

BISSELL HILLS PARK: PHASE ONE IMPLEMENTATION

ISSUE FOR BID

BISSELL HILLS PARK
10237 ASHBROOK DR.
ST LOUIS, MO 63137



7722 Big Bend Blvd.
St. Louis, MO 63119
t. 314.644.5700

PREPARED FOR - CITY OF BELLEFONTAINE NEIGHBORS
9641 BELLEFONTAINE ROAD
ST LOUIS, MO 63137

MSD # -
ISSUE DATE - AUGUST 16, 2018
REVISED AND REISSUED -

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PROJECT VICINITY MAP:
N.T.S.

BOUNDARY & TOPOGRAPHIC SURVEY

PART OF LOT 14 OF JAMES R. BISSELL ESTATE, TOWNSHIP 46 NORTH, RANGE 7 EAST, 5TH P.M.
CITY OF BELLEFONTAINE NEIGHBORS, ST. LOUIS COUNTY, MO

GIS Gateway Land Services, Inc.
3378 Olive Blvd.
St. Louis, MO 63132
Office: 314.881.9556
www.gisll.com
Land Surveying Services No. LS-200604482

STATE OF MISSOURI
JAMES L. DEGENERHARDT
PLAT NO. 26-49
PROFESSIONAL LAND SURVEYOR

James L. Degenerhardt, P.L.S.
License No: FL5-2649

PROJECT REVISION:

NO.	DATE	DESCRIPTION

BISSELL HILLS PARK
10201 ASHBROOK DRIVE
BELLEFONTAINE NEIGHBORS, MO
63137

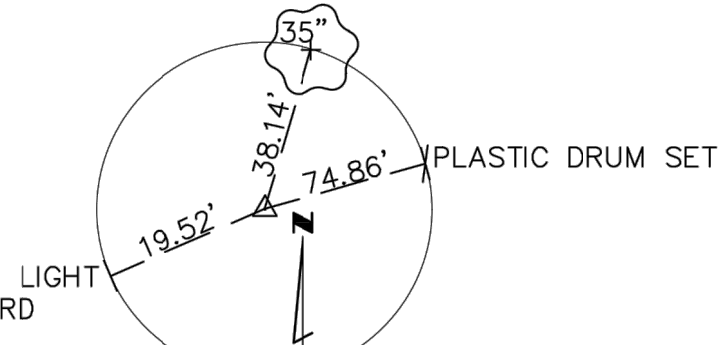
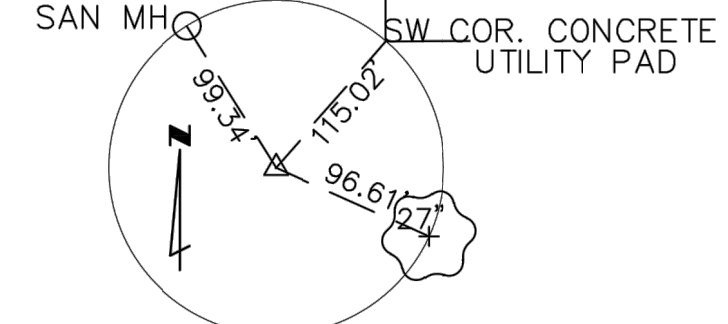
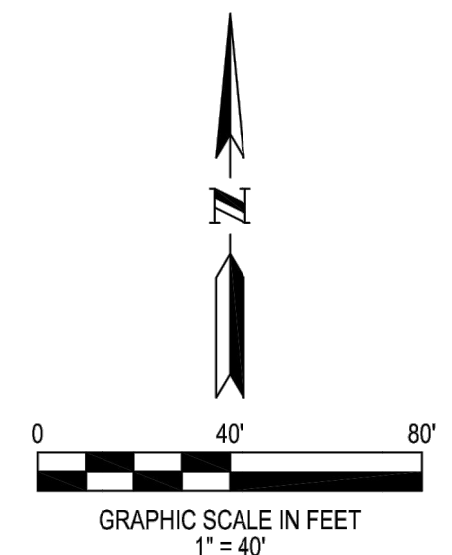
BOUNDARY & TOPOGRAPHIC SURVEY
PART OF LOT 14 OF JAMES R. BISSELL ESTATE
TOWNSHIP 46 NORTH, RANGE 7 EAST, OF THE 5TH P.M.
ST. LOUIS COUNTY

DATE: 03/23/18
BOOK NO.: 27770
DRAFTED BY: LSC
APPROVED BY: JLD
FILE NAME: 18-041.DWG

SHEET TITLE:
SURVEY

SHEET NUMBER
SUV-1

SHEET NO: 1 OF 1
PROJECT NO: 18-041



ABBREVIATIONS

AC	ACRES
ASPH	ASPHALT
BK	BOOK
BLDG	BUILDING
BM	BENCH MARK
CLF	CHAIN LINK FENCE
CONC	CONCRETE
DB	DEED BOOK
E	EAST
EMH	ELECTRIC MANHOLE
EL	ELEVATION
FF	FINISHED FLOOR
FL	FLOW LINE
L	LENGTH
MH	MANHOLE
N	NORTH
NE	NORTHEAST
NTS	NOT TO SCALE
PB	PLAT BOOK
PG	PAGE
PVC	POLYVINYL CHLORIDE
P.O.C.	POINT OF COMMENCEMENT
P.O.B.	POINT OF BEGINNING
PWMT	PAVEMENT
R	RADIUS
RCP	REINFORCED CONC. PIPE
REC	RECORD
RR TIE	RAIL ROAD TIE WALL
R/W	RIGHT OF WAY
S	SOUTH
SA	SANITARY
SBM	SITE BENCHMARK
SF	SQUARE FEET
ST	STORM
SUR	SURVEY
SW	SOUTHWEST
TRANS	TRANSFORMER
VCP	VITRIFIED CLAY PIPE
W	WEST
WMH	WATER MANHOLE
W/	DENOTES WITH

LEGEND

PP	POWER POLE W/ GUY WIRE
PP	POWER POLE
-	STREET SIGN
GV	GAS VALVE
GM	GAS METER
WV	WATER VALVE
WM	WATER METER
OW/WS	WATER FAUCET OR SPRINKLER
CO	CLEAN OUT
ER	ELECTRIC RISER
YD	YARD DRAIN
EB/EM	ELECTRIC BOX OR METER
MB	MAIL BOX
TB/CB	TELEPHONE OR CABLE BOX
LS	LIGHT STANDARD
FH	FIRE HYDRANT
TS	TRAFFIC SIGNAL
YL	YARD LIGHT
CM	COIN METER
TH	TEST HOLE
FP	FLAGPOLE
B	BOLLARD
OHW	OVERHEAD UTILITY LINE
G	GAS LINE
UE-UE	UNDERGROUND ELECTRIC
SS	SANITARY SEWER
W-W	WATER LINE
ST-ST	STORM SEWER
X-X	FENCE
UT	UNDERGROUND TELEPHONE
FO	FIBER OPTIC
TL	TREE LINE
ST	SEPTIC TANK
GI	STORM GRATE INLET
SI	STORM INLET
ET	ELECTRIC TRANSFORMER
SM	SANITARY MANHOLE
UM	UTILITY MANHOLE
B	BUSH W/ DIAMETER
EPB	ELEC. PULL BOX

MONUMENT LEGEND

○	FOUND IRON PIPE
●	FOUND REBAR
○	SET REBAR
●	SET IRON PIPE
■	STONE
■	CONCRETE MONUMENT
+	CROSS
+	ANCHOR CROSS
●	COTTON PICKER SPINDLE
●	RAILROAD SPIKE
●	POST
●	DISC

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All the improvements & facilities above ground and underground shown herein were plotted from available information and do not necessarily reflect the actual existence, nonexistence, elevation, size, type, number or location of these or other improvements, facilities, or utilities. The General Contractor and/or owner shall be responsible for verifying the actual location & elevation of all improvements, facilities, & utilities, shown or not shown, and said improvements, facilities, & utilities shall be located in the field prior to any grading, excavation or construction of any improvements. These provisions shall in no way absolve any part from complying with the Underground Facility Safety & Damage Prevention Act, Chapter 319, RSMo.

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DEED DESCRIPTION:
A TRACT OF LAND BEING PART OF LOT 14 OF JAMES R. BISSELL ESTATE, TOWNSHIP 46 NORTH, RANGE 7 EAST, ST. LOUIS COUNTY, MISSOURI, DESCRIBED AS: BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 14; THENCE SOUTHWARDLY ALONG THE WESTERN LINE OF A TRACT OF LAND, CONVEYED TO THE DIOCESE OF THE CATHOLIC CHURCH BY DEED RECORDED IN BOOK 2922, PAGE 347 OF THE ST. LOUIS COUNTY RECORDS, 453.72 FEET TO A POINT IN THE NORTHERN LINE OF ASHBROOK DRIVE; THENCE WESTWARDLY ALONG THE NORTHERN LINE OF ASHBROOK DRIVE 345.52 FEET TO THE EASTERN LINE OF BLOCK 31 OF BISSELL HILLS PLAT NO. 9; THENCE NORTHWARDLY ALONG THE EASTERN LINE OF SAID BLOCK 31 593.52 FEET TO A POINT IN THE NORTHERN LINE OF LOT 14 OF THE JAMES R. BISSELL ESTATE; THENCE EASTWARDLY ALONG THE NORTHERN LINE OF SAID LOT 14 340.0 FEET TO THE POINT OF BEGINNING, SUBJECT TO A 10 FEET WIDE EASEMENT ALONG THE NORTHERN LINE, A 5 FEET WIDE EASEMENT ALONG THE EASTERN LINE AND AN EASEMENT DESCRIBED AS: BEGINNING AT THE NORTH-EASTERN CORNER OF BLOCK 31 OF BISSELL HILLS PLAT NO. 9; THENCE SOUTH 89 DEGREES 23 MINUTES EAST ALONG THE NORTHERN LINE OF THE LOT 14 OF JAMES R. BISSELL ESTATE 95.14 FEET TO A POINT; THENCE SOUTH 15 DEGREES 32 MINUTES WEST 162.28 FEET TO A POINT; THENCE SOUTH 2 DEGREES 33 MINUTES WEST 250.20 FEET TO A POINT; THENCE SOUTH 21 DEGREES 06 MINUTES EAST 159 FEET MORE OR LESS TO A POINT IN THE NORTHERN LINE OF ASHBROOK DRIVE; THENCE WESTWARDLY ALONG THE NORTHERN LINE OF ASHBROOK DRIVE 66.51 FEET TO THE EASTERN LINE OF BLOCK 31 OF BISSELL HILLS PLAT NO. 9; THENCE NORTHWARDLY ALONG THE EASTERN LINE OF SAID BLOCK 31 593.52 FEET TO THE POINT OF BEGINNING, THE ABOVE DESCRIBED EASEMENTS ARE RESERVED FOR PUBLIC UTILITY USE AND MAY BE USED FOR SEWER AND DRAINAGE PURPOSES.

A CURRENT TITLE COMMITMENT HAS NOT BEEN MADE AVAILABLE FOR OUR USE, IT IS POSSIBLE THERE ARE EASEMENTS AND OTHER INSTRUMENTS OF RECORD THAT AFFECT THE SUBJECT TRACT THAT WOULD BE EXPOSED IN THE TITLE COMMITMENT REPORT AND ARE UNKNOWN TO THIS OFFICE AT THE TIME OF SURVEY WAS EXECUTED AND THEREFORE NOT PLOTTED HEREON. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY THE SURVEYOR.

BASIS OF BEARING: THE BEARING SYSTEM HAS BEEN ADOPTED FROM JAMES R. BISSELL'S ESTATE, PB 3, PG 21.

SITE DATUM ELEVATION: HORIZONTAL AND VERTICAL CONTROL HAS BEEN ESTABLISHED BY GPS OBSERVATION USING MODOT NETWORK, GEOD 12B ADJUSTMENTS AND NAVD88 IN FEET.

SURVEYORS CERTIFICATE

THIS IS TO CERTIFY THAT AT THE REQUEST OF THE CITY OF BELLEFONTAINE NEIGHBORS DEPARTMENT OF PARKS AND RECREATION, WE HAVE DURING THE MONTH OF MARCH, 2018, EXECUTED A SURVEY IN ACCORDANCE WITH THE CURRENT STANDARDS FOR PROPERTY BOUNDARY SURVEYS, PUBLISHED IN THE CODE OF STATE REGULATIONS, TITLE 20, DIVISION 2030. THIS SURVEY MEETS THE ACCURACY REQUIREMENTS FOR URBAN PROPERTY AS DEFINED IN SAID STANDARDS. UNLESS OTHERWISE NOTED, THE RIGHT OF WAY, EASEMENTS AND SETBACKS SHOWN HEREON, HAVE BEEN ADOPTED FROM RECORD PLATS AND DEEDS OF RECORD.

GATEWAY LAND SERVICES, INC. (AGENT)
By *James L. Degenerhardt*
(AGENT) JAMES L. DEGENERHARDT

LOT 9
BISSELL HILLS PLAT NO. 9
PB 61, PG 13

LOT 8
SAMUEL HERRING
10236 SURF DR
11F83103
DB 16022, PG 1280

LOT 7
MICHAEL LEVISON
10232 SURF DR
11F831097
DB 20519, PG 673

LOT 6
JASON & KATHERINE BUCHANAN
10228 SURF DR
11F830911
DB 21282, PG 1128

LOT 5
IVORY & TANEISHA MARTIN
10224 SURF DR
11F830755
DB 19838, PG 1180

LOT 4
SHIRLEY BUTLER
10220 SURF DR
11F830728
DB 20010, PG 3207

LOT 3
JAMES & CATHERINE POLLVOGT
10216 SURF DR
11F830719
DB 8565, PG 1370

LOT 2
MECHEL RAGGIO
10212 SURF DR
11F830544
DB 21196, PG 643

LOT 1
RAINETH IV ST LOUIS LLC
10129 ASHBROOK DR
11F830382
DB 21606, PG 2545



CONTROL POINTS

POINT NO	NORTHING	EASTING	ELEVATION	DESC.
1	1064125.80	896513.59	476.90	PK NAIL
2	1064315.81	896569.85	479.73	60D NAIL
3	1064195.39	896638.61	478.18	CUT CROSS
4	1064519.90	896618.38	482.96	HUB

Issues		
No.	Description	Date
01	Schematic Design	05/04/18
02	Design Development	09/18/18
03	50% CD Set	07/13/18
04	100% CDs	07/24/18
05	Issue For Bid	08/16/18

