

# 2023 GREEN INFRASTRUCTURE UPGRADES

## RICHARD KLUGE ELEMENTARY SCHOOL

### SITE #337

5760 N. 67TH STREET, MILWAUKEE, WI 53218

### FINAL PLAN SET

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T1.0 TITLE PAGE

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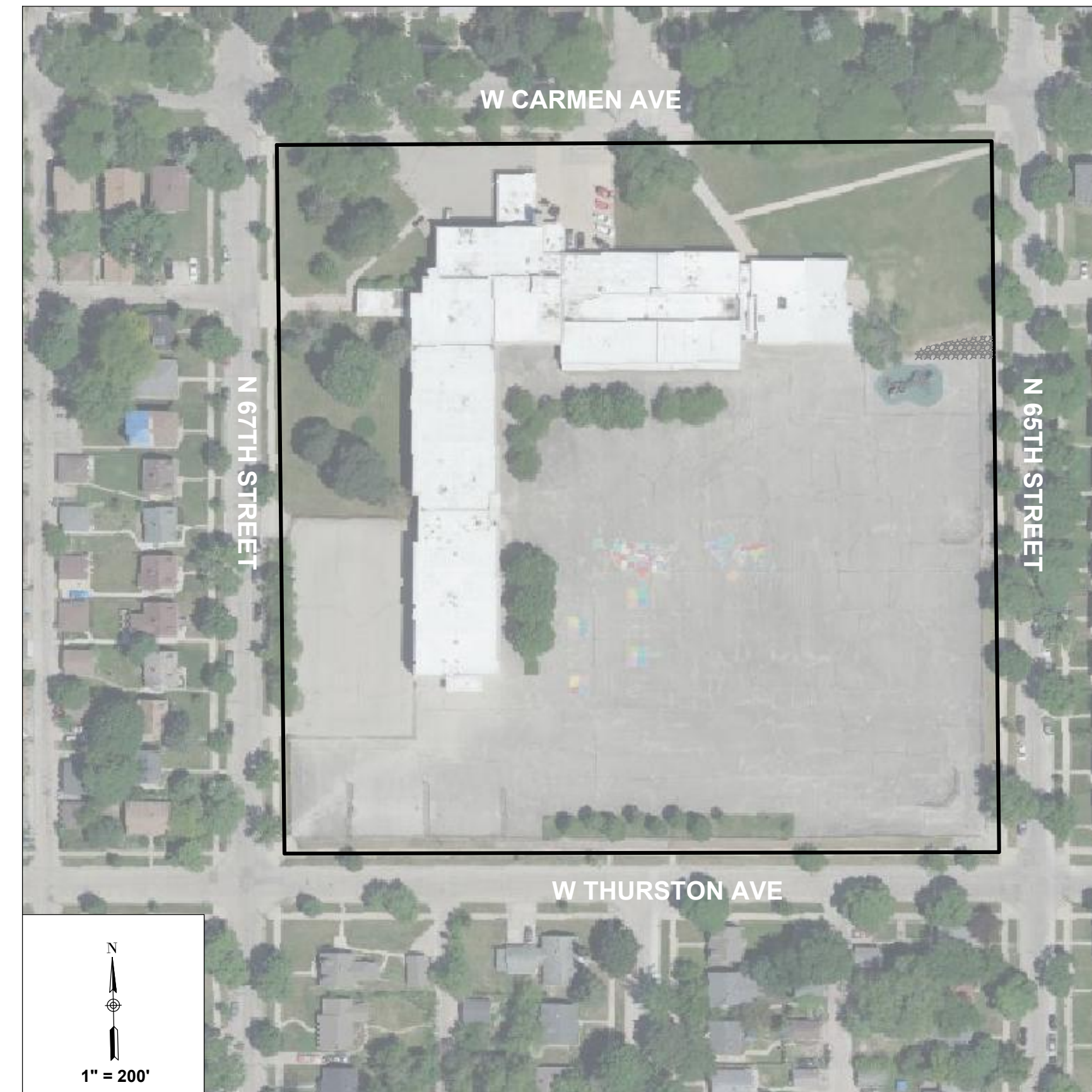
G001 LEGEND AND NOTES

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 L501 PLANTING DETAILS



#### PRIME CONSULTANT

Stormwater Solutions Engineering, LLC.  
 247 W Freshwater Way, Suite 410  
 Milwaukee WI 53204  
 Phone: 414-810-1245  
 Kara Koch, P.E., ENV. SP  
 Senior Project Engineer  
 kara@stormwater-solutions-engineering.com



#### LANDSCAPE ARCHITECT CONSULTANT

Learning Landscapes Design, LLC  
 4241 SW Tunnelwood Street  
 Portland, OR 97221

#### ALTERNATE NOTES:

**MANDATORY ALTERNATE BID #1  
 OVERHEAD STRUCTURE:**  
 INSTALL OVERHEAD STRUCTURE WITH FOOTINGS PRIOR TO THE INSTALLATION OF THE CONCRETE PAD. INSTALL IN ENTIRETY, METAL POLYGON STRUCTURE WITH THE GUTTER AND DOWNSPOUT. COORDINATE WITH ENGINEER ON LOCATION FOR DOWNSPOUT AND ROOF PITCH.

**MANDATORY ALTERNATE BID #2  
 CIRCULAR CONCRETE PLANTERS:**  
 REMOVE ASPHALT TO INSTALL FIVE CIRCULAR CONCRETE PLANTERS AS SPECIFIED ON THE PLANS. PATCH ASPHALT UP TO PLANTER EDGE, ADD TOPSOIL, TREE, PLANTINGS, AND TREE PROTECTION.

**MANDATORY ALTERNATE BID #3  
 NATURE PLAY:**  
 BASE BID INCLUDES THE INSTALLATION OF THE CONCRETE CURB AND ENGINEERED WOOD FIBER SURFACING. ADD ALTERNATE FOR THE INSTALLATION OF NATURE PLAY SPECIFIED.

#### CONSTRUCTION BARRICADE NOTES:

FOR CONSTRUCTION BARRICADING WHERE A SEPARATION IS NEEDED BETWEEN AN AREA TO BE RECONSTRUCTED AND AN AREA TO REMAIN, BUT THERE IS NO EXISTING FENCING, A TEMPORARY 6 FOOT HIGH CHAIN LINK FENCE, SELF SUPPORTED, FREE STANDING SHALL BE USED AND MAINTAINED UNTIL THE PROJECT IS COMPLETE.

CONSTRUCTION BARRICADING SHALL BE MAINTAINED ON A DAILY BASIS TO ASSURE THAT AT THE END OF EACH WORK DAY THE SITE IS SECURED.

PROJECT NUMBER: 7429 (DIVISION 5)

PROJECT APPROVAL BY:



MILWAUKEE PUBLIC SCHOOLS  
 DIVISION OF FACILITIES AND MAINTENANCE SERVICES  
 1124 NORTH 11TH STREET  
 MILWAUKEE, WI 53205-0259  
 PHONE: 414-283-4600  
 FAX: 414-283-4682

**LEGEND:**

SECTION LINE

PLAT LINE

FENCE LINE

PROPERTY LINE

RIGHT-OF-WAY

EASEMENT LIMITS

C/L ROAD

1' CONTOUR MAJOR

1' CONTOUR MINOR

FIBER OPTIC BURIED

CATV BURIED

TELEPHONE BURIED

GAS SERVICE

ELECTRIC BURIED

HAND RAIL

OVERHEAD WIRES

SANITARY SEWER

COMBINED SEWER

STORM SEWER

WATER SERVICE

CONIFEROUS TREE

DECIDUOUS TREE

BUSH

NSE CONTROL

SPOT GRADE

PROPERTY CORNER

CONCRETE NAIL

CONCRETE MONUMENT

POLE

SIGN

YARD LIGHT

STREET LIGHT

ELECTRIC MANHOLE

ELECTRIC PEDESTAL

ELECTRIC POLE

ELECTRIC METER

GUY ANCHOR

FLOOD LIGHT

BASKETBALL HOOP

WATER VALVE

SPRINKLER HEAD

FIRE HYDRANT

SHUTOFF VALVE

DRILL HOLE

CATCH BASIN/INLET

MANHOLE

TELEPHONE MANHOLE

TELEPHONE PEDESTAL

CATV PEDESTAL

HANDHOLE

GAS VALVE

GAS METER

BUILDING

ASPHALT PAVEMENT

CONCRETE PAVEMENT

STONE

LAWN OR CHIP AREAS

RETAINING WALL

PROPERTY BOUNDARY

EXISTING MAJOR CONTOUR (5' INTERVAL)

EXISTING MINOR CONTOUR (1' INTERVAL)

ASPHALT SAW CUT LINE

ASPHALT REMOVAL

REMOVALS (AS NOTED)

REMOVALS (AS NOTED)

SILT SOCK / SILT FENCE

INLET PROTECTION TYPE B AND C

INLET PROTECTION TYPE A

ALTERNATE

LIMIT OF WORK

PROPOSED MAJOR CONTOUR (5' INTERVAL)

PROPOSED MINOR CONTOUR (1' INTERVAL)

ASPHALT CURB

CONCRETE CURB

COBBLE CHANNEL INLET

BEEHIVE GRATE

CLEANOUT

STORM INLET

PROPOSED STORM MANHOLE

TRENCH DRAIN

PERFORATED UNDERDRAIN

STORM SEWER PIPE

DRAINAGE SWALE

GRADE BREAK

STORMWATER DRAINAGE DIRECTION

EXISTING SPOT GRADE

PROPOSED SPOT GRADE

EQUIPMENT USE ZONE - EXTEND A MIN. 6' OF IMPACT SURFACING BEYOND EDGE OF PLAY EQUIPMENT. SEE SPECS

DECORATIVE FENCE AS SPECIFIED

ROPE FENCE AS SPECIFIED

PROPOSED TREE

PROPOSED MULTI-STEMMED TREE

PLANTING AREA 1 - LAWN/MICROCLOVER

PLANTING AREA 2 - URBAN UPLANDS

12" ENGINEERED WOOD FIBER SURFACE

LAWN

BIOSWALE PLANTING

PERMEABLE PAVERS SURFACE

CONCRETE PAVING

ADA COMPANION SEATING 36"x48" CLEAR SPACE

LOG BORDER

WOOD BENCHES

ART POSTS (12)

RAIN MEASURING POST

SIGN POST

SENSORY PANEL SEE SPECS

COMMUNICATION BOARD SEE SPECS

MUSICAL INSTRUMENTS OWNER PROVIDED, CONTRACTOR INSTALLED

BIOSWALE STEPPING STONE PATH

CONCRETE BENCH PLANTERS (TYP. OF 5), AS SPECIFIED

RAIN BARREL AS SPECIFIED

CONCRETE ADA RAMP

NATURE PLAYGROUND - LOG CLIMBERS ARE BLACK LOCUST (ROBINIA) LOGS AND STRUCTURAL SUPPORTS AS NEEDED. LOGS MUST BE INSTALLED IN A STABLE POSITION FULLY SUPPORTING ITS OWN WEIGHT. CONTRACTOR HAS FLEXIBILITY IN INSTALLATION METHODS AS LONG AS IT MEETS SAFETY REGULATIONS AND PROJECT SPECIFICATIONS. PLAY COMPONENTS MUST MEET ASTM AND CSCP SAFETY GUIDELINES. ALL SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

OVERHEAD STRUCTURE

BASKETBALL HOOP SEE SPECS

**SURVEY NOTES:**

- 1) SURVEY PREPARED BY NORTH SHORE ENGINEERING, INC. REFER TO PLAT OF SURVEY FOR ALL EXISTING CONDITION DETAILS.
- 2) UTILITIES MARKED BY DIGGERS HOTLINE AND ALL LINES UTILITY SERVICE.

**GENERAL NOTES:**

1. THE CONTRACTOR TO COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION OVER THE WORK.
2. CONTRACTOR TO VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD MEASUREMENTS BEFORE FABRICATION OR ORDERING OF MATERIALS PRIOR TO COMMENCEMENT OF ANY DEMOLITION OR CONSTRUCTION. DO NOT SCALE DRAWINGS.
3. CONTRACTOR TO NOTIFY ENGINEER OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS.
4. CONTRACTOR TO CONTACT PUBLIC AND PRIVATE UNDERGROUND UTILITY LOCATING SERVICES TO HAVE THE SITE MARKED PRIOR TO ANY DIGGING OR EARTHWORK.
5. CONTRACTOR TO REPLACE ANY INSTALLED MATERIAL NOT MEETING THE SPECIFICATION OR PLAN REQUIREMENTS WITH MATERIAL THAT MEETS THESE REQUIREMENTS WITHOUT ADDITIONAL COST TO THE OWNER.
6. CONTRACTOR TO REPLACE PAVEMENT, CURB AND GUTTER, TREES, LAWN AREA, ANY ABOVE GROUND APPARATUS, OR ANY OTHER ITEM THAT WAS DAMAGED AS A RESULT OF CONSTRUCTION RELATED ACTIVITIES AS DEEMED BY OWNERS REPRESENTATIVE THAT WAS NOT CALLED OUT FOR REMOVAL OR REPLACEMENT. CONTRACTOR TO REPLACE/REPAIR DAMAGED ITEM TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER.
7. SURVEY PREPARED BY NORTH SHORE ENGINEERING, INC. REFER TO PLAT OF SURVEY FOR FULL EXISTING CONDITION DETAILS.
9. FOR CONSTRUCTION BARRICADING WHERE A SEPARATION IS NEEDED BETWEEN AN AREA TO BE RECONSTRUCTED AND AN AREA TO REMAIN, BUT THERE IS NO EXISTING FENCING, A TEMPORARY 6 FOOT HIGH CHAIN LINK FENCE, SELF SUPPORTED, FREE STANDING SHALL BE USED AND MAINTAINED UNTIL THE PROJECT IS COMPLETE.
9. CONSTRUCTION BARRICADING SHALL BE MAINTAINED ON A DAILY BASIS TO ASSURE THAT AT THE END OF EACH WORK DAY THE SITE IS SECURED.
10. CONTRACTOR IS TO SECURE CONSTRUCTION AREA FOR SAFETY, INCLUDING BUT NOT LIMITED TO: TRAFFIC CONTROL SIGNAGE, BARRICADE ENTRANCE, AND PLACE CONSTRUCTION FENCE AROUND OPEN TRENCHES AND SAWCUT AREAS.

**ABBREVIATIONS**

@	AT
%	PERCENT SLOPE, '%, FT/FT
ABDN	ABANDONED
AGGR	AGGREGATE
ALT	ALTERNATE
APPROX	APPROXIMATE
APVD	APPROVED
ASTM	THE AMERICAN SOCIETY OF TESTING AND MATERIALS
AVE	AVENUE
BLDG	BUILDING
BM	BENCHMARK
CB	CATCH BASIN
CJ	CONSTRUCTION JOINT
C/L	CENTERLINE
DIA	DIAMETER
DSGN	DESIGNER
DWG	DRAWING
E	EASTING, EAST
EA	EACH
EG	EXISTING GRADE
EL	ELEVATION
ELEV	ELEVATION
EQL	EQUAL
EJ	EXPANSION JOINT
EX	EXISTING
FT	FOOT, FEET
GND	GROUND
GR	GRADE
HORIZ	HORIZONTAL
HP	HIGH POINT
HYD	HYDRANT
INV	INVERT
LF	LINEAL FEET
LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
N	NORTH, NORTHING
NE	NORTHEAST
NO	NUMBER
#	NUMBER
NTS	NOT TO SCALE
NW	NORTHWEST
PROP	PROPOSED
PVMT	PAVEMENT
REQ'D	REQUIRED
RT	RIGHT
RMV	REMOVE
ROW	RIGHT OF WAY
R/W	RIGHT OF WAY
S	SOUTH, SLOPE
SE	SOUTHEAST
SPEC	SPECIFICATIONS
SQ	SQUARE
ST	STREET
STD	STANDARD
SW	SOUTHWEST
T&B	TOP AND BOTTOM
TOC	TOP OF CURB
TOS	TOP OF SLOPE
TOPO	TOPOGRAPHIC
TYP	TYPICAL
W/	WITH

**QUANTITY NOTES:**

- 1) THE BELOW QUANTITIES ARE APPROXIMATIONS AND ARE NOT INTENDED TO BE USED DURING CONSTRUCTION ACTIVITIES. CONTRACTORS ARE RESPONSIBLE FOR QUANTIFYING ITEMS PRIOR TO COMMENCING WORK.
- 2) DISCREPANCIES TO BE COMMUNICATED WITH MPS AND THE PROJECT ENGINEER.
- 3) VOLUMES PROVIDED ARE MEASURED AS IN-PLACE CUBIC YARDS.

Item	Quantity	Unit
<b>BASE BID</b>		
<b>GENERAL &amp; SITE PREP</b>		
Mobilization	1	LS
Provide, install, maintain, and remove silt sock	1,057	LF
Provide, install, and maintain inlet protection	9	EA
Chain Link Fence Removal	103	LF
Existing volley ball poles and foundation removal	2	EA
Sawcutting	1,448	LF
Asphalt removal	97,512	SF
Stone base course removal	0	CY
Rough & fine grading	97,512	SF
Clean out existing catch basin	7	EA
Tree Stump removal	2	EA
Storm sewer pipe removal	351	LF
Storm catch basin removal	4	EA
<b>UTILITIES</b>		
6" perforated PVC underdrain and fittings	833	LF
6" solid PVC storm sewer pipe and fittings	195	LF
6" Clean out with cast iron lid and fitting	8	EA
12 in diameter standpipe (Nyloplast)	4	EA
Metal lockable beehive grate (Nyloplast)	4	EA
Fabco Beehive Overflow Filter	4	EA
NDS 9" catch basin kit with galvanized grate	2	EA
Core into existing manhole	2	EA
Adjust rim elevation of existing catch basin	1	EA
<b>BIOSWALE</b>		
Bioswale engineered media	811	CY
Bioswale No. 1 clear stone	702	TONS
Bioswale pea gravel	176	TONS
Bioswale jute mat	2,951	SY
Cobble drain inlet	3	EA
6" Animal guard	3	EA
Cobble channel inlet	2	EA
<b>PERMEABLE PAVERS</b>		
Permeable paver, setting bed, and joint stone	962	SF
Permeable paver No. 1 clear stone	46	TONS
<i>Permeable paver metal edging (see Landscape)</i>		
<b>HARDSCAPE</b>		
Asphalt curb	970	LF
Asphalt paving / patch	21,978	SF
5" concrete slab / walkway	2,137	SF
Raised concrete curb	185	LF
ADA concrete ramp	1	EA
Stone stepping stones	63	LF
12" engineered wood fiber (EWF)	1,933	SF
EWF No. 1 clear stone	93	TONS
Crack fill & clean asphalt surface	189,703	SF
Painted Play	1	LS
<b>FURNITURE &amp; EQUIPMENT</b>		
Basketball Hoops	1	EA
Nature Play (log steppers and balancing logs)	1	LS
Wood bench, continuous	12	EA
Sensory Panel	3	LS
Rain Measuring Post	1	EA
Sign Post	1	EA
Art Post	12	EA
Gaga Pits	2	EA
<b>LANDSCAPE</b>		
Metal edging, steel	347	LF
Log border - horizontal (assumes 8' ave. length)	73	LF
Topsoil, imported and placed	1,427	CY
Sod	2,783	SY
Sod - Bioswale	1,045	SY
Bioswale seed	12,653	SF
Lawn/Micro Clover Seed	12,625	SF
Shade trees, 3" cal.	51	EA
Perennials and grasses, plugs	9,787	EA
Tree protection staking	22	EA
Urban Erosion Control Mat for Urban Planting areas	235	SY
<b>FENCING</b>		
Cedar mesh fence	75	LF
Low Rope Fence	792	LF

<b>ALTERNATE BID</b>		
<b>1 OVERHEAD STRUCTURE</b>		
Overhead Structure	1	EA
Rain Barrel	1	EA
<b>2 CIRCULAR TREE PLANTERS</b>		
Sawcutting	305	LF
Asphalt and/or stone base removal	43	CY
Rough & fine grading	1,150	SF
Asphalt paving / patch	469	SF
Concrete circular tree planter	5	EA
Tree protection staking	5	EA
Grasses, raised planter, cont.	35	EA
Shade trees, 3" cal.	5	EA
Mulch - shredded hardwood / 3" cover	350	SF
<b>3 NATURE PLAY</b>		
Nature Play (log steppers and balancing logs)	1	LS

**STORMWATER SOLUTIONS ENGINEERING, LLC**  
 247 W. FRESHWATER WAY, SUITE 410  
 MILWAUKEE, WI 53204  
 PHONE: (414) 810-1245  
 WWW.STORMWATER-SOLUTIONS-ENGINEERING.COM

**Learning Landscapes**  
 LEARNING LANDSCAPES DESIGN, LLC  
 4241 SW TUNNELWOOD STREET  
 PORTLAND, OR 97221

**MPS MILWAUKEE PUBLIC SCHOOLS**

**DIVISION OF FACILITIES AND MAINTENANCE SERVICES**  
 1124 NORTH 11TH STREET  
 MILWAUKEE, WI 53205-0259  
 PHONE: 414-283-4600  
 FAX: 414-283-4682

**SHEET NAME: LEGEND AND NOTES**

**PROJECT NAME: 2023 GREEN INFRASTRUCTURE UPGRADES**

**PROJECT ADDRESS: MILWAUKEE GERMAN IMMERSION ELEMENTARY SCHOOL 3778 N. 82ND STREET, MILWAUKEE, WI 53222**

ISSUED FOR:	REV:	DATE:
50% CD		11/14/2022
90% CD		12/22/2022
100% CD		1/23/2023

<b>DRAWN BY:</b>	<b>EMP</b>
<b>REVIEWED BY:</b>	<b>KLK</b>
<b>APPROVED BY:</b>	<b>CBG</b>
<b>DATE:</b>	<b>January 2023</b>

**SEAL AND SIGNATURE**

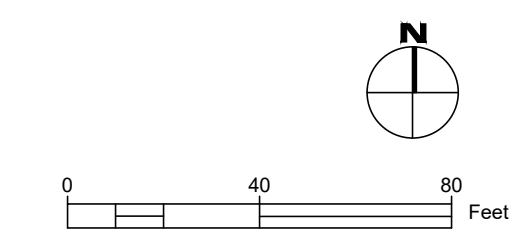
**PROJECT NUMBER: 7429 (DIVISION 5)**

**SITE NUMBER: 337**

**SHEET: G001**



<b>SHEET NAME:</b> EXISTING CONDITIONS	<b>PROJECT NAME:</b> 2023 GREEN INFRASTRUCTURE UPGRADES	<b>PROJECT ADDRESS:</b> RICHARD KLUGE ELEMENTARY SCHOOL 5760 N 67TH STREET, MILWAUKEE, 53218
	<b>ISSUED FOR:</b> 50% CD	<b>REV:</b>
	90% CD	12/22/2022
	100% CD	1/23/2023
<b>DRAWN BY:</b>	EMP	
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<b>APPROVED BY:</b>	CBG	
<b>DATE:</b>	January 2023	
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<b>SHEET:</b>		
<b>C001</b>		



**LEGEND:**

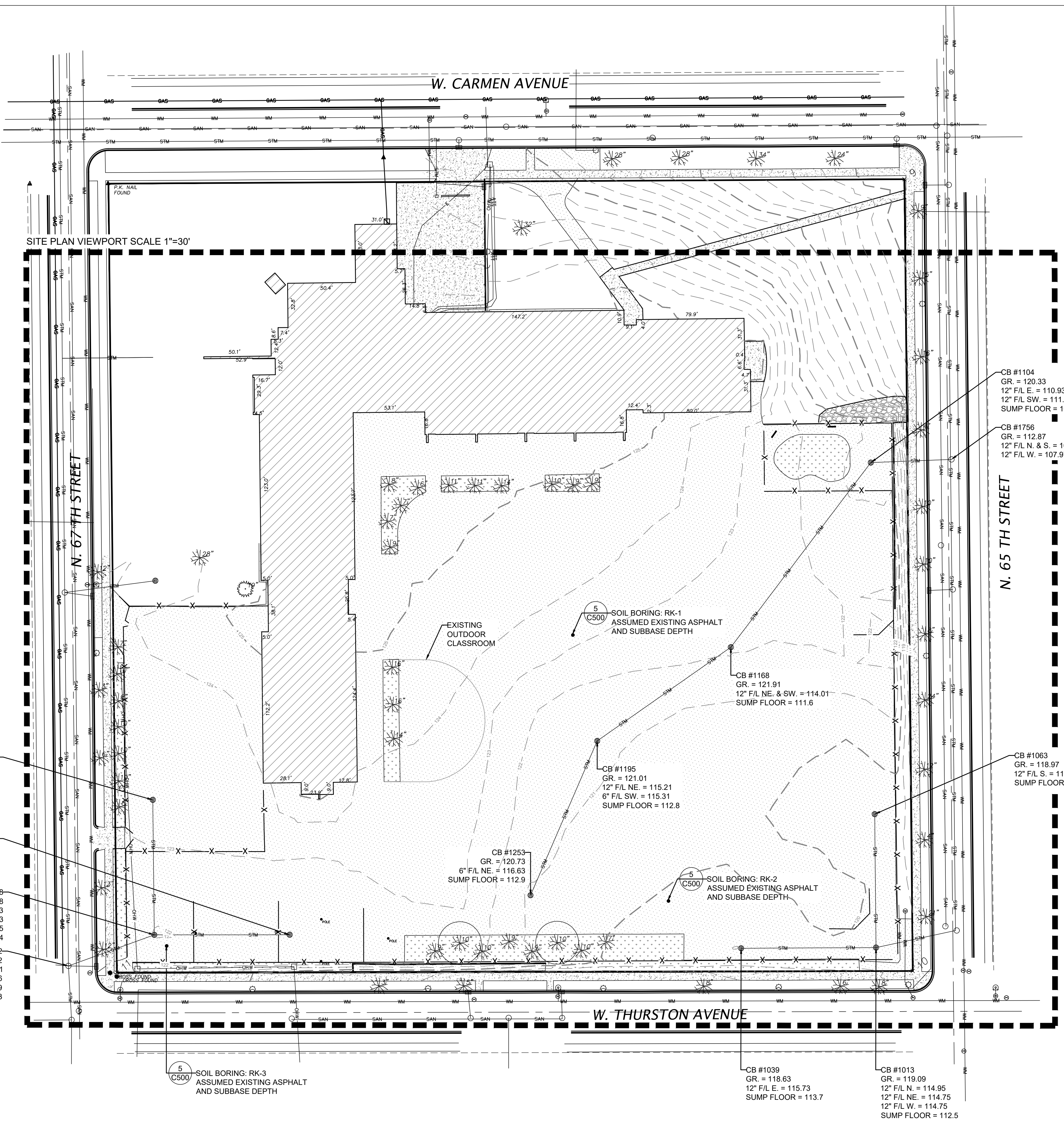
- CONIFEROUS TREE
- DECIDUOUS TREE
- BUSH
- NSE CONTROL
- SPOT GRADE
- PROPERTY CORNER
- CONCRETE NAIL
- CONCRETE MONUMENT
- POLE
- SIGN
- YARD LIGHT
- STREET LIGHT
- ELECTRIC MANHOLE
- ELECTRIC PEDESTAL
- ELECTRIC POLE
- ELECTRIC METER
- GUY ANCHOR
- FLOOD LIGHT
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- DRILL HOLE
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- MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- CATV PEDESTAL
- HANDHOLE
- GAS VALVE
- GAS METER
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- STONE
- LAWN OR CHIP AREAS
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- SECTION LINE
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- C/L ROAD
- 1' CONTOUR MAJOR
- 1' CONTOUR MINOR
- FIBER OPTIC BURIED
- CATV BURIED
- TELEPHONE BURIED
- GAS SERVICE
- ELECTRIC BURIED
- HAND RAIL
- OVERHEAD WIRES
- SANITARY SEWER
- COMBINED SEWER
- STORM SEWER
- WATER SERVICE

**GENERAL NOTES:**

- SURVEY PREPARED BY NORTH SHORE ENGINEERING, INC. REFER TO PLAT OF SURVEY FOR FULL EXISTING CONDITION DETAILS.
- UTILITIES MARKED BY DIGGERS HOTLINE AND LOCATED BY ALL LINES.
- 4-INCH DIAMETER PAVEMENT CORES WERE COLLECTED AT THE SOIL BORING LOCATIONS IDENTIFIED ON THE PLANS BY GESTRA ENGINEERING, INC. FOLLOWING, A 4-FOOT SUBGRADE SAMPLE WAS COLLECTED BELOW THE CORE SAMPLES. RESULTS ARE PRESENTED IN THE 'DRILLING AND LABORATORY TESTING SUMMARY', DATED OCTOBER 7, 2022.

**BENCHMARK NOTES:**

- MAIN BENCHMARK: CITY BENCHMARK NO. 59-23 LOCATION: W. SILVER SPRING DR. & N. 68TH ST. DESCRIPTION: CONCRETE MONUMENT WITH OVAL BRASS CAP IN CENTER MEDIAN OF W. SILVER SPRING DR. 50' ± E. OF MEDIAN NOSE ELEVATION = 122.91 (CITY OF MILWAUKEE DATUM)
- SITE BENCHMARK: SANITARY MANHOLE AS SHOWN ON SURVEY LOCATION: 275' ± S. OF NE. LOT CORNER IN C/L PAVEMENT OF N. 65TH ST. DESCRIPTION: MANHOLE RIM ELEVATION = 114.66 (CITY OF MILWAUKEE DATUM)



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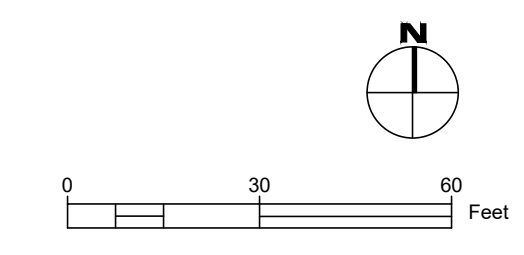
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**PROJECT NUMBER: 7429 (DIVISION 5)**

**SITE NUMBER: 337**

**SHEET:**

**C002**

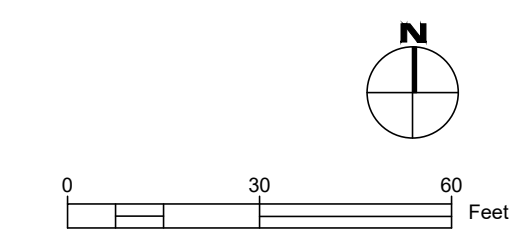
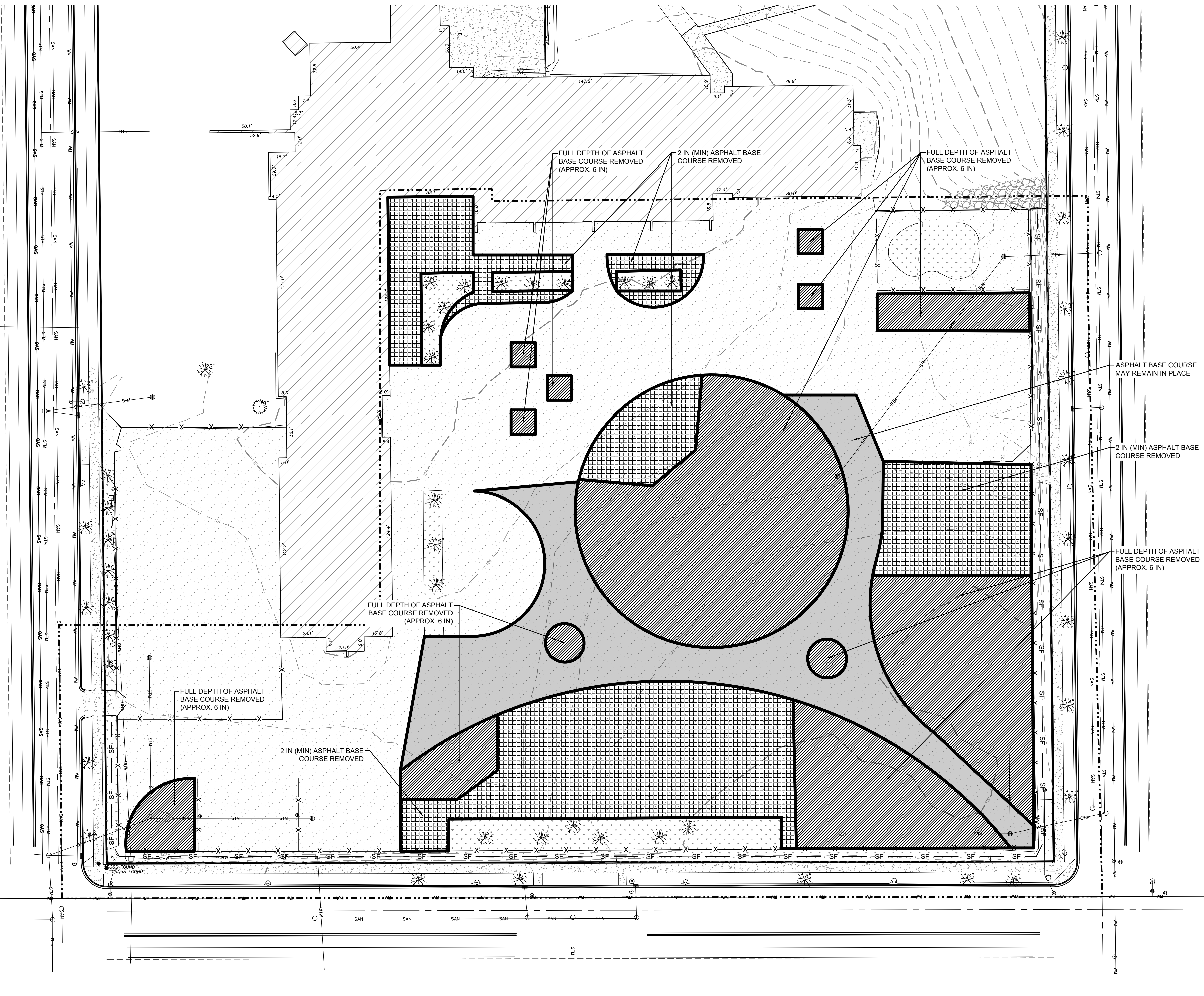


- LEGEND:**
- PROPERTY BOUNDARY
  - - - EXISTING MAJOR CONTOUR (5' INTERVAL)
  - - - EXISTING MINOR CONTOUR (1' INTERVAL)
  - ASPHALT SAW CUT LINE
  - XXXXX ASPHALT REMOVAL
  - XXXXXX REMOVALS (AS NOTED)
  - X REMOVALS (AS NOTED)
  - SF SILT SOCK / SILT FENCE
  - INLET PROTECTION TYPE B AND C
  - INLET PROTECTION TYPE A
  - ALTERNATE

- GENERAL NOTES:**
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  - CONTRACTOR TO NOTIFY ENGINEER OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS.
  - CONTRACTOR TO CONTACT PUBLIC AND PRIVATE UNDERGROUND UTILITY LOCATING SERVICES TO HAVE THE SITE MARKED PRIOR TO ANY DIGGING OR EARTHWORK. CONTRACTOR TO REPLACE ANY INSTALLED MATERIAL NOT MEETING THE SPECIFICATION OR PLAN REQUIREMENTS WITH MATERIAL THAT MEETS THESE REQUIREMENTS WITHOUT ADDITIONAL COST TO THE OWNER.
  - CONTRACTOR TO REPLACE PAVEMENT, CURB AND GUTTER, TREES, LAWN AREA, ANY ABOVE GROUND APPARATUS, OR ANY OTHER ITEM THAT WAS DAMAGED AS A RESULT OF CONSTRUCTION RELATED ACTIVITIES AS DEEMED BY OWNERS REPRESENTATIVE THAT WAS NOT CALLED OUT FOR REMOVAL OR REPLACEMENT. CONTRACTOR TO REPLACE/REPAIR DAMAGED ITEM TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER.
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- GENERAL EROSION CONTROL NOTES**
- CONSTRUCTION SITE EROSION CONTROL AND SEDIMENTATION CONTROL TO COMPLY WITH THE REQUIREMENTS OF THE CITY OF MILWAUKEE. CONTRACTOR TO EMPLOY EROSION CONTROL METHODS AS SHOWN AND SPECIFIED.
  - TEMPORARY EROSION CONTROL DEVICES TO BE INSTALLED PRIOR TO LAND DISTURBANCE ACTIVITIES.
  - CONTRACTOR TO CONDUCT ALL ACTIVITIES ON THE SITE IN A LOGICAL SEQUENCE TO MINIMIZE THE AREA OF UNSTABILIZED SOIL AT ANY ONE TIME.
  - EROSION CONTROL MEASURES TO REMAIN IN PLACE AND BE MAINTAINED UNTIL SUCH TIME WHEN CONSTRUCTION HAS BEEN COMPLETED AND FINAL STABILIZATION HAS BEEN ESTABLISHED.
  - CONTRACTOR TO PERFORM PERIODIC STREET, PLAYGROUND, AND PARKING LOT SWEEPING TO MAINTAIN THE PUBLIC STREET FREE OF DUST AND SOIL.
  - ALL DISTURBED GROUND LEFT INACTIVE FOR SEVEN OR MORE DAYS TO BE STABILIZED BY TEMPORARY OR PERMANENT SEEDING, MULCHING, SODDING, COVERING WITH TARPS, OR EQUIVALENT BEST MANAGEMENT PRACTICES. IF TEMPORARY SEEDING IS USED, CONTRACTOR TO INSTALL A PERMANENT COVER AS PART OF THE FINAL SITE STABILIZATION.
  - CONTRACTOR TO NOTIFY PERMITTING AGENCIES IN ACCORDANCE WITH PERMIT REQUIREMENTS.
  - CONTRACTOR TO REPAIR ANY SILTATION OR EROSION DAMAGE TO ADJOINING SURFACES AND DRAINAGE WAYS RESULTING FROM LAND DEVELOPMENT OR LAND DISTURBING ACTIVITIES.
  - KEEP A COPY OF THE EROSION CONTROL PLAN ON SITE FOR THE DURATION OF THE PROJECT.





