IMMEDIATELY.
 3. STOCKPILE HEIGHTS MUST NOT EXCEED 36 FEET.
 4. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
 5. STOCKPILES SHALL BE LOCATED SO THAT ALL SWALES CAN FUNCTION AS DESIGNED.



UNDERGROUND UTILITY LINE TRENCH DETAIL

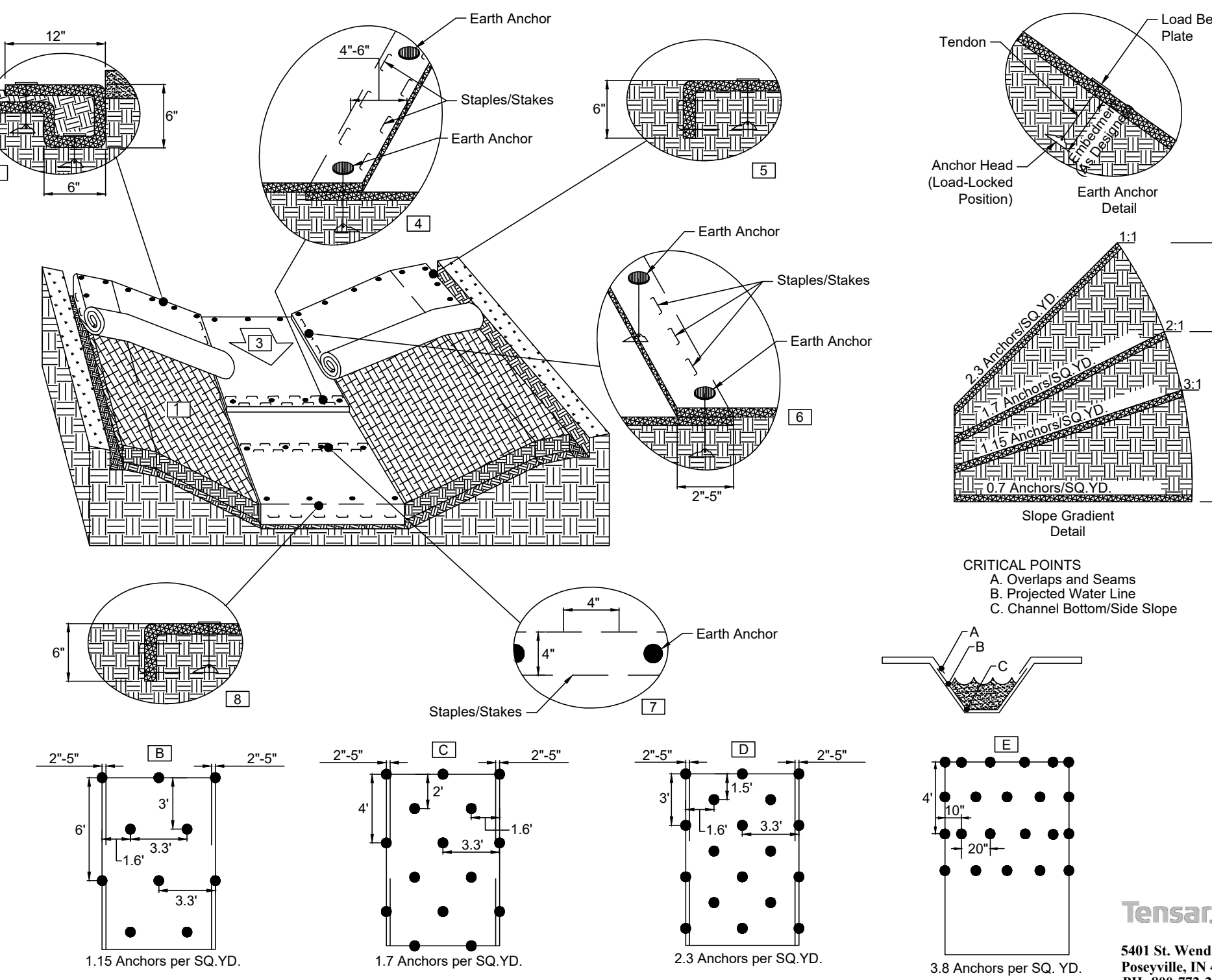
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SWALE NO.	WIDTH (W)	DEPTH (D)	SIDE SLOPE (X)	MAX. SLOPE	LINING WIDTH (LW)	LINING	TEMPORARY LINING	STAPLE PATTERN
A	1'	1'	3	9%	7'	GRASS	N.A.G. S75	D

