

2023 GREEN INFRASTRUCTURE UPGRADES

MILWAUKEE GERMAN IMMERSION ELEMENTARY SCHOOL

SITE #146

3778 N. 82ND STREET, MILWAUKEE, WI 53222

FINAL PLAN SET

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STORMWATER
SOLUTIONS
ENGINEERING LLC

PRIME CONSULTANT

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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 STAGE. 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
SWINGS AND POUR IN PLACE RUBBER SURFACE:**
 REMOVE ASPHALT SURFACE AND SUBBASE TO PREP SUBSURFACE FOR THE INSTALLATION OF SWINGS, SUBSURFACE STORAGE AND DRAINAGE, AND POUR-IN-PLACE RUBBER SURFACE, AS INDICATED ON THE PLANS. INCLUDE TREE PLANTING AND GROUND COVERING AS INDICATED ON THE PLANS.

**MANDATORY ALTERNATE BID #3
2-5YR OLD NATURE PLAY AREA**
 INSTALLATION OF RAISED CONCRETE CURB, ENGINEERED WOOD FIBER SURFACING WITH SUBSURFACE STORAGE, AND NATURE PLAY EQUIPMENT FOR 2-5 YEAR OLDS. IN BASE BID, INCLUDE THE INSTALLATION OF PERFORATED UNDERDRAIN WITH A 9-IN NDS DRAIN INLET AS 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: 7331 (DIVISION 1)

PROJECT APPROVAL BY:



MILWAUKEE
PUBLIC SCHOOLS

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:

PLAT LINE	----
FENCE LINE	-----x-----x-----
PROPERTY LINE	-----
RIGHT-OF-WAY	-----
EASEMENT LIMITS	-----
C/L ROAD	-----
1' CONTOUR MAJOR	-----
1' CONTOUR MINOR	-----
FIBER OPTIC BURIED	-----FO-----
CATV BURIED	-----CFV-----
TELEPHONE BURIED	-----AFT-----
GAS SERVICE	-----GAS-----
ELECTRIC BURIED	-----E-----
HAND RAIL	-----x-----x-----
OVERHEAD WIRES	-----OHW-----
SANITARY SEWER	-----SAN-----
COMBINED SEWER	-----CMB-----
STORM SEWER	-----STM-----
WATER SERVICE	-----WM-----
CONIFEROUS TREE	
DECIDUOUS TREE	
BUSH	
NSE CONTROL	
SPOT GRADE	
PROPERTY CORNER	
CONCRETE NAIL	
CONCRETE MONUMENT	
GUARD POST	
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	
STONE	
LAWN OR CHIP AREAS	
CONCRETE PAVEMENT	
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	
PERFORATED UNDERDRAIN	-----
STORM SEWER PIPE	-----

-----	ALTERNATE
	ASPHALT PAVING
-----	DRAINAGE SWALE
-----	GRADE BREAK
	STORMWATER DRAINAGE DIRECTION
x #11	EXISTING SPOT GRADE
x #07	PROPOSED SPOT GRADE
•••	BOLLARDS
-----	LIMIT OF WORK
-----	EQUIPMENT USE ZONE - EXTEND A MIN. 6' OF IMPACT SURFACING BEYOND EDGE OF PLAY EQUIPMENT
	CHAIN-LINK FENCE
	DECORATIVE FENCE W/ MESH
	DECORATIVE LOW ROPE FENCE
	PROPOSED TREE, SEE PLANTING PLAN
	PLANTING AREA 1 - LAWN / MICRO CLOVER
	SOD
	PLANTING AREA 2 - URBAN UPLANDS
	BIOSWALE PLANTING
	POURED IN PLACE RUBBER SURFACE
	4" ENGINEERED WOOD FIBER SURFACE
	12" ENGINEERED WOOD FIBER SURFACE
	PERMEABLE PAVERS SURFACE
	CONCRETE PAVING
	WOOD ART POSTS
	STEPPING STONE PATH - BIOSWALE
	ADA COMPANION SEATING 36"x48" CLEAR SPACE
	PICNIC TABLES
	EXPANDED METAL BENCHES
	CONCRETE BENCHES
	CONCRETE BENCHES PLANTERS (TYP. OF 2)
	SEATING NOOKS
	CONCRETE ADA RAMP
	NATURE PLAY GROUND - LOG CLIMBERS ARE COMPOSED OF 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 LONG AS IT MEETS SAFETY REGULATIONS A PROJECT SPECIFICATIONS. PLAY COMPONENTS MUST MEET ASTM AND CSPC SAFETY GUIDELINES. ALL SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
	OVERHEAD STRUCTURE
	BELT SWING SET
	RAIN MEASURING POST
	SIGN POST
	SENSORY BOARD
	MUSICAL INSTRUMENTS
	BASKETBALL HOOP
	FUNNEL BALL

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. 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
MMSD	MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
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
SO	SQUARE
ST	STREET
STA	STATION
STD	STANDARD
SW	SOUTHWEST
T&B	TOP AND BOTTOM
TOC	TOP OF CURB
TOS	TOP OF SLOPE
TOPO	TOPOGRAPHIC
TYP	TYPICAL
W/	WITH
WS	WATER SURFACE

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
BASE BID		
GENERAL & SITE PREP		
Mobilization	1	LS
Provide, install, maintain, and remove silt sock	825	LF
Provide, install, and maintain inlet protection	6	EA
Chain Link Fence Removal	241	LF
Existing play equipment and foundation removal	6	EA
Sawcutting	1,660	LF
Asphalt removal	82,500	SF
Stone base course removal	525	CY
Rough & fine grading	83,020	SF
Clean out existing catch basin	3	EA
Bench removal, onsite storage	2	EA
Clearing and grubbing - topsoil removal	680	SF
Underdrain storm sewer pipe removal	91	LF
Timber wood edge removal	45	LF
Curb removal	27	LF
Concrete sidewalk removal	102	SF
UTILITIES		
6" perforated PVC underdrain and fittings	565.6	LF
6" solid PVC storm sewer pipe and fittings	218	LF
8" solid PVC storm sewer pipe and fittings	177	LF
6" Clean out with cast iron lid and fitting	9	EA
18 in diameter standpipe (Nyloplast)	1	EA
Metal lockable beehive grate (Nyloplast)	1	EA
Neenah R-2561-A Beehive Grate and Casting	2	EA
NDS 9" catch basin kit with galvanized grate	1	EA
Core into existing trapped manhole	2	EA
Adjust rim elevation of existing catch basin	2	EA
BIOSWALE		
Bioswale engineered media	592	CY
Bioswale No. 1 clear stone	440	TONS
Bioswale pea gravel	110	TONS
Bioswale jute mat	1920	SY
Cobble drain inlet	5	EA
6" Animal guard	5	EA
Cobble channel inlet	6	EA
PERMEABLE PAVERS		
Permeable paver, setting bed, and joint stone	7361	SF
Permeable paver No. 1 clear stone	354	TONS
Permeable paver metal edging (see Landscape)		
HARDSCAPE		
Asphalt curb	330	LF
Asphalt paving / patch	7248	SF
5" concrete slab / walkway	597	SF
Concrete Stage	904	SF
Raised concrete curb	252	LF
ADA concrete ramp	1	EA
Stone stepping stones	84	LF
12" engineered wood fiber (EWF)	1371	SF
EWF No. 1 clear stone	66	TONS
4" engineered wood fiber (EWF) and subbase	477	SF
Crack fill & clean asphalt surface	38825	SF
Cobble Paved Surface	145	SF
Painted Play	1	LS
6" Concrete apron, curb, sidewalk, and driveway	720	SF
Prep, crackfill, and Bituminous Surface Treatment for parking lot	16550	SF
FURNITURE & EQUIPMENT		
Basketball Hoops	1	EA
Nature Play (log steppers and balancing logs)	1	LS
Musical Instruments	1	LS
Picnic Tables	12	EA
Metal Bench	3	EA
Concrete circular tree planter	2	EA
Concrete semi-circle seating area	2	LS
Concrete benches	33	EA
Sensory Panel	2	EA
Rain Measuring Post	1	EA
Sign Post	1	EA
Art Posts	12	EA
Maypole Post	1	EA
Relocated Benches	2	EA
Seating Nook	3	EA
Bollard - Recycled from Fence Posts	2	EA
Bollard - Collapsible	1	EA
LANDSCAPE		
Metal edging, steel	777	LF
Topsoil, imported and placed	1,021	CY
Sod	2,743	SY
Bioswale seed	6,570	SF
MicroClover/ Lawn Seed	12,319	SF
Shade trees, 3" cal.	53	EA
Perennials and grasses - plugs	9,081	EA
Grasses in Raised Planter - cont.	14	EA
Mulch - shredded hardwood / 3" cover	140	SF
Tree protection staking	36	EA
Urban Erosion Control Mat for Urban Planting areas	181	SY
FENCING		
Cedar mesh fence	81	LF
Extend 6' fence to 12' chain link fence	0	LF
Rope Fence	410	LF
4' Chainlink Fence	57	LF
6' Chainlink Fence	102	LF

ALTERNATE BID	
1 OVERHEAD STRUCTURE	
Overhead Structure	1 EA
2 SWINGS WITH PIP SURFACING	
Sawcutting	108 LF
Asphalt and/or stone base removal	81 CY
Rough & fine grading	2,377 SF
Asphalt patch	118 SF
6" perforated PVC underdrain and fittings	50 LF
6" solid PVC storm sewer pipe and fittings	64 LF
6" Clean out with cast iron lid and fitting	1 EA
6" Animal guard	1 EA
Topsoil, imported and placed	12 CY
MicroClover/ Lawn Seed	537 SF
Shade trees, 3" cal.	2 EA
Tree protection staking	2 EA
PIP Surfacing	1772 SF
Arched Swing	1 EA
3 2-SYR OLD NATURE PLAY AREA	
Raised concrete curb	140 LF
12" engineered wood fiber (EWF)	1122 SF
EWF No. 1 clear stone	54 TONS
Nature Play (log steppers and balancing logs)	1 LS
Raised concrete curb	252 LF
ADA concrete ramp	1 EA

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

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

SEAL AND SIGNATURE

PROJECT NUMBER: 7331 (DIVISION 1)
 SITE NUMBER: 146
 SHEET: **G001**



ISSUED FOR:	REV:	DATE:
50% CD		11/14/2022
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DRAWN BY:	KLK
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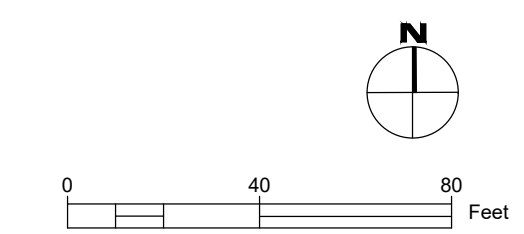
SEAL AND SIGNATURE

PROJECT NUMBER: 7331 (DIVISION 1)

SITE NUMBER: 146

SHEET:

C001



LEGEND:

CONIFEROUS TREE	BUILDING
DECIDUOUS TREE	ASPHALT PAVEMENT
BUSH	CONCRETE PAVEMENT
NSE CONTROL	STONE
SPOT GRADE	LAWN OR CHIP AREAS
PROPERTY CORNER	
CONCRETE NAIL	
CONCRETE MONUMENT	
GUARD POST	
SIGN	
YARD LIGHT	
STREET LIGHT	
ELECTRIC MANHOLE	
ELECTRIC PEDESTAL	
ELECTRIC POLE	
ELECTRIC METER	
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CATCH BASIN/INLET	
MANHOLE	
TELEPHONE MANHOLE	
TELEPHONE PEDESTAL	
CATV PEDESTAL	
HANDHOLE	
GAS VALVE	
GAS METER	

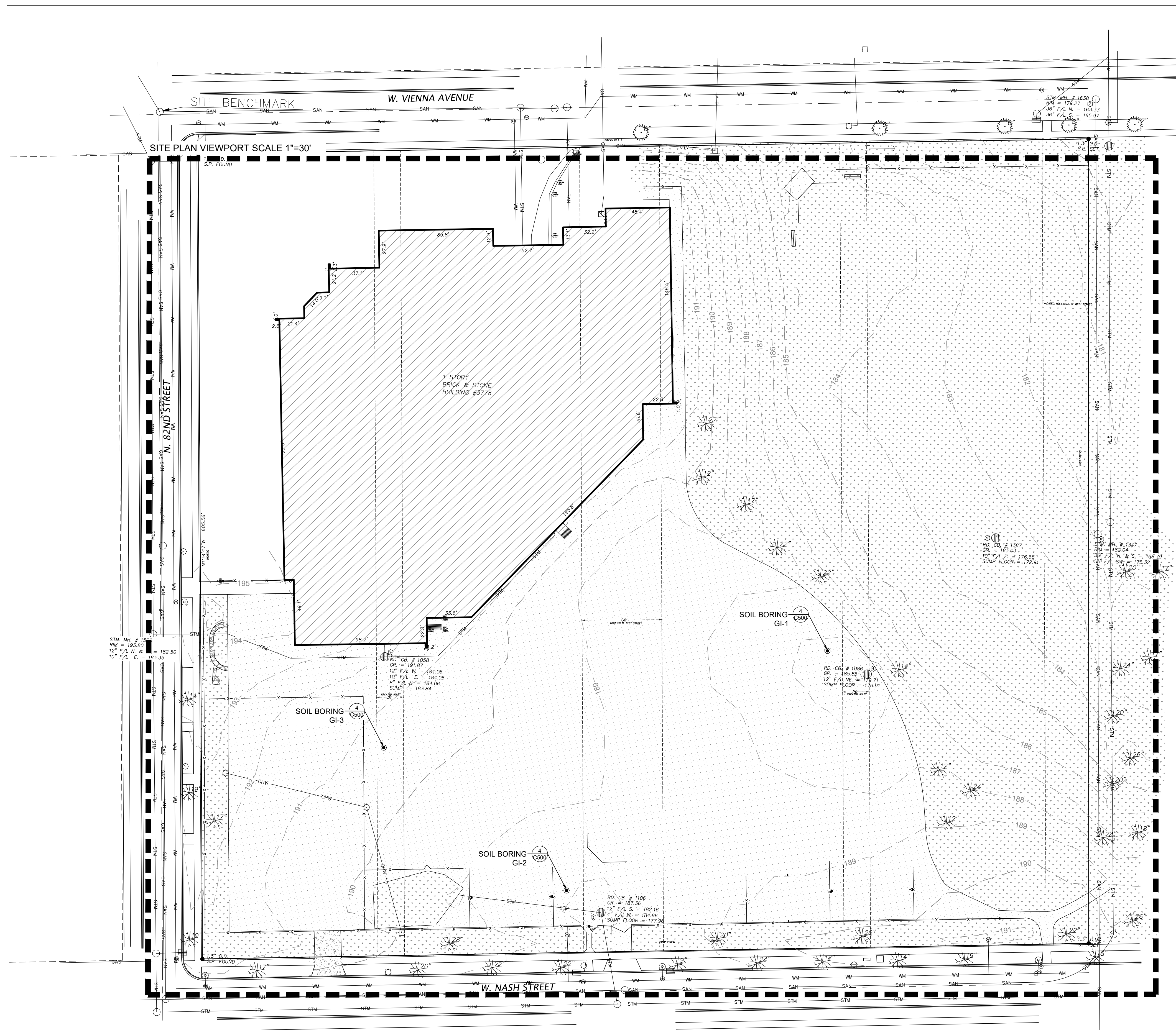
PLAT LINE	---
FENCE LINE	-x-x-
PROPERTY LINE	---
RIGHT-OF-WAY	---
EASEMENT LIMITS	---
C/L ROAD	---
1' CONTOUR MAJOR	---
1' CONTOUR MINOR	---
FIBER OPTIC BURIED	FO
CATV BURIED	CTV
TELEPHONE BURIED	TF
GAS SERVICE	GAS
ELECTRIC BURIED	E
HAND RAIL	-x-x-
OVERHEAD WIRES	OHW
SANITARY SEWER	SAN
COMBINED SEWER	CMB
STORM SEWER	STM
WATER SERVICE	WM

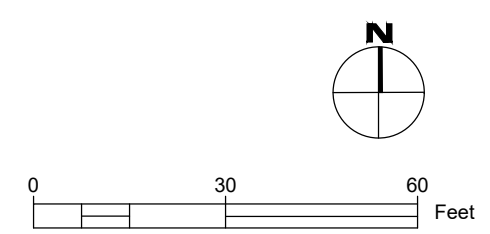
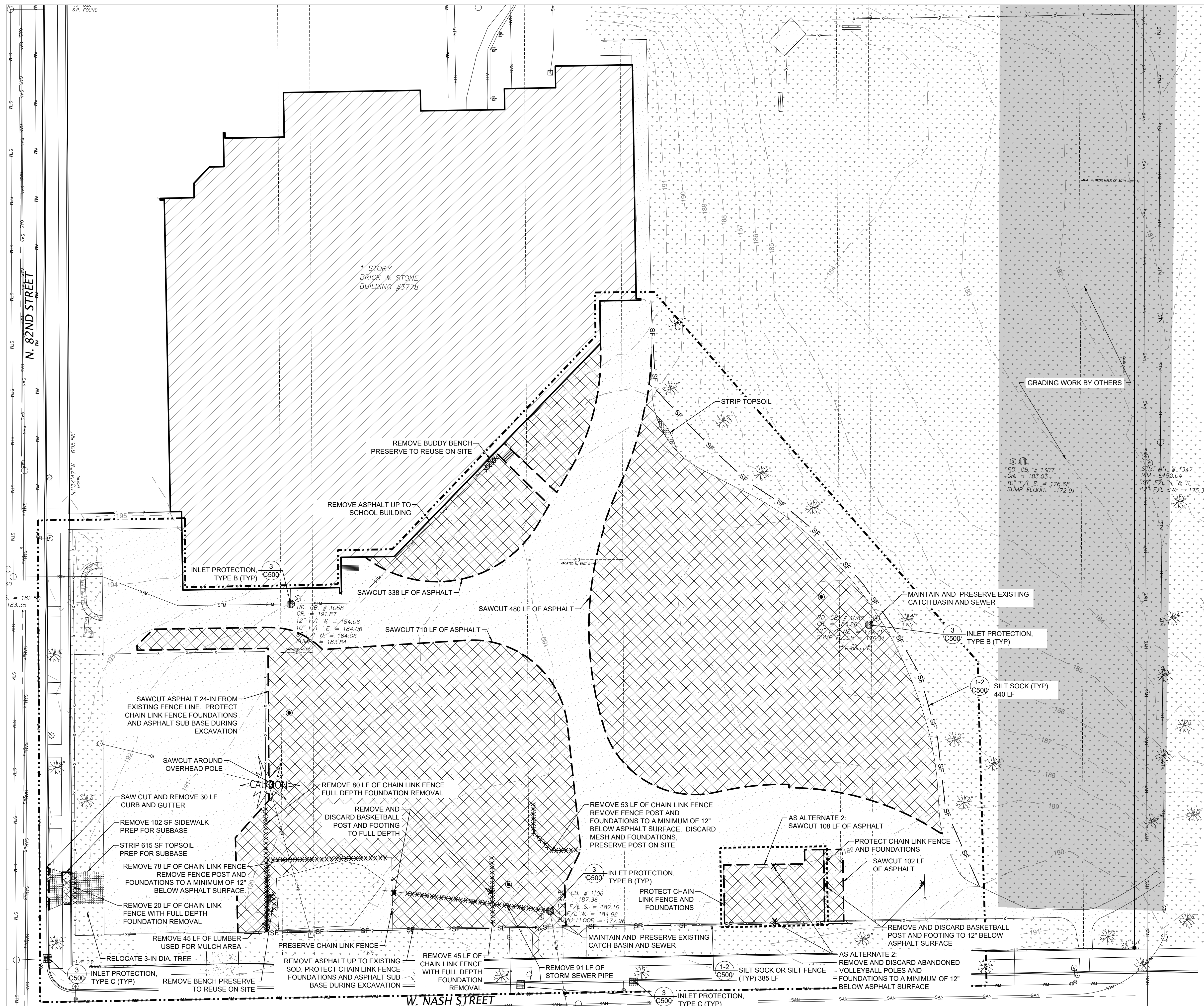
GENERAL NOTES:

1. SURVEY PREPARED BY NORTH SHORE ENGINEERING, INC. REFER TO PLAT OF SURVEY FOR FULL EXISTING CONDITION DETAILS.
2. UTILITIES MARKED BY DIGGERS HOTLINE AND LOCATED BY ALL LINES.
3. 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:

1. MAIN BENCHMARK: REFERENCE BENCHMARK FOR SECTION CORNER LOCATION: N. 84TH STREET & W. CAPITOL DRIVE DESCRIPTION: FIRE HYDRANT BEHIND CURB LINE SE. CORNER OF INTERSECTION, TOP OF NOZZLE ELEVATION = 192.02 (CITY OF MILWAUKEE DATUM)
2. SITE BENCHMARK: SANITARY MANHOLE LOCATION: INTERSECTION OF N. 82ND STREET AND W. VIENNA AVENUE, AS SHOWN ON SURVEY DESCRIPTION: MANHOLE RIM ELEVATION = 189.93 (CITY OF MILWAUKEE DATUM)





LEGEND:

- PROPERTY BOUNDARY
- - - EXISTING MAJOR CONTOUR (5' INTERVAL)
- - - EXISTING MINOR CONTOUR (1' INTERVAL)
- - - ASPHALT SAW CUT LINE
- XXXXXX ASPHALT REMOVAL
- ||||| STRIPPED TOPSOIL
- XXXXXXX CONCRETE REMOVAL
- XXXXXXXXX REMOVALS (AS NOTED)
- X REMOVALS (AS NOTED)
- SF — SILT SOCK / SILT FENCE
- INLET PROTECTION
- ALTERNATE/FUTURE WORK
- LIMIT OF WORK

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, LLC. REFER TO PLAT OF SURVEY FOR FULL EXISTING CONDITION DETAILS.
8. 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.

GENERAL EROSION CONTROL NOTES

1. 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.
2. TEMPORARY EROSION CONTROL DEVICES TO BE INSTALLED PRIOR TO LAND DISTURBANCE ACTIVITIES.
3. CONTRACTOR TO CONDUCT ALL ACTIVITIES ON THE SITE IN A LOGICAL SEQUENCE TO MINIMIZE THE AREA OF UNSTABILIZED SOIL AT ANY ONE TIME.
4. EROSION CONTROL MEASURES TO REMAIN IN PLACE AND BE MAINTAINED UNTIL SUCH TIME WHEN CONSTRUCTION HAS BEEN COMPLETED AND FINAL STABILIZATION HAS BEEN ESTABLISHED.
5. CONTRACTOR TO PERFORM PERIODIC STREET, PLAYGROUND, AND PARKING LOT SWEEPING TO MAINTAIN THE PUBLIC STREET FREE OF DUST AND SOIL.
6. 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.
7. CONTRACTOR TO NOTIFY PERMITTING AGENCIES IN ACCORDANCE WITH PERMIT REQUIREMENTS.
8. CONTRACTOR TO REPAIR ANY SILTATION OR EROSION DAMAGE TO ADJOINING SURFACES AND DRAINAGE WAYS RESULTING FROM LAND DEVELOPMENT OR LAND DISTURBING ACTIVITIES.
9. KEEP A COPY OF THE EROSION CONTROL PLAN ON SITE FOR THE DURATION OF THE PROJECT.

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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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

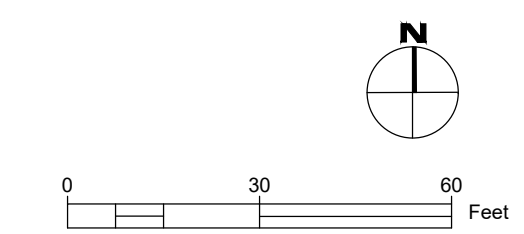
SHEET NAME: SITE PREPARATION AND EROSION CONTROL PLAN
PROJECT NAME: 2023 GREEN INFRASTRUCTURE UPGRADES
PROJECT ADDRESS: MILWAUKEE GERMAN IMMERSION ELEMENTARY SCHOOL
 3778 N. 82ND STREET, MILWAUKEE, WI 53222

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

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

SEAL AND SIGNATURE

PROJECT NUMBER: 7331 (DIVISION 1)
 SITE NUMBER: 146
 SHEET: **C002**



- LEGEND:**
- PROPERTY BOUNDARY
 - - - EXISTING MAJOR CONTOUR (5' INTERVAL)
 - - - EXISTING MINOR CONTOUR (1' INTERVAL)
 - ALTERNATE
 - - - - - LIMIT OF WORK
 - ASPHALT REMOVAL ONLY
 - ▨ MIN 2-IN BASE COURSE REMOVED
 - ▧ 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. 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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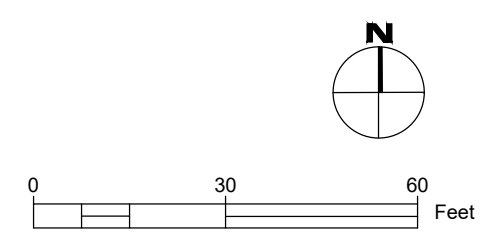
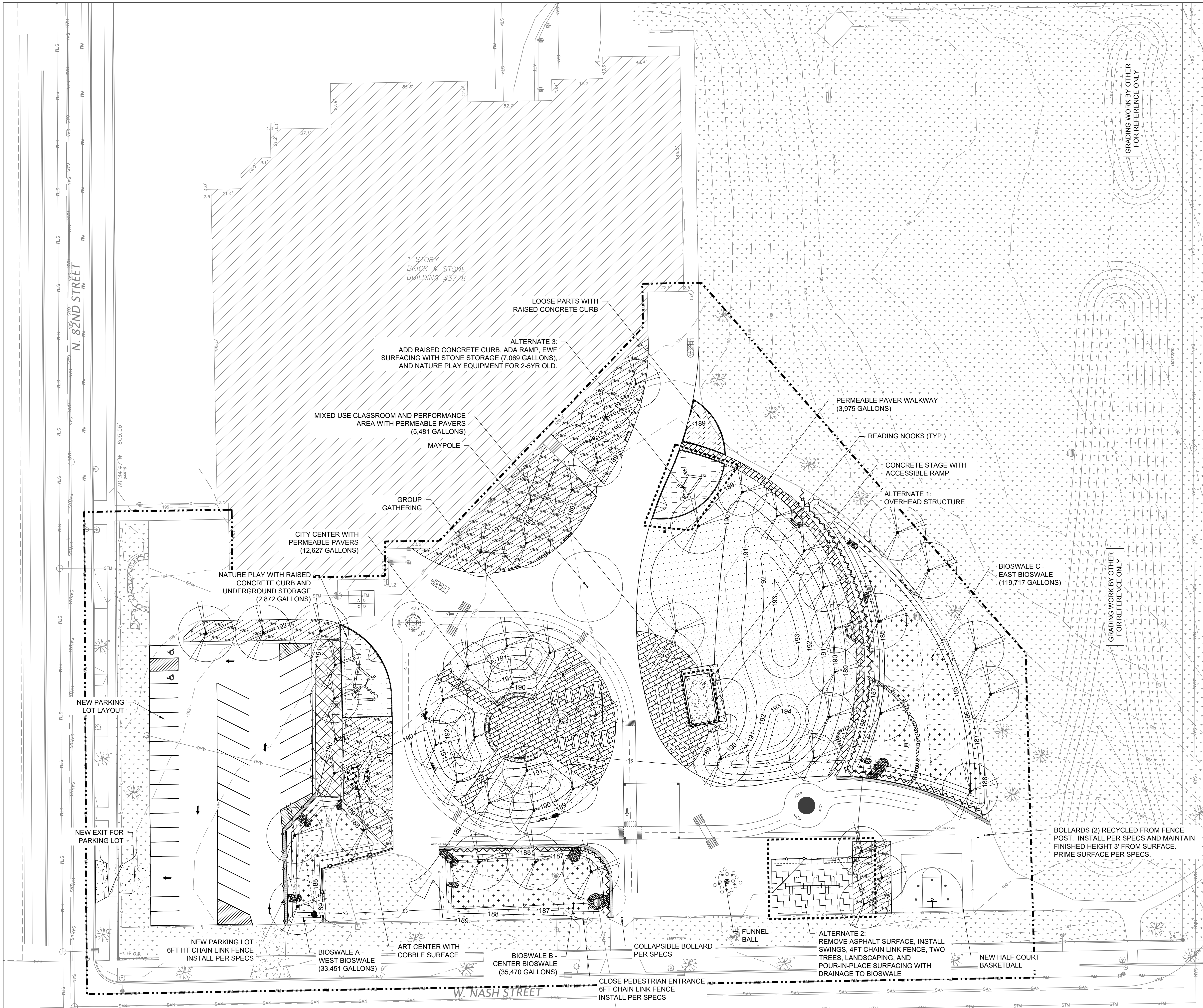
SHEET NAME: ASPHALT BASE COURSE REMOVAL PLAN
PROJECT NAME: 2023 GREEN INFRASTRUCTURE UPGRADES
PROJECT ADDRESS: MILWAUKEE GERMAN IMMERSION ELEMENTARY SCHOOL
 3778 N. 82ND STREET, MILWAUKEE, WI 53222

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

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

PROJECT NUMBER: 7331 (DIVISION 1)
SITE NUMBER: 146
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
- ⊙ CHAIN-LINK FENCE
- ⊙ DECORATIVE FENCE W/ MESH
- ⊙ DECORATIVE LOW ROPE FENCE
- ⊙ BEEHIVE GRATE
- CLEANOUT
- STORM INLET
- ⋯ PERFORATED UNDERDRAIN
- SS STORM SEWER PIPE
- BOLLARD - RECYCLED FROM FENCE POLES
- COLLAPSIBLE BOLLARD - AS SPECIFIED
- ⋯ ALTERNATE
- ▨ LAWN / MICRO CLOVER
- ▨ LAWN / SOD
- ▨ URBAN UPLANDS PLANTING
- ▨ BIOSWALE PLANTING
- ▨ 4" ENGINEERED WOOD FIBER
- ▨ 12" ENGINEERED WOOD FIBER
- ▨ POURED IN PLACE RUBBER
- ▨ PERMEABLE PAVERS
- ▨ CONCRETE PAVING
- ▨ EXISTING GRASS OR WOOD CHIP
- ⋯ LIMIT OF WORK

GENERAL NOTES:

1. CONTRACTOR IS TO REFER TO SHEET L100 FOR PLANTING LAYOUT AND 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 FENCE BUILT WITH A WOODEN SNOW FENCE WITH HEAVY DUTY POSTS SHALL BE STALLED TO WITHSTAND A YEAR.
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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SHEET NAME:	SITE PLAN	PROJECT NAME:	2023 GREEN INFRASTRUCTURE UPGRADES
PROJECT ADDRESS:	MILWAUKEE GERMAN IMMERSION ELEMENTARY SCHOOL 3778 N. 82ND STREET, MILWAUKEE, WI 53222		

ISSUED FOR:	REV:	DATE:
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DRAWN BY:	KLK
REVIEWED BY:	CNH
APPROVED BY:	CBG
DATE:	January 2023

SEAL AND SIGNATURE
PROJECT NUMBER: 7331 (DIVISION 1)
SITE NUMBER: 146
SHEET:
C100



ISSUED FOR:	REV:	DATE:
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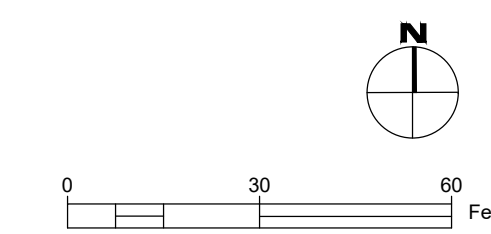
SEAL AND SIGNATURE

PROJECT NUMBER: 7331 (DIVISION 1)

SITE NUMBER: 146

SHEET:

C200

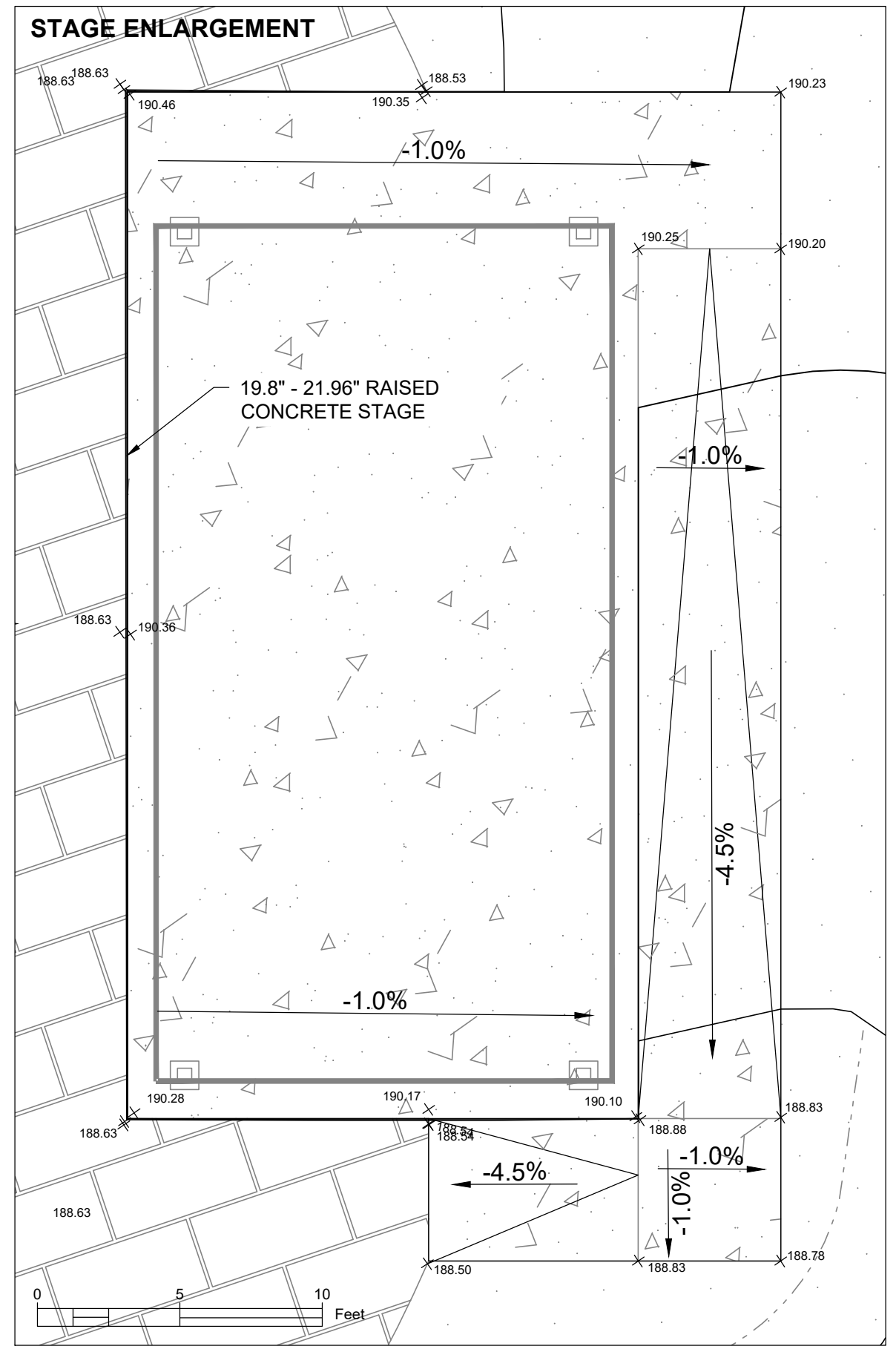


LEGEND:

- 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.01 EXISTING SPOT GRADE
- x.02 PROPOSED SPOT GRADE
- BEEHIVE GRATE
- CLEANOUT
- STORM INLET
- - - ALTERNATE
- ▨ ASPHALT PATCH
- ▨ CONCRETE PAVING
- ▨ LAWN / MICRO CLOVER
- ▨ LAWN / SOD
- ▨ URBAN UPLANDS PLANTING
- ▨ BIOSWALE PLANTING
- ▨ 4" ENGINEERED WOOD FIBER
- ▨ 12" ENGINEERED WOOD FIBER
- ▨ POURED IN PLACE RUBBER
- ▨ PERMEABLE PAVERS
- ▨ EXISTING GRASS OR WOOD CHIP
- - - 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 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.
- WALKING PATHS ARE GRADED TO MEET THE 2010 ADA STANDARD FOR ACCESSIBLE DESIGN: LONGITUDINAL SLOPES NO GREATER THAN 1:20 FEET, NO GREATER THAN 5% MAXIMUM, 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.