- LEGEND:**
- PROPERTY BOUNDARY
  - - - EXISTING MAJOR CONTOUR (5' INTERVAL)
  - - - EXISTING MINOR CONTOUR (1' INTERVAL)
  - - - - - ALTERNATE
  - - - - - LIMIT OF WORK
  - [Solid Gray Box] ASPHALT REMOVAL ONLY
  - [Cross-hatched Box] MIN 2-IN BASE COURSE REMOVED
  - [Diagonal Hatched Box] FULL DEPTH BASE COURSE REMOVED

- NOTES:**
1. CONTRACTOR TO REMOVE AND HAUL OFF ASPHALT FROM PROPOSED DEPAVING AREAS. ASPHALT ASSUMED TO BE 4 TO 4.9 INCHES ACROSS SITE FROM THE GEOTECHNICAL REPORT.
  2. AREAS WHERE GREEN INFRASTRUCTURE OR UPLAND PLANTINGS ARE PROPOSED, BASE COURSE TO BE REMOVED AND HAULED OFF SITE AT FULL DEPTH. THICKNESS OF BASE COURSE IS ASSUMED TO BE 6 INCHES FROM GEOTECHNICAL REPORT.
  3. AREAS OF SOD OR MICRO CLOVER ARE TO HAVE A MINIMUM OF 4 INCHES OF TOPSOIL, 6 INCHES PREFERRED. BASE COURSE BELOW THE 4-6 INCHES CAN REMAIN IN PLACE.

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 WWW.STORMWATER-SOLUTIONS-ENGINEERING.COM

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 LEARNING LANDSCAPES DESIGN, LLC  
 4241 SW TUNNELWOOD STREET  
 PORTLAND, OR 97221

**MPS MILWAUKEE PUBLIC SCHOOLS**

**DIVISION OF FACILITIES AND MAINTENANCE SERVICES**  
 1124 NORTH 11TH STREET  
 MILWAUKEE, WI 53205-0259  
 PHONE: 414-283-4600  
 FAX: 414-283-4682

**SHEET NAME:**  
 ASPHALT BASE COURSE REMOVAL PLAN

**PROJECT NAME:**  
 2023 GREEN INFRASTRUCTURE UPGRADES

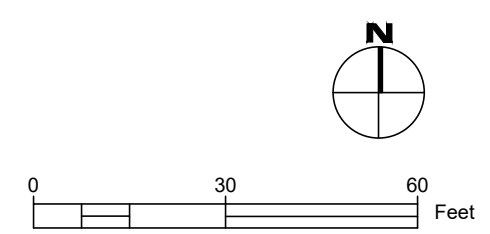
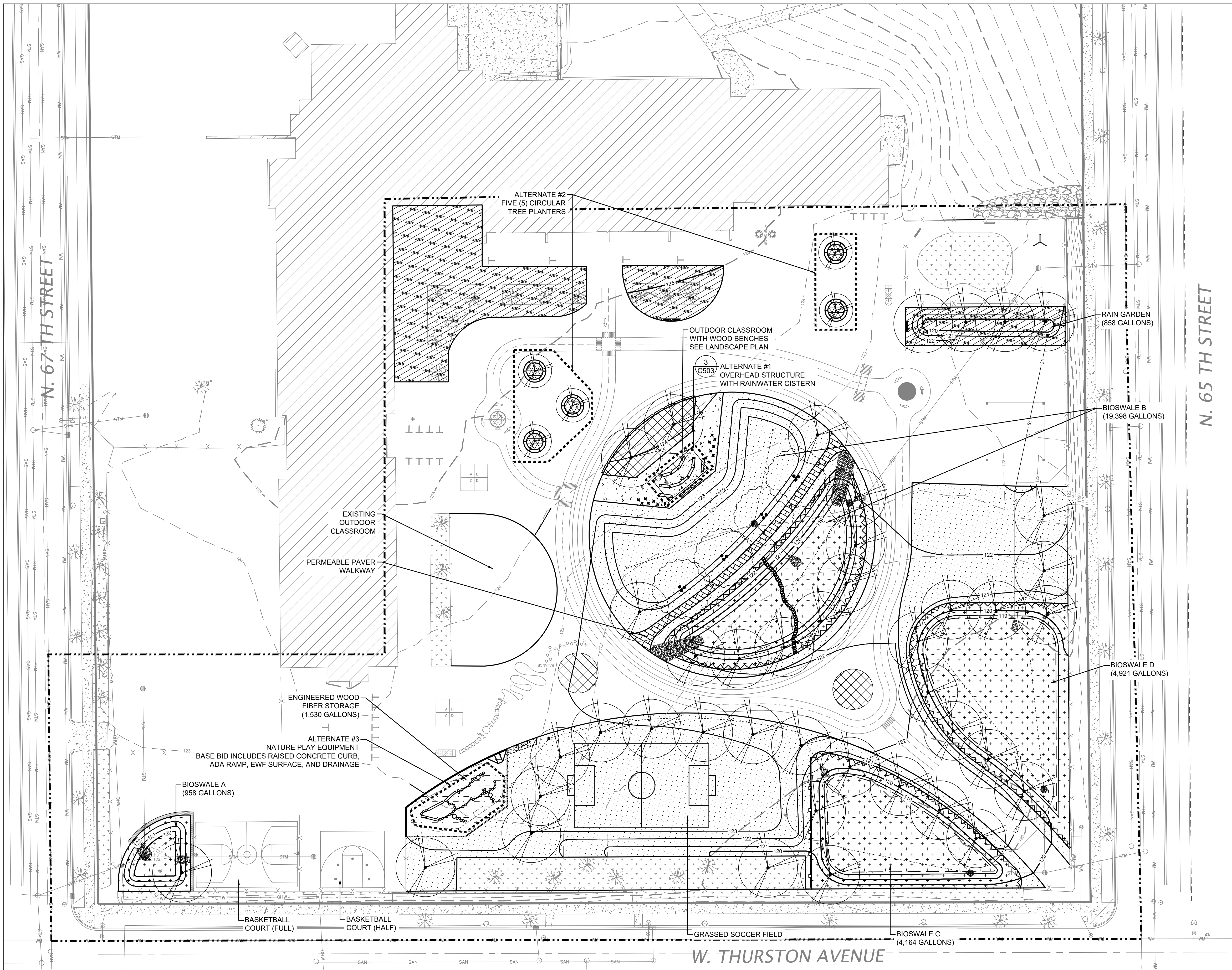
**PROJECT ADDRESS:**  
 RICHARD KLUGE ELEMENTARY SCHOOL  
 5760 N 67TH STREET, MILWAUKEE, 53218

ISSUED FOR:	REV:	DATE:
50% CD		11/14/2022
90% CD		12/22/2022
100% CD		1/23/2023

**DRAWN BY:** EMP  
**REVIEWED BY:** KLK  
**APPROVED BY:** CBG  
**DATE:** January 2023  
**SEAL AND SIGNATURE**

**PROJECT NUMBER:** 7429 (DIVISION 5)  
**SITE NUMBER:** 337  
**SHEET:**  
**C003**





**LEGEND:**

- PROPERTY BOUNDARY
- - - EXISTING MAJOR CONTOUR (5' INTERVAL)
- - - EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPOSED MAJOR CONTOUR (5' INTERVAL)
- PROPOSED MINOR CONTOUR (1' INTERVAL)
- ▨ ASPHALT CURB
- ▩ CONCRETE CURB
- ⊗ COBBLE CHANNEL INLET
- DECORATIVE WOOD FENCE
- PROPOSED PROTECTIVE FENCE
- PROPOSED CHAIN LINK FENCE
- PROPOSED LOW ROPE FENCE
- BEEHIVE GRATE
- CLEANOUT
- STORM INLET
- PROPOSED STORM MANHOLE
- TRENCH DRAIN
- PERFORATED UNDERDRAIN
- SS — STORM SEWER PIPE
- - - - - ALTERNATE
- ▨ PLANTING AREA 1
- ▩ PLANTING AREA 2
- ▨ SOD
- ▨ BIOSWALE PLANTING
- ▨ 12" ENGINEERED WOOD FIBER
- ▨ PERMEABLE PAVERS
- ▨ CONCRETE PAVING
- ▨ NEW ASPHALT SURFACE
- - - - - LIMIT OF WORK

**GENERAL NOTES:**

1. CONTRACTOR IS TO REFER TO SHEET L300 FOR THE PLANTING PLAN.
2. INSTALL TEMPORARY PROTECTIVE FENCING AROUND GREEN INFRASTRUCTURE (BIOSWALES AND NATIVE PLANTINGS) AS DIRECTED BY MPS OR ON-SITE ENGINEER FOR ESTABLISHMENT. TEMPORARY FENCING SHALL BE INSTALLED TO WITHSTAND A YEAR. WOODEN SNOW FENCE WITH HEAVY DUTY POSTS.
3. REFER TO SHEET L200 FOR PAVEMENT MARKING DETAILS. PREPARE ASPHALT SURFACE PRIOR TO PAVEMENT MARKINGS. PRESSURE WASH, SWEEP, AND CRACKFILL.

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 MILWAUKEE, WI 53205-0259  
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<b>SHEET NAME:</b> SITE PLAN	<b>PROJECT NAME:</b> 2023 GREEN INFRASTRUCTURE UPGRADES	<b>PROJECT ADDRESS:</b> RICHARD KLUGE ELEMENTARY SCHOOL 5760 N 67TH STREET, MILWAUKEE, 53218
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ISSUED FOR:	REV:	DATE:
50% CD		11/14/2022
90% CD		12/22/2022
100% CD		1/23/2023

<b>DRAWN BY:</b>	EMP
<b>REVIEWED BY:</b>	KLK
<b>APPROVED BY:</b>	CBG
<b>DATE:</b>	January 2023
<b>SEAL AND SIGNATURE</b>	

PROJECT NUMBER: 7429 (DIVISION 5)

SITE NUMBER: 337

SHEET:  
**C100**



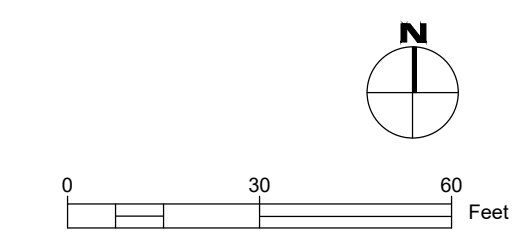
ISSUED FOR:	REV:	DATE:
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<b>DRAWN BY:</b>	EMP
<b>REVIEWED BY:</b>	KLK
<b>APPROVED BY:</b>	CBG
<b>DATE:</b>	January 2023

**SEAL AND SIGNATURE**

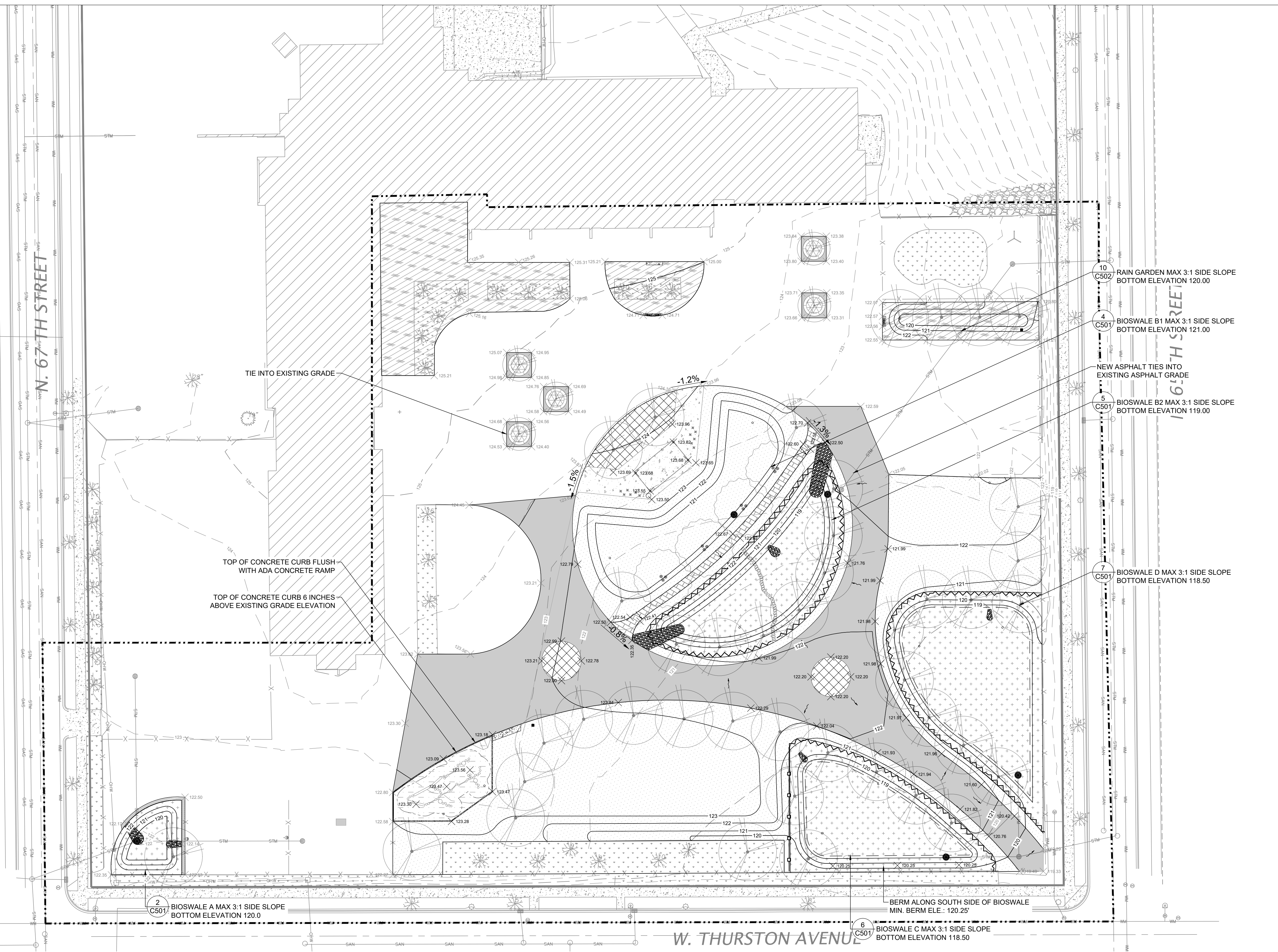
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PROJECT NUMBER: 7429 (DIVISION 5)  
 SITE NUMBER: 337  
 SHEET:  
**C200**



- LEGEND:**
- PROPERTY BOUNDARY
  - - - EXISTING MAJOR CONTOUR (5' INTERVAL)
  - - - EXISTING MINOR CONTOUR (1' INTERVAL)
  - PROPOSED MAJOR CONTOUR (5' INTERVAL)
  - PROPOSED MINOR CONTOUR (1' INTERVAL)
  - ▨ ASPHALT CURB
  - ▧ CONCRETE CURB
  - - - DRAINAGE SWALE
  - - - GRADE BREAK
  - STORMWATER DRAINAGE DIRECTION
  - x.001 EXISTING SPOT GRADE
  - x.007 PROPOSED SPOT GRADE
  - BEEHIVE GRATE
  - CLEANOUT
  - STORM INLET
  - PROPOSED STORM MANHOLE
  - ▬ TRENCH DRAIN
  - - - ALTERNATE
  - ▨ NEW ASPHALT SURFACE
  - ▨ CONCRETE PAVING
  - ▨ PLANTING AREA 1
  - ▨ PLANTING AREA 2
  - ▨ SOD
  - ▨ BIOSWALE PLANTING
  - ▨ 12" ENGINEERED WOOD FIBER
  - ▨ PERMEABLE PAVERS
  - - - LIMIT OF WORK

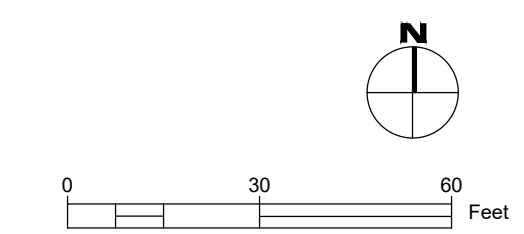
- GENERAL NOTES:**
- ELEVATIONS SHOWN ON THE PLAN ARE EQUAL TO THE FINISHED TOP OF GRADE.
  - CUT MATERIALS ARE TO BE MANAGED ON THE SITE TO THE EXTENT PRACTICABLE. THE DIMENSIONS OF THE FILL MAY ALTER FROM THE PROPOSED GRADES DUE TO THE FINAL VOLUME OF MATERIALS TO BE MANAGED ON SITE. ANY DEVIATIONS FROM THE PLANS MUST BE APPROVED BY THE ENGINEER.
  - BASE COURSE REMOVED FROM AREAS IDENTIFIED ON C003 MAY BE UTILIZED AS FILL MATERIAL TO BRING UP GRADES ACROSS THE SITE. ADDITIONAL FILL WILL NOT BE ACCEPTED ON SITE. PROJECT ENGINEER WILL ALTER GRADES TO NOT REQUIRE THE PLACEMENT OF ADDED FILL.
  - WALKING PATHS ARE GRADED TO MEET THE 2010 ADA STANDARD FOR ACCESSIBLE DESIGN: LONGITUDINAL SLOPES NO GREATER THAN 1:20 FEET AND CROSS SLOPES NO GREATER THAN 1:50 FEET OR BETWEEN 1.5% TO 2% MAXIMUM. CUT FILL VOLUMES ARE REPRESENTED IN PLACE CUBIC YARD AND DOES NOT ACCOUNT FOR COMPACTION REQUIREMENTS.



ISSUED FOR:	REV:	DATE:
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100% CD		1/23/2023

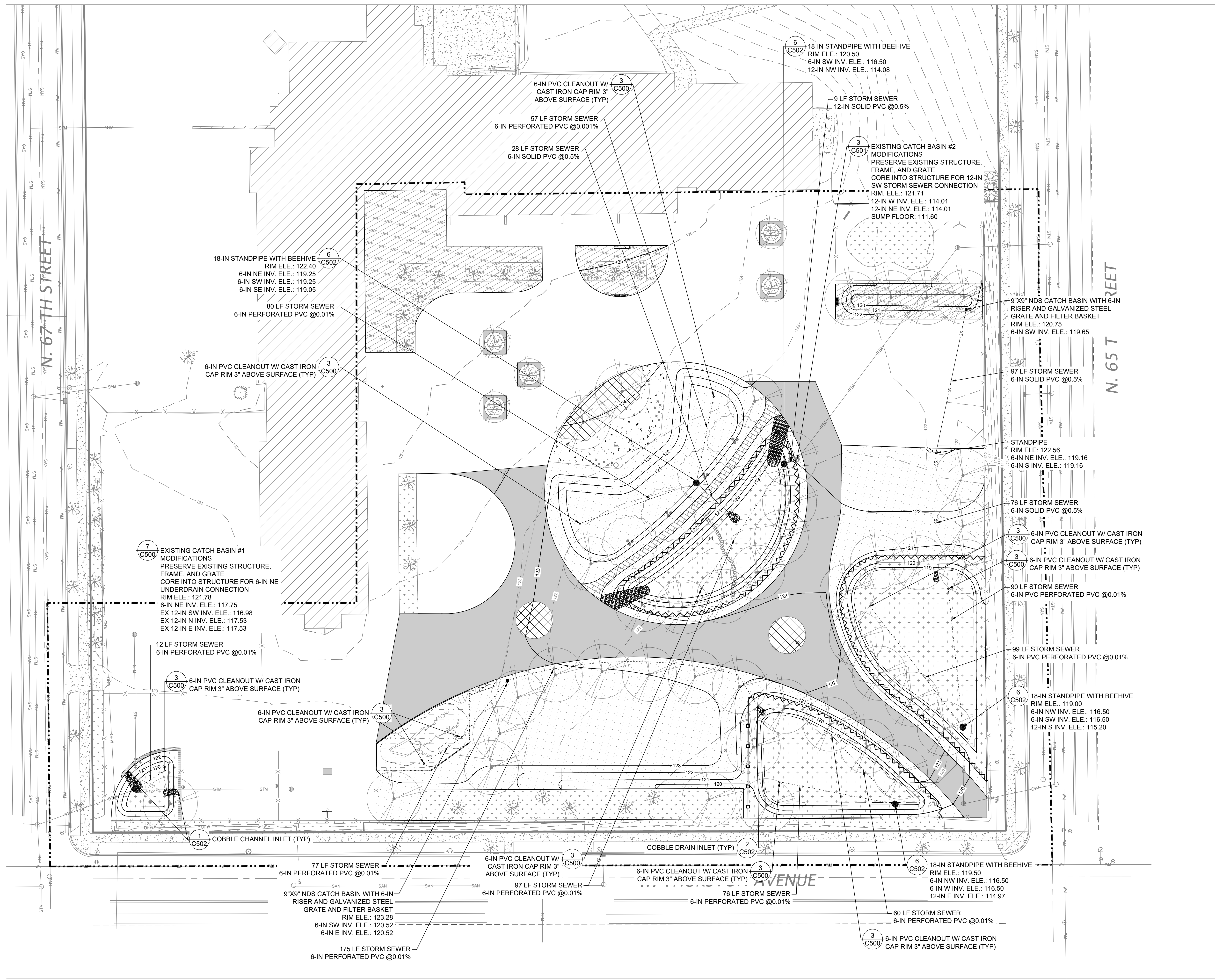
<b>DRAWN BY:</b>	EMP
<b>REVIEWED BY:</b>	KLK
<b>APPROVED BY:</b>	CBG
<b>DATE:</b>	January 2023

<b>SEAL AND SIGNATURE</b>	
<b>PROJECT NUMBER:</b>	7429 (DIVISION 5)
<b>SITE NUMBER:</b>	337
<b>SHEET:</b>	C300

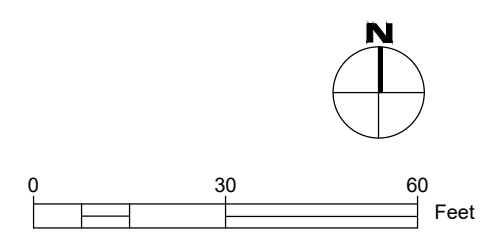
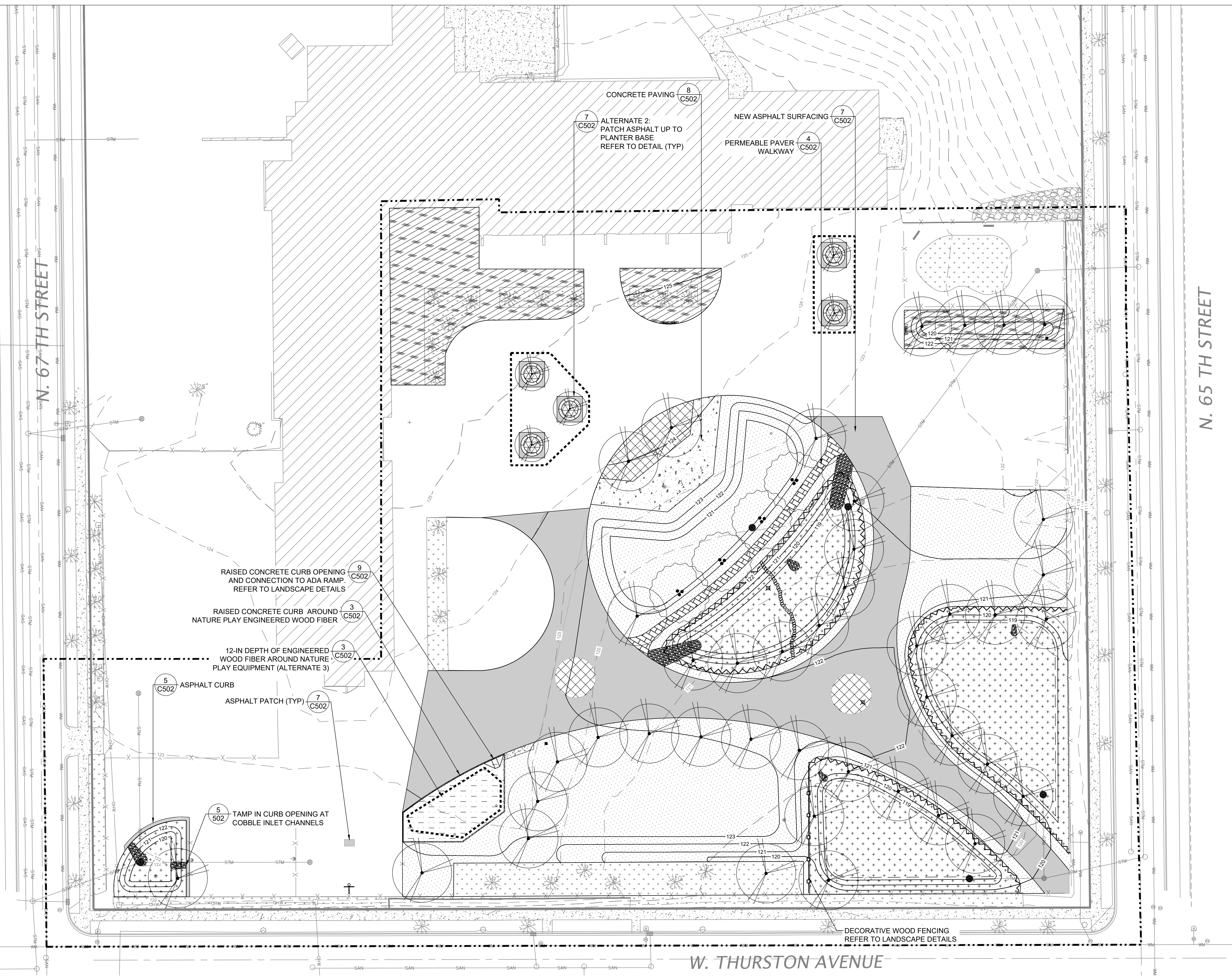


- LEGEND:**
- PROPERTY BOUNDARY
  - - - EXISTING MAJOR CONTOUR (5' INTERVAL)
  - - - EXISTING MINOR CONTOUR (1' INTERVAL)
  - PROPOSED MAJOR CONTOUR (5' INTERVAL)
  - PROPOSED MINOR CONTOUR (1' INTERVAL)
  - ▨ ASPHALT CURB
  - ▩ CONCRETE CURB
  - COBBLE CHANNEL INLET
  - BEEHIVE GRATE
  - CLEANOUT
  - STORM INLET
  - PROPOSED STORM MANHOLE
  - TRENCH DRAIN
  - - - PERFORATED UNDERDRAIN
  - SS STORM SEWER PIPE
  - - - - - ALTERNATE
  - ▨ NEW ASPHALT SURFACE
  - ▨ CONCRETE PAVING
  - ▨ PLANTING AREA 1
  - ▨ PLANTING AREA 2
  - ▨ SOD
  - ▨ BIOSWALE PLANTING
  - ▨ 12" ENGINEERED WOOD FIBER
  - ▨ PERMEABLE PAVERS
  - - - - - LIMIT OF WORK

- GENERAL NOTES:**
- CONTRACTOR TO VERIFY IN FIELD AND VERIFY DESIGN WITH ENGINEERS: EXISTING PIPE QUALITY, EXISTING STRUCTURAL INTEGRITY, AND PROPOSED GRATE AND FRAME.
  - SUPPLY MATERIALS AS SPECIFIED, OR APPROVED EQUAL.
  - EXISTING CATCH BASINS WITHIN PROJECT AREA TO BE CLEANED AFTER CONSTRUCTION.







- LEGEND:**
- PROPERTY BOUNDARY
  - - - EXISTING MAJOR CONTOUR (5' INTERVAL)
  - - - EXISTING MINOR CONTOUR (1' INTERVAL)
  - PROPOSED MAJOR CONTOUR (5' INTERVAL)
  - PROPOSED MINOR CONTOUR (1' INTERVAL)
  - ▨ ASPHALT CURB
  - ▧ CONCRETE CURB
  - BEEHIVE GRATE
  - CLEANOUT
  - STORM INLET
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  - ▨ NEW ASPHALT SURFACE
  - ▨ CONCRETE PAVING
  - ▨ PLANTING AREA 1
  - ▨ PLANTING AREA 2
  - ▨ SOD
  - ▨ BIOSWALE PLANTING
  - ▨ 12" ENGINEERED WOOD FIBER
  - ▨ PERMEABLE PAVERS
  - LIMIT OF WORK

- GENERAL NOTES:**
1. PREPARE ASPHALT SURFACE PRIOR TO PAVEMENT MARKINGS PER MPS SPECIFICATIONS.
  2. REFER TO L200 FOR PAVEMENT MARKINGS.
  3. DAMAGES TO ASPHALT WILL BE EVALUATED AT SUBSTANTIALLY COMPLETED PRIOR TO ASPHALT SEAL COAT FOR REPAIRS BASED ON THE QUALITY OF THE ASPHALT SURFACE PRIOR TO CONSTRUCTION.
  4. ASPHALT CURB AND PATCHES ASSOCIATED WITH SUBSTANTIALLY COMPLETING THE CONSTRUCTION PROJECT ARE INCIDENTAL TO THE PROJECT.

