

# SHAFFER PRESERVE

BETHEL TOWNSHIP

## PRE-CONSTRUCTION DOCUMENTS

SEAL: \_\_\_\_\_

CONSULTANT(S): \_\_\_\_\_

ISSUE DATE: 02/27/2024    DRAWN BY: RG    DESIGNED BY: KM    CHECKED BY: PS

REVISIONS:

NO.    DATE    REVISION:

PROJECT TITLE:  
**SHAFFER PRESERVE**  
 PRE-CONSTRUCTION DOCUMENTS

1657 BETHEL ROAD  
 GARNET VALLEY, PA 19061

OWNER:  
 BETHEL TOWNSHIP  
 1092 BETHEL ROAD  
 GARNET VALLEY, PA 19060

PROJECT NUMBER(S): 22068.10    SOURCE: SC

ORIENTATION: \_\_\_\_\_    DRAWING SCALE: AS NOTED

DRAWING TITLE:  
**COVER SHEET**

SHEET NUMBER:

**CS**

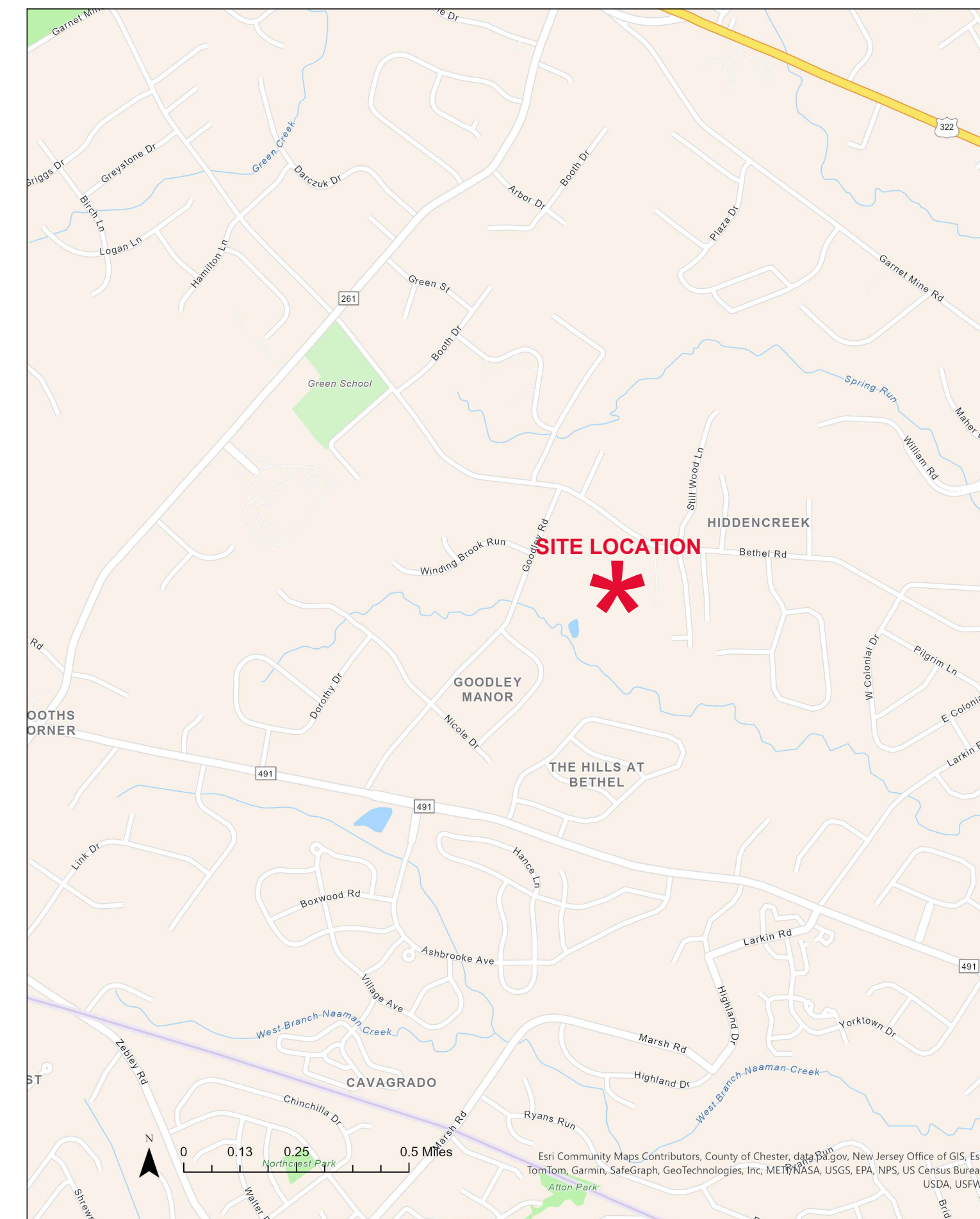


PROJECT DESIGN AREA

ILLUSTRATIVE PLAN ONLY

**SHEET LIST:**

- CS COVER SHEET
- ED-1 EXISTING CONDITIONS & DEMOLITION PLAN
- C-101 SITE GRADING PLAN
- L-101 SITE LAYOUT PLAN
- L-501 SITE DETAILS
- L-502 SITE DETAILS
- L-503 SITE DETAILS
- P-101 PLANTING PLAN
- P-501 PLANTING DETAILS



SITE LOCATION



Before You Dig Anywhere  
 STOP! CALL 1-800-242-1776  
 PA Act 177 (1998) requires notification to ONE CALL SYSTEM 3 working days for construction phase and 10 working days for design phase before you excavate.  
 PA ONE CALL SYSTEM, INC.  
 DESIGN PHASE SERIAL # TBD



**GENERAL NOTES:**

1. THE CONTRACTOR IS RESPONSIBLE TO APPLY FOR AND OBTAIN, PRIOR TO CONSTRUCTION, ANY FEDERAL, STATE, COUNTY, OR TOWNSHIP PERMITS THAT MIGHT BE REQUIRED TO COMPLETE THIS PROJECT.
2. THE CONTRACTOR SHALL DETERMINE THE EXTENT AND EXACT LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO COMMENCING WORK. CONTRACTOR SHALL REPORT TO THE LANDSCAPE ARCHITECT / CLIENT REPRESENTATIVE ANY CONDITION NOT CONSISTENT WITH THE DRAWINGS. THE CONTRACTOR SHALL PROTECT ALL SERVICE LINES AND EXISTING SITE AREA FROM DETERIORATION OR DAMAGE. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. CONTRACTOR SHALL NOTIFY UTILITY COMPANIES THREE (3) DAYS PRIOR TO COMMENCING WORK TO COMPLY WITH PA ACT 287. PA ONE CALL SYSTEM: 1-800-242-1776.
3. ALL SITE WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LOCAL & STATE CODES/ REGULATIONS.
4. ALL DEMOLITION DEBRIS SHALL BE DISPOSED OF PROPERLY, LEGALLY AND IN A TIMELY MANNER.
5. ALL EXISTING TREES, SHRUBS, AND GROUND COVER NOT INDICATED TO BE REMOVED SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES.
6. ALL OTHER DEBRIS SUCH AS OLD FENCING AND DEBRIS PILES SHALL BE CLEANED UP AND DISPOSED OF PROPERLY, LEGALLY, AND IN A TIMELY MANNER.
7. PROTECT ALL EXISTING BUILT ELEMENTS, INCLUDING BUT NOT LIMITED TO: PAVING, WALLS, COLUMNS, CURBS, AND STEPS. ALL EXISTING BUILT ELEMENTS SHALL BE PROTECTED DURING CONSTRUCTION ACTIVITIES. RESTORE ANY DAMAGED ITEMS TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
8. SEED ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES.
9. SITE INFORMATION BASED ON SITE SURVEY, COMPLETED BY G.D. HOUTMAN & SON, INC. ON SEPTEMBER 30, 2020.

REMOVE AND DISPOSE OF APPROXIMATELY 2300 SQ/FT OF EXISTING ASPHALT PAVING

REMOVE EXISTING STAND PIPE. POND TO BE DRAINED FOLLOWING ALL REGULATIONS PRIOR TO ANY GRADING WORK.

REMOVE AND DISPOSE OF EXISTING CHAIN LINK FENCE ALONG LENGTH OF THE PROPERTY

EXISTING CHAIN LINK FENCE ALONG THE SOUTH SIDE OF THE PROPERTY MAY OR MAY NOT BE REMOVED BY THE TOWNSHIP. SEEK DIRECTION FROM THE TOWNSHIP BEFORE DOING ANY WORK IN THIS AREA.

REMOVE AND DISPOSE OF ALL DEBRIS PILES OF WOOD AND BRANCHES ALONG THE WOODLAND EDGE (TYP)

REMOVE AND DISPOSE OF APPROXIMATELY 3700 SQ/FT OF EXISTING ASPHALT PAVING

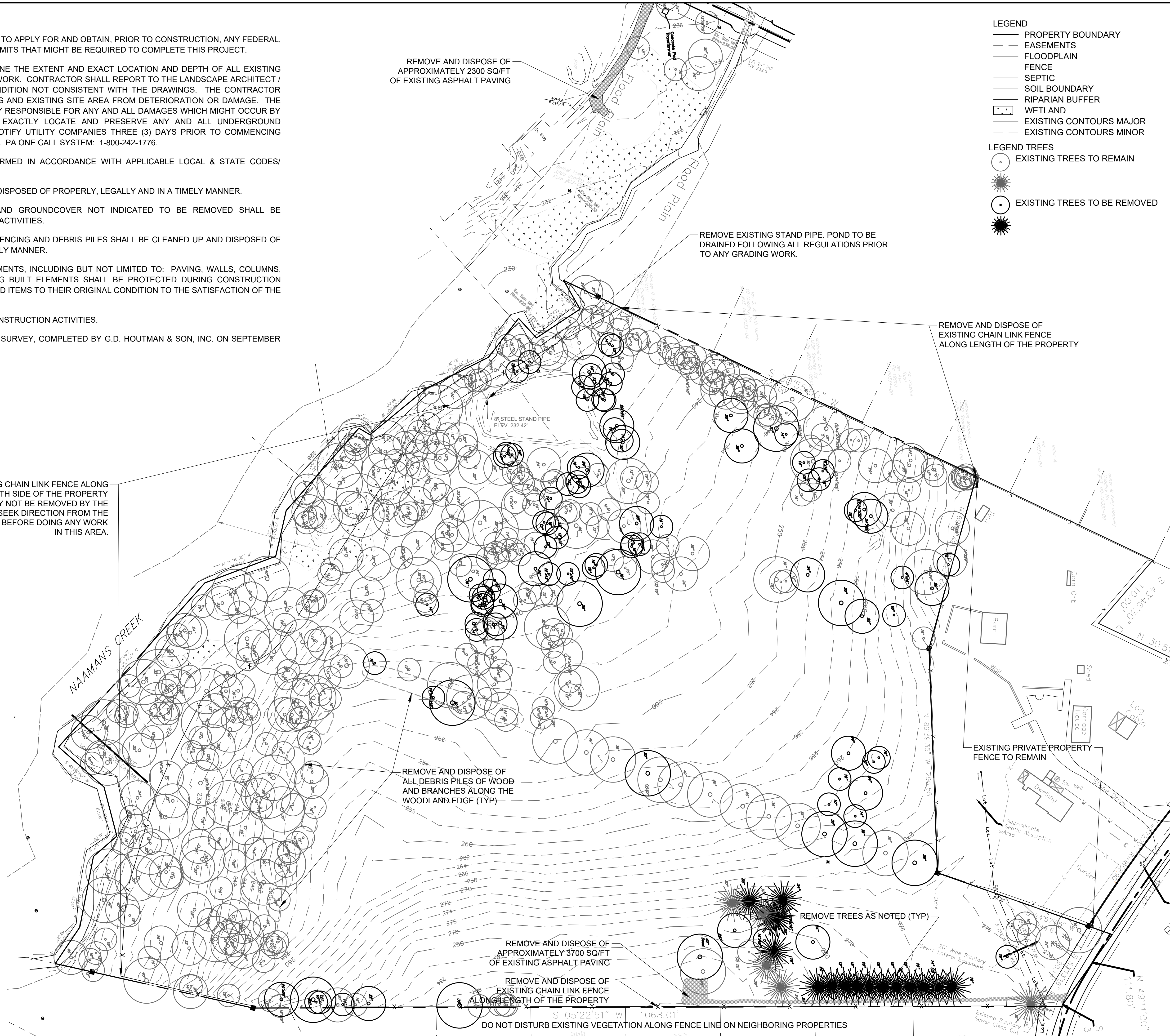
REMOVE AND DISPOSE OF EXISTING CHAIN LINK FENCE ALONG LENGTH OF THE PROPERTY

REMOVE TREES AS NOTED (TYP)

DO NOT DISTURB EXISTING VEGETATION ALONG FENCE LINE ON NEIGHBORING PROPERTIES

- LEGEND**
- PROPERTY BOUNDARY
  - - - EASEMENTS
  - - - FLOODPLAIN
  - FENCE
  - SEPTIC
  - SOIL BOUNDARY
  - RIPARIAN BUFFER
  - ◻ WETLAND
  - EXISTING CONTOURS MAJOR
  - EXISTING CONTOURS MINOR

- LEGEND TREES**
- EXISTING TREES TO REMAIN
  - ☼ EXISTING TREES TO BE REMOVED



SEAL: \_\_\_\_\_

CONSULTANT(S): \_\_\_\_\_

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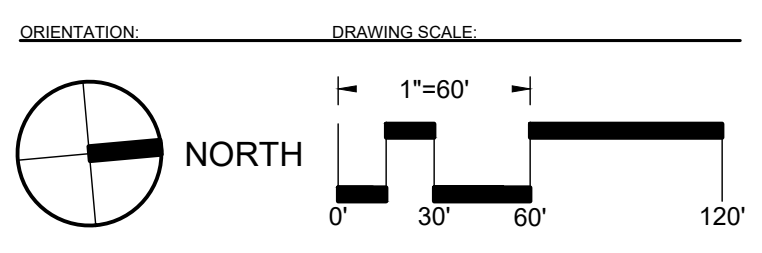
NO.	DATE	REVISION