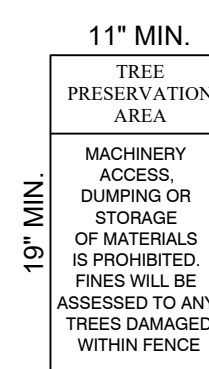
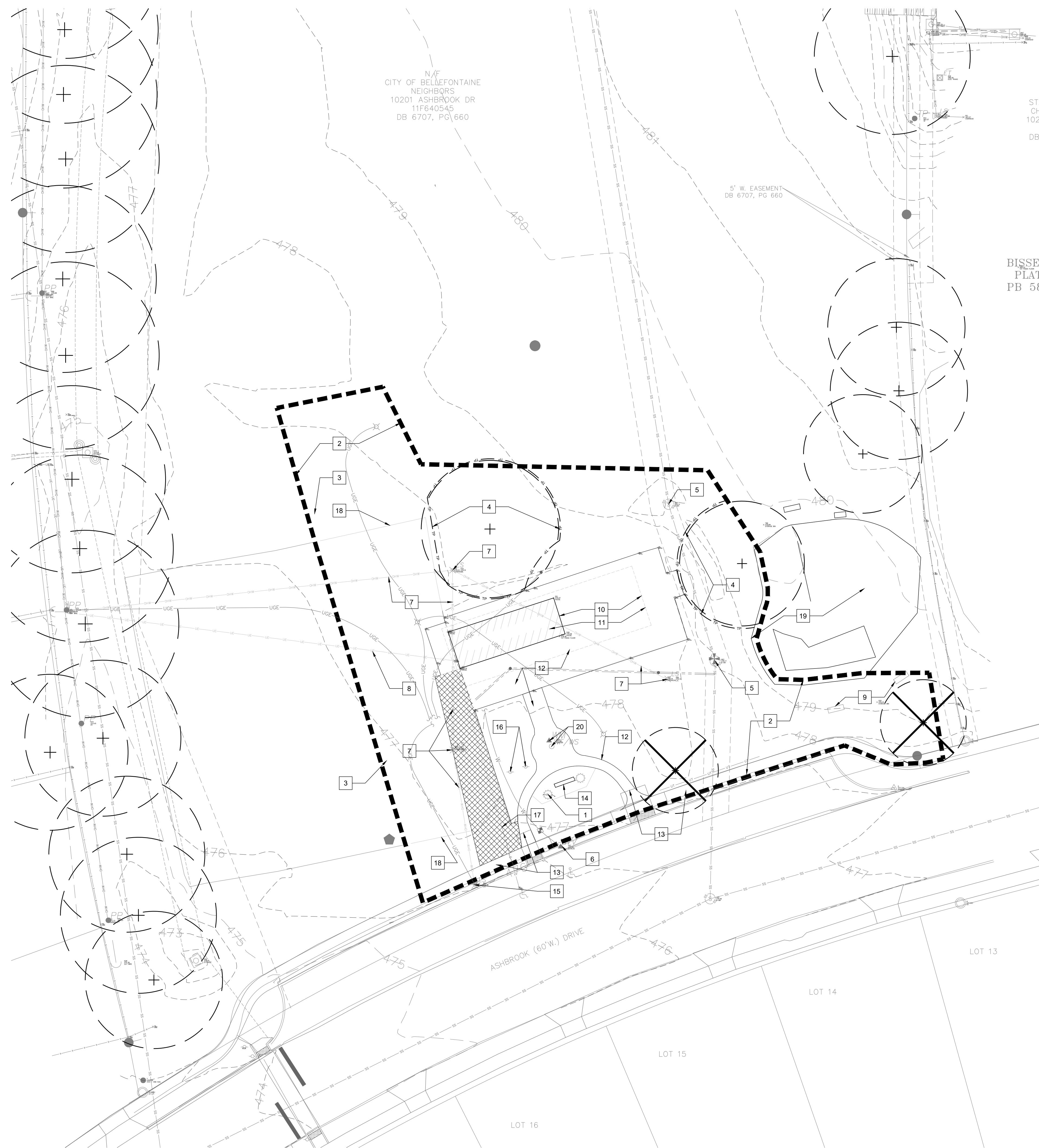
Revisions		
No.	Description	Date

SWT No.	20388
MSD No.	P-XXX
Drawn	Reviewed
KP	SR, JW

Sheet Title
**DEMOLITION AND TREE
PROTECTION PLAN**

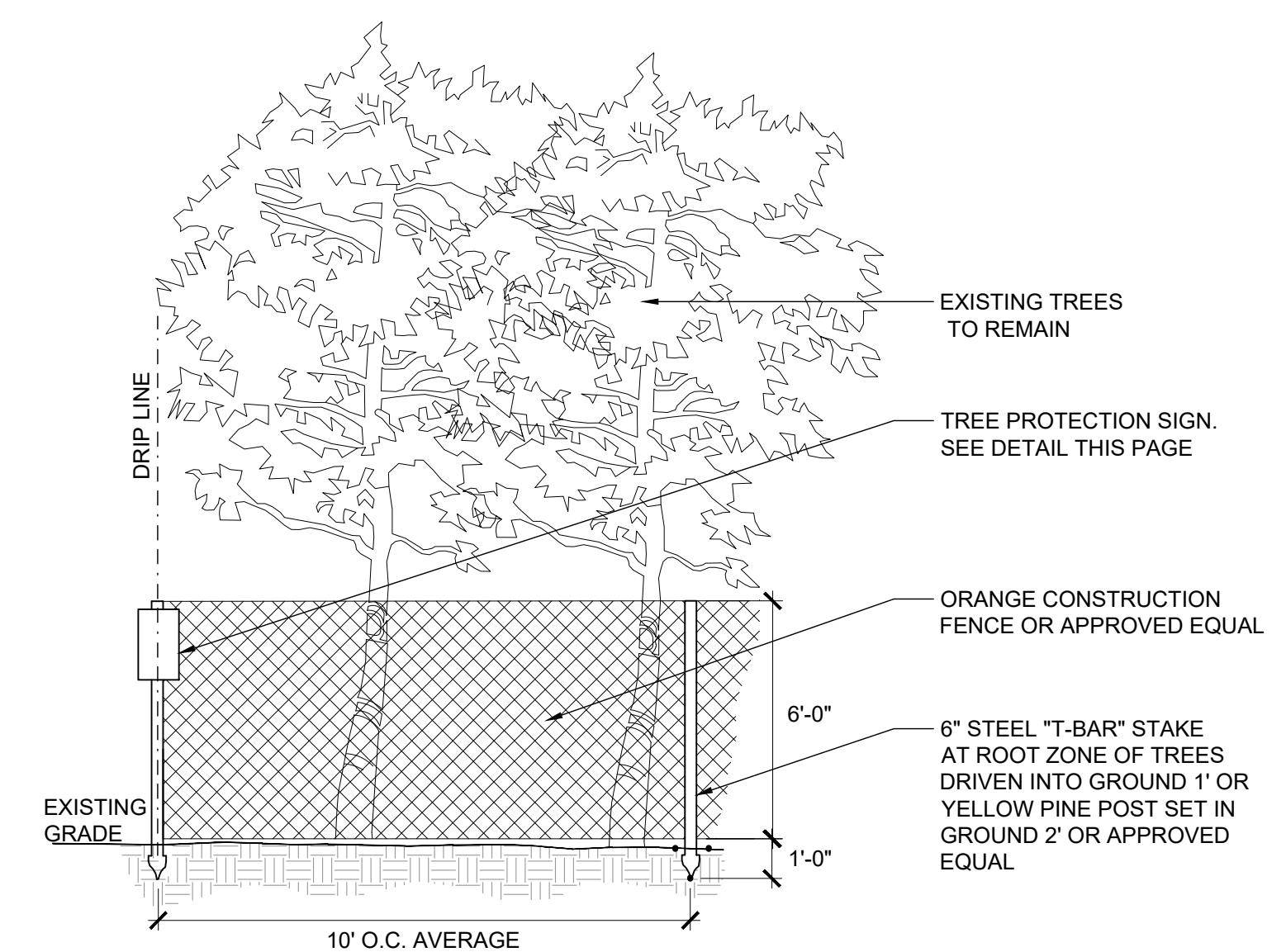
Number

LD-100



- NOTES:
1. TYPE SIZE SHOULD BE NO SMALLER THAN 48 PT. (1/2" HT.)
 2. SIMILAR SIGNS REQUESTING SUBCONTRACTOR COOPERATION AND COMPLIANCE WITH TREE PROTECTION STANDARDS ARE RECOMMENDED AT THE SITE ENTRANCE
 3. SIGNS SHOULD BE PLACED AT A DISTANCE NOT TO EXCEED 50'

B TREE PROTECTION SIGN

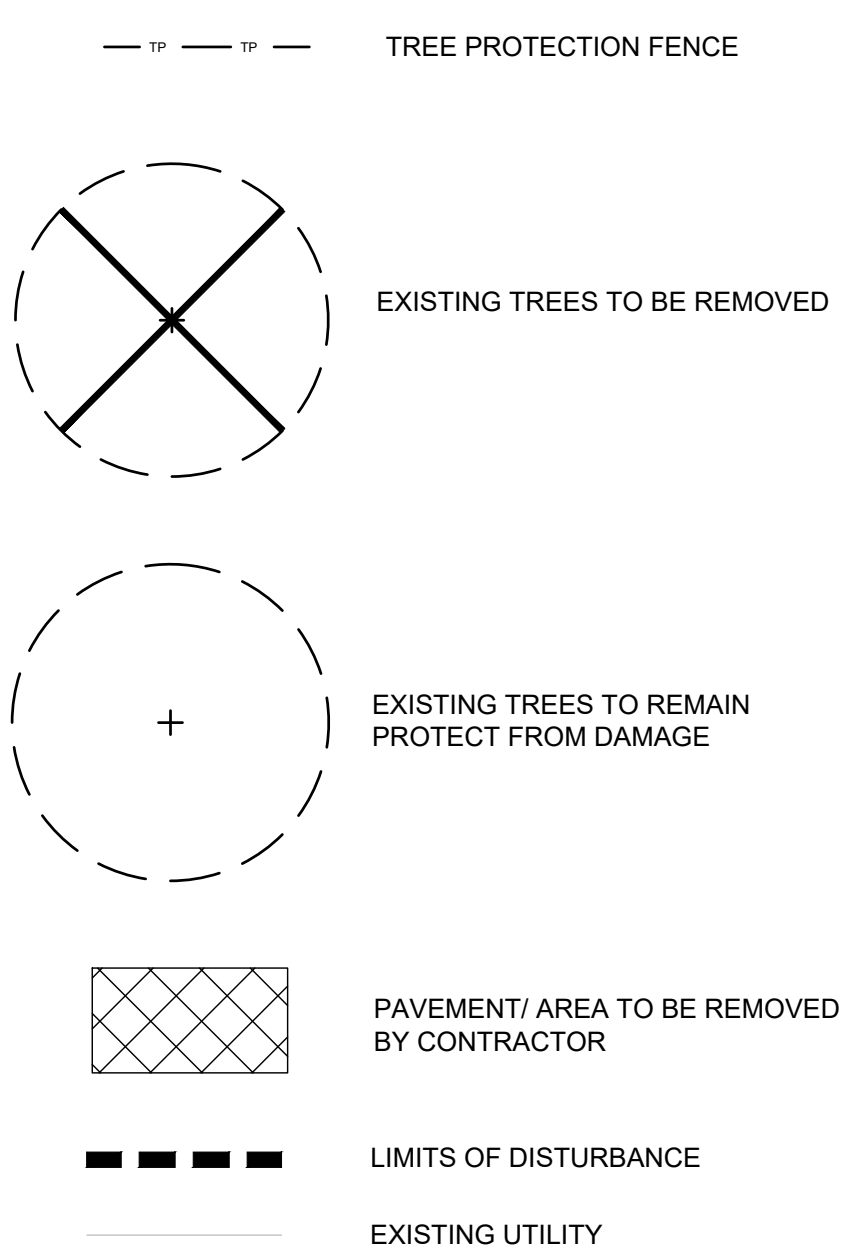


A TYPICAL TREE PROTECTION
SCALE: 1"=4'

DEMOLITION KEYED NOTES

- 1 EXISTING LANDSCAPE PLANTINGS TO BE REMOVED
- 2 PROJECT LIMITS. FURNISH, INSTALL, AND MAINTAIN A 4' MIN. HEIGHT SAFETY BARRICADE FENCE
- 3 FURNISH, INSTALL, AND MAINTAIN SILTATION FENCE. INSTALL SILT FENCE PER MODOT STANDARD PLAN 806.10J
- 4 INSTALL TREE PROTECTION FENCING. SEE DETAIL A, SHEET LD-100
- 5 PROTECT EXISTING MANHOLE TO REMAIN
- 6 PROTECT EXISTING WATER TAP TO REMAIN
- 7 REMOVE AND DISPOSE OF EXISTING LIGHTPOLE, FOUNDATION, AND OVERHEAD WIRES
- 8 ABANDON EXISTING UNDERGROUND ELECTRIC SERVICE. REMOVE CONDUIT ABOVE GROUND AT POLE
- 9 EXISTING BENCH TO REMAIN, PROTECT FROM DAMAGE
- 10 EXISTING PARK SHELTER AND CANOPY STRUCTURE TO BE REMOVED BY CITY AND DISPOSED OF BY CITY
- 11 CONTRACTOR TO REMOVE AND DISPOSE OF PARK SHELTER AND CANOPY FOUNDATIONS
- 12 EXISTING CONCRETE WALKWAY TO BE REMOVED BY CITY
- 13 EXISTING CONCRETE WALKWAY PROTECT FROM DAMAGE. COORDINATE WITH CITY PROJECT "ASHBROOK DRIVE ROADWAY IMPROVEMENTS"
- 14 EXISTING MASONRY SIGN TO REMAIN, PROTECT FROM DAMAGE, REFER TO DETAIL D/L-500 FOR SIGN PANEL REPLACEMENT.
- 15 EXISTING LIGHT POLE TO REMAIN, DO NOT DISTURB
- 16 EXISTING SIGNS, REMOVE AND RETURN TO CITY
- 17 ABANDON EXISTING GAS SERVICE TO THIS POINT, STUB AND CAP GAS LINE FOR FUTURE USE
- 18 REMOVE AND DISPOSE OF EXISTING GRAVEL
- 19 EXISTING PLAYGROUND SURFACING, DO NOT DISTURB
- 20 EXISTING WATER FOUNTAIN, TO BE REMOVED BY CIT. EXISTING WATER METER TO BE REMOVED BY CONTRACTOR

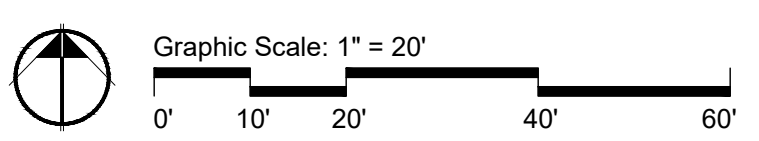
LEGEND



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NOTIFY LANDSCAPE ARCHITECT IMMEDIATELY IN EVENTS OF DISCREPANCIES, OMISSIONS, AND/OR CONFLICTS IN THE DRAWINGS OR SPECIFICATIONS. THE CONTRACTOR IS NOT AUTHORIZED TO SCALE THE DRAWINGS. ALL QUESTIONS IN REFERENCE TO CONTRACT DOCUMENTS SHALL BE IMMEDIATELY DIRECTED TO THE LANDSCAPE ARCHITECT.