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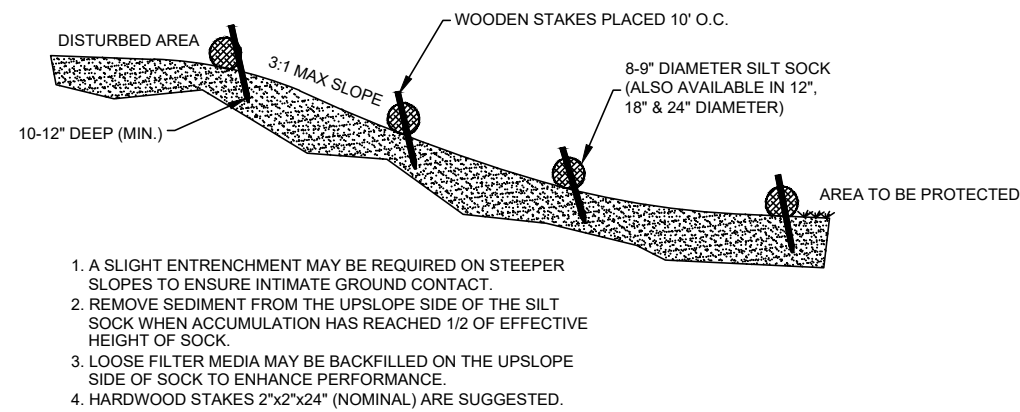
SHEET NAME: <b>PAVEMENT PLAN</b>	PROJECT NAME: <b>2023 GREEN INFRASTRUCTURE UPGRADES</b>	PROJECT ADDRESS: <b>RICHARD KLUGE ELEMENTARY SCHOOL 5760 N 67TH STREET, MILWAUKEE, 53218</b>
	ISSUED FOR: 50% CD _____ 90% CD _____ 100% CD _____	REV: _____ _____ _____

DRAWN BY:	EMP
REVIEWED BY:	KLK
APPROVED BY:	CBG
DATE:	January 2023

SEAL AND SIGNATURE	
PROJECT NUMBER: 7429 (DIVISION 5)	
SITE NUMBER: 337	
SHEET:	<b>C400</b>

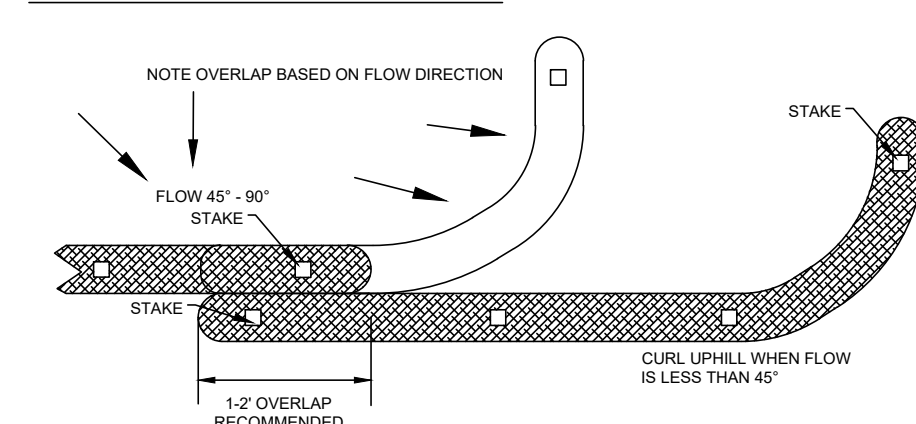


**SLOPE INTERRUPTION**

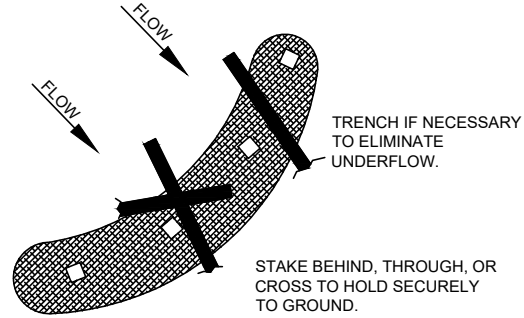


1. A SLIGHT ENTRENCHMENT MAY BE REQUIRED ON STEEPER SLOPES TO ENSURE INTIMATE GROUND CONTACT.
2. REMOVE SEDIMENT FROM THE UPSLOPE SIDE OF THE SILT SOCK WHEN ACCUMULATION HAS REACHED 1/2 OF EFFECTIVE HEIGHT OF SOCK.
3. LOOSE FILTER MEDIA MAY BE BACKFILLED ON THE UPSLOPE SIDE OF SOCK TO ENHANCE PERFORMANCE.
4. HARDWOOD STAKES 2"x4" (NOMINAL) ARE SUGGESTED.

**PERIMETER CONTROL & OVERLAPPING**

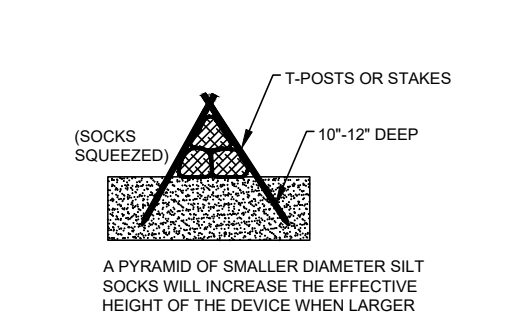


**DITCH CHECK**



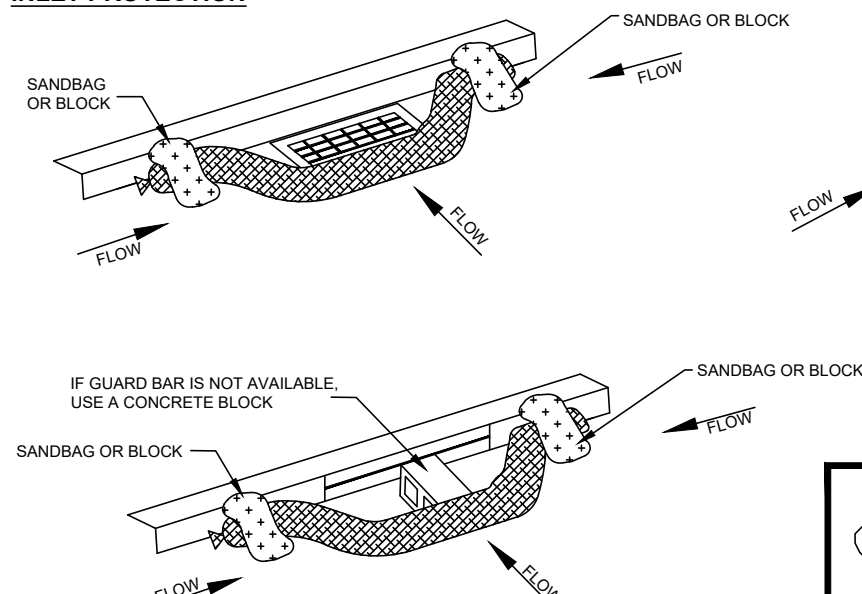
INSTALL SILT SOCK PERPENDICULAR TO FLOW WITH ENDS CURLED SLIGHTLY UPSTREAM TO PREVENT HIGH WATER FROM GOING AROUND THE ENDS. SLOW AND SPREAD WATER TO REDUCE CHANNELING AND EROSION.

**PYRAMID INSTALLATION STAKING**



A PYRAMID OF SMALLER DIAMETER SILT SOCKS WILL INCREASE THE EFFECTIVE HEIGHT OF THE DEVICE WHEN LARGER DIAMETER SOCKS ARE NOT READILY AVAILABLE OR EASY TO INSTALL.

**INLET PROTECTION**



1. THESE GUIDELINES ARE BASED UPON MANUFACTURERS RECOMMENDATIONS. PROJECT SPECIFICATIONS MAY SUPERSEDE THESE GUIDELINES.
2. REFER TO REGULATORY AUTHORITY OR PROJECT ENGINEER FOR DETAILED INSTALLATION PROCEDURES.
3. WOOD FILLER MATERIAL IS PROPERLY SIZED, BIODEGRADABLE, WEED, SEED & DISEASE FREE AND ENVIRONMENTALLY SOUND.

## Silt Sock

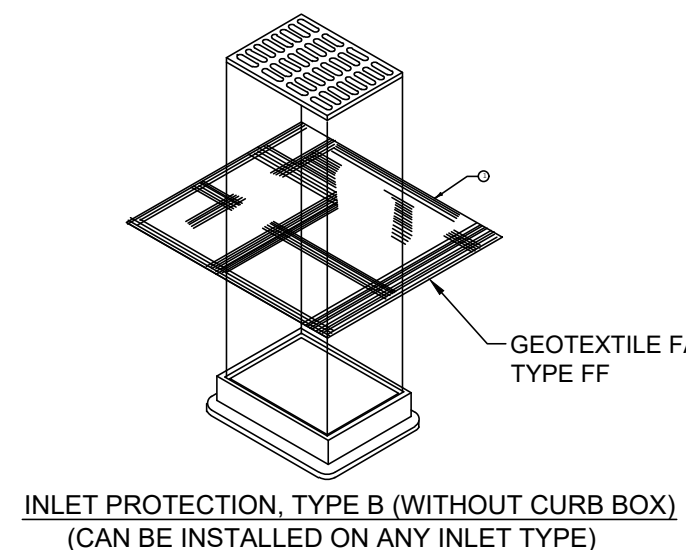
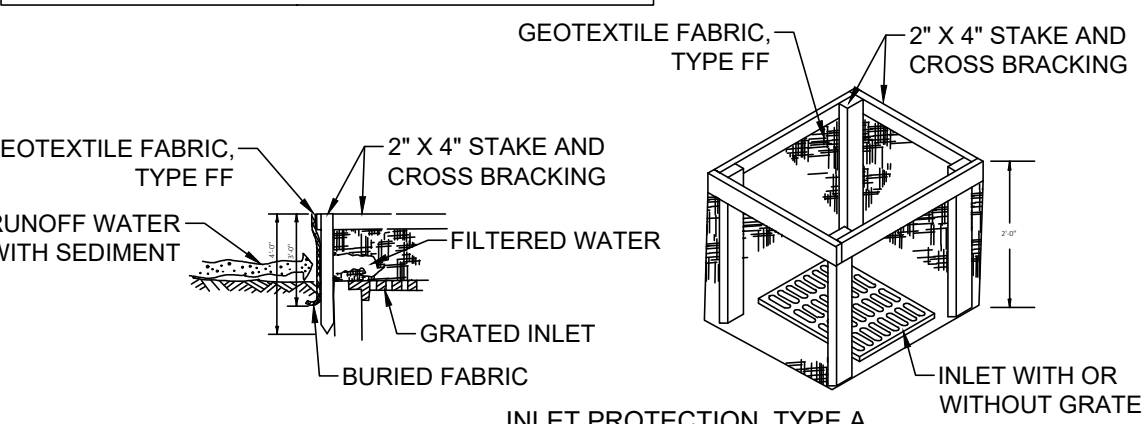
EROSION CONTROL PRODUCTS

(608) 438-7625

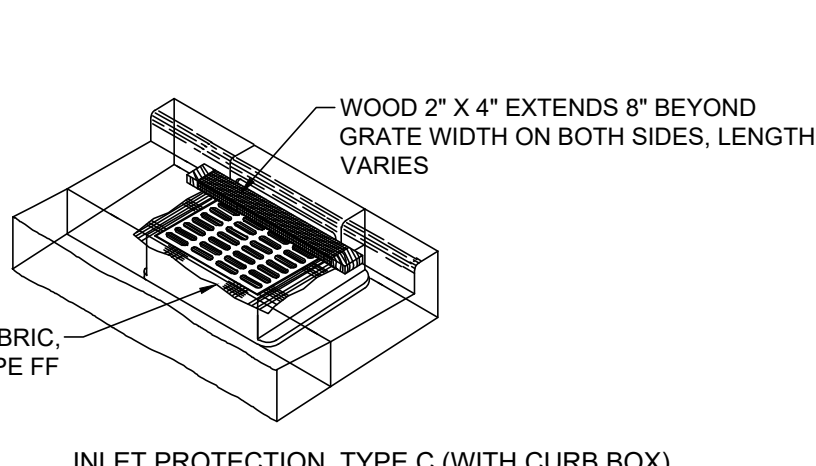
WWW.SILT SOCK.NET

**1 SILT SOCK**  
NTS

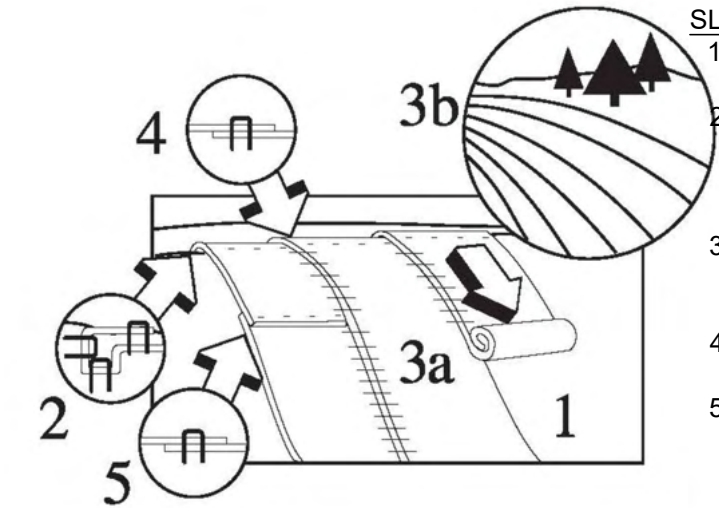
NOTE: ATTACH GEOTEXTILE FABRIC, TYPE FF TO THE TOP OF STAKES AND CROSS BRACINGS.



- INLET PROTECTION GENERAL NOTES:**
1. FABRIC SHALL BE REPLACED AT THE ENGINEERS DISCRETION.
  2. MANUFACTURED ALTERNATIVE APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED FOR THE INLET PROTECTION TYPE SPECIFIED.
  3. WHEN REMOVING OR MAINTAINING INLET PROTECT, CARE SHALL BE TAKEN SO THAT THE SEDIMENT RAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.
  4. FABRIC SIZE SHALL BE 8" (MIN) OR GREATER ON ALL SIDE OF THE INLET COVER TO PROVIDE A HAND HOLD WHEN MAINTENANCE OR REMOVAL IS REQUIRED.
  5. FOR INLET PROTECTION, TYPE C, WITH A CURB BOX, AN ADDITIONAL 18" OF BARIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX.

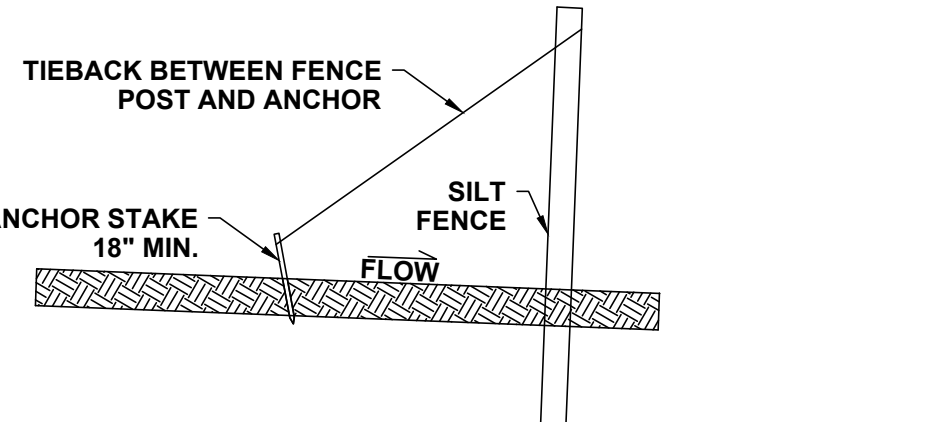


**2 INLET PROTECTION DETAIL**  
NTS

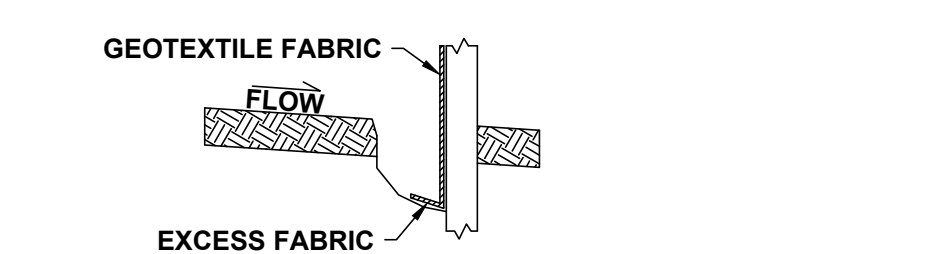


- SLOPE APPLICATION NOTES:**
1. PREPARE SOIL SO THAT AREA IS SMOOTH, THEN ADD SEED, FERTILIZER & LIME AS REQUIRED.
  2. START BY STAPLING THE BLANKET AT THE TOP OF THE SLOPE IN A 6" DEEP X 8" WIDE TRENCH. BACKFILL & COMPACT TRENCH SO THAT THE WATER WILL FLOW EVENLY ONTO THE BLANKET.
  3. (a). ROLL BLANKET DOWN THE SLOPE, OR (b) HORIZONTALLY ACROSS SLOPES <50 FEET, INSURING SOIL BLANKET CONTACT.
  4. OVERLAP EDGES OF BLANKET A MINIMUM OF 2" WITH PARALLEL BLANKETS.
  5. IF MORE THAN ONE BLANKET IS NEEDED FOR THE RUN THEN OVERLAP ADJOINING ENDS A MINIMUM OF 4" SINGLE STYLE. STAPLE OVERLAP AREAS WITH STAGGERED PATTERN WITH STAPLES.

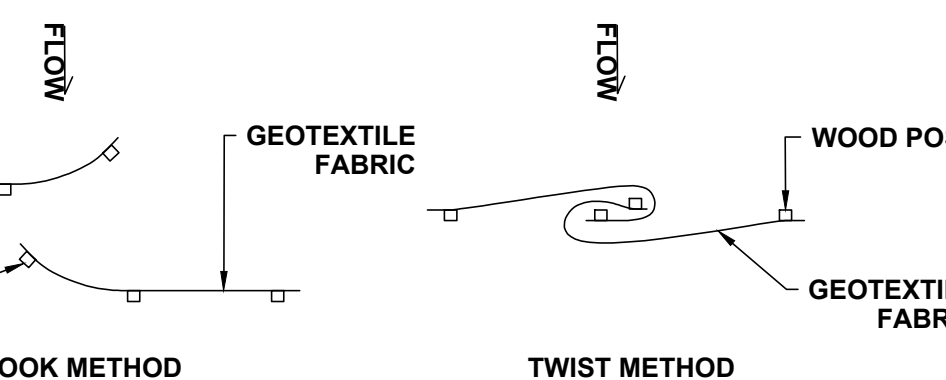
**4 BIOSWALE EROSION CONTROL MATTING INSTALLATION DETAIL**  
NTS



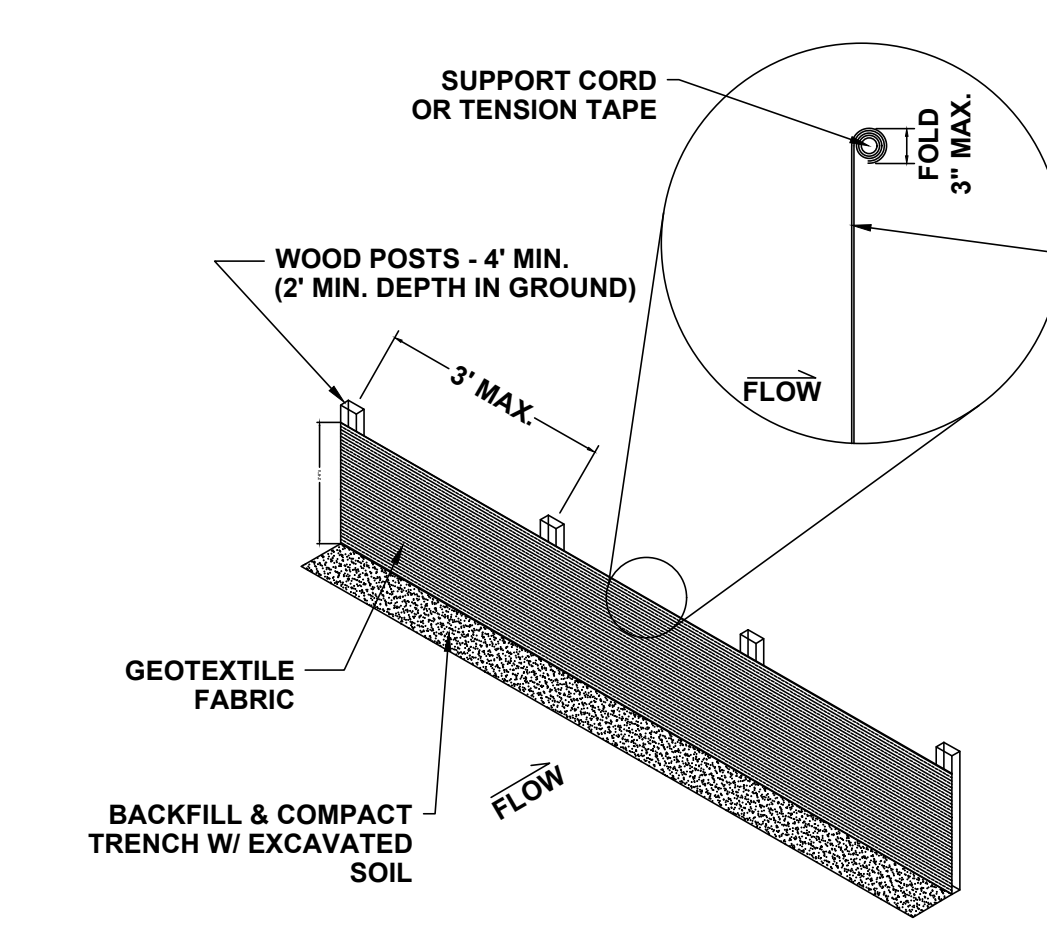
**1A SILT FENCE TIEBACK (WHEN REQUIRED BY ENGINEER)** SCALE: N.T.S



**1B TRENCH DETAIL** SCALE: N.T.S

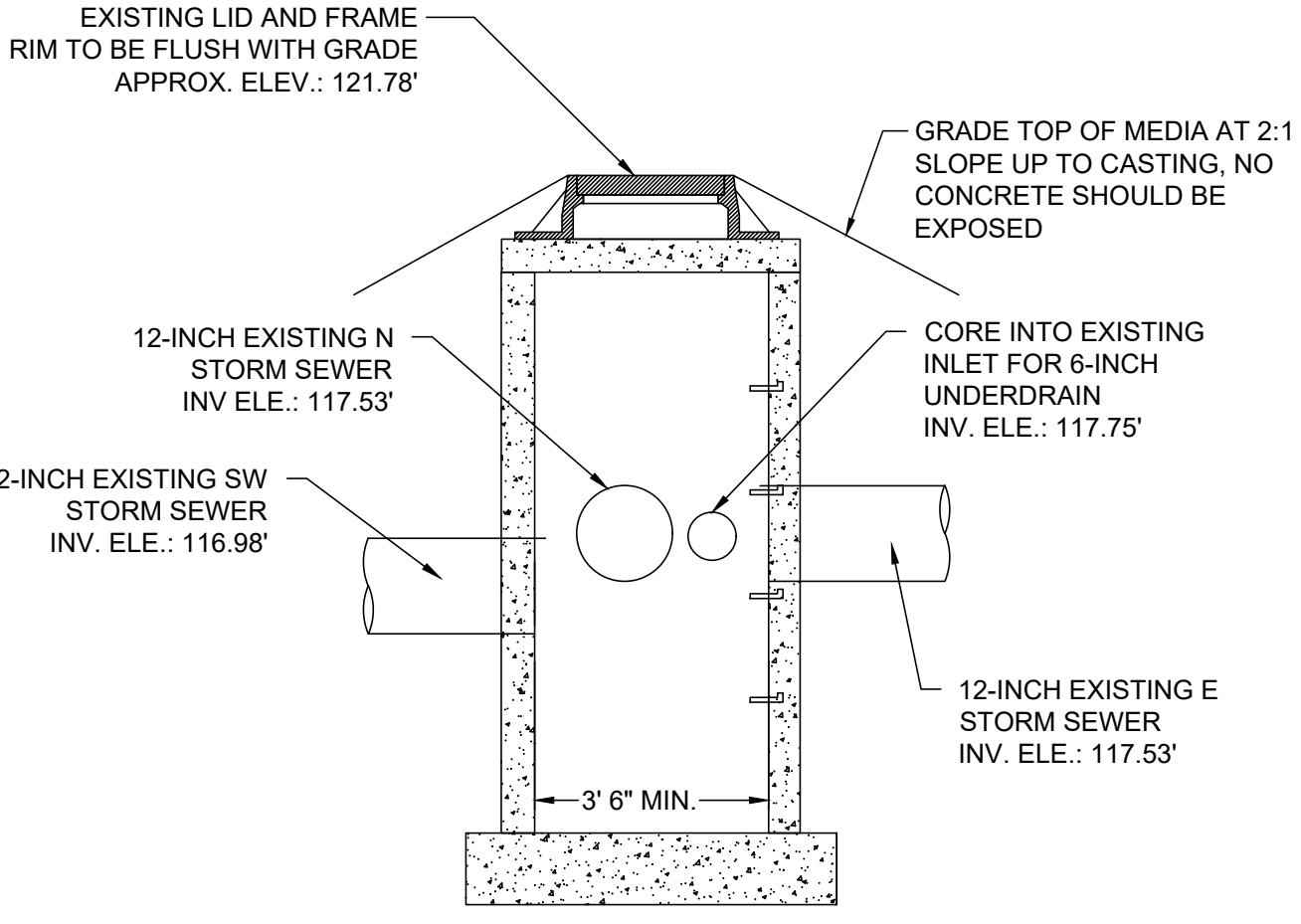


**1C JOINING OF TWO LENGTHS OF SILT FENCE** SCALE: N.T.S

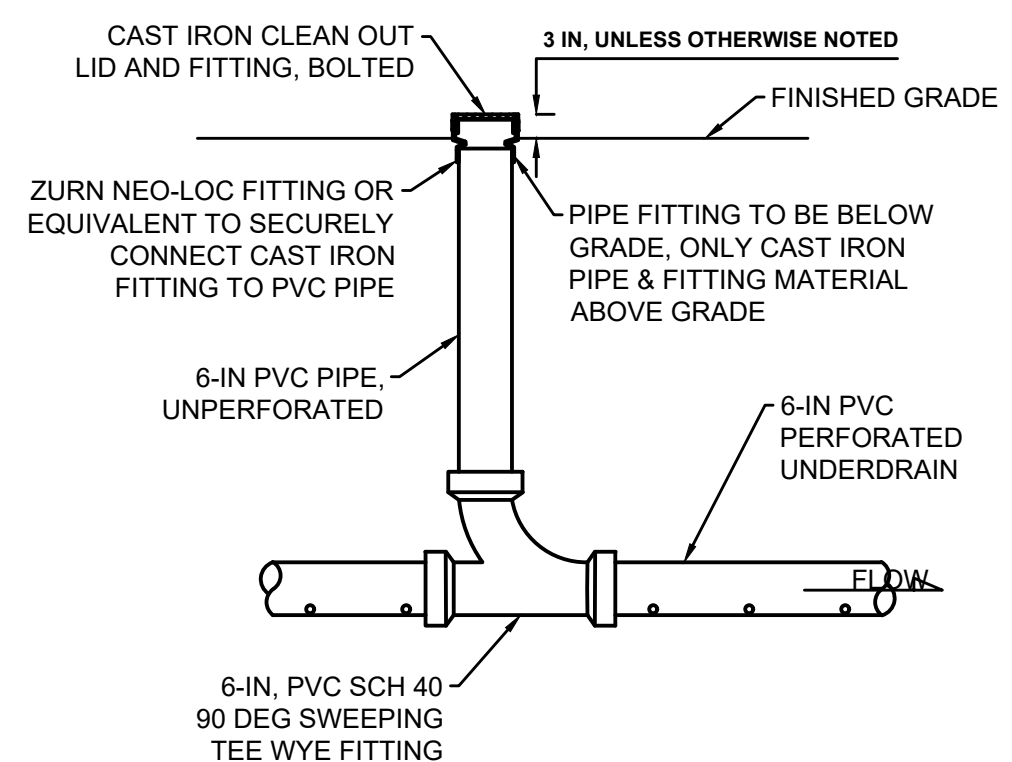


- 1 SILT FENCE** SCALE: N.T.S
- SILT FENCE NOTES:**
1. ADDITIONAL POST DEPTH OR TIEBACKS MAY BE REQUIRED IN UNSTABLE SOILS.
  2. 8' POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.
  3. HORIZONTAL BRACE REQUIRED WITH 2"x4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
  4. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
  5. WOOD POSTS SHALL BE A MINIMUM OF 1 1/2" x 1 1/2" OF OAK OR HICKORY.
  6. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
  7. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS: A.) OVERLAP THE END POSTS AND TWIST OR ROTATE AT LEAST 180 DEGREES. B.) HOOK THE END OF EACH SILT FENCE LENGTH.

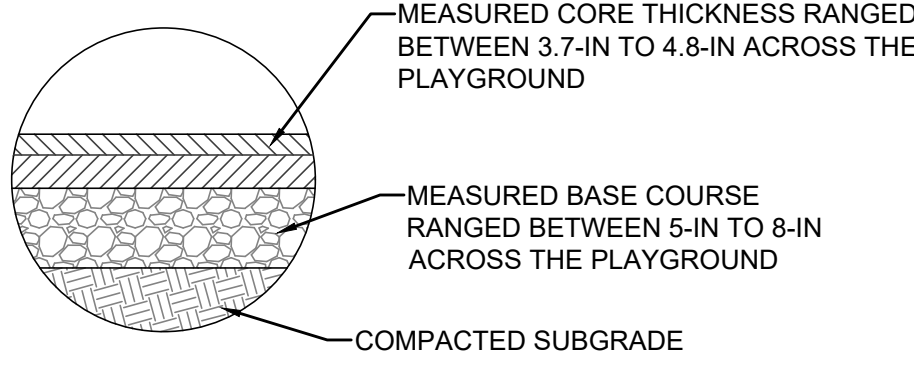
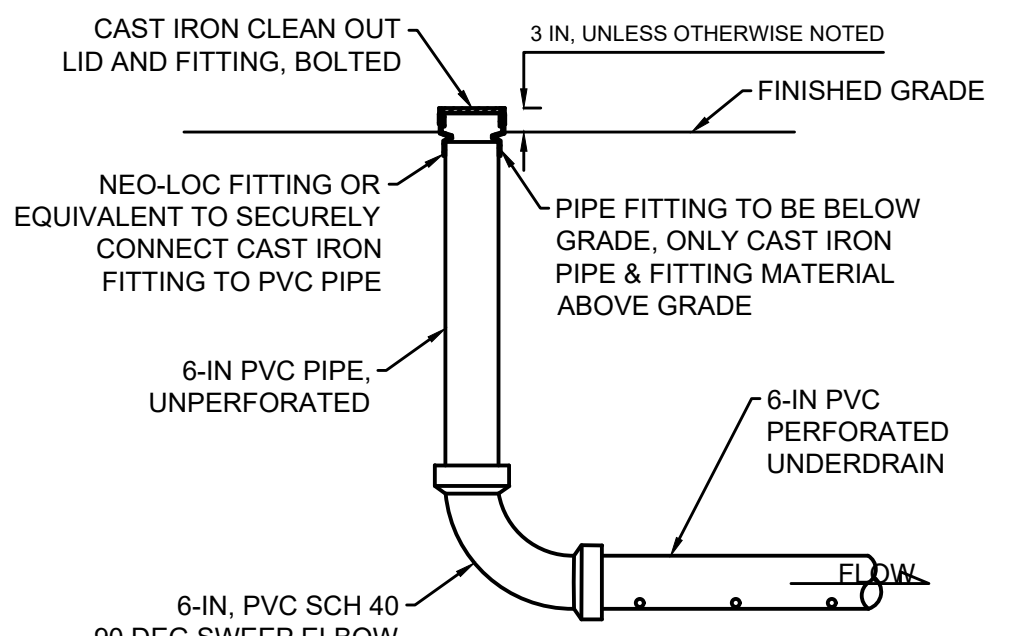
**6 SILT FENCE**  
NTS



**7 EXISTING CATCH BASIN #1 MODIFICATIONS**  
NTS



**3 CLEANOUT (TYPICAL)**  
NTS



**5 ASSUMED EXISTING ASPHALT AND BASE DEPTH**  
NTS

SHEET NAME: <b>DETAILS</b>	PROJECT NAME: <b>2023 GREEN INFRASTRUCTURE UPGRADES</b>	PROJECT ADDRESS: <b>RICHARD KLUGE ELEMENTARY SCHOOL</b>
		<b>5760 N 67TH STREET, MILWAUKEE, 53218</b>

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50% CD		11/14/2022
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100% CD		1/23/2023

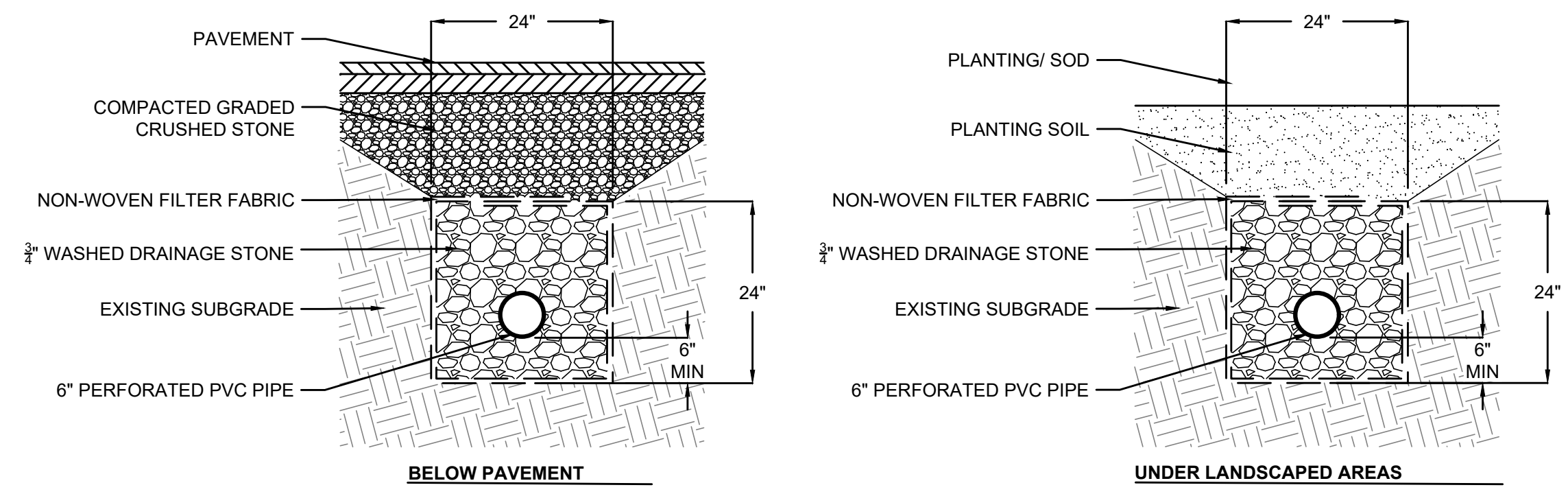
DRAWN BY:	EMP
REVIEWED BY:	KLK
APPROVED BY:	CBG
DATE:	January 2023