PROJECT TITLE: SHAFER PRESERVE PRE-CONSTRUCTION DOCUMENTS

1657 BETHEL ROAD GARNET VALLEY, PA 19061

OWNER: BETHEL TOWNSHIP 1092 BETHEL ROAD GARNET VALLEY, PA 19060

PROJECT NUMBER(S): 22068.10 SOURCE: SC



DRAWING TITLE: EXISTING CONDITIONS AND DEMO PLAN

SHEET NUMBER: ED-1

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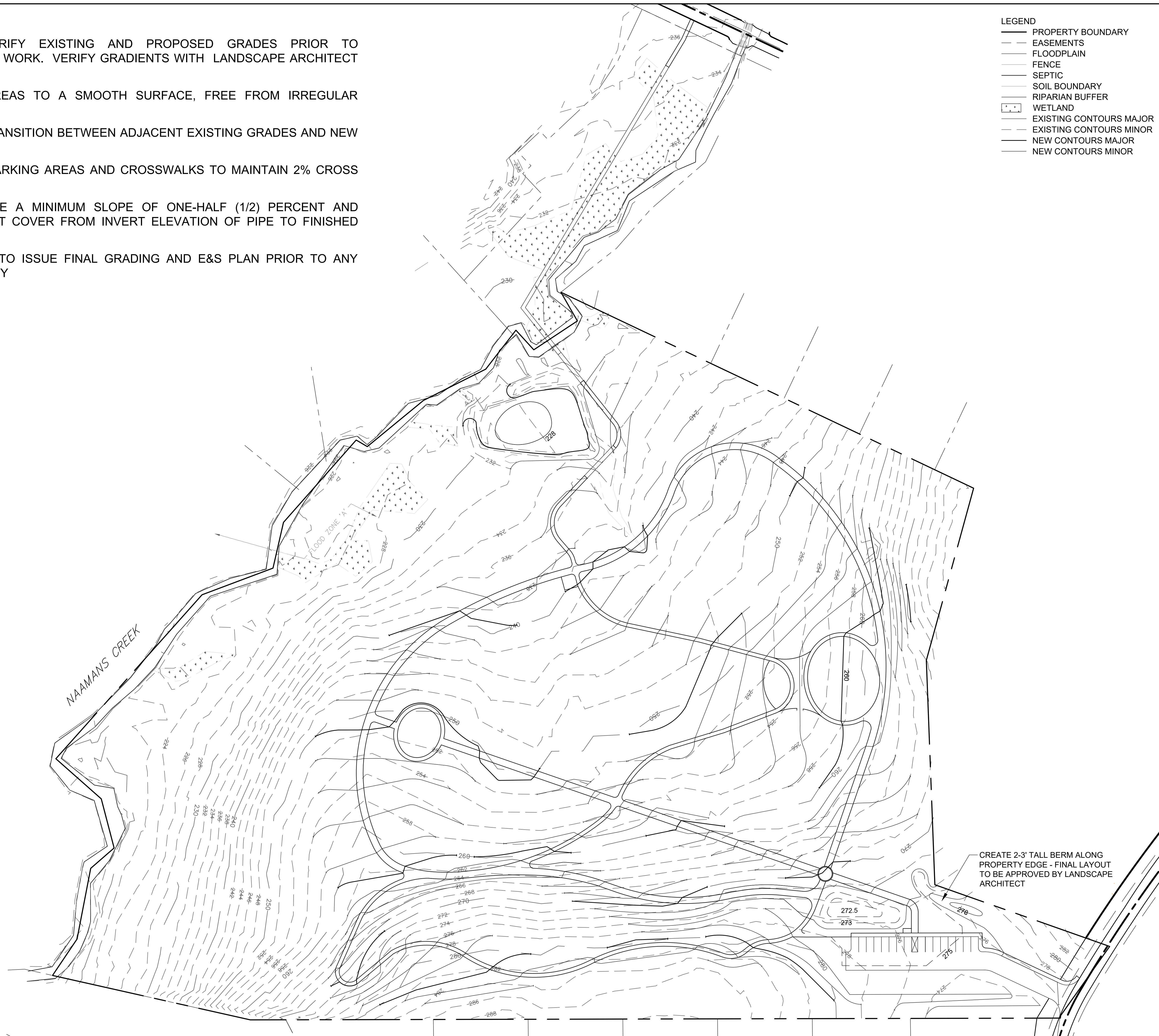


**GRADING NOTES:**

1. CONTRACTOR TO VERIFY EXISTING AND PROPOSED GRADES PRIOR TO PROCEEDING WITH ANY WORK. VERIFY GRADIENTS WITH LANDSCAPE ARCHITECT PRIOR TO PROCEEDING.
2. UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE FROM IRREGULAR SURFACE CHANGES.
3. PROVIDE A SMOOTH TRANSITION BETWEEN ADJACENT EXISTING GRADES AND NEW GRADES.
4. ALL TRAILS, DRIVES, PARKING AREAS AND CROSSWALKS TO MAINTAIN 2% CROSS SLOPE.
5. ALL PIPES SHALL HAVE A MINIMUM SLOPE OF ONE-HALF (1/2) PERCENT AND MAINTAIN TWO (2) FOOT COVER FROM INVERT ELEVATION OF PIPE TO FINISHED GRADE.
6. CIVIL ENGINEER (TBD) TO ISSUE FINAL GRADING AND E&S PLAN PRIOR TO ANY CONSTRUCTION ACTIVITY

**LEGEND**

—	PROPERTY BOUNDARY
- - -	EASEMENTS
---	FLOODPLAIN
---	FENCE
---	SEPTIC
---	SOIL BOUNDARY
---	RIPARIAN BUFFER
•••	WETLAND
---	EXISTING CONTOURS MAJOR
---	EXISTING CONTOURS MINOR
---	NEW CONTOURS MAJOR
---	NEW CONTOURS MINOR



SEAL: \_\_\_\_\_

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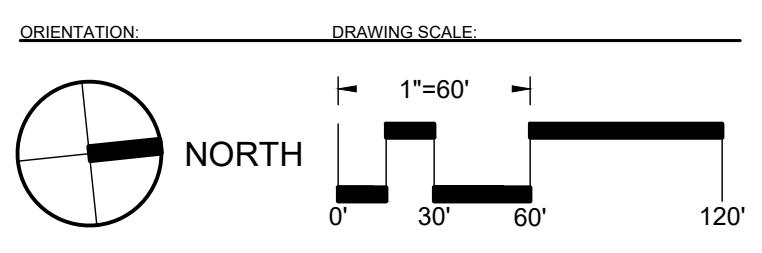
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DRAWING TITLE:  
**GRADING PLAN**

SHEET NUMBER:  
**C-101**

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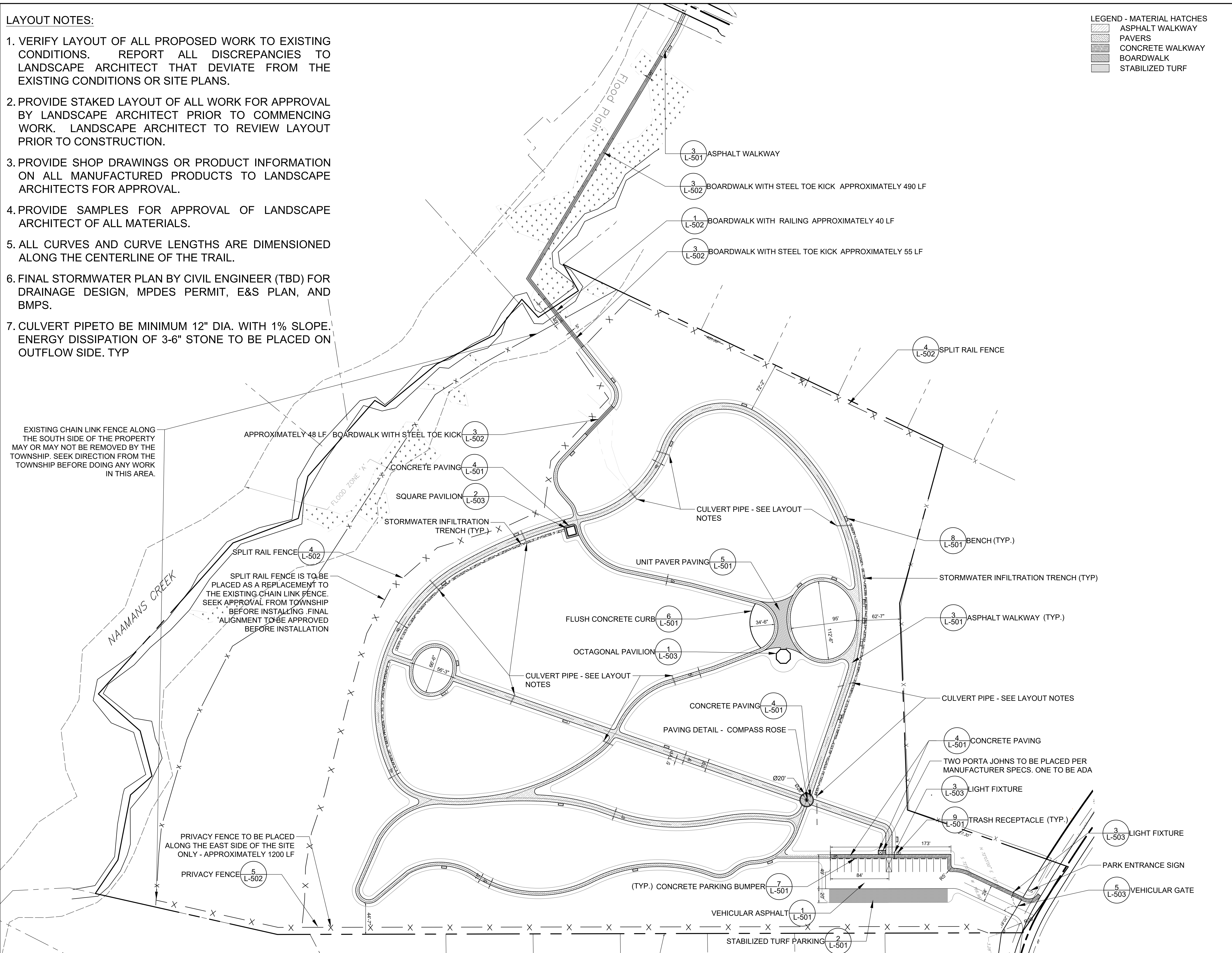


LAYOUT NOTES:

1. VERIFY LAYOUT OF ALL PROPOSED WORK TO EXISTING CONDITIONS. REPORT ALL DISCREPANCIES TO LANDSCAPE ARCHITECT THAT DEVIATE FROM THE EXISTING CONDITIONS OR SITE PLANS.
2. PROVIDE STAKED LAYOUT OF ALL WORK FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO COMMENCING WORK. LANDSCAPE ARCHITECT TO REVIEW LAYOUT PRIOR TO CONSTRUCTION.
3. PROVIDE SHOP DRAWINGS OR PRODUCT INFORMATION ON ALL MANUFACTURED PRODUCTS TO LANDSCAPE ARCHITECTS FOR APPROVAL.
4. PROVIDE SAMPLES FOR APPROVAL OF LANDSCAPE ARCHITECT OF ALL MATERIALS.
5. ALL CURVES AND CURVE LENGTHS ARE DIMENSIONED ALONG THE CENTERLINE OF THE TRAIL.
6. FINAL STORMWATER PLAN BY CIVIL ENGINEER (TBD) FOR DRAINAGE DESIGN, MPDES PERMIT, E&S PLAN, AND BMPS.
7. CULVERT PIPE TO BE MINIMUM 12" DIA. WITH 1% SLOPE. ENERGY DISSIPATION OF 3-6" STONE TO BE PLACED ON OUTFLOW SIDE. TYP

LEGEND - MATERIAL HATCHES

	ASPHALT WALKWAY
	PAVERS
	CONCRETE WALKWAY
	BOARDWALK
	STABILIZED TURF



SEAL: \_\_\_\_\_

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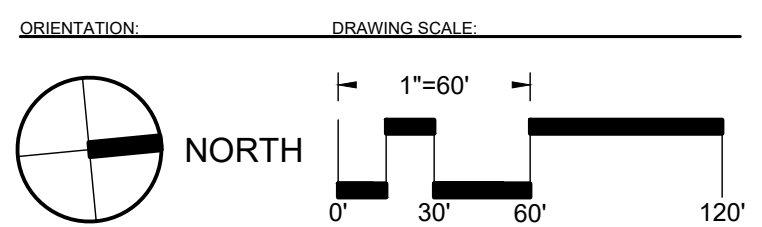
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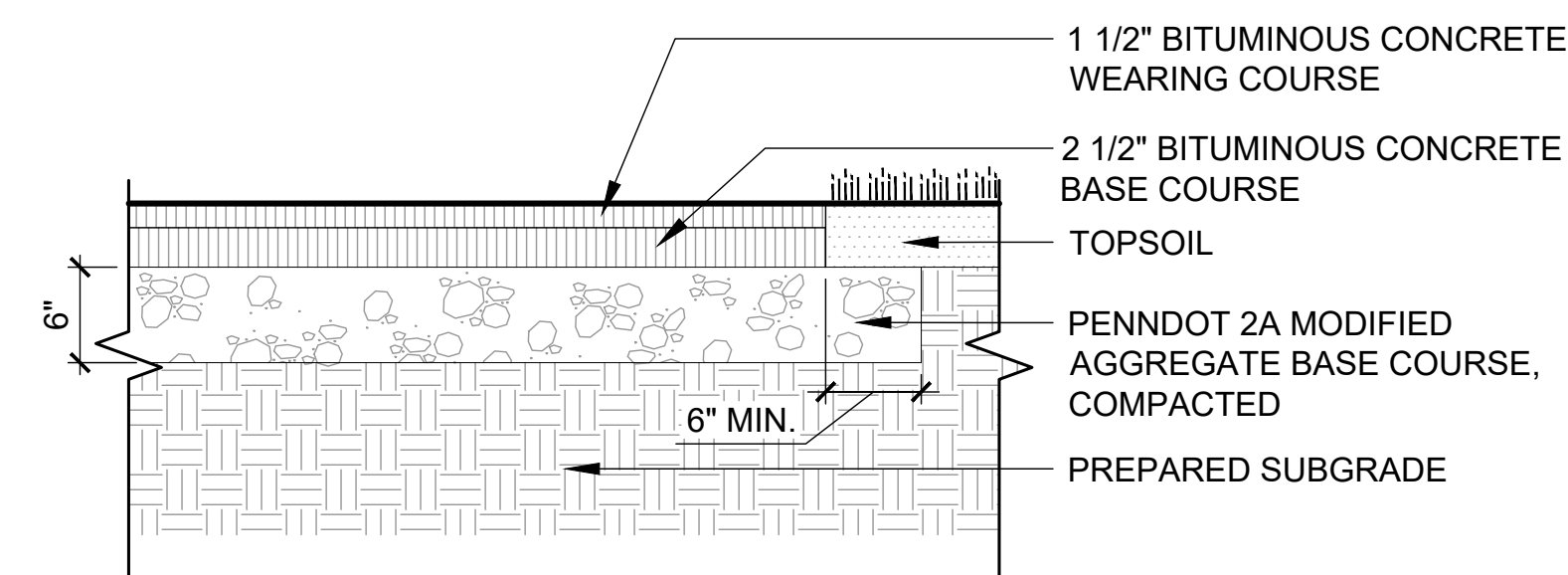