EXISTING ASPHALT SURFACE EXCEEDS 1.5%. TRANSITION TO CROSS SLOPE OF LESS THAN 1.5% WITHIN NEW WALKWAY

GRADING WORK BY OTHER FOR REFERENCE ONLY

GRADING WORK BY OTHER FOR REFERENCE ONLY

SLEDDING HILL, MAX SIDE SLOPE 4:1
REFER TO STAGE ENLARGEMENT

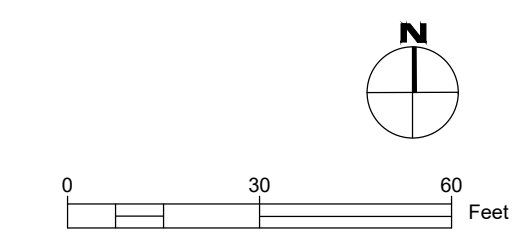
BIOSWALE C
MAX SIDE SLOPE 3:1
BOTTOM ELEVATION 185.0'

BIOSWALE A
MAX SIDE SLOPE 3:1
BOTTOM ELEVATION 187.50'

BIOSWALE B
MAX SIDE SLOPE 3:1
BOTTOM ELEVATION 186.50'

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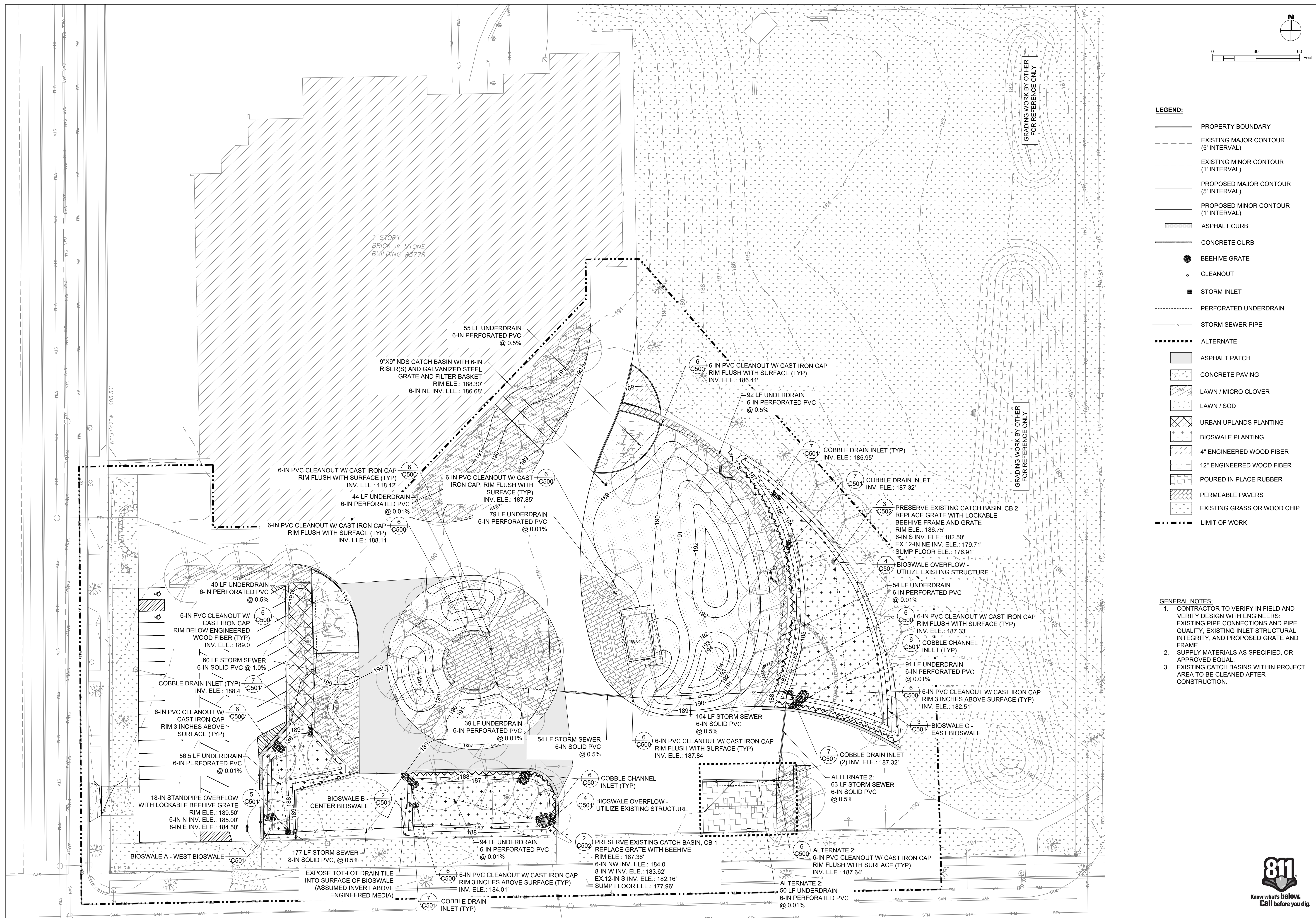


LEGEND:

- 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
- - - PERFORATED UNDERDRAIN
- STORM SEWER PIPE
- ALTERNATE
- ▨ ASPHALT PATCH
- ▨ CONCRETE PAVING
- ▨ LAWN / MICRO CLOVER
- ▨ LAWN / SOD
- ▨ URBAN UPLANDS PLANTING
- ▨ BIOSWALE PLANTING
- ▨ 4" ENGINEERED WOOD FIBER
- ▨ 12" ENGINEERED WOOD FIBER
- ▨ POURED IN PLACE RUBBER
- ▨ PERMEABLE PAVERS
- ▨ EXISTING GRASS OR WOOD CHIP
- LIMIT OF WORK

GENERAL NOTES:

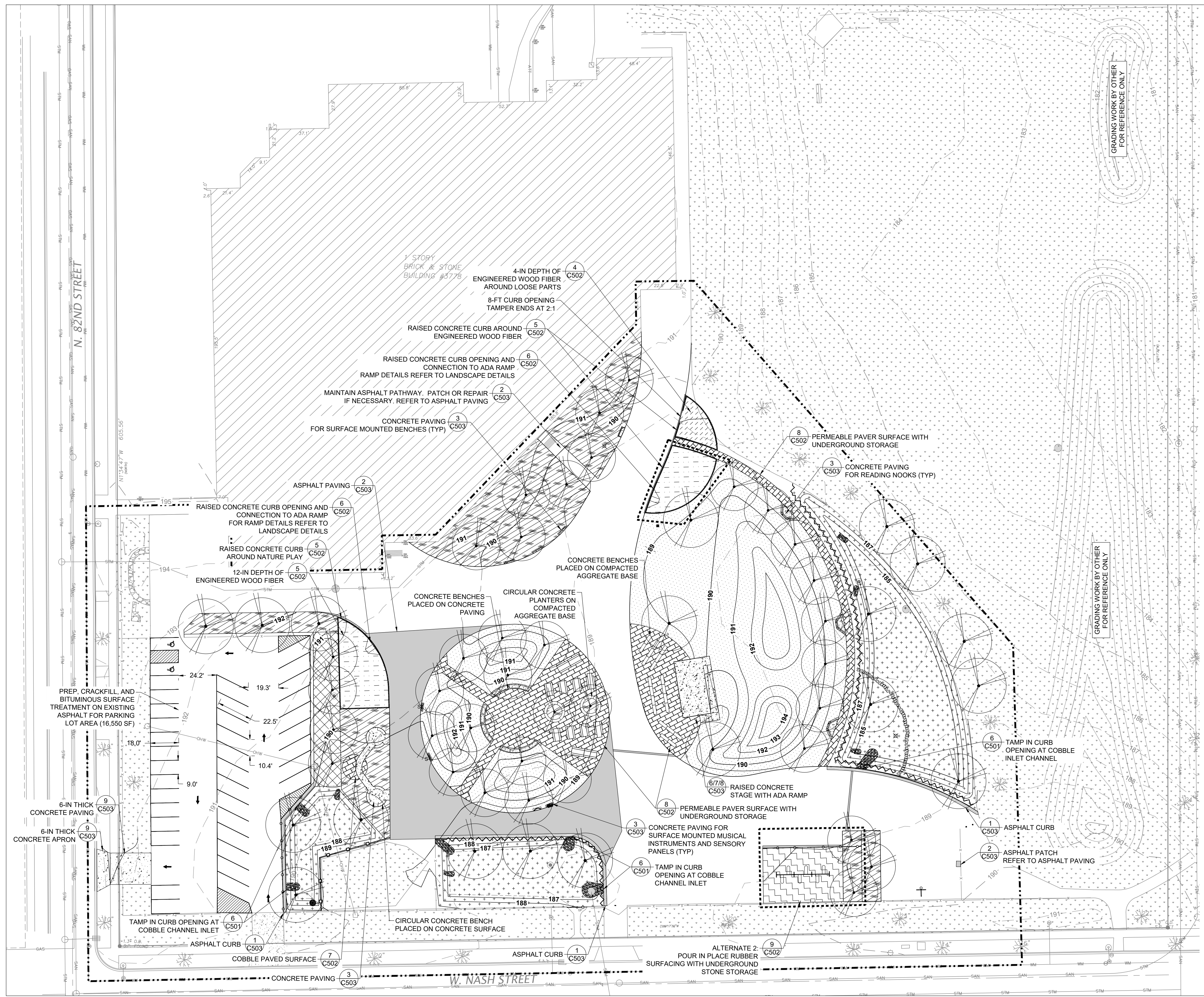
1. CONTRACTOR TO VERIFY IN FIELD AND VERIFY DESIGN WITH ENGINEERS: EXISTING PIPE CONNECTIONS AND PIPE QUALITY, EXISTING INLET STRUCTURAL INTEGRITY, AND PROPOSED GRATE AND FRAME.
2. SUPPLY MATERIALS AS SPECIFIED, OR APPROVED EQUAL.
3. EXISTING CATCH BASINS WITHIN PROJECT AREA TO BE CLEANED AFTER CONSTRUCTION.



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DATE:	January 2023
SEAL AND SIGNATURE	

PROJECT NUMBER:	7331 (DIVISION 1)
SITE NUMBER:	146
SHEET:	C400



- 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
 - ALTERNATE
 - ▭ ASPHALT PATCH
 - ▨ CONCRETE PAVING
 - ▨ LAWN / MICRO CLOVER
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 - ▨ URBAN UPLANDS PLANTING
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 - ▨ PERMEABLE PAVERS
 - ▨ EXISTING GRASS OR WOOD CHIP
 - LIMIT OF WORK

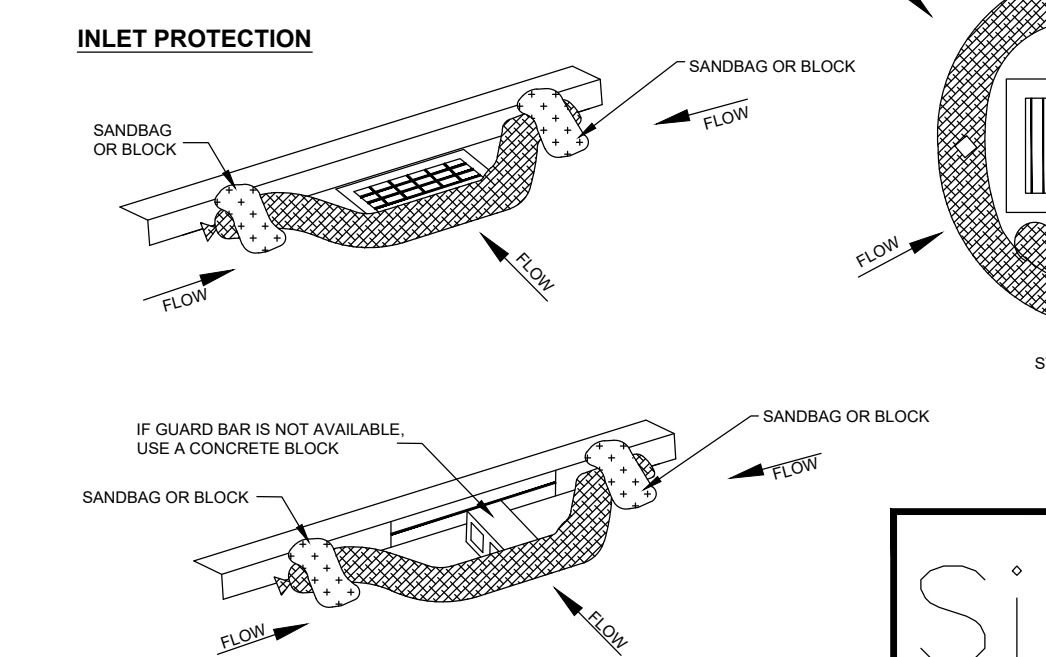
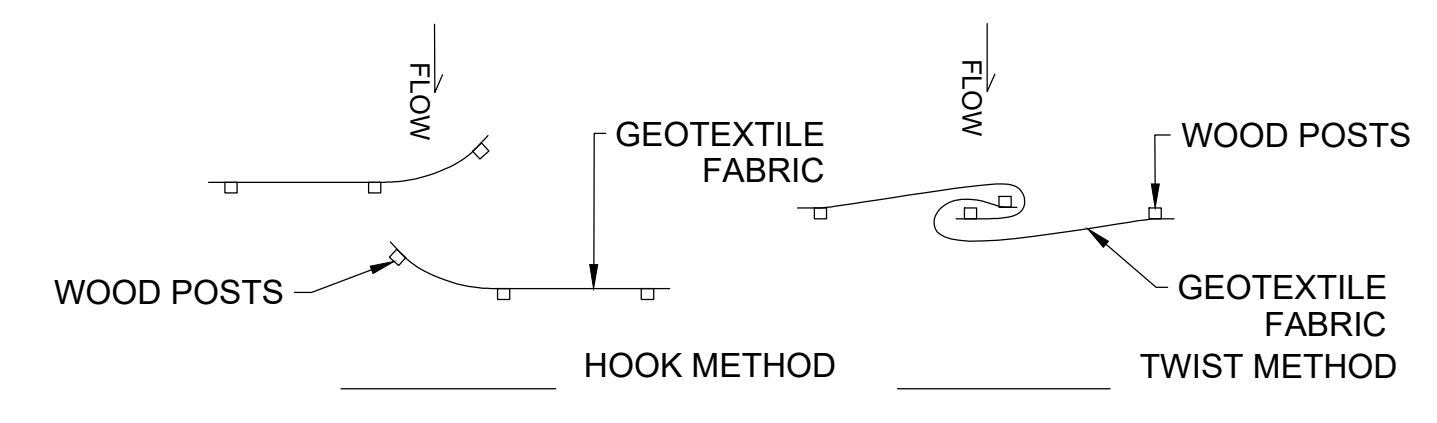
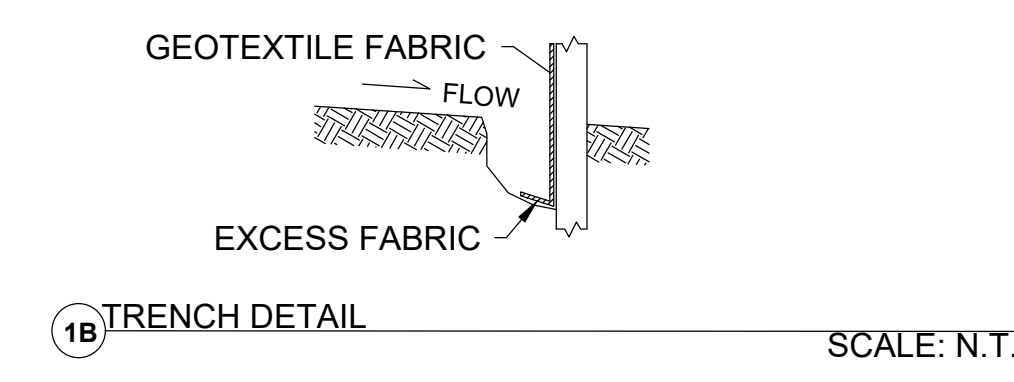
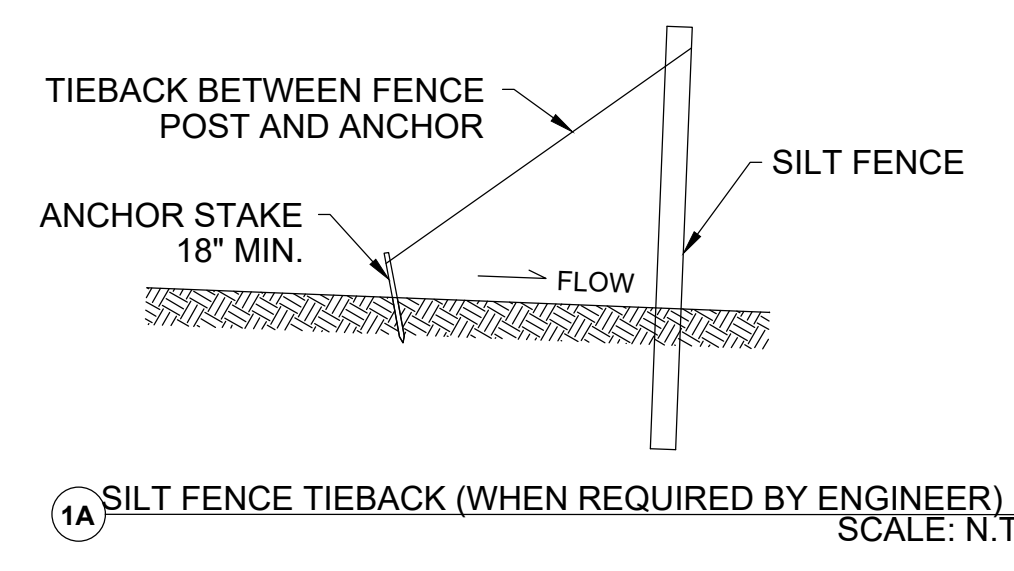
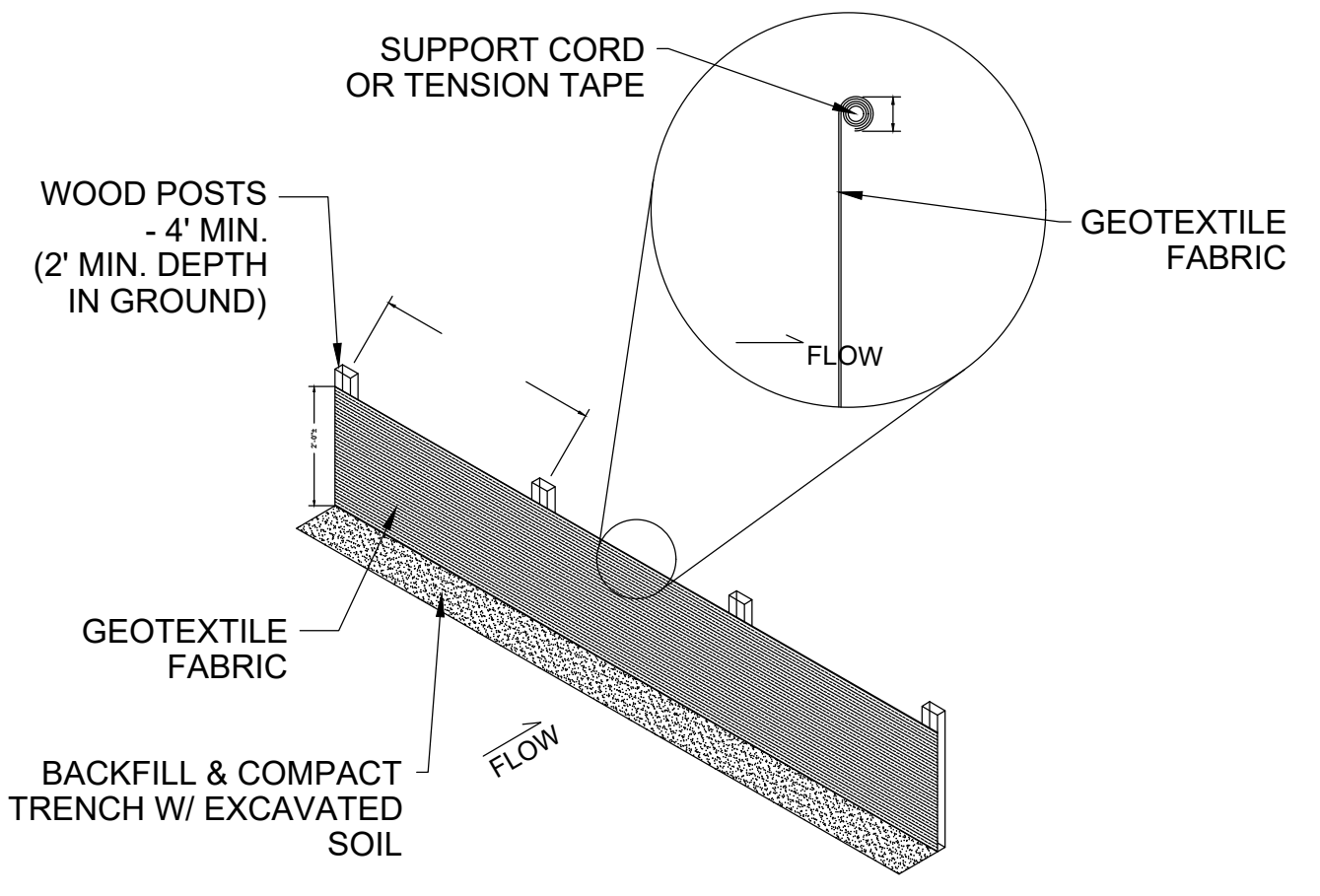
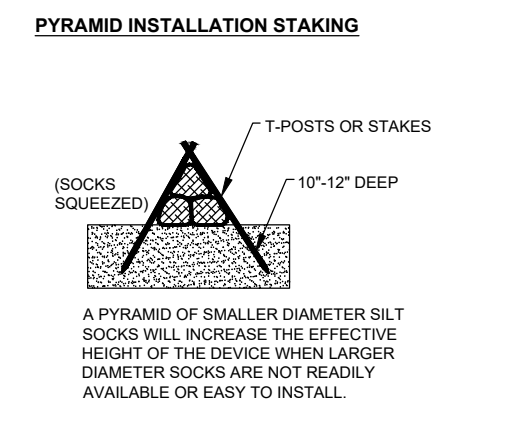
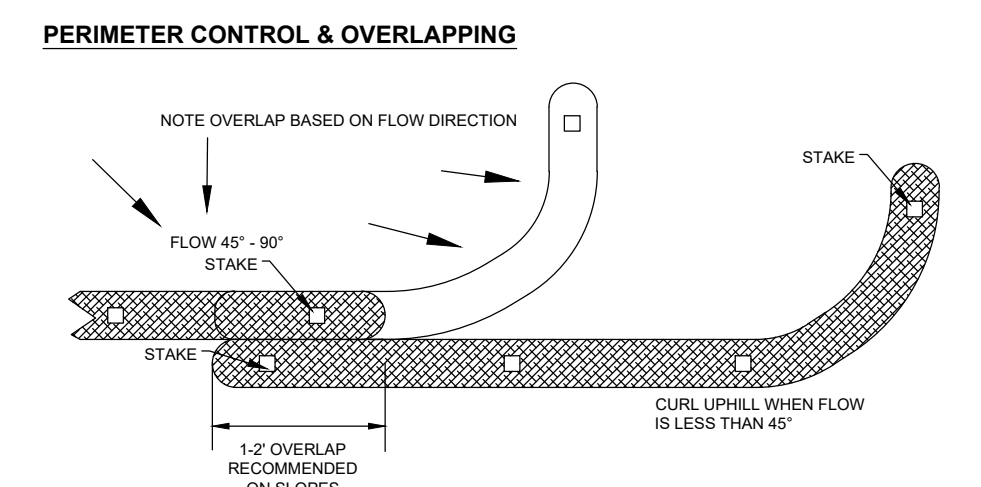
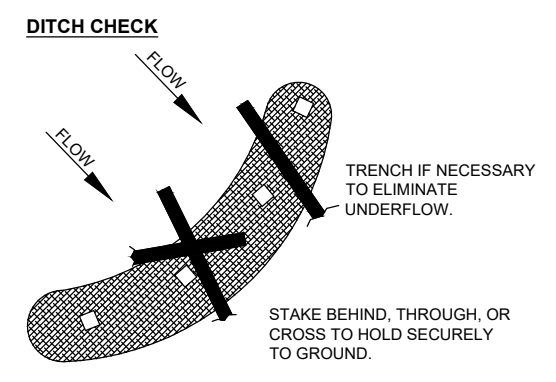
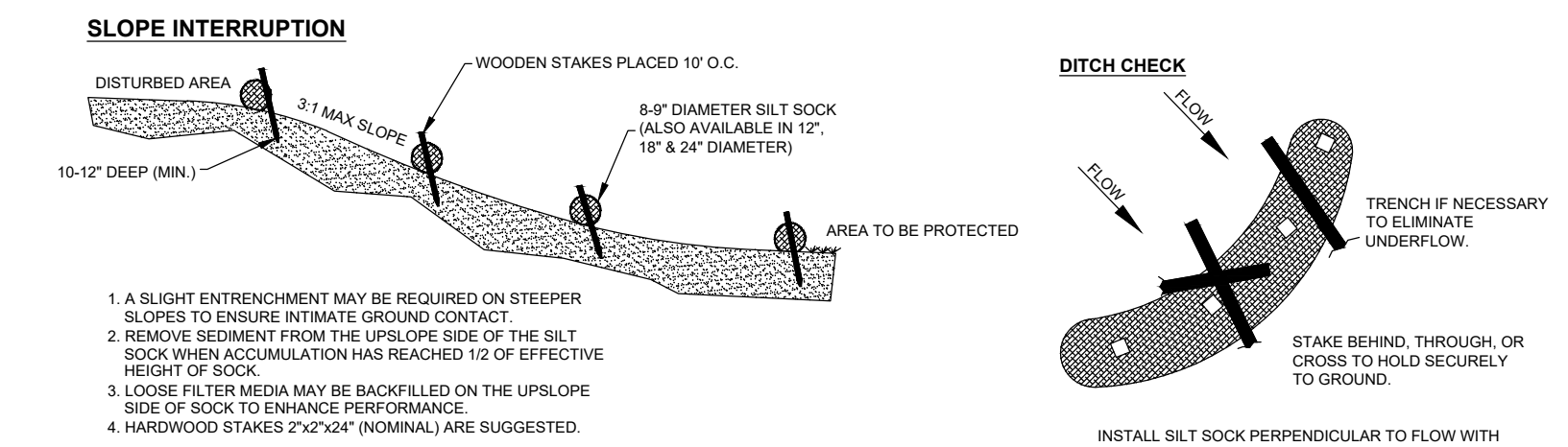
- GENERAL NOTES:**
- PREPARE ASPHALT SURFACE PRIOR TO PAVEMENT MARKINGS PER MPS SPECIFICATIONS.
 - REFER TO L200 FOR PAVEMENT MARKINGS.
 - PROVIDE COLOR SWATCHES TO MPS PROJECT MANAGER FOR PAINT COLOR SELECTION FOR PAVEMENT MARKINGS.
 - CONTRACTOR IS RESPONSIBLE FOR PROTECTING ASPHALT WHERE IT'S INTENDED TO REMAIN. ASPHALT DAMAGES CAUSED BY LACK OF PROTECTION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR.
 - ADDITIONAL DAMAGES TO ASPHALT FROM UNFORSEEN CONDITIONS WILL BE EVALUATED AT SUBSTANTIALLY COMPLETED.



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REVIEWED BY:	CNH
APPROVED BY:	CBG
DATE:	January 2023

SEAL AND SIGNATURE	
PROJECT NUMBER:	7331 (DIVISION 1)
SITE NUMBER:	146
SHEET:	C500



Silt Sock

EROSION CONTROL PRODUCTS

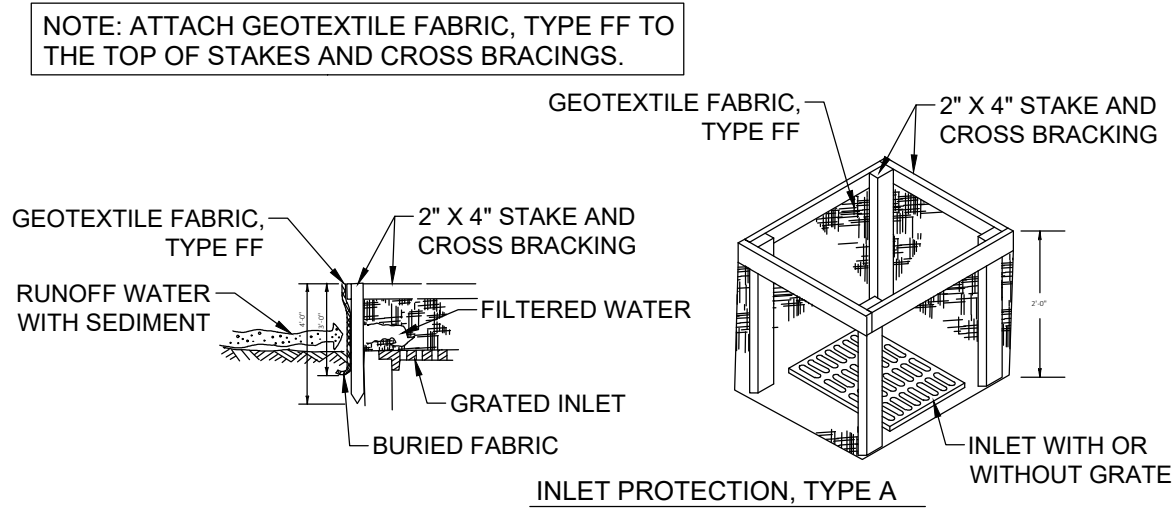
(608) 438-7625
WWW.SILT SOCK.NET

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

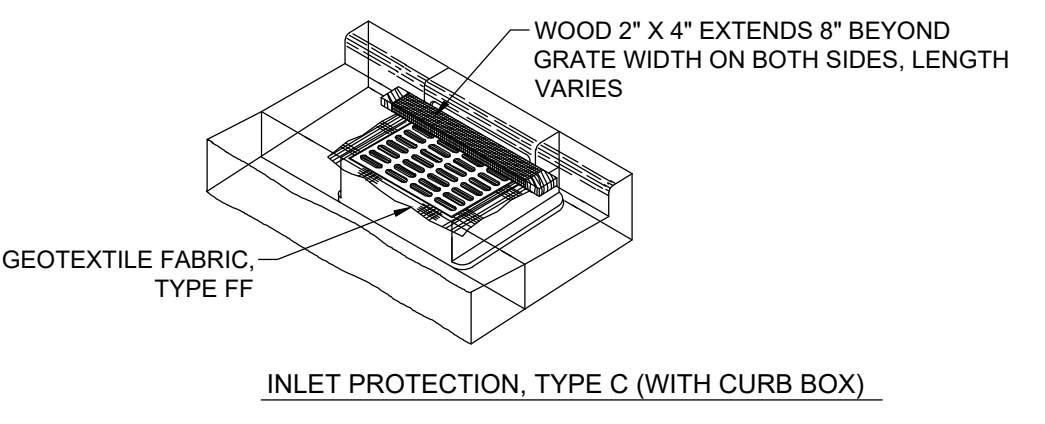
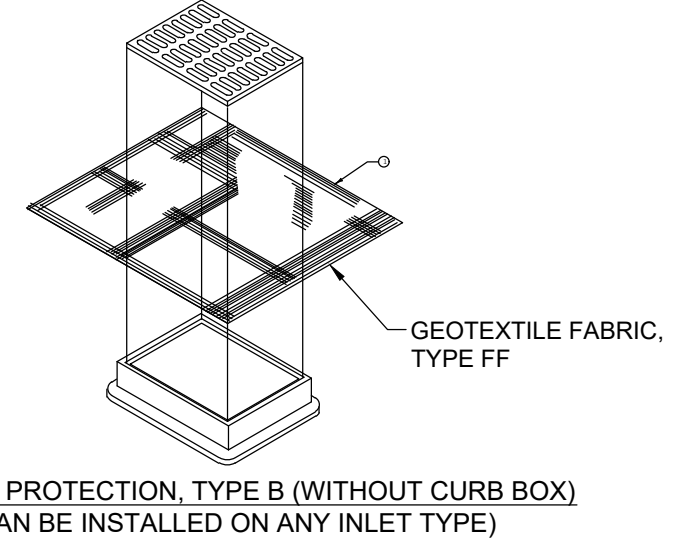
1 SILT SOCK NTS

2 SILT FENCE NTS

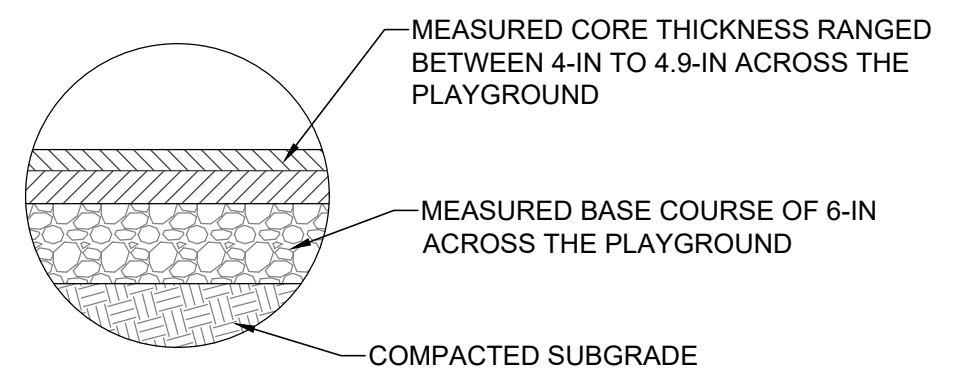
- 1 SILT FENCE SCALE: N.T.S.
- SILT FENCE NOTES:
- ADDITIONAL POST DEPTH OR TIEBACKS MAY BE REQUIRED IN UNSTABLE SOILS.
 - 8' POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.
 - HORIZONTAL BRACE REQUIRED WITH 2"x4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
 - FOR MANUAL INSTALLATIONS THE 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.
 - WOOD POSTS SHALL BE A MINIMUM OF 1 1/8" x 1 1/8" OF OAK OR HICKORY.
 - SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
 - 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.