SEAL AND SIGNATURE

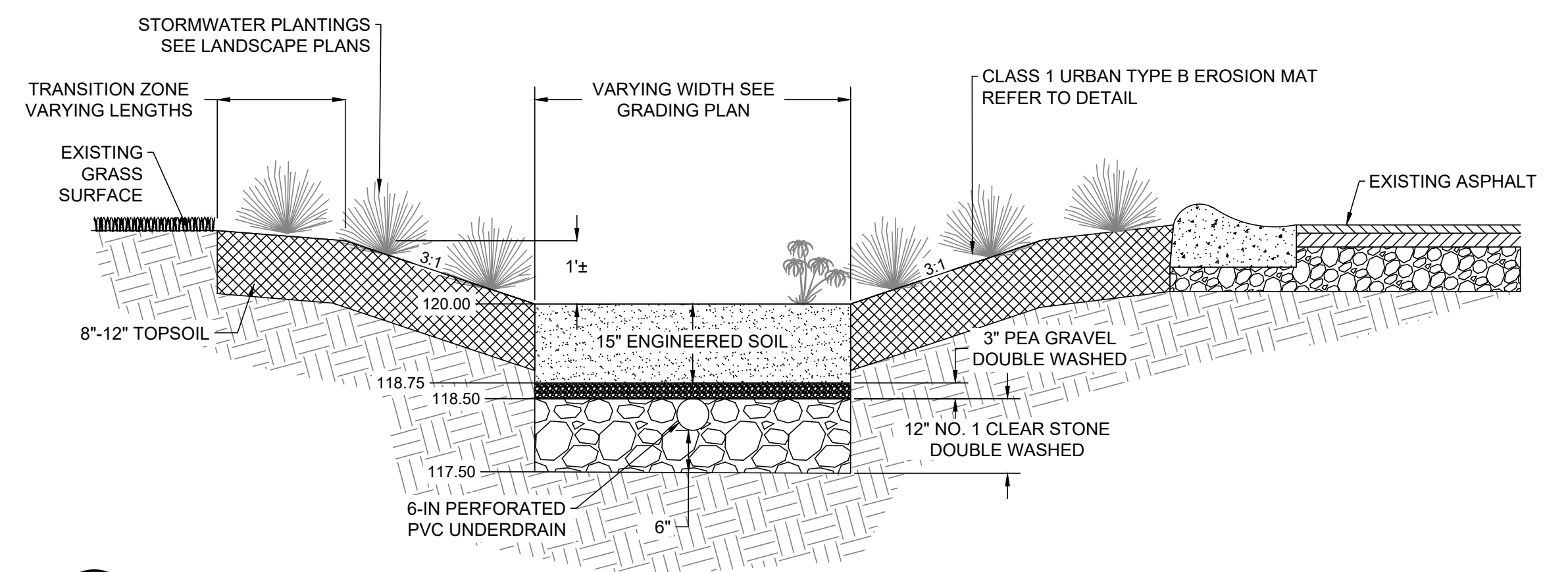
PROJECT NUMBER: 7429 (DIVISION 5)

SITE NUMBER: 337

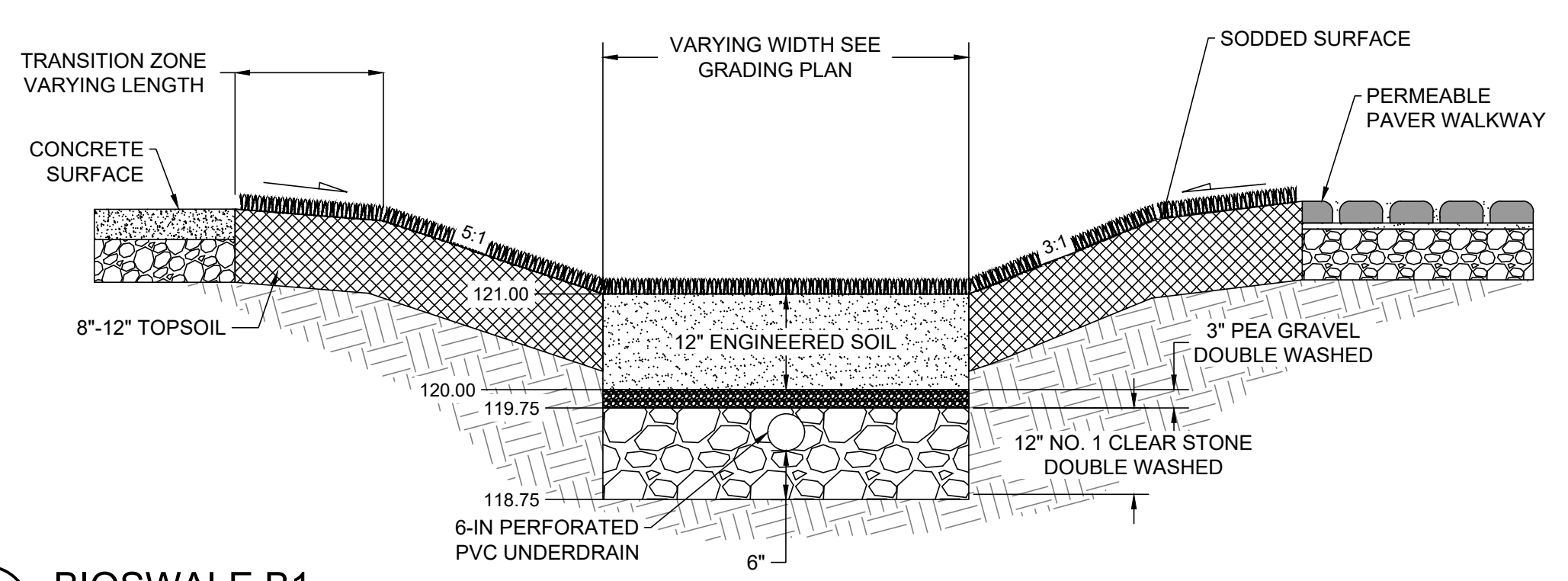
SHEET:  
**C500**



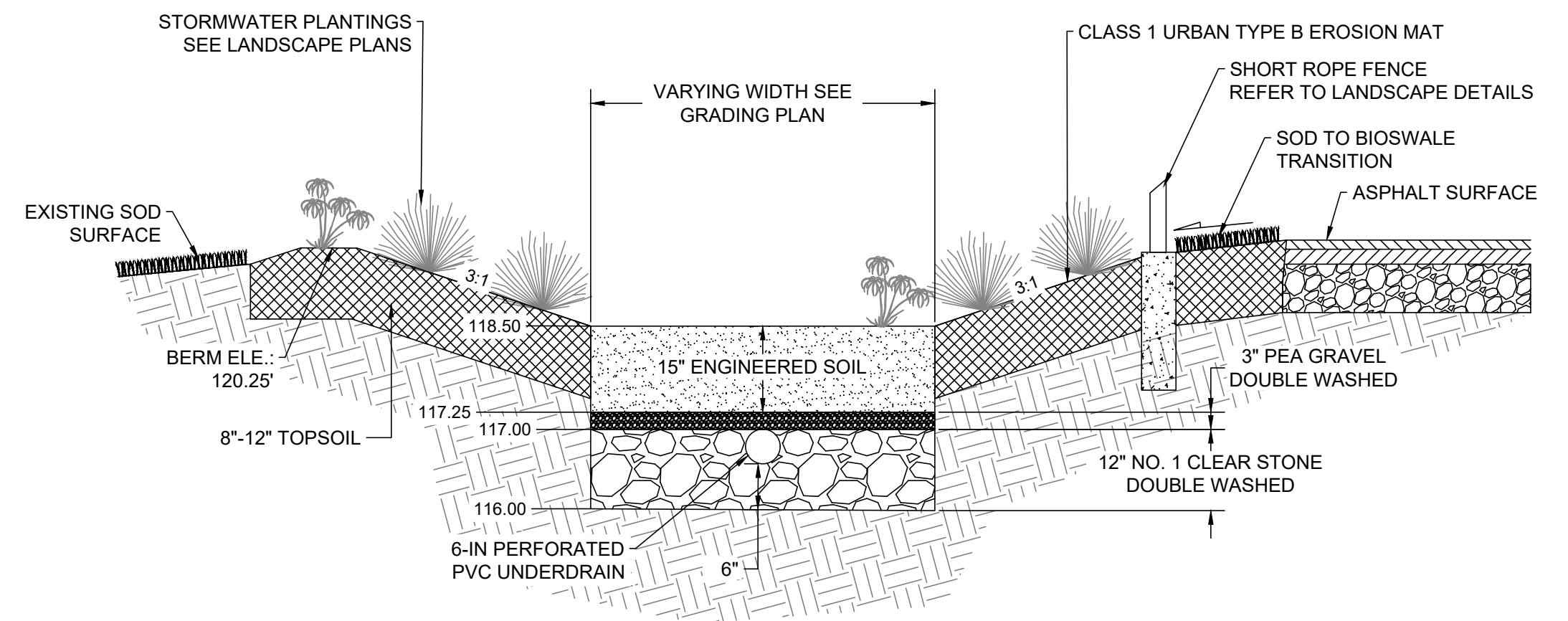
**1 UNDERDRAIN AND STORM SEWER TRENCH**  
NTS



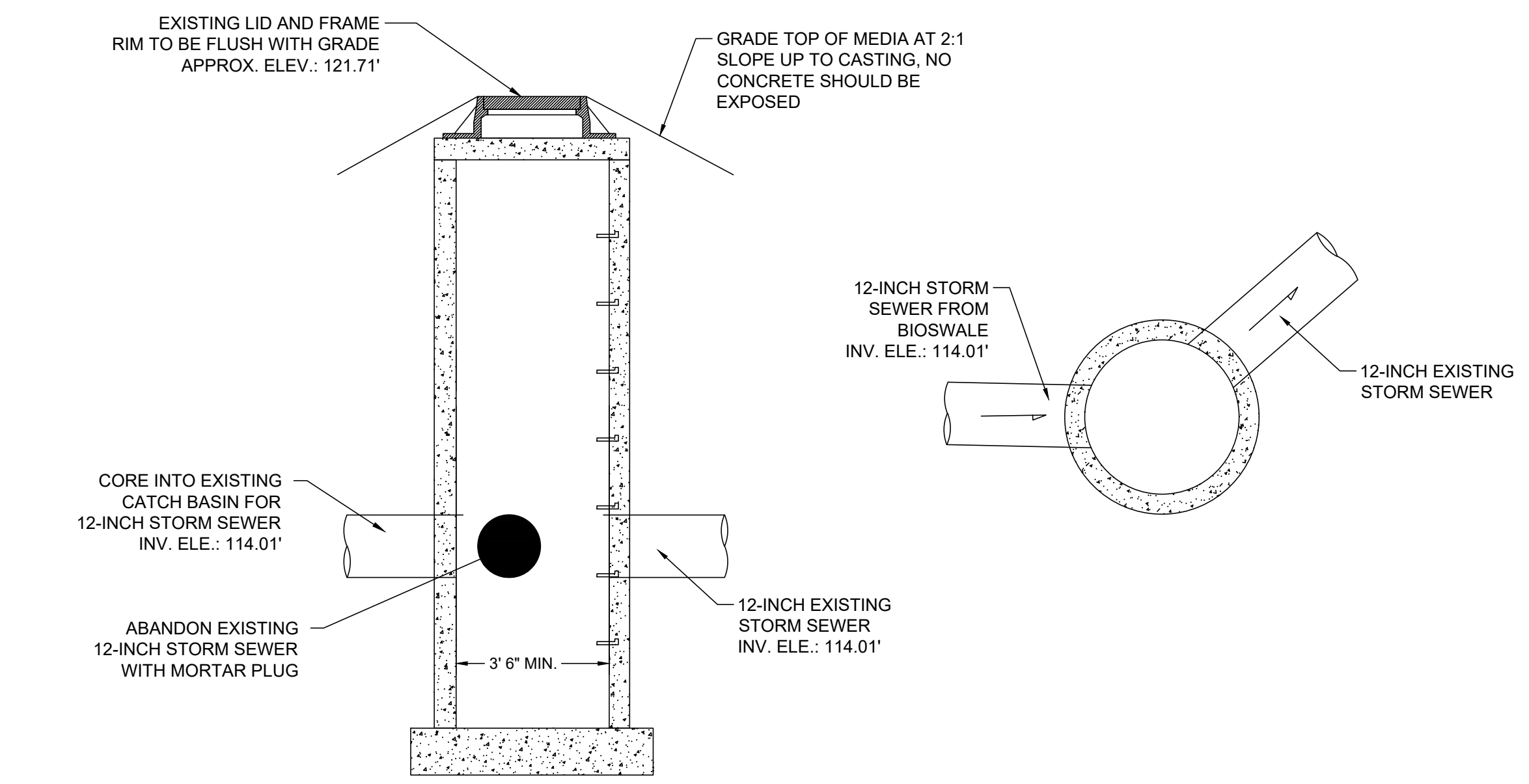
**2 BIOSWALE A**  
NTS



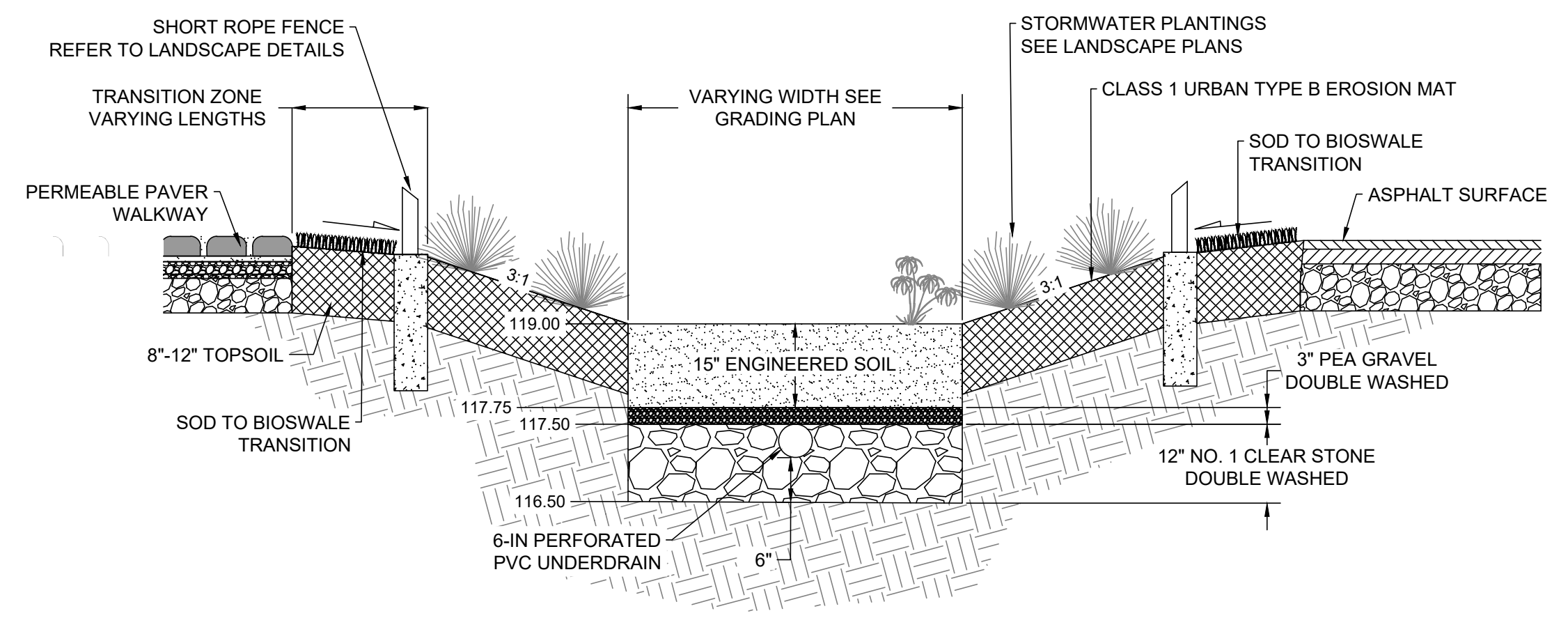
**4 BIOSWALE B1**  
NTS



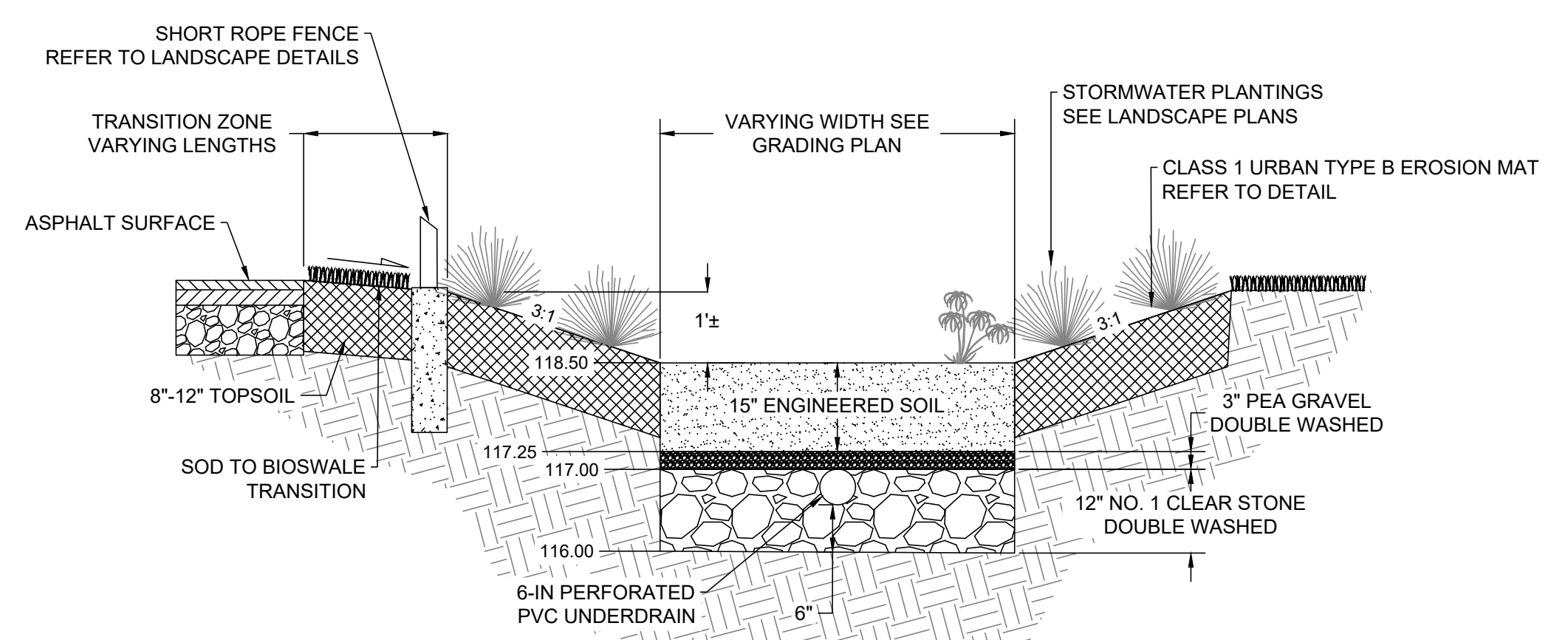
**6 BIOSWALE C**  
NTS



**3 EXISTING CATCH BASIN #2 MODIFICATIONS**  
NTS



**5 BIOSWALE B2**  
NTS



**7 BIOSWALE D**  
NTS

SHEET NAME: <b>DETAILS</b>	PROJECT NAME:	2023 GREEN INFRASTRUCTURE UPGRADES
	PROJECT ADDRESS:	RICHARD KLUGE ELEMENTARY SCHOOL 5760 N 67TH STREET, MILWAUKEE, 53218

ISSUED FOR:	REV:	DATE:
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100% CD		1/23/2023

DRAWN BY:	EMP
REVIEWED BY:	KLK
APPROVED BY:	CBG
DATE:	January 2023

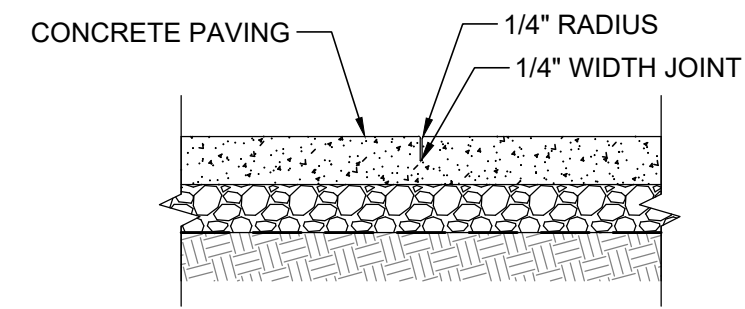
SEAL AND SIGNATURE

PROJECT NUMBER: 7429 (DIVISION 5)

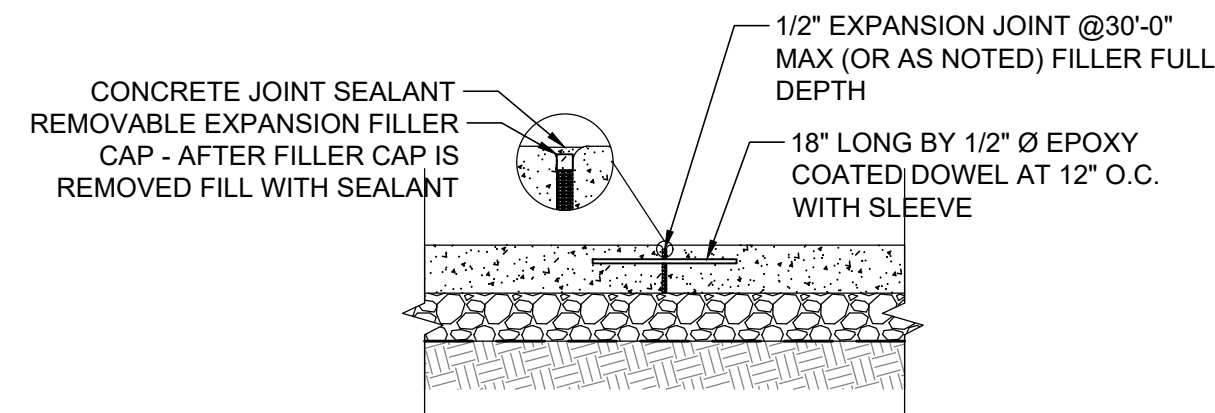
SITE NUMBER: 337

SHEET:  
**C501**

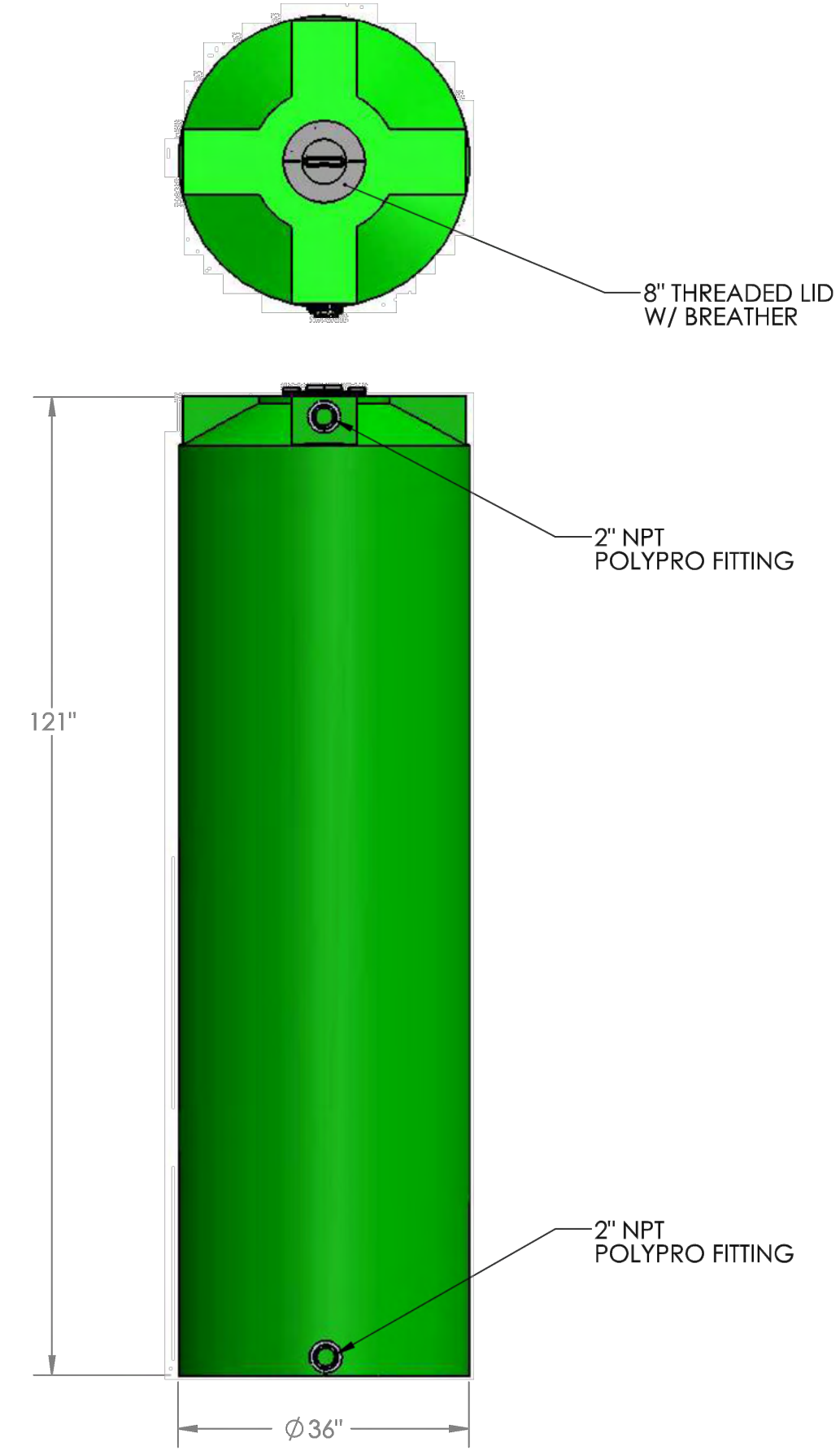




**1 CONCRETE TOOLED CONTROL JOINT**  
NTS



**2 CONCRETE EXPANSION JOINT**  
NTS



**3 RAINWATER CISTERN (ALTERNATE)**  
NTS

- NOTE:
1. RAIN BARREL ("CISTERN") TO BE INSTALLED ADJACENT TO OVERHEAD STRUCTURE AND FITTED TO RECEIVE RUNOFF FROM THE STRUCTURE'S ROOF.
  2. SECURE CISTERN TO THE STRUCTURE'S COLUMN UNDER THE DIRECTION OF MPS PROJECT MANAGER.

- NOTES:
1. MATERIAL: HDPE
  2. COLOR: DARK GREEN
  3. WEIGHT: 100 LBS.

SHEET NAME: <b>DETAILS</b>	PROJECT NAME: <b>2023 GREEN INFRASTRUCTURE UPGRADES</b>	PROJECT ADDRESS: <b>RICHARD KLUGE ELEMENTARY SCHOOL 5760 N 67TH STREET, MILWAUKEE, 53218</b>
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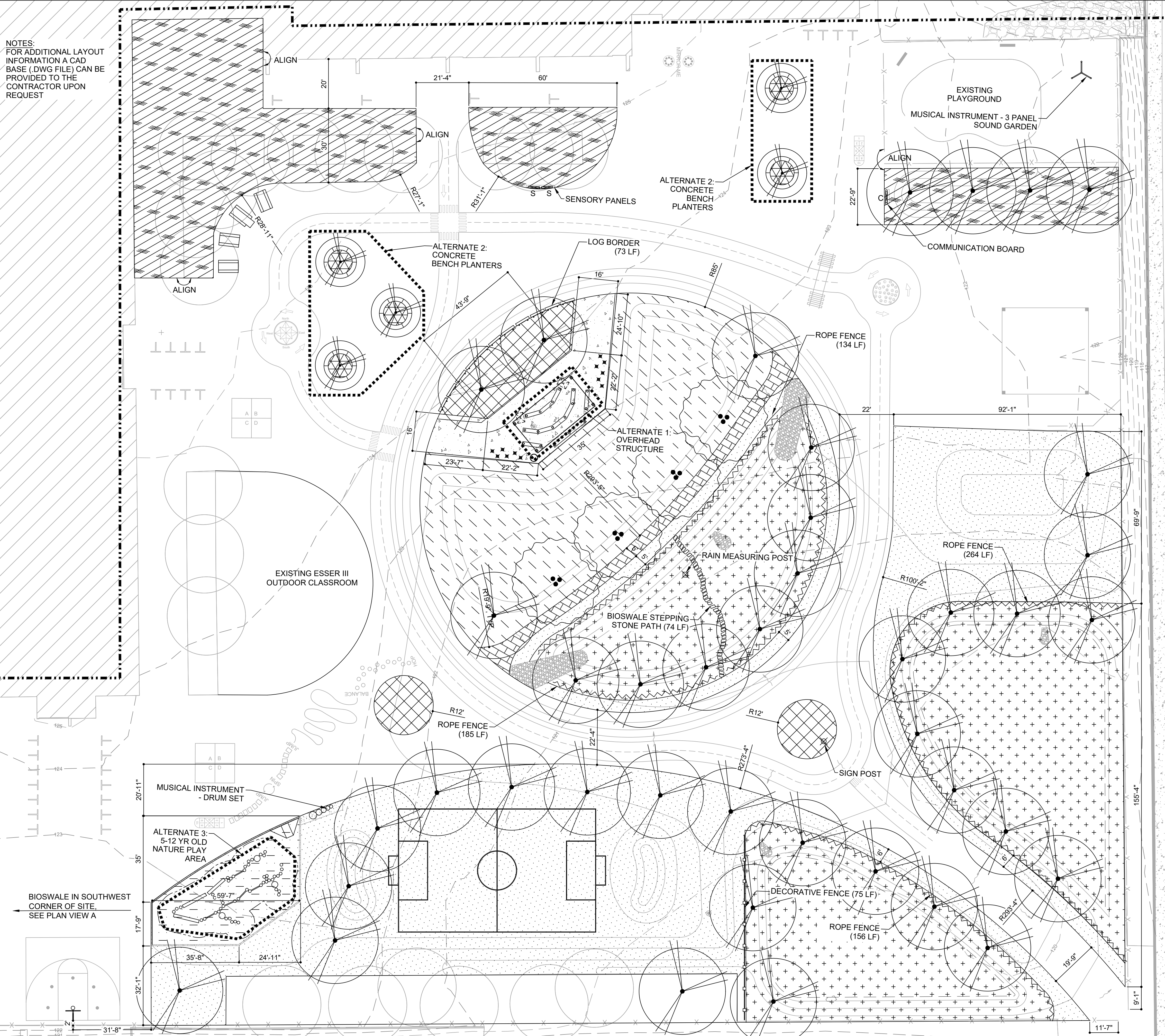
DRAWN BY:	EMP
REVIEWED BY:	KLK
APPROVED BY:	CBG
DATE:	January 2023

SEAL AND SIGNATURE

PROJECT NUMBER: 7429 (DIVISION 5)
SITE NUMBER: 337
SHEET: <b>C503</b>

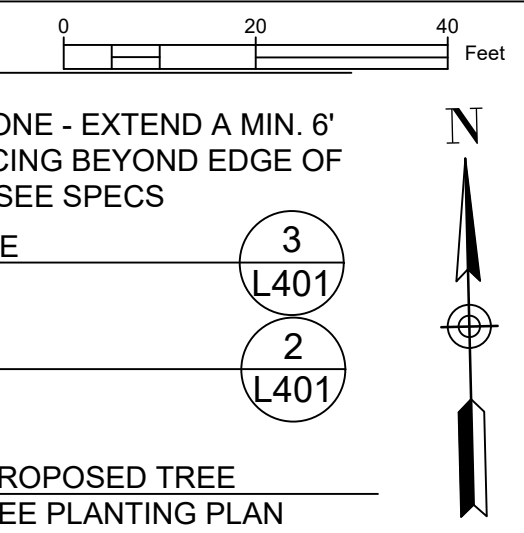


NOTES:  
FOR ADDITIONAL LAYOUT  
INFORMATION A CAD  
BASE (.DWG FILE) CAN BE  
PROVIDED TO THE  
CONTRACTOR UPON  
REQUEST



**MATERIALS LEGEND**

- EQUIPMENT USE ZONE - EXTEND A MIN. 6' OF IMPACT SURFACING BEYOND EDGE OF PLAY EQUIPMENT, SEE SPECS
- DECORATIVE FENCE (L401)
- ROPE FENCE (L401)
- PROPOSED TREE SEE PLANTING PLAN
- PROPOSED MULTI-STEMMED TREE SEE PLANTING PLAN
- EXISTING TREE
- ▨ PLANTING AREA 1 - LAWN / MICROCLOVER SEE PLANTING PLAN
- ▩ PLANTING AREA 2 - URBAN UPLANDS SEE PLANTING PLAN
- 12" ENGINEERED WOOD FIBER SURFACE SEE CIVIL PLANS
- LAWN SEE PLANTING PLAN
- BIOSWALE SOD SEE PLANTING PLAN
- ++ BIOSWALE PLANTING SEE PLANTING PLAN
- ▨ PERMEABLE PAVERS SURFACE SEE CIVIL PLANS
- CONCRETE PAVING SEE CIVIL PLANS
- ADA COMPANION SEATING 36"x48" CLEAR SPACE LOG BORDER (L400)
- WOOD BENCHES (L400)
- ★ ART POSTS (TYP OF 12) (L401)
- ⊗ RAIN MEASURING POST (L400)
- ⊗ SIGN POST (L401)
- S SENSORY PANEL (TYP OF 2) SEE SPECS
- C COMMUNICATION BOARD SEE SPECS
- Y MUSICAL INSTRUMENTS (TYP OF 2) OWNER PROVIDED, CONTRACTOR INSTALLED
- BIOSWALE STEPPING STONE PATH (L501)
- CONCRETE BENCH PLANTERS (TYP. OF 5), AS SPECIFIED (L402)
- RAIN BARREL AS SPECIFIED
- CONCRETE ADA RAMP (L401)
- NATURE PLAYGROUND - LOG CLIMBERS ARE BLACK LOCUST (ROBINIA) LOGS AND STRUCTURAL SUPPORTS AS NEEDED. LOGS MUST BE INSTALLED IN A STABLE POSITION FULLY SUPPORTING ITS OWN WEIGHT. CONTRACTOR HAS FLEXIBILITY IN INSTALLATION METHODS AS LONG AS IT MEETS SAFETY REGULATIONS AND PROJECT SPECIFICATIONS. PLAY COMPONENTS MUST MEET ASTM AND CSPC SAFETY GUIDELINES. ALL SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- OVERHEAD STRUCTURE (L403, L404)
- BASKETBALL HOOP SEE SPECS
- PICNIC TABLES & ADA PICNIC TABLE (TYP OF 4) OWNER PROVIDED, CONTRACTOR INSTALLED