DRAWING TITLE:  
**SITE LAYOUT PLAN**

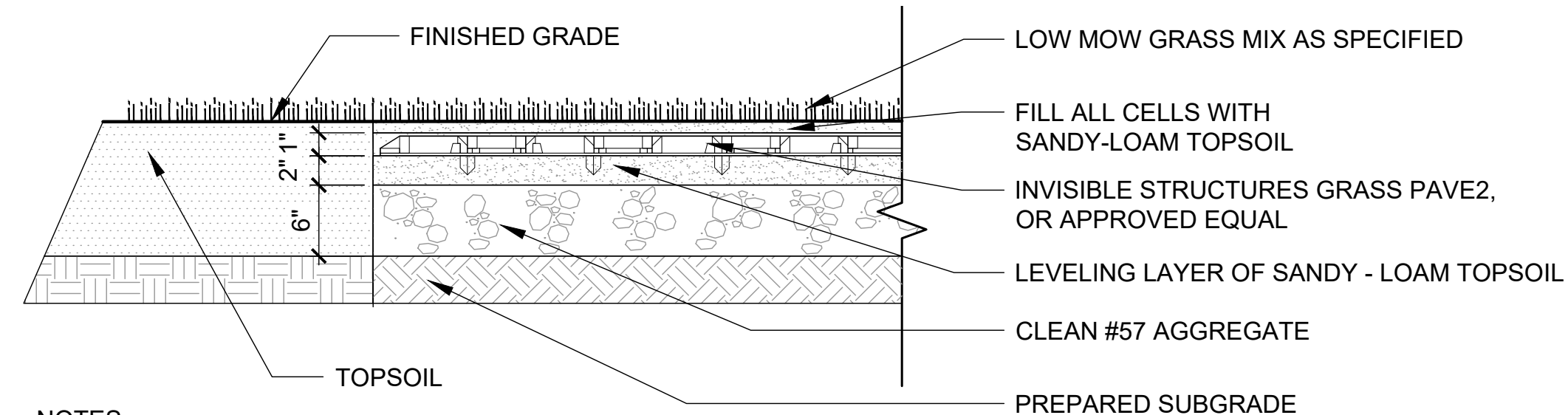
SHEET NUMBER:  
**L-101**

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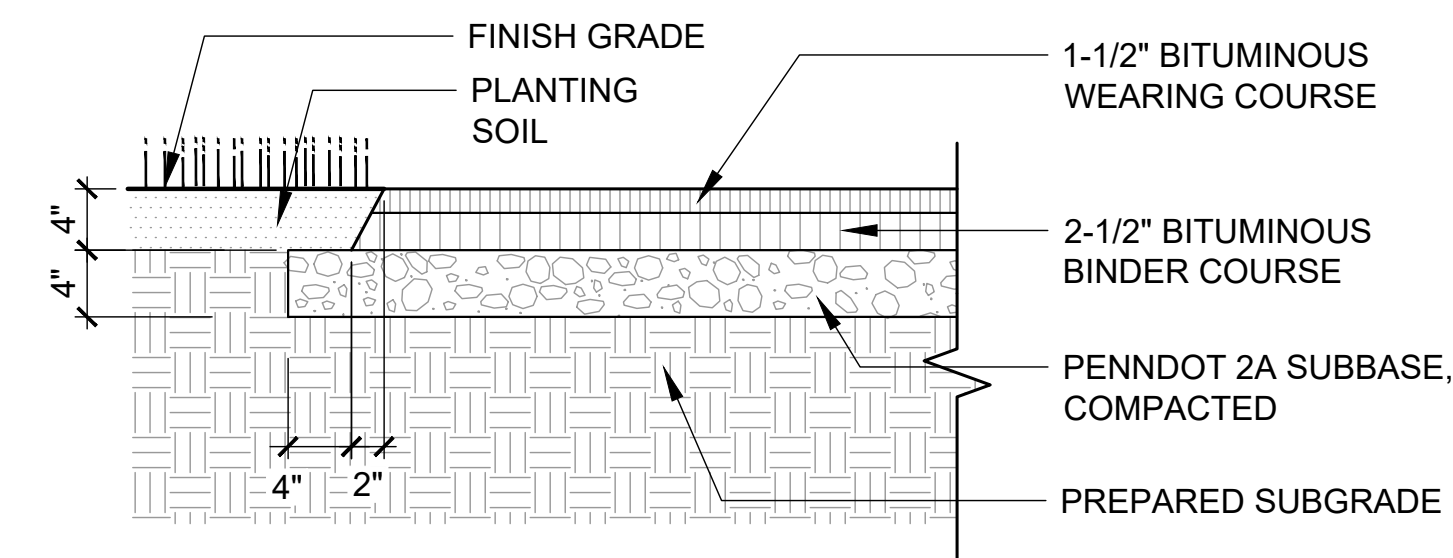




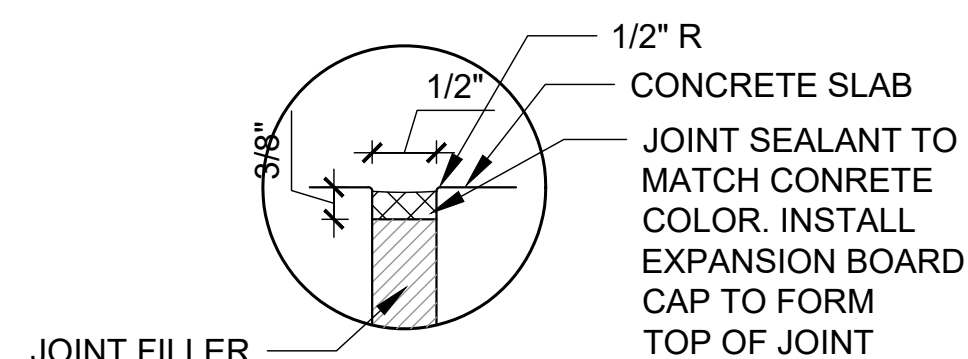
**1 VEHICULAR ASPHALT**  
 L-501 1" = 1'-0"



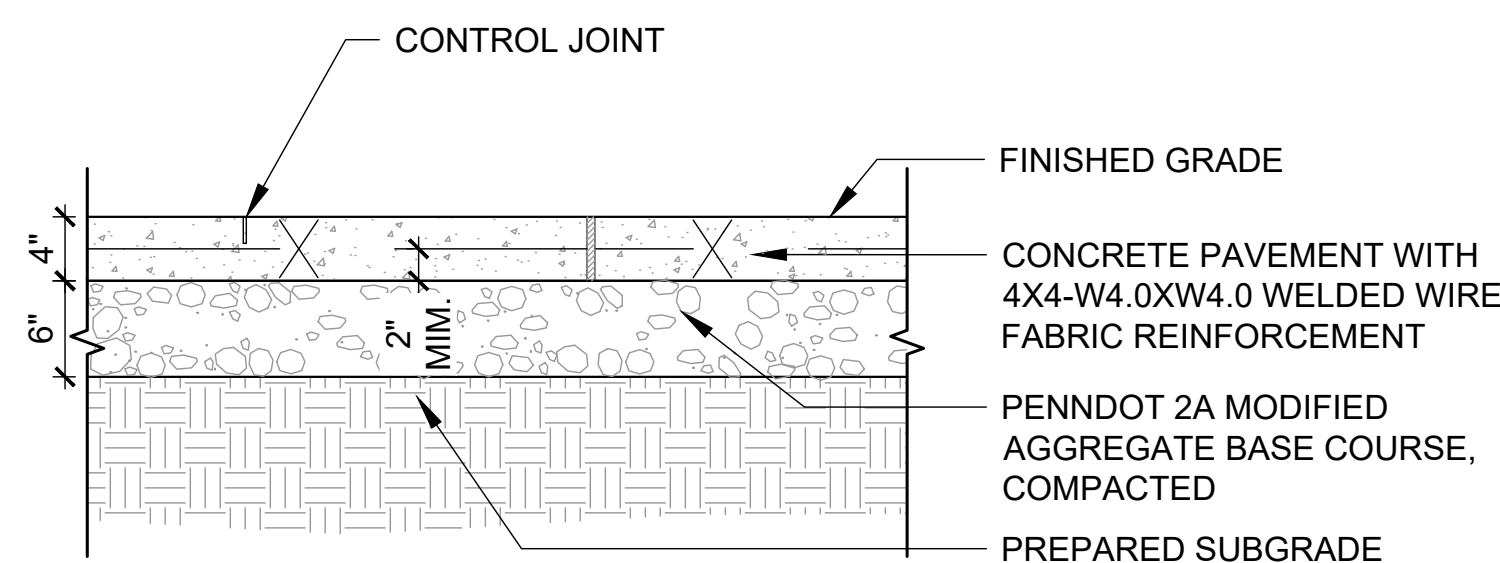
**2 STABILIZED TURF PARKING**  
 L-501 1" = 1'-0"



**3 ASPHALT WALKWAY**  
 L-501 1" = 1'-0"

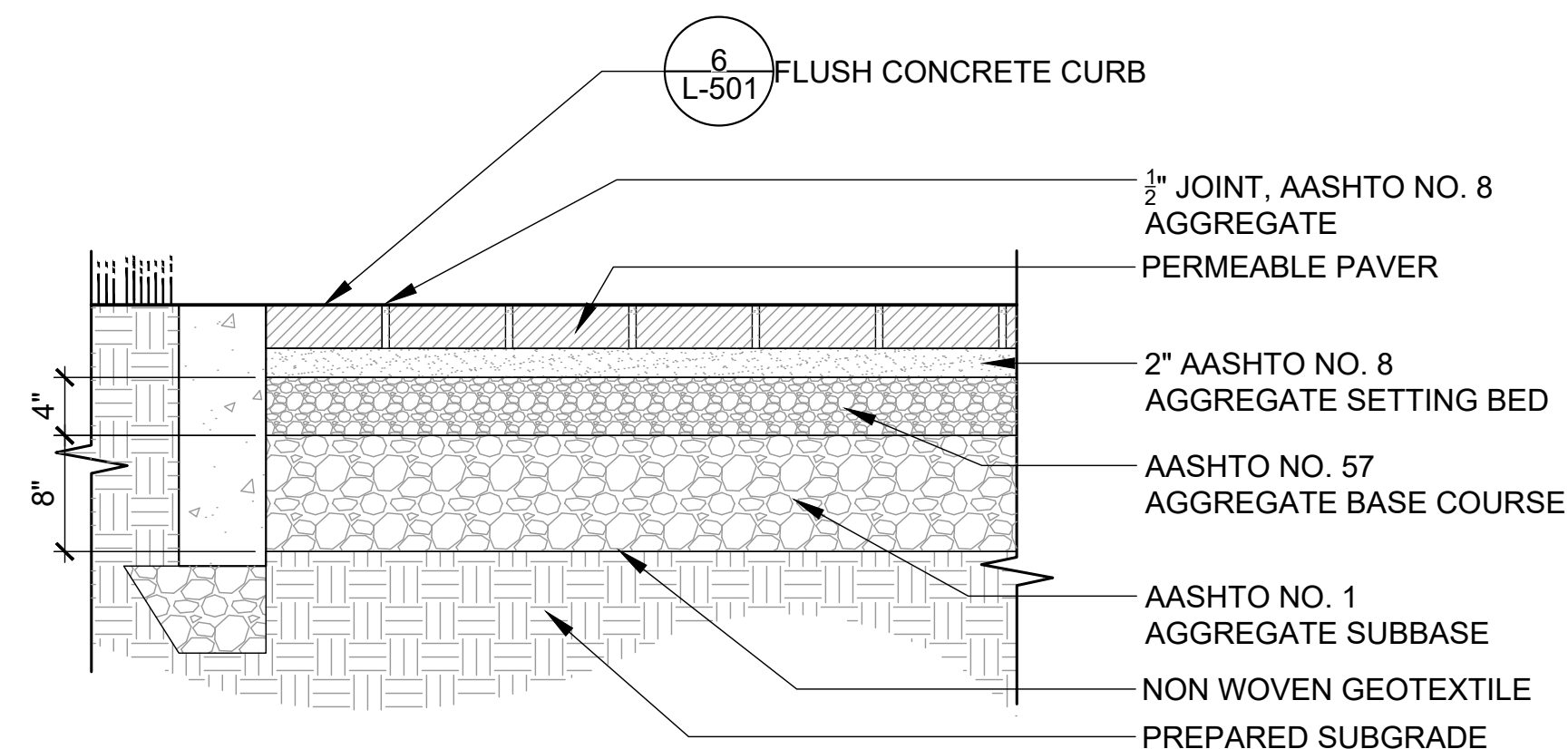


**EXPANSION JOINT**



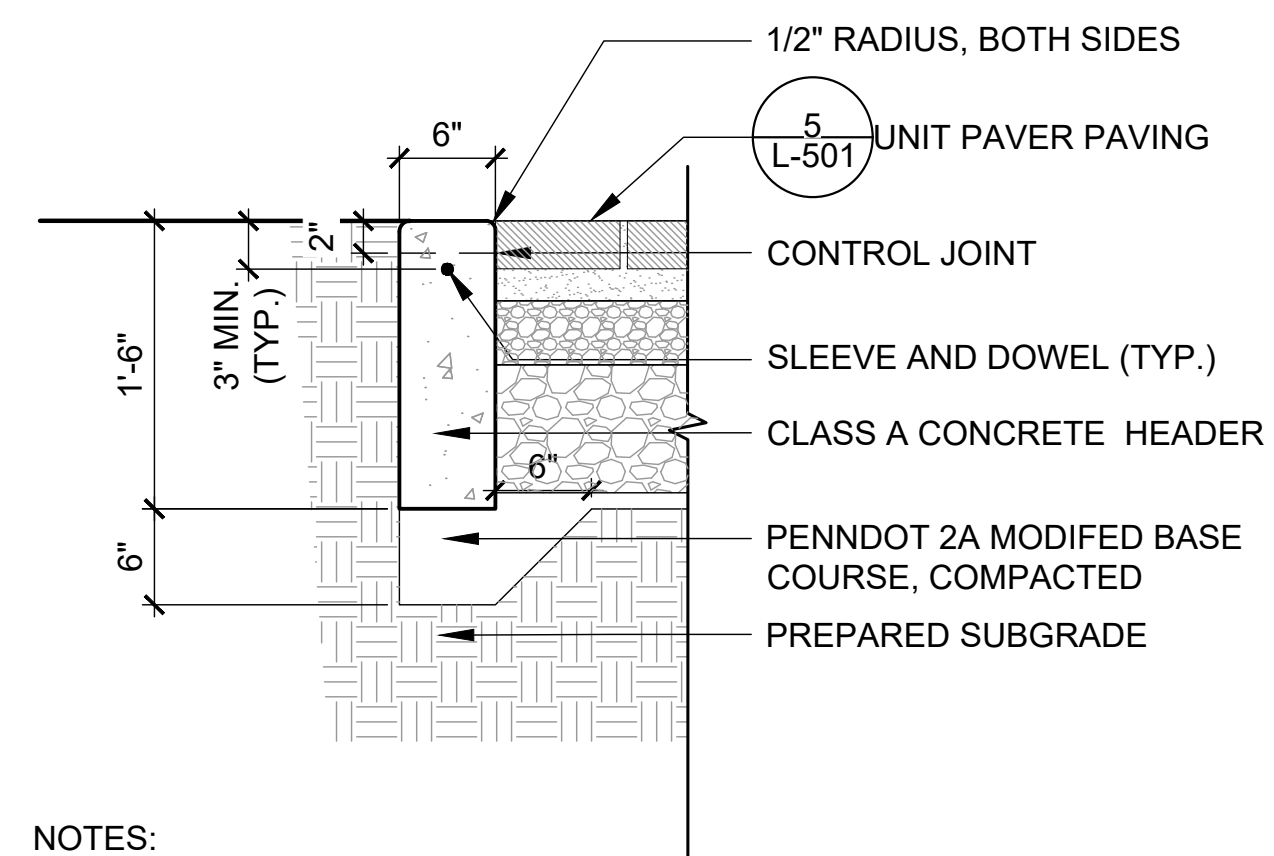
**4 CONCRETE PAVING**  
 L-501 1" = 1'-0"

NOTES:  
 1. CONTROL JOINTS TO BE PLACED 5' MINIMUM UNLESS OTHERWISE NOTED.  
 2. INSTALL AT EXPANSION JOINTS 20' MINIMUM UNLESS OTHERWISE NOTED, AND WHERE WALK ABUTS ANOTHER STRUCTURE OR EXISTING CONCRETE PAVING.  
 3. ALL SIDEWALK THAT IS BROKEN CRACKED OR OUT OF ALIGNMENT SHALL BE REPLACED PRIOR TO ACCEPTANCE.