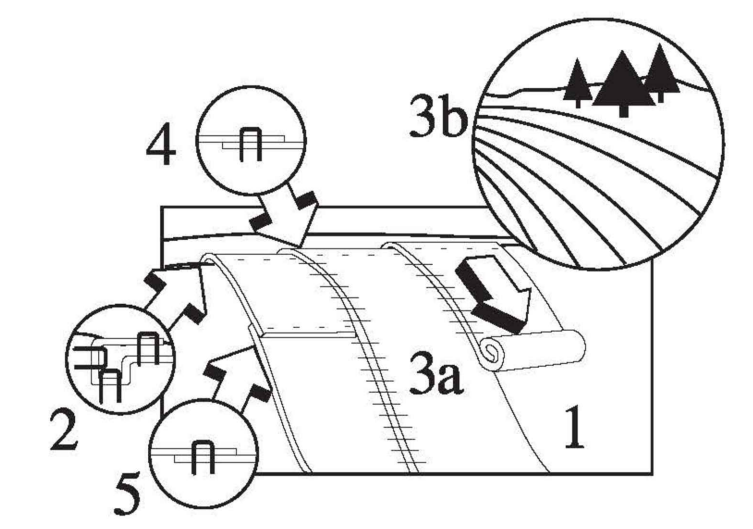
- INLET PROTECTION GENERAL NOTES:
- FABRIC SHALL BE REPLACED AT THE ENGINEERS DISCRETION.
 - MANUFACTURED ALTERNATIVE APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED FOR THE INLET PROTECTION TYPE SPECIFIED.
 - WHEN REMOVING OR MAINTAINING INLET PROTECT, CARE SHALL BE TAKEN SO THAT THE SEDIMENT RAPPED ON THE GEOTEXTILE FABRIC DOES FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.
 - 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.
 - FOR INLET PROTECTION, TYPE C, WITH A CURB BOX, AN ADDITIONAL 18" OF BARIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STABLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX.



3 INLET PROTECTION DETAIL NTS

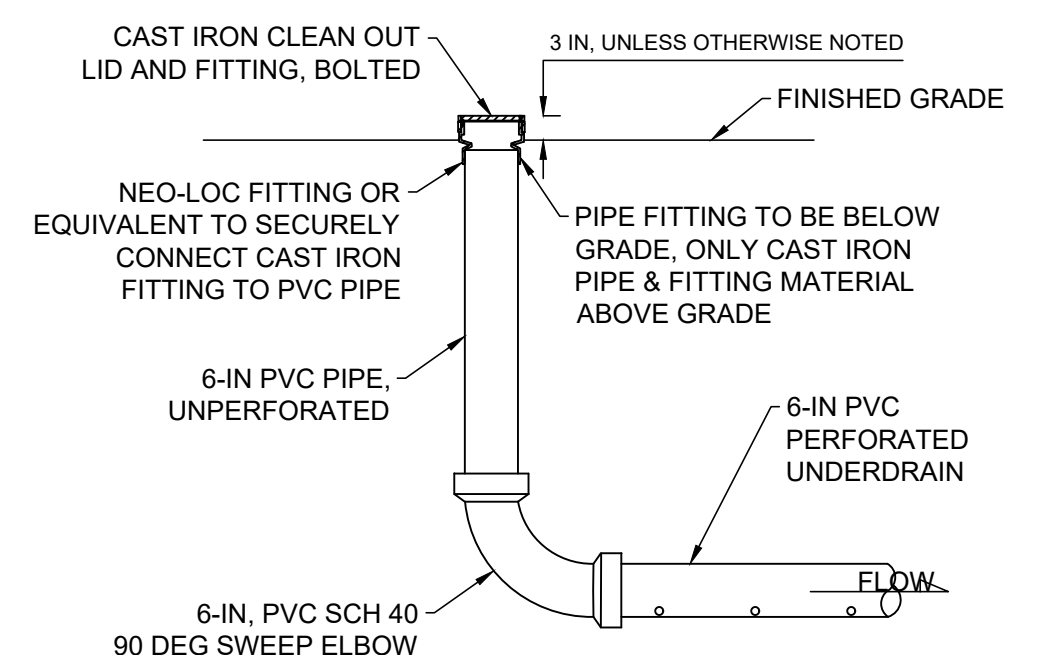
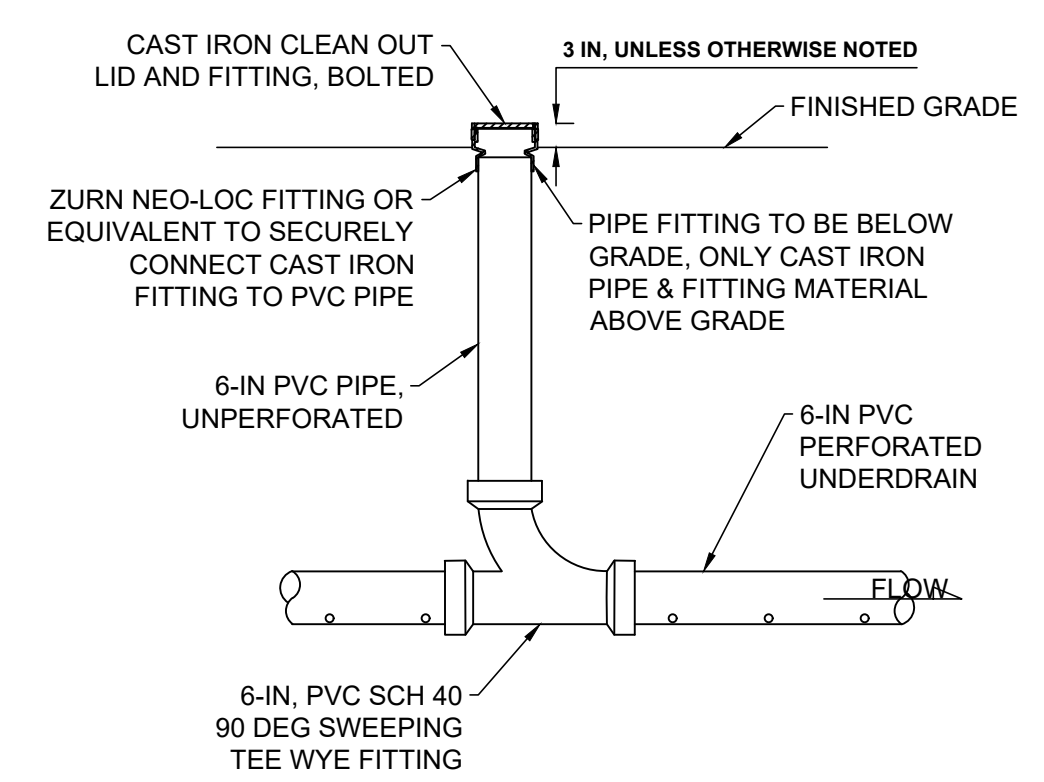


4 ASSUMED EXISTING ASPHALT AND BASE DEPTH NTS



5 BIOSWALE EROSION CONTROL MATTING INSTALLATION DETAIL NTS

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

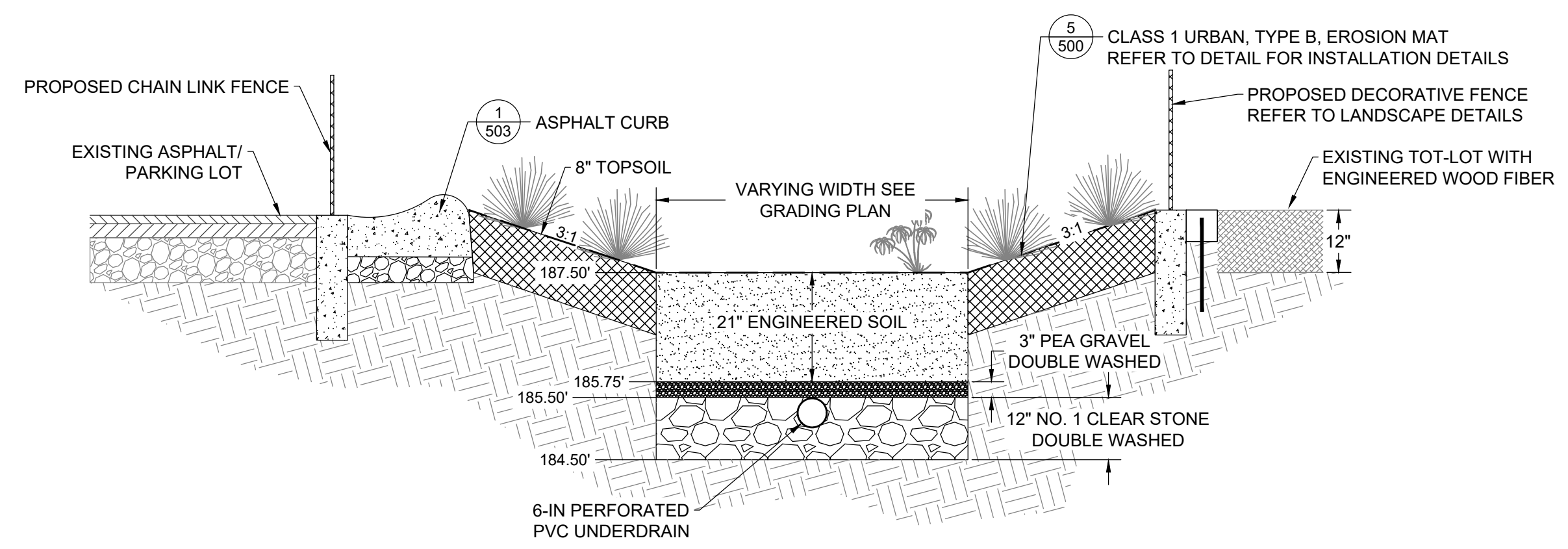


6 CLEANOUT (TYPICAL) NTS

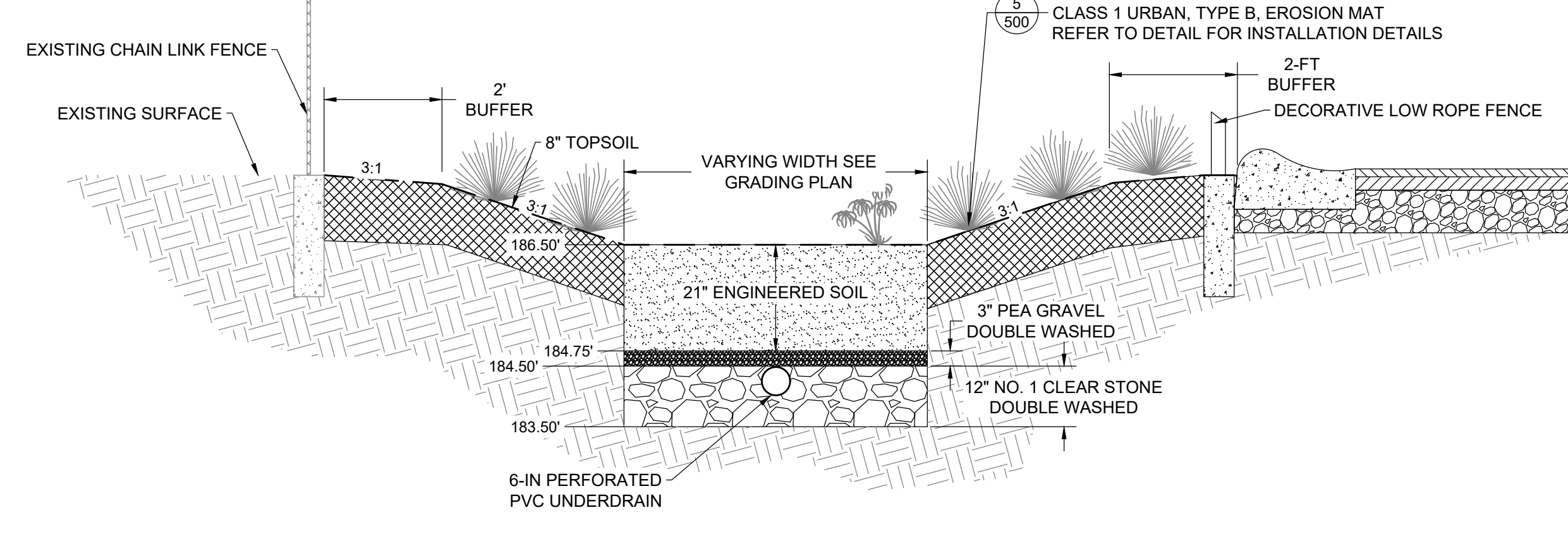
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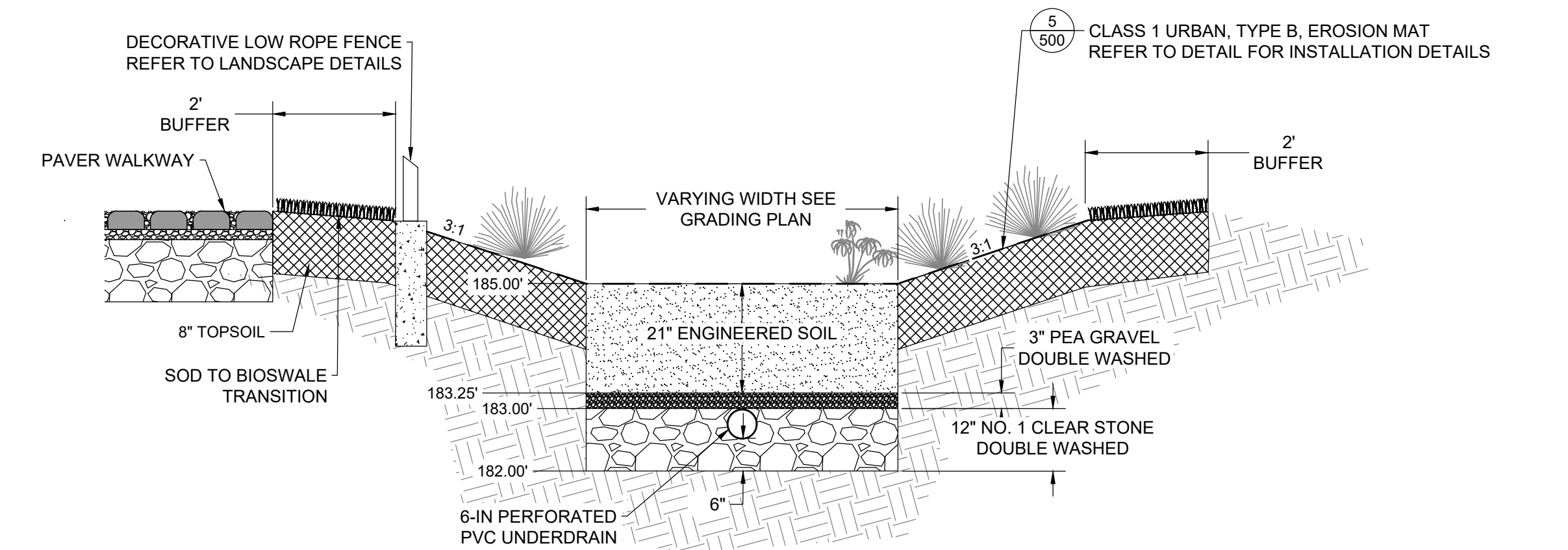
PROJECT NUMBER: 7331 (DIVISION 1)
SITE NUMBER: 146
SHEET:
C501



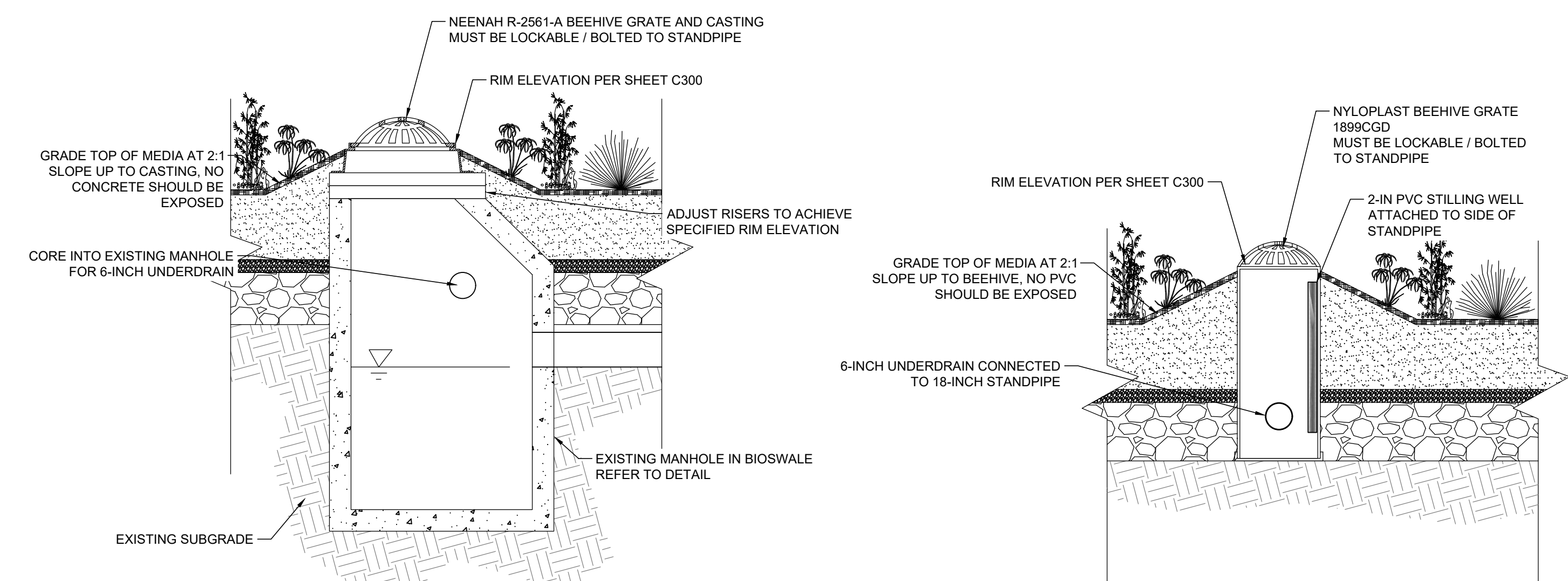
1 BIOSWALE A - WEST BIOSWALE
 NTS



2 BIOSWALE B - CENTER BIOSWALE
 NTS

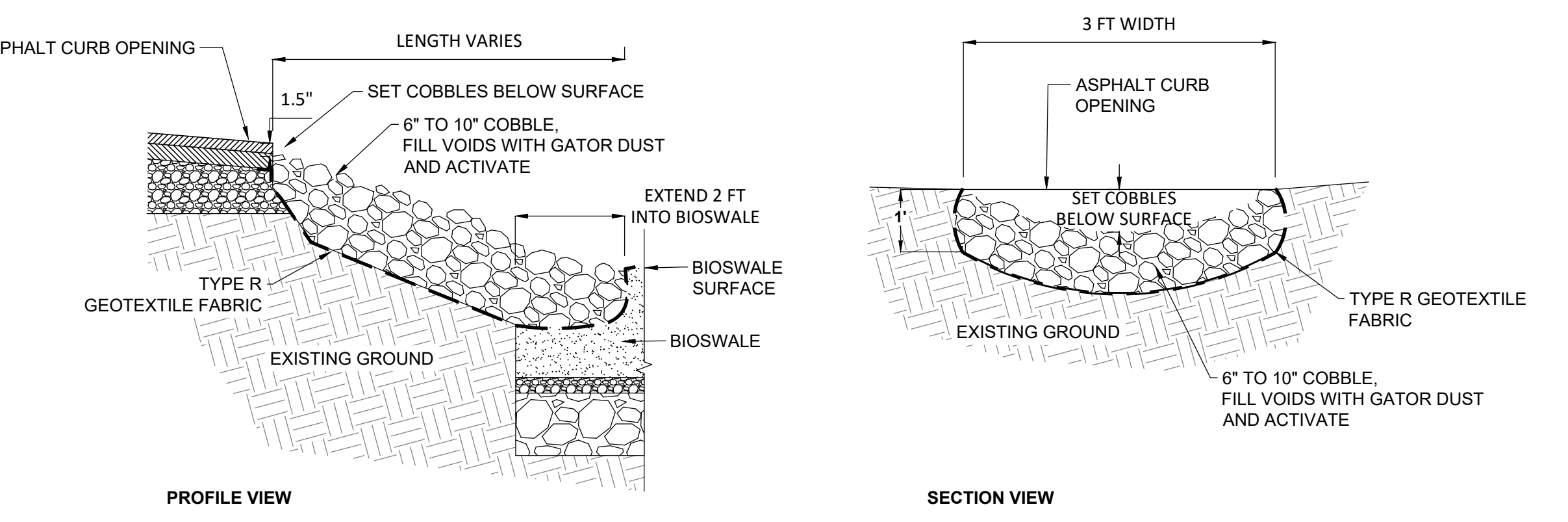


3 BIOSWALE C - EAST BIOSWALE
 NTS

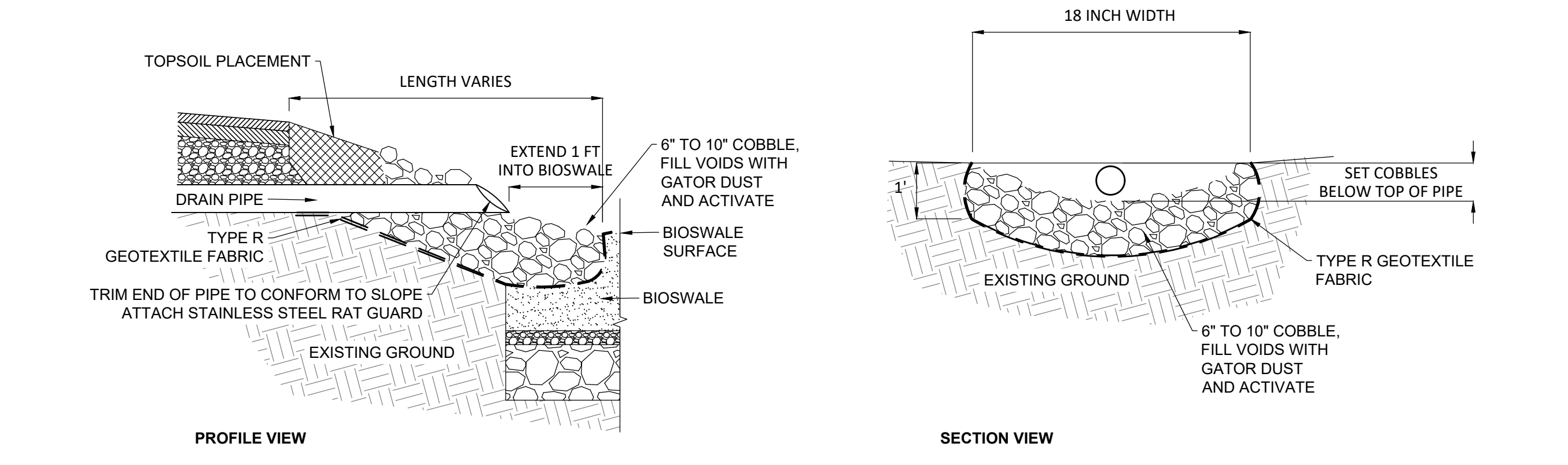


4 BIOSWALE OVERFLOW - EXISTING STRUCTURE
 NTS

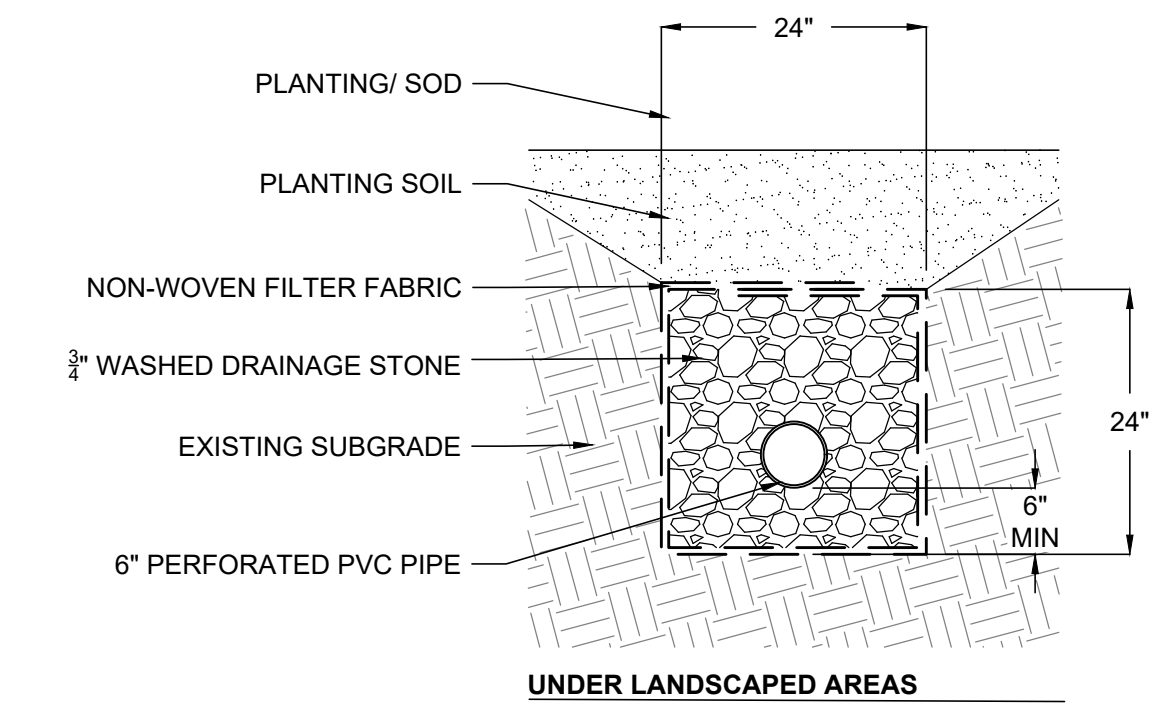
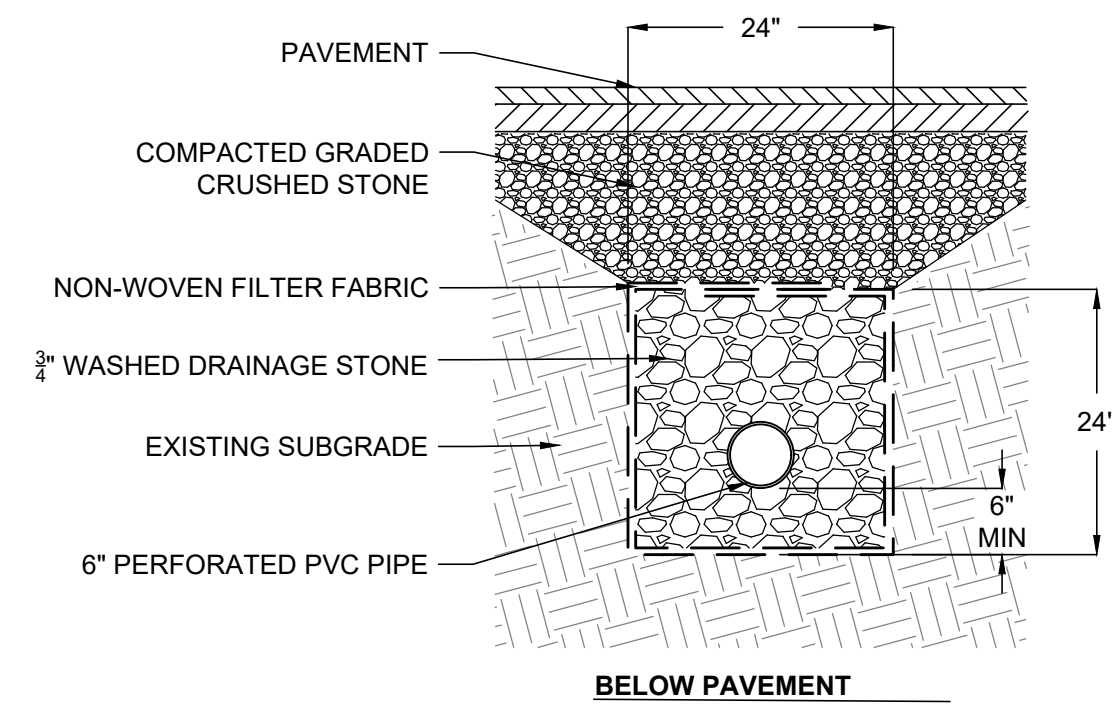
5 18-IN STANDPIPE STANDPIPE OVERFLOW
 NTS