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MILWAUKEE, WI 53234  
PHONE: (414) 810-1245  
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DIVISION OF FACILITIES AND MAINTENANCE SERVICES  
1124 NORTH 11TH STREET  
MILWAUKEE, WI 53205-0259  
PHONE: 414-283-4600  
FAX: 414-283-4682

SHEET NAME: **MATERIALS & LAYOUT PLAN**  
PROJECT NAME: **2023 GREEN INFRASTRUCTURE UPGRADES**  
PROJECT ADDRESS: **RICHARD KLUGE CREATIVE ARTS SCHOOL 5760 N. 67TH STREET, MILWAUKEE, WI 53218**

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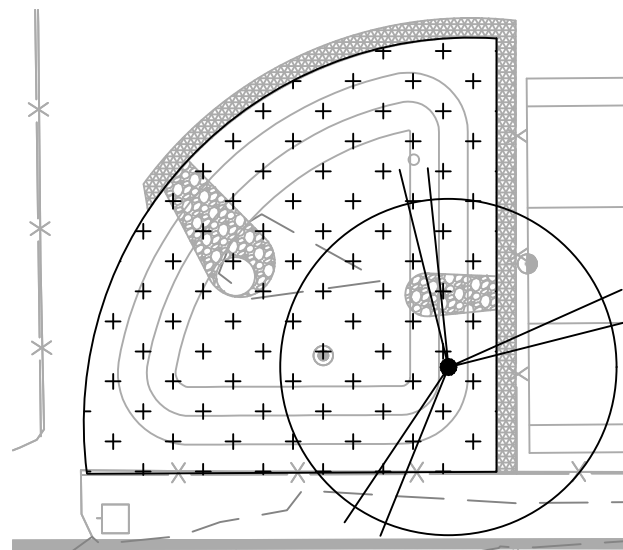
DRAWN BY: ZWA  
REVIEWED BY: KW  
APPROVED BY: MM  
DATE: January 2023

SEAL AND SIGNATURE

PROJECT NUMBER: 7429 (DIVISION 5)

SITE NUMBER: 337

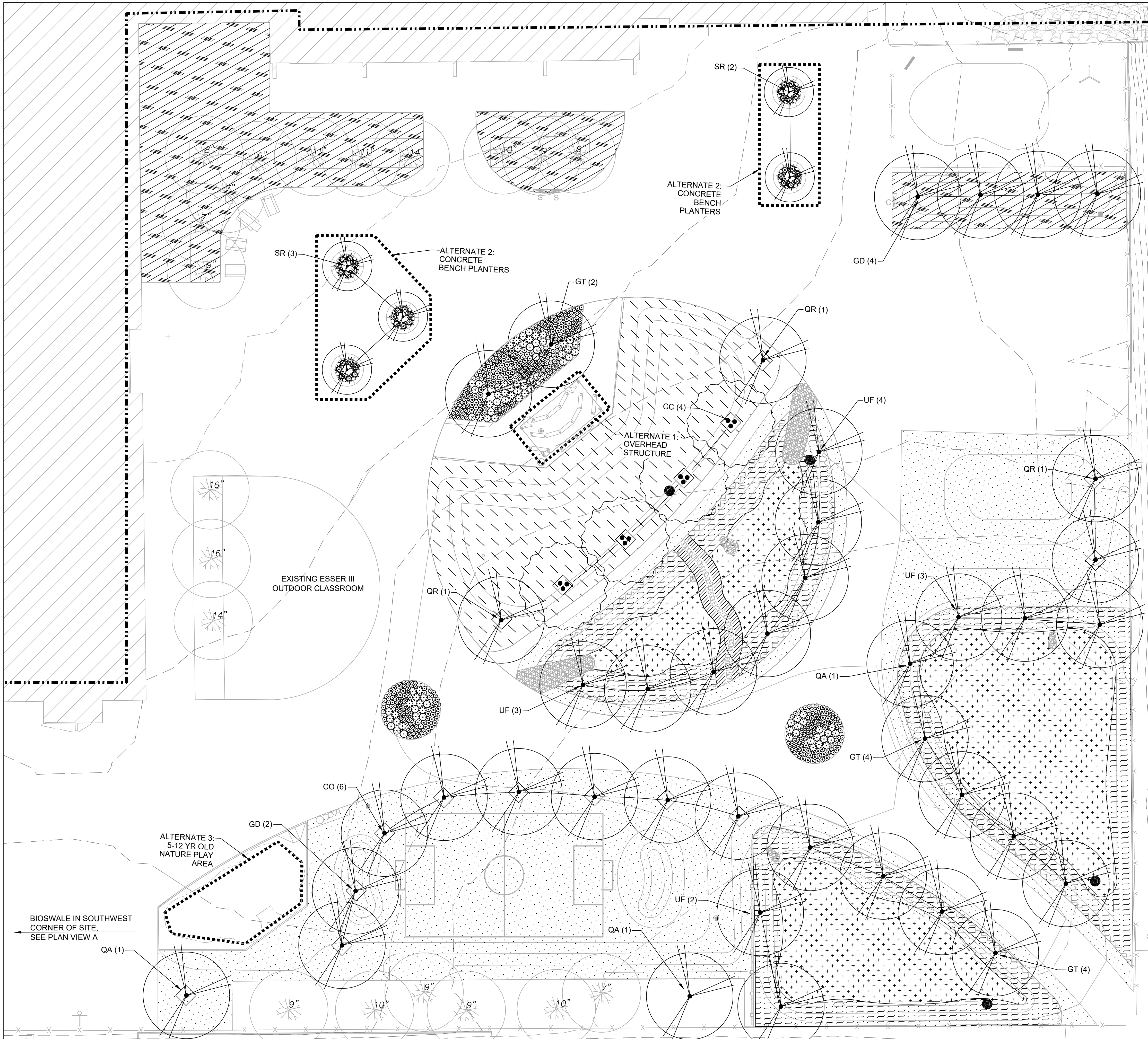
SHEET: **L100**



PLAN VIEW A - BIOSWALE







**PLANTING LEGEND**

	QUANTITIES	QUANTITIES	
		BASE BID	ALT 2
EXISTING TREE			
PROPOSED TREES			
<i>Diamond symbol indicates tree installation and protection staking per detail 3/L501. Trees without protection staking shall be staked per detail 3/L500.</i>			
CO	<i>Celtis occidentalis</i> - Common Hackberry 3" Cal. B&B, Mature Size: 50' ht. x 50' spread	6	-
GD	<i>Gymnocladus dioica</i> - Kentucky Coffeetree 3" Cal. B&B, Mature Size: 55' ht. x 55' spread	6	-
GT	<i>Gleditsia triacanthos</i> 'Skycole' - Skyline Honeylocust 3" Cal. B&B, Mature Size: 55' ht. x 35' spread, Thornless variety	11	-
QA	<i>Quercus macrocarpa</i> - Bur Oak 3" Cal. B&B, Mature Size: 80' ht. x 80' spread,	3	-
QR	<i>Quercus rubra</i> - Red Oak 3" Cal. B&B, Mature Size: 60' ht. x 60' spread	3	-
SR	<i>Syringa reticulata</i> 'Ivory Silk' - Snowcap Tree Lilac 3" Cal. B&B, Mature Size: 25' ht. x 15' spread	-	5
UF	<i>Ulmus</i> 'Frontier' - Frontier Elm 3" Cal. B&B, Mature Size: 50' ht. x 30' spread	12	-
PROPOSED MULTI-STEMMED TREE			
CC	<i>Carpinus caroliniana</i> - Muscledwood Multi-stem B&B, Mature Size: 30' ht. x 30' spread	4	-

Lawn See Specs	25057	-
Planting Area 1 - Lawn / Microclover See Specs	10508	-
<i>Geum triflorum</i> - Prairie Smoke Plant plugs 12" o.c. with triangular spacing	484	-
Bioswale Sod See Specs	9408	-

**ZONE B**

<i>Bio-swale Bottom Seed Mix</i> See Specs	12653	-
---	-------	---

**ZONE C**

Bioswale Side Slope Mix Plant plugs 12"-18" O.C. with triangular spacing, group plugs by species in groups of 40-50.	8689	-
<i>Allium cernuum</i> - Nodding Onion Plug, Mature Size: 1.5' ht x 1' spread		
<i>Dodecatheon meadia</i> - Shooting Star Plug, Mature Size: 1.5' ht x 1' spread		
<i>Eragrostis Spectabilis</i> - Purple Love Grass Plug, Mature Size: 1' ht x 1.5' spread		
<i>Rudbeckia hirta</i> - Black Eyed Susan Plug, Mature Size: 1-3' ht x 1.5' spread		
<i>Zizia aurea</i> - Golden Alexander Plug, Mature Size: 1-2' ht x 1.5' spread		

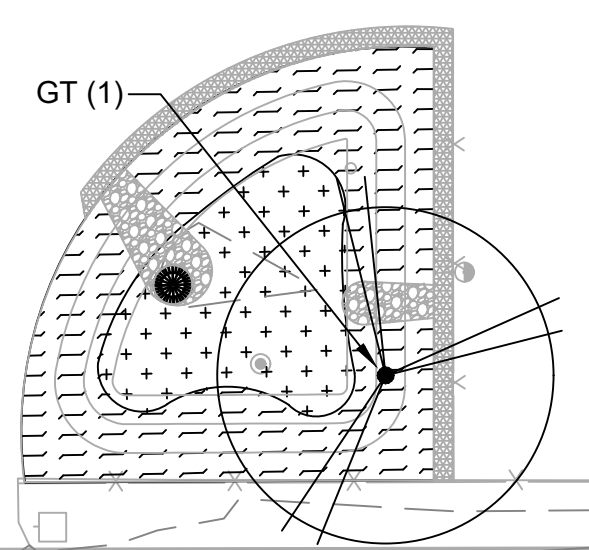
**URBAN SCHOOLYARD PLANTING AREA**

<i>Aquilegia canadensis</i> - Wild Columbine Plug, Mature Size: 2.5' ht x 1.5' spread	125	-
<i>Coreopsis lanceolata</i> - Lance Leaf Coreopsis Plug, Mature Size: 1.5' ht x 1.5' spread	178	-
<i>Liatris aspera</i> - Rough Blazing Star Plug, Mature Size: 2.5' ht x 1.5' spread	124	-
<i>Schizachyrium Scoparium</i> - Little Bluestem Plug, Mature Size: 2' ht x 1.5' spread	100	-
<i>Sporobolus heterolepis</i> - Prairie Dropseed Plug, Mature Size: 3' ht x 3' spread	87	-

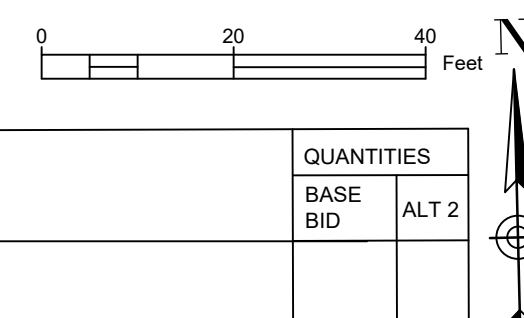
**RAISED CONCRETE PLANTERS**

<i>Sporobolus heterolepis</i> - Prairie Dropseed 3 gal Cont., Mature Size: 3' ht x 3' spread	-	35
---	---	----

- NOTES**
- SEE SHEET L500 AND L501 FOR PLANTING DETAILS AND NOTES
  - SEE SPECS FOR SEED MIX SPECIES PERCENT COVERAGE



PLAN VIEW A - BIOSWALE



SHEET NAME: <b>PLANTING PLAN</b>	PROJECT NAME: <b>2023 GREEN INFRASTRUCTURE UPGRADES</b>	PROJECT ADDRESS: <b>RICHARD KLUGE CREATIVE ARTS SCHOOL 5760 N. 67TH STREET, MILWAUKEE, WI 53218</b>

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DRAWN BY:	ZWA
REVIEWED BY:	KW
APPROVED BY:	MM
DATE:	January 2023

SEAL AND SIGNATURE

PROJECT NUMBER: 7429 (DIVISION 5)

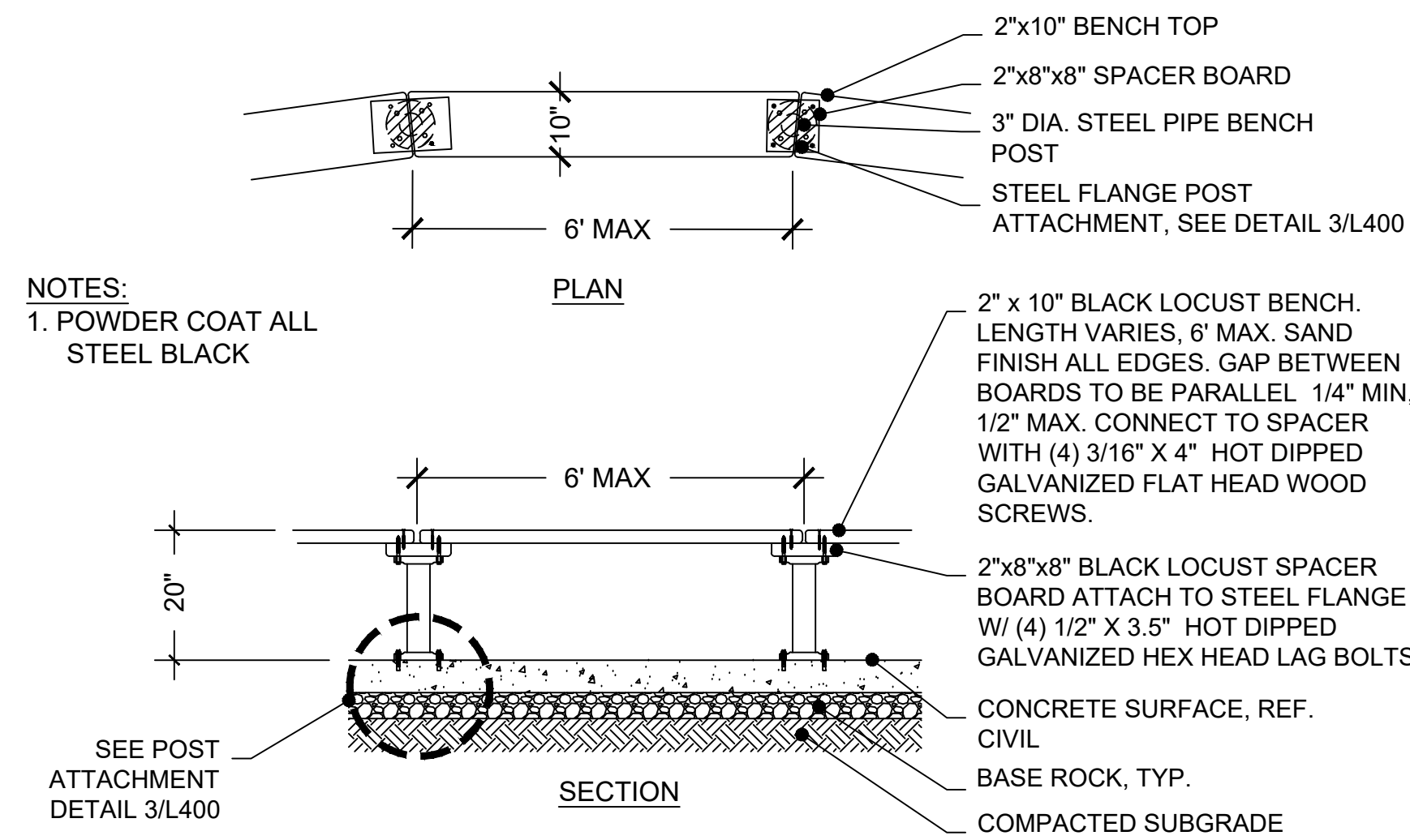
SITE NUMBER: 337

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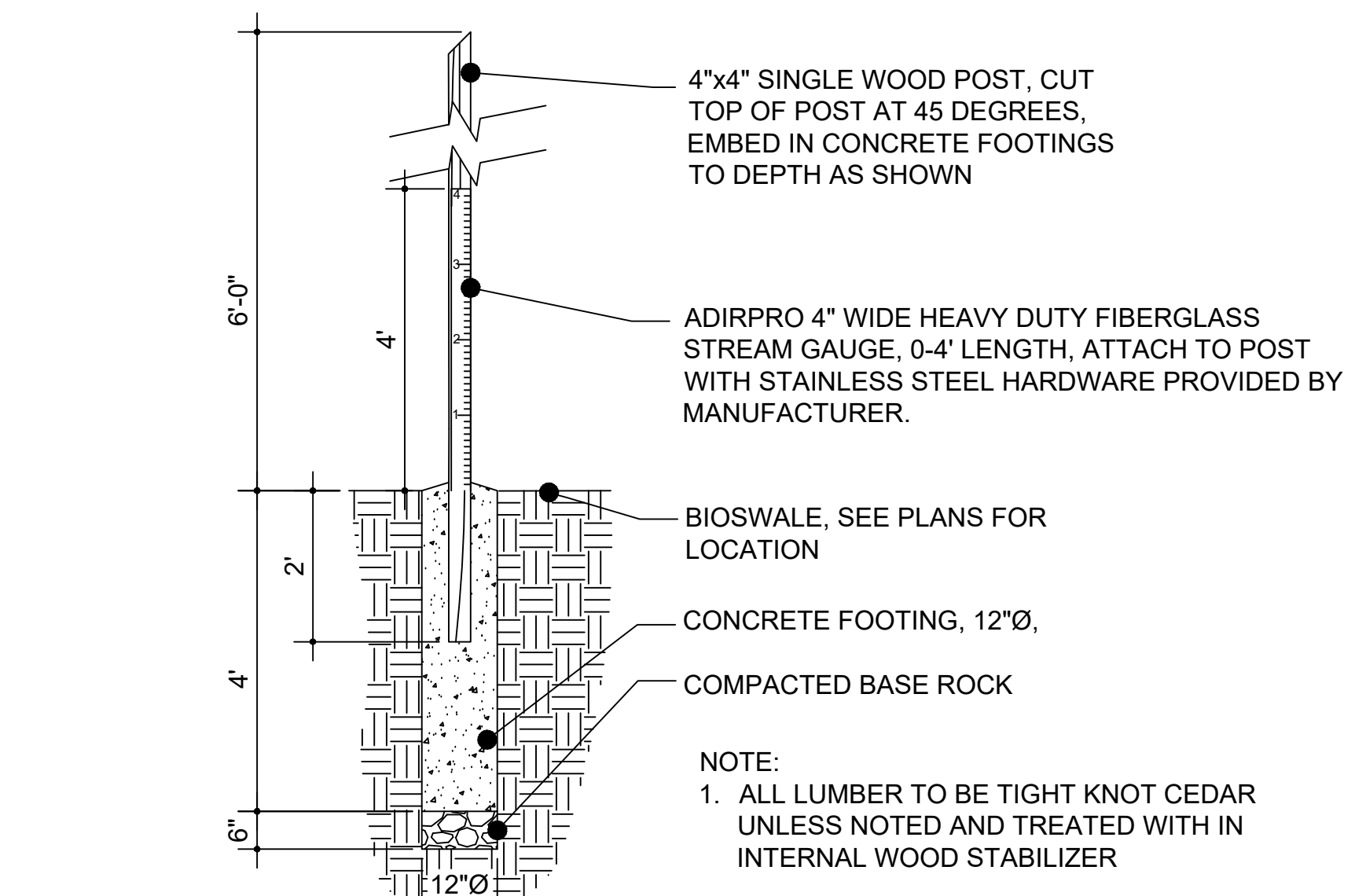
**L300**





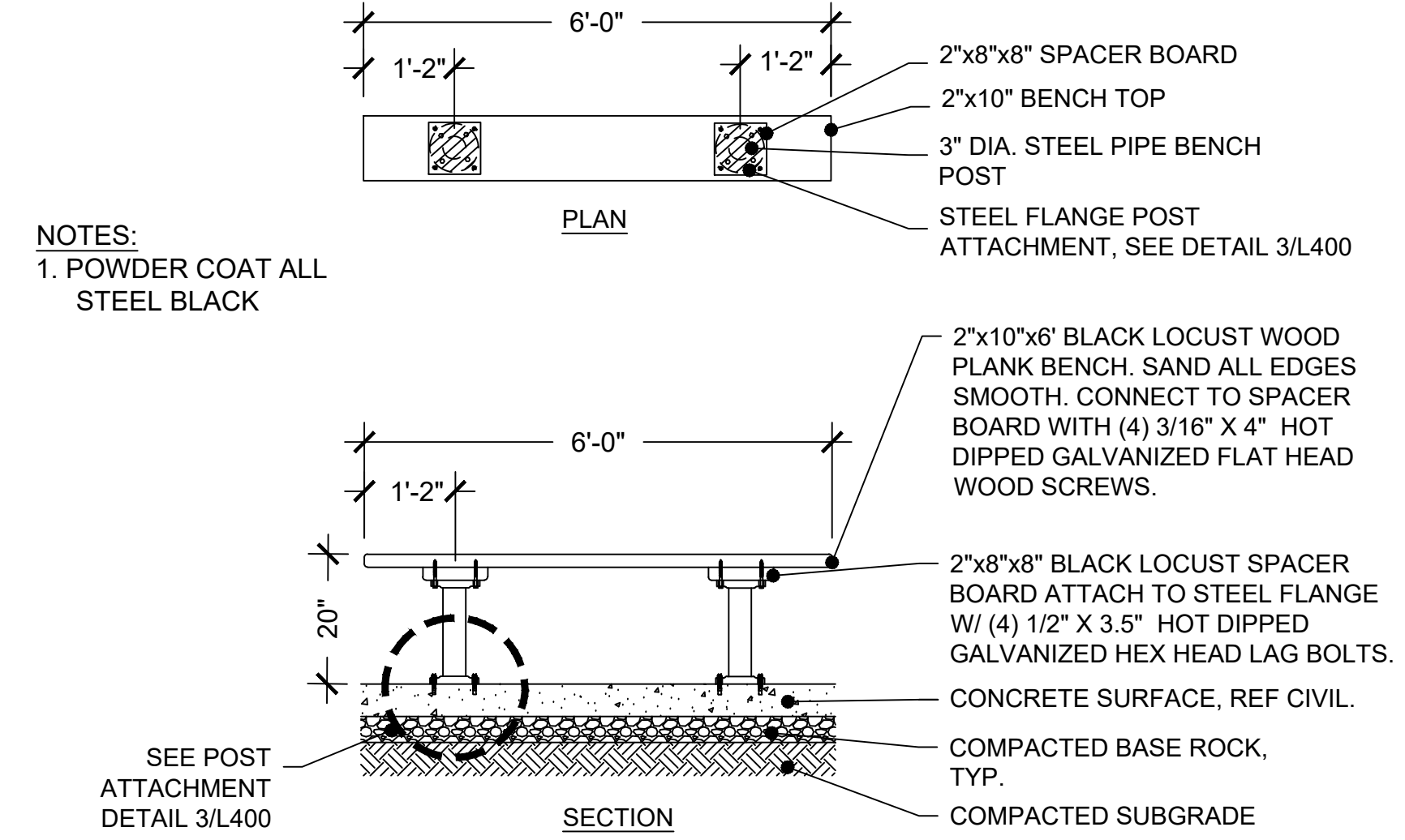


**1 WOOD BENCH - CONTINUOUS**  
PLAN & SECTION  
0" 6" 12" 24"

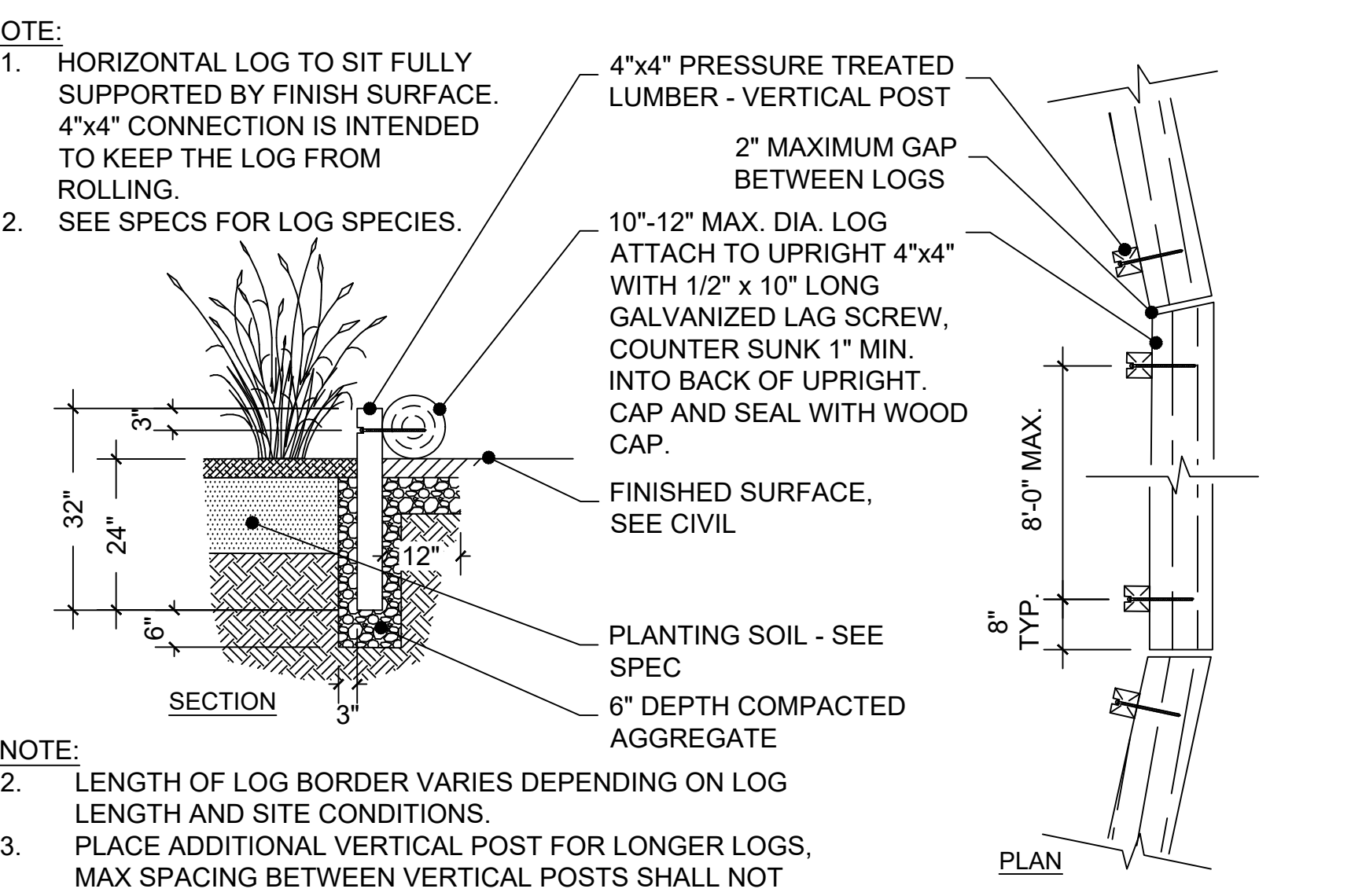


**4 RAIN MEASURING POST - IN BIOSWALE**  
SECTION  
0" 6" 12" 24"

**7 NOT USED**

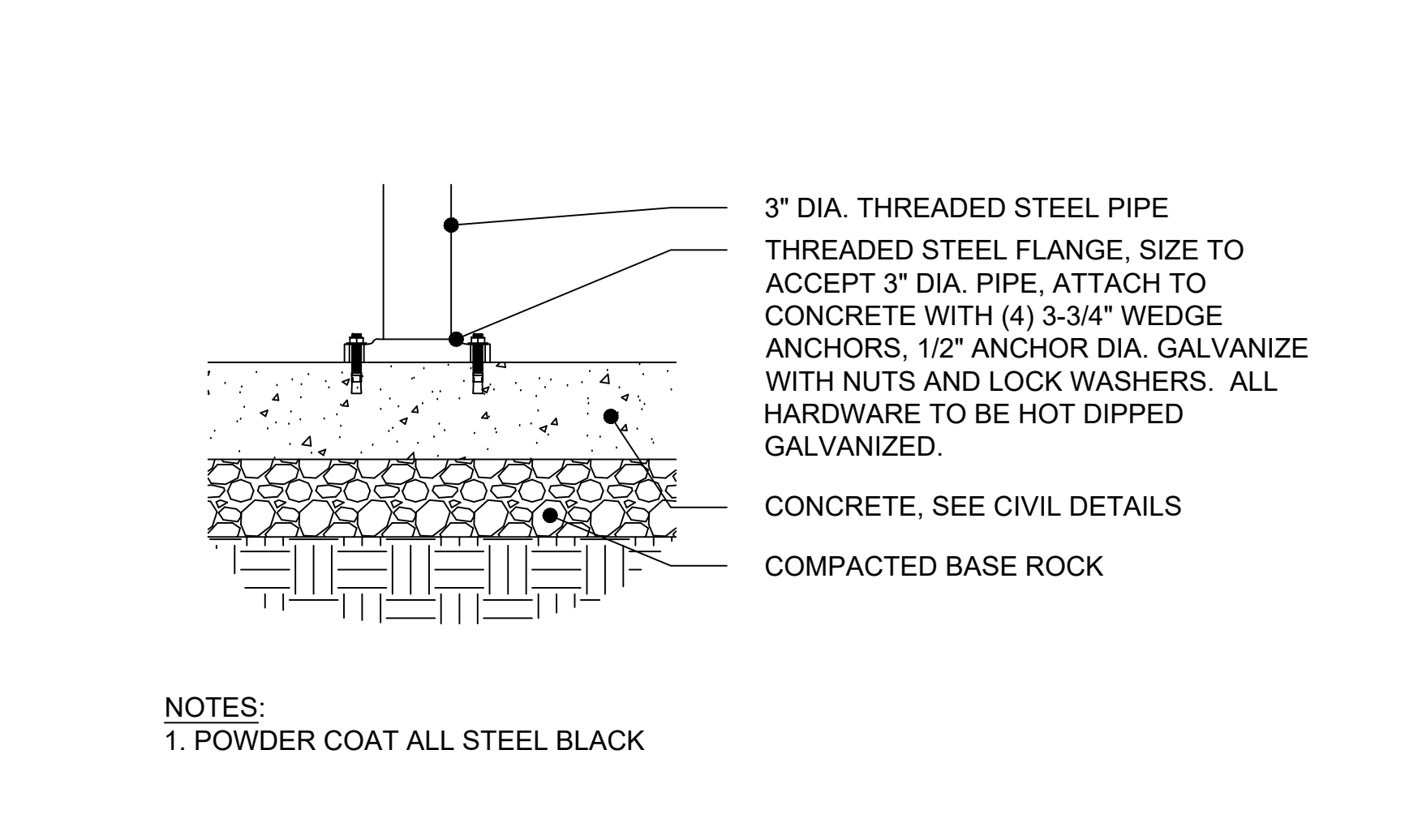


**2 WOOD BENCH - FREESTANDING**  
PLAN & SECTION  
0" 6" 12" 24"



**5 LOG BORDER**  
PLAN & SECTION  
0" 6" 12" 24"

**8 NOT USED**



**3 WOOD BENCH - POST ATTACHMENT**  
SECTION  
0" 2" 4" 8"

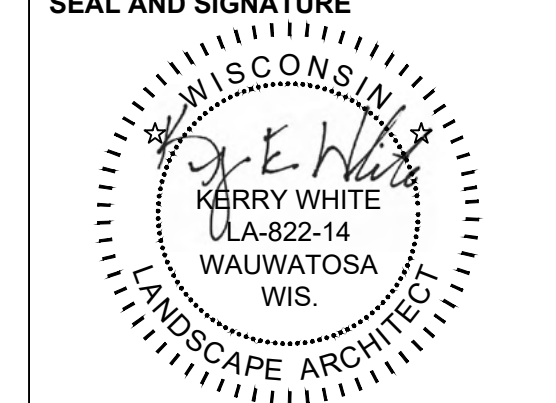
**6 NOT USED**

**8 NOT USED**

SHEET NAME: <b>SITE DETAILS</b>	PROJECT NAME: <b>2023 GREEN INFRASTRUCTURE UPGRADES</b>	PROJECT ADDRESS: <b>RICHARD KLUGE CREATIVE ARTS SCHOOL 5760 N. 67TH STREET, MILWAUKEE, WI 53218</b>
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DRAWN BY:    ZWA		
REVIEWED BY:    KW		
APPROVED BY:    MM		
DATE:    January 2023		