**5 UNIT PAVER PAVING**  
 L-501 1" = 1'-0"

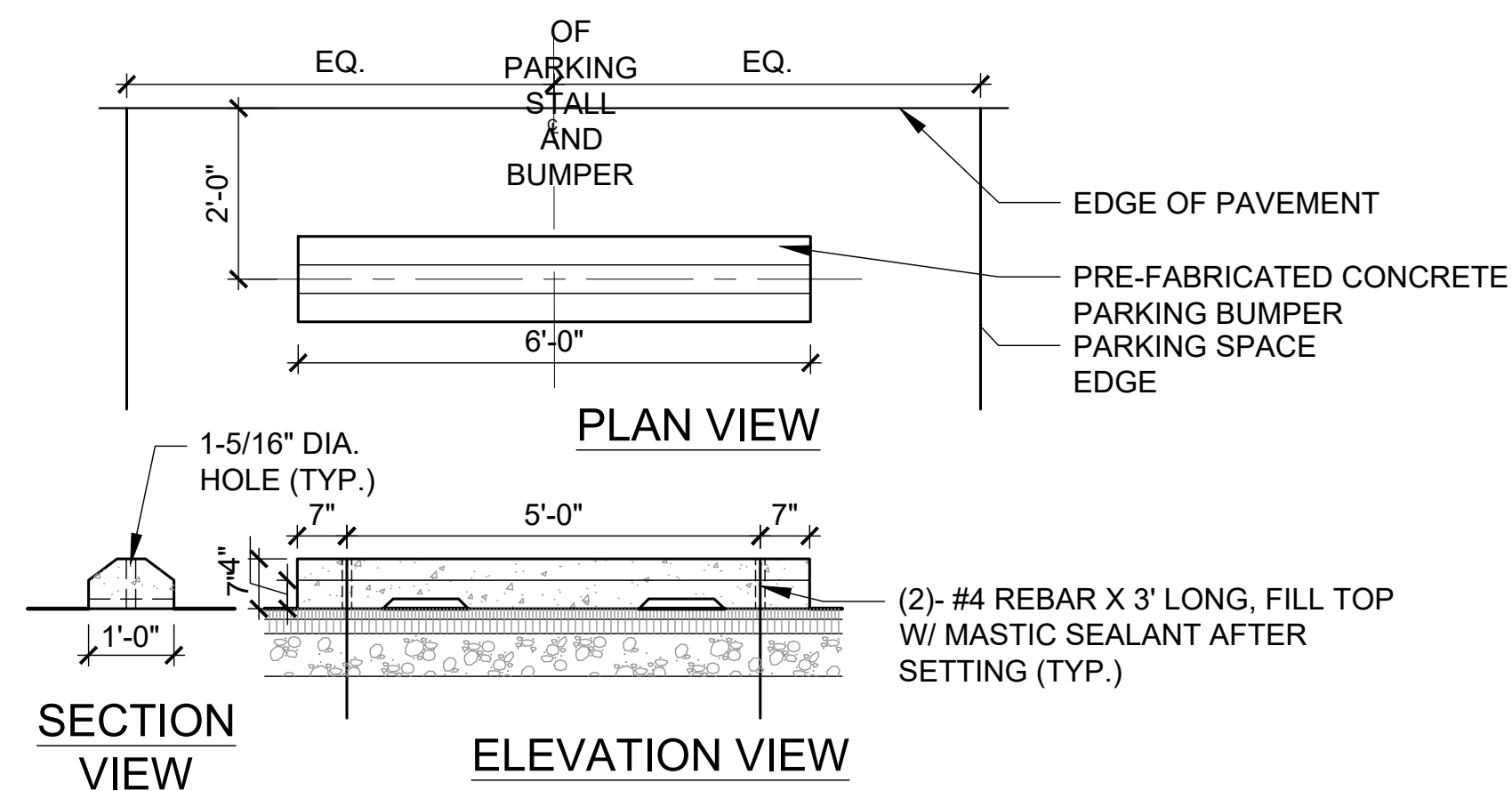
NOTES:  
 1. PAVER TO BE: EP HENRY ECO PAVER



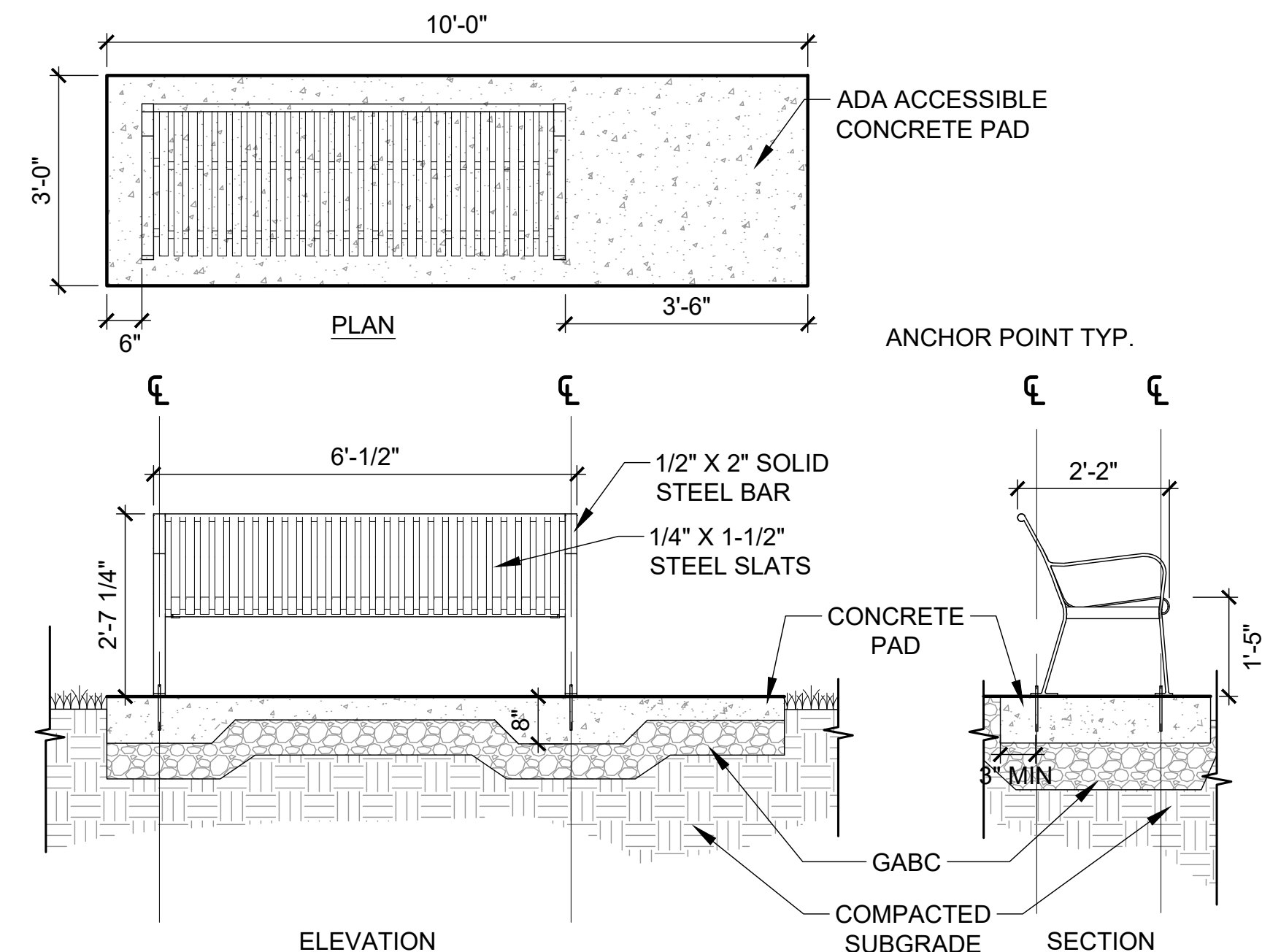
**6 FLUSH CONCRETE CURB**  
 L-501 1" = 1'-0"

NOTES:  
 1. PLACE EXPANSION JOINTS EVERY 20 FEET AND CONTROL JOINTS EVERY 10'. CONTROL JOINTS TO BE 2" DEEP  
 2. EXPANSION JOINTS SHALL BE PLACED AT STRUCTURES AND AT THE END OF THE WORK DAY.  
 3. FLEXIBLE FORMS SHALL BE REQUIRED FOR ALL CURB RADII WITH A RADIUS OF LESS THAN 150 FEET.

**7 CONCRETE PARKING BUMPER**  
 L-501 1/2" = 1'-0"



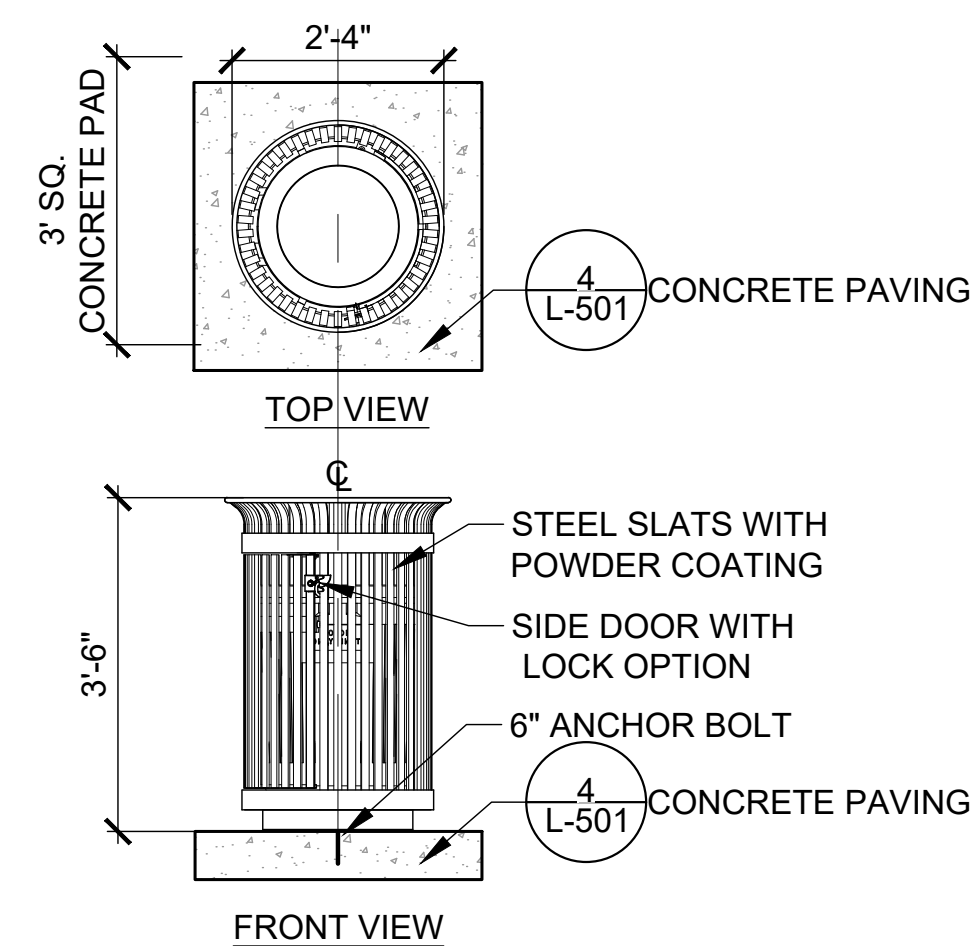
**7 CONCRETE PARKING BUMPER**  
 L-501 1/2" = 1'-0"



**8 BENCH**  
 L-501 1/2" = 1'-0"

NOTES:  
 1. INSTALLATION TO BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.  
 2. FASTENERS SHALL NOT BE INSTALLED UNTIL BENCH IS LOCATED ON SITE.  
 3. TRIM ANCHOR BOLTS TO BE 2" MAXIMUM ABOVE FINISH GRADE PER MANUFACTURERS SPECIFICATIONS.

**9 TRASH RECEPTACLE**  
 L-501 1/2" = 1'-0"



**9 TRASH RECEPTACLE**  
 L-501 1/2" = 1'-0"

NOTES:  
 1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.  
 2. DOORS TO OPEN FULLY WITH NO OBSTRUCTIONS.  
 3. PROVIDE MANUFACTURER DRAWINGS FOR APPROVAL BY CLIENT REPRESENTATIVE.