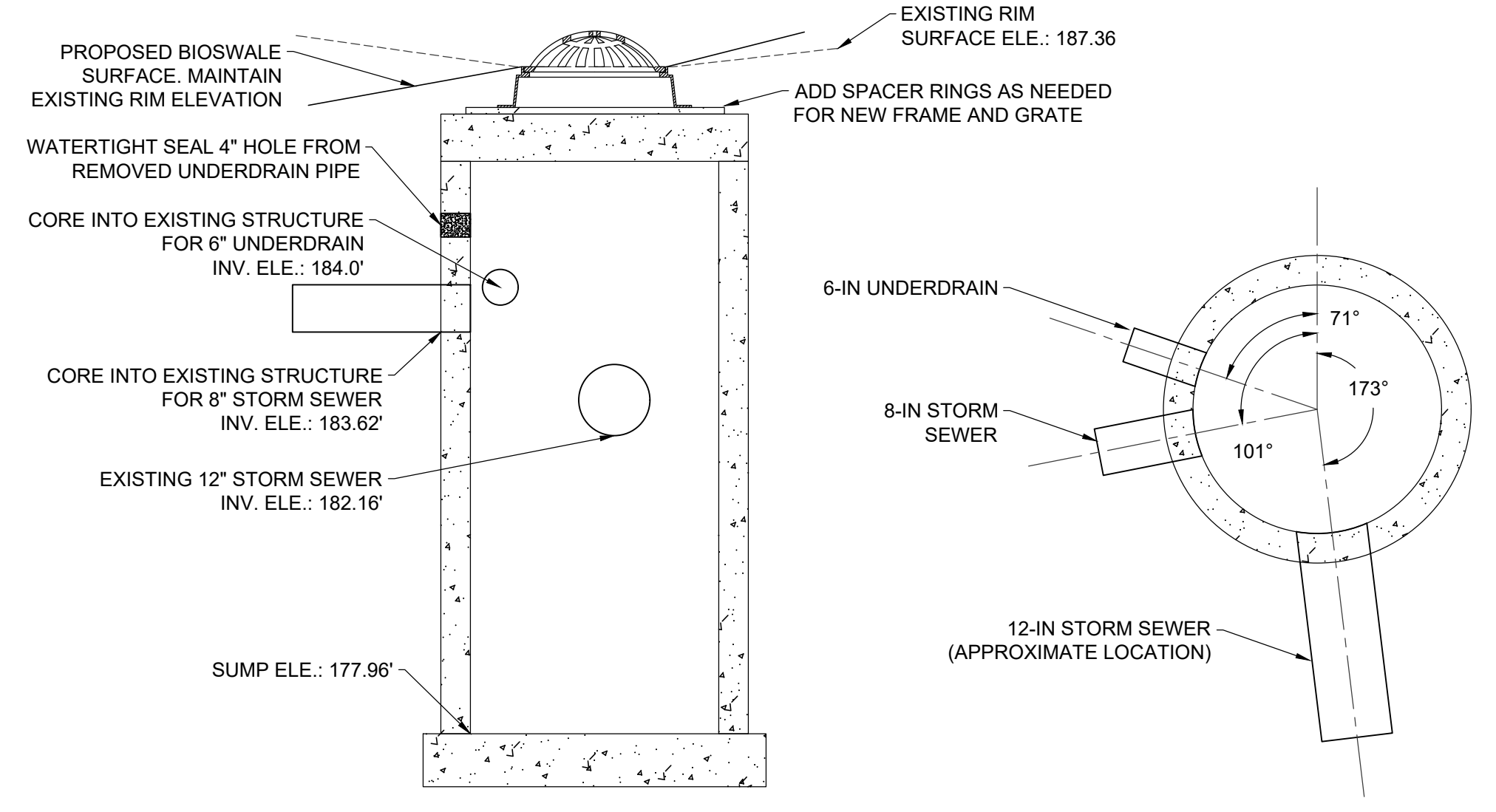
6 COBBLE CHANNEL INLET
 NTS



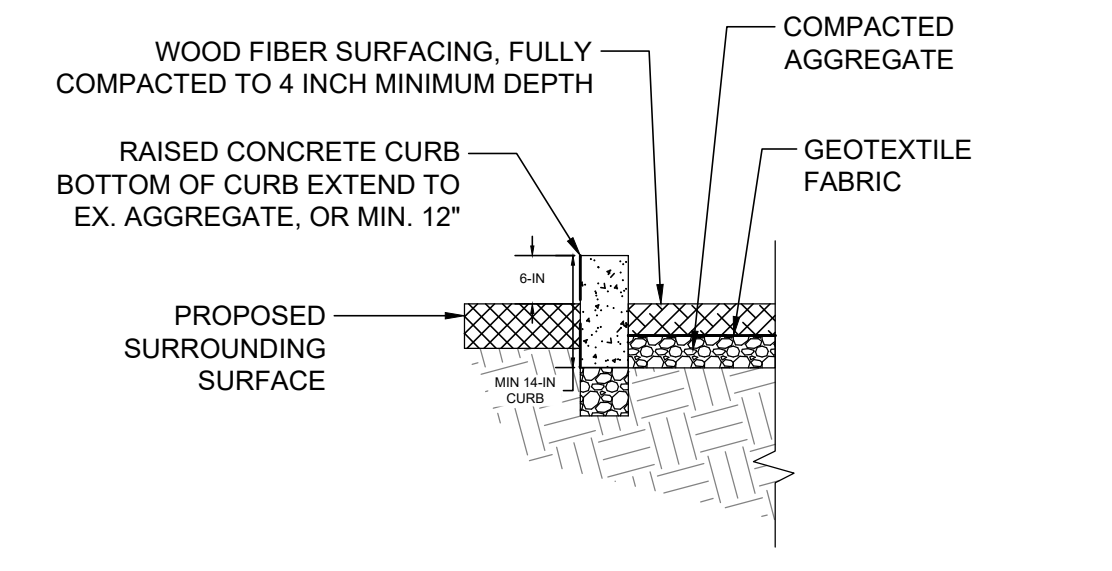
7 COBBLE DRAIN INLET
 NTS



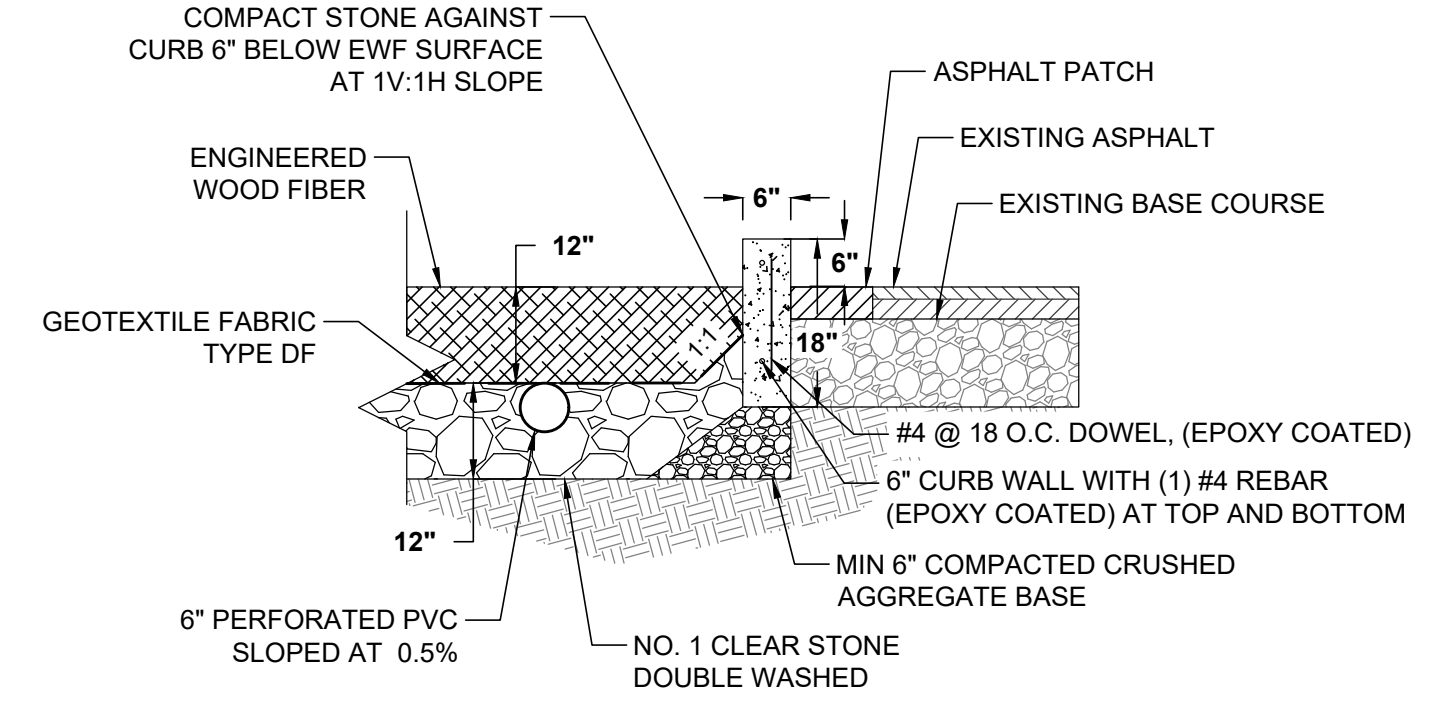
1 UNDERDRAIN AND STORM SEWER TRENCH
NTS



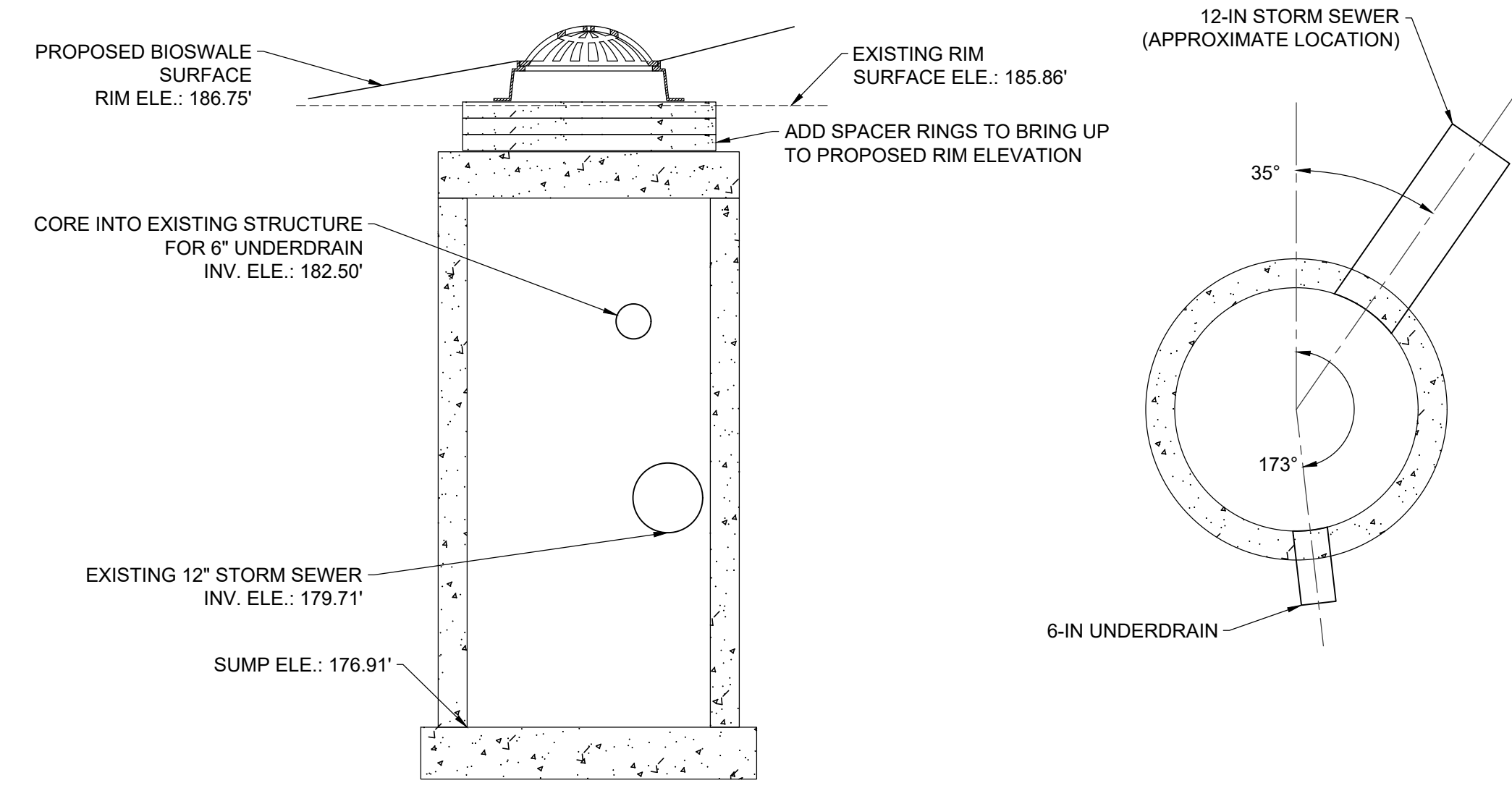
2 EXISTING TRAPPED CATCH BASIN, CB #1
NTS



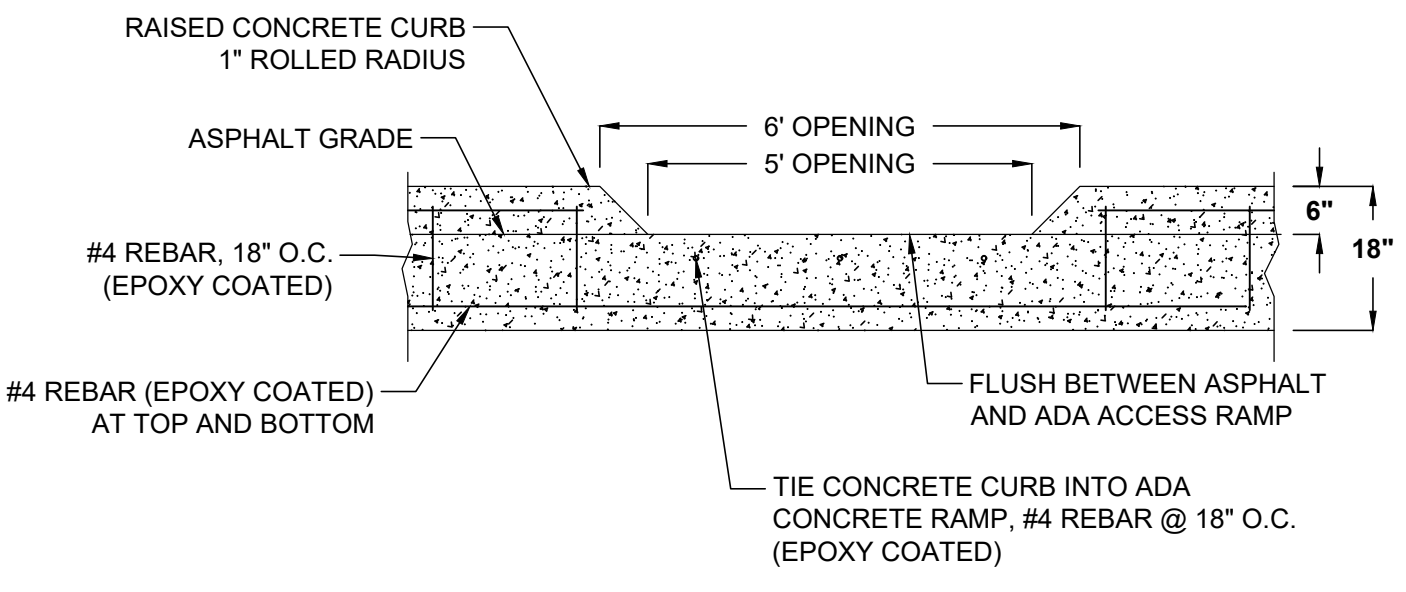
4 4-IN ENGINEERED WOOD FIBER SURFACE
NTS



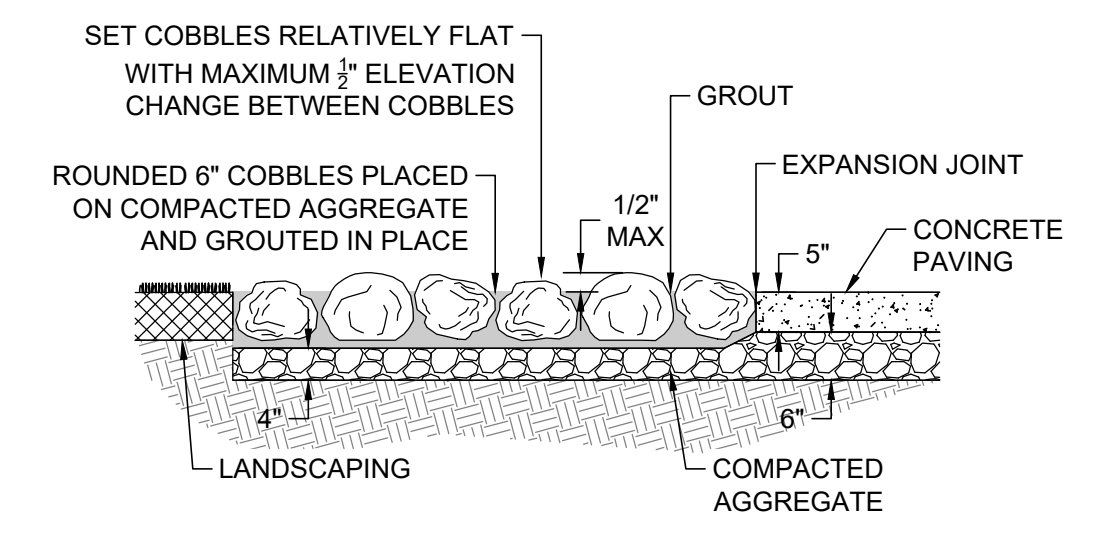
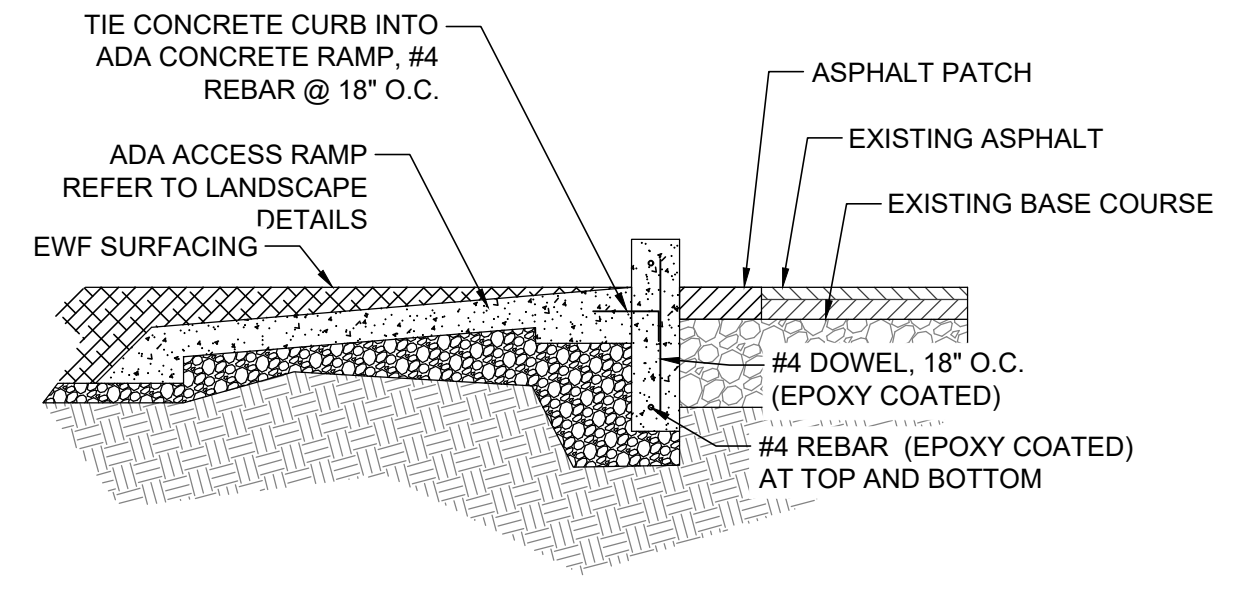
5 RAISED CONCRETE CURB AND 12-IN ENGINEERED WOOD FIBER
NTS



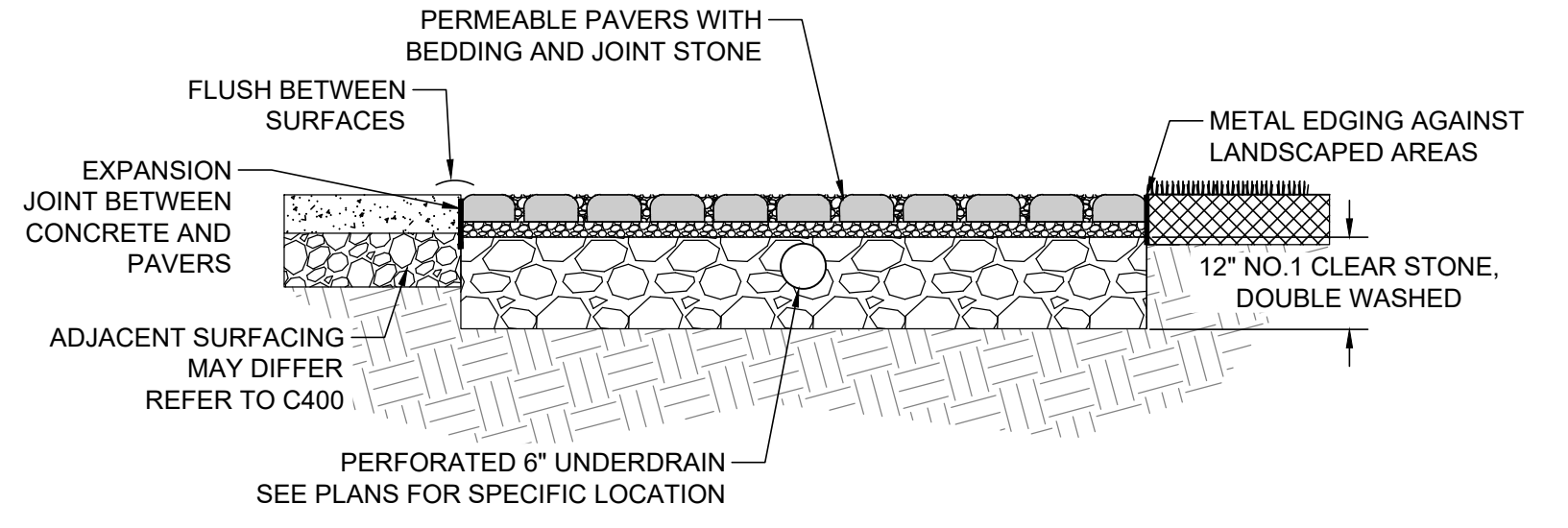
3 EXISTING TRAPPED CATCH BASIN, CB #2
NTS



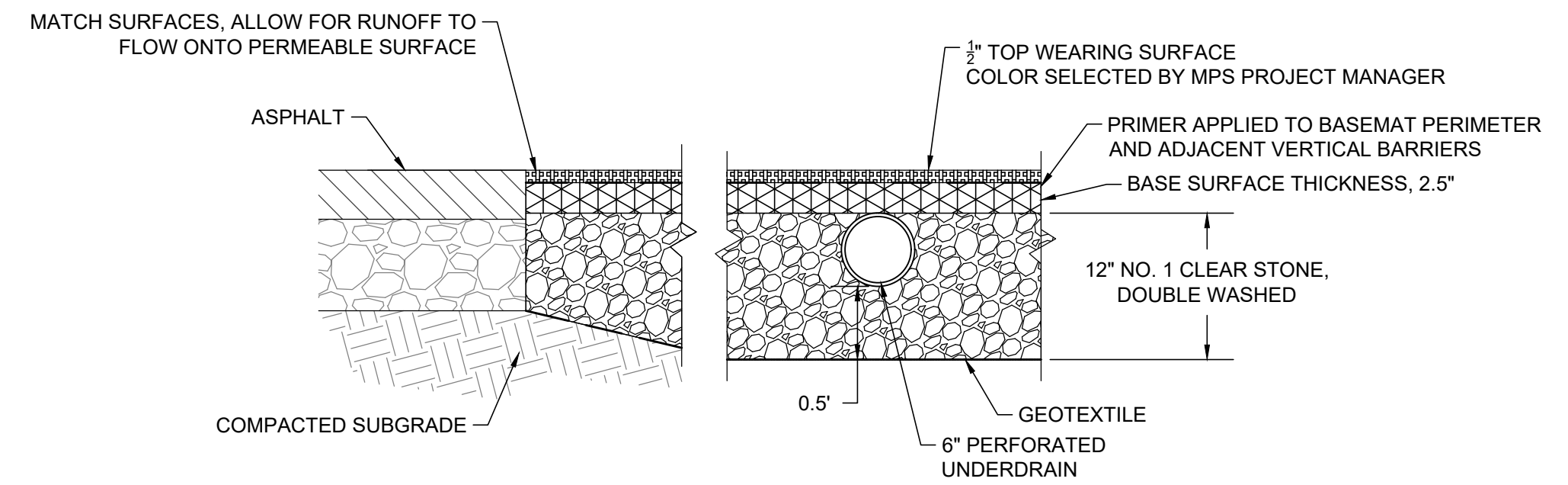
6 RAISED CONCRETE CURB OPENING AND CONNECTION TO ADA ACCESS RAMP
NTS



7 COBBLE PAVED SURFACE
NTS



8 PERMEABLE PAVER SURFACE WITH UNDERGROUND STORAGE
NTS



9 POUR-IN-PLACE RUBBER SURFACE WITH UNDERGROUND STORAGE
NTS

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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: **DETAILS**
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

DRAWN BY: **KLK**
REVIEWED BY: **CNH**
APPROVED BY: **CBG**
DATE: **January 2023**

SEAL AND SIGNATURE

PROJECT NUMBER: **7331 (DIVISION 1)**
SITE NUMBER: **146**

SHEET: **C502**

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

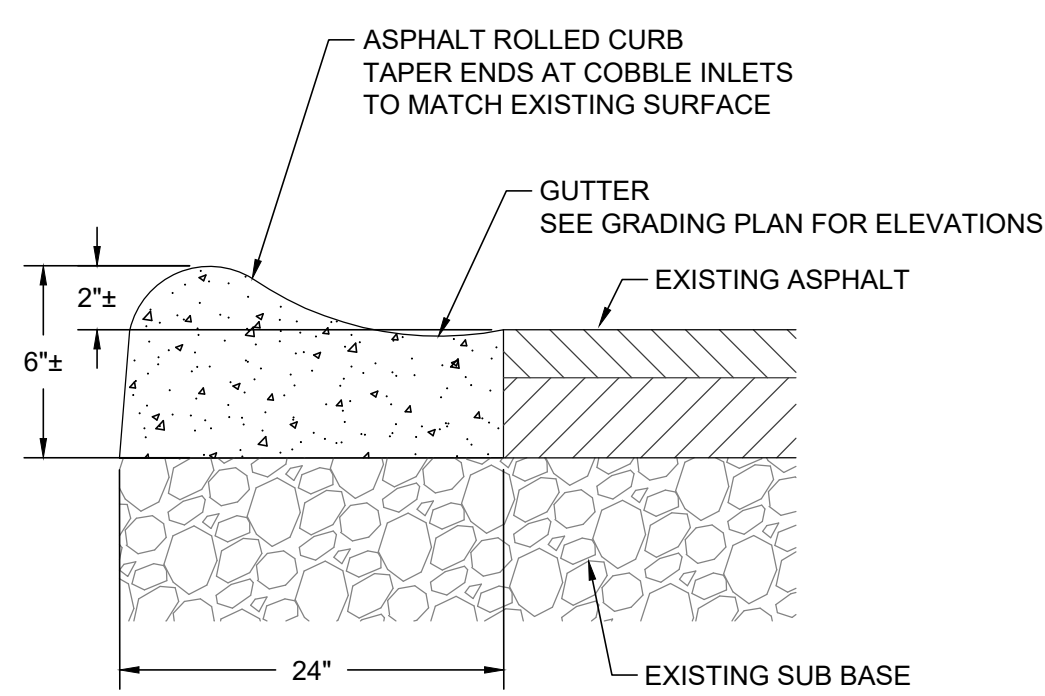
DRAWN BY:	KLK
REVIEWED BY:	CNH
APPROVED BY:	CBG
DATE:	January 2023

SEAL AND SIGNATURE

PROJECT NUMBER: 7331 (DIVISION 1)

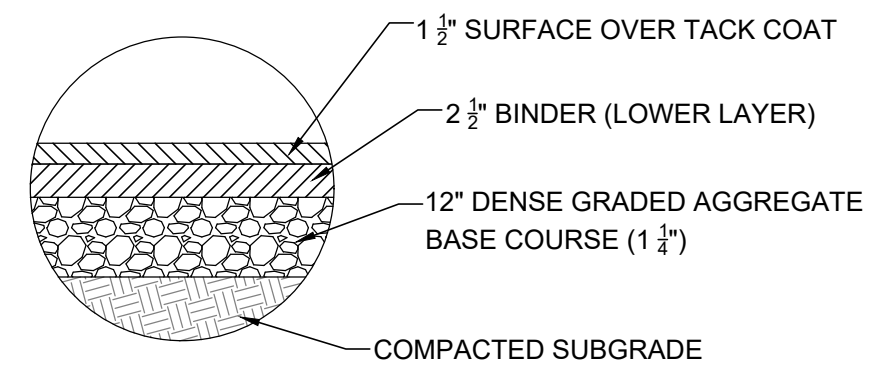
SITE NUMBER: 146

SHEET:
C503

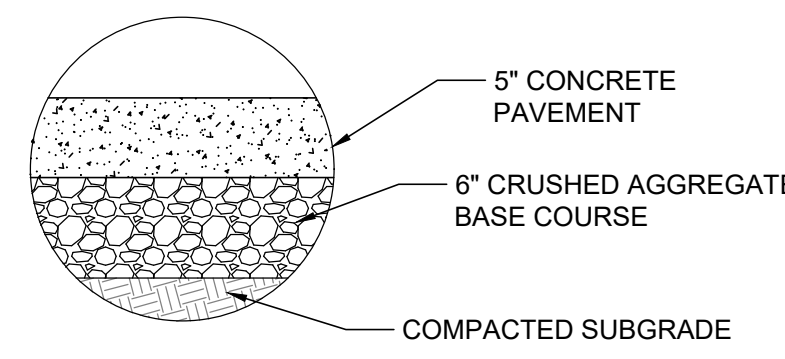


- NOTES:**
1. THE FUNCTION OF THE ASPHALT CURB IS TO CONVEY WATER TO COBBLE INLETS.
 2. ASPHALT CURBS CAN BE FULL DEPTH NEW PATCHES OF ASPHALT, OR CONSTRUCTED BY MILLING AND OVERLAYING A NEW TOP SURFACE. CONSULT WITH ENGINEER PRIOR TO CONSTRUCTION.
 3. WHEN INSTALLING A FULL DEPTH NEW PATCH, COMPACT SUBBASE MATERIAL PRIOR TO PLACEMENT OF ASPHALT PATCH.
 4. GUTTER SLOPE TO COBBLE INLETS SHALL BE UNIFORM.
 5. WHEN CONSTRUCTING THE ASPHALT CURB WITH A LOG BORDER, COORDINATE THE ASPHALT PATCH WORK WITH THE INSTALLATION OF THE HORIZONTAL LOGS TO ENSURE 50% LOG TO ASPHALT CONTACT.
 6. REFER TO LANDSCAPE DETAILS FOR THE INSTALLATION OF THE HORIZONTAL LOG BORDER.