A DEMOLITION PLAN
SCALE: 1"=20'





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St. Louis, MO 63137

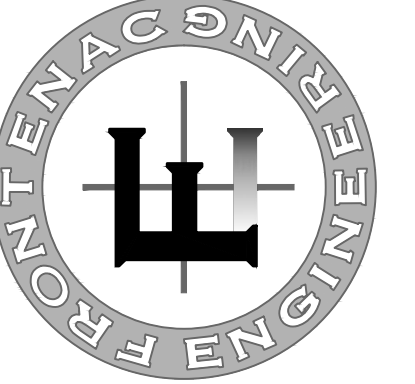
Project:
**Bissell Hills Park:
Phase One
Implementation**

Landscape Architect:

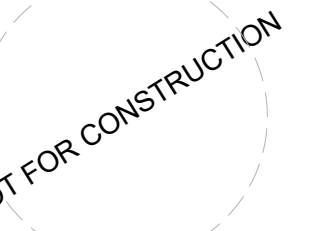


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FRONTENAC ENGINEERING GROUP
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MISSOURI STATE CERTIFICATE OF AUTHORITY:
CIVIL / STRUCTURAL ENGINEERING: 001225
LAND SURVEYING: 000282



John W. Wohlschlaeger
Landscape Architect
MO # LA 2009014766



SWT Design, Inc.
Missouri State Certificate of
Authority #2006002904

KEY PLAN

Issues

No.	Description	Date
01	Schematic Design	05/04/18
02	Design Development	06/18/18
03	50% CD Set	07/13/18
04	100% CDs	07/24/18
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Revisions

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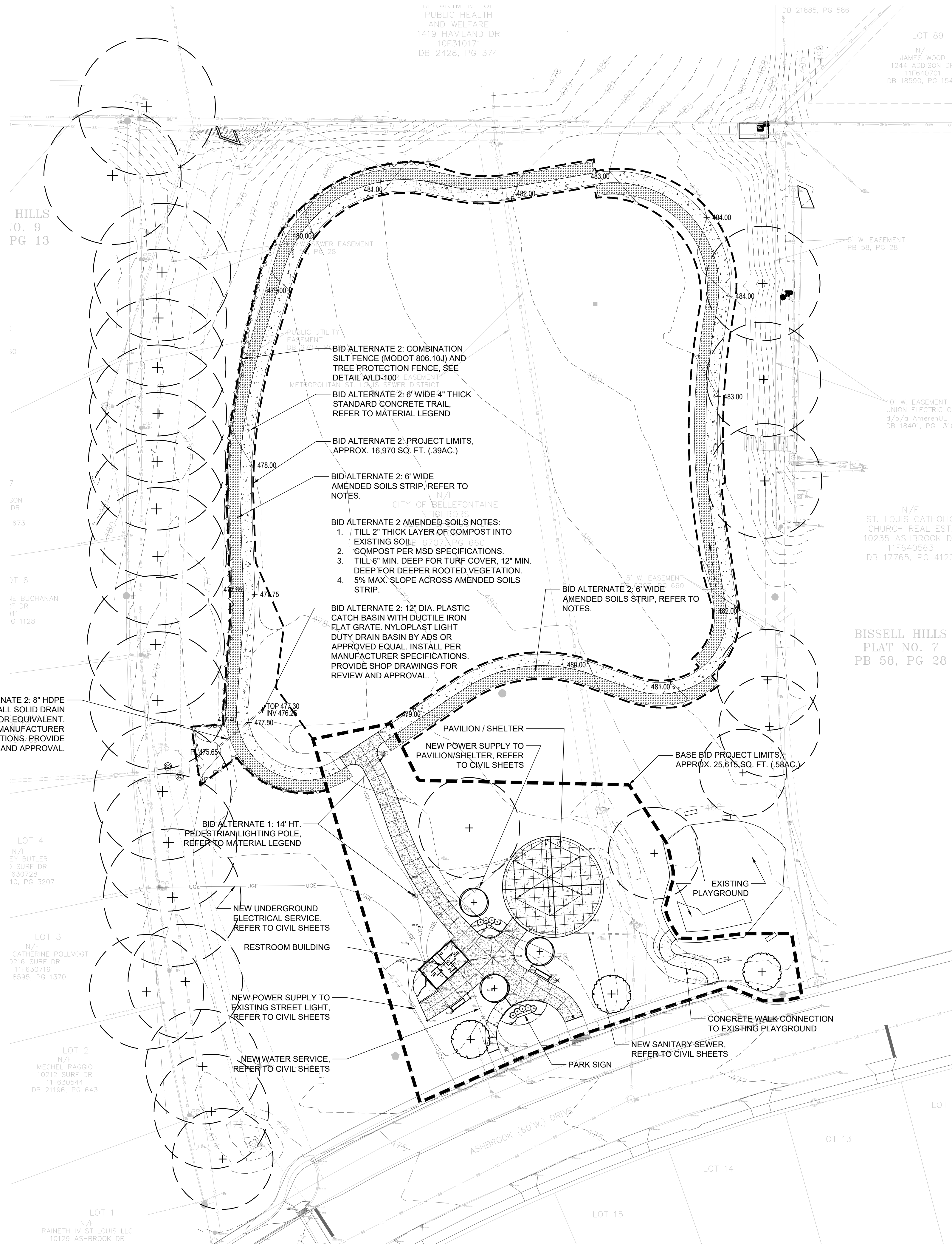
SWT No. 20388
MSD No. P-XXX
Drawn KP Reviewed SR, JW

Sheet Title
OVERALL SITE PLAN

Number

L-100

August 16, 2018 - ISSUE FOR BID



BID ALTERNATE ITEMS NOTES:

BID ALTERNATE #1: PEDESTRIAN LIGHTING
ALTERNATE BID: CONTRACTOR TO PROVIDE ALL WORK ASSOCIATED WITH ADDING 14' HT PEDESTRIAN LIGHT FIXTURES AS INDICATED ON THE LAYOUT PLANS. THIS WORK SHALL INCLUDE ALL EQUIPMENT ASSOCIATED WITH LIGHT POLE ASSEMBLY, FOUNDATIONS, WIRING, CONDUITS, CIRCUITRY, AND CONTROLS. REFER TO LAYOUT PLANS AND CIVIL SHEETS FOR ADDITIONAL LAYOUT INFORMATION.

BASE BID: NO PEDESTRIAN LIGHTING AND ASSOCIATED WORK NOTED ABOVE INCLUDED IN BASE BID.

BID ALTERNATE #2: LOOP TRAIL
ALTERNATE BID: CONTRACTOR TO PROVIDE ALL WORK ASSOCIATED WITH ADDING A 6' WIDE LOOP TRAIL AS INDICATED ON OVERALL SITE PLAN. THIS WORK SHALL INCLUDE 4" THICK STANDARD CONCRETE PAVEMENT PER DETAIL F/L-500, SILT FENCE AND TREE PROTECTION FENCING AS INDICATED ON PLAN, GRADING TO MAINTAIN A MAX 5% RUNNING SLOPE & 2% MAX CROSS SLOPE, CATCH BASIN AND DRAINAGE PIPE INSTALLATION, AMENDED SOILS STRIP, AND TURF SEEDING TO RESTORE DISTURBED AREAS.

BASE BID: AREA TO REMAIN AS EXISTING, DO NOT DISTURB.

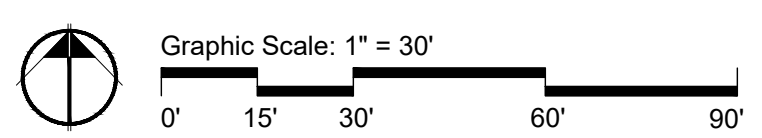
LEGEND

- LIMITS OF DISTURBANCE
- EXISTING UTILITY
- PROPOSED UTILITY
- SPOT ELEVATION
- CONTOURS
- EXISTING TREES TO REMAIN PROTECT FROM DAMAGE

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A OVERALL SITE PLAN
SCALE: 1"=30'



ALL RIGHTS RESERVED BY THE ARCHITECT. ANY REPRODUCTION OR TRANSMISSION OF THIS DRAWING WITHOUT THE WRITTEN PERMISSION OF THE ARCHITECT IS STRICTLY PROHIBITED. THE ARCHITECT ASSUMES NO LIABILITY FOR ANY DAMAGE TO PERSONS OR PROPERTY CAUSED BY THE USE OF THIS DRAWING. THE ARCHITECT'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED BY THE ARCHITECT. THE ARCHITECT'S LIABILITY DOES NOT EXTEND TO ANY DAMAGE TO PERSONS OR PROPERTY CAUSED BY THE USE OF THIS DRAWING. THE ARCHITECT'S LIABILITY DOES NOT EXTEND TO ANY DAMAGE TO PERSONS OR PROPERTY CAUSED BY THE USE OF THIS DRAWING.



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Phase One
Implementation**

Landscape Architect:



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John W. Wohlschlaeger
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KEY PLAN

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SWT No. 20388
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Sheet Title
LAYOUT AND MATERIALS PLAN

Number

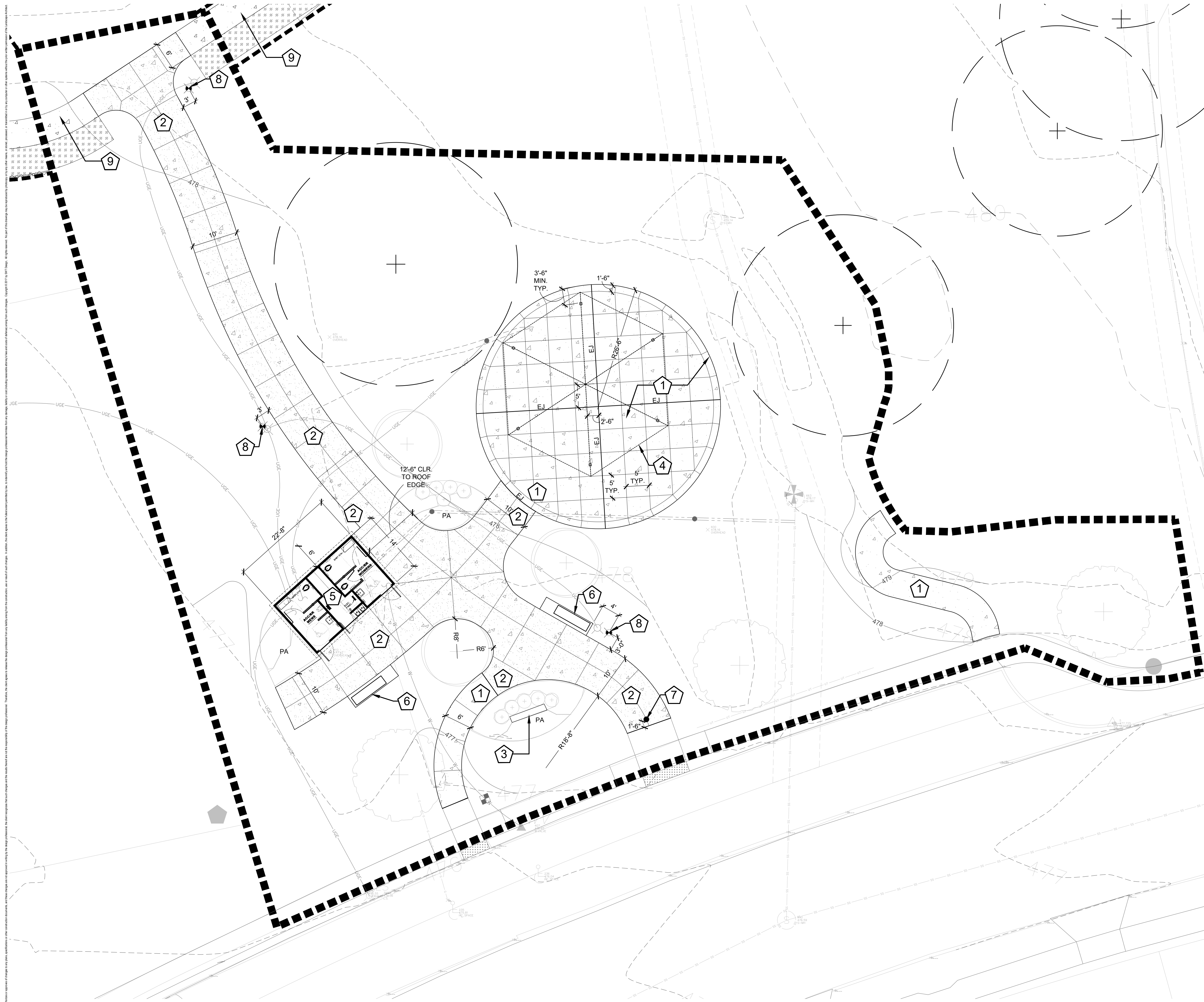
L-110

MATERIALS LEGEND

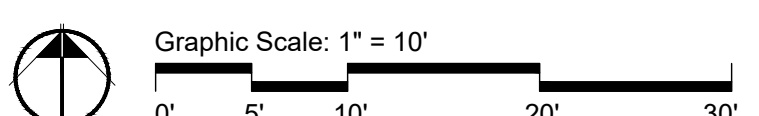
- 1 **STANDARD CONCRETE PAVING**
4" THICK CONCRETE PAVING, MEDIUM BROOM FINISH. EDGES TO BE 1/2" TOOLED RADIUS. CONTRACTOR TO COORDINATE LOCATION OF ALL JOINTS WITH LANDSCAPE ARCHITECT. SEE DETAIL 'F' SHEET L-500.
- 2 **HEAVY DUTY CONCRETE PAVING**
6" THICK CONCRETE PAVING, MEDIUM BROOM FINISH. EDGES TO BE 1/2" TOOLED RADIUS. CONTRACTOR TO COORDINATE LOCATION OF ALL JOINTS WITH LANDSCAPE ARCHITECT. SEE DETAIL 'C' SHEET L-500.
- 3 **BISSELL HILLS PARK SIGNAGE**
NEW BISSELL HILLS PARK SIGNAGE EXISTING STONE MASONRY TO REMAIN IN-PLACE. TUCKPOINT AND REPAIR. SEE DETAIL 'D' SHEET L-500.
- 4 **HEXAGONAL PAVILION SHELTER**
OXFORD PAVILION MODEL GX02-40 BY POLIGON OR APPROVED EQUAL. PAVILION TO BE CONTRACTOR FURNISHED AND INSTALLED. SEE SHEETS L-500, L-510, AND L-511 FOR ADDITIONAL NOTES AND REQUIREMENTS.
- 5 **RESTROOM BUILDING**
PRE-ENGINEERED RESTROOM BUILDING BY PUBLIC RESTROOM COMPANY. OWNER FURNISHED AND CONTRACTOR INSTALLED. CONTRACTOR TO INSTALL REQUIRED FOUNDATIONS. REFER TO STRUCTURAL SHEETS.
- 6 **BENCH**
BENCH TO BE FURNISHED AND INSTALLED BY OWNER. CONTRACTOR TO INSTALL BENCH PAD. SEE DETAIL G/L-500.
- 7 **REMOVABLE BOLLARD**
MODEL# R-7902, REMOVABLE RECEIVER WITH LID MOUNT OPTION BY RELIANCE FOUNDRY OR APPROVED EQUAL. SEE DETAIL 'B' SHEET L-500.
- 8 **PEDESTRIAN LIGHTING (BID ALTERNATE)**
14' HT. LED PEDESTRIAN LIGHT POLE ASSEMBLY BY STERNBERG LIGHTING OR APPROVED EQUAL. REFER TO ELECTRICAL AND STRUCTURAL FOR ADDITIONAL REQUIREMENTS. SEE SHEET L-501 FOR ADDITIONAL INFORMATION. CONTRACTOR TO PRODUCT SHOP DRAWINGS FOR REVIEW AND APPROVAL.
- 9 **LOOP TRAIL (BID ALTERNATE)**
6' WIDE LOOP TRAIL, 4" THICK CONCRETE PAVING, MEDIUM BROOM FINISH. EDGES TO BE 1/2" TOOLED RADIUS. CONTRACTOR TO COORDINATE LOCATION OF ALL JOINTS WITH LANDSCAPE ARCHITECT. SEE DETAIL 'F' SHEET L-500.