SEAL \_\_\_\_\_

CONSULTANT(S) \_\_\_\_\_

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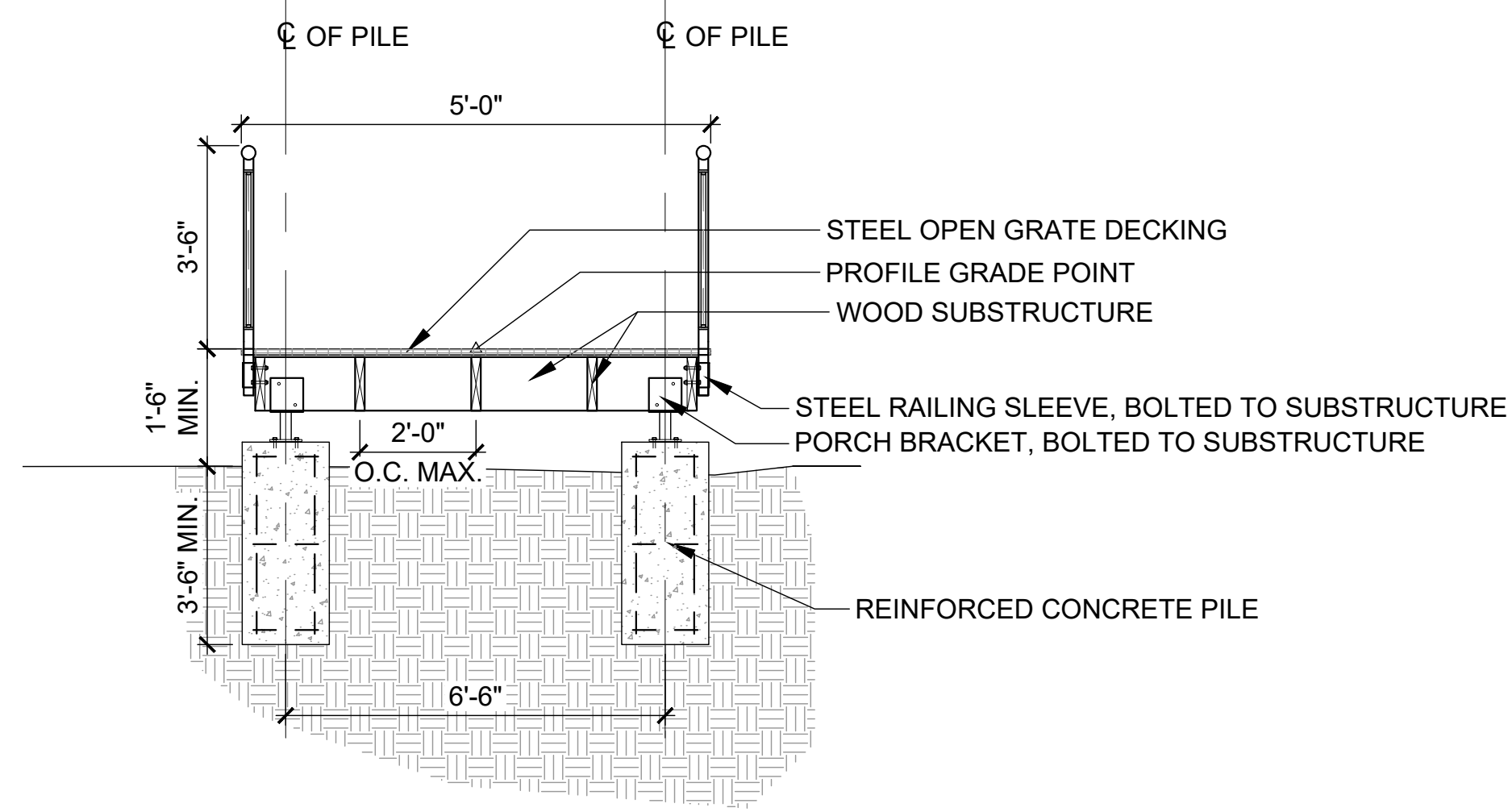
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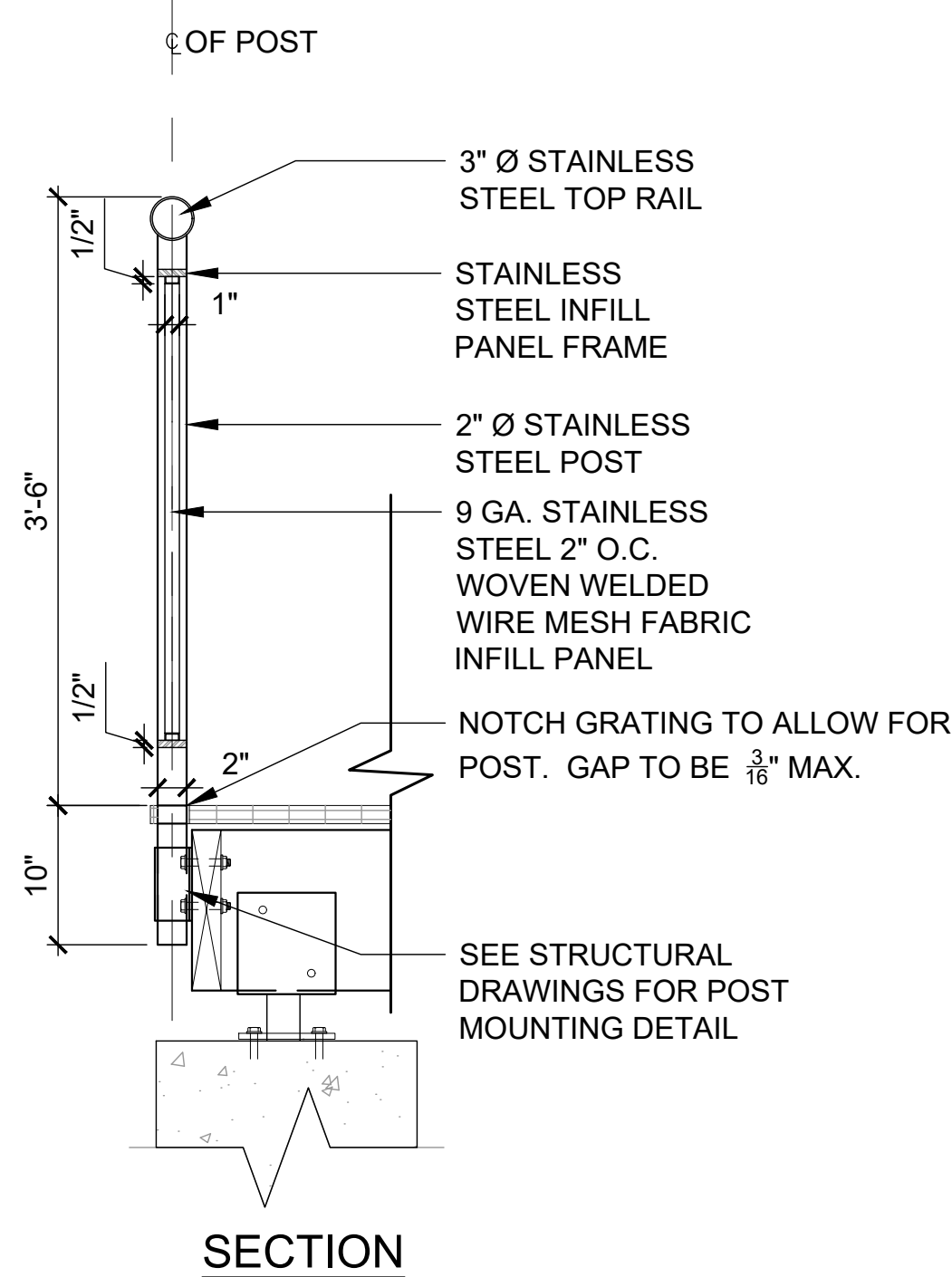
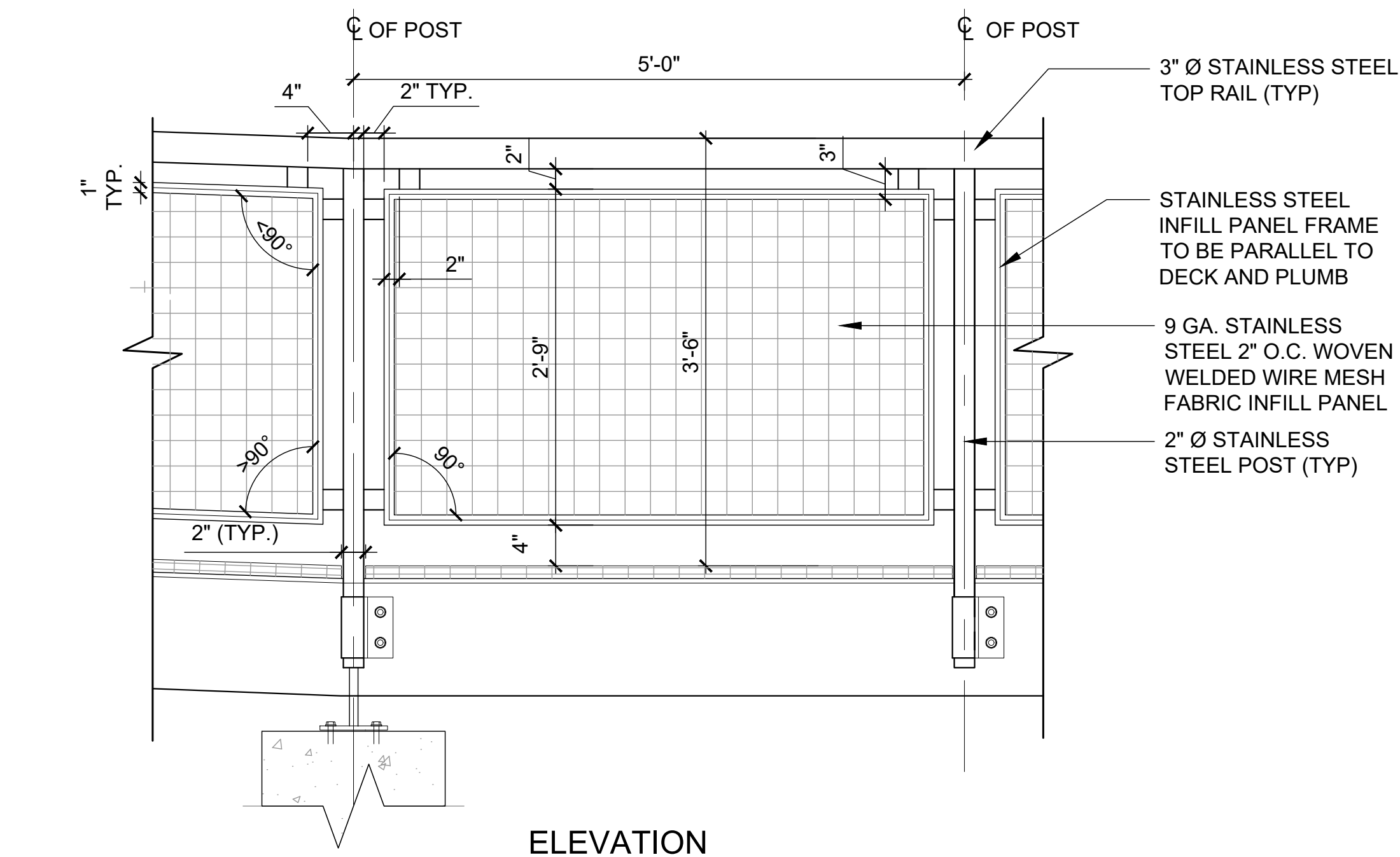
DRAWING TITLE: **SITE DETAILS**

SHEET NUMBER: **L-501**





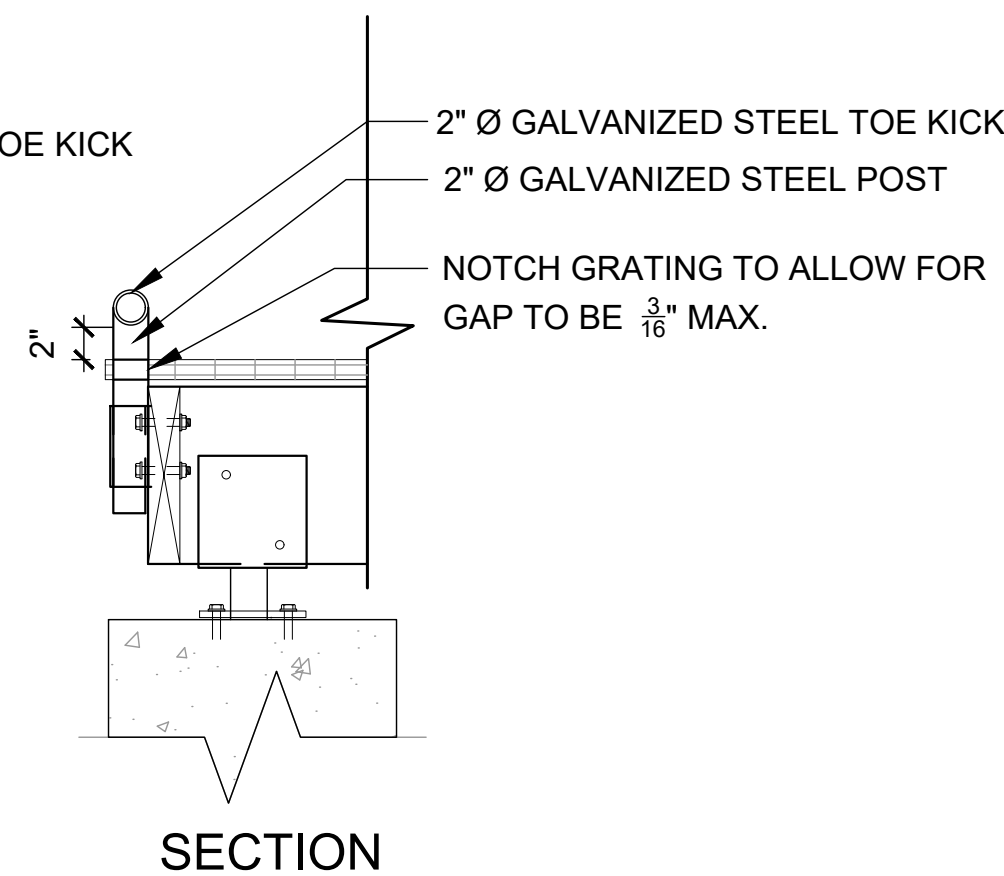
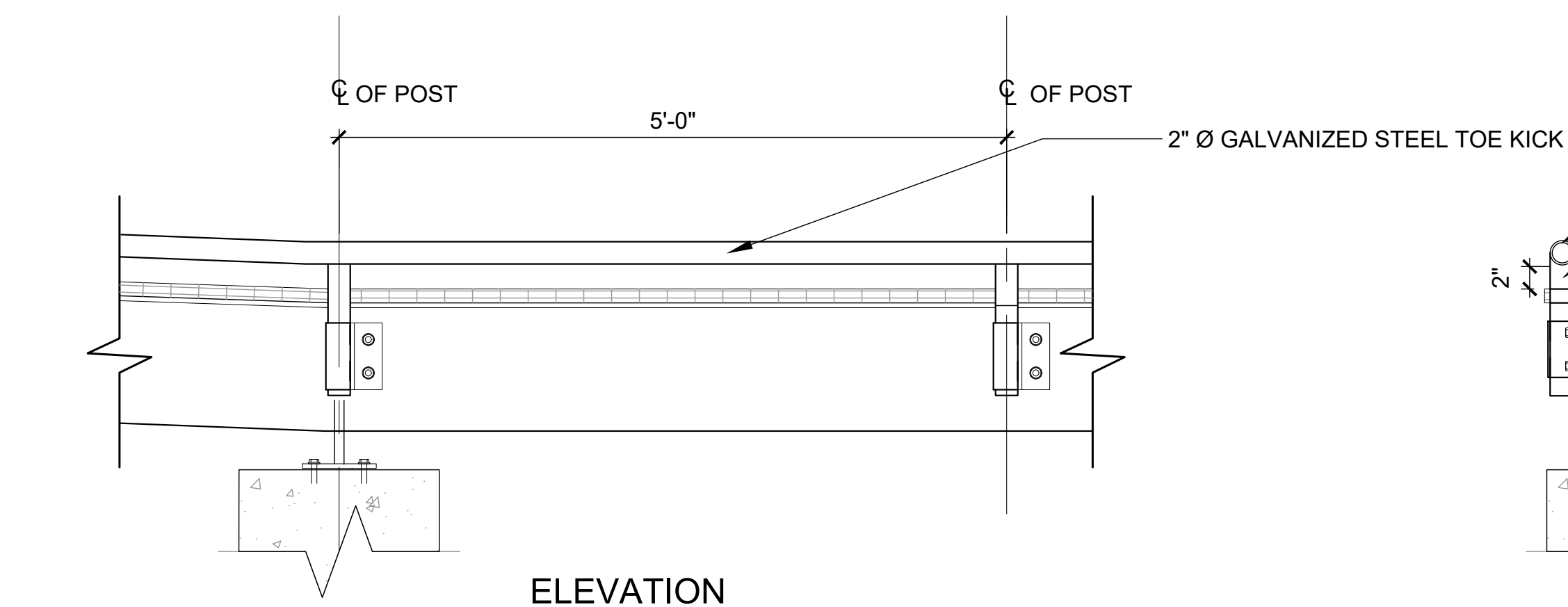
**1 BOARDWALK WITH RAILING**  
 L-502 3/8" = 1'-0"



**NOTES:**

1. SUBMIT SHOP DRAWINGS FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO FABRICATION OF RAILING.
2. ADJUST ANGLES OF INFILL PANELS TO MAINTAIN 2" SPACING FROM TOP RAIL AND POST.