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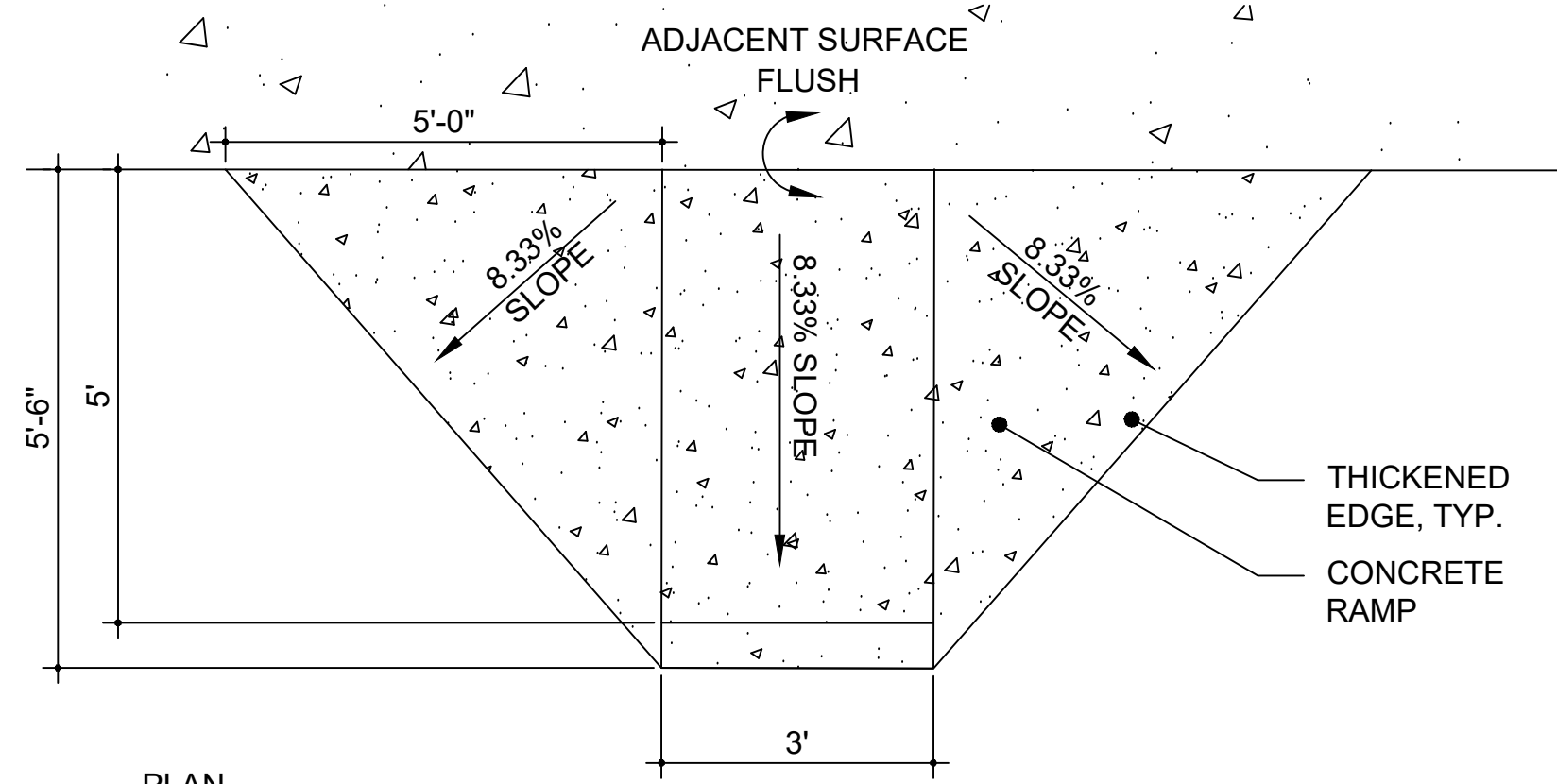
DRAWN BY:	ZWA
REVIEWED BY:	KW
APPROVED BY:	MM
DATE:	January 2023



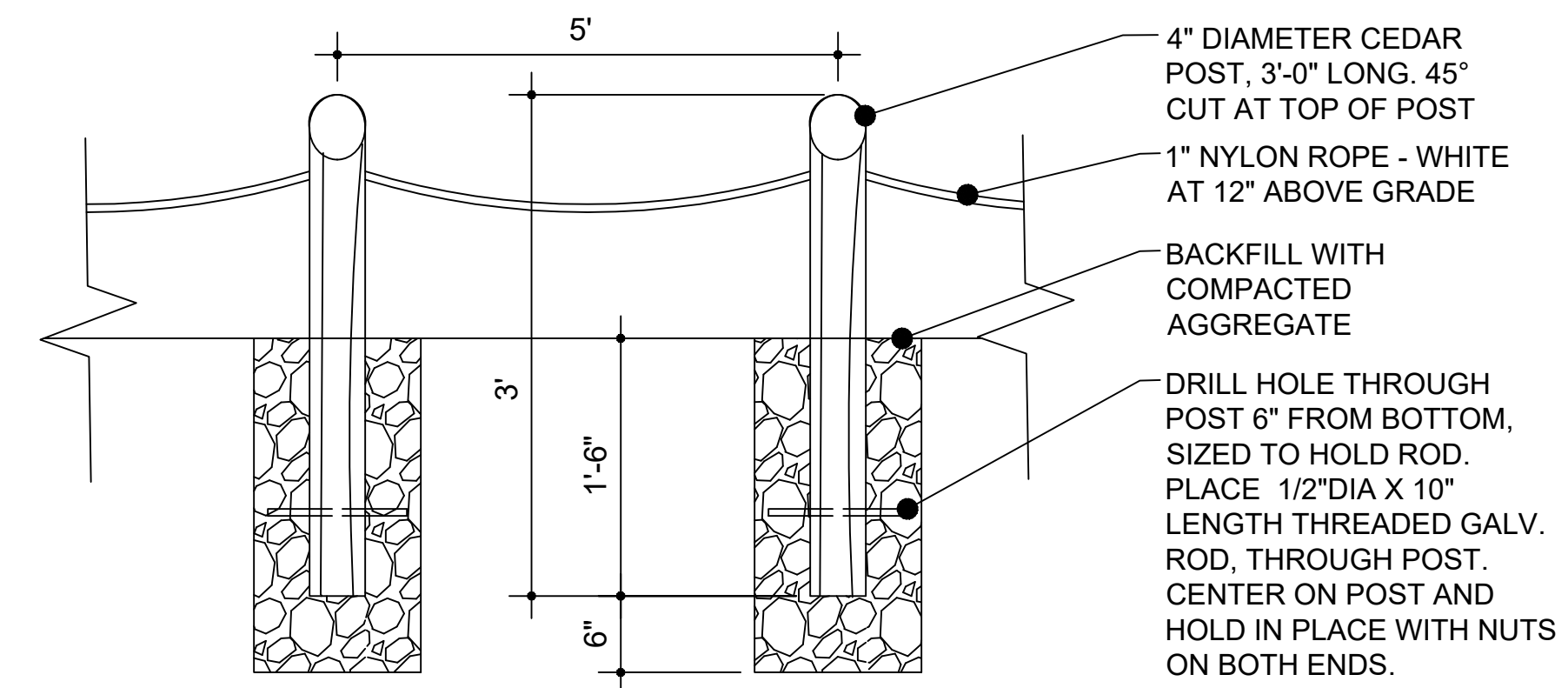
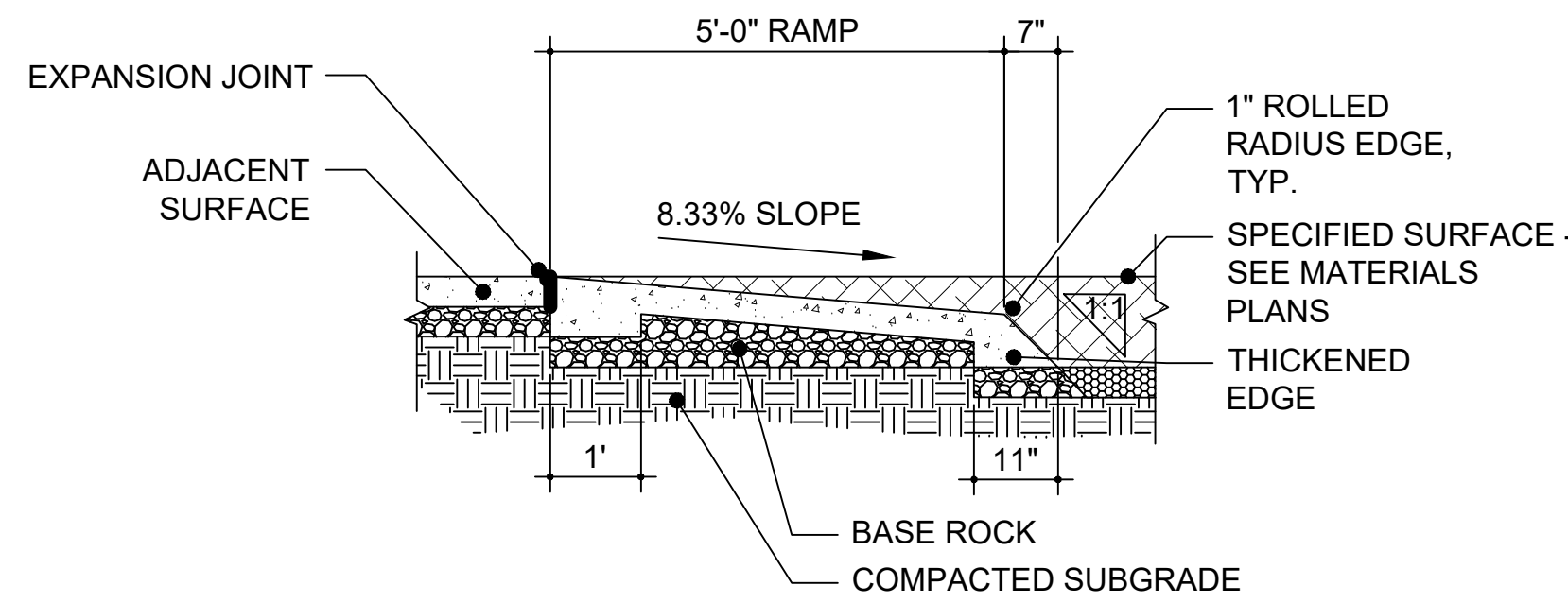
PROJECT NUMBER: 7429 (DIVISION 5)  
SITE NUMBER: 337

SHEET:  
**L400**



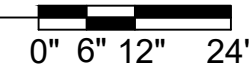


NOTE: PLAY SURFACING SHOULD COMPLETELY COVER RAMP

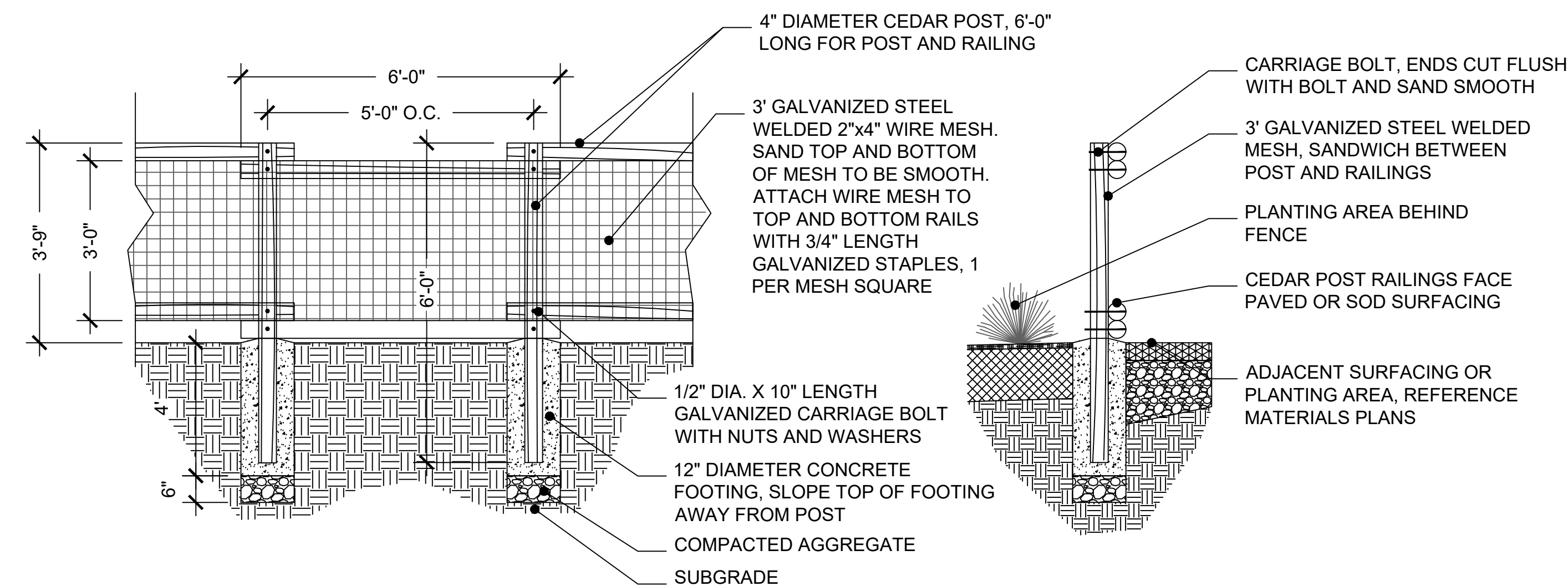
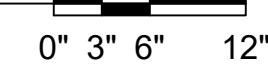


- NOTES:
1. DRILL HOLE THROUGH POST TO ACCEPT ROPE, SAND ALL ROUGH EDGES SMOOTH.
  2. ROPE INSTALLATION: AT EACH POST TIE KNOT IN ROPE, INSERT ROPE IN POST, LOOP THE ROPE AROUND ONE SIDE OF THE POST, INSERT THE ROPE THROUGH THE POST AGAIN, TIE ANOTHER KNOT, REPEAT AT EACH POST.
  3. ROPE BETWEEN POSTS SHALL BE LOOSE ENOUGH THAT IF STEPPED ON IT NEARLY TOUCHES THE GROUND.
  4. POST TO BE SET 5' O.C. AND CLOSER AS NEEDED AT TIGHT TURNS.

1 ADA ACCESS RAMP  
PLAN AND SECTION



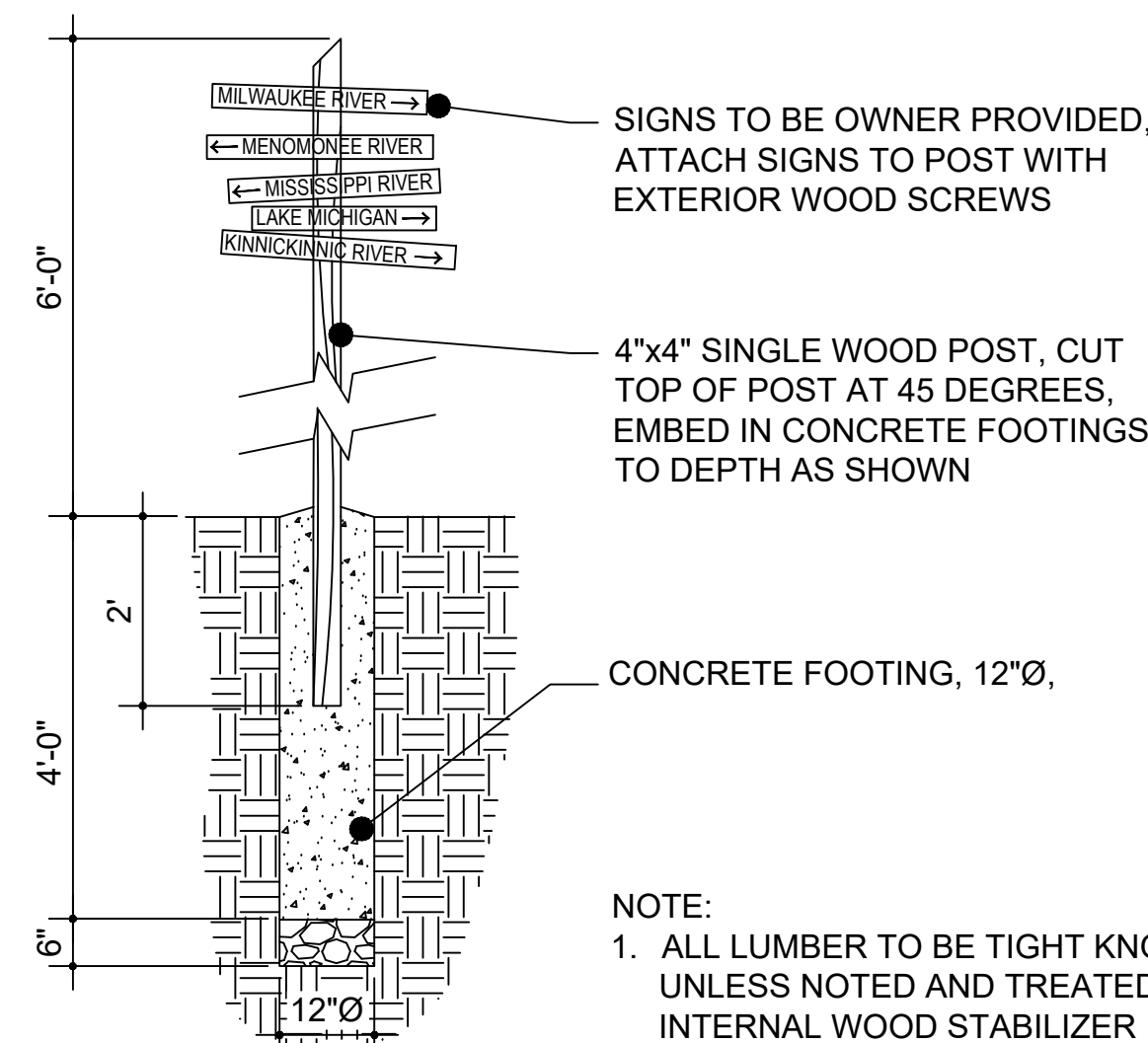
2 ROPE FENCE  
SECTION



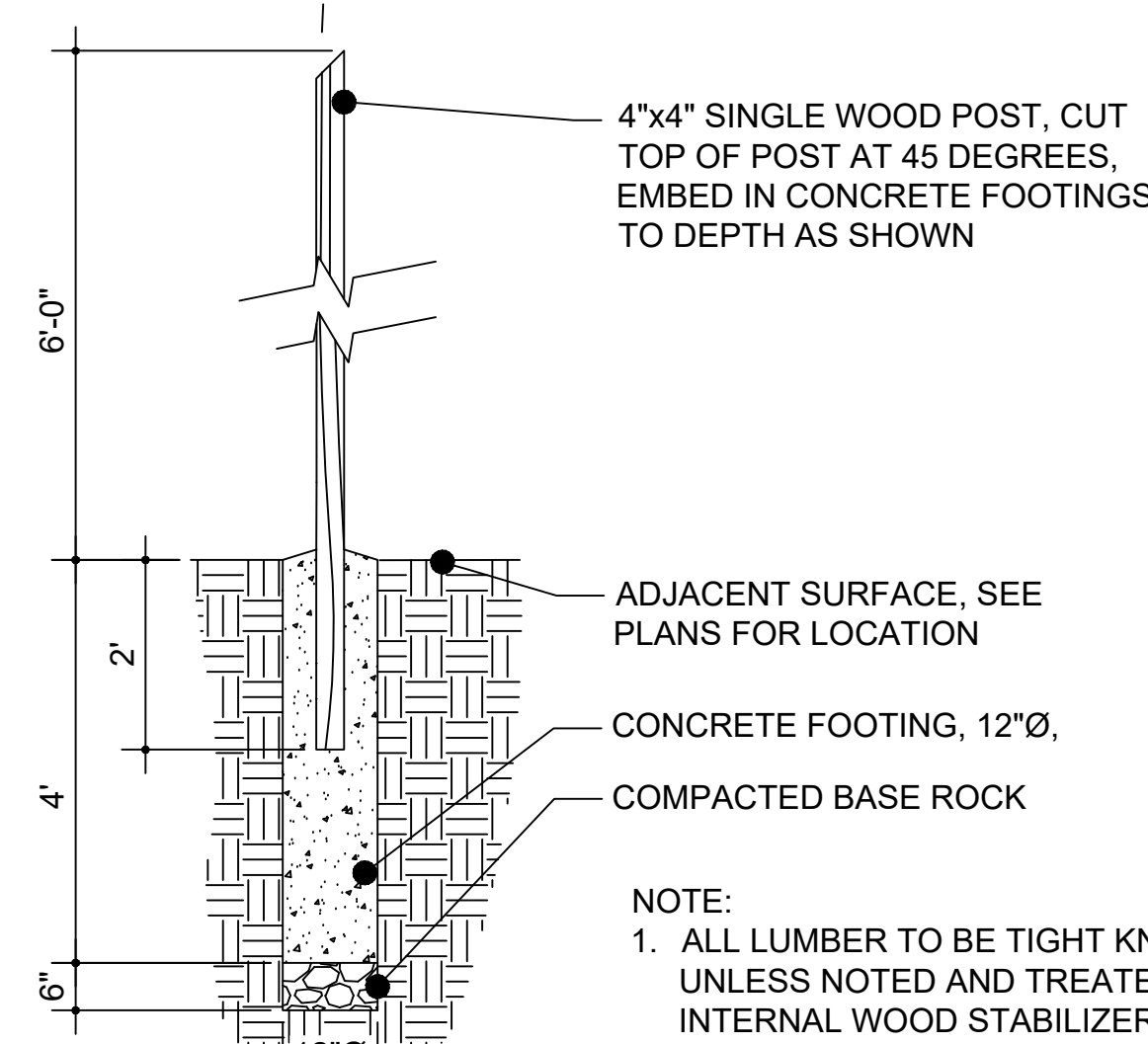
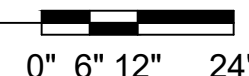
3 DECORATIVE FENCE  
SECTION



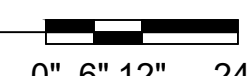
6 NOT USED



5 SIGN POST  
SECTION



6 ART POST  
SECTION



SHEET NAME: <b>SITE DETAILS</b>	PROJECT NAME: <b>2023 GREEN INFRASTRUCTURE UPGRADES</b>	PROJECT ADDRESS: <b>RICHARD KLUGE CREATIVE ARTS SCHOOL 5760 N. 67TH STREET, MILWAUKEE, WI 53218</b>
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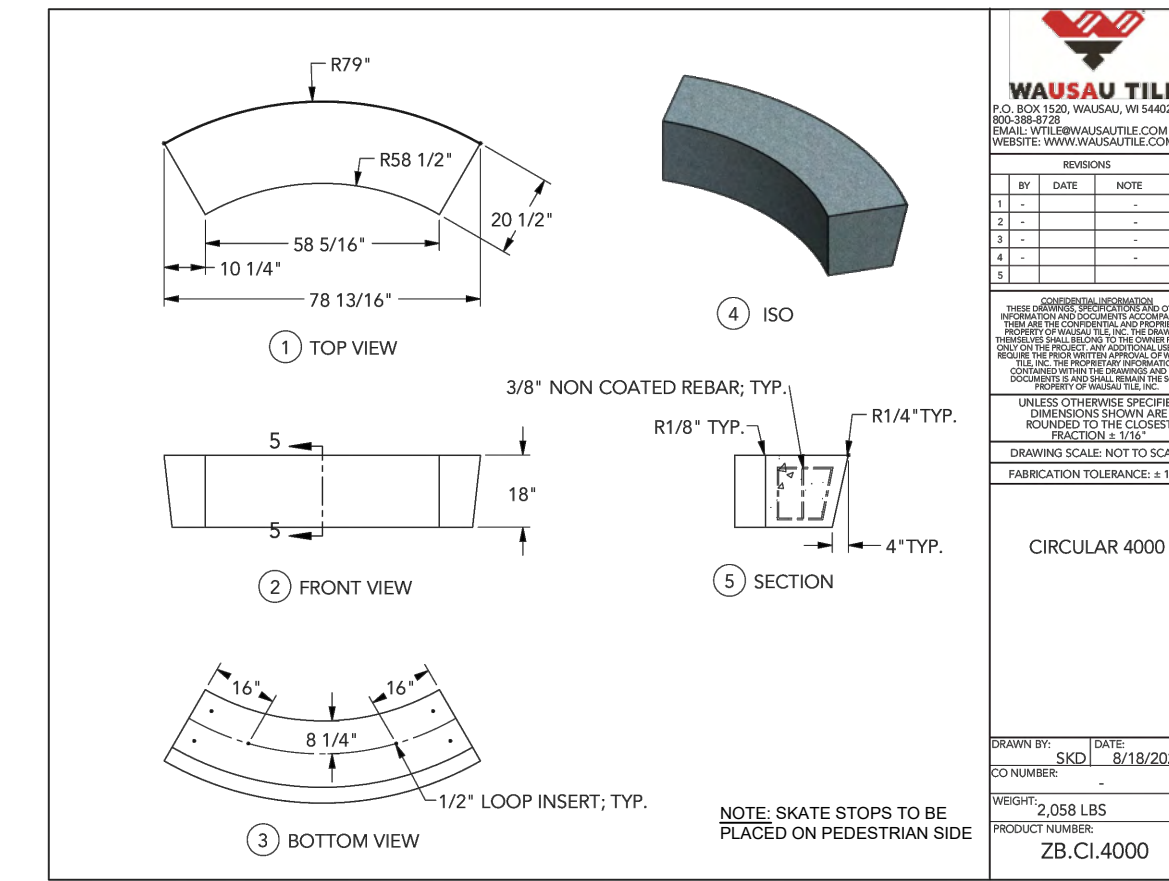
PROJECT NUMBER: 7429 (DIVISION 5)

SITE NUMBER: 337

SHEET:

L401



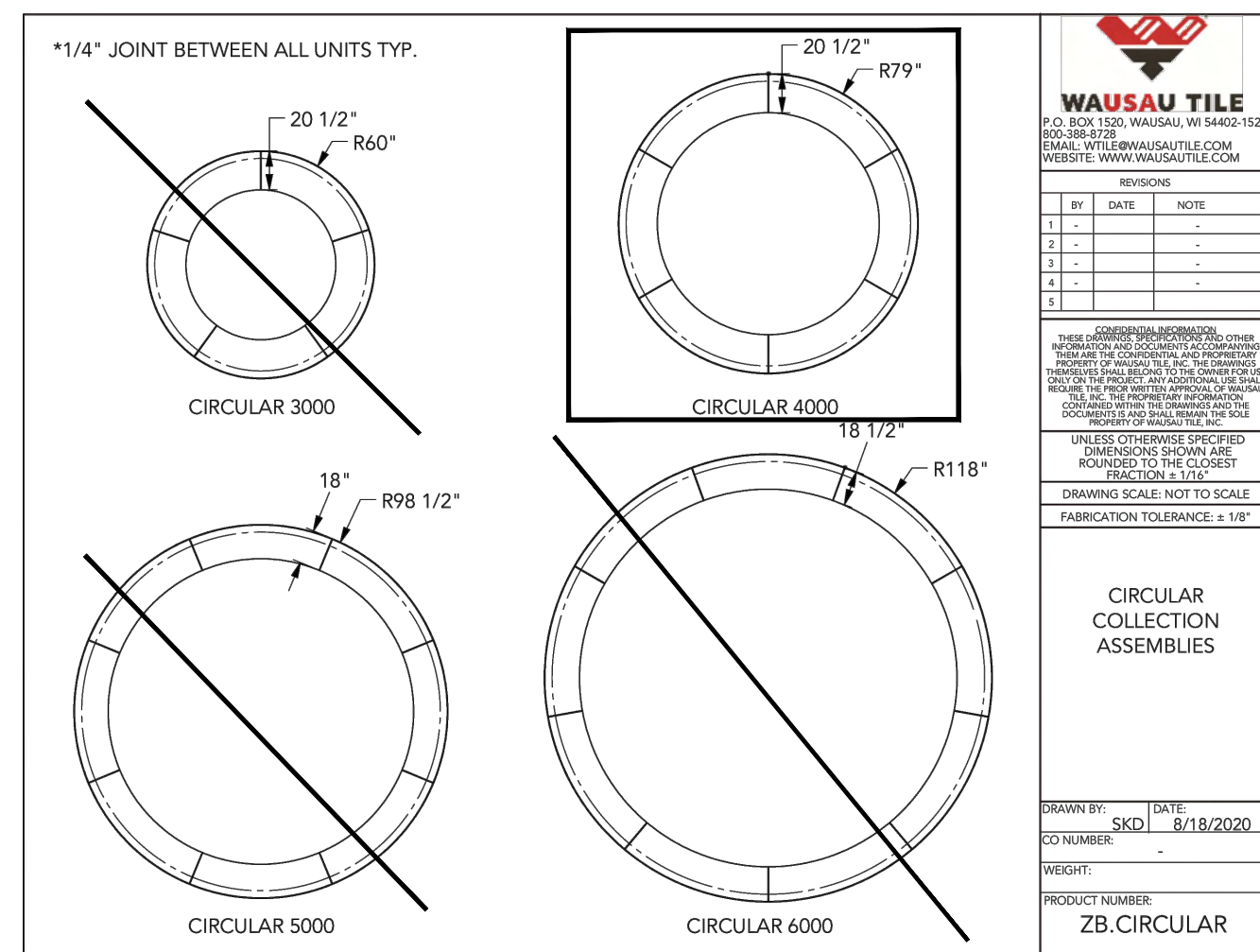


1 NOT USED

2 NOT USED

3 CONCRETE BENCH / TREE PLANTER PLAN

0" 12" 24" 48"



4 CONCRETE BENCH / TREE PLANTER PLAN

0" 24" 48" 96"

SHEET NAME: SITE DETAILS	PROJECT NAME: 2023 GREEN INFRASTRUCTURE UPGRADES	PROJECT ADDRESS: RICHARD KLUGE CREATIVE ARTS SCHOOL 5760 N. 67TH STREET, MILWAUKEE, WI 53218
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DRAWN BY:	ZWA
REVIEWED BY:	KW
APPROVED BY:	MM
DATE:	January 2023

SEAL AND SIGNATURE  
  
 KERRY WHITE  
 LA-822-14  
 WAUWATOSA  
 WIS.  
 LANDSCAPE ARCHITECT

PROJECT NUMBER: 7429 (DIVISION 5)

SITE NUMBER: 337

SHEET:  
**L402**





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PROJECT NAME: OUTDOOR CLASSROOM MPS

PROJECT LOCATION: MILWAUKEE, WI

BUILDING TYPE: MSE 16X30

ROOF TYPE: MULTI-RIB

BUILDING NUMBER: P14115

ORDER NUMBER: 72044

**DRAWING LIST:**

SHEET NUMBER	DRAWING DESCRIPTION
CS	COVER SHEET
1	ARCHITECTURAL ELEVATIONS
2-2.1	ANCHOR AND FOOTING LAYOUT / DETAILS
3	STRUCTURAL FRAMING PLAN
4-4.1	FRAME CONNECTION DETAILS
5	ELECTRICAL DETAILS
6-6.1	ROOF LAYOUT
7-7.1	ROOF CONNECTION DETAILS

**MANUFACTURER NOTES:**

**MATERIALS:**

DESCRIPTION	ASTM DESIGNATION
TUBE STEEL	A501 (GRADE B)
SCHEDULE PIPE	A53 (GRADE B)
RMT PIPE	A519
LIGHT GAUGE COLD FORMED	A1003 (GRADE 50)
STRUCTURAL STEEL PLATE	A36
ROOF PANELS (STEEL)	A653
ANCHOR BOLTS	SEE SHEET 2.1

**GENERAL NOTES:**

UNLESS NOTED OTHERWISE, THIS STRUCTURE WAS DESIGNED TO ONLY SUPPORT WHAT IS SHOWN ON THESE DRAWINGS. POLIGON MUST BE CONTACTED IF ANYTHING ELSE IS TO BE ATTACHED TO THIS STRUCTURE (WALLS, COLUMN WRAPS, RAILINGS, ETC.) SO THE DESIGN OF THIS STRUCTURE CAN BE REVIEWED AND POSSIBLY REVISED.

UNLESS NOTED OTHERWISE, THIS STRUCTURE WAS DESIGNED ASSUMING A 20' SEPARATION BETWEEN ANY ADJACENT STRUCTURE WITH AN EAVE HEIGHT EQUAL TO OR GREATER THAN THE EAVE HEIGHT OF THIS STRUCTURE. IF THAT SEPARATION DOES NOT EXIST, POLIGON MUST BE CONTACTED SO THE DESIGN OF THIS STRUCTURE CAN BE REVIEWED AND POSSIBLY REVISED.

STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATION MANUAL.

ALL WELDING IS PERFORMED BY AMERICAN WELDING SOCIETY CERTIFIED WELDERS AND CONFORMS TO THE LATEST EDITION OF AWS D1.1 OR D1.3 AS REQUIRED.

PARTS SHOWN MAY BE UPGRADED DUE TO STANDARDIZED FABRICATION. REFER TO THE SHIPPING BILL OF MATERIALS AND FINAL INSTALLATION INSTRUCTIONS INCLUDED WITH THE STRUCTURE FOR POSSIBLE SUBSTITUTIONS AND IMPROVEMENTS.

FOR PROPER FIELD INSTALLATION OF THE BUILDING IT IS RECOMMENDED THAT THE PRIMARY FRAME INSTALLER AND THE ROOF INSTALLER HAVE A MINIMUM FIVE (5) YEARS DOCUMENTED EXPERIENCE INSTALLING THIS TYPE OF PRODUCT.

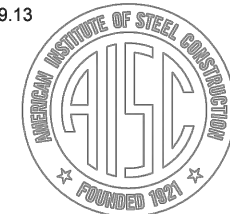
FOR PROPER FIELD INSTALLATION OF THE BUILDING IT IS RECOMMENDED THAT ELECTRIC WIRING, IF REQUIRED, BE RUN THROUGH THE STRUCTURAL MEMBERS BEFORE THE BUILDING IS ERECTED.