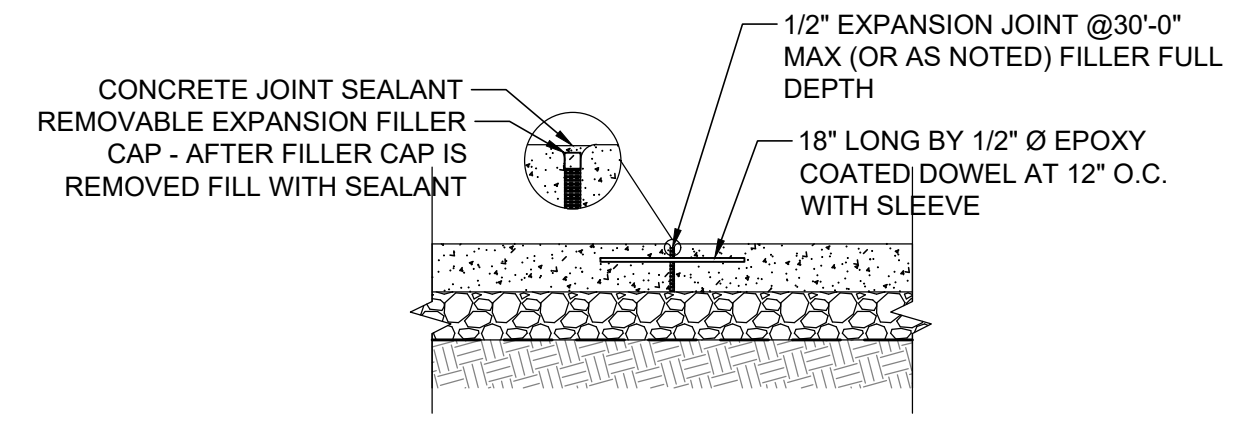
1 ASPHALT CURB (TYP)
 NTS



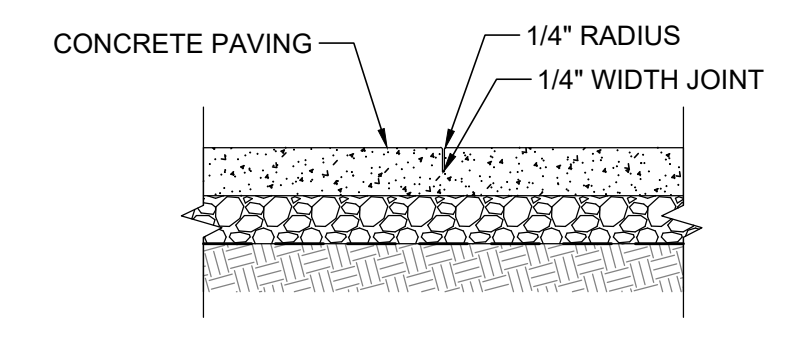
2 ASPHALT PAVING
 NTS



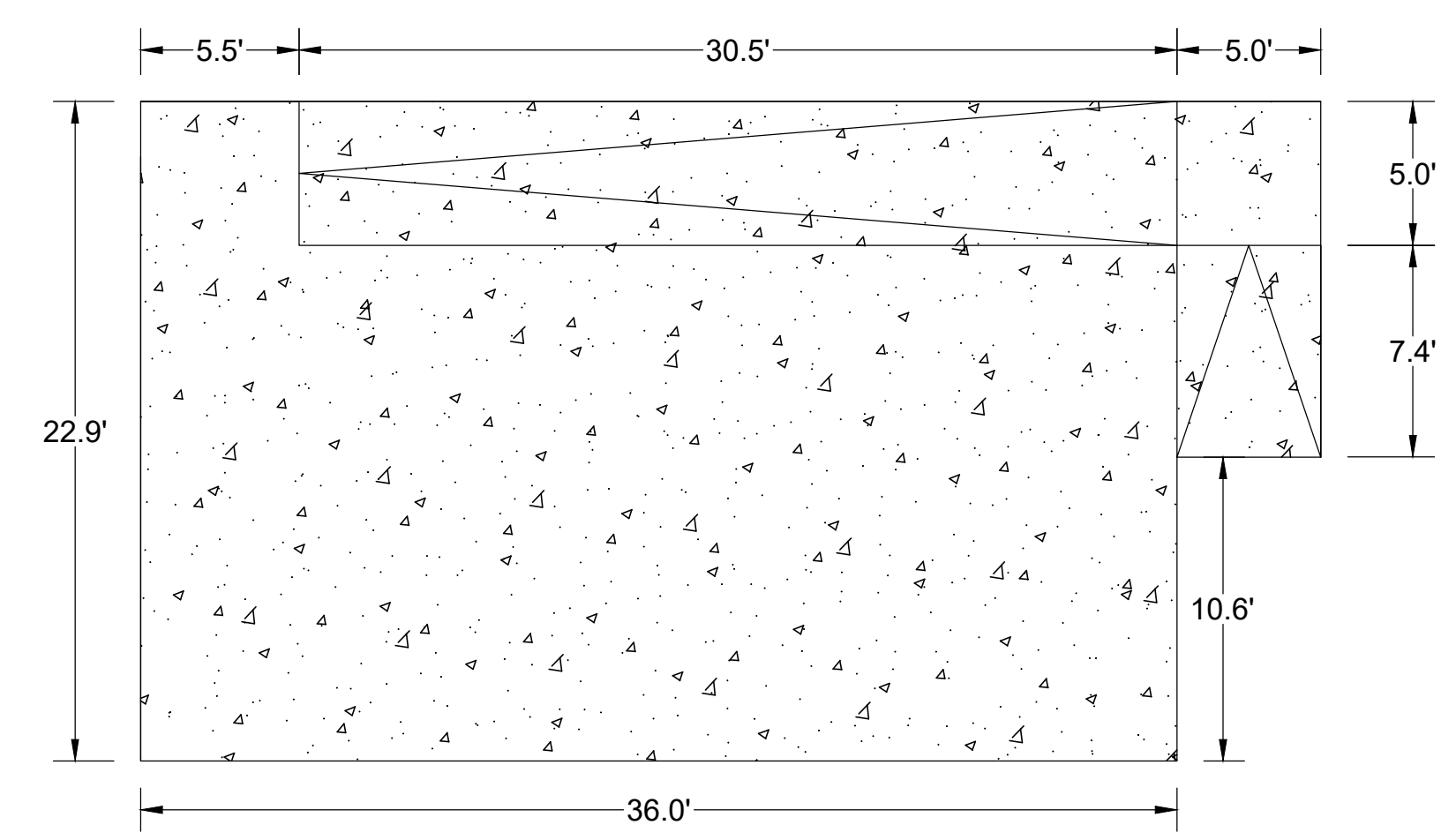
3 CONCRETE PAVING
 NTS



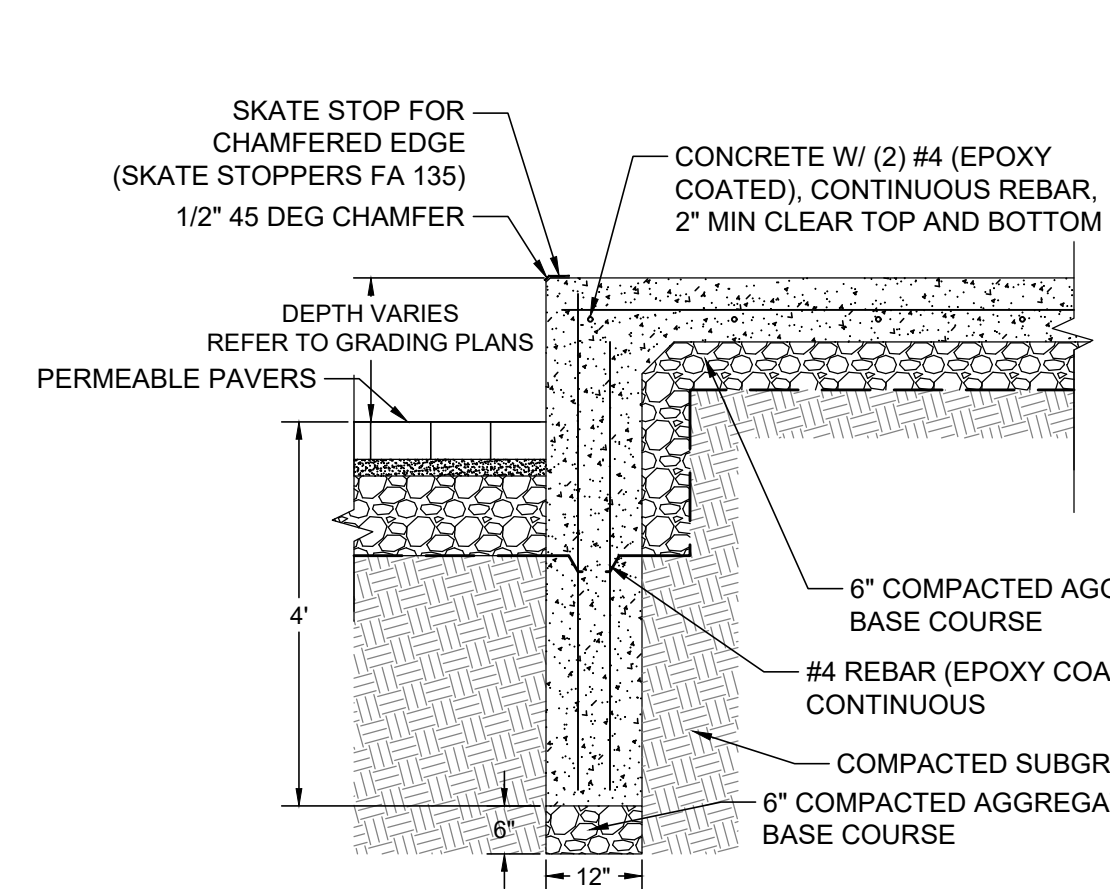
4 CONCRETE EXPANSION JOINT
 NTS



5 CONCRETE TOOLED CONTROL JOINT
 NTS

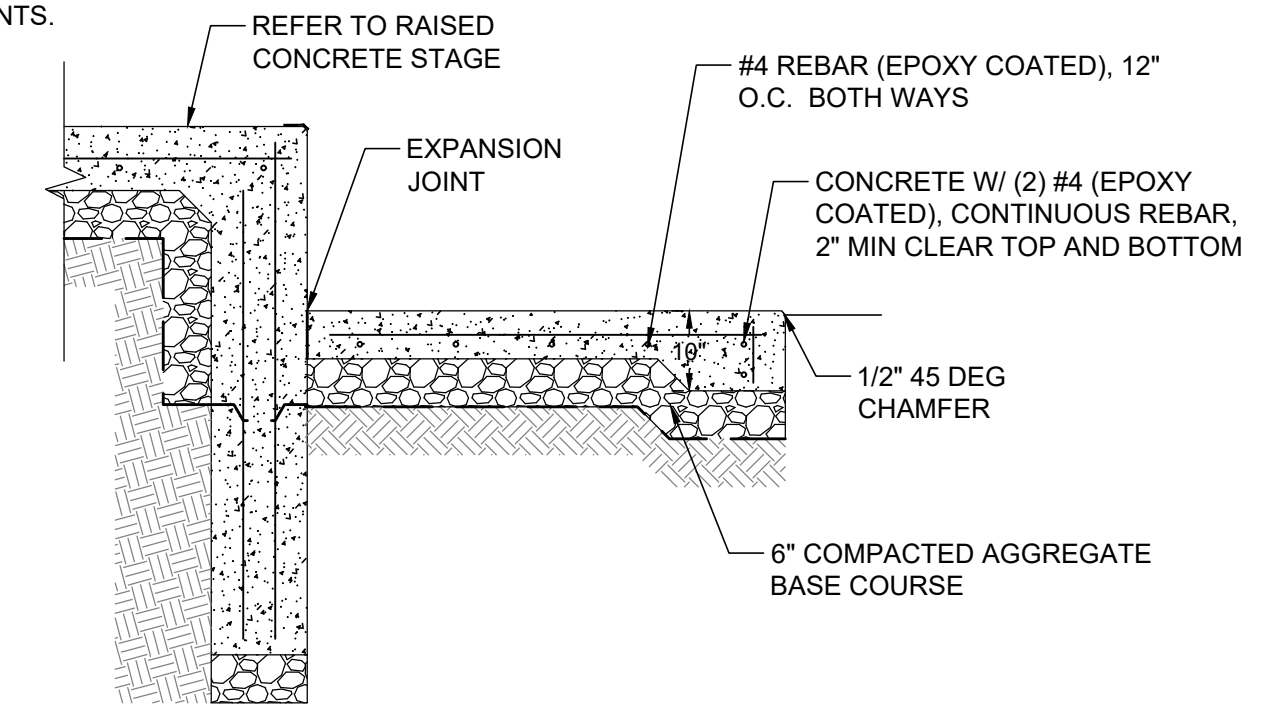


6 CONCRETE STAGE
 NTS

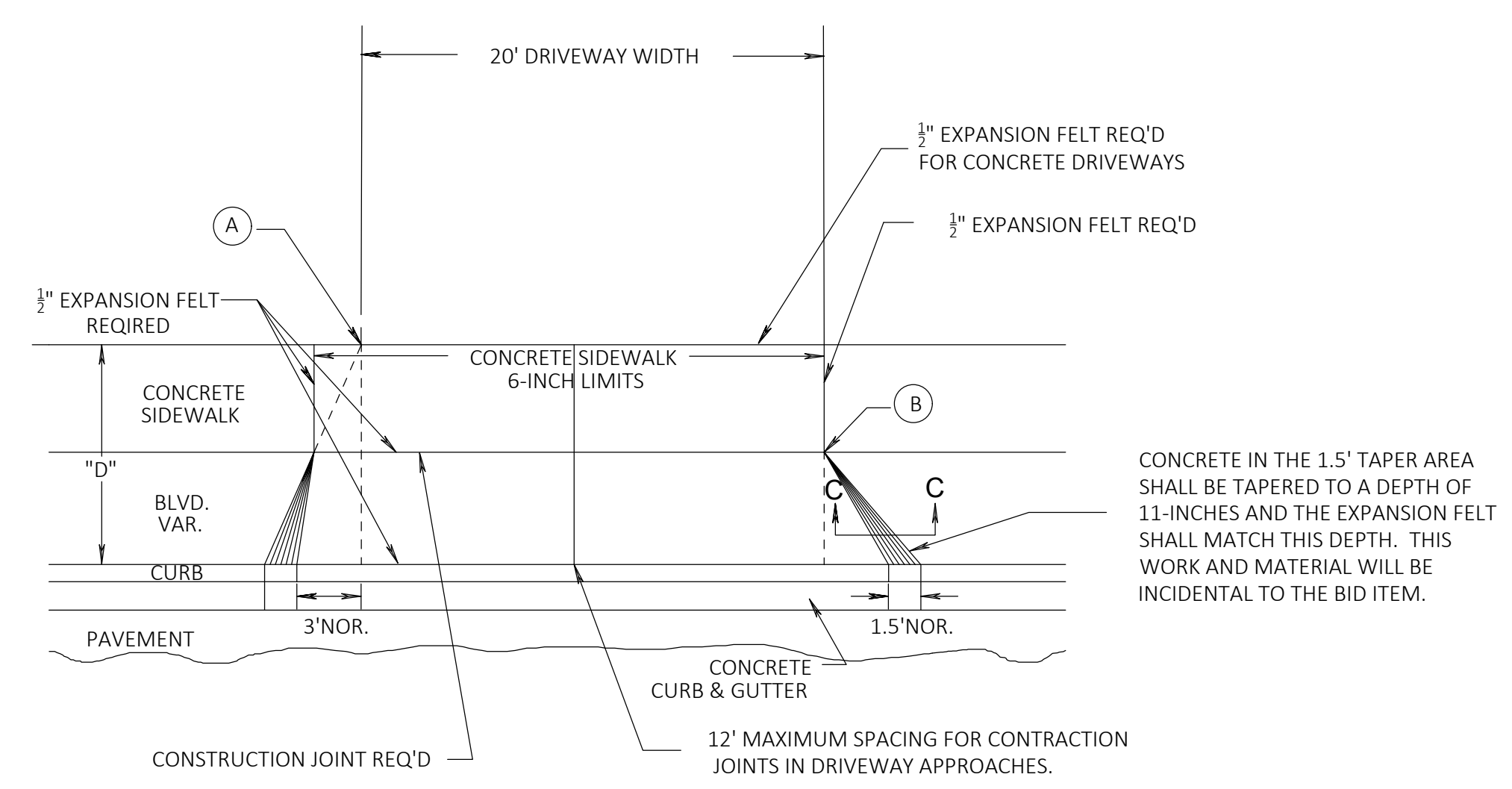


- SKATE STOP NOTES:**
1. SKATE STOPPERS TO BE INSTALLED 18 INCHES FROM ALL CORNERS.
 2. SPACED EVENLY 24-36" O.C. ACROSS RAISED STRAIGHT SECTIONS.
 3. SHALL NOT BE PLACED ON ANY JOINTS.
 4. USE SKATE STOPPERS FA 135 OR APPROVED EQUAL.

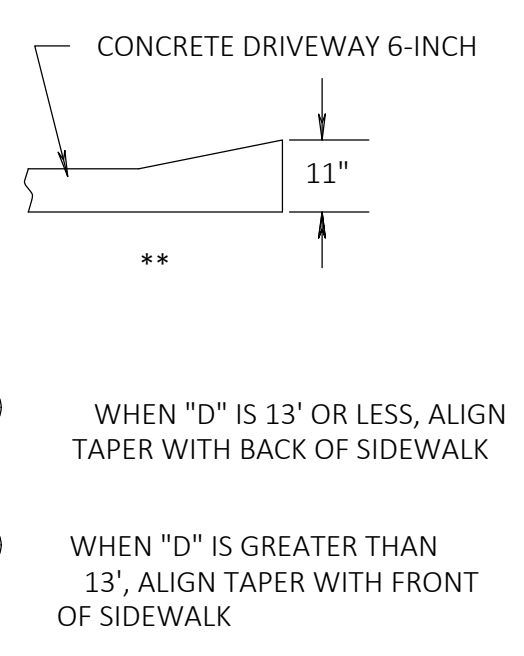
7 RAISED CONCRETE STAGE FOUNDATION
 NTS



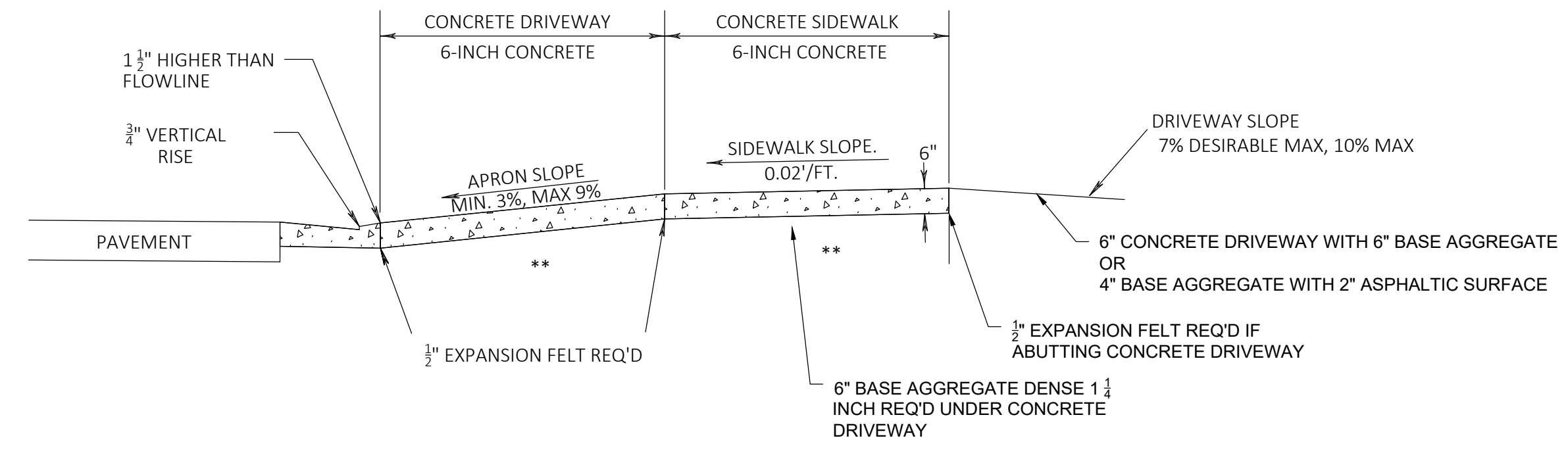
8 CONCRETE STAGE RAMP
 NTS



CONCRETE IN THE 1.5' TAPER AREA SHALL BE TAPERED TO A DEPTH OF 11-INCHES AND THE EXPANSION FELT SHALL MATCH THIS DEPTH. THIS WORK AND MATERIAL WILL BE INCIDENTAL TO THE BID ITEM.



SECTION C-C



TYPICAL SIDEWALK SECTION

9 DRIVEWAY APRON
 NTS

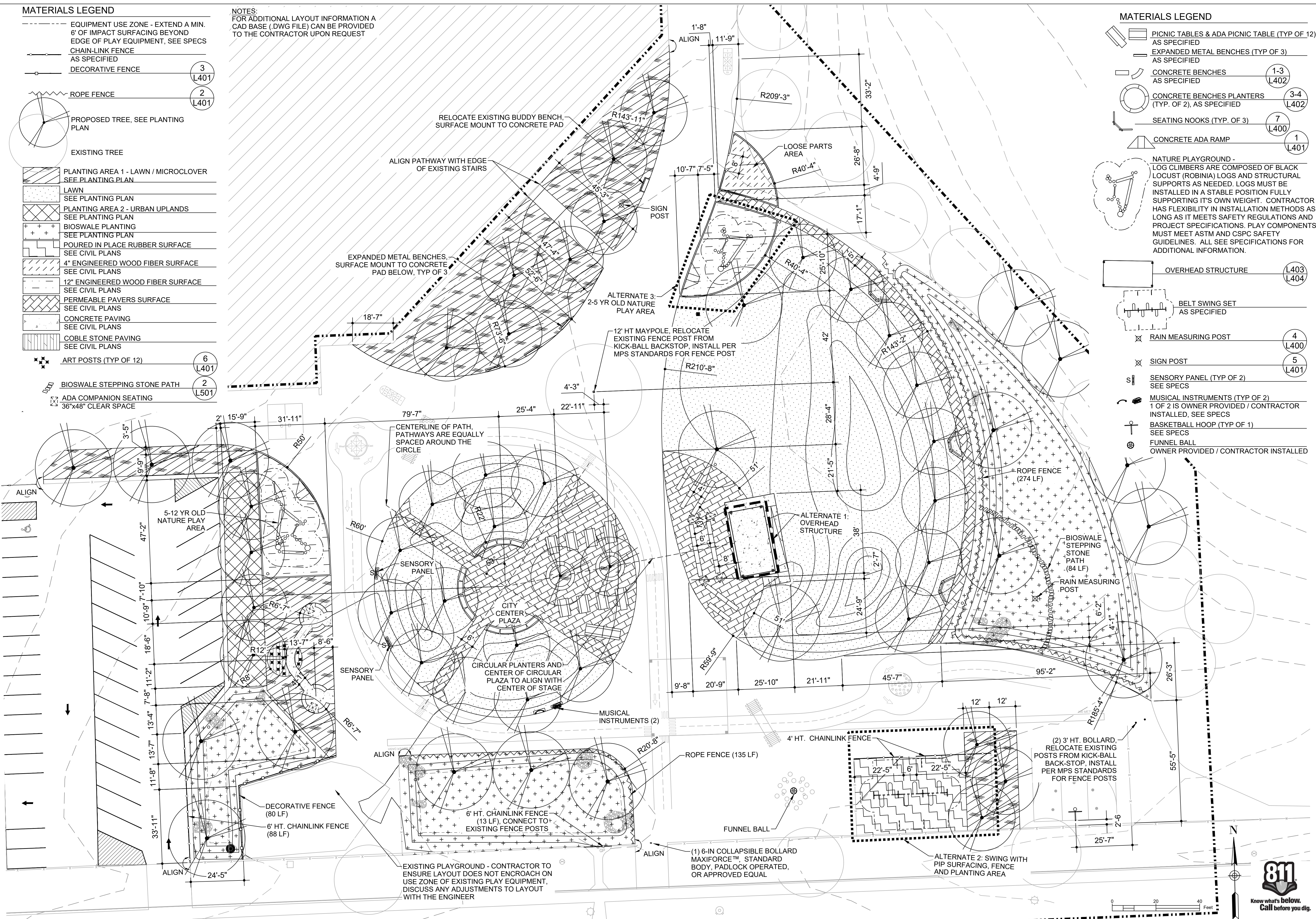
MATERIALS LEGEND

- EQUIPMENT USE ZONE - EXTEND A MIN. 6' OF IMPACT SURFACING BEYOND EDGE OF PLAY EQUIPMENT, SEE SPECS
- CHAIN-LINK FENCE AS SPECIFIED
- DECORATIVE FENCE (3) L401
- ROPE FENCE (2) L401
- PROPOSED TREE, SEE PLANTING PLAN
- EXISTING TREE
- PLANTING AREA 1 - LAWN / MICROCOVER SEE PLANTING PLAN
- LAWN SEE PLANTING PLAN
- PLANTING AREA 2 - URBAN UPLANDS SEE PLANTING PLAN
- BIOSWALE PLANTING SEE PLANTING PLAN
- POURED IN PLACE RUBBER SURFACE SEE CIVIL PLANS
- 4" ENGINEERED WOOD FIBER SURFACE SEE CIVIL PLANS
- 12" ENGINEERED WOOD FIBER SURFACE SEE CIVIL PLANS
- PERMEABLE PAVERS SURFACE SEE CIVIL PLANS
- CONCRETE PAVING SEE CIVIL PLANS
- COBLE STONE PAVING SEE CIVIL PLANS
- ART POSTS (TYP OF 12) (6) L401
- BIOSWALE STEPPING STONE PATH (2) L501
- ADA COMPANION SEATING 36"x48" CLEAR SPACE (2) L501

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

MATERIALS LEGEND

- PICNIC TABLES & ADA PICNIC TABLE (TYP OF 12) AS SPECIFIED
- EXPANDED METAL BENCHES (TYP OF 3) AS SPECIFIED
- CONCRETE BENCHES (1-3) L402 AS SPECIFIED
- CONCRETE BENCHES PLANTERS (TYP. OF 2), AS SPECIFIED (3-4) L402
- SEATING NOOKS (TYP. OF 3) (7) L400
- CONCRETE ADA RAMP (1) L401
- NATURE PLAYGROUND - LOG CLIMBERS ARE COMPOSED OF BLACK LOCUST (ROBINIA) LOGS AND STRUCTURAL SUPPORTS AS NEEDED. LOGS MUST BE INSTALLED IN A STABLE POSITION FULLY SUPPORTING IT'S 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 (L403) (L404)
- BELT SWING SET AS SPECIFIED
- RAIN MEASURING POST (4) L400
- SIGN POST (5) L401
- SENSORY PANEL (TYP OF 2) SEE SPECS
- MUSICAL INSTRUMENTS (TYP OF 2) 1 OF 2 IS OWNER PROVIDED / CONTRACTOR INSTALLED, SEE SPECS
- BASKETBALL HOOP (TYP OF 1) SEE SPECS
- FUNNEL BALL OWNER PROVIDED / CONTRACTOR INSTALLED



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

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

 KERRY WHITE
 LA-822-14
 WAUWATOSA, WI.

PROJECT NUMBER: 7331 (DIVISION 1)
SITE NUMBER: 146
SHEET: L100



****SHEET MUST BE PRINTED IN COLOR****

PAINT LEGEND

- PANTONE 7683
- PANTONE 802 C
- PANTONE 102 C
- PANTONE 804 C
- WHITE
- PANTONE 291 C

PAINT NOTES

1. REFERENCE SPECIFICATIONS FOR COLOR AND APPLICATION INFORMATION
2. ALL PAVEMENT MARKINGS ARE PER MPS STANDARD TEMPLATES UNLESS OTHERWISE STATED
3. PREP SURFACE AS SPECIFIED, SEE CIVIL PLANS
4. A COPY OF MPS' STANDARD LINE AND GAME STRIPING DETAILS IS AVAILABLE UPON REQUEST FROM THE DIVISION OF FACILITIES AND MAINTENANCE SERVICES, (414) 283-4600



(5) SOLID 12" DIA. PAINTED CIRCLES, 5' FROM POST, EVENLY SPACED.
 (15) OPEN 2' DIA. PAINTED CIRCLES, RANDOMLY SPACES AROUND POST

SHEET NAME: PAVEMENT MARKINGS PLAN
PROJECT NAME: 2023 GREEN INFRASTRUCTURE UPGRADES
PROJECT ADDRESS: MILWAUKEE GERMAN IMMERSION ELEMENTARY SCHOOL
 3778 N. 82ND STREET, MILWAUKEE, WI 53222

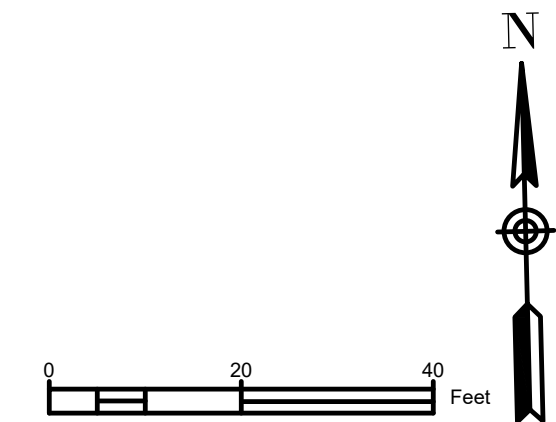
ISSUED FOR:	REV:	DATE:
50% CD		11/14/2022
95% CD		12/22/2022
100% CD		1/23/2023

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

SEAL AND SIGNATURE

 KERRY WHITE
 LA-822-14
 WAUWATOSA
 WIS.

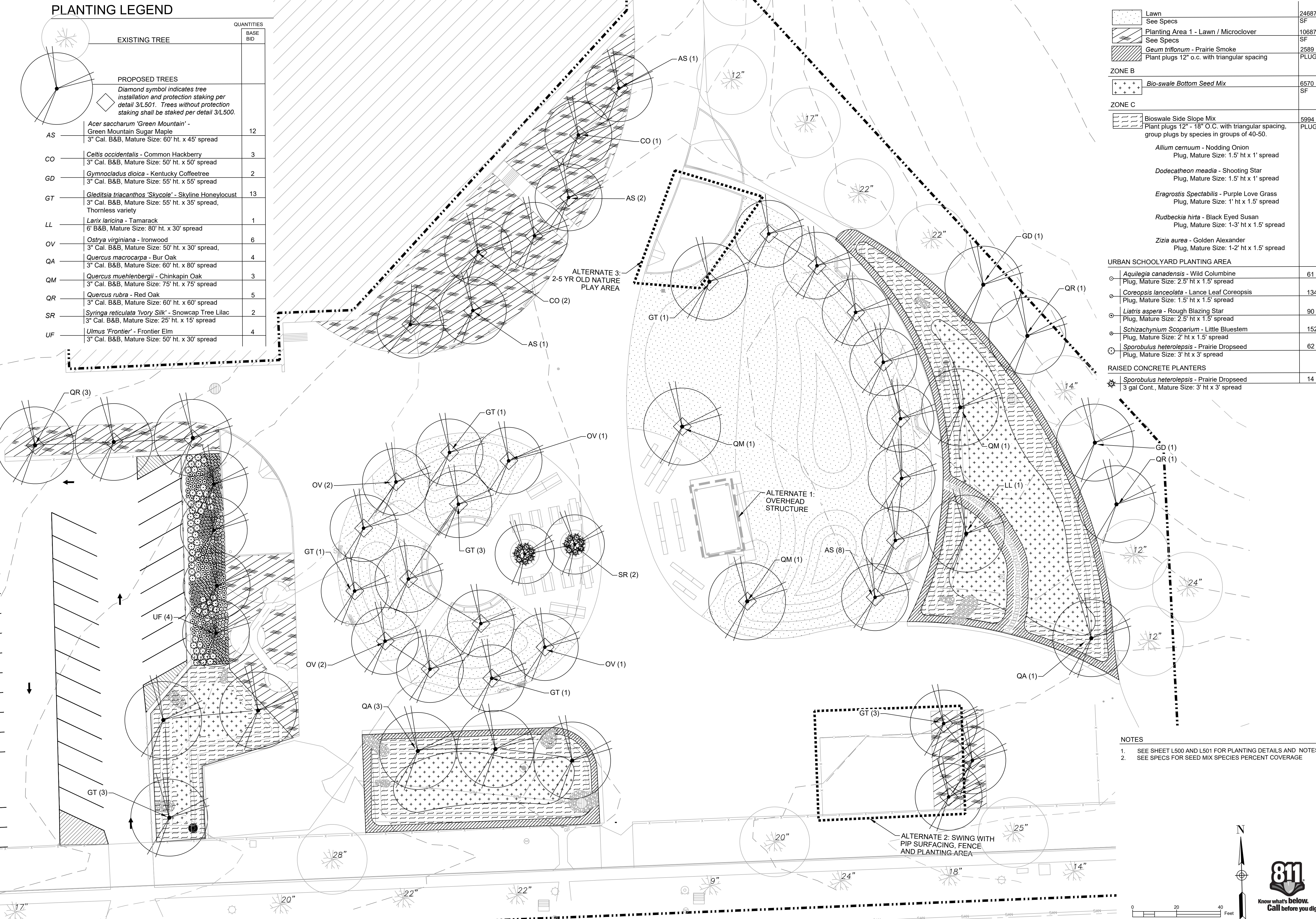
PROJECT NUMBER: 7331 (DIVISION 1)
SITE NUMBER: 146
SHEET: L200



PLANTING LEGEND

EXISTING TREE		QUANTITIES
		BASE BID
<p><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></p>		
PROPOSED TREES		
AS	<i>Acer saccharum</i> 'Green Mountain' - Green Mountain Sugar Maple 3" Cal. B&B, Mature Size: 60' ht. x 45' spread	12
CO	<i>Celtis occidentalis</i> - Common Hackberry 3" Cal. B&B, Mature Size: 50' ht. x 50' spread	3
GD	<i>Gymnocladus dioica</i> - Kentucky Coffeetree 3" Cal. B&B, Mature Size: 55' ht. x 55' spread	2
GT	<i>Gleditsia triacanthos</i> 'Skycole' - Skyline Honeylocust 3" Cal. B&B, Mature Size: 55' ht. x 35' spread, Thornless variety	13
LL	<i>Larix laricina</i> - Tamarack 6" B&B, Mature Size: 80' ht. x 30' spread	1
OV	<i>Ostrya virginiana</i> - Ironwood 3" Cal. B&B, Mature Size: 50' ht. x 30' spread	6
QA	<i>Quercus macrocarpa</i> - Bur Oak 3" Cal. B&B, Mature Size: 60' ht. x 80' spread	4
QM	<i>Quercus muehlenbergii</i> - Chinkapin Oak 3" Cal. B&B, Mature Size: 75' ht. x 75' spread	3
QR	<i>Quercus rubra</i> - Red Oak 3" Cal. B&B, Mature Size: 60' ht. x 60' spread	5
SR	<i>Syringa reticulata</i> 'Ivory Silk' - Snowcap Tree Lilac 3" Cal. B&B, Mature Size: 25' ht. x 15' spread	2
UF	<i>Ulmus</i> 'Frontier' - Frontier Elm 3" Cal. B&B, Mature Size: 50' ht. x 30' spread	4

Lawn See Specs	24687 SF
Planting Area 1 - Lawn / Microclover See Specs	10687 SF
<i>Geum triflorum</i> - Prairie Smoke Plant plugs 12" o.c. with triangular spacing	2589 PLUGS
ZONE B	
Bio-swale Bottom Seed Mix	6570 SF
ZONE C	
Bioswale Side Slope Mix Plant plugs 12" - 18" O.C. with triangular spacing, group plugs by species in groups of 40-50.	5994 PLUGS
<p><i>Allium cernuum</i> - Nodding Onion Plug, Mature Size: 1.5' ht x 1' spread</p> <p><i>Dodecatheon meadia</i> - Shooting Star Plug, Mature Size: 1.5' ht x 1' spread</p> <p><i>Eragrostis Spectabilis</i> - Purple Love Grass Plug, Mature Size: 1' ht x 1.5' spread</p> <p><i>Rudbeckia hirta</i> - Black Eyed Susan Plug, Mature Size: 1-3' ht x 1.5' spread</p> <p><i>Zizia aurea</i> - Golden Alexander Plug, Mature Size: 1-2' ht x 1.5' spread</p>	
URBAN SCHOOLYARD PLANTING AREA	
<i>Aquilegia canadensis</i> - Wild Columbine Plug, Mature Size: 2.5' ht x 1.5' spread	61
<i>Coreopsis lanceolata</i> - Lance Leaf Coreopsis Plug, Mature Size: 1.5' ht x 1.5' spread	134
<i>Liatis aspera</i> - Rough Blazing Star Plug, Mature Size: 2.5' ht x 1.5' spread	90
<i>Schizachyrium Scoparium</i> - Little Bluestem Plug, Mature Size: 2' ht x 1.5' spread	152
<i>Sporobolus heterolepis</i> - Prairie Dropseed Plug, Mature Size: 3' ht x 3' spread	62
RAISED CONCRETE PLANTERS	
<i>Sporobolus heterolepis</i> - Prairie Dropseed 3 gal Cont., Mature Size: 3' ht x 3' spread	14



NOTES

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

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 PHONE: 414-283-4600
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SHEET NAME: PLANTING PLAN
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
95% CD		12/22/2022
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DRAWN BY:	ZWA
REVIEWED BY:	KW
APPROVED BY:	MM
DATE:	January 2023

SEAL AND SIGNATURE

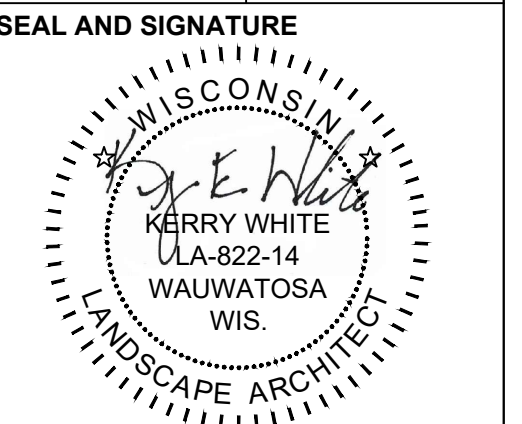
Kerry White
 KERRY WHITE
 LA-822-14
 WAUWATOSA
 WIS.
 LANDSCAPE ARCHITECT

PROJECT NUMBER: 7331 (DIVISION 1)
SITE NUMBER: 146
SHEET: L300



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



PROJECT NUMBER: 7331 (DIVISION 1)