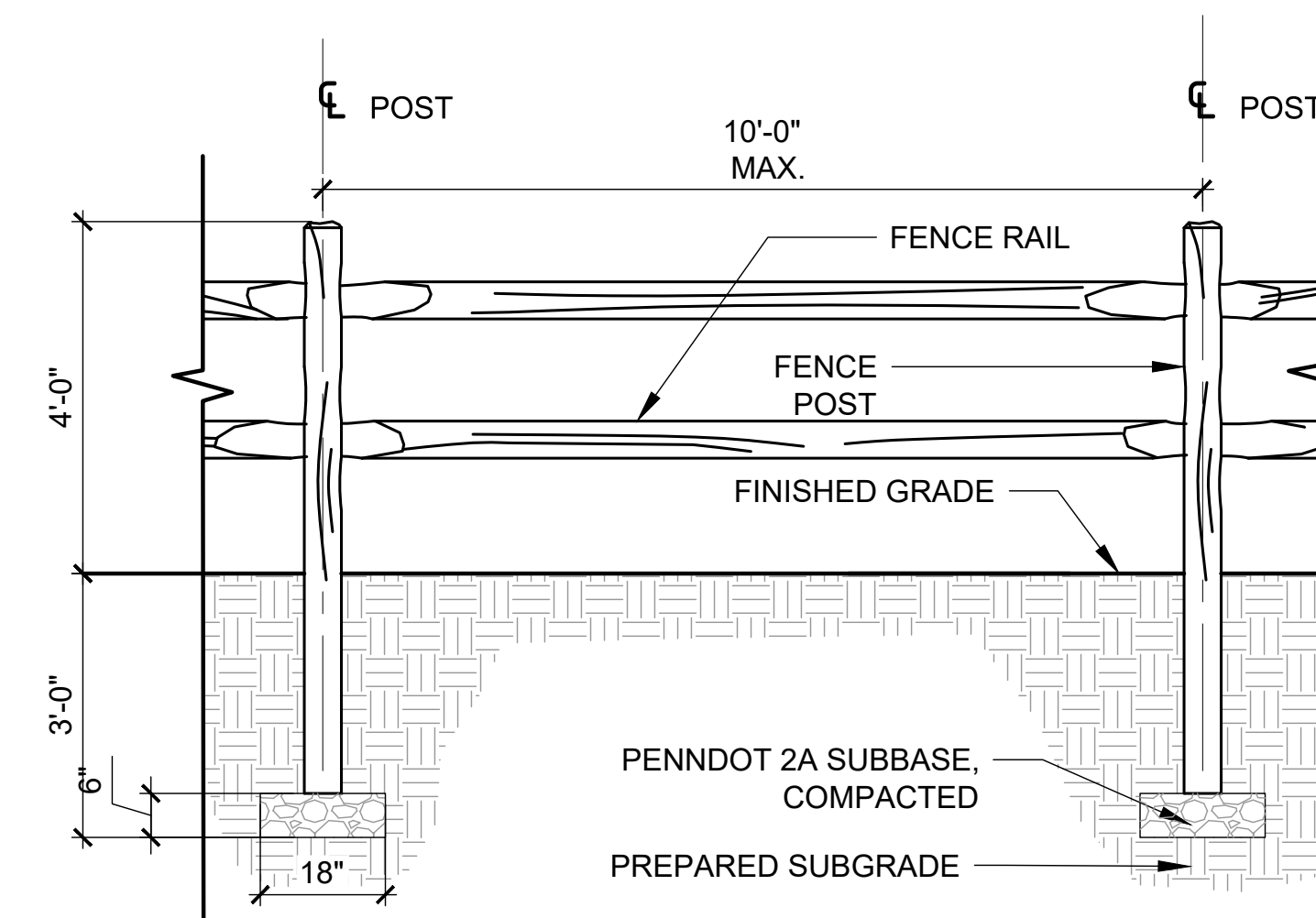
**2 BOARDWALK RAILING**  
 L-502 1" = 1'-0"



**NOTES:**

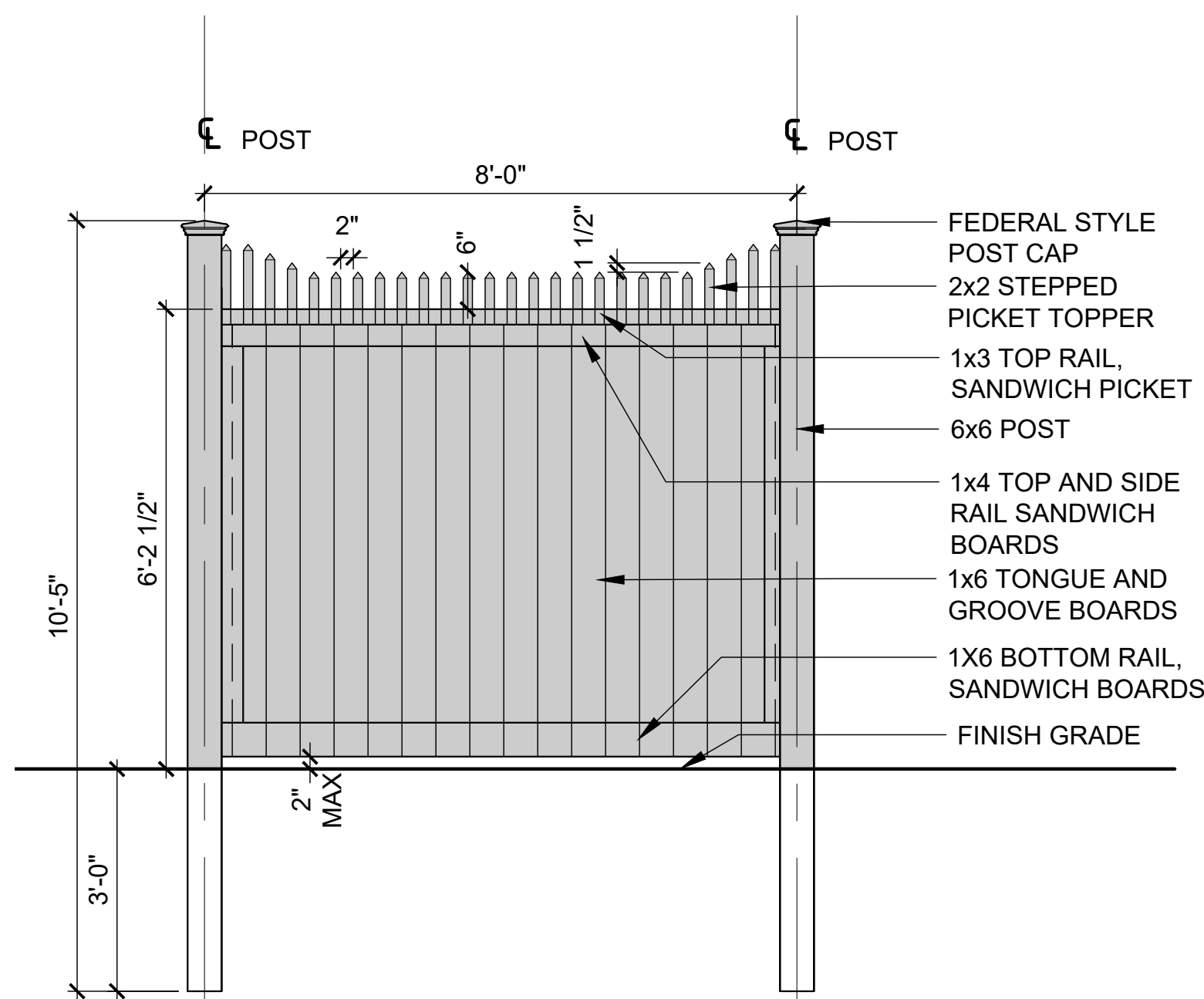
1. SUBMIT SHOP DRAWINGS FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO FABRICATION OF BOARDWALK AND RAILING.
2. INSTALL TOE KICK ON BOTH SIDES OF BOARDWALK EXCEPT WHERE RAILING IS INDICATED.

**3 BOARDWALK WITH STEEL TOE KICK**  
 L-502 1" = 1'-0"



- NOTE:**
1. PLACE ODD FENCE POST SPACING AWAY FROM END POSTS. MINIMUM RAIL LENGTH IS 4'.
  2. ALL FENCING ALONG PATHS SHOULD BE A MIN. OF 24" FROM EDGE OF WALKWAY.
  3. ALL FENCING ALONG ENTRANCE DRIVE SHOULD BE A MIN. OF 5' FROM EDGE OF DRIVE.
  4. LAYOUT FENCE ALIGNMENT IN FIELD FOR APPROVAL OF OWNER'S REPRESENTATIVE BEFORE INSTALLING.

**4 SPLIT RAIL FENCE**  
 L-502 1/2" = 1'-0"



**NOTE:**

1. SUBMIT HARDWARE CUT SHEETS FOR APPROVAL BY CLIENT REPRESENTATIVE.
2. STAIN FENCE WITH TWO COATS OF PENETRATING STAIN. COLOR TO BE DETERMINED.

**5 PRIVACY FENCE**  
 L-502 1/2" = 1'-0"

SEAL \_\_\_\_\_

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 DRAWING SCALE: AS NOTED

DRAWING TITLE:  
**SITE DETAILS**

SHEET NUMBER:  
**L-502**



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18'-5 3/4" REF.

20'-0" REF.

**GENERAL ROOF NOTES:**

- METAL ROOFING:
  - 24 GAUGE
  - GALVALUME COATED
  - KYNAR 500 PAINTED
- TRIM COLOR MATCHES ROOF
- SEE POLYGON.COM FOR COLOR OPTIONS

**STOP!!**  
NOT FOR CONSTRUCTION

USE FOR PRELIMINARY PLANNING AND ESTIMATING ONLY

DRAWING: ARCHITECTURAL ELEVATIONS	
SCALE: 1:55	REV. LEVEL: A
polygon (616)399-1963 www.polygon.com	
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SHEET **1**

12'-0" SQ.

**GENERAL ROOF NOTES:**

- METAL ROOFING:
  - 24 GAUGE
  - GALVALUME COATED
  - KYNAR 500 PAINTED
- TRIM COLOR MATCHES ROOF
- SEE POLYGON.COM FOR COLOR OPTIONS

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DRAWING: ARCHITECTURAL ELEVATIONS	
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SHEET **1**

**2 SQUARE PAVILION**  
L-503 1/2" = 1'-0"

**D-Series Size 1**  
Mast Arm Mount  
LED Area Luminaire

**Specifications**

EPA:	0.9 (0.08 m²)
Length:	27" (68.6 cm)
Width:	13" (33.0 cm)
Height:	5" (12.7 cm)
Weight (max):	26 lbs (11.8 kg)

**Capable Luminaire**

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocell interoperability!
- This luminaire is part of an A+ Certified solution for ROAM2 or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background.

To learn more about A+, visit [www.acuitybrands.com/aplus](http://www.acuitybrands.com/aplus).

- See ordering tree for details.
- A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately. Link to Roam; Link to DTL DLL.

**3 LIGHT FIXTURE**  
L-503 NTS

**LITHONIA LIGHTING**

**FEATURES & SPECIFICATIONS**

**INTENDED USE** — These specifications are for USA standards only. Round Straight Steel is a general purpose light pole for up to 36-foot mounting heights. This pole provides a robust yet cost effective option for mounting area lights and floodlights.

**CONSTRUCTION** —

**Pole Shaft:** The pole shaft is of 1.32" uniform wall thickness and is made of a weldable-grade, hot rolled, commercial-quality steel tubing with a minimum yield of 42,000 psi. Shaft is one-piece with a full-length longitudinal high-frequency electric resistance weld. Uniformly round in cross-section down length of shaft with no taper. Standard shaft diameters are 2", 4", 6", 8" and 10" diameter shaft available by quote. Shaft wall thickness of .1875" is available with certain diameters.

**Pole Top:** Options include: top cap, drilled for side mount fixture, 4" top cap with drilling (includes extra hardware) and open top. Side drilled and open top poles include a removable press-fit, black, low density polyethylene top cap.

**Hardware:** A reinforced hardware with grounding provision is provided at 12" or 18" from the base end of the pole assembly on side A. Every hardware includes a cover and attachment hardware. 2.5" x 3" rectangular hardware is provided on pole.

**Base Cover:** A two-piece ABS round plastic full base cover is provided with each pole assembly. Additional base cover options are available upon factory request. Options include fabricated two-piece sheet steel. All base covers are finished to match pole.

**Anchor Base/Bolt:** Anchor base is fabricated from hot rolled carbon steel plate that conforms with ASTM A36. Anchor bolts conform to ASTM F1554 Grade 55 and are provided with two hex nuts and two flat washers. Bolts have a 1" thread on one end. All anchor bolts are hot-dipped galvanized a minimum of 12" nominal on the threaded end. Anchor bolts are made of steel not having a minimum yield strength of 55,000 psi and a yield strength of 75,000 psi to 90,000 psi.

**HARDWARE** — All structural fasteners are high-strength galvanized carbon steel. All non-structural fasteners are galvanized or zinc-plated carbon steel or stainless steel.

**FINISH:** Extra available standard powder-coat finishes include Dark Bronze, White, Black, Medium Bronze and Natural Aluminum colors. Clear Finish, Dark Sandstone, Charcoal Gray, Series Green, Bright Red and Steel Blue colors. Architectural Colors and Special Finishes are available by quote and include, but are not limited to: Hot-Dipped Galvanized, Hot-Dipped Galvanized, Mill Colors, Custom Colors and Standard Warranty Finishes. Factory applied primer paint finish is available for customer field paint application.

**BUY AMERICAN ACT** — Product with the BAA option is assembled in the USA and meets the Buy American(s) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to [www.acuitybrands.com/buy-american](http://www.acuitybrands.com/buy-american) for additional information.

**WARRANTY** — 1 year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: [www.acuitybrands.com/support/warranty/terms-and-conditions](http://www.acuitybrands.com/support/warranty/terms-and-conditions)

**NOTE:** Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

**4 LIGHT POST**  
L-503 NTS

12'-0"

CHAMFER POST TOP 3/4"

10"

5"

10"

4'-0"

3'-0"

4'-0"

6"

2'-0"

EDGE OF SHOULDER

CONCRETE FOOTER TO DRAIN AWAY FROM POST 2% MIN.

10" X 10" WESTERN RED CEDAR POST- BELOW GRADE PORTION TO BE COATED WITH PRESERVATIVE FOR GROUND CONTACT PROTECTION

CONCRETE FOOTER

**5 VEHICULAR GATE**  
L-503 1/2" = 1'-0"

12'-0"

CHAMFER POST TOP 3/4"

10"

5"

10"

4'-0"

3'-0"

4'-0"

6"

2'-0"

EDGE OF SHOULDER

CONCRETE FOOTER TO DRAIN AWAY FROM POST 2% MIN.