**CERTIFICATES:**

MILWAUKEE COUNTY CERTIFICATE OF COMPETENCY NO. 21-0819.13  
 PCI (POWDER COATING INSTITUTE) 4000 CERTIFIED

**FABRICATOR APPROVALS:**

CITY OF PITTSBURGH, PA APPROVED FABRICATOR #C08-2010  
 CITY OF LOS ANGELES, CA APPROVED FABRICATOR #FB01586  
 CITY OF RIVERSIDE, CA APPROVED FABRICATOR #SF\_000042  
 CITY OF HOUSTON, TX APPROVED FABRICATOR #470  
 CLARK COUNTY, NV APPROVED FABRICATOR #254  
 STATE OF UTAH APPROVED FABRICATOR C2008-14  
 AISC APPROVED FABRICATOR C-00018751



**DESIGN CRITERIA:**

**GENERAL:**  
 2015 INTERNATIONAL BUILDING CODE  
 RISK CATEGORY: II

**DEAD LOAD:**  
 ROOF DEAD LOAD: 2 PSF  
 FRAME DEAD LOAD: SELF WEIGHT

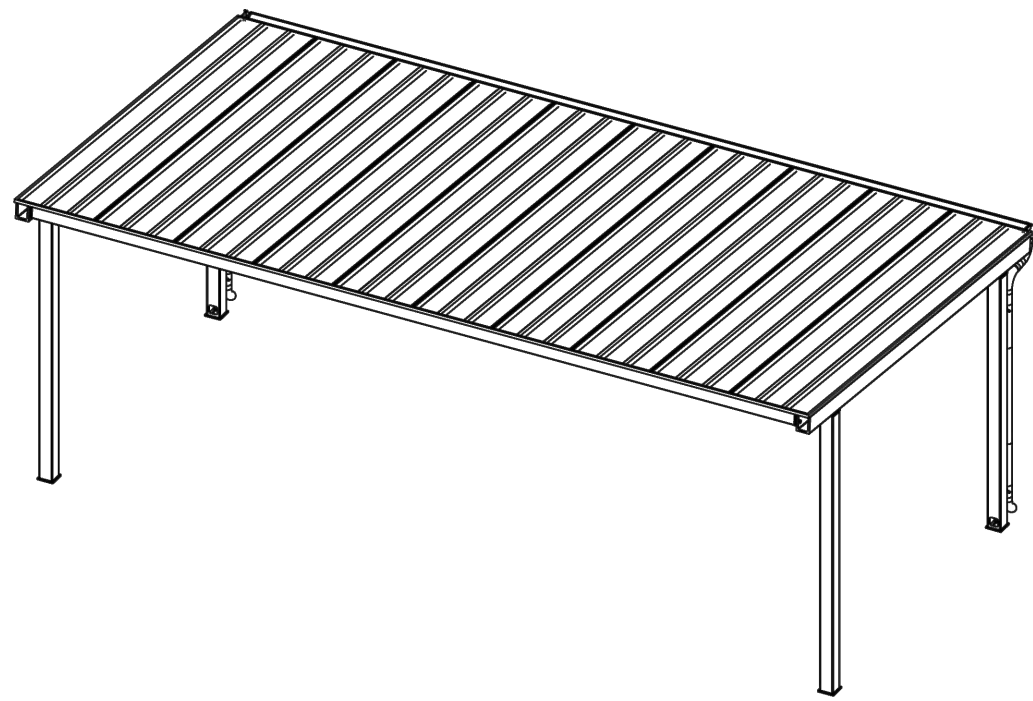
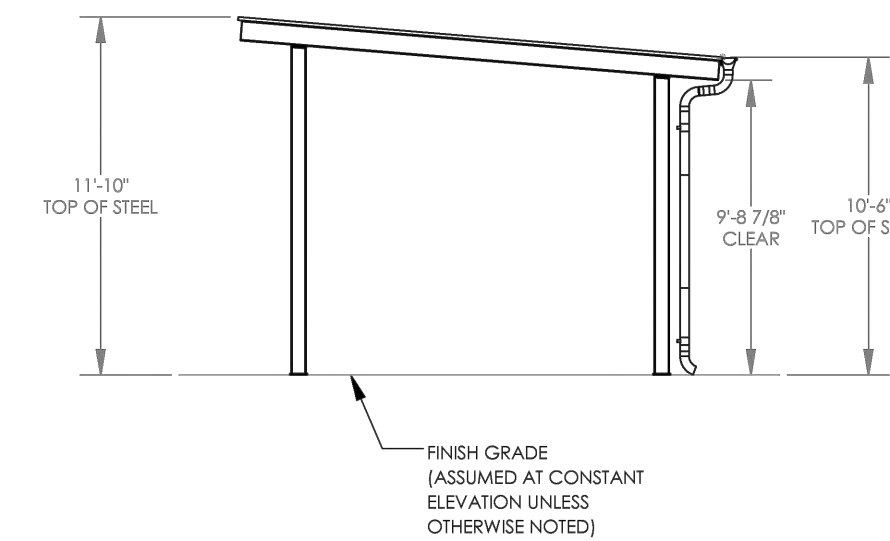
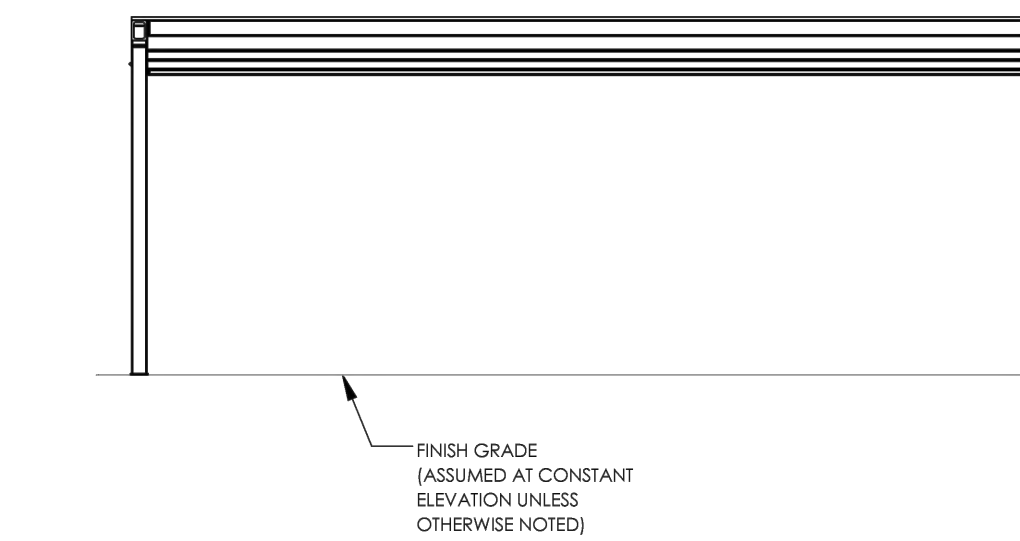
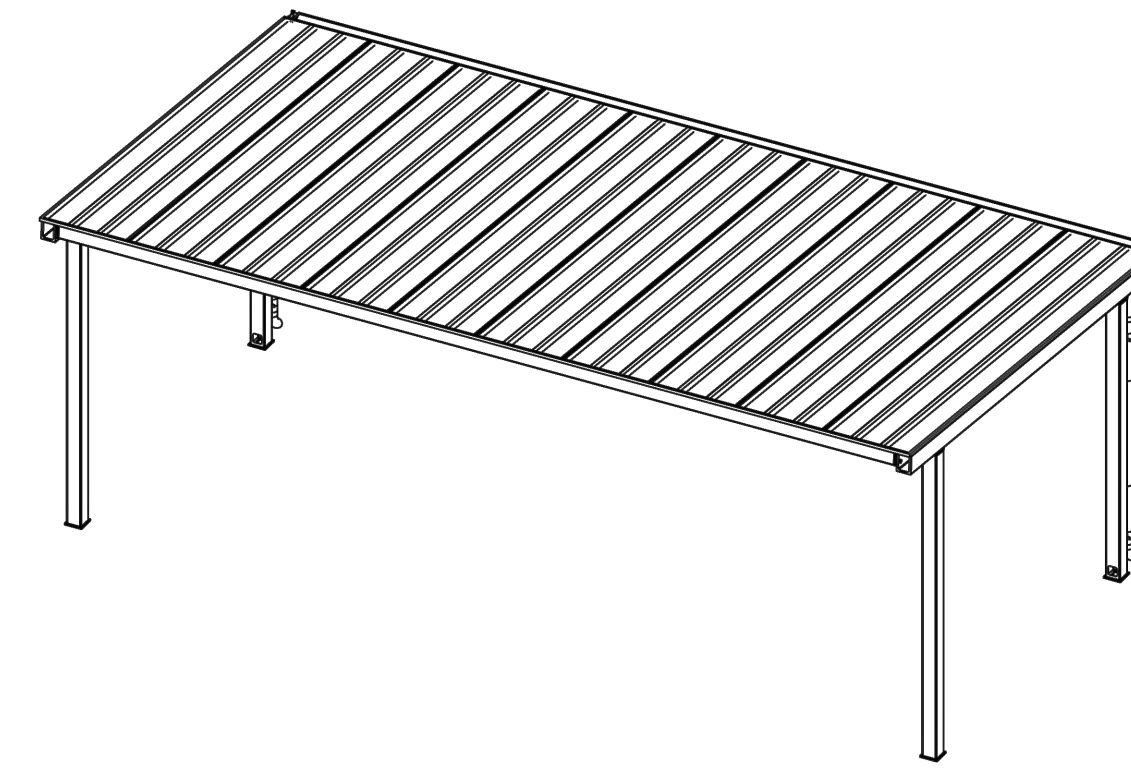
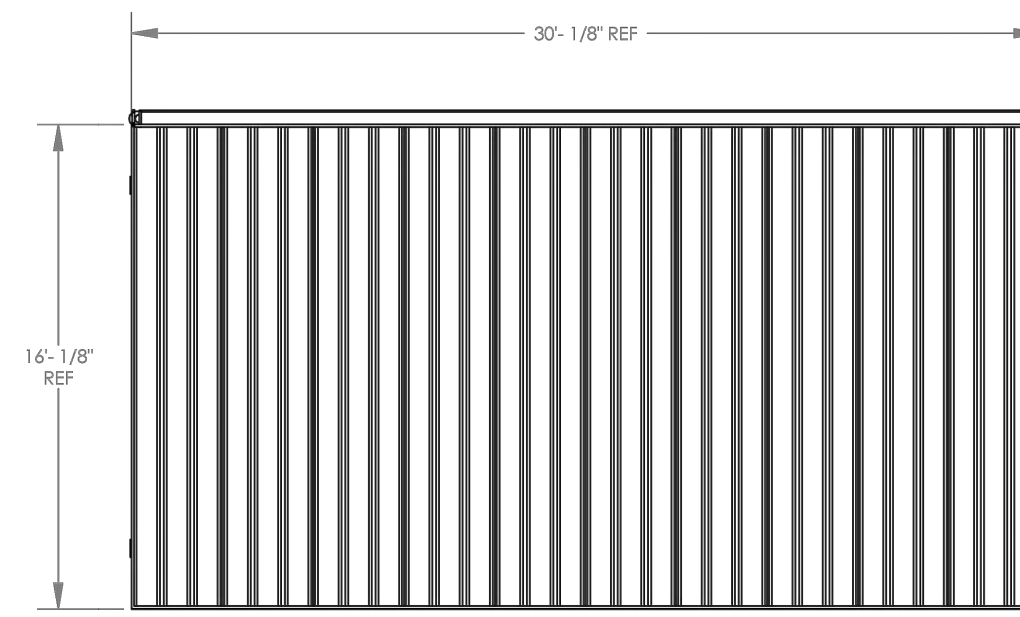
**LIVE LOAD:**  
 ROOF LIVE LOAD: 20 PSF

**SNOW DESIGN DATA:**  
 GROUND SNOW LOAD (Pg): 30 PSF  
 FLAT ROOF SNOW LOAD (Pf): 25 PSF  
 SNOW EXPOSURE FACTOR (Ce): 1.0  
 SNOW LOAD IMPORTANCE FACTOR (Is): 1.0  
 THERMAL FACTOR (Ct): 1.2

**WIND DESIGN DATA:**  
 BASIC WIND SPEED (V): 115 MPH  
 GUST EFFECT FACTOR (G): 0.85  
 INTERNAL PRESSURE COEFFICIENT (GCp): 0  
 WIND EXPOSURE: C

**SEISMIC DESIGN DATA:**  
 STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE  
 SEISMIC IMPORTANCE FACTOR (Ie): 1.0  
 SEISMIC DESIGN CATEGORY: C  
 SEISMIC SITE CLASS: D  
 SEE CALCULATIONS FOR ADDITIONAL DATA

**ADDITIONAL CRITERIA:**  
 NONE

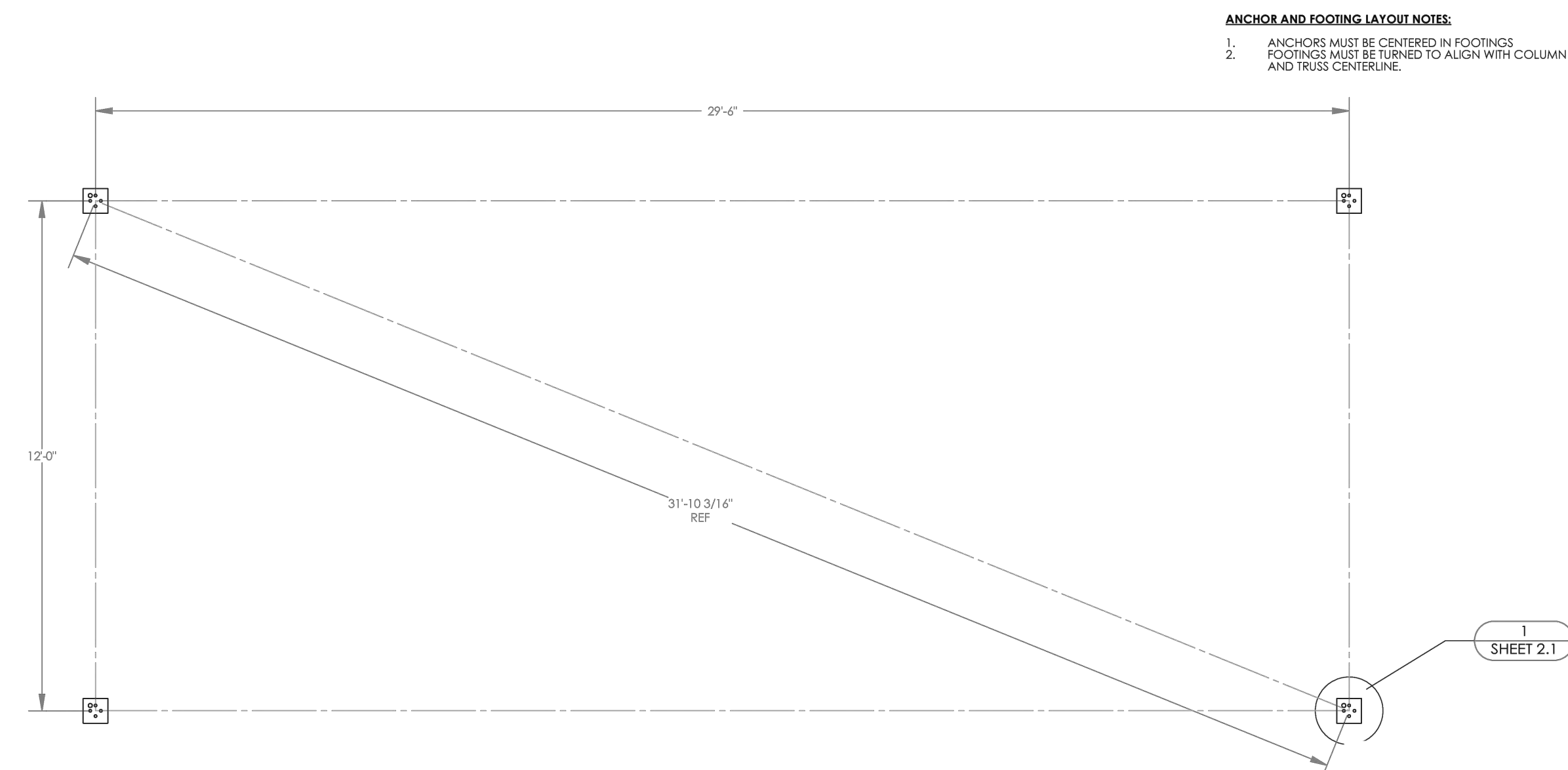


1 SHADE SHELTER - COVER SHEET

NOT TO SCALE

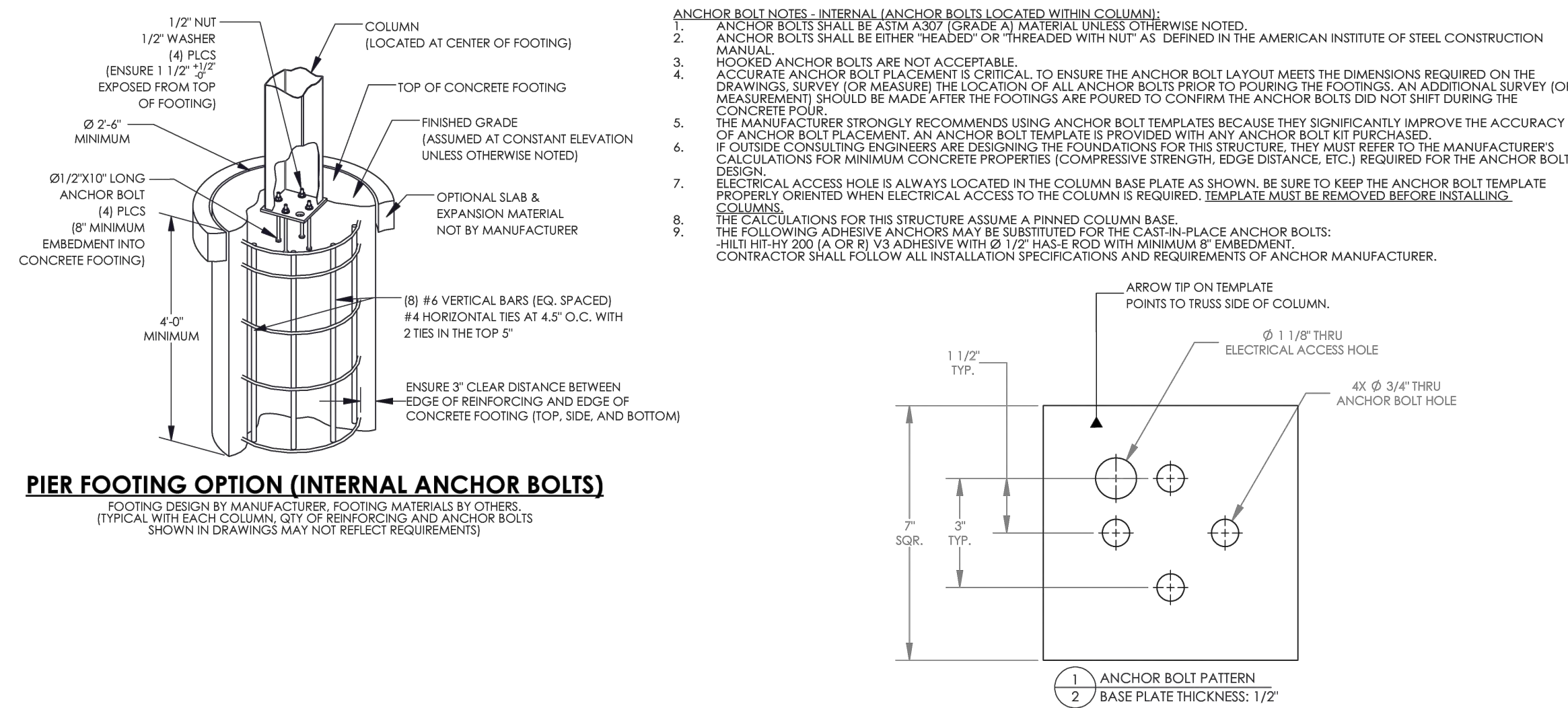
2 SHADE SHELTER - ARCHITECTURAL ELEVATIONS

NOT TO SCALE



3 SHADE SHELTER - ANCHOR AND FOOTING LAYOUT

NOT TO SCALE



4 SHADE SHELTER - ANCHOR AND FOOTING DETAILS

NOT TO SCALE

**STORMWATER SOLUTIONS ENGINEERING LLC**  
 247 W. FRESHWATER WAY, SUITE 410  
 MILWAUKEE, WI 53204  
 PHONE: (414) 810-1245  
 WWW.STORMWATER-SOLUTIONS-ENGINEERING.COM

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DIVISION OF FACILITIES AND MAINTENANCE SERVICES

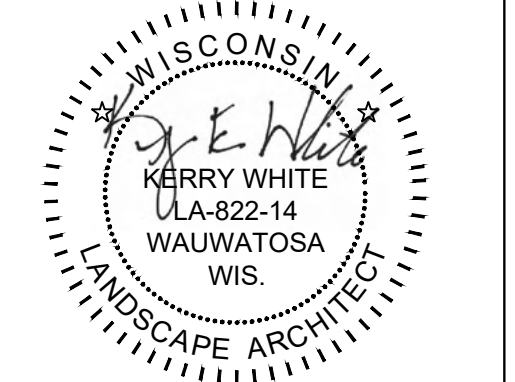
1124 NORTH 11TH STREET  
 MILWAUKEE, WI 53205-0259  
 PHONE: 414-283-4600  
 FAX: 414-283-4682

SHEET NAME: SITE DETAILS  
 PROJECT NAME: 2023 GREEN INFRASTRUCTURE UPGRADES  
 PROJECT ADDRESS: RICHARD KLUGE CREATIVE ARTS SCHOOL  
 5760 N. 67TH STREET, MILWAUKEE, WI 53218

ISSUED FOR:	REV:	DATE:
50% CD		11/14/2022
95% CD		12/22/2022
100% CD		1/23/2023

DRAWN BY:	ZWA
REVIEWED BY:	KW
APPROVED BY:	MM
DATE:	January 2023

SEAL AND SIGNATURE

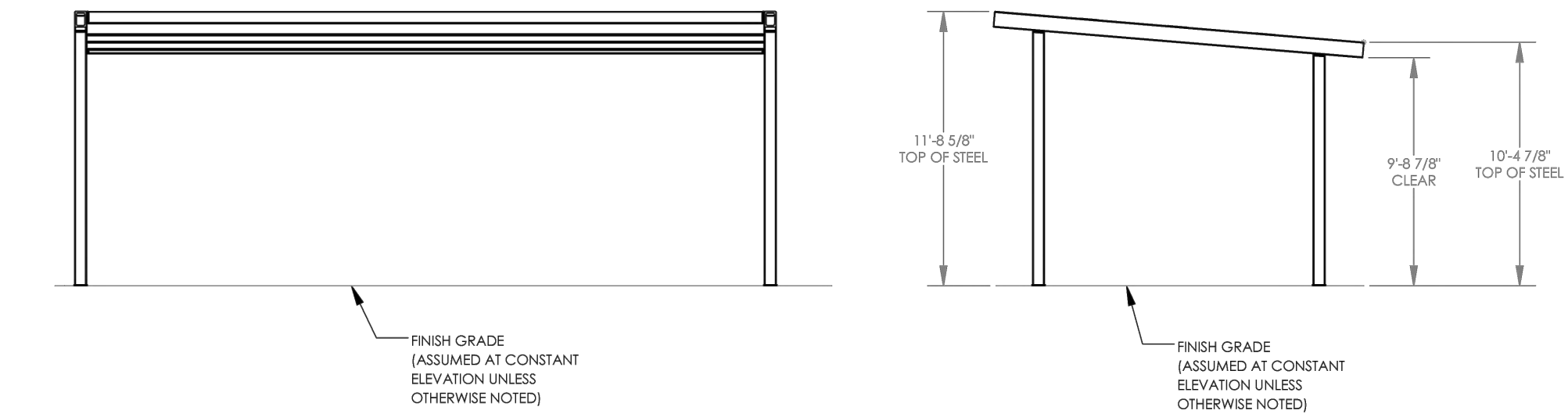
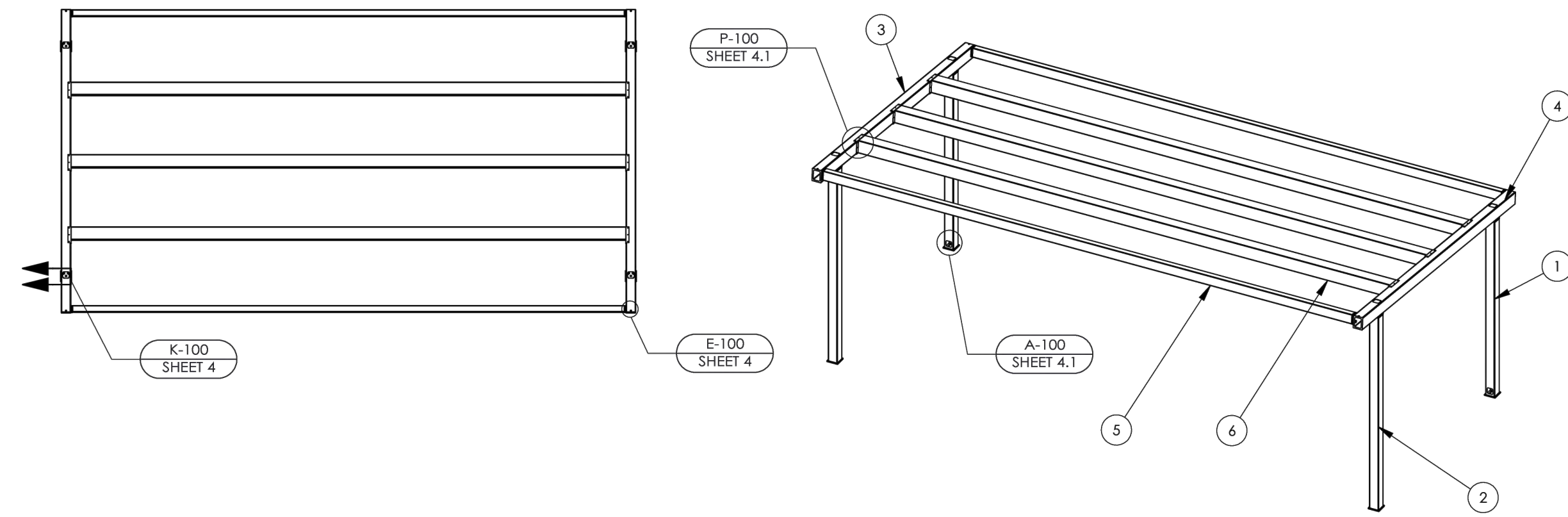


PROJECT NUMBER: 7429 (DIVISION 5)

SITE NUMBER: 337

SHEET: L403





ITEM	QTY	PART NO.	DESCRIPTION	MATERIAL	WEIGHT
6	3	-	PURLIN ASM	HSS8X8X3/16	389.17
5	2	-	EAVE ASM	HSS6X4X3/16	241.49
4	1	-	TRUSS 2 ASM	HSS8X6X3/16	283.74
3	1	-	TRUSS 1 ASM	HSS8X6X3/16	283.74
2	2	-	COLUMN 2 ASM	HSS6X6X3/16	167.62
1	2	-	COLUMN 1 ASM	HSS6X6X3/16	153.19

**5 SHADE SHELTER - STRUCTURAL FRAMING PLAN** NOT TO SCALE

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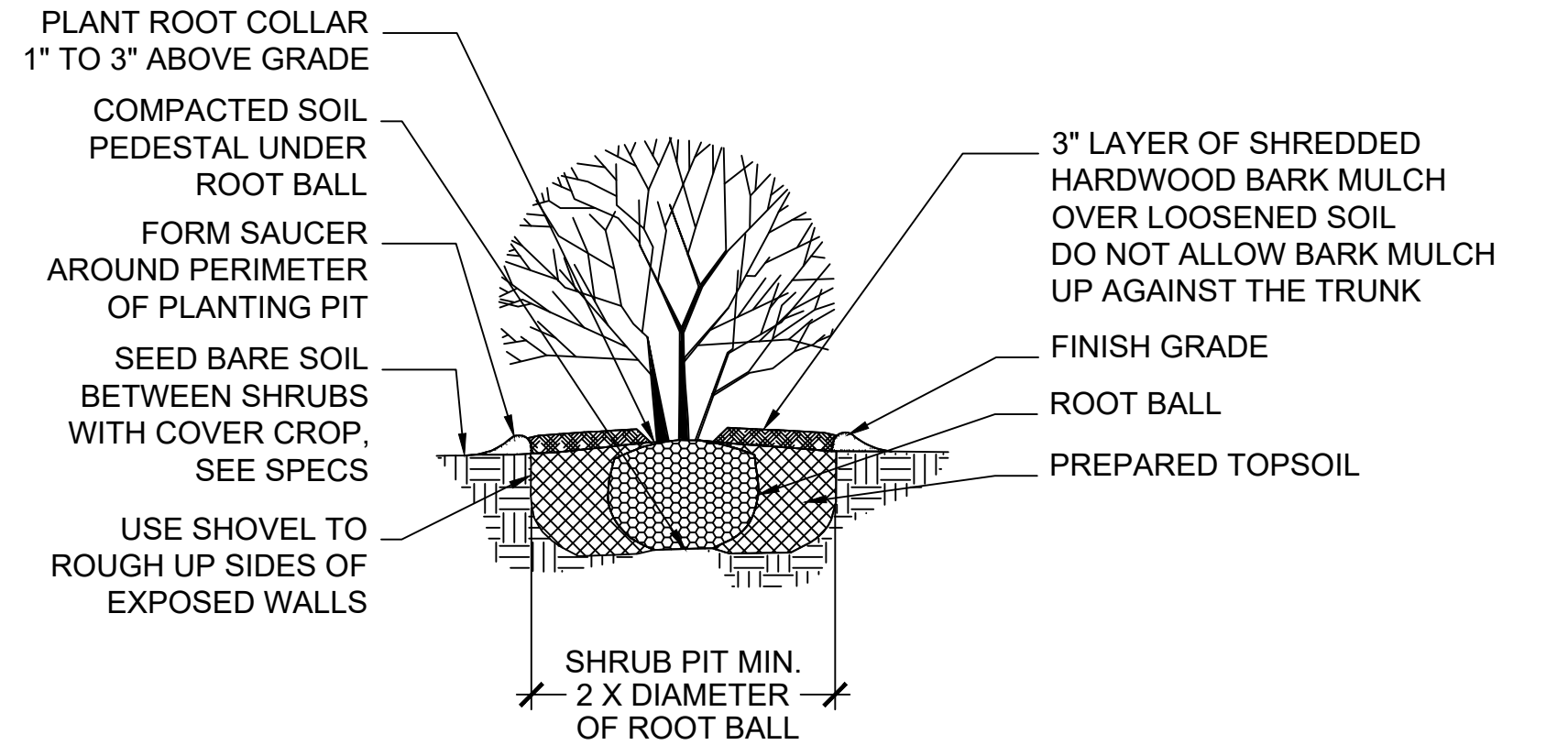
SITE NUMBER: 337

SHEET:  
**L404**



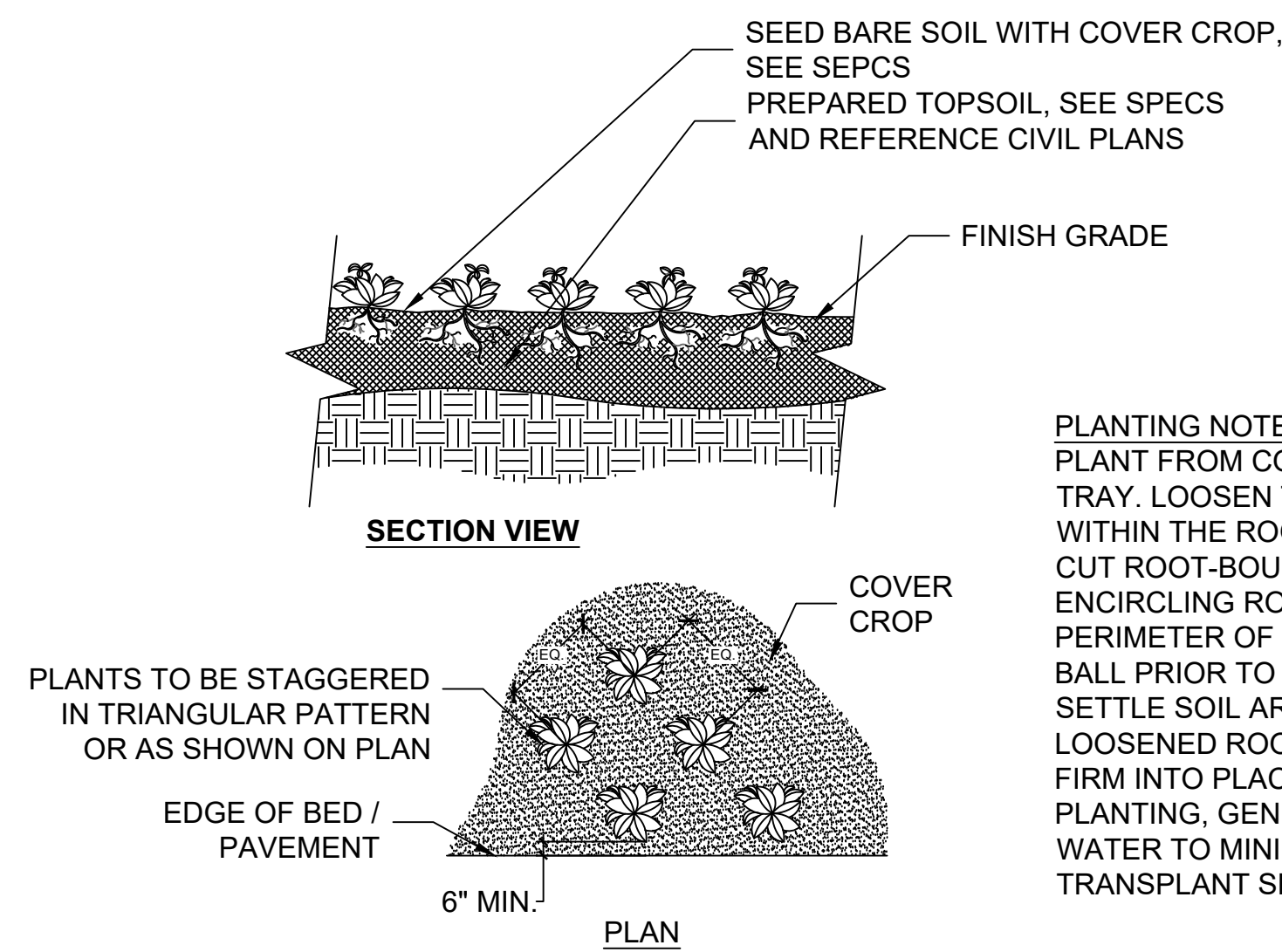
**B & B NOTES:** REMOVE THE ROPE AROUND TRUNK, PEEL THE TOP OF BURLAP BACK AND SCRAPE EXCESS SOIL TO EXPOSE THE ROOT COLLAR. REMOVE THE WIRE BASKET AND PEEL THE BURLAP OFF