SWALE DETAIL

NO SCALE



CHANNEL INSTALLATION EARTH ANCHOR DETAIL

NO SCALE

- NOTES:**
1. PREPARE SOIL BEFORE INSTALLING TRM. INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
 2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE TRM IN A 6" (15 CM) DEEP X 6" (15CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF TRM EXTENDED BEYOND THE UPSLOPE PORTION OF THE TRENCH. USE SHOREMAX MAT AT THE CHANNEL/CULVERT OUTLET AS SUPPLEMENTAL SCOUR PROTECTION AS NEEDED. ANCHOR THE TRM WITH A ROW OF STAPLES AND ANCHORS APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF TRM BACK OVER SEED AND COMPACTED SOIL.
 3. ROLL CENTER TRM IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. TRM WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL TRM MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES AND ANCHORS IN APPROPRIATE LOCATIONS AS SHOWN IN THE FASTENER PATTERN GUIDE.
 4. PLACE CONSECUTIVE TRM END-OVER-END (SHINGLE STYLE) WITH A 4" - 6" (10 CM - 15 CM) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER TO SECURE TRM.
 5. FULL LENGTH EDGE OF TRM AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES AND ANCHORS APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
 6. ADJACENT TRM MUST BE OVERLAPPED APPROXIMATELY 2' - 5' (5 CM - 12.5 CM) (DEPENDING ON TRM TYPE) AND FASTENED.
 7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9 M - 12 M) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10CM) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
 8. THE TERMINAL END OF THE TRM MUST BE ANCHORED WITH A ROW OF STAPLES AND ANCHORS APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

THE PERFORMANCE OF GROUND ANCHORING DEVICES IS HIGHLY DEPENDENT ON NUMEROUS SITE/PROJECT SPECIFIC VARIABLES. IT IS THE SOLE RESPONSIBILITY OF THE PROJECT ENGINEER AND/OR CONTRACTOR TO SELECT THE APPROPRIATE ANCHOR TYPE AND LENGTH. ANCHORING SHALL BE SELECTED TO HOLD THE MAT IN INTIMATE CONTACT WITH THE SOIL SUBGRADE AND RESIST PULL OUT IN ACCORDANCE WITH THE PROJECT'S DESIGN INTENT.

- ANCHOR PATTERN GUIDE CAN VARY BASED ON EARTH ANCHOR AND BLANKET SELECTION.
- IF DESIRED, THE SYSTEM CAN BE SOIL-FILLED AND SODDED AFTER TRM INSTALLATION. SOD SHOULD BE STAPLE/STAKED ACCORDING TO PLAN SPECIFICATIONS.

Tensar. NORTH AMERICAN GREEN
 5401 St. Wendel - Cynthiana Rd.
 Poseyville, IN 47633
 PH: 304-772-2040
 www.tensaragrreen.com

BY	
DATE	
REVISION	

NO.	DATE	DESCRIPTION

EROSION & SEDIMENTATION POLLUTION CONTROL DETAILS

PRELIMINARY/FINAL SUBDIVISION & LAND DEVELOPMENT PLAN

For
LCW HOLDINGS, LLC APARTMENT COMPLEX

North Lebanon Township
 Lebanon County, Pennsylvania

SEI ENGINEERING SURVEYING

279 N. ZINNS MILL ROAD, LEBANON, PA 17042
 717-272-7110
 WWW.STECKER.NET

FIELD CREW: MOJ, JEC
 BASE MAP: JEC
 DRAWN: CDS
 DESIGN: CDS
 CHECKED: SAS
 DATE: 3/16/26
 SCALE: AS NOTED
 PROJECT # 2547-25-001