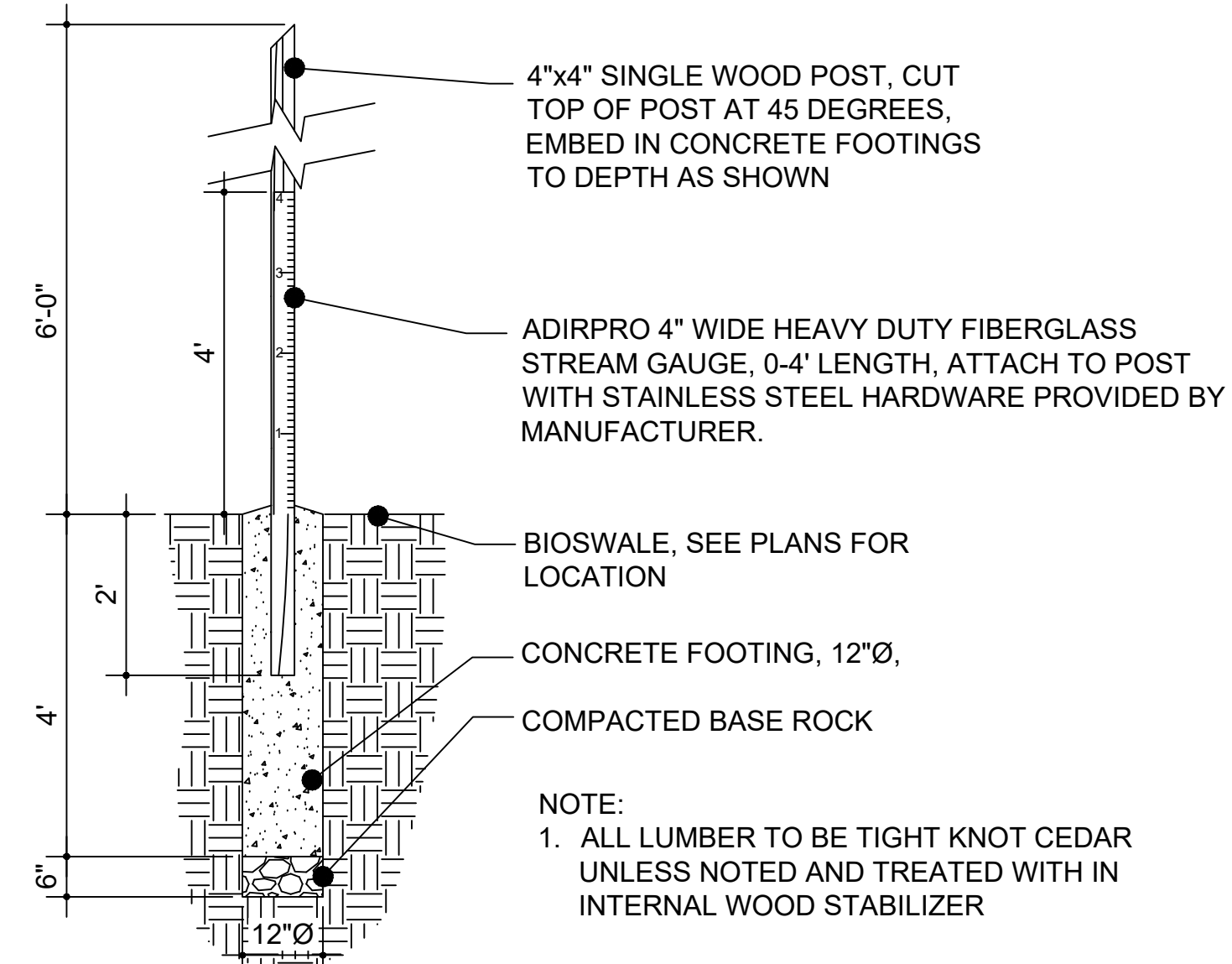
SITE NUMBER: 146

SHEET:
L400

1 NOT USED

2 NOT USED

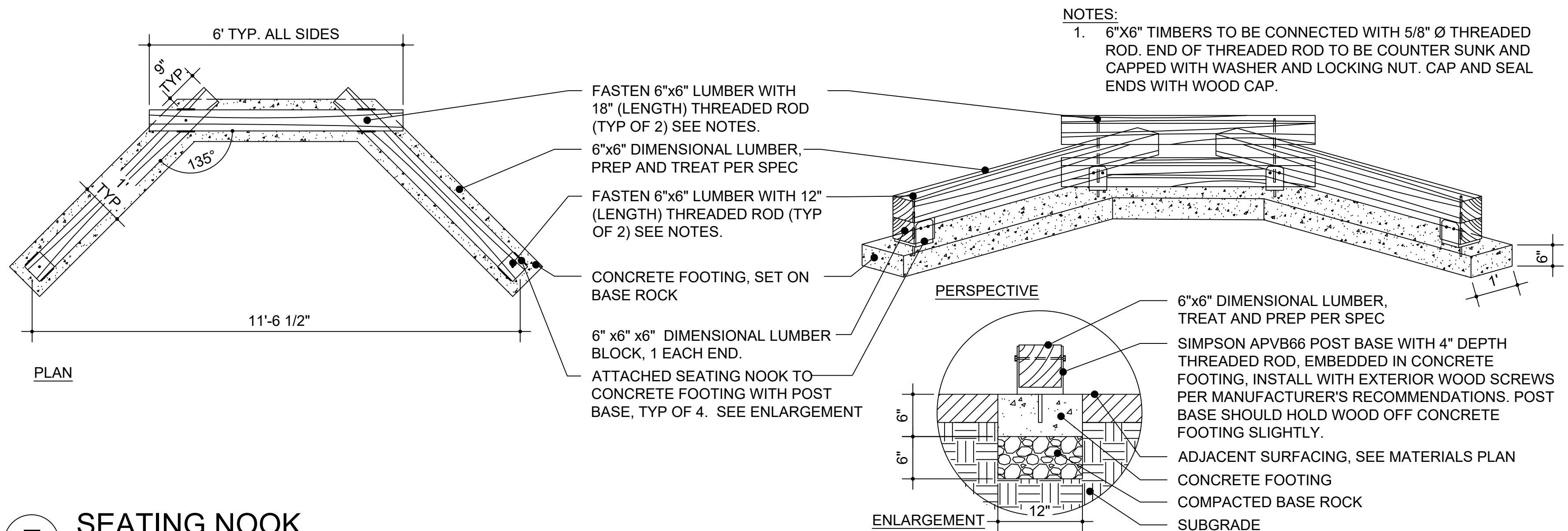
3 NOT USED



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

5 NOT USED

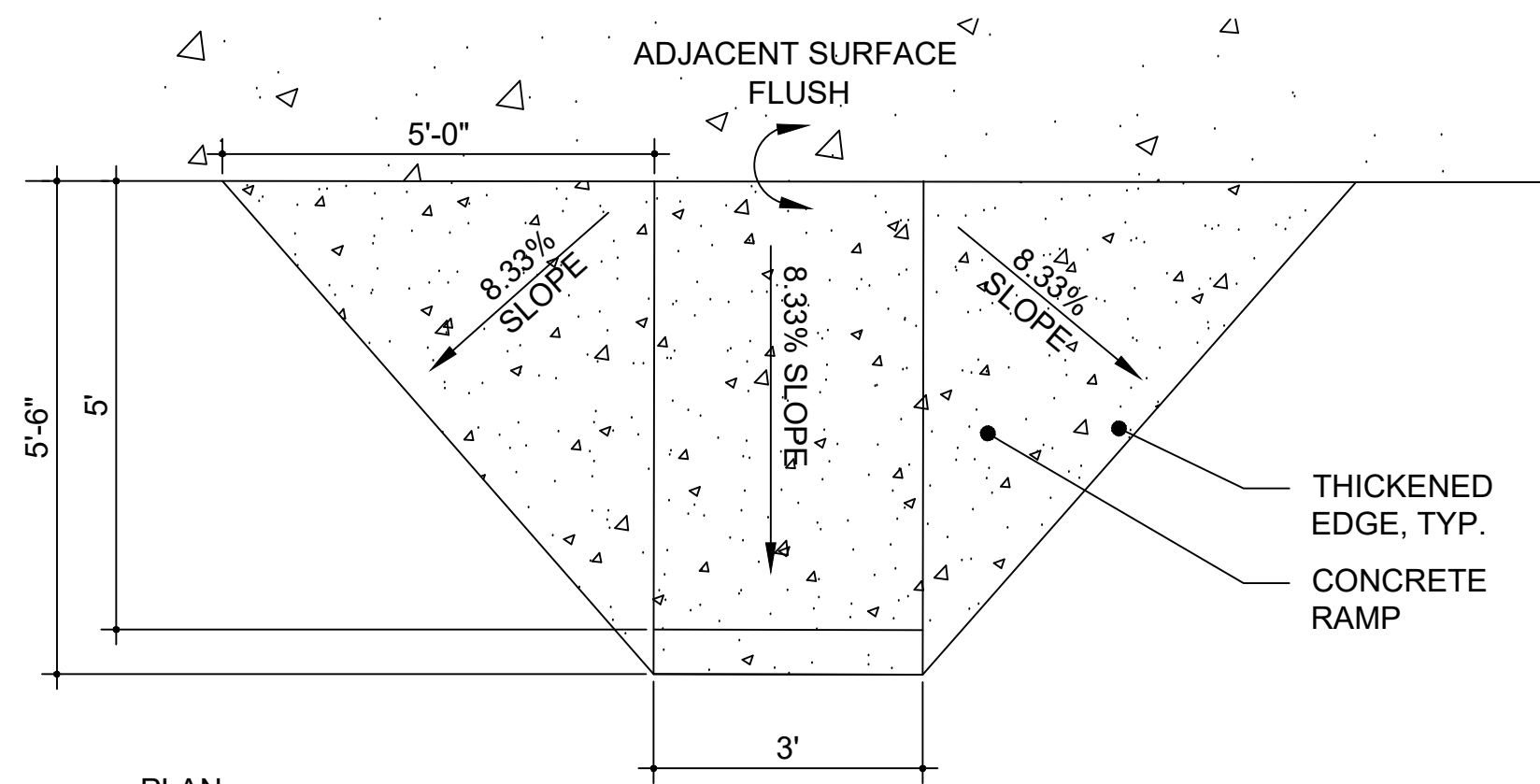
6 NOT USED



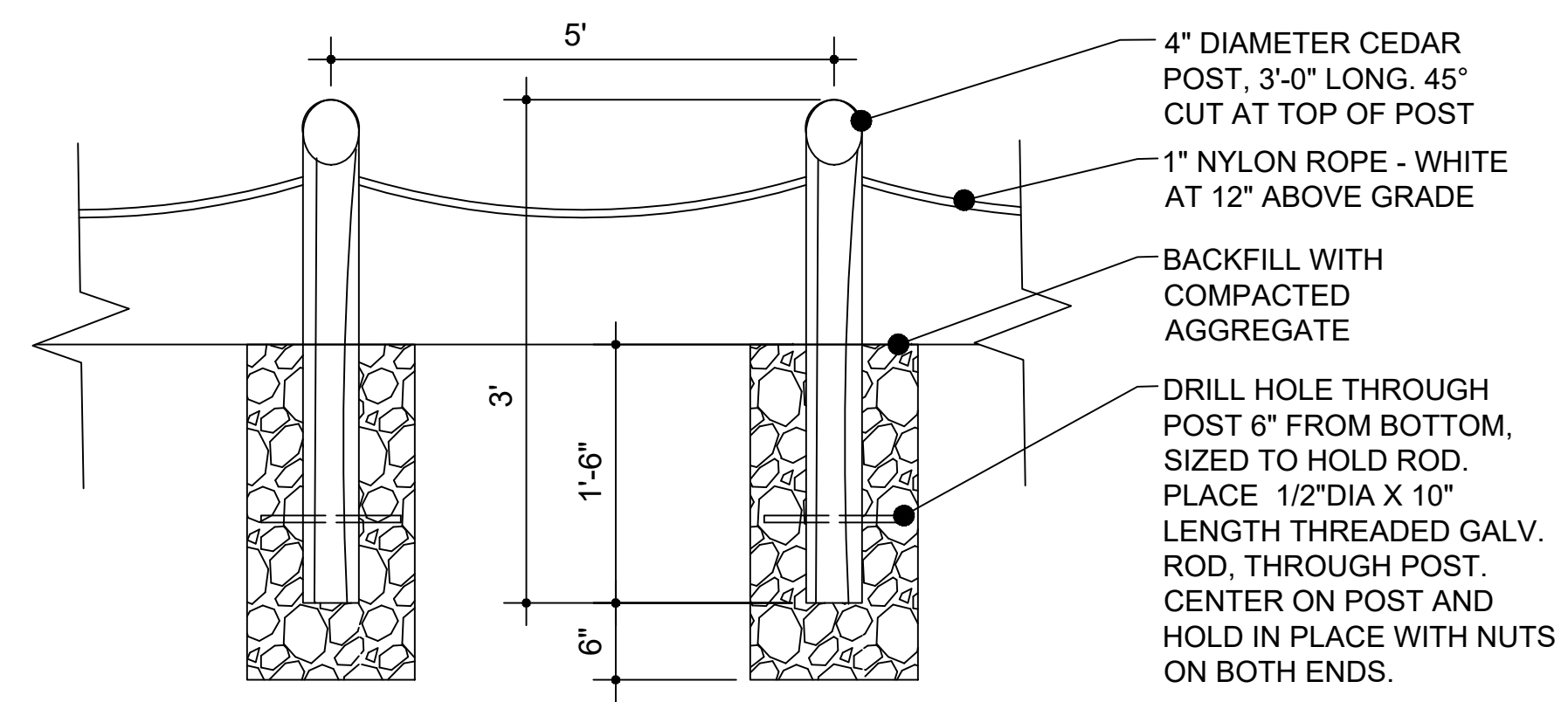
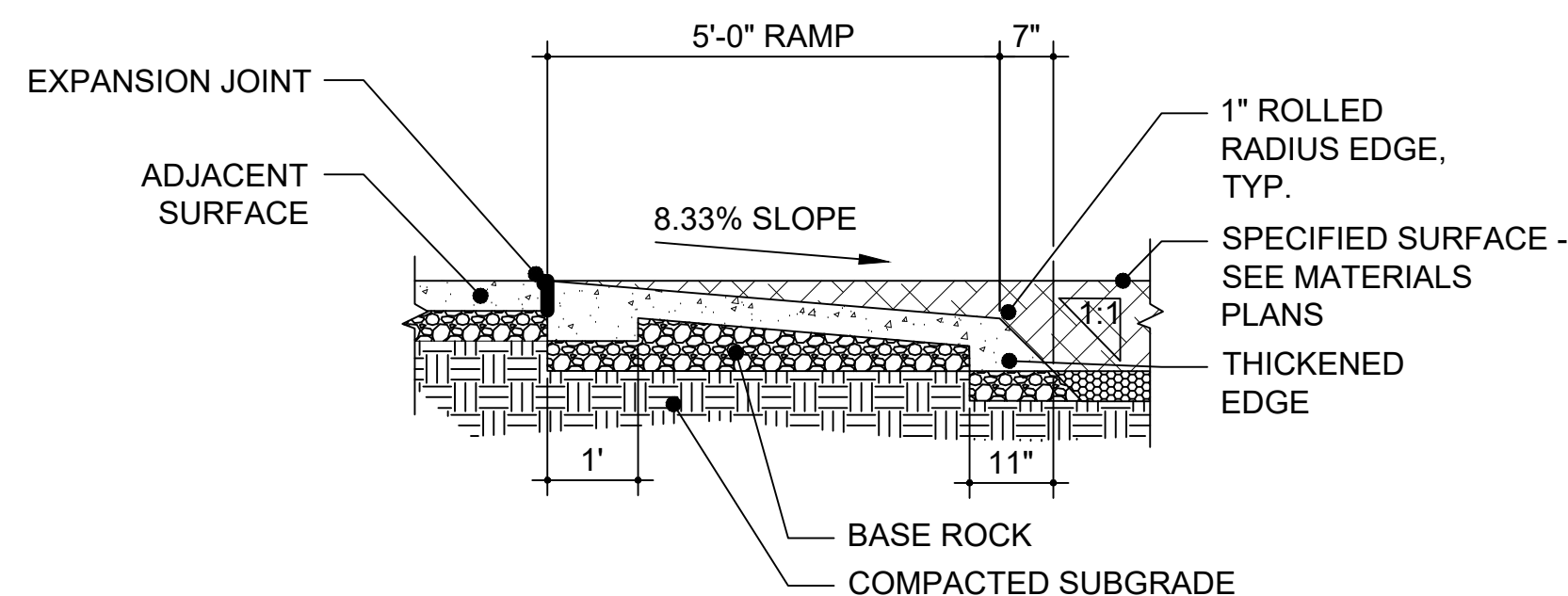
7 SEATING NOOK
 PLAN, PERSPECTIVE AND SECTION
 0" 6" 12" 24"

8 NOT USED



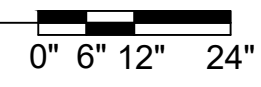


NOTE: PLAY SURFACING SHOULD COMPLETELY COVER RAMP

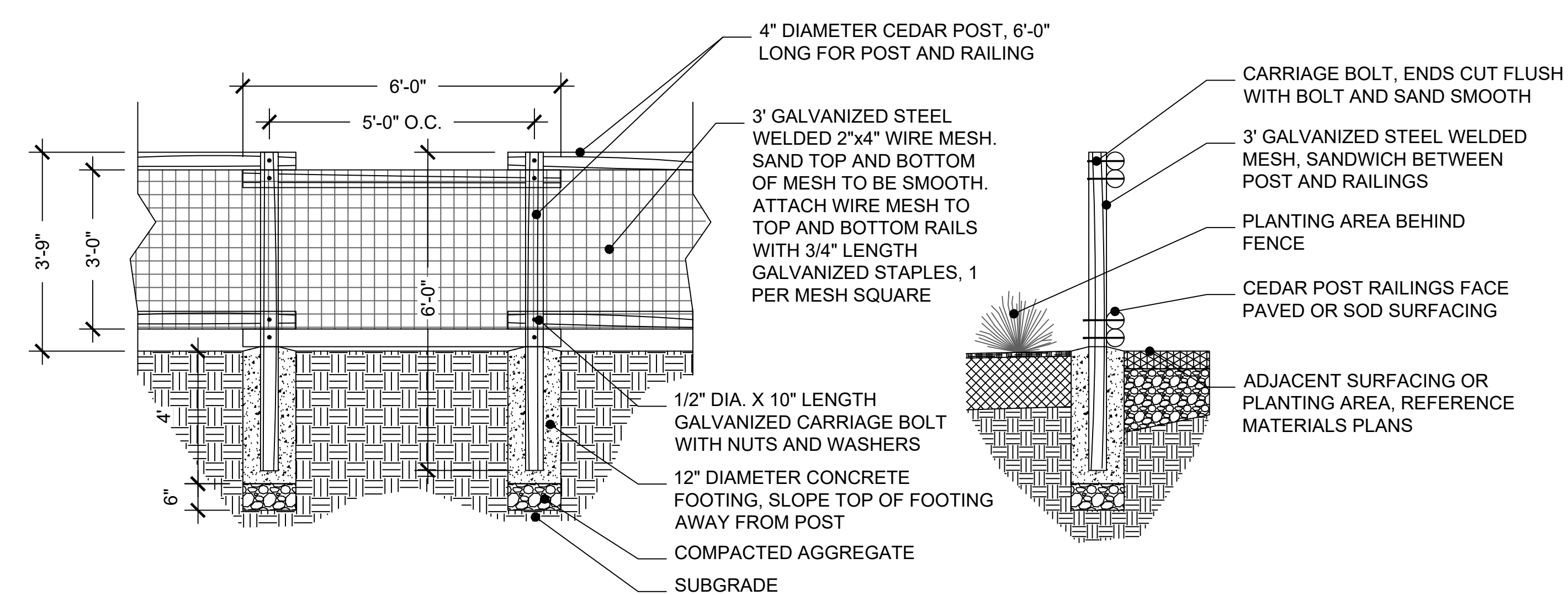
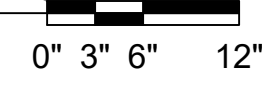


- NOTES:
1. DRILL HOLE THROUGH POST TO ACCEPT ROPE, SAND ALL ROUGH EDGES SMOOTH.
 2. ROPE INSTALLATION: AT EACH POST TIE KNOT IN ROPE, INSERT ROPE IN POST, LOOP THE ROPE AROUND ONE SIDE OF THE POST, INSERT THE ROPE THROUGH THE POST AGAIN, TIE ANOTHER KNOT, REPEAT AT EACH POST.
 3. ROPE BETWEEN POSTS 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.

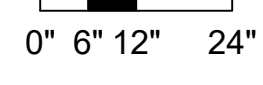
1 ADA ACCESS RAMP
PLAN AND SECTION



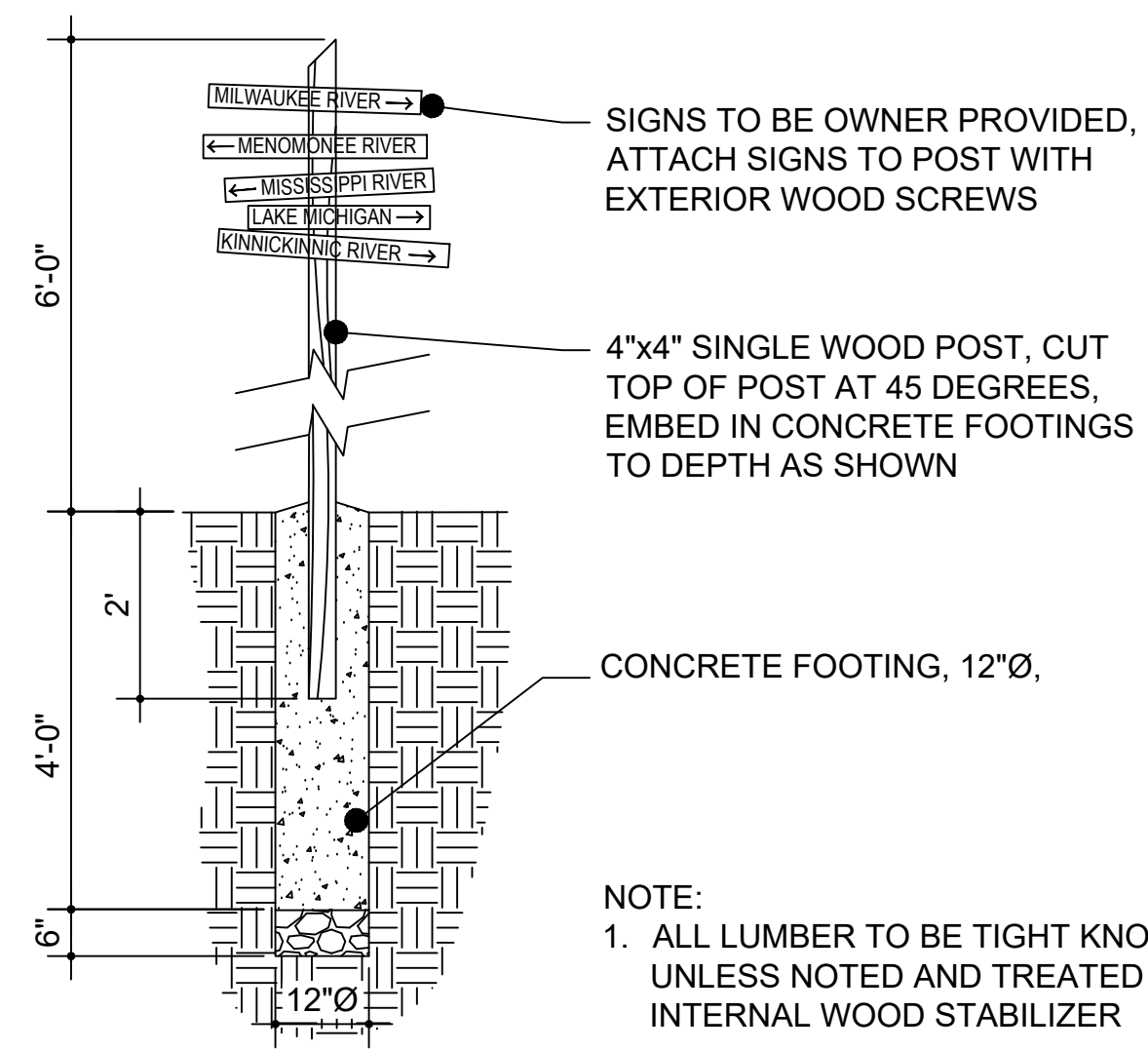
2 ROPE FENCE
SECTION



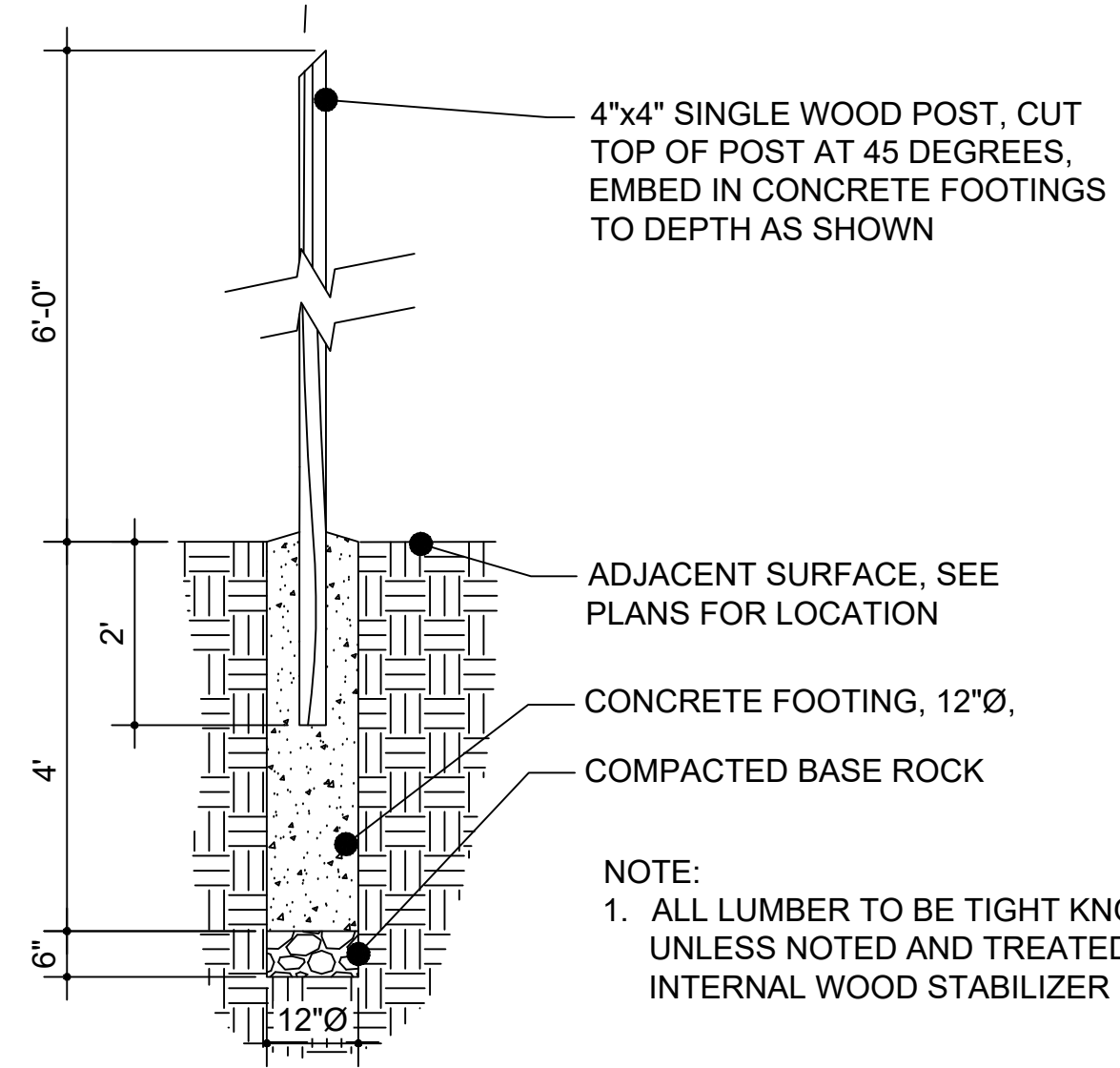
4 NOT USED



3 DECORATIVE FENCE
SECTION

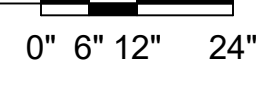


NOTE:
1. ALL LUMBER TO BE TIGHT KNOT CEDAR UNLESS NOTED AND TREATED WITH IN INTERNAL WOOD STABILIZER

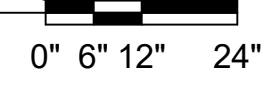


NOTE:
1. ALL LUMBER TO BE TIGHT KNOT CEDAR UNLESS NOTED AND TREATED WITH IN INTERNAL WOOD STABILIZER

5 SIGN POST
SECTION



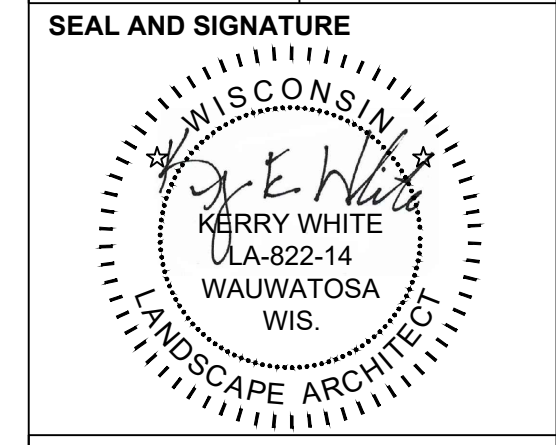
6 ART POST
SECTION



SHEET NAME: SITE DETAILS	PROJECT NAME: 2023 GREEN INFRASTRUCTURE UPGRADES	PROJECT ADDRESS: MILWAUKEE GERMAN IMMERSION ELEMENTARY SCHOOL 3778 N. 82ND STREET, MILWAUKEE, WI 53222
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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

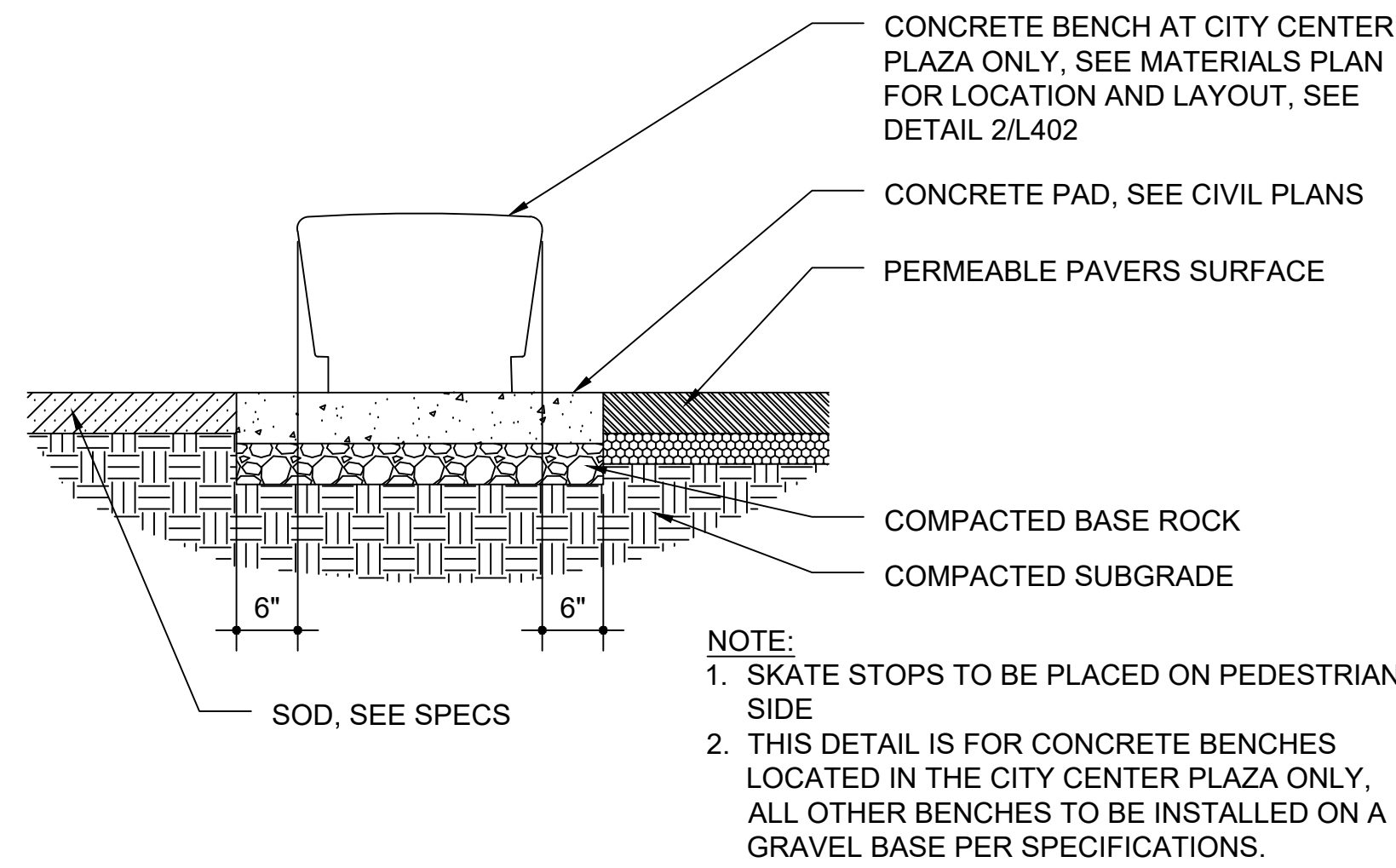


PROJECT NUMBER: 7331 (DIVISION 1)