LEGEND

- LIMITS OF DISTURBANCE
- EXISTING UTILITY
- PROPOSED UTILITY
- SPOT ELEVATION
- CONTOURS
- EXISTING TREES TO REMAIN PROTECT FROM DAMAGE



A LAYOUT AND MATERIALS PLAN
SCALE: 1"=10'



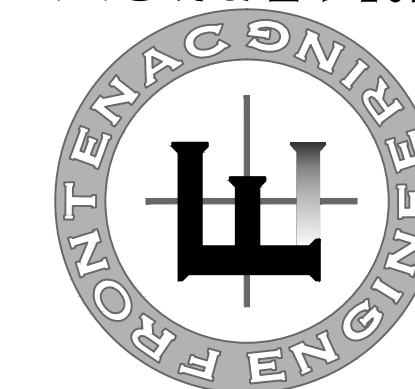
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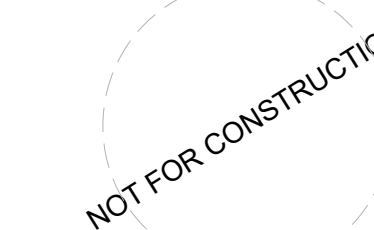
August 16, 2018 - ISSUE FOR BID



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John W. Wohlschlaeger
Landscape Architect
MO # LA 2009014766



SWT Design, Inc.
Missouri State Certificate of
Authority #2006002904

KEY PLAN

Issuances

No.	Description	Date
01	Schematic Design	05/04/18
02	Design Development	06/18/18
03	50% CD Set	07/13/18
04	100% CDs	07/24/18
05	Issue For Bid	08/16/18

Revisions

No.	Description	Date

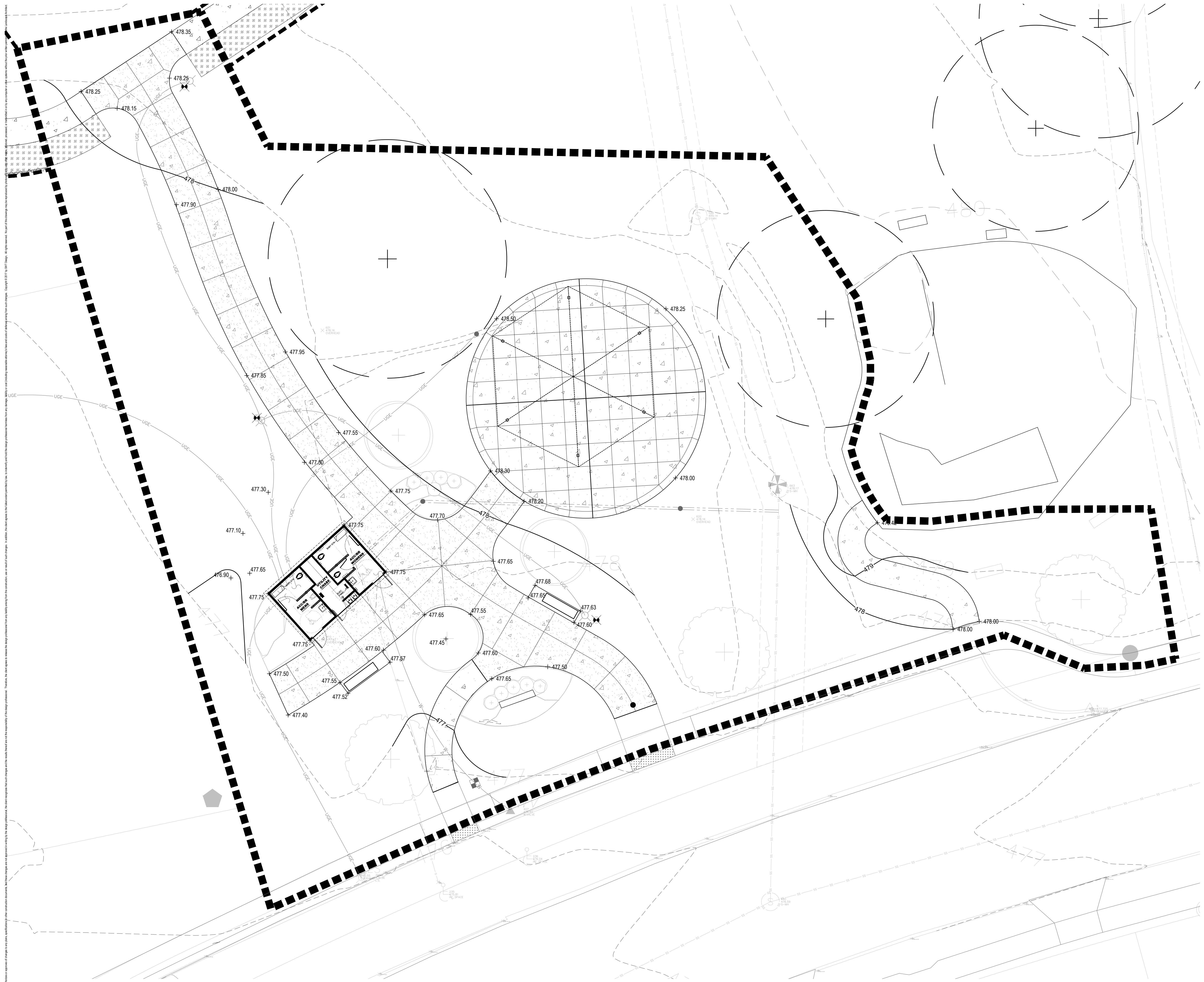
SWT No.	20388
MSD No.	P-XXX
Drawn	Reviewed
KP	SR, JW

Sheet Title

GRADING PLAN

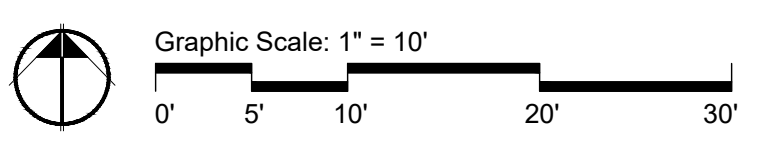
Number

L-120



LEGEND

- LIMITS OF DISTURBANCE
- EXISTING UTILITY
- PROPOSED UTILITY
- SPOT ELEVATION
- CONTOURS
- EXISTING TREES TO REMAIN
PROTECT FROM DAMAGE



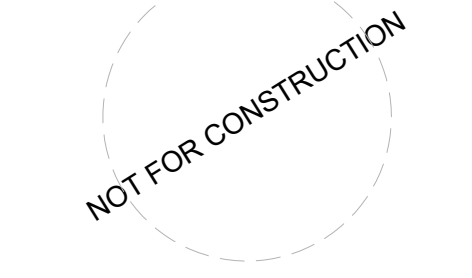
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A GRADING PLAN
SCALE: 1"=10'

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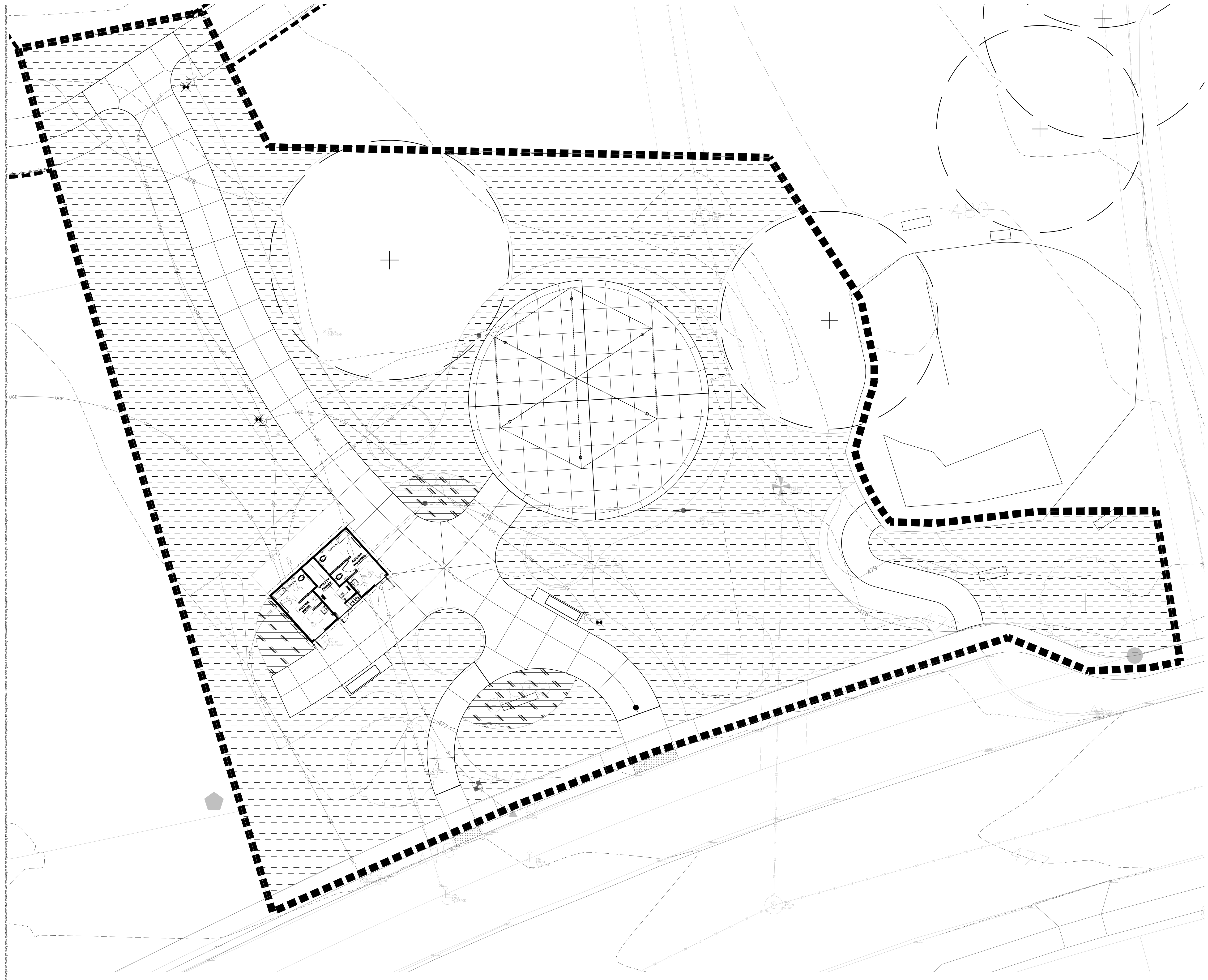
Revisions

No.	Description	Date

SWT No.	20388
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Drawn	Reviewed
KP	SR, JW

Sheet Title
SOILS PLAN

Number
L-130



LEGEND

	TURF SOIL: AMENDED ON SITE NATIVE TOPSOIL. PER DETAIL FL-520
	PLANTING SOIL: IMPORTED TOPSOIL. PER DETAIL G/L-520.

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Graphic Scale: 1" = 10'
 0' 5' 10' 20' 30'

A SOILS PLAN
 SCALE: 1"=10'

August 16, 2018 - ISSUE FOR BID

DRAWN BY: J.W. WOHLSCHLAEGER, LICENSED LANDSCAPE ARCHITECT, MISSOURI LICENSE #2009014766. CHECKED BY: J.W. WOHLSCHLAEGER, LICENSED LANDSCAPE ARCHITECT, MISSOURI LICENSE #2009014766. DATE: 08/16/18. PROJECT: BISSSELL HILLS PARK PHASE ONE IMPLEMENTATION. SHEET: SOILS PLAN (L-130).



9641 Bellefontaine Road
St. Louis, MO 63137

Project:
**Bissell Hills Park:
Phase One
Implementation**

Landscape Architect:



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St. Louis, MO 63119
t. 314.644.5700

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John W. Wohlschlaeger
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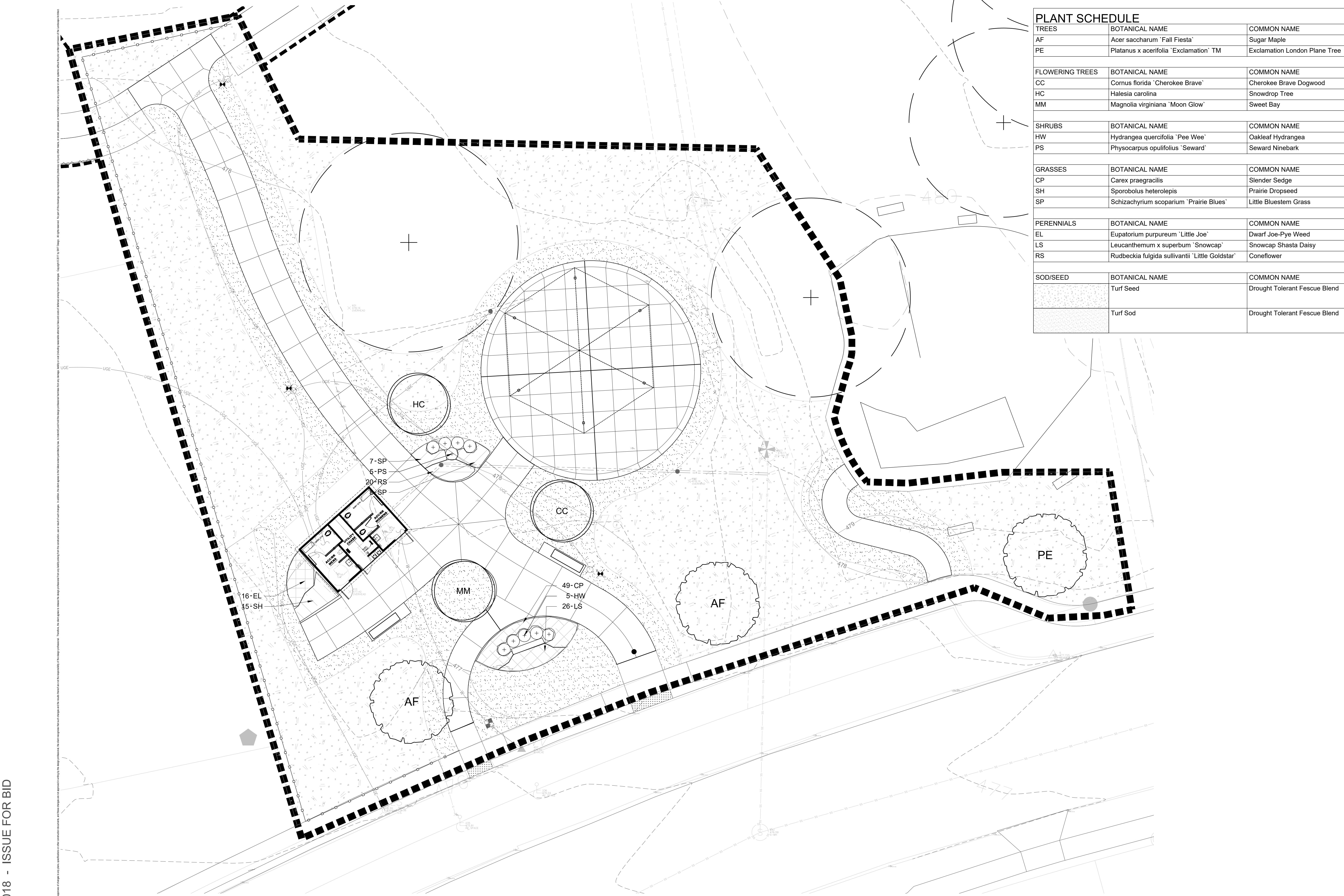
Sheet Title

PLANTING PLAN

Number

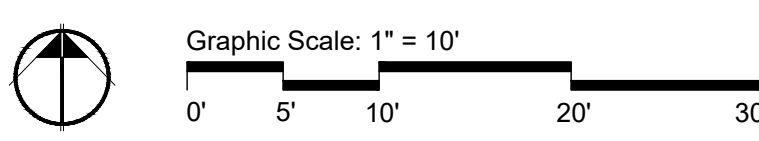
L-140

PLANT SCHEDULE		
TREES	BOTANICAL NAME	COMMON NAME
AF	Acer saccharum 'Fall Fiesta'	Sugar Maple
PE	Platanus x acerifolia 'Exclamation' TM	Exclamation London Plane Tree
FLOWERING TREES	BOTANICAL NAME	COMMON NAME
CC	Cornus florida 'Cherokee Brave'	Cherokee Brave Dogwood
HC	Halesia carolina	Snowdrop Tree
MM	Magnolia virginiana 'Moon Glow'	Sweet Bay
SHRUBS	BOTANICAL NAME	COMMON NAME
HW	Hydrangea quercifolia 'Pee Wee'	Oakleaf Hydrangea
PS	Physocarpus opulifolius 'Seward'	Seward Ninebark
GRASSES	BOTANICAL NAME	COMMON NAME
CP	Carex praegracilis	Slender Sedge
SH	Sporobolus heterolepis	Prairie Dropseed
SP	Schizachyrium scoparium 'Prairie Blues'	Little Bluestem Grass
PERENNIALS	BOTANICAL NAME	COMMON NAME
EL	Eupatorium purpureum 'Little Joe'	Dwarf Joe-Pye Weed
LS	Leucanthemum x superbum 'Snowcap'	Snowcap Shasta Daisy
RS	Rudbeckia fulgida sullivantii 'Little Goldstar'	Coneflower
SOD/SEED	BOTANICAL NAME	COMMON NAME
	Turf Seed	Drought Tolerant Fescue Blend
	Turf Sod	Drought Tolerant Fescue Blend