10" X 10" WESTERN RED CEDAR POST- BELOW GRADE PORTION TO BE COATED WITH PRESERVATIVE FOR GROUND CONTACT PROTECTION

CONCRETE FOOTER

**STOP!!**  
NOT FOR CONSTRUCTION

USE FOR PRELIMINARY PLANNING AND ESTIMATING ONLY

DRAWING: ARCHITECTURAL ELEVATIONS	
SCALE: 1:48	REV. LEVEL: A
polygon (616)399-1963 www.polygon.com	
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SHEET **1**

SEAL \_\_\_\_\_

CONSULTANT(S) \_\_\_\_\_

ISSUE DATE: 02/27/2024    DRAWN BY: RG    DESIGNED BY: KM    CHECKED BY: PS

REVISIONS:

NO.    DATE:    REVISION:

PROJECT TITLE:  
**SHAFFER PRESERVE**  
PRE-CONSTRUCTION DOCUMENTS

1657 BETHEL ROAD  
GARNET VALLEY, PA 19061

OWNER:  
BETHEL TOWNSHIP  
1092 BETHEL ROAD  
GARNET VALLEY, PA 19060

PROJECT NUMBER(S): 22068.10    SOURCE: SC

ORIENTATION: \_\_\_\_\_    DRAWING SCALE: AS NOTED

DRAWING TITLE:  
**SITE DETAILS**

SHEET NUMBER:  
**L-503**



**PLANTING NOTES:**

1. PLANTING BEDS AND TREE LOCATIONS SHALL BE STAKED OUT AND FIELD VERIFIED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
2. SEED MIXES WILL BE PROVIDED AND CONFIRMED BY THE LANDSCAPE ARCHITECT.
3. IF THERE IS A DISCREPANCY BETWEEN THE PLANT SCHEDULE AND THE PLANTING PLAN, REFER TO THE PLANTING PLAN FOR PLANT QUANTITIES.
4. LANDSCAPE ARCHITECT WILL INSPECT PLANT MATERIAL AT THE PLACE OF GROWTH AND AT THE PROJECT SITE, BEFORE PLANTING, AND RETAINS THE RIGHT TO REJECT UNSATISFACTORY OR DEFECTIVE PLANT MATERIAL AT ANY TIME DURING THE PROGRESS OF WORK. THE LANDSCAPE CONTRACTOR WILL IMMEDIATELY REMOVE REJECTED PLANT MATERIALS FROM THE PROJECT SITE, AND REPLACE WITH ACCEPTABLE MATERIAL AT NO ADDITIONAL COST.
5. NO SUBSTITUTIONS SHALL BE PERMITTED, EXCEPT BY WRITTEN PERMISSION OF THE LANDSCAPE ARCHITECT GRANTED PRIOR TO THE PURCHASE AND DELIVERY OF PLANT MATERIAL.
6. DELIVER FRESHLY DUG TREES AND SHRUBS. DO NOT PRUNE BEFORE DELIVERY. PROTECT BUDS, BARK, BRANCHES, AND ROOT SYSTEMS FROM SUNSCALD, DRYING, SWEATING, WHIPPING, SCRAPING, AND OTHER HANDLING AND TYING DAMAGE. TAKE SPECIAL PRECAUTION TO PROTECT TREE TRUNKS DURING TRANSPORT FROM SHIFTING, SWAYING, AND WORKING LOOSE FROM ROOT BALL. DO NOT BEND OR BIND-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY NATURAL SHAPE OR STRIP BARK.
7. IF TOP SOIL IS NEEDED, PROVIDE NEW TOPSOIL WHICH IS FERTILE, FRIABLE, NATURAL LOAM, SURFACE SOIL; REASONABLY FREE OF SUBSOIL, CLAY LUMPS, WEEDS AND OTHER LITTER; FREE OF ROOTS, STUMPS, STONES LARGER THAN 1" IN ANY DIMENSION, AND OTHER EXTRANEIOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH.
8. IMPORT TOPSOIL FROM LOCAL OFF-SITE SOURCES OR VENDORS. IMPORTED TOPSOIL SHALL HAVE CHARACTERISTICS SIMILAR TO HEALTHY, EXISTING TOPSOIL ON THE PROJECT SITE, IF PRESENT. OBTAIN TOPSOIL FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4 INCHES DEEP; DO NOT OBTAIN FROM BOGS OR MARSHES.
9. MULCH ALL PLANTED TREES WITH THREE (3) INCHES OF UN-DYED DOUBLE-SHREDDED HARDWOOD BARK MULCH. SUBMIT SAMPLE OF MULCH TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO BRINGING ANY MULCH TO THE SITE.
10. PLANTS CHOSEN ARE CONSIDERED DEER RESISTANT. DEER RESISTANT DOES NOT MEAN DEER PROOF, BUT THESE PLANTS ARE KNOWN TO NOT BE PREFERRED BY DEER.
11. TREE SIZES DO NOT REFLECT ACTUAL CANOPY SIZE.

**TREE LIST/SCHEDULE:**

QTY	KEY	Scientific name	Common Name	Size
6	AG	Amelanchier X Grandiflora	Serviceberry	6-8'
16	AR	Acer rubrum	Red Maple	2.5 cal
9	AT	Asimina triloba	Pawpaw	1.5 cal
8	BN	Betula nigra	River Birch	8-12'
12	CA	Carpinus caroliniana	Hornbeam	6-8'
9	CC	Cercis canadensis - multistem	Redbud	6-8'
8	CF	Cornus florida	Flowering Dogwood	1.5 cal
15	GT	Gleditsia trianthus var. inermis	Honey Locust	2.5 cal
9	JV	Juniperus virginiana	Eastern Red Cedar	6-8'
15	MV	Magnolia virginiana	Sweetbay Magnolia	6-8'
9	NS	Nyssa sylvatica	Black Gum	2.5 cal
3	OV	Ostrya virginiana	Hop Hornbeam	2.5 cal
8	PO	Plantanus occidentalis	Sycamore	2.5 cal
10	PS	Pinus strobus	Eastern White Pine	8-12'
3	QA	Quercus phellos	Willow Oak	2.5 cal
7	QB	Quercus bicolor	Swamp White Oak	2.5 cal
5	QP	Quercus palustris	Pin Oak	2.5 cal
8	QR	Quercus rubra	Red Oak	2.5 cal
3	TA	Tilia americana	Basswood	2.5 cal
3	TD	taxodium distichum	Bald Cypress	6-8'

**LEGEND - PLANTING TYPES**

- LAWN / LOW MOW
- RAIN GARDEN
- WARM SEASON MEADOW
- WOODLAND EDGE
- RIPARIAN - BY OTHERS (NIC)
- WOODLAND FACW
- STABILIZED TURF

**LEGEND TREES**

- EXISTING TREES
- EXISTING EVERGREEN TREES
- NEW CANOPY TREE
- NEW UNDERSTORY TREE
- NEW EVERGREEN SEMI/EVERGREEN TREE

**PLANTING NOTES:**

1. LAWN / LOW MOW - ANY AREAS DONE BY SEED SHOULD BE DONE IN LATE SPRING OR EARLY FALL. CAREX SP. AND OTHER LOW GROWING NATIVE GRASSES CAN BE USED, BUT SHOULD BE PLUGGED SUCH AS CAREX WOODII. FINE FESCUE LOW MOW GRASSES CONTAINING CREEPING RED FESCUE, SHEEP FESCUE, AND CHEWING FESCUE CAN BE USED AS A TURF GRASS ALTERNATIVE. SOD SHOULD BE USED ALONG ALL PATHS TO PROVIDE QUICK STABILIZATION OF DISTURBED SOILS DURING CONSTRUCTION.
2. RAIN GARDEN - SEED AND PLUGS. PLUGS SHOULD BE USED IN THE BOTTOM SO THAT THE PLANTS CAN GET ESTABLISHED FASTER. SEED MIX ERNMX-180. PLANT PLUGS SHOULD BE THE SAME AS NOTED IN THE SEED MIX. SEED PER ERNST SEEDS RECOMMENDATIONS. SHRUBS SUCH AS ILEX GLABRA, CORNUS SERICIA, AND CLETHRA ALNIFOLIA CAN BE ADDED BUT SHOULD BE PLACED WITH GUIDANCE FROM LANDSCAPE PROFESSIONAL.
3. WARM SEASON MEADOW - SEED. USE ERNMX-155 DEER RESISTANCE MEADOW MIX. SEED PER ERNST SEEDS RECOMMENDATIONS. SOME SHRUBS CAN BE ADDED SUCH AS CEANOTHUS AMERICANUS, ITEA VIRGINIANA, ROSA VIRGINIANA, AND SPIREA ALOA. ALL SHRUBS SHOULD BE PLACED WITH GUIDANCE FROM A LANDSCAPE PROFESSIONAL.
4. WOODLAND EDGE - SEED. USE ERNMX 140 TO BE ADDED ONCE ALL TREES AND SHRUBS HAVE BEEN PLANTED. SHRUBS CAN BE ADDED TO HELP PROVIDE MORE VISUAL BARRIER BETWEEN PROPERTIES, WHILE PROVIDING VALUABLE RESOURCES FOR TO THE ECOLOGY. SHRUBS SUCH AS CALYCANTHUS FLORIDA, HAMAMELIS VIRGINIANA, LINDERA BENZOIN, MYRICA PENNSYLVANICA, ILEX VERTICILLATA, AND VIBURNUM LENTAGO SHOULD BE CONSIDERED AS PART OF THE SHRUB LAYER. ALL SHRUBS SHOULD BE PLACED BY A LANDSCAPE PROFESSIONAL.
5. RIPARIAN - THIS AREA HAS BEEN NOTED IN THE ARBORIST REPORT. THIS WORK IS NOT PART OF THE INITIAL PRESERVE IMPROVEMENTS. WHEN READY, THIS AREA SHOULD BE REPLANTED WITH NATIVE TREES AND SHRUBS TO IMPROVE STORMWATER SERVICES. RESTORATION GRADE TREES AND SHRUBS CAN BE USED ALONG SIDE THE ERNMX - 263 SEED MIX TO ESTABLISH A HEALTHY RIPARIAN PLANT COMMUNITY
6. WOODLAND FACW - USE ERNMX 137 IF IT DETERMINED THAT THIS AREA IS MORE SHADED THROUGHOUT THE DAY. USE ERNMX 122 IF IT GETS AT LEAST 4 HOURS OF DIRECT SUNLIGHT. THIS WILL BE BEST DETERMINED AFTER ALL CONSTRUCTION ACTIVITY AND TREE CLEARING HAS BEEN COMPLETED.
7. STABILIZED TURF - USE A GRASS MIX THAT CONTAINS MOSTLY PERENNIAL RYE FOR DURABILITY. SEED PER SUPPLIER RECOMMENDATION.



SCALE: \_\_\_\_\_

CONSULTANT(S): \_\_\_\_\_

ISSUE DATE: 02/27/2024    DRAWN BY: RG    DESIGNED BY: KM    CHECKED BY: PS

REVISIONS:

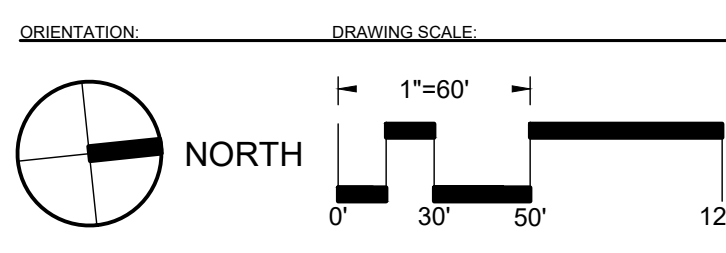
NO.	DATE	REVISION

PROJECT TITLE:  
**SHAFFER PRESERVE**  
 PRE-CONSTRUCTION DOCUMENTS

1657 BETHEL ROAD  
 GARNET VALLEY, PA 19061

OWNER:  
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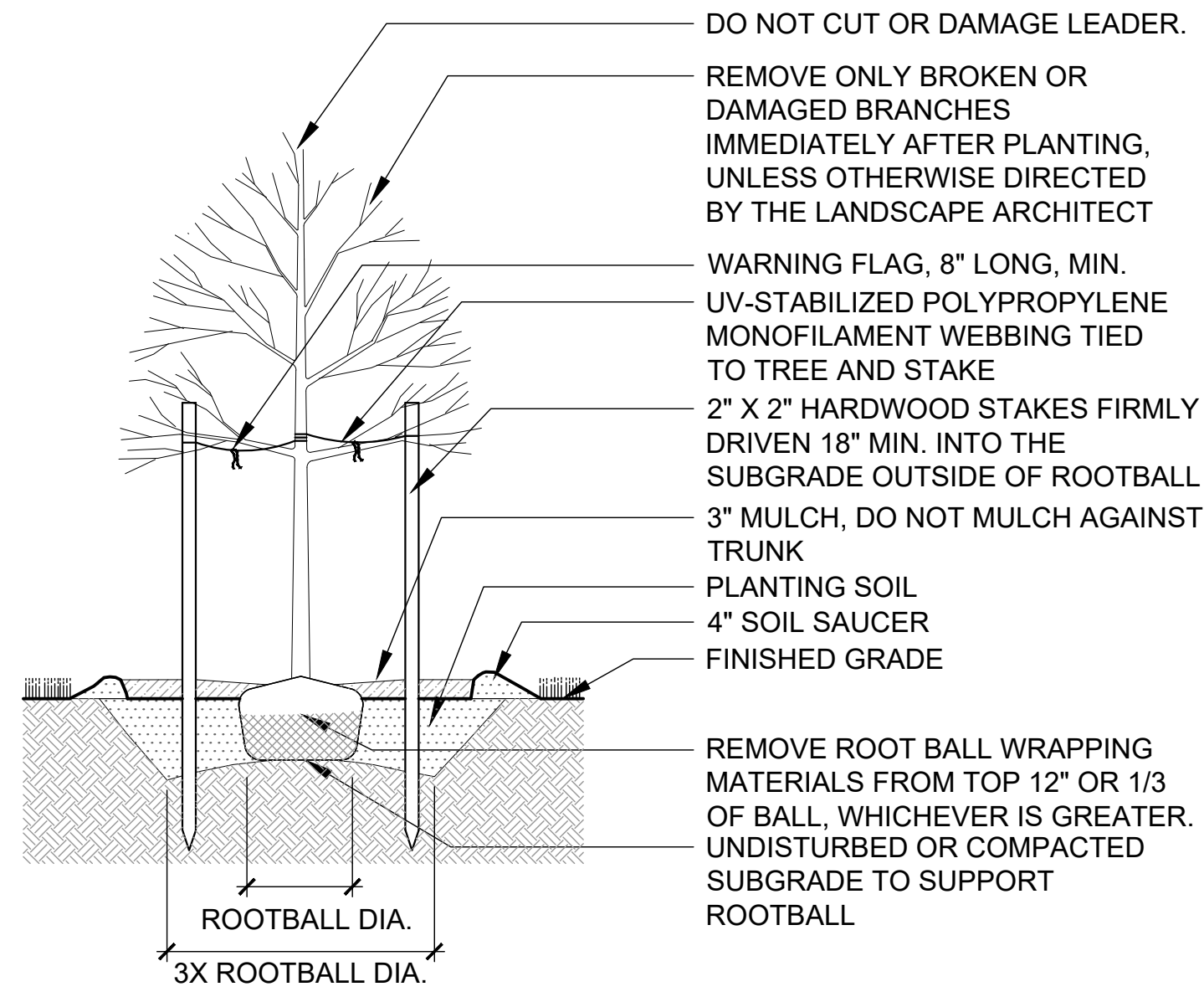