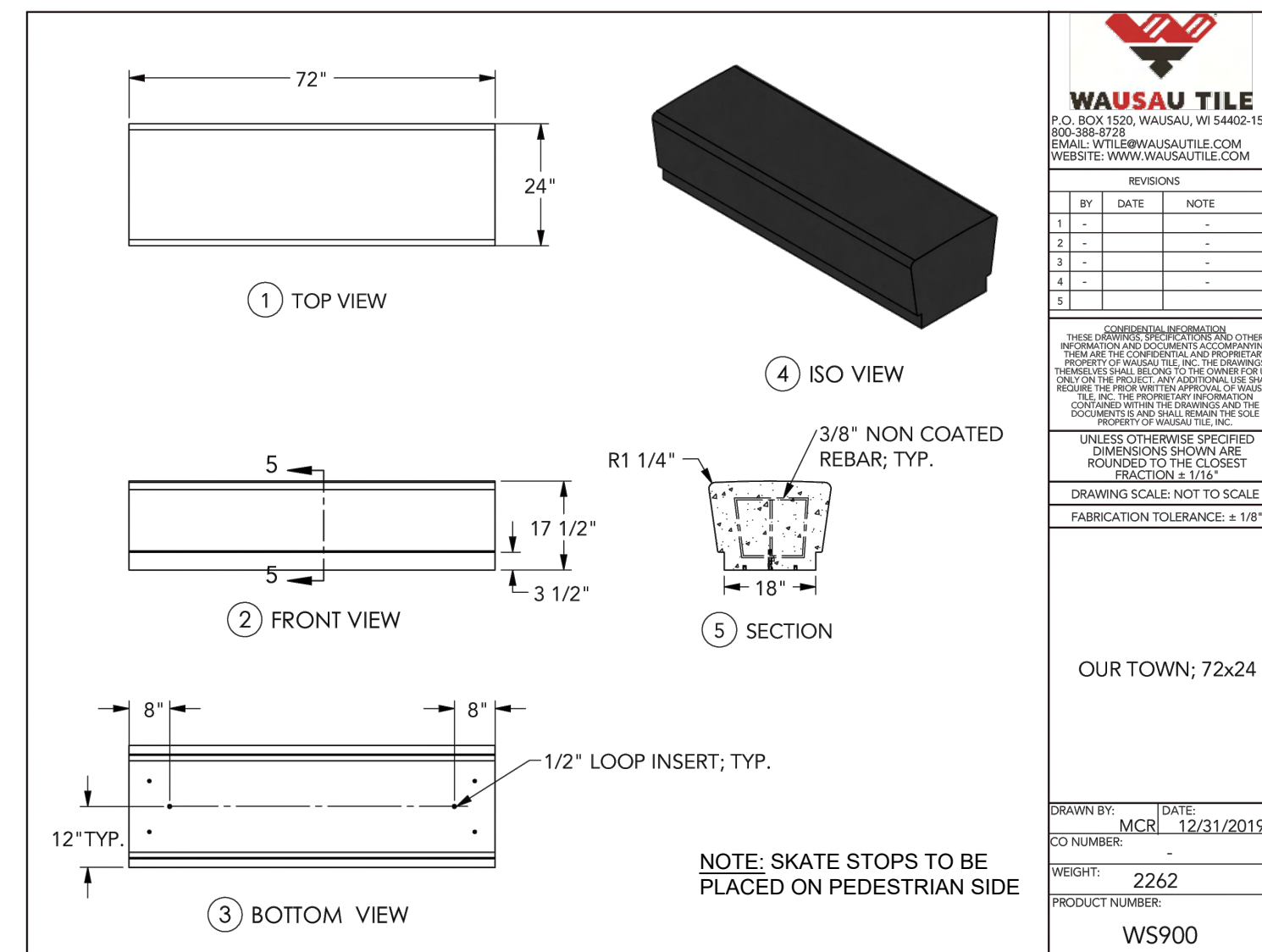
SITE NUMBER: 146

SHEET:
L401

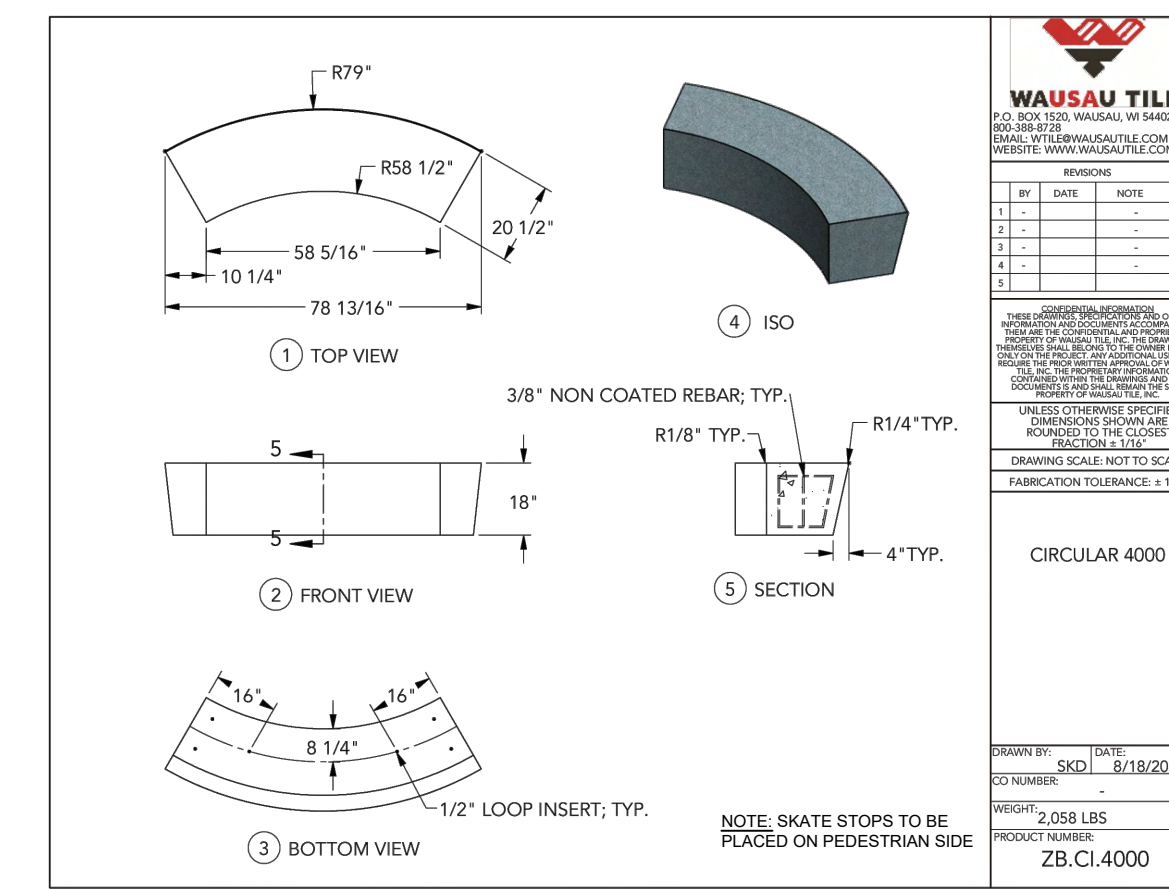




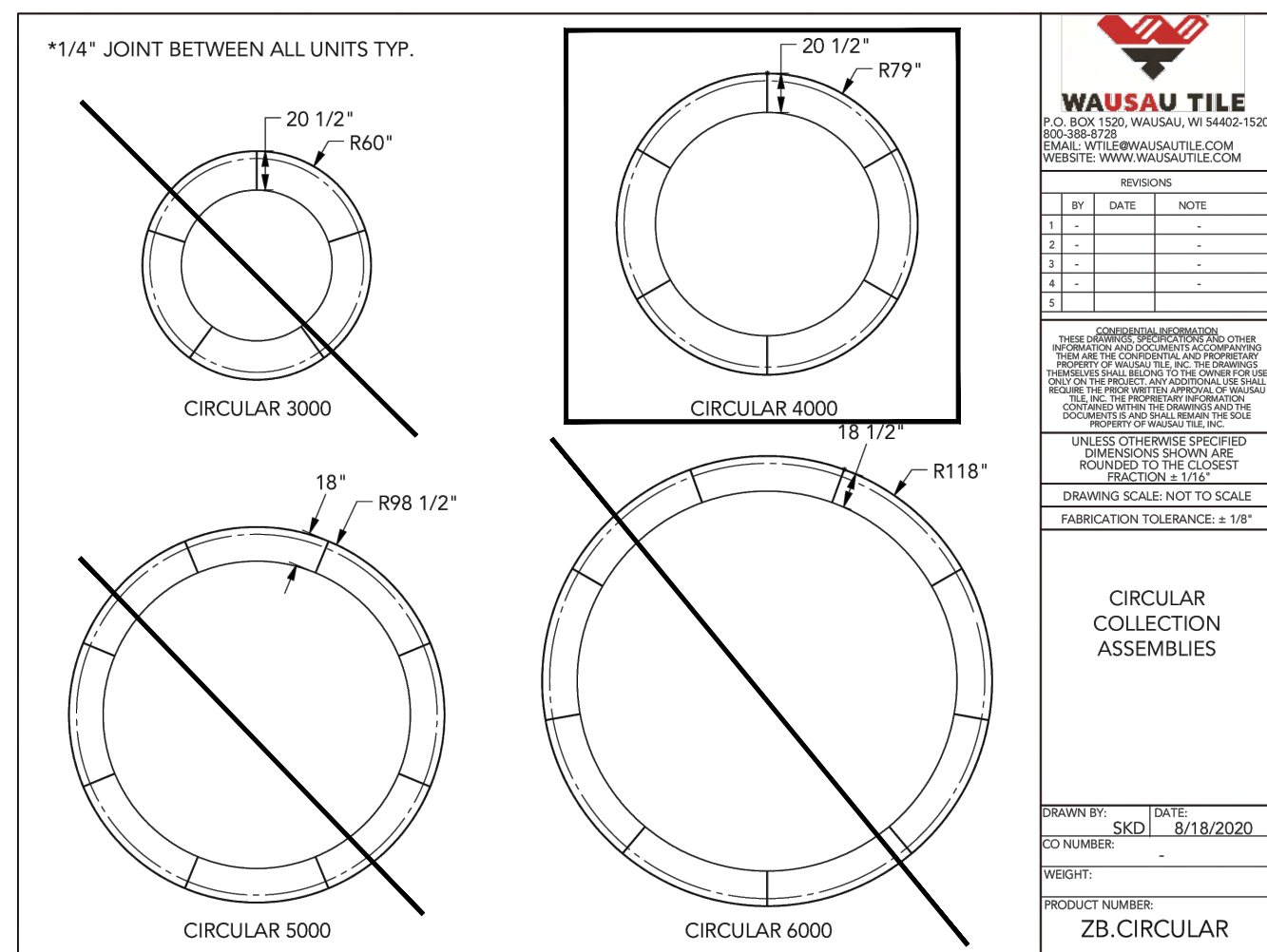
1 CONCRETE BENCHES AT CITY CENTER PLAZA SECTION
 0" 4" 8" 16"



2 CONCRETE BENCH SECTION
 0" 8" 16" 32"



3 CONCRETE BENCH / TREE PLANTER PLAN
 0" 12" 24" 48"



4 CONCRETE BENCH / TREE PLANTER PLAN
 0" 24" 48" 96"

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 247 W. FRESHWATER WAY, SUITE 410
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 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: **MILWAUKEE GERMAN IMMERSION ELEMENTARY SCHOOL 3778 N. 82ND STREET, MILWAUKEE, WI 53222**

ISSUED FOR:	REV:	DATE:
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DRAWN BY: **ZWA**
 REVIEWED BY: **KW**
 APPROVED BY: **MM**
 DATE: **January 2023**

SEAL AND SIGNATURE

PROJECT NUMBER: 7331 (DIVISION 1)
 SITE NUMBER: 146
 SHEET:
L402





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 Copyright laws protect the style and visual appearance of the structure while patents may protect other parts of the design.

PROJECT NAME: OUTDOOR CLASSROOM MPS

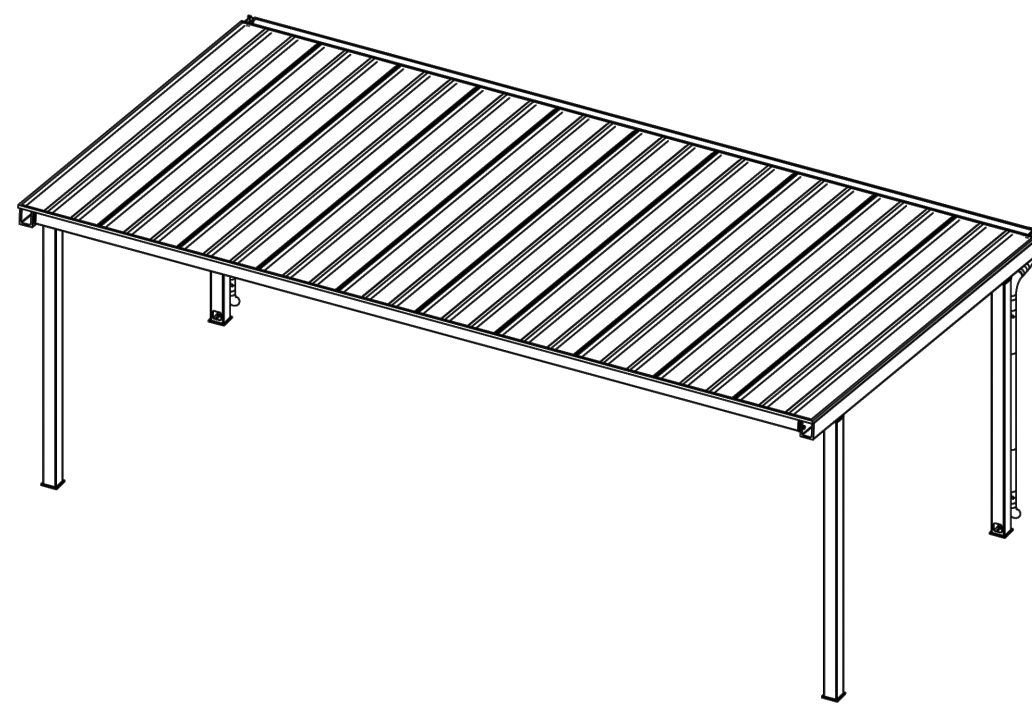
PROJECT LOCATION: MILWAUKEE, WI

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	A300 (GRADE B)
SCHEDULE PIPE	A53 (GRADE B)
RMT PIPE	A519
LIGHT GAGE COLD FORMED STRUCTURAL STEEL PLATE	A1003 (GRADE 60)
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.

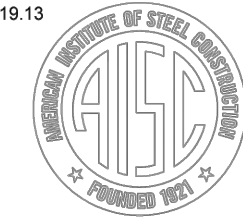
FOR PROPER FIELD INSTALLATION OF THE BUILDING IT IS RECOMMENDED THAT ELECTRIC WIRING IF REQUIRED, BE RUN THROUGH THE STRUCTURAL MEMBERS BEFORE THE BUILDING IS ERECTED.

CERTIFICATES:

MANULAKE COUNTY CERTIFICATE OF COMPETENCY NO. 21-0819-13
 PCI (POWDER COATING INSTITUTE) 4000 CERTIFIED

FABRICATOR APPROVALS:

CITY OF PHOENIX, AZ APPROVED FABRICATOR #C08-2010
 CITY OF LOS ANGELES, CA APPROVED FABRICATOR #F051596
 CITY OF RIVERSIDE, CA APPROVED FABRICATOR #SF_000042
 CITY OF HOUSTON, TX APPROVED FABRICATOR #470
 CLARK COUNTY, NV APPROVED FABRICATOR #284
 STATE OF UTAH APPROVED FABRICATOR 02008-14
 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

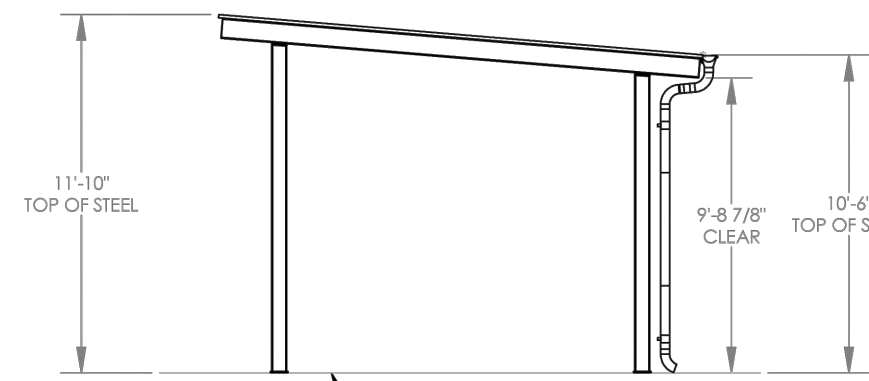
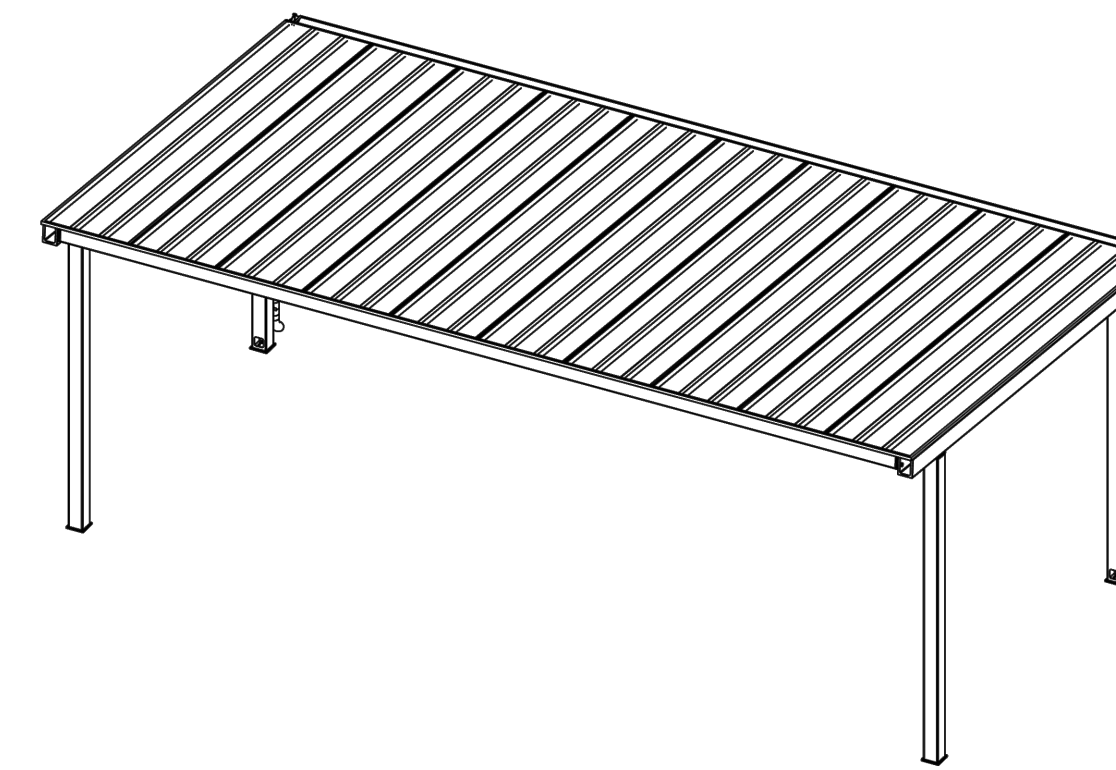
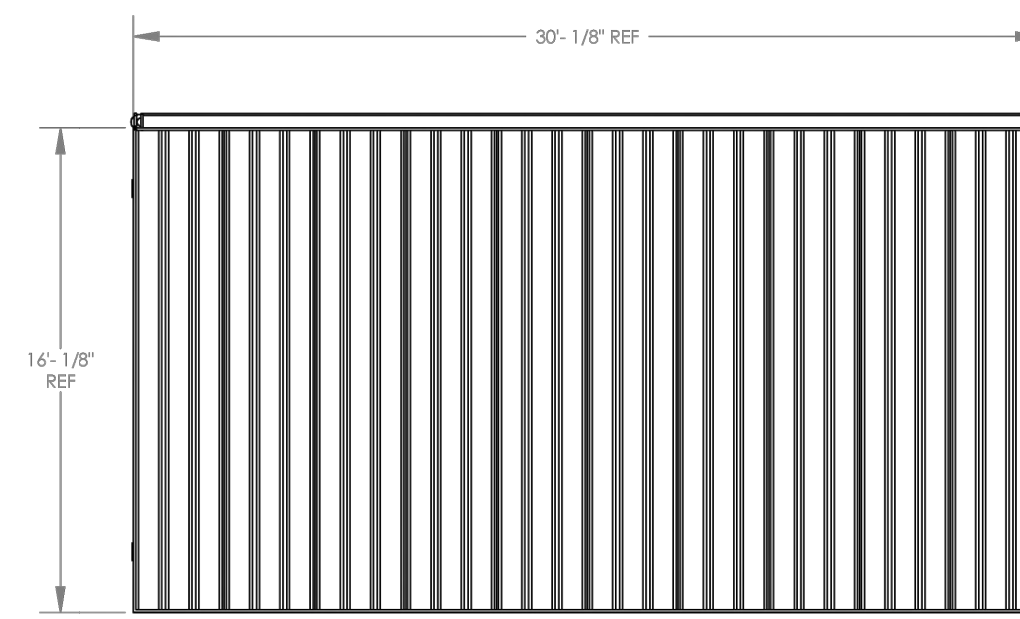
LIVE LOAD:
 ROOF LIVE LOAD: 20 PSF

SNOW DESIGN DATA:
 GROUND SNOW LOAD (Pg): 30 PSF
 FLAT ROOF SNOW LOAD (Pp): 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 (GCp1): 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

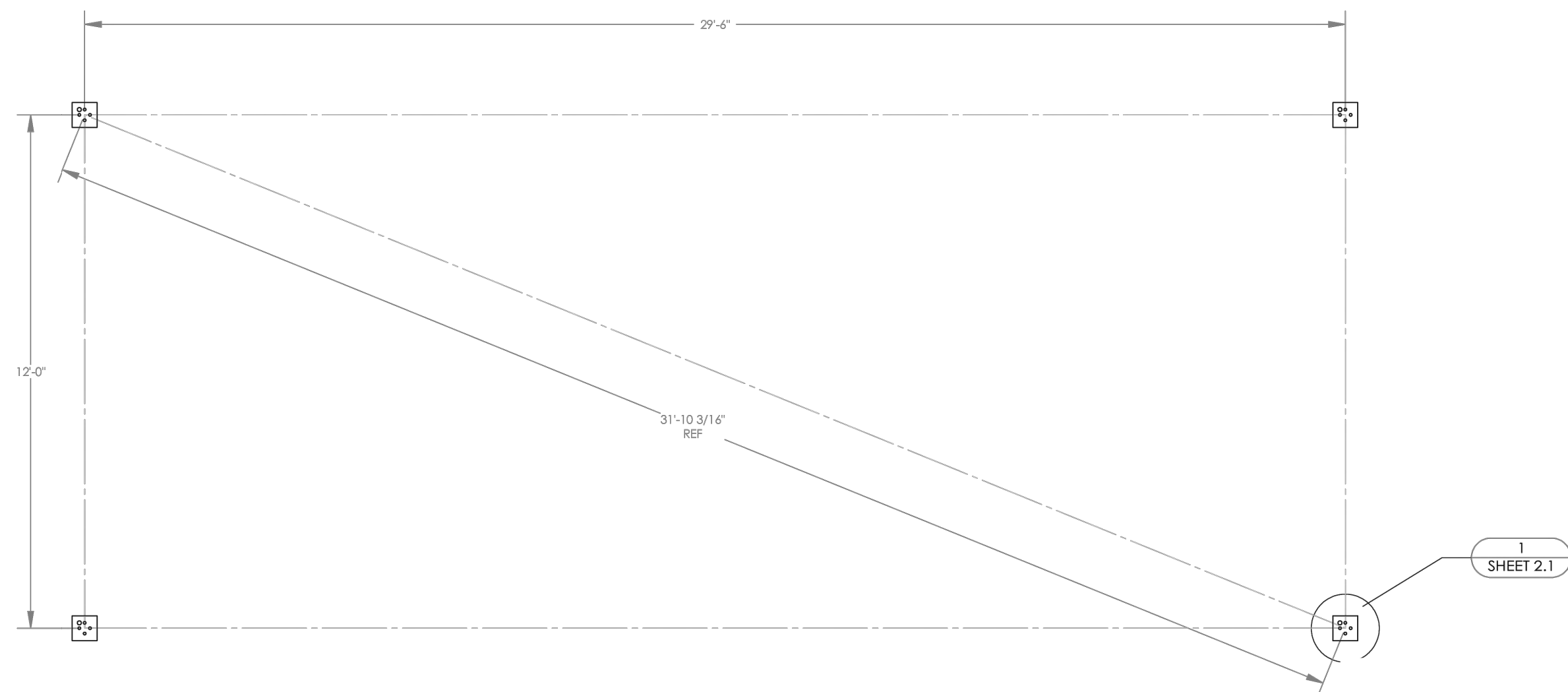


1 SHADE SHELTER - COVER SHEET

NOT TO SCALE

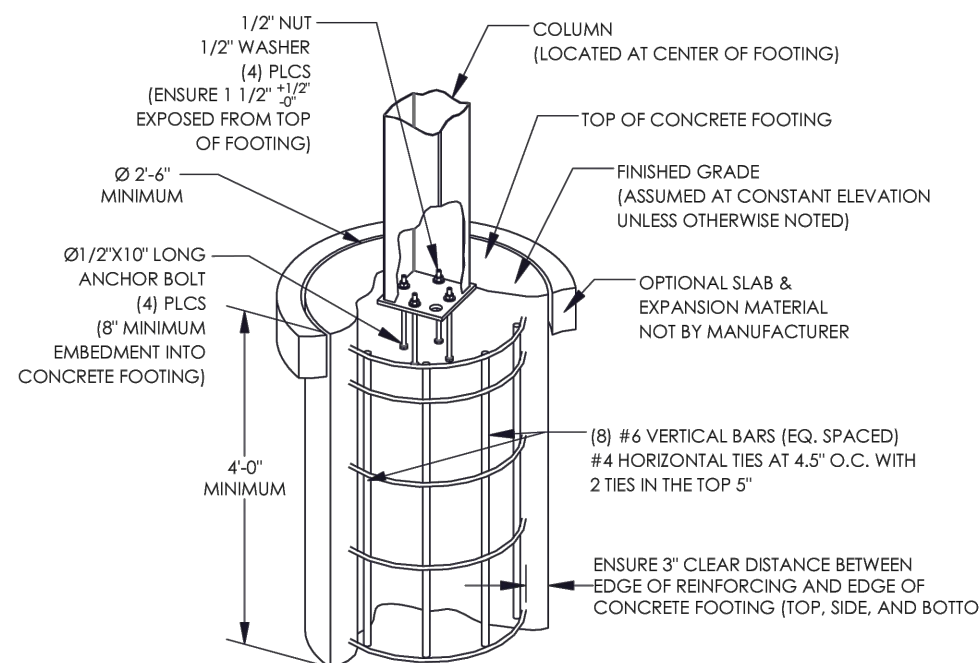
2 SHADE SHELTER - ARCHITECTURAL ELEVATIONS

NOT TO SCALE



ANCHOR AND FOOTING LAYOUT NOTES:

- ANCHORS MUST BE CENTERED IN FOOTINGS
- FOOTINGS MUST BE TURNED TO ALIGN WITH COLUMN AND TRUSS CENTERLINE

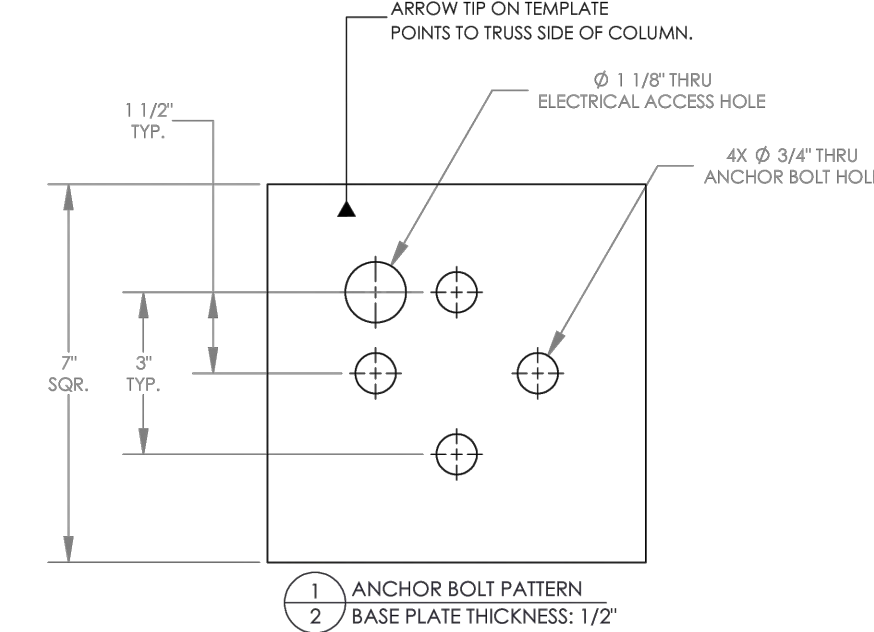


PIER FOOTING OPTION (INTERNAL ANCHOR BOLTS)

FOOTING DESIGN BY MANUFACTURER. FOOTING MATERIALS BY OTHERS.
 (TYPICAL WITH EACH COLUMN. QTY OF REINFORCING AND ANCHOR BOLTS SHOWN IN DRAWINGS MAY NOT REFLECT REQUIREMENTS)

ANCHOR BOLT NOTES - INTERNAL (ANCHOR BOLTS LOCATED WITHIN COLUMN):

- ANCHOR BOLTS SHALL BE ASTM A307 (GRADE A) MATERIAL UNLESS OTHERWISE NOTED.
- ANCHOR BOLTS SHALL BE EITHER "HEADED" OR "THREADED WITH NUT" AS DEFINED IN THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL.
- HOOKED ANCHOR BOLTS ARE NOT ACCEPTABLE.
- ACCURATE ANCHOR BOLT PLACEMENT IS CRITICAL TO ENSURE THE ANCHOR BOLT LAYOUT MEETS THE DIMENSIONS REQUIRED ON THE DRAWINGS. SURVEY (OR MEASURE) THE LOCATION OF ALL ANCHOR BOLTS PRIOR TO POURING THE FOOTINGS. AN ADDITIONAL SURVEY (OR MEASUREMENT) SHOULD BE MADE AFTER THE FOOTINGS ARE POURED TO CONFIRM THE ANCHOR BOLTS DID NOT SHIFT DURING THE CONCRETE POUR.
- THE MANUFACTURER STRONGLY RECOMMENDS USING ANCHOR BOLT TEMPLATES BECAUSE THEY SIGNIFICANTLY IMPROVE THE ACCURACY OF ANCHOR BOLT PLACEMENT. AN ANCHOR BOLT TEMPLATE IS PROVIDED WITH ANY ANCHOR BOLT KIT PURCHASED.
- IF OUTSIDE CONSULTING ENGINEERS ARE DESIGNING THE FOUNDATIONS FOR THIS STRUCTURE, THEY MUST REFER TO THE MANUFACTURER'S CALCULATIONS FOR MINIMUM CONCRETE PROPERTIES (COMPRESSIVE STRENGTH, EDGE DISTANCE, ETC.) REQUIRED FOR THE ANCHOR BOLT DESIGN.
- ELECTRICAL ACCESS HOLE IS ALWAYS LOCATED IN THE COLUMN BASE PLATE AS SHOWN. BE SURE TO KEEP THE ANCHOR BOLT TEMPLATE PROPERLY ORIENTED WHEN ELECTRICAL ACCESS TO THE COLUMN IS REQUIRED. TEMPLATE MUST BE REMOVED BEFORE INSTALLING COLUMN.
- THE CALCULATIONS FOR THIS STRUCTURE ASSUME A PINNED COLUMN BASE.
- IF THE FOLLOWING ADHESIVE ANCHORS MAY BE SUBSTITUTED FOR THE CAST-IN-PLACE ANCHOR BOLTS:
 - HULL HIT-HY 200 (A OR R) VS ADHESIVE WITH Ø 1/2" HAS-E-ROD WITH MINIMUM 8" EMBEDMENT.
 CONTRACTOR SHALL FOLLOW ALL INSTALLATION SPECIFICATIONS AND REQUIREMENTS OF ANCHOR MANUFACTURER.



FOUNDATION NOTES:

- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE BUILDING CODE, AMERICAN CONCRETE INSTITUTE, AND ALL APPLICABLE STATE AND LOCAL ORDINANCES AND REQUIREMENTS.
- THE CONCRETE DESIGN IS BASED ON THE FOLLOWING PROPERTIES:
 • SLABS OF 4" (1'-11")
 • 28 DAY STRENGTH OF 4500 psi.
- THE FOOTING SHALL BEAR ON COMPETENT UNDISTURBED SOIL OR 95% COMPACTED FILL. IF SIGNS OF ORGANIC MATERIAL, UNCONTROLLED FILL, CLAY OR SILT HIGH WATER TABLE OR OTHER POSSIBLE DETRIMENTAL CONDITIONS ARE FOUND, INSTALLATION OF THE FOUNDATION MUST BE DISCONTINUED AND A SOILS ENGINEER CONTACTED.
- THE REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615, GRADE 60.
- IF FOOTING DEPTH SHOWN DOES NOT MEET LOCAL FROST REQUIREMENTS, THE DRILLED PIER FOOTING MAY BE EXTENDED, EXTEND VERTICAL BARS AS REQUIRED AND PROVIDE ADDITIONAL TIES TO MEET SPACING REQUIREMENTS AS SHOWN. IF LOCAL FROST DEPTH REQUIREMENTS ARE NOT MET AND NO DRILLED PIER FOOTING OPTION IS GIVEN, CONTACT POLIGON ENGINEERING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCAL FROST LINE DEPTH BELOW GRADE PRIOR TO CONSTRUCTION.

(THE FOUNDATION DESIGN SHOWN ON THESE DRAWINGS IS NOT SITE SPECIFIC, BUT BASED ON THE PRESUMPTIVE ALLOWABLE FOUNDATION PRESSURES IN CHAPTER 18 OF THE BUILDING CODE (CLASS 5 SOIL). THE BUILDING OFFICIAL IN THE JURISDICTION IN WHICH THIS STRUCTURE IS LOCATED MAY REQUIRE A SITE SPECIFIC GEOTECHNICAL REPORT OR LETTER FROM A QUALIFIED LOCAL PROFESSIONAL ENGINEER ATTESTING TO WHETHER THE ACTUAL SITE CONDITIONS MEET THE ASSUMPTIONS IDENTIFIED ABOVE.)