August 16, 2018 - ISSUE FOR BID

A PRELIMINARY PLANTING PLAN
SCALE: 1"=10'



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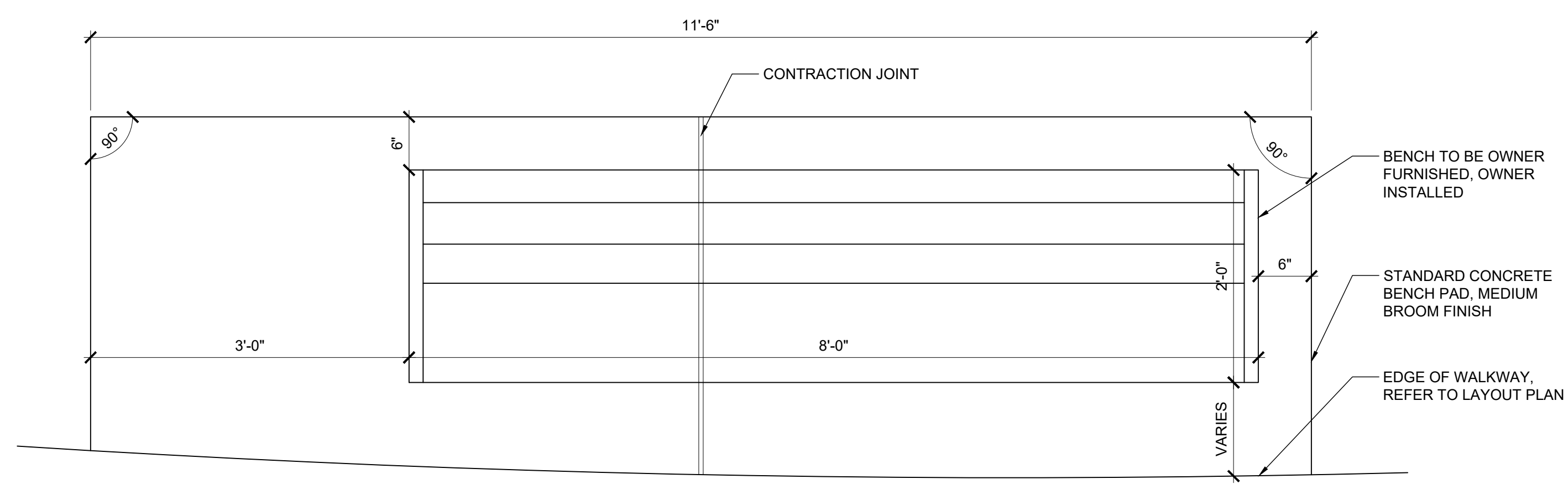
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Phase One
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Landscape Architect:



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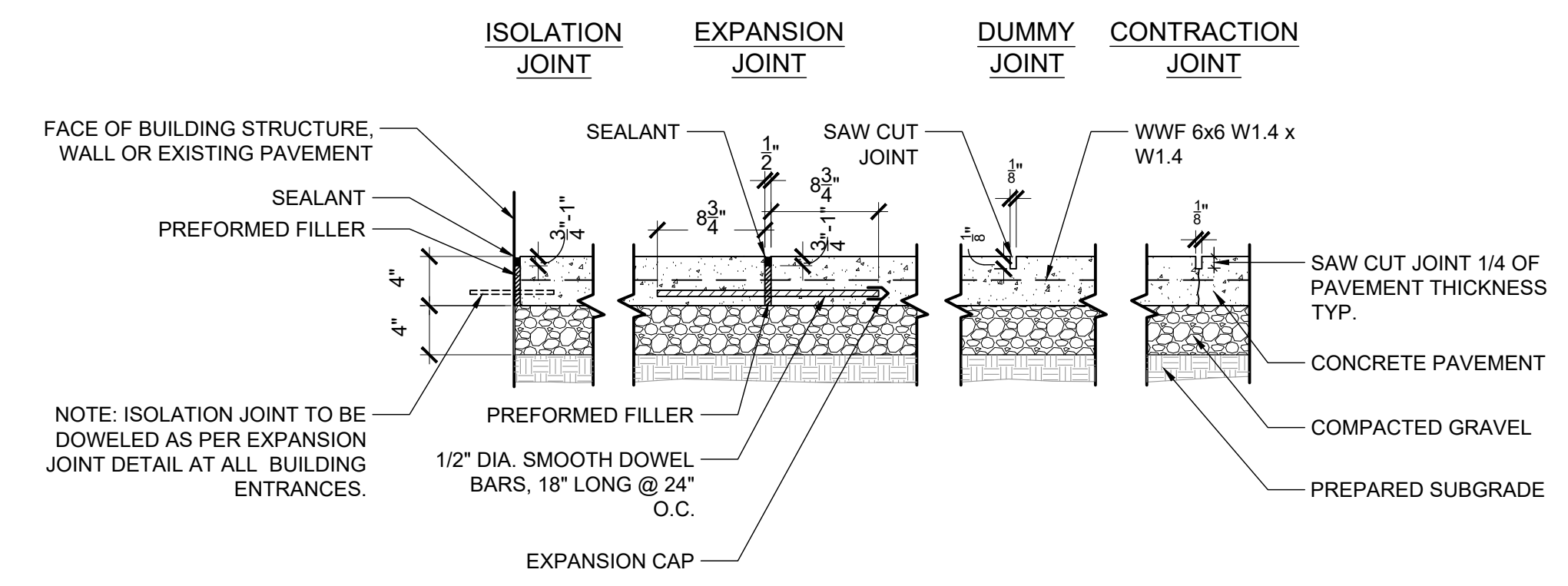
G BENCH AND PAD DETAIL
SCALE: 1"=1'

- NEW SIGNAGE NOTES:**
- SIGN TO BE A CABINET SIGN MANUFACTURED FROM ALUMINUM SUBSTRATE AND INTERNAL FRAMING WITH PAINTED AND APPLIED GRAPHIC FINISHES.
 - GRAPHIC LAYOUT TO BE SIMILAR TO EXISTING. CONTRACTOR TO PROVIDE GRAPHIC LAYOUT DRAWINGS TO OWNER FOR REVIEW.
 - CONTRACTOR TO PROVIDE SHOP DRAWINGS DETAILING ALL FINISHES, CONNECTIONS, FRAMING, FASTENERS, ATTACHMENT TO SIGN, ETC. FOR REVIEW AND APPROVAL.
 - CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR PROPOSED FINISH AND GRAPHIC MATERIAL.



- REPLACE BRICKS WITH NATURAL STONE TO MATCH EXISTING, NATURAL STONE
- DEMO EXISTING SIGN PANEL. REPLACE WITH NEW METAL CABINET SIGN APPROX. 3'-0" BY 5'-3". CONTRACTOR TO FIELD VERIFY DIMENSIONS.
- TUCKPOINT MASONRY JOINTS, TYP.

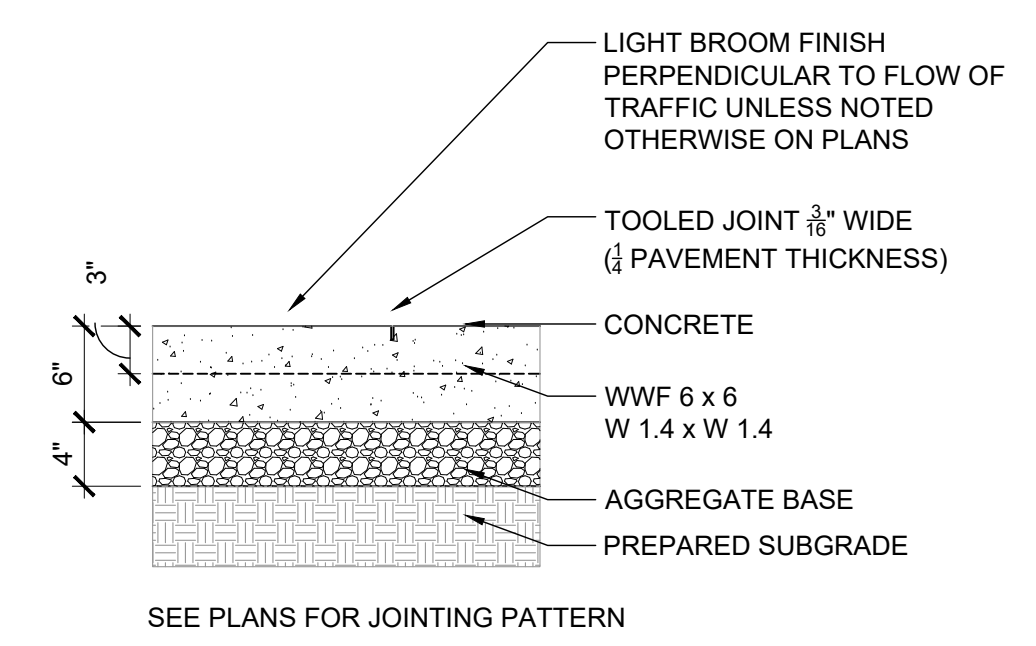
D SIGN REPLACEMENT/REPAIR DETAIL
SCALE: NTS



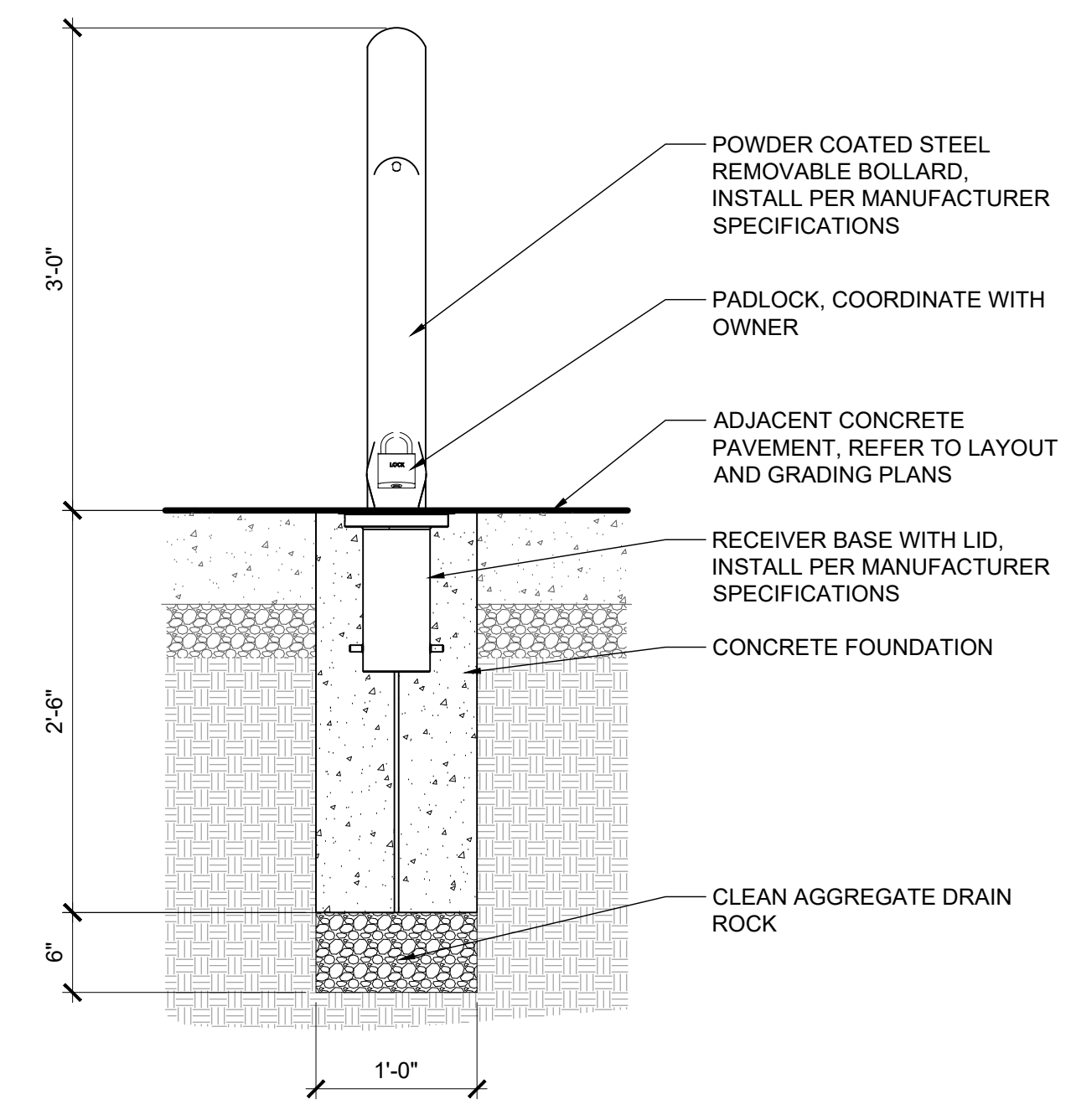
NOTE: ISOLATION JOINT TO BE DOWELED AS PER EXPANSION JOINT DETAIL AT ALL BUILDING ENTRANCES.
1/2" DIA. SMOOTH DOWEL BARS, 18" LONG @ 24" O.C.
EXPANSION CAP

NOTE:
1. SELF LEVELING SEALANT IS NOT ACCEPTABLE. CONTRACTOR SHALL PROVIDE PRODUCT DATA AND COLOR INFORMATION TO OWNER FOR APPROVAL.