**CONTAINER NOTES:** REMOVE PLANT FROM POT. LOOSEN ROOTS / CUT WITH KNIFE TO REDUCE POT-BOUND ROOTS



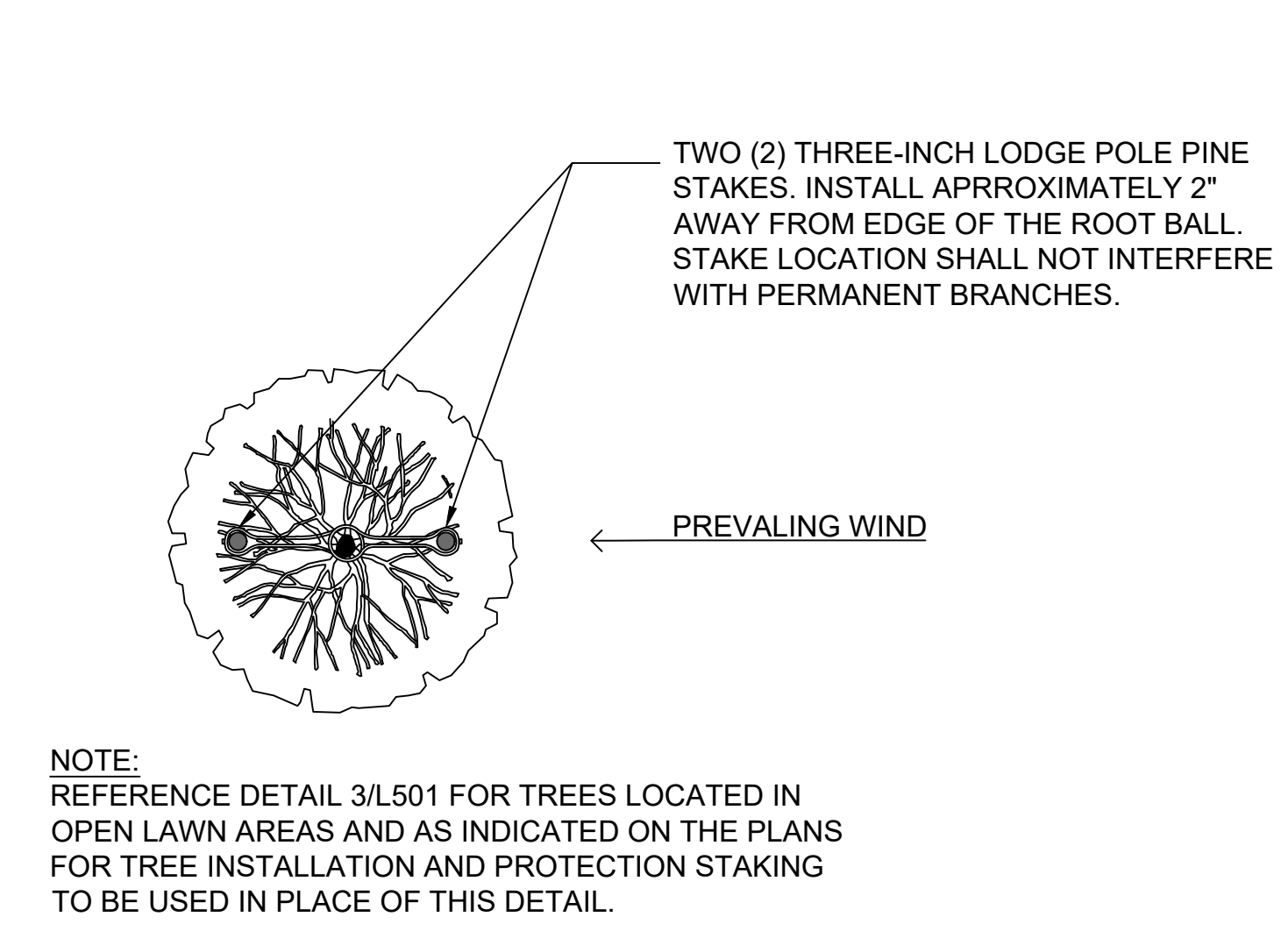
**1 SHRUB PLANTING**

SECTION 0" 6" 12" 24"



**2 PLUG PLANTING**

SECTION 0" 6" 12" 24"

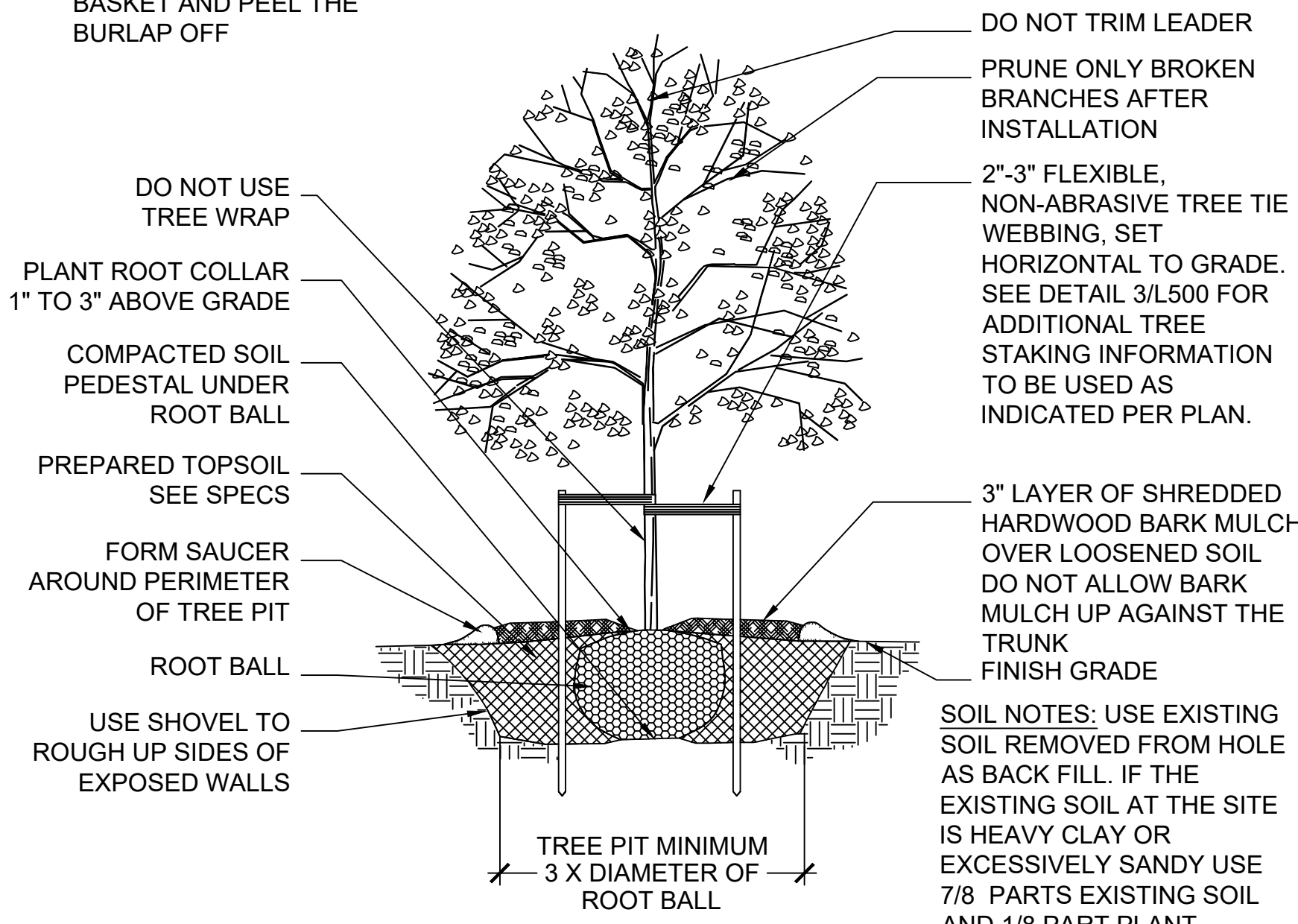


**3 TREE STAKING**

PLAN 0" 6" 12" 24"

**B & B NOTES:** REMOVE THE ROPE AROUND TRUNK, PEEL THE TOP OF BURLAP BACK AND SCRAPE EXCESS SOIL TO EXPOSE THE ROOT COLLAR. REMOVE THE WIRE BASKET AND PEEL THE BURLAP OFF

**DNR NOTES:** THIS PLANTING DETAIL CONFORMS TO TREE PLANTING GUIDELINES AS SPECIFIED IN DNR DOCUMENT, 'DEVELOPING PLANTING SPECIFICATIONS' REVISED 10/25

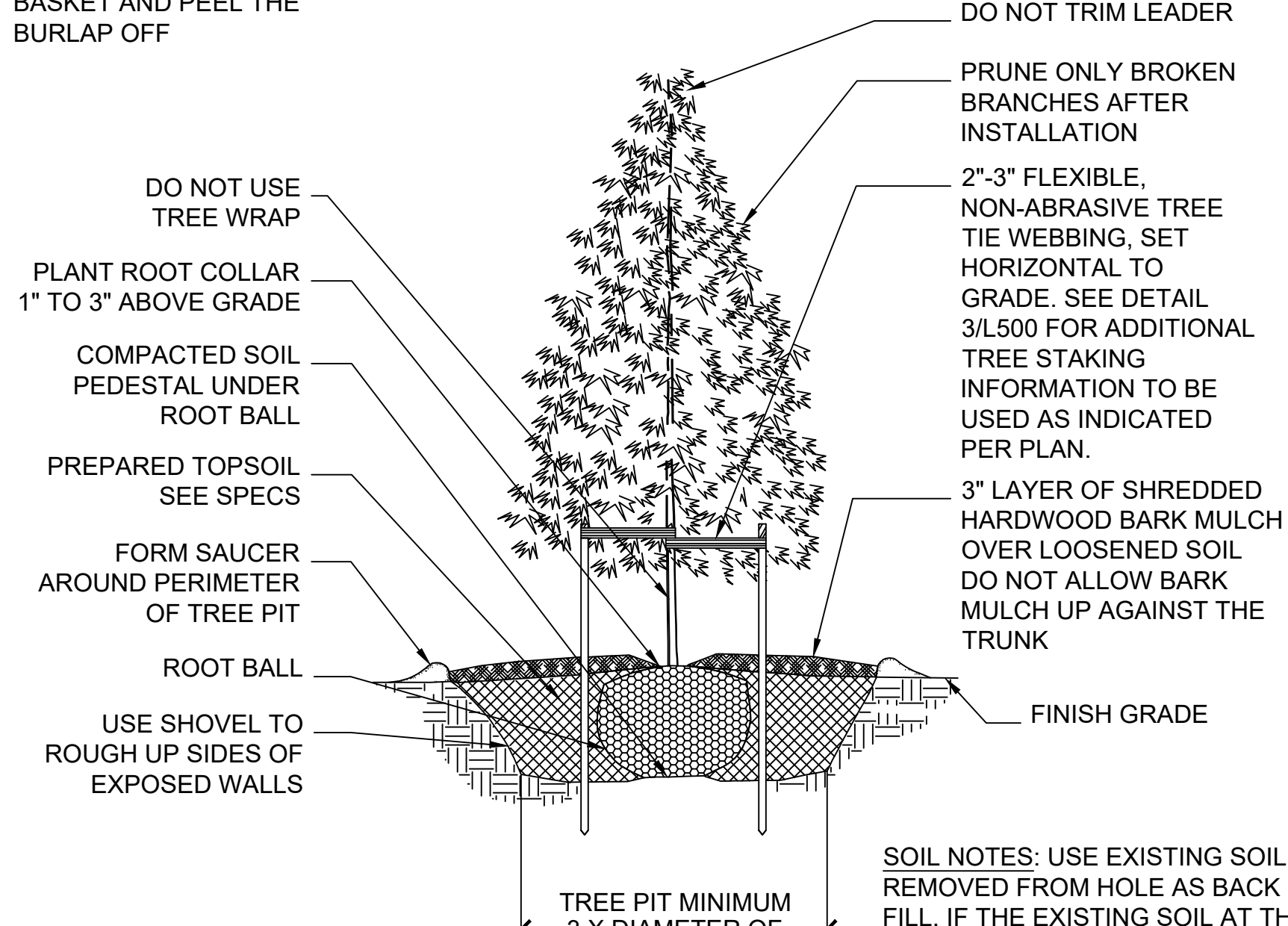


**4 DECIDUOUS TREE PLANTING**

SECTION NTS

**B & B NOTES:** REMOVE THE ROPE AROUND TRUNK, PEEL THE TOP OF BURLAP BACK AND SCRAPE EXCESS SOIL TO EXPOSE THE ROOT COLLAR. REMOVE THE WIRE BASKET AND PEEL THE BURLAP OFF

**DNR NOTES:** THIS PLANTING DETAIL CONFORMS TO TREE PLANTING GUIDELINES AS SPECIFIED IN DNR DOCUMENT, 'DEVELOPING PLANTING SPECIFICATIONS' REVISED 10/25



**5 EVERGREEN TREE PLANTING**

SECTION NTS

SHEET NAME: <b>PLANTING DETAILS</b>	PROJECT NAME: <b>2023 GREEN INFRASTRUCTURE UPGRADES</b>	PROJECT ADDRESS: <b>RICHARD KLUGE CREATIVE ARTS SCHOOL 5760 N. 67TH STREET, MILWAUKEE, WI 53218</b>
	ISSUED FOR:	REV:
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100% CD		1/23/2023

DRAWN BY:	ZWA
REVIEWED BY:	KW
APPROVED BY:	MM
DATE:	January 2023

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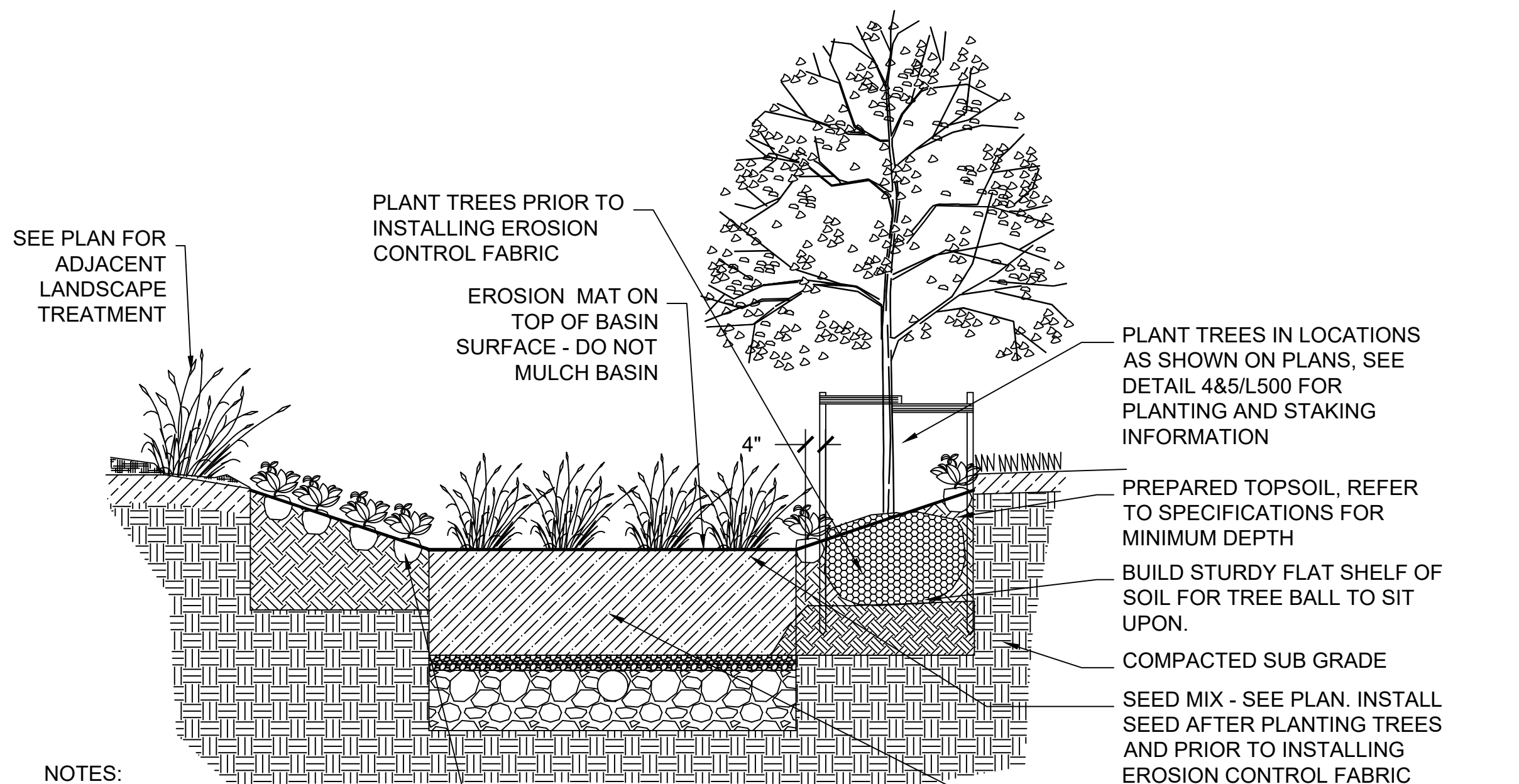
PROJECT NUMBER: 7429 (DIVISION 5)

SITE NUMBER: 337

SHEET:

**L500**

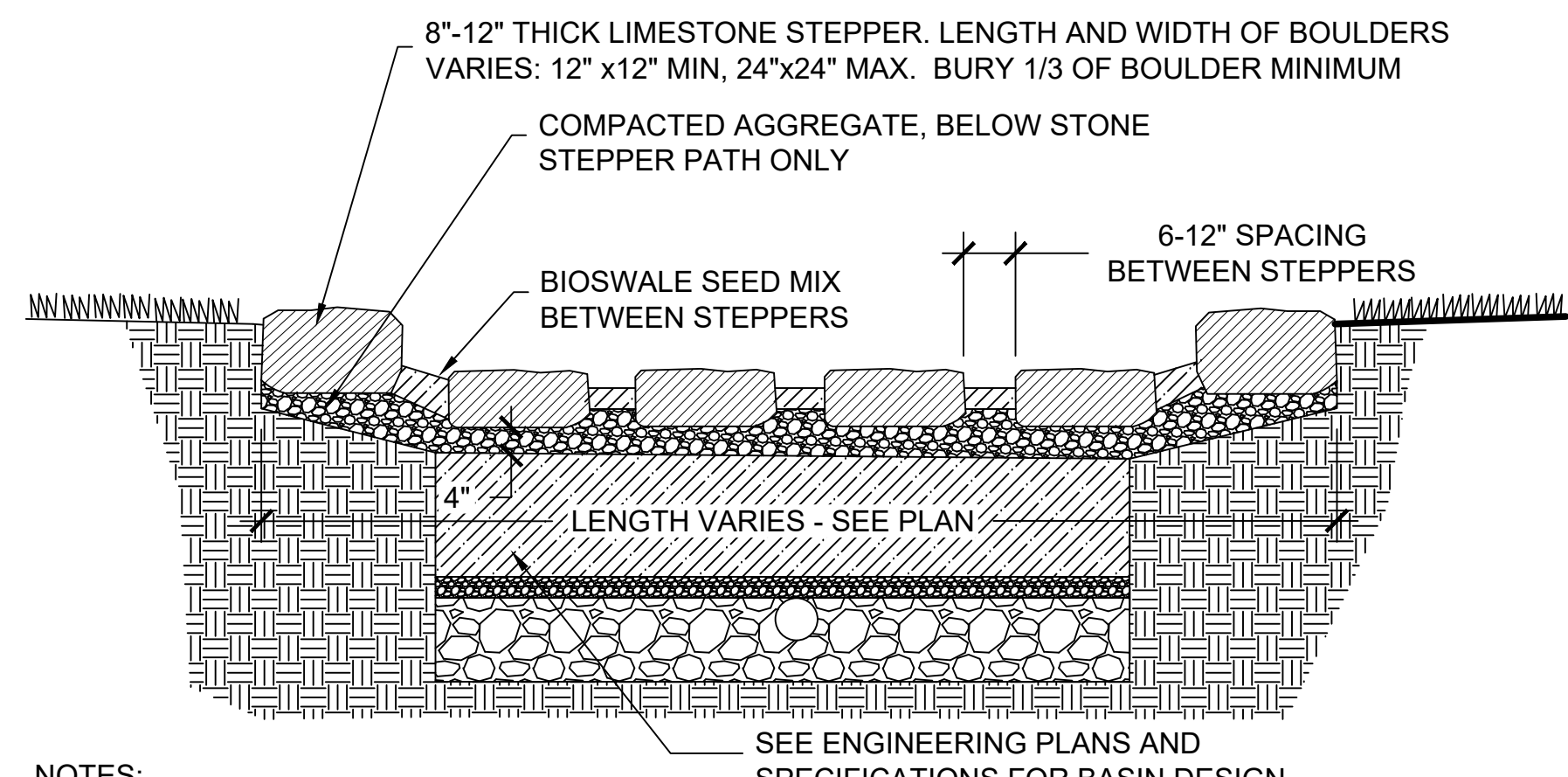




- NOTES:**
1. SEE PLAN FOR ARRANGEMENT OF PLANTS
  2. SEE SHRUB AND PERENNIAL PLANTING DETAILS FOR PROPER PLANTING PROCEDURES

**1 BIOFILTRATION BASIN WITH MIXED PLANT TYPES**

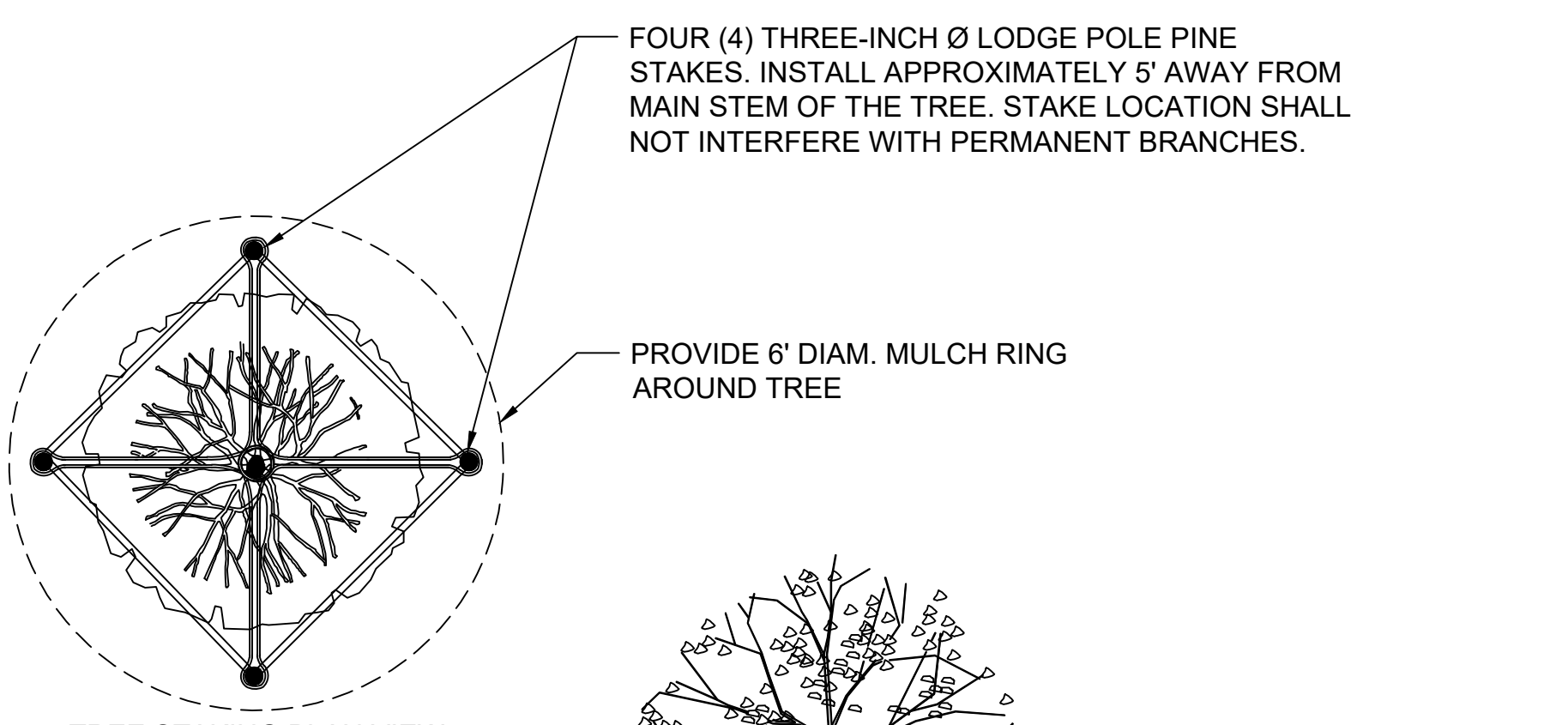
SECTION 0" 6" 12" 24"



- NOTES:**
1. HEIGHT DIFFERENCE TO BE 6" MAXIMUM.
  2. BOULDERS MUST REST IN A STABLE POSITION FULLY SUPPORTING ITS OWN WEIGHT. SUBGRADE AND SURROUNDING SOIL MUST BE STABLE AND CAPABLE OF SUPPORTING BOULDERS WITHOUT SETTLING.
  3. BOULDER EDGES SHALL BE SMOOTH AND ROUNDED. ALL SHARP POINTS AND EDGES SHALL BE REMOVED.

**2 BIOSWALE STEPPING STONE PATH**

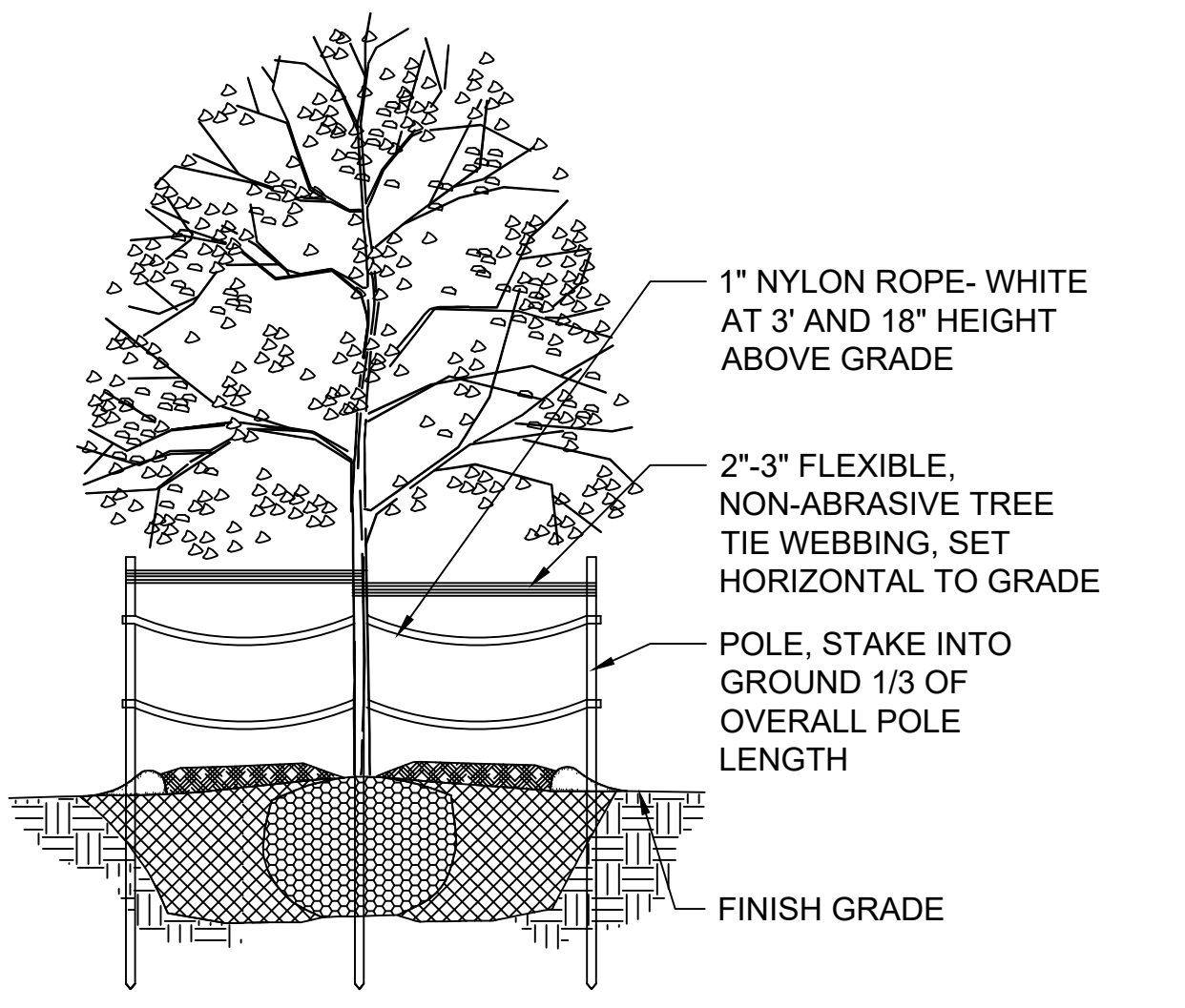
SECTION 0" 6" 12" 24"



TREE STAKING PLAN VIEW NO SCALE

**NOTE:**  
THIS DETAIL IS TO BE USED IN AREAS WHERE TREES ARE IN OPEN AREAS ONLY. SEE L300 FOR LOCATIONS.

REFER TO DETAIL 3/L500 FOR STAKING OF TREES WITHOUT ADDITIONAL INSTALLATION AND PROTECTION.



**3 TREE INSTALLATION AND PROTECTION STAKING**

SECTION NTS

**PLANTING NOTES**

1. CONTRACTOR SHALL INSPECT THE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS RELATED TO THE NATURE AND SCOPE OF WORK.
2. CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND AND ABOVE GROUND UTILITIES AND PROVIDE THE NECESSARY PROTECTION BEFORE CONSTRUCTION BEGINS.
3. CONTRACTOR SHALL VERIFY PLAN LAYOUT AND DIMENSIONS SHOWN AND BRING TO THE ATTENTION OF THE PRIME CONSULTANT DISCREPANCIES WHICH MAY COMPROMISE THE DESIGN AND/OR INTENT OF THE PROJECT'S LAYOUT.
4. CONTRACTOR SHALL ASSURE COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS GOVERNING THE WORK AND/OR MATERIALS SUPPLIED.
5. CONTRACTOR SHALL PROTECT EXISTING ROADS, CURBS/GUTTERS, TRAILS, SIDEWALKS, TREES, LAWNS AND OTHER SITE ELEMENTS DURING CONSTRUCTION OPERATIONS. DAMAGE TO SAME SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
6. CONTRACTOR TO MAINTAIN EXISTING GRADE WITHIN THE TREE CANOPY LINE (MINIMUM) OF TREES TO BE PRESERVED AND PROTECTED UNLESS OTHERWISE INDICATED ON THE PLANS. REFERENCE SPECIFICATIONS FOR ADDITIONAL TREE PROTECTION INFORMATION.
7. NO PRUNING SHALL BE PERFORMED ON TREES TO BE PRESERVED EXCEPT BY APPROVED ARBORIST.
8. NO EQUIPMENT SHALL OPERATE INSIDE THE DRIP LINE (AT MINIMUM) OF TREES TO BE PRESERVED.
9. HAND WORK ONLY AND NO MACHINERY OR MATERIAL STORAGE WITHIN DRIP LINE OF TREES TO BE PRESERVED.
10. EXISTING TREES TO REMAIN SHALL BE FERTILIZED AND PRUNED TO REMOVE DEAD WOOD, DAMAGED, AND/OR RUBBING BRANCHES.
11. CONTRACTOR SHALL COORDINATE THE PHASES OF CONSTRUCTION AND PLANTING INSTALLATION WITH OTHER CONTRACTORS WORKING ON THE SITE.
12. CONTRACTOR TO COMPLETE SOIL PREPARATION PER SPECIFICATIONS.
13. CONTRACTOR TO SUPPLY AND INSTALL SOD, TREES, SHRUBS, PERENNIALS, GRASSES, PLUGS, AND GROUNDCOVERS.
14. PROPOSED PLANT MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1 UNLESS NOTED OTHERWISE. DECIDUOUS SHRUBS SHALL HAVE AT LEAST 5 CANES AT THE SPECIFIED HEIGHT. ORNAMENTAL TREES SHALL HAVE NO "V" CROTCHES AND SHALL BEGIN BRANCHING NO LOWER THAN 3 FEET ABOVE ROOT BALL. SHADE TREES SHALL BEGIN BRANCHING NO LOWER THAN 6' ABOVE FINISHED GRADE.
15. ALL PLANTS AND TREES SHALL BE PLANTED PER DETAILS AND SPECS.
16. ALL TREES, AS IDENTIFIED ON THE PLANS, SHALL BE STAKED AS SHOWN ON THE PLANTING DETAILS UNLESS NOTED OTHERWISE ON THE PLANS.
17. NO PLANTS SHALL BE INSTALLED UNTIL FINAL GRADES AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
18. WHEN QUANTITIES ARE LISTED THEY ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL COUNTS MUST BE VERIFIED BY THE CONTRACTOR. IN THE CASE OF A DISCREPANCY BETWEEN THE LEGEND AND THE PLAN, PLANTS INDICATED ON THE PLAN SHALL SUPERCEDE QUANTITIES LISTED IN THE LEGEND. SPECIFICATIONS AND DETAILS TAKE PRECEDENCE OVER NOTES.
19. NO PLANT MATERIAL SUBSTITUTIONS WILL BE ACCEPTED UNLESS APPROVAL IS REQUESTED OF THE LANDSCAPE ARCHITECT BY THE LANDSCAPE CONTRACTOR PRIOR TO THE SUBMISSION OF BID AND/OR QUOTATION.
20. ADJUSTMENTS IN LOCATION OF PROPOSED PLANT MATERIAL MAY BE NEEDED IN FIELD. PRIME CONSULTANT MUST BE NOTIFIED PRIOR TO THE ADJUSTMENT OF PLANTS.
21. CONTRACTOR SHALL VERIFY PLANT QUANTITIES SHOWN ON THE PLAN AND PROVIDE A LIST TO THE CLIENT IDENTIFYING THE SPECIES AND SIZES TO BE USED THROUGHOUT THE PROJECT. THE LANDSCAPE ARCHITECT AND THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY SUBSTANDARD PLANT MATERIAL. REJECTED MATERIAL SHALL BE REMOVED FROM THE PROJECT SITE IMMEDIATELY.

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SEAL AND SIGNATURE

PROJECT NUMBER: 7429 (DIVISION 5)

SITE NUMBER: 337

SHEET: **L501**