3 SHADE SHELTER - ANCHOR AND FOOTING LAYOUT

NOT TO SCALE

4 SHADE SHELTER - ANCHOR AND FOOTING DETAILS

NOT TO SCALE



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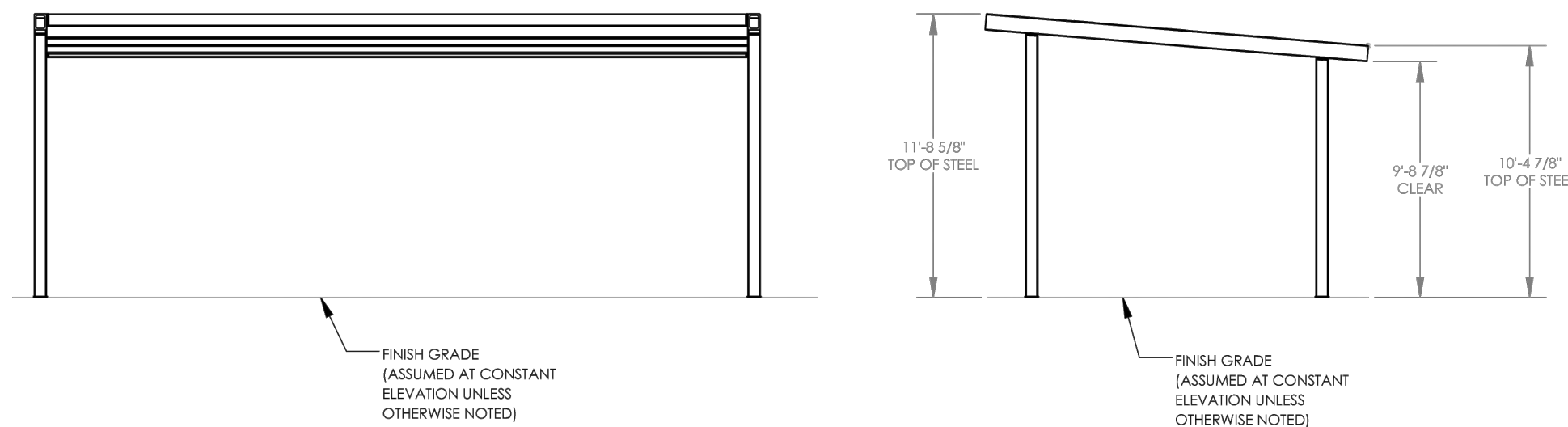
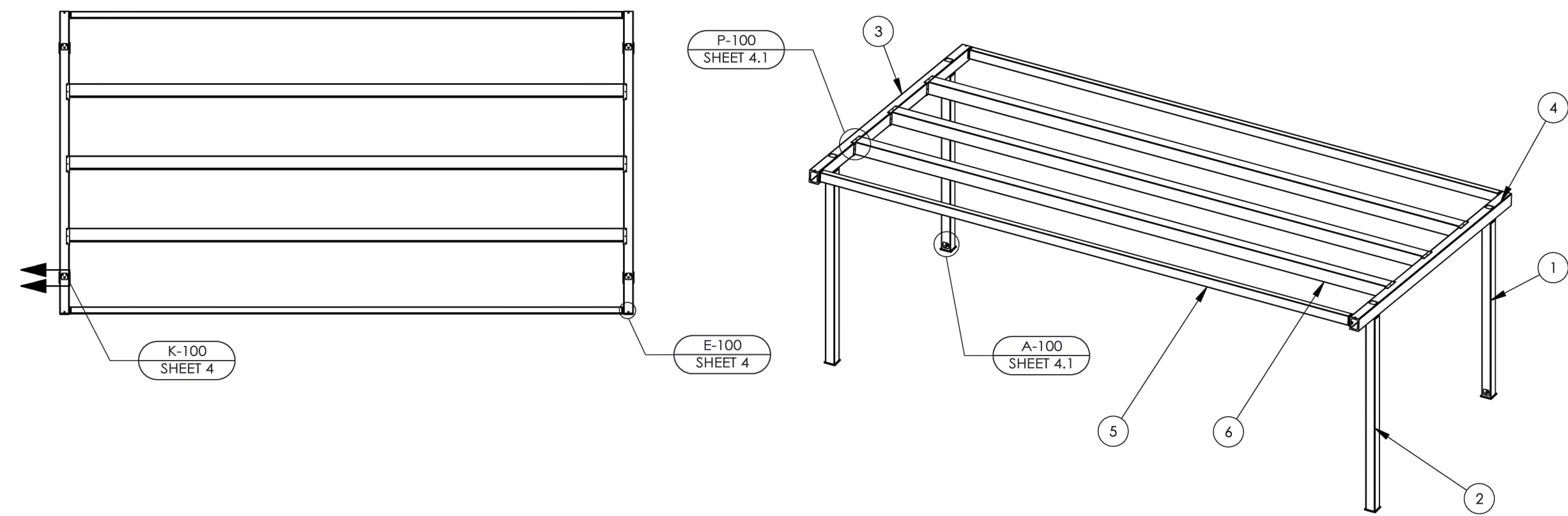


DIVISION OF FACILITIES AND MAINTENANCE SERVICES

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 MILWAUKEE, WI 53205-0259
 PHONE: 414-283-4600
 FAX: 414-283-4682

SHEET NAME: SITE DETAILS	PROJECT NAME: 2023 GREEN INFRASTRUCTURE UPGRADES	PROJECT ADDRESS: MILWAUKEE GERMAN IMMERSION ELEMENTARY SCHOOL 3778 N. 82ND STREET, MILWAUKEE, WI 53222
	ISSUED FOR:	REV:
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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: 7331 (DIVISION 1)		
SITE NUMBER: 146		
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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SHEET NAME: **SITE DETAILS**
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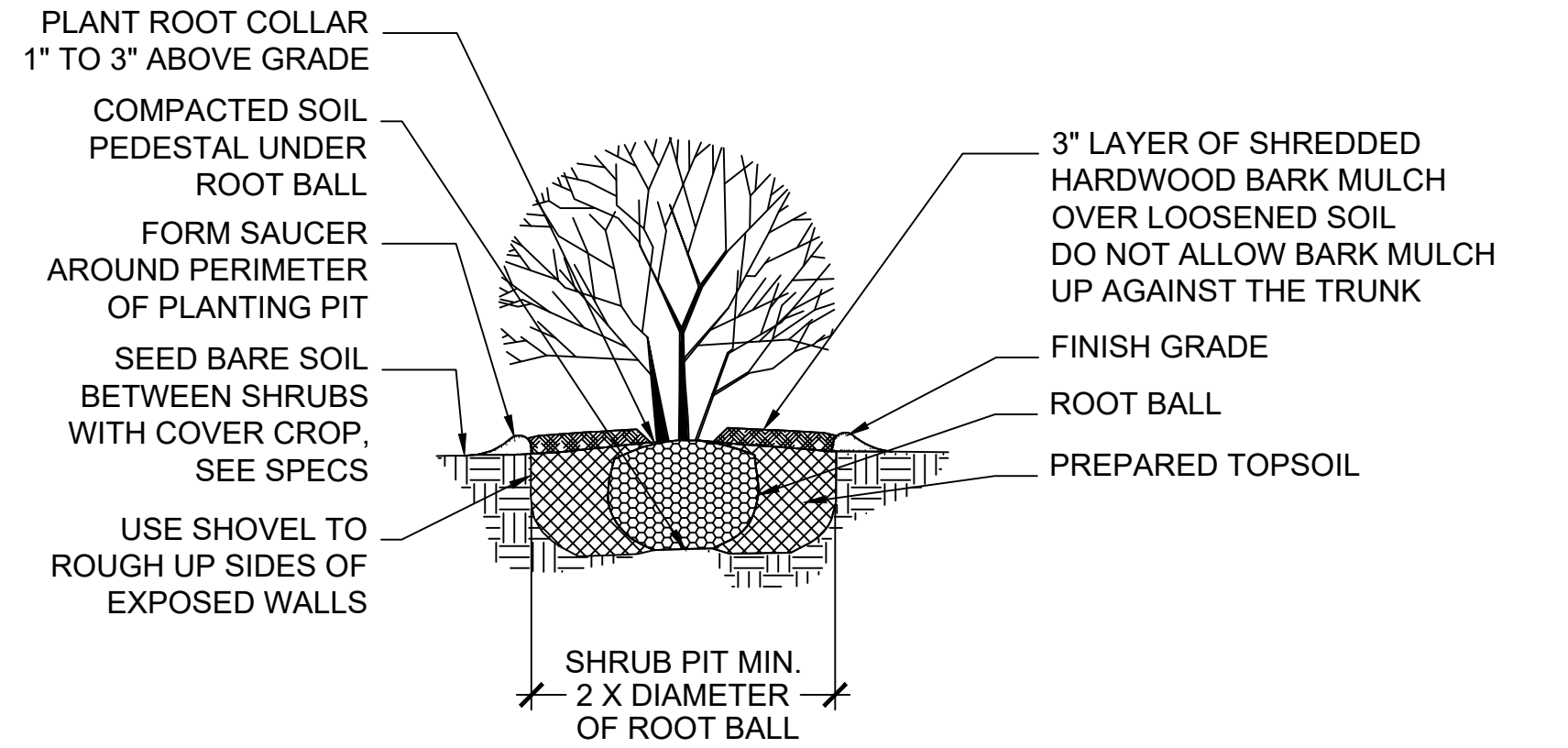
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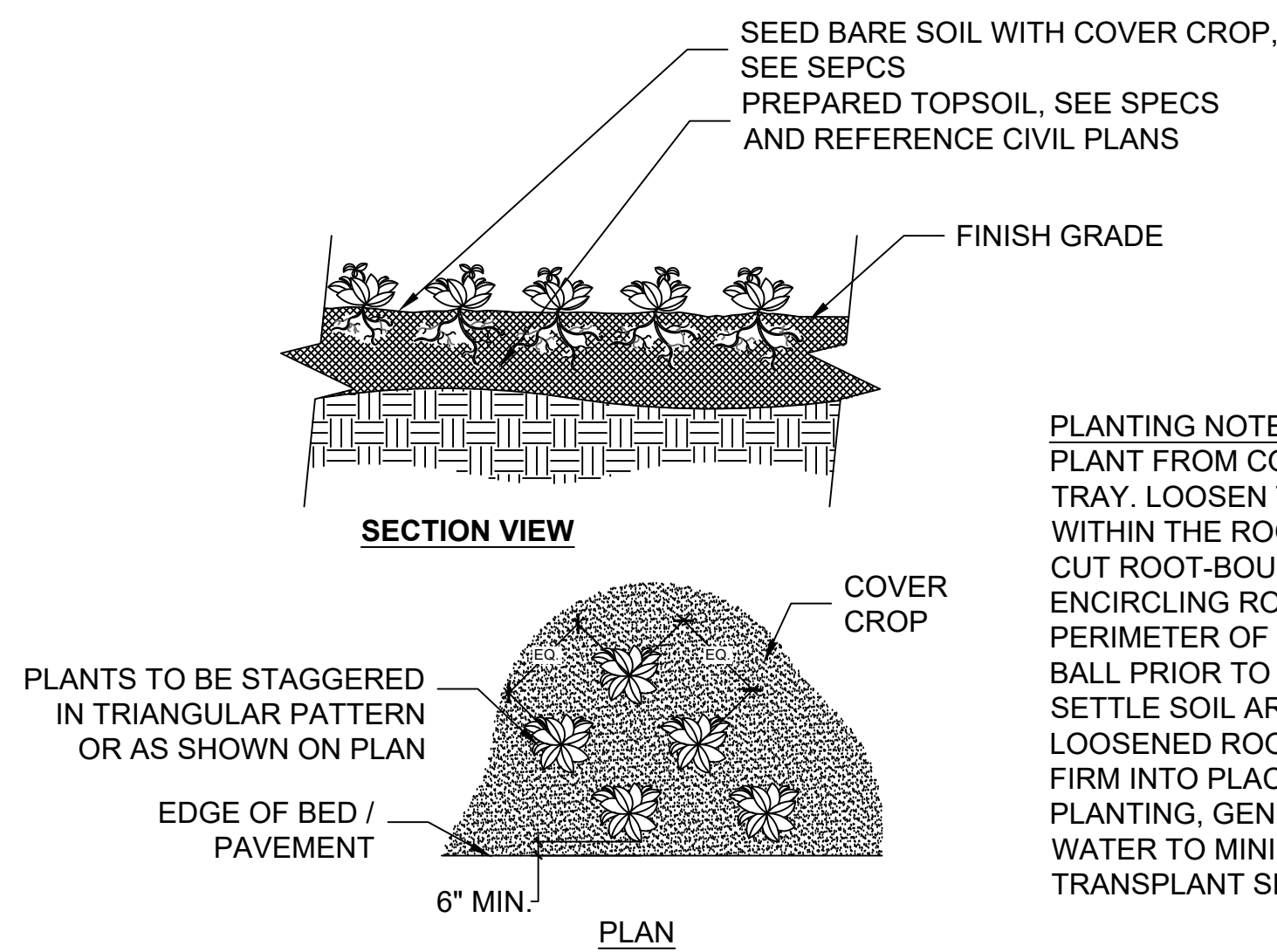
B & B NOTES: REMOVE THE ROPE AROUND TRUNK, PEEL THE TOP OF BURLAP BACK AND SCRAPE EXCESS SOIL TO EXPOSE THE ROOT COLLAR. REMOVE THE WIRE BASKET AND PEEL THE BURLAP OFF

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



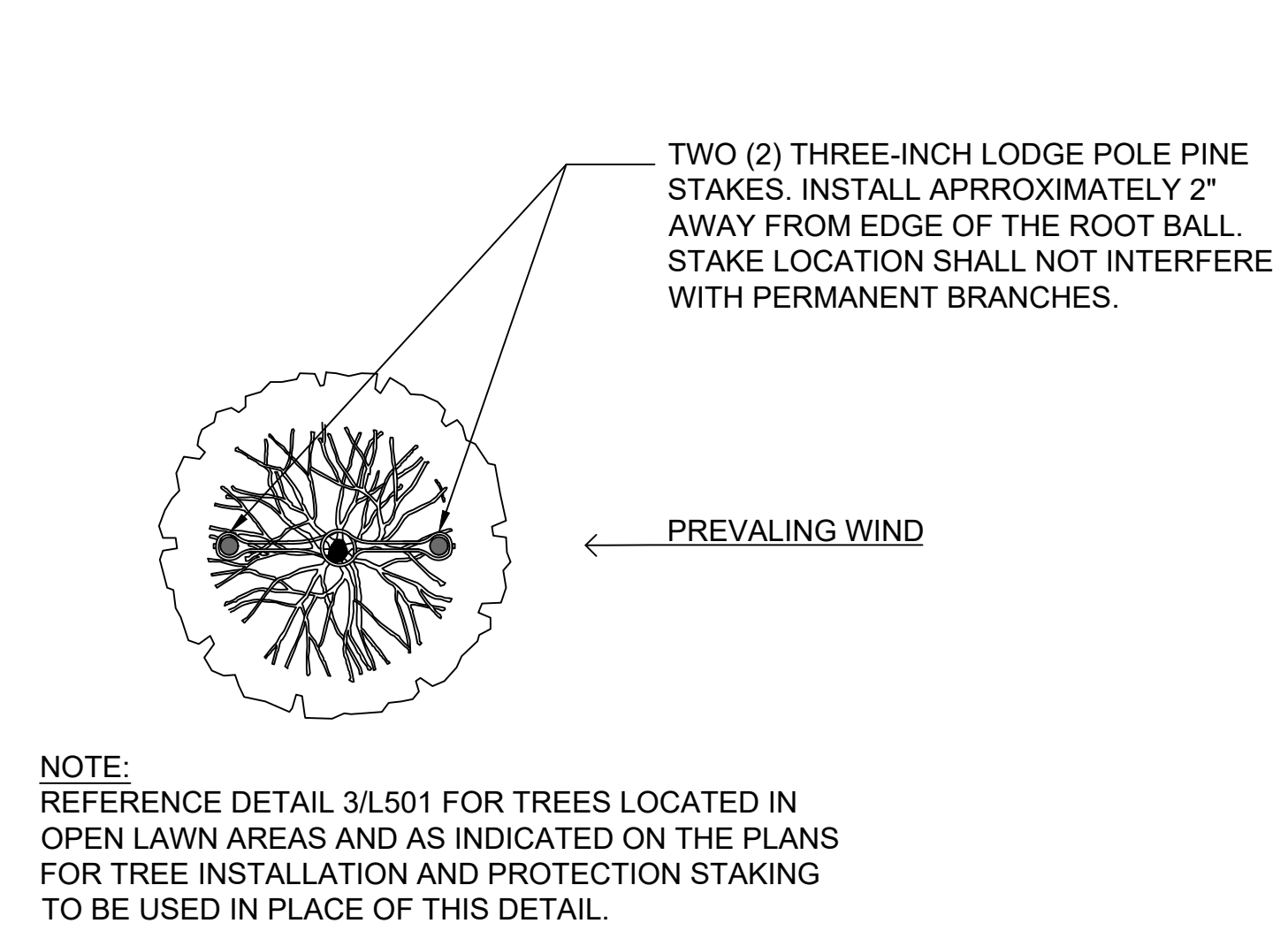
1 SHRUB PLANTING

SECTION 0" 6" 12" 24"



2 PLUG PLANTING

SECTION 0" 6" 12" 24"

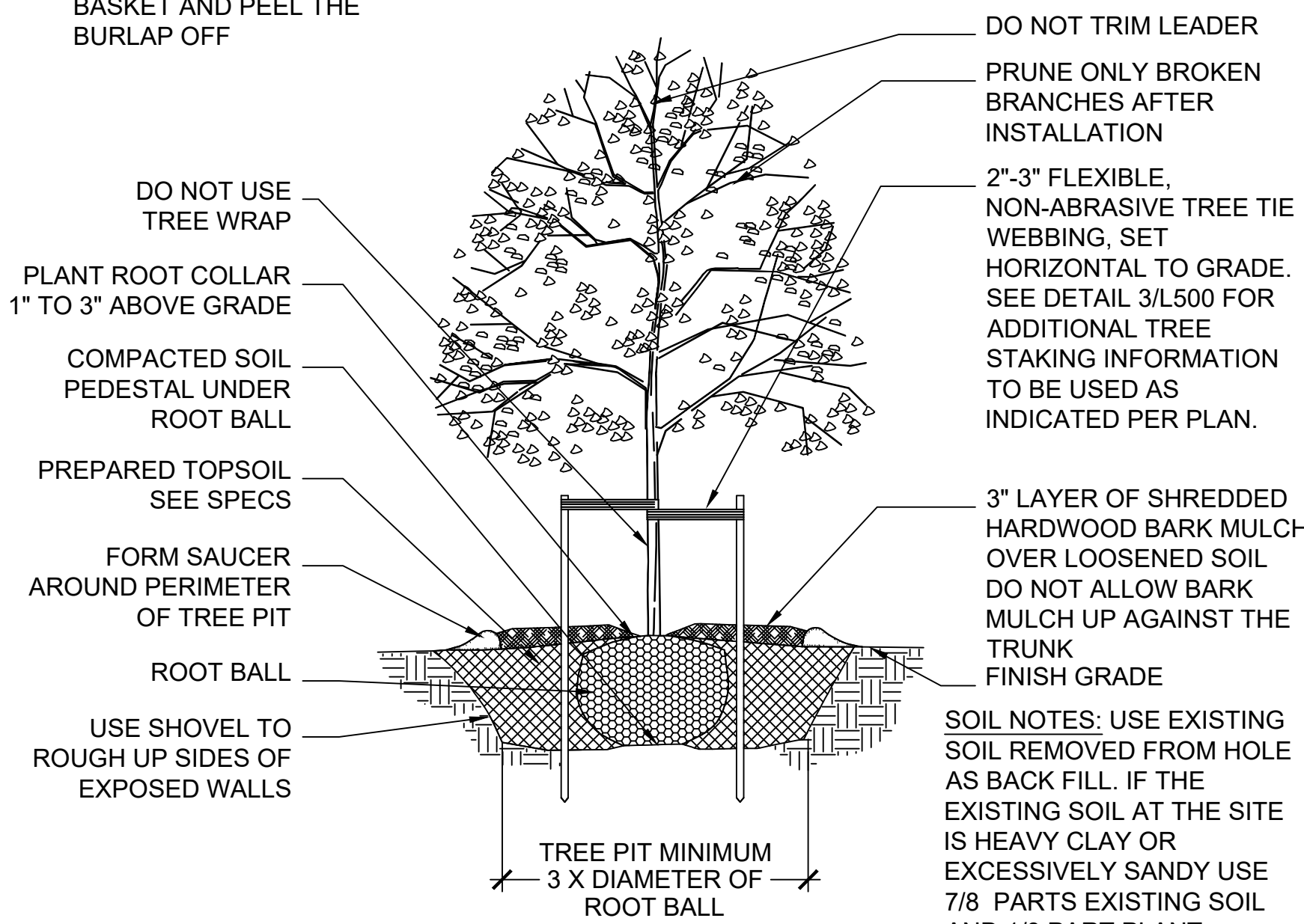


3 TREE STAKING

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

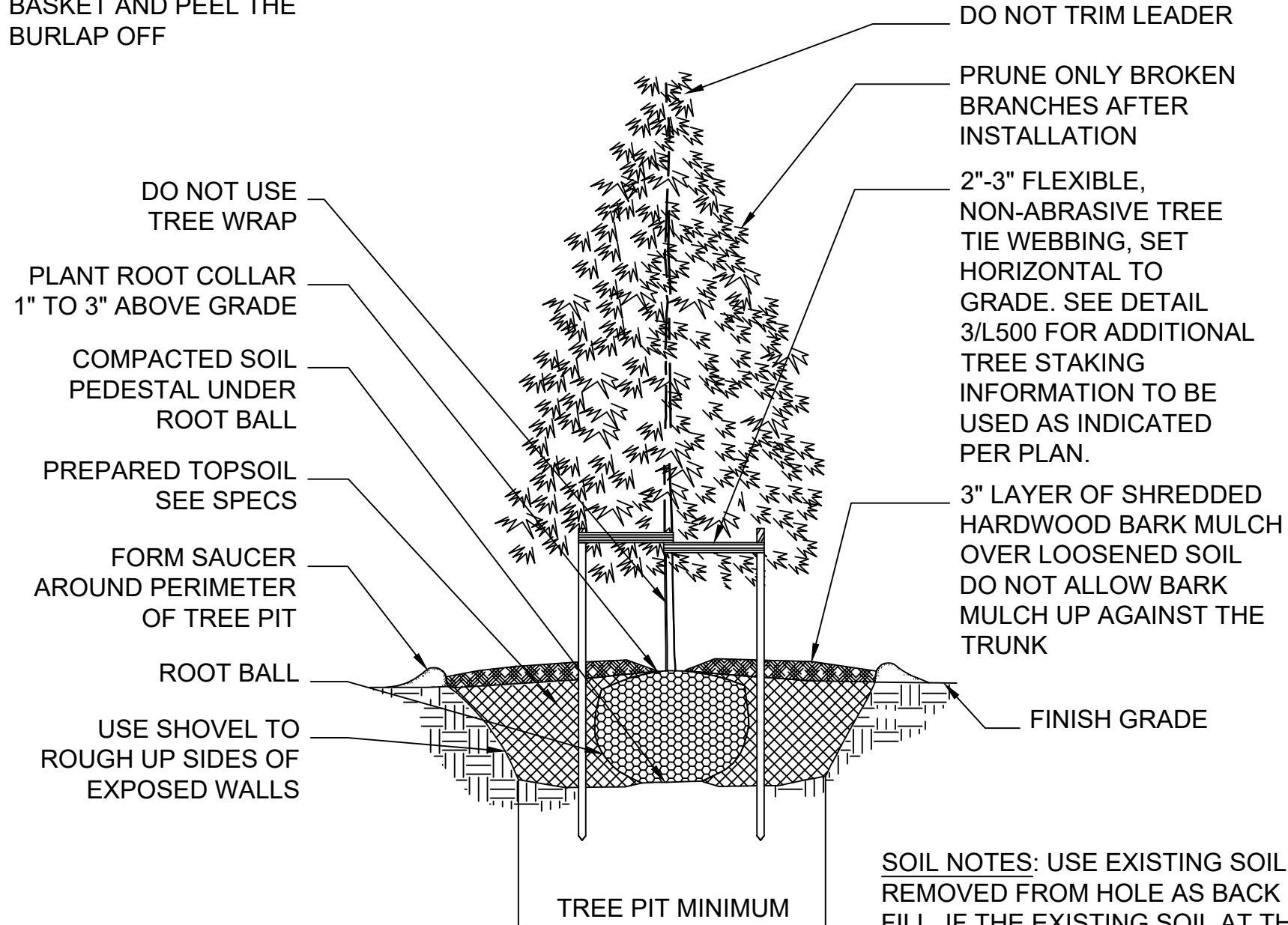


4 DECIDUOUS TREE PLANTING

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

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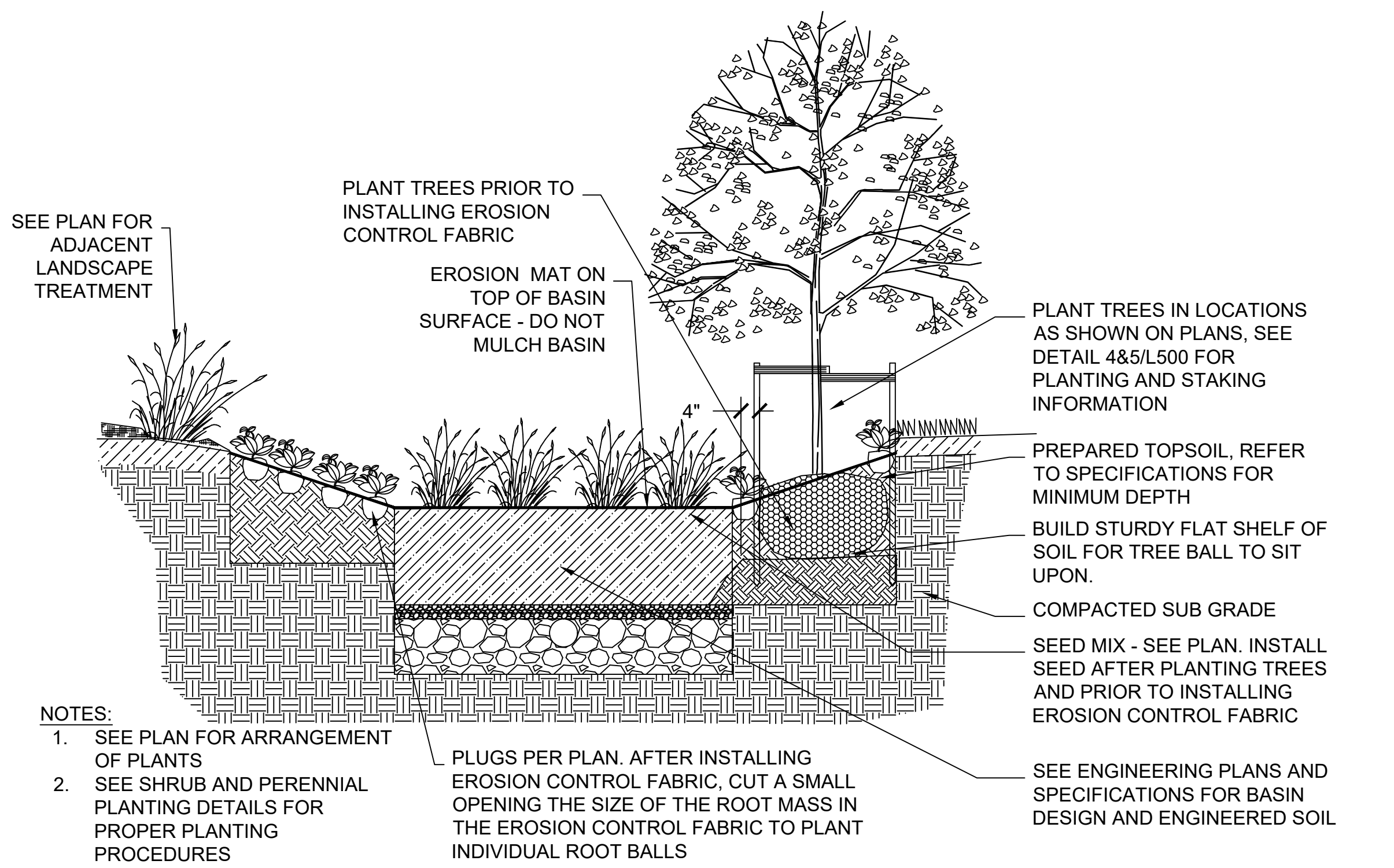
PROJECT NUMBER: 7331 (DIVISION 1)

SITE NUMBER: 146

SHEET:

L500



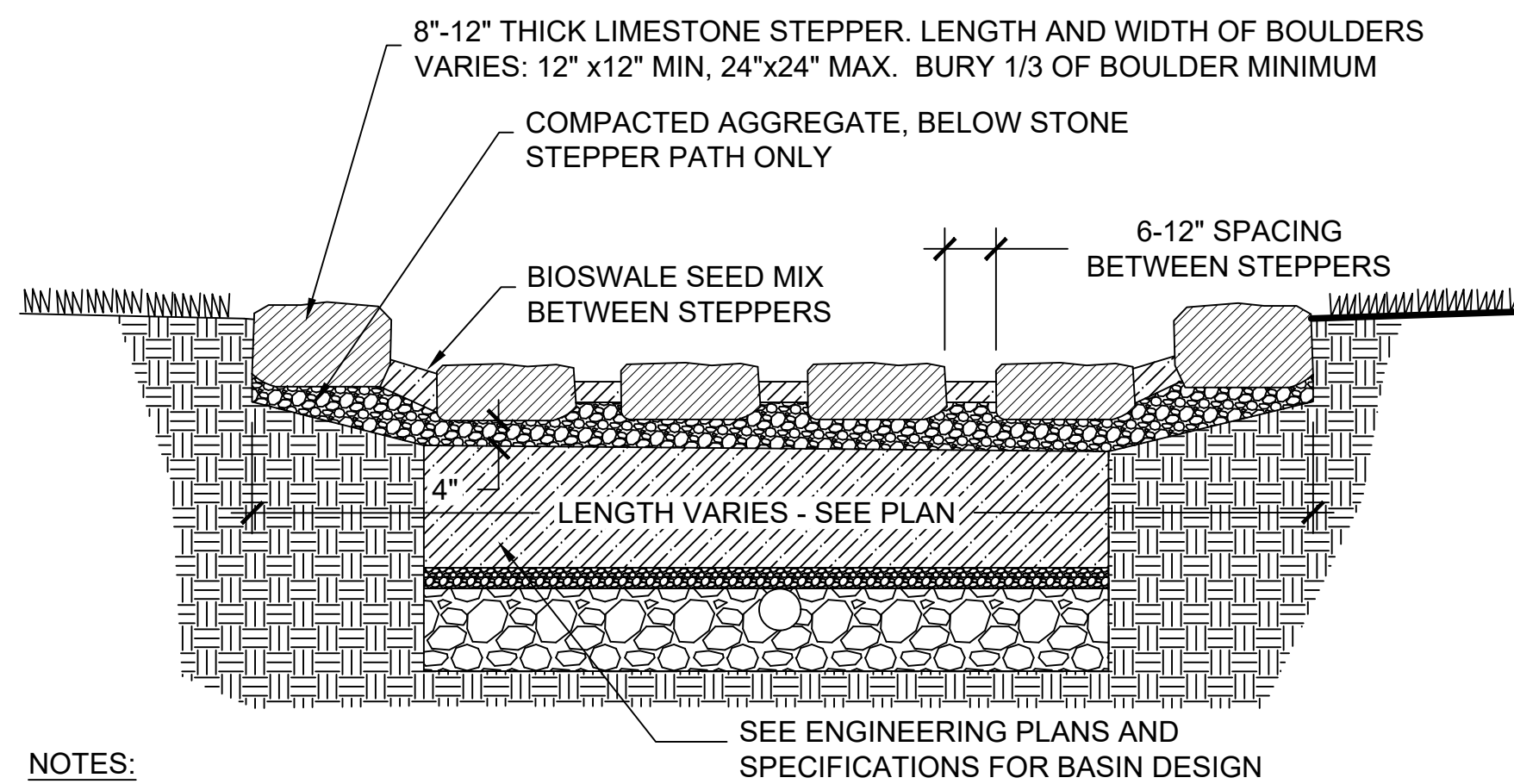
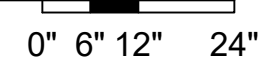


NOTES:

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

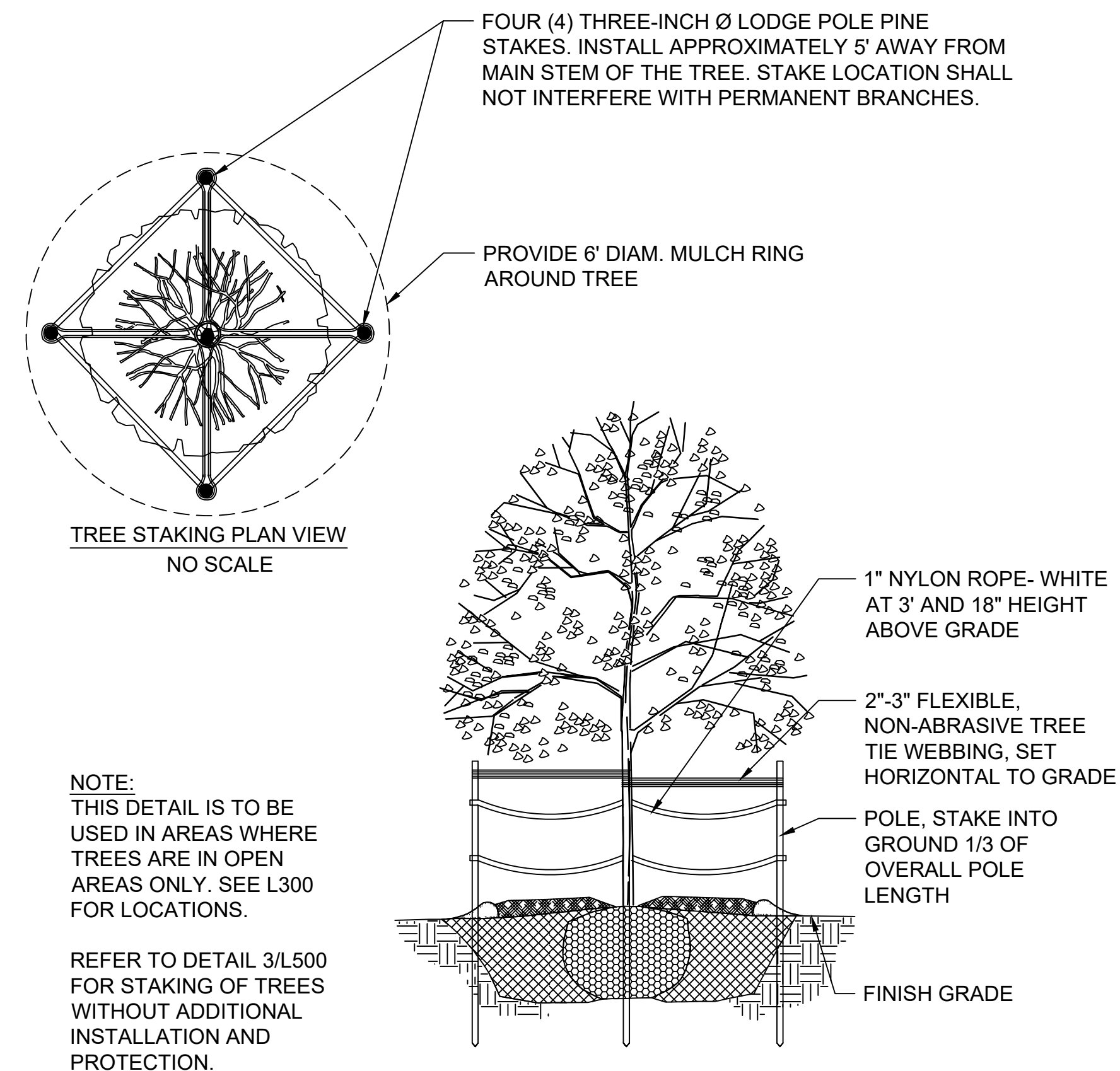
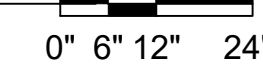


NOTES:

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



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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Learning Landscapes
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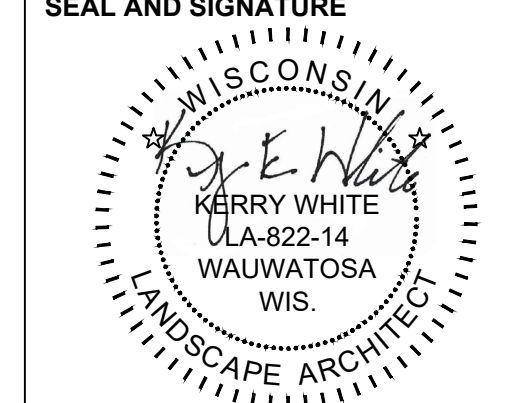
MPS MILWAUKEE PUBLIC SCHOOLS

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SHEET NAME: **PLANTING DETAILS**
 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
95% CD		12/22/2022
100% CD		1/23/2023

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



PROJECT NUMBER: 7331 (DIVISION 1)

SITE NUMBER: 146

SHEET:

L501