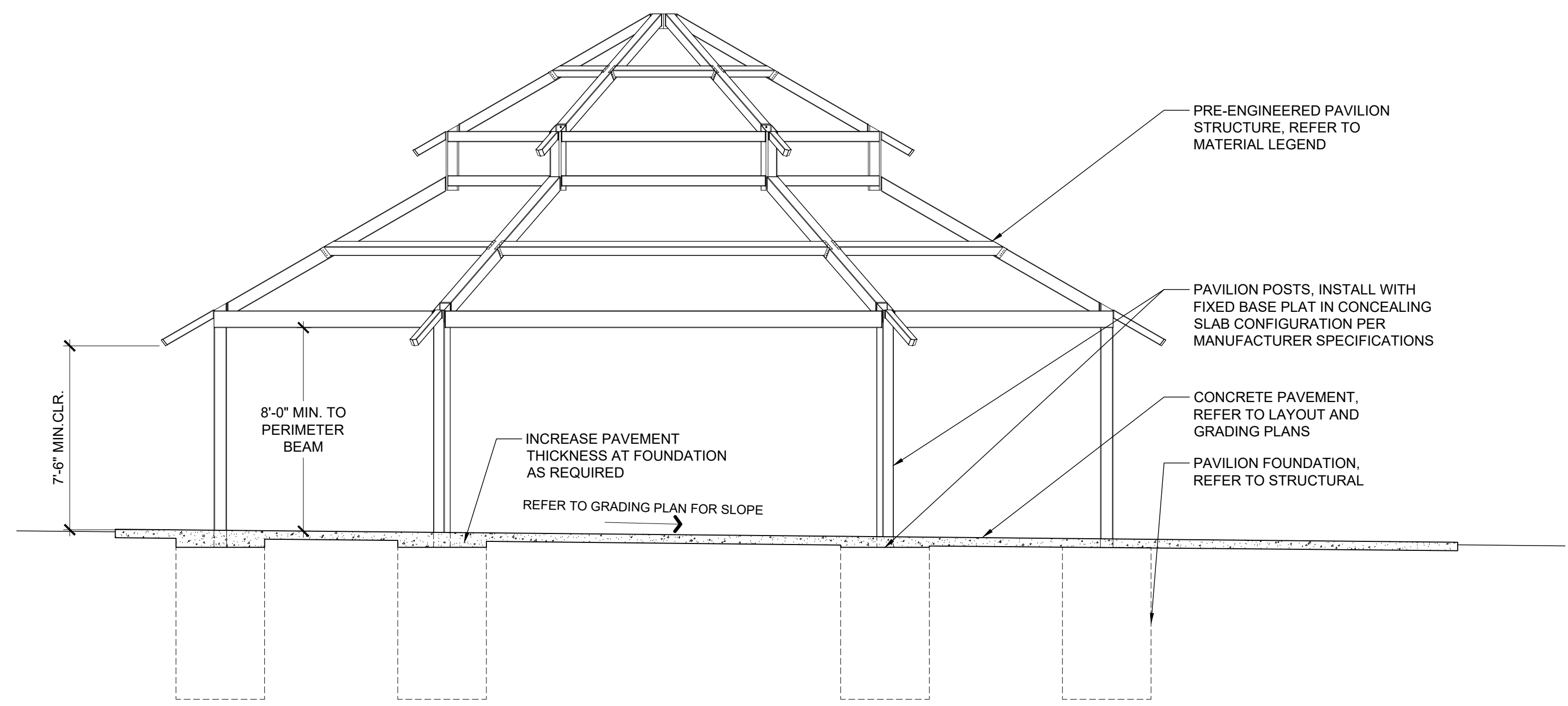
F 4" THICK CONCRETE PAVING
SCALE: 1"=1'



C HEAVY DUTY CONCRETE DETAIL
SCALE: 1"=1'



B REMOVABLE BOLLARD FOUNDATION DETAIL
SCALE: 1"=1'



A PAVILION PLAZA SECTION
SCALE: NTS

Bollard Post, Model R-7902

General Description:
Make a pronounced statement on entry to your streetscape, business, park, school or stadium with the contemporary and practical design of the model R-7902 steel bollard. A staple of the product line, it will complement the aesthetics of almost any architectural style. It can be embedded in new concrete or surface-mounted on existing concrete. For locations where access needs fluctuate, it can also be installed with removable or fold down mountings. The model R-7902 can be finished in one of seven different powder-coated color options and it is kept in stock, available to ship immediately.

Specifications:
Height: 36" (Above Grade)
Base Diameter: 4 3/8"
Weight: 31 lbs (Bollard Post Full Length)
Material: Steel (ASTM A36)

Finish Options:
* Polyester Powdercoated
See Reliance Foundry's standard color options at www.reliance-foundry.com/bollard-post-installation-bollards

Mount Options:
* Removable Receiver with Lid (see sheet 2 of 7)
* Removable Receiver with Chain (see sheet 3 of 7)
* Fixed Embedded Mount (see sheet 4 of 7)
* Flanged Surface Mount (see sheet 5 of 7)
* Fold Down Mount (see sheet 6 of 7)
* Optional Chain Accessory (see sheet 7 of 7)

Notes:
• Embedment details are for reference illustration only. Minimum foundation sizes depend on local soil conditions, weather conditions, and engineering requirements.
• Bollard post is provided as shown, with material detailed in legend below. Concrete, foundation and/or installation ordered separately or provided by others.
• This drawing is not drawn to scale. Dimensions provided herein is for reference only. Please consult Reliance Foundry sales professionals if any dimension is critical to your particular installation.
• Reliance Foundry reserves the right to amend design and specifications without prior notice for product improvement.

RELIANCE FOUNDRY
Unit 207, 6450 - 148 Street, Surrey, BC V5V 7C7, Canada
1-888-735-5680 info@reliance-foundry.com
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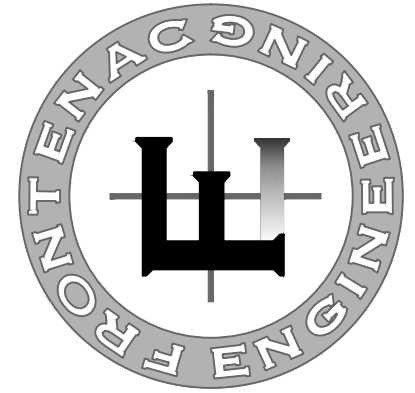
Bollard Post, Model R-7902

ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	WEIGHT
1	1	R7902	Removable Bollard R7902 Removable Assembly	Steel Powder Coated	31 lbs
2	1	R7901R	Receiver	Galvanized Steel w/ 116 Stainless Steel Cover	24 lbs
3	1	Padlock (Optional)	Optional Padlock (Brass or Stainless Steel)	Choice of Brass or Stainless Steel	5/8 lbs

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E REMOVABLE BOLLARD - DETAIL
SCALE: NTS

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Landscape Architect
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Sheet Title
LANDSCAPE DETAILS

Number
L-500

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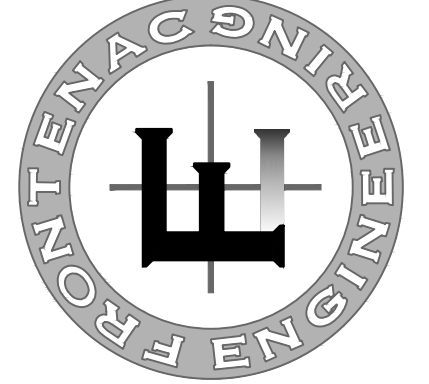
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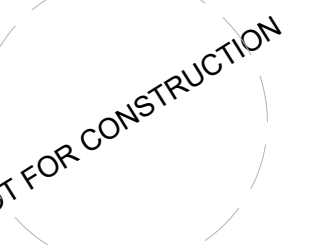


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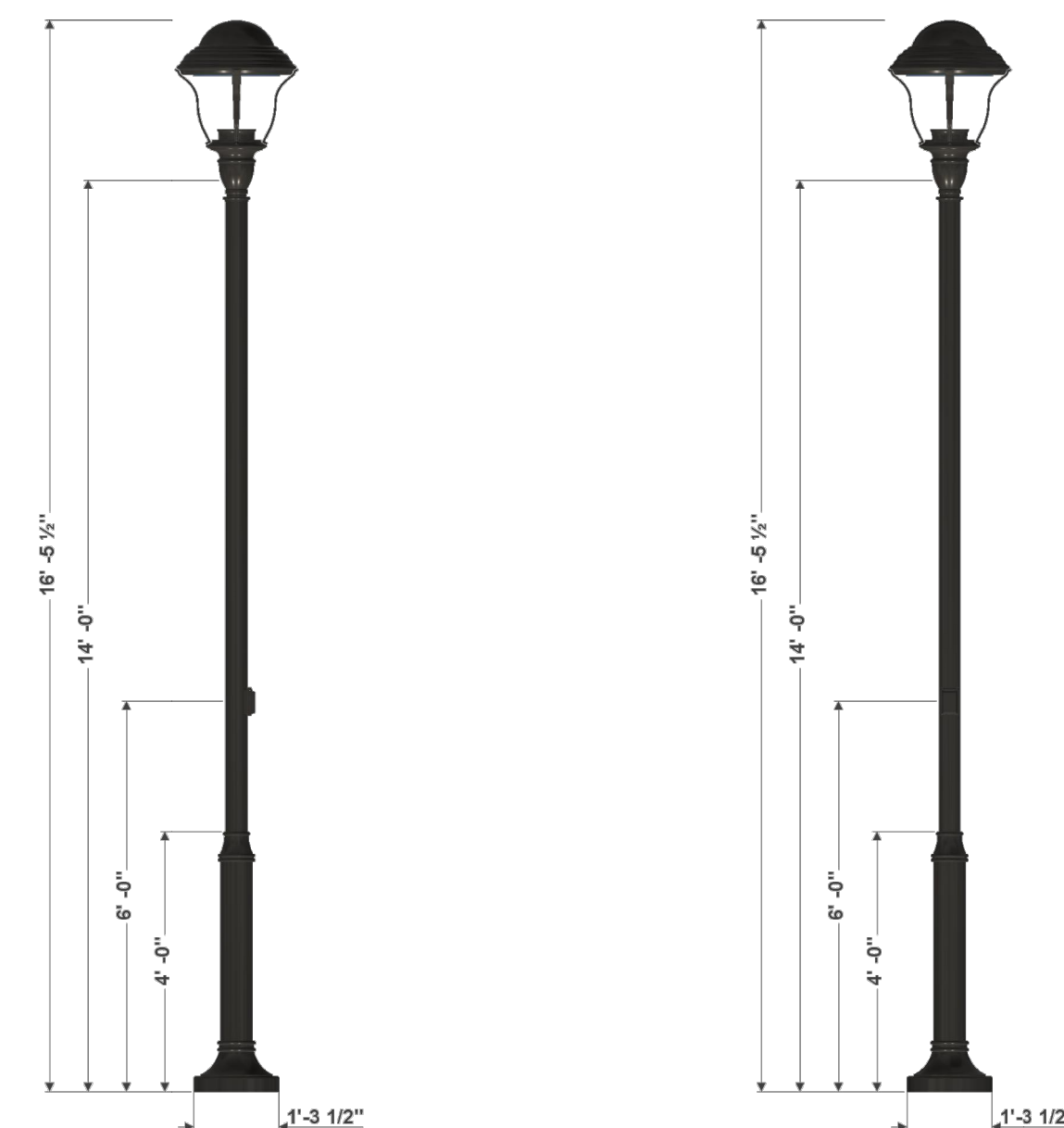
Sheet Title
LIGHTING DETAILS

Number

L-501



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CONCEPTUAL ASSEMBLY DRAWING, SUBJECT TO ENGINEERING VERIFICATION BY THE FACTORY



Job Name: _____ Customer Signature: _____ Drawing #23724
Job Location: _____ Date: 2018/07/31 2 of 2



Job Name: _____ Customer Signature: _____ Drawing #23724
Job Location: _____ Date: 2018/07/31 1 of 2



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CONCEPTUAL ASSEMBLY DRAWING, SUBJECT TO ENGINEERING VERIFICATION BY THE FACTORY

POST TOP FIXTURE: E450LED-R3
The E450 Euro is a large scale, contemporary architectural fixture design. The E450 is offered with a flat or sag glass lens and is IP66 rated. All are provided with tool-less access for ease of maintenance.
Model: E450LED
Filter Options: R3
POST TOP LIGHT SOURCE: -16L27T4-MDL10-SV1
Array: 16L (16 LEDs, 56 Watts) (16L)
Color Temp: 2700K (27)
Distribution: Type 4 (T4)
Driver: Multi-Volt Dimmable Low-Range Driver, 120-277V, 1000mA (MDL10)
Lens: Textured Flat Acrylic Lens (SV1)

POLE: 3214P4-188
The 15-3/4" "Glammer" cast 305 aluminum alloy base and aluminum shaft shall be a one-piece construction. The pole is U.L./E.T.L. listed in U.S./Canada. All pole heights to have a tolerance of ± 2"
Model: 3200 Gateway (32)
Height: 14 Ft (14)
Shaft Type: Smooth Straight 4 Inch, 6061-T8 Aluminum Alloy (P4)
Gauge: 0.188" (.188)

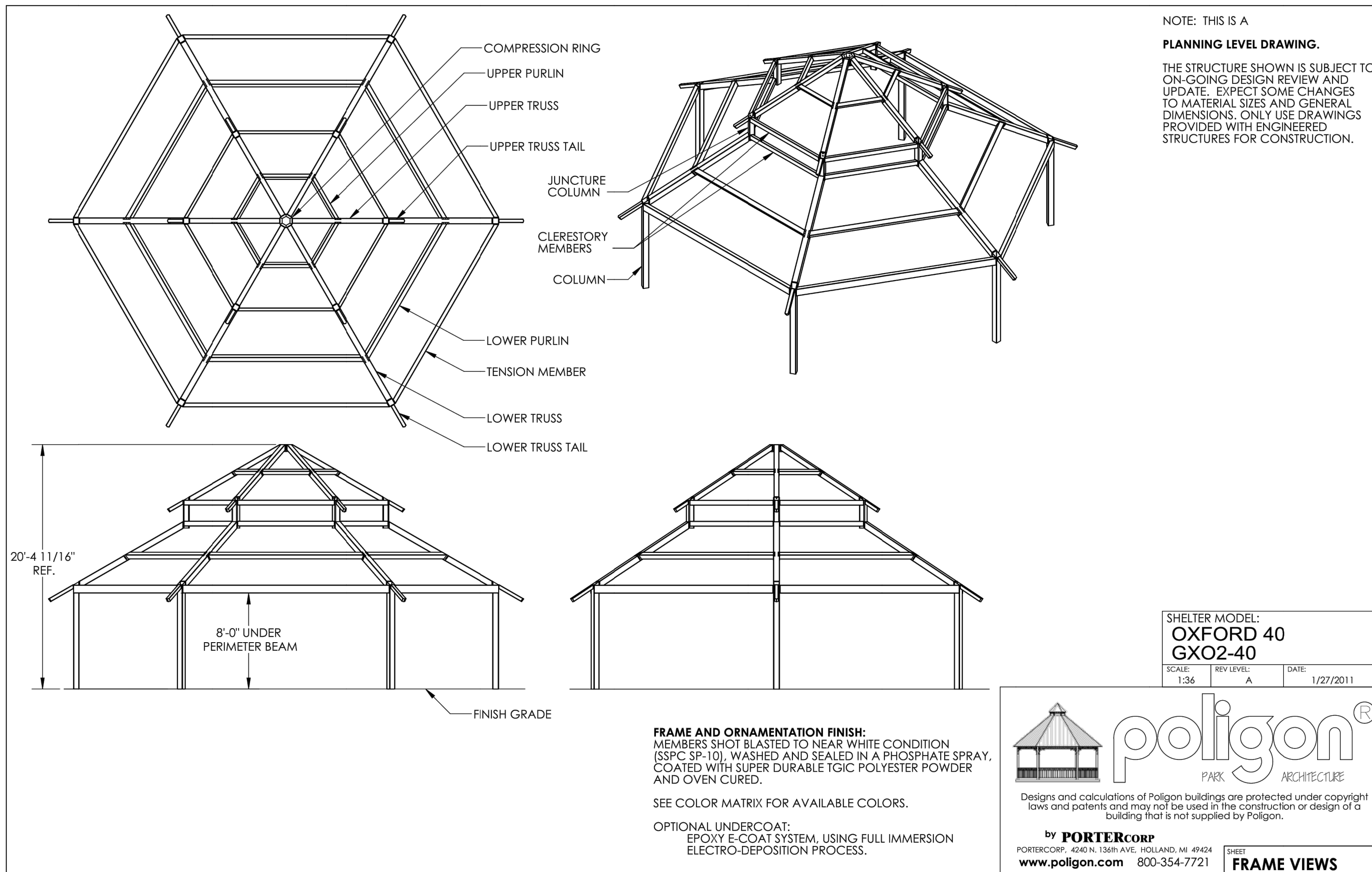
ACCESSORY: GF-LPIUC/
Ground-fault interrupter with duplex receptacle and low-profile in-use cover.
Model: GF-LPIUC

FINISH: BK
Assembly shall be powder coated to Black Smooth finish. Prior to coating, the assembly shall be chemically cleaned and etched in a 5-stage washing system which includes alkaline cleaning, rinsing, phosphoric etching, reverse osmosis water rinsing, and non-chrome sealing to ensure corrosion resistance.