DRAWING TITLE:  
**PLANTING PLAN**

SHEET NUMBER:  
**LP-101**

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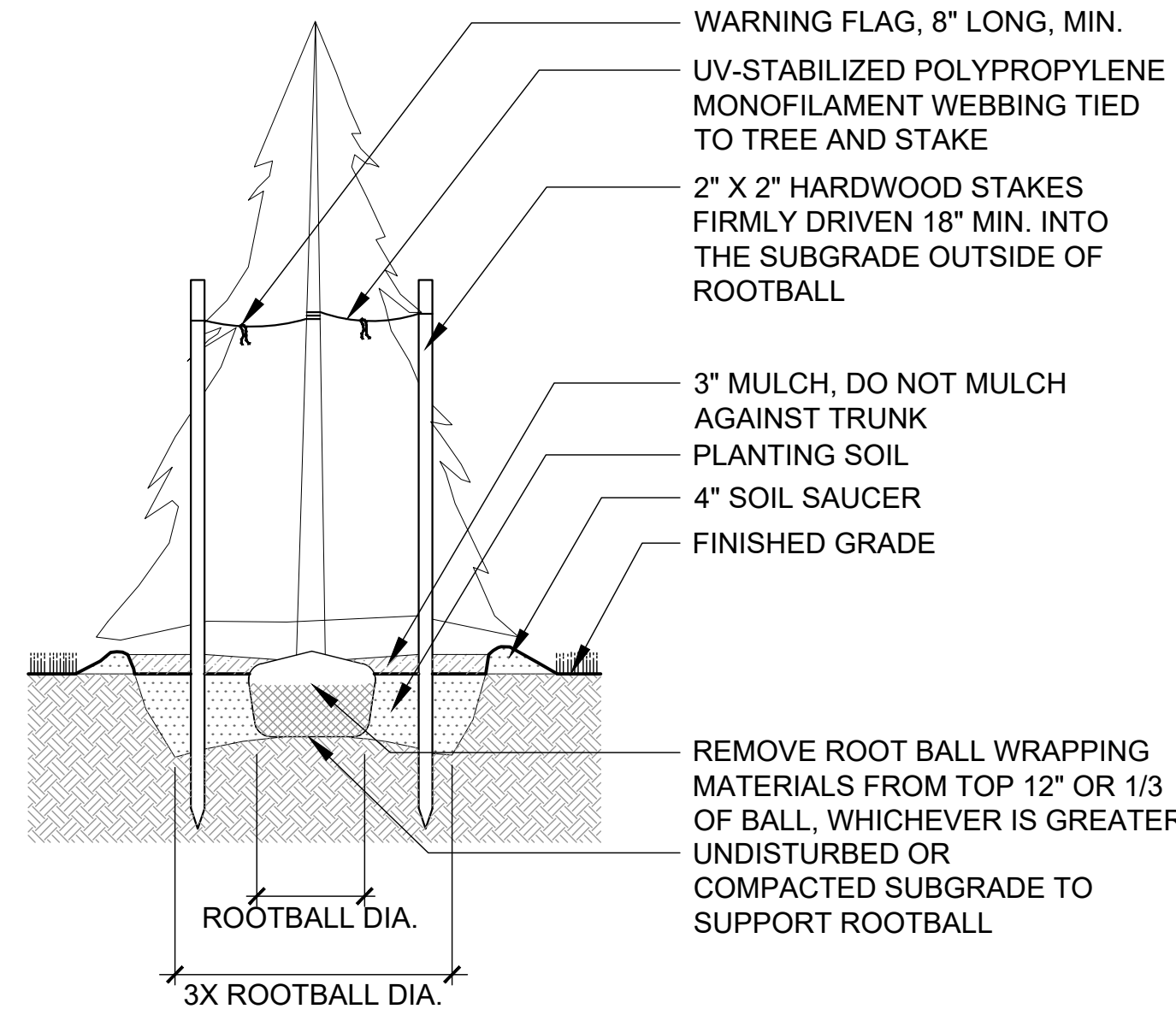




**NOTES:**

1. STAKE TREES ONLY WHEN CONDITIONS REQUIRE ADDITIONAL STABILIZATION, AS DESCRIBED IN SPECIFICATIONS.
2. SET TOP OF BALL 2"- 3" ABOVE FINISHED GRADE. DO NOT BACKFILL OVER TOP OF ROOTBALL.
3. REMOVE ROOT BALL WRAPPING MATERIALS (BURLAP, TWINE, WIRE BASKET, ETC) AFTER TREE IS SET IN PLACE. SYNTHETIC WRAPPING MUST BE REMOVED COMPLETELY.
4. DO NOT PULL MONOFILAMENT WEBBING TIGHT. LEAVE SLIGHTLY SLACK TO ALLOW TREE TO SWAY IN THE WIND.
5. SCARIFY EDGES OF TREE PIT.

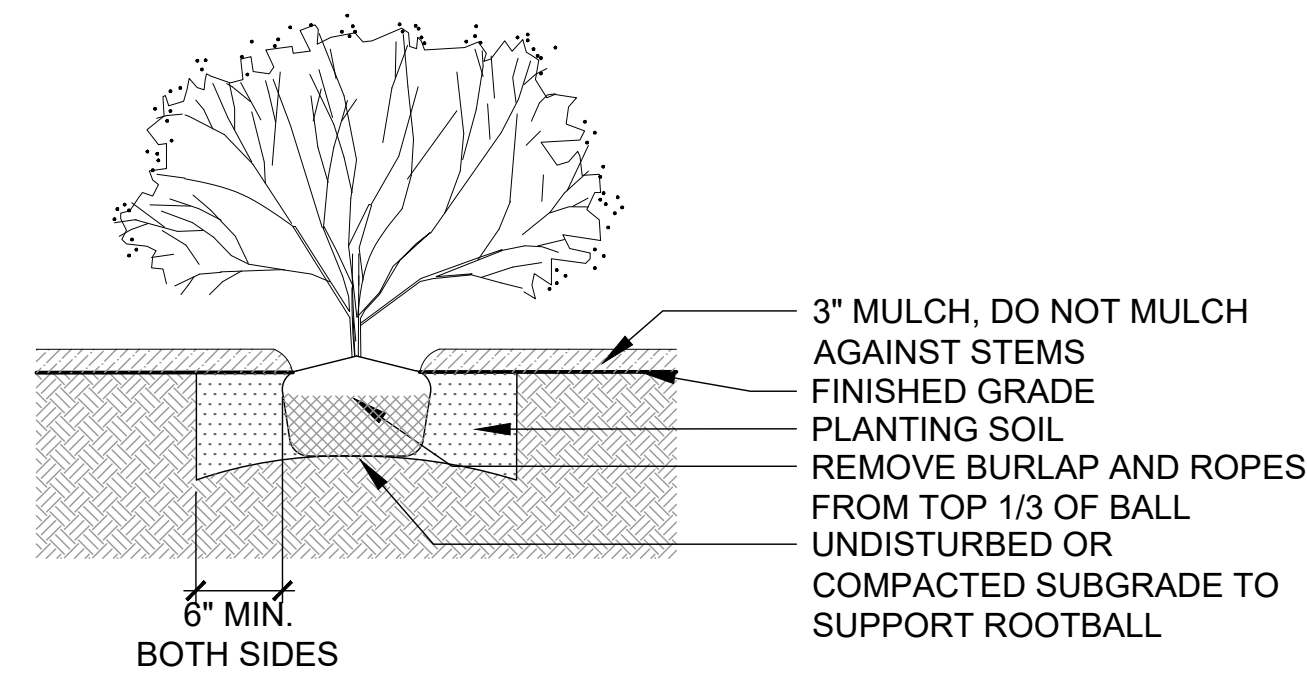
**1 DECIDUOUS TREE PLANTING**  
 LP-501 1/2" = 1'-0"



**NOTES:**

1. SET TOP OF ROOT BALL 2 - 3" ABOVE FINISH GRADE. DO NOT BACKFILL OVER TOP OF BALL.
3. REMOVE ROOT BALL WRAPPING MATERIALS (BURLAP, TWINE, WIRE BASKET, ETC) AFTER TREE IS SET IN PLACE. SYNTHETIC WRAPPING MUST BE REMOVED COMPLETELY.
4. DO NOT PULL MONOFILAMENT WEBBING TIGHT. LEAVE SLIGHTLY SLACK TO ALLOW TREE TO SWAY IN THE WIND.
5. SCARIFY EDGES OF TREE PIT.

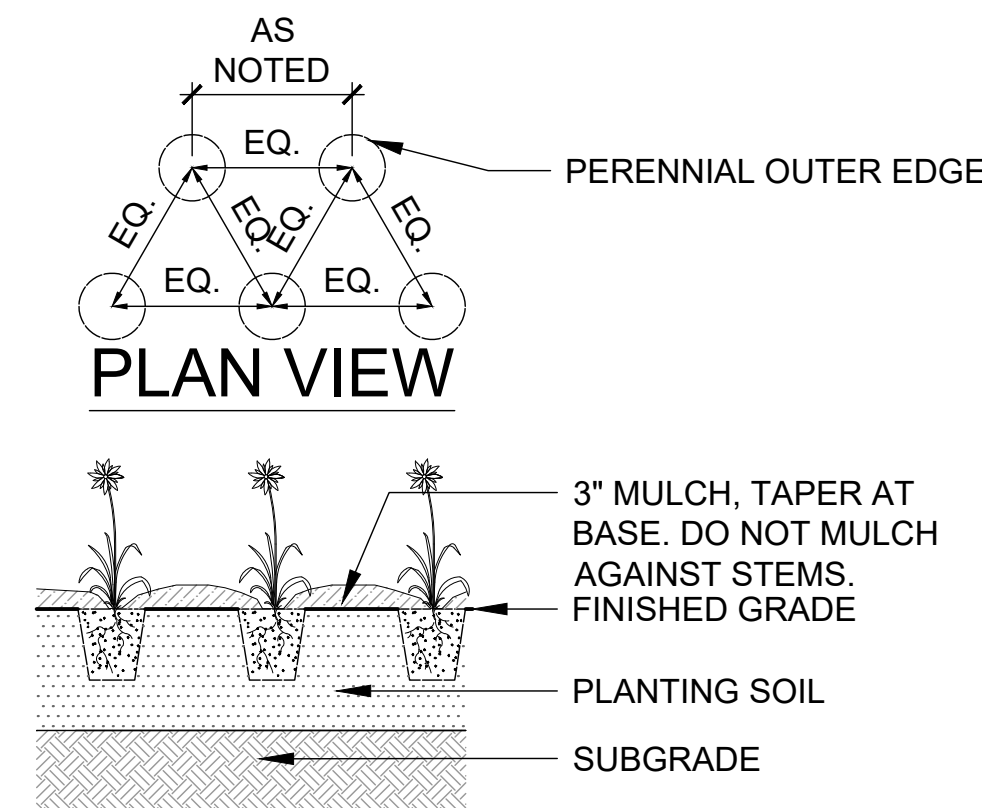
**2 EVERGREEN TREE PLANTING**  
 LP-501 1/2" = 1'-0"



**NOTES:**

1. SET TOP OF BALL 3" ABOVE FINISHED GRADE.
2. SCARIFY EDGES OF PLANTING PIT.

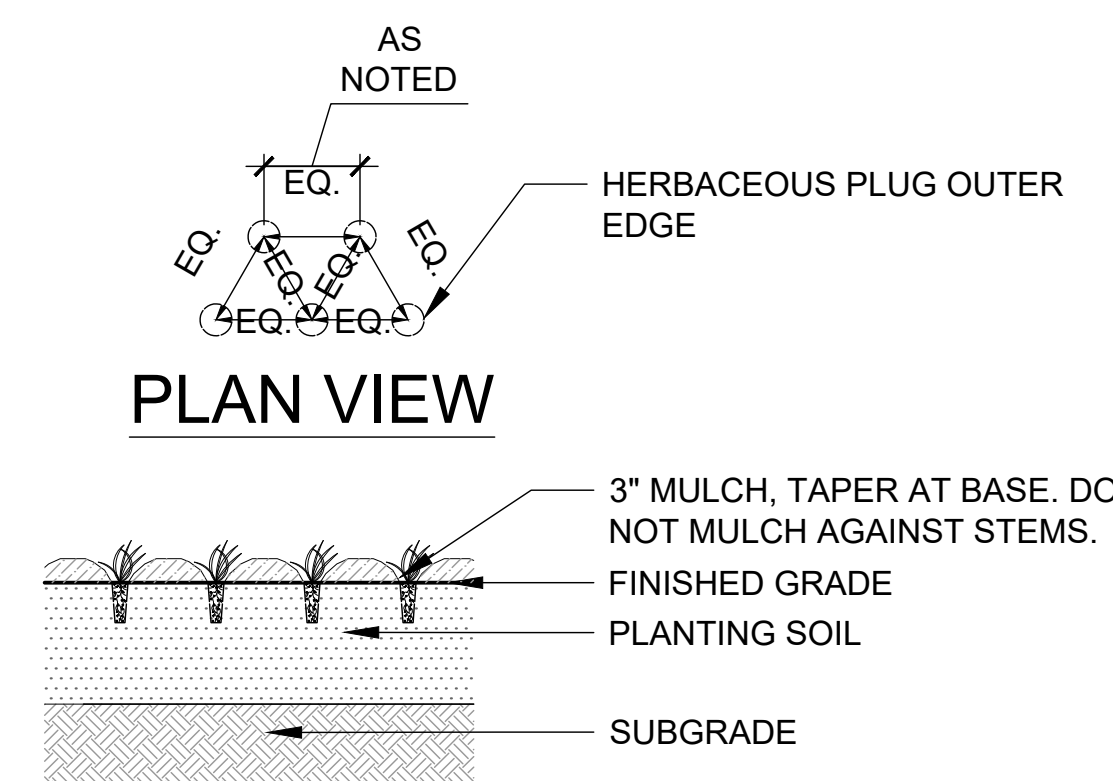
**3 SHRUB PLANTING**  
 LP-501 1/2" = 1'-0"



**NOTES:**

1. PLANT SPACING PER PLANTING PLAN AND PLANT SCHE
2. REMOVE CONTAINER BEFORE PLANTING.

**4 PERENNIAL PLANTING**  
 LP-501 1/2" = 1'-0"



**NOTE:**

1. PLANT SPACING PER PLANTING PLAN AND PLANT SCHEDULE.

**5 HERBACEOUS PLUG PLANTING**  
 LP-501 1/2" = 1'-0"

SEAL \_\_\_\_\_

CONSULTANT'S \_\_\_\_\_

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**PLANTING DETAILS**

SHEET NUMBER:  
**LP-501**