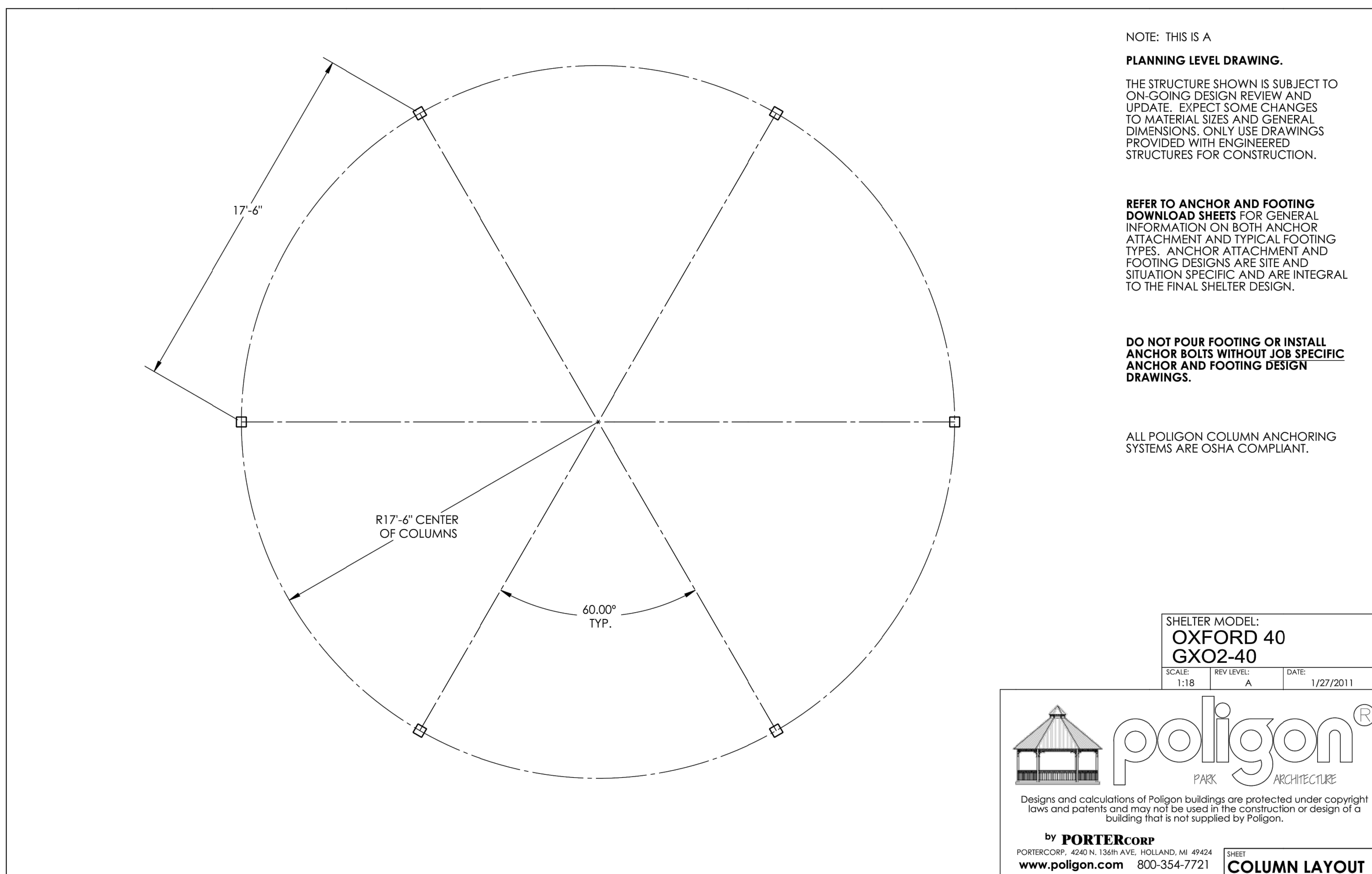
Wind Load Evaluation
This assembly, as configured, MEETS AASHTO requirements for wind loading
Wind Speed: 90 mph
Gust Factor: 1.14

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CONCEPTUAL ASSEMBLY DRAWING, SUBJECT TO ENGINEERING VERIFICATION BY THE FACTORY

A BASIS OF DESIGN PEDESTRIAN LIGHTING DETAILS
SCALE: NTS



B PAVILION - FRAME VIEWS
SCALE: NTS



A PAVILION - COLUMN LAYOUT
SCALE: NTS

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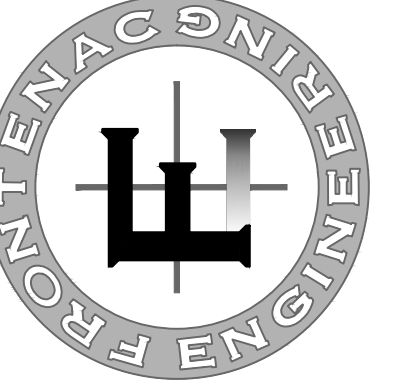
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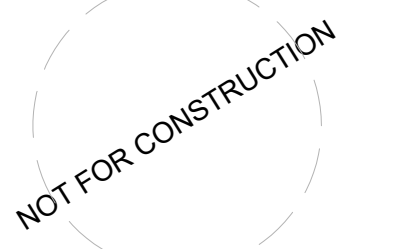


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	01	Schematic Design	05/04/18
	02	Design Development	06/18/18
	03	50% CD Set	07/13/18
	04	100% CDs	07/24/18
	05	Issue For Bid	08/16/18

Revisions	No.	Description	Date

SWT No. 20388
MSD No. P-XXX

Drawn: KP Reviewed: SR, JW

Sheet Title:
PAVILION PLANS

Number

L-511



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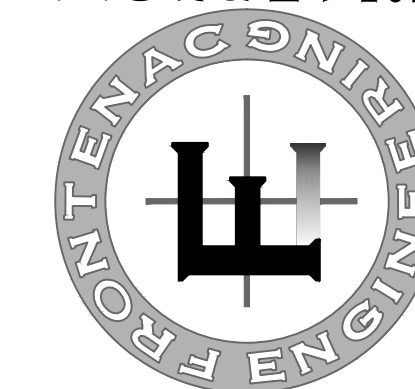
Project:
**Bissell Hills Park:
Phase One
Implementation**

Landscape Architect:

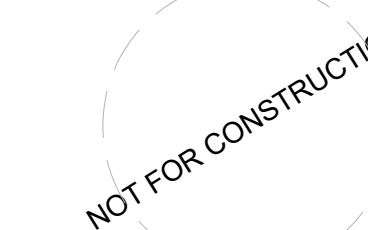


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2725 SUTTON BLVD.
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MO. CERTIFICATE OF AUTHORITY:
CIVIL / STRUCTURAL ENGINEERING: 001225
LAND SURVEYING: 000282



John W. Wohlschlaeger
Landscape Architect
MO # LA 2009014766



SWT Design, Inc.
Missouri State Certificate of
Authority #2006002904

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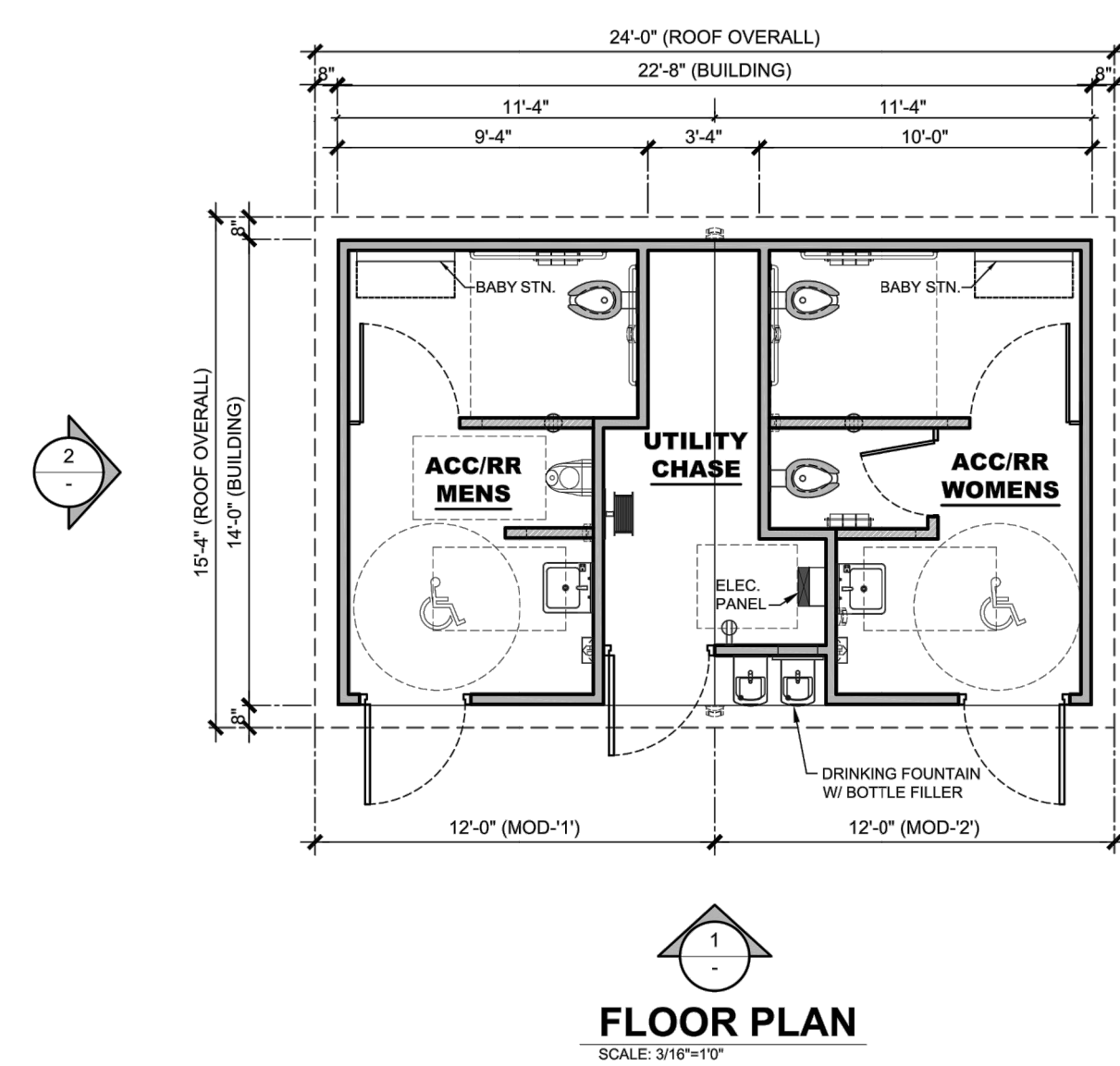
SWT No. 20388
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Sheet Title
RESTROOM PLANS

Number

L-512

PROJECT REF#: 10500-6/22/2018-0

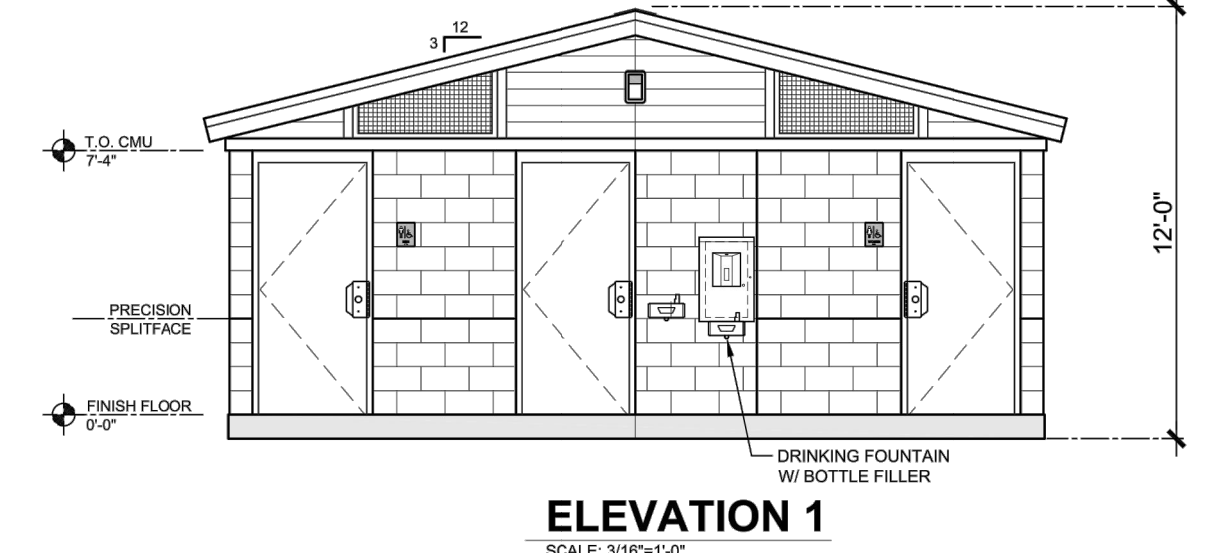


FLOOR PLAN
SCALE: 3/16"=1'-0"

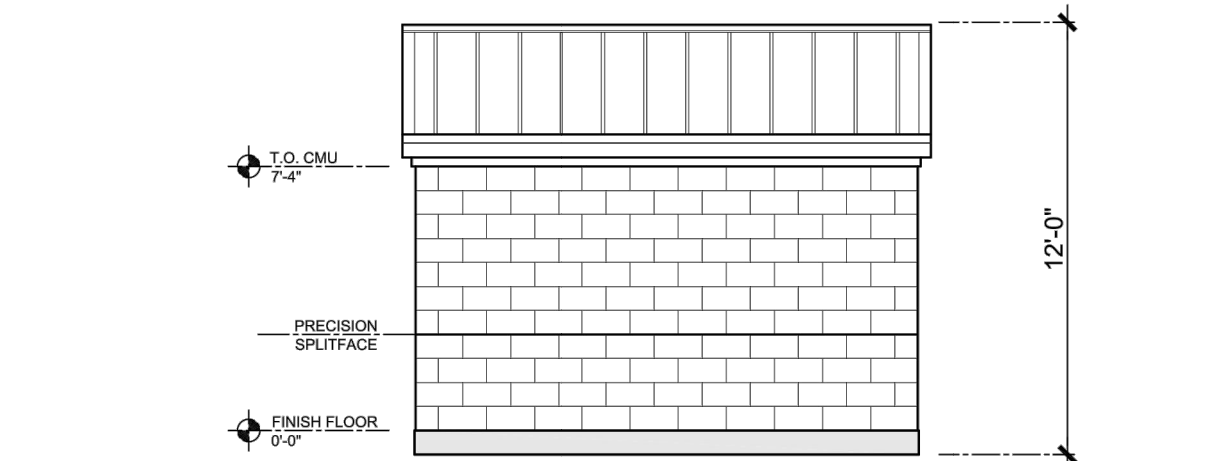
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		PROJECT:	BELLEFONTAINE NEIGHBORS PARK ST. LOUIS, MISSOURI	PROJECT #:	10500	START DATE:	6-22-2018	MAX. PERSON/HOUR:	180 S

C RESTROOM BUILDING - PLAN
SCALE: NTS

PROJECT REF#: 10500-6/22/2018-0



ELEVATION 1
SCALE: 3/16"=1'-0"



ELEVATION 2
SCALE: 3/16"=1'-0"

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		PROJECT:	BELLEFONTAINE NEIGHBORS PARK ST. LOUIS, MISSOURI	PROJECT #:	10500	START DATE:	6-22-2018	MAX. PERSON/HOUR:	180 S

B RESTROOM BUILDING - ELEVATION
SCALE: NTS



FLOOR PLAN
SCALE: NOT TO SCALE

BELLEFONTAINE NEIGHBORS PARK RESTROOM BUILDING

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St. Louis, MO 63137

Project:
**Bissell Hills Park:
Phase One
Implementation**

Landscape Architect:



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John W. Wohlschlaeger
Landscape Architect
MO # LA 2009014766

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SWT Design, Inc.
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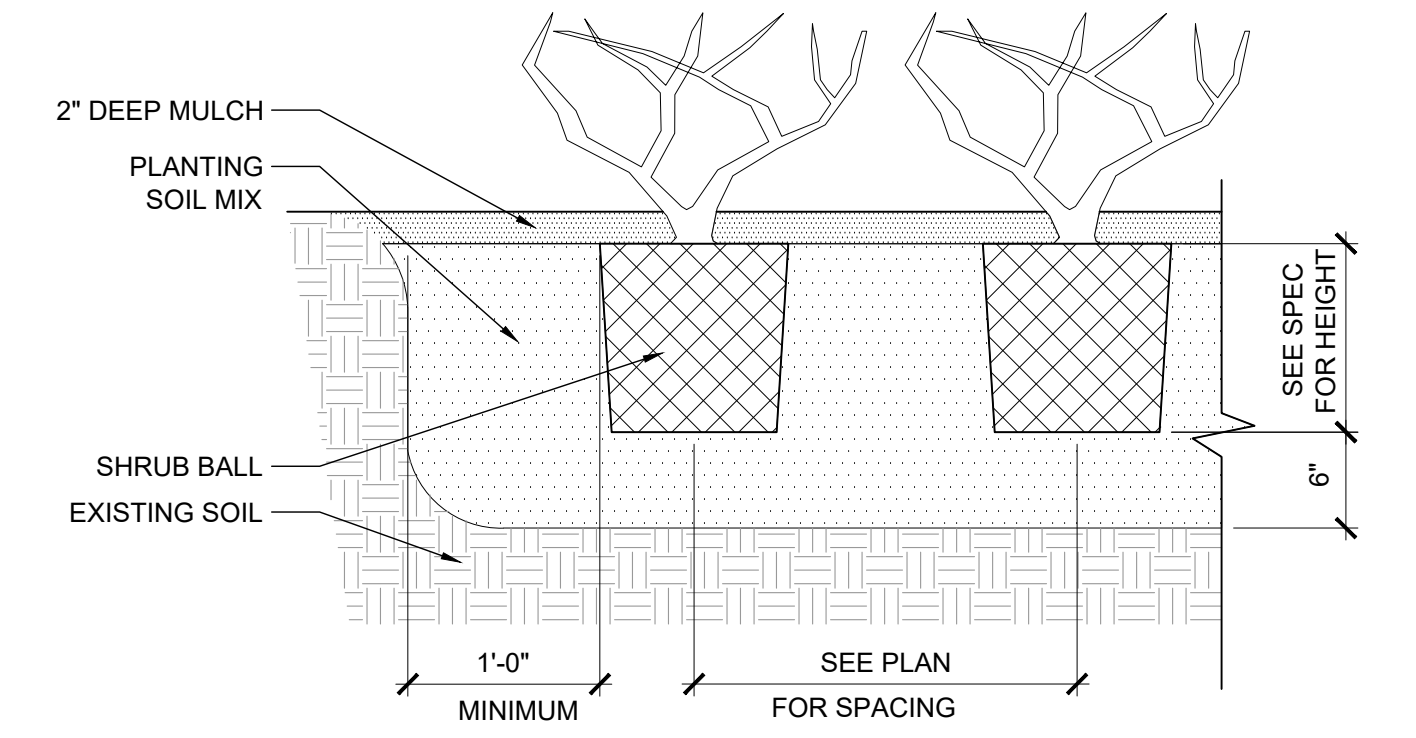
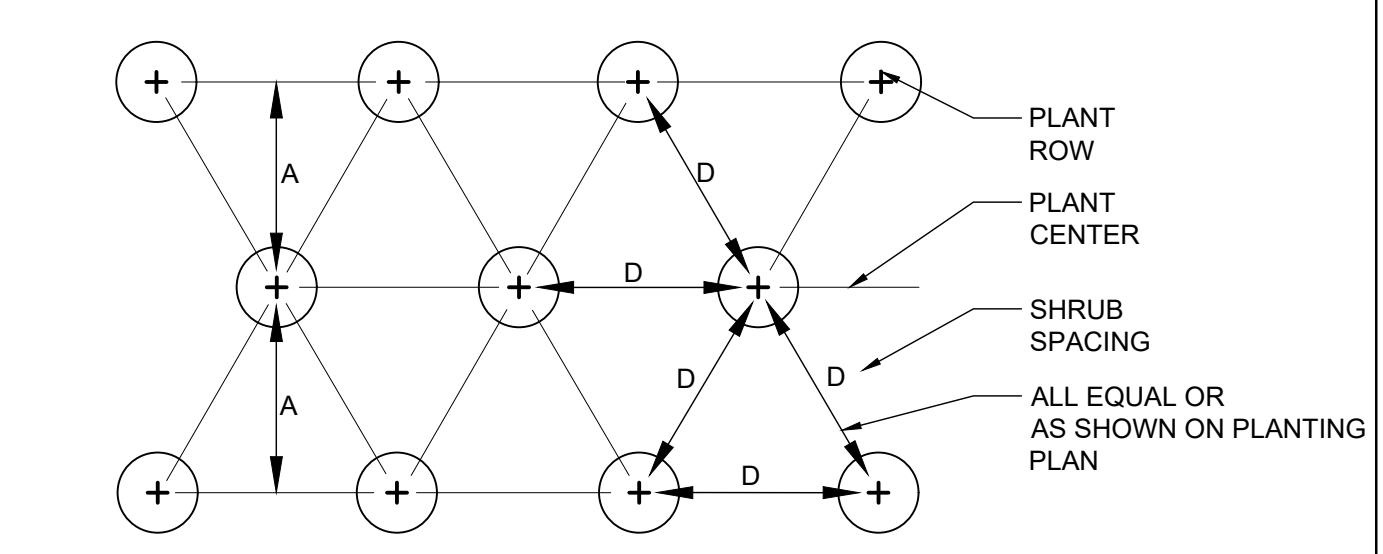
SWT No. 20388
MSD No. P-XXX

Drawn KP Reviewed SR, JW

Sheet Title
PLANTING DETAILS

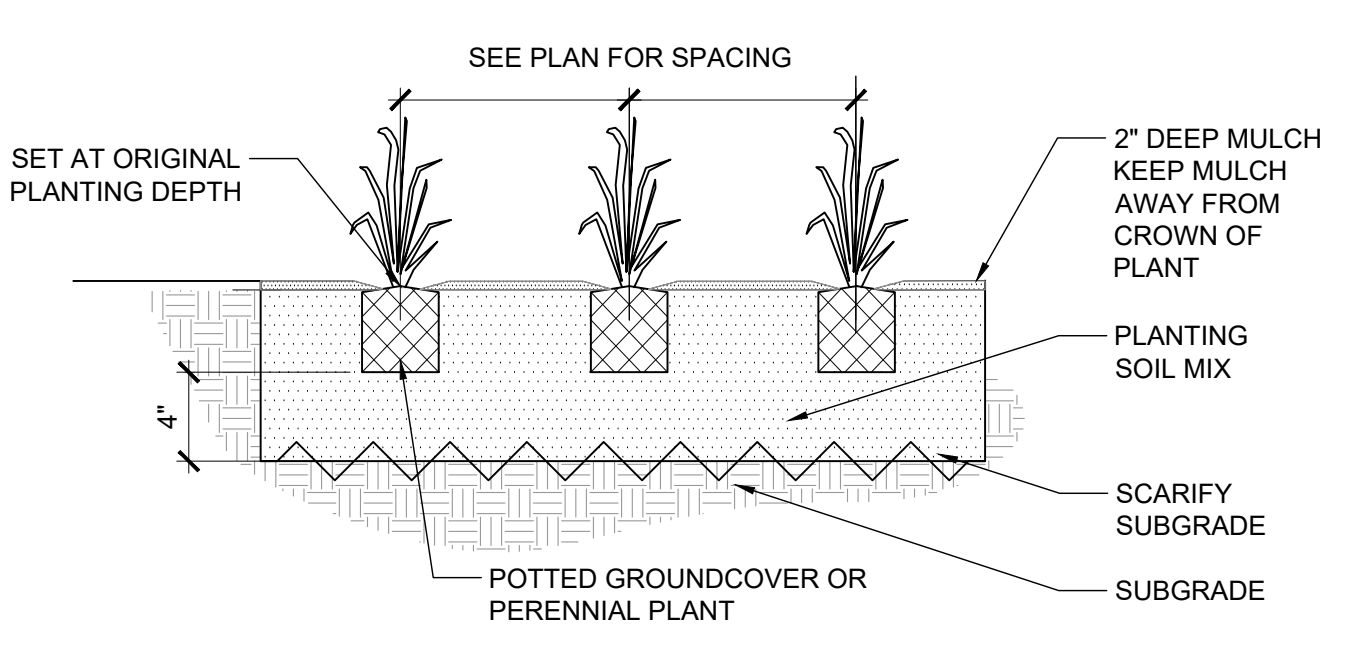
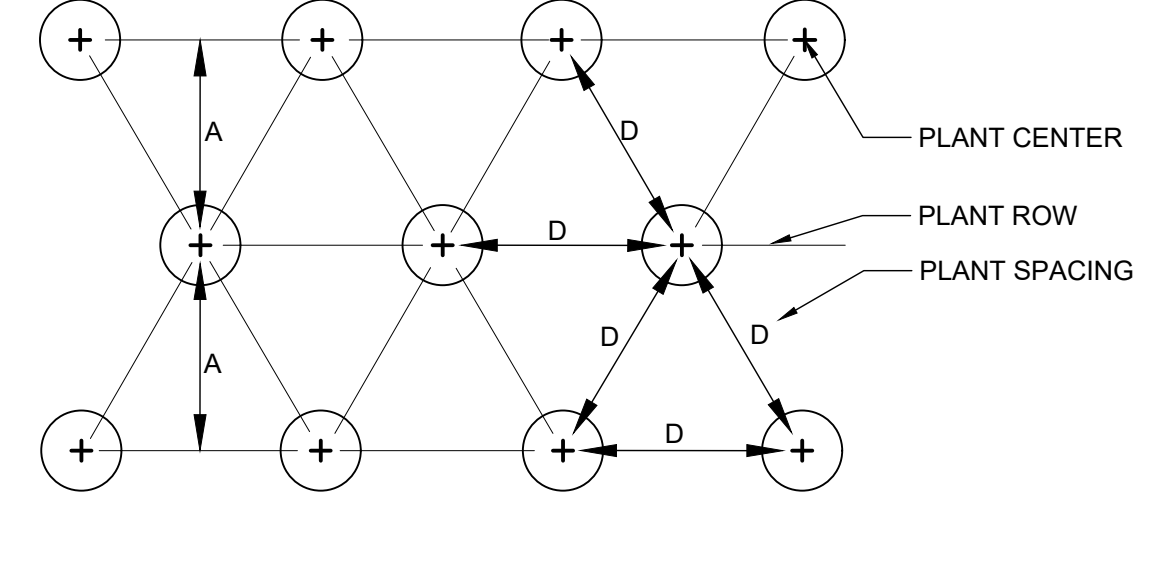
Number

SPACING "D"	ROW "A"	NUMBER OF PLANTS/SQ. FT.
24"	20.8"	.250
30"	26.0"	.160
36"	30.0"	.110
4'	3.46'	.060



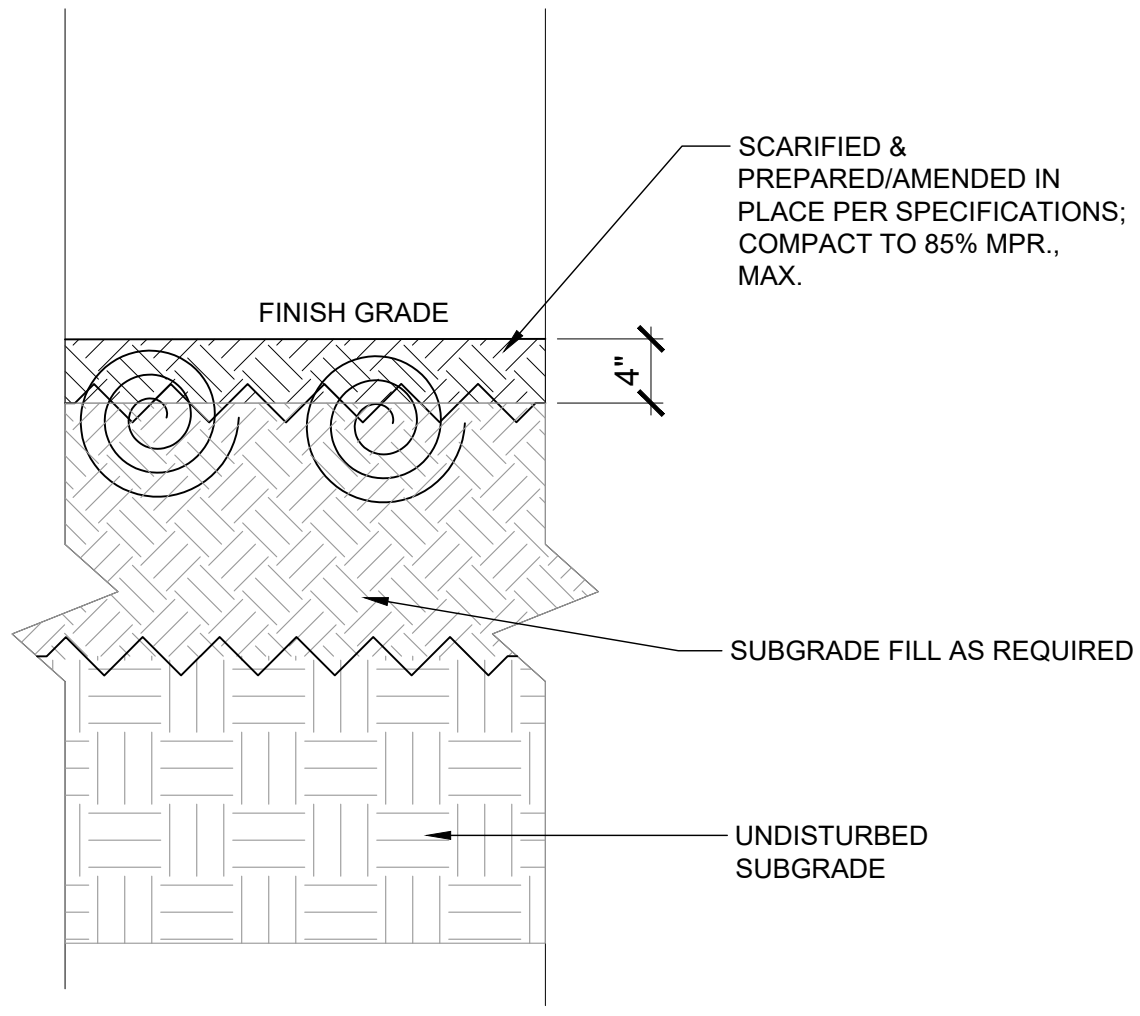
- NOTES:
 1. SHRUB SPACING SHALL BE AS NOTED IN PLANTING SCHEDULE.
 2. IF SHRUBS ARE B&B, ROPES AT TOP OF BALL SHALL BE CUT. REMOVE TOP 1/3 OF BURLAP. NON-BIODEGRADABLE MATERIAL SHALL BE TOTALLY REMOVED.

SPACING "D"	ROW "A"	NUMBER OF PLANTS/SQ. FT.
18"	15.6"	.450
15"	13.0"	.640
12"	10.4"	1.00
10"	8.66"	1.44
8"	6.93"	2.25
6"	5.19"	4.00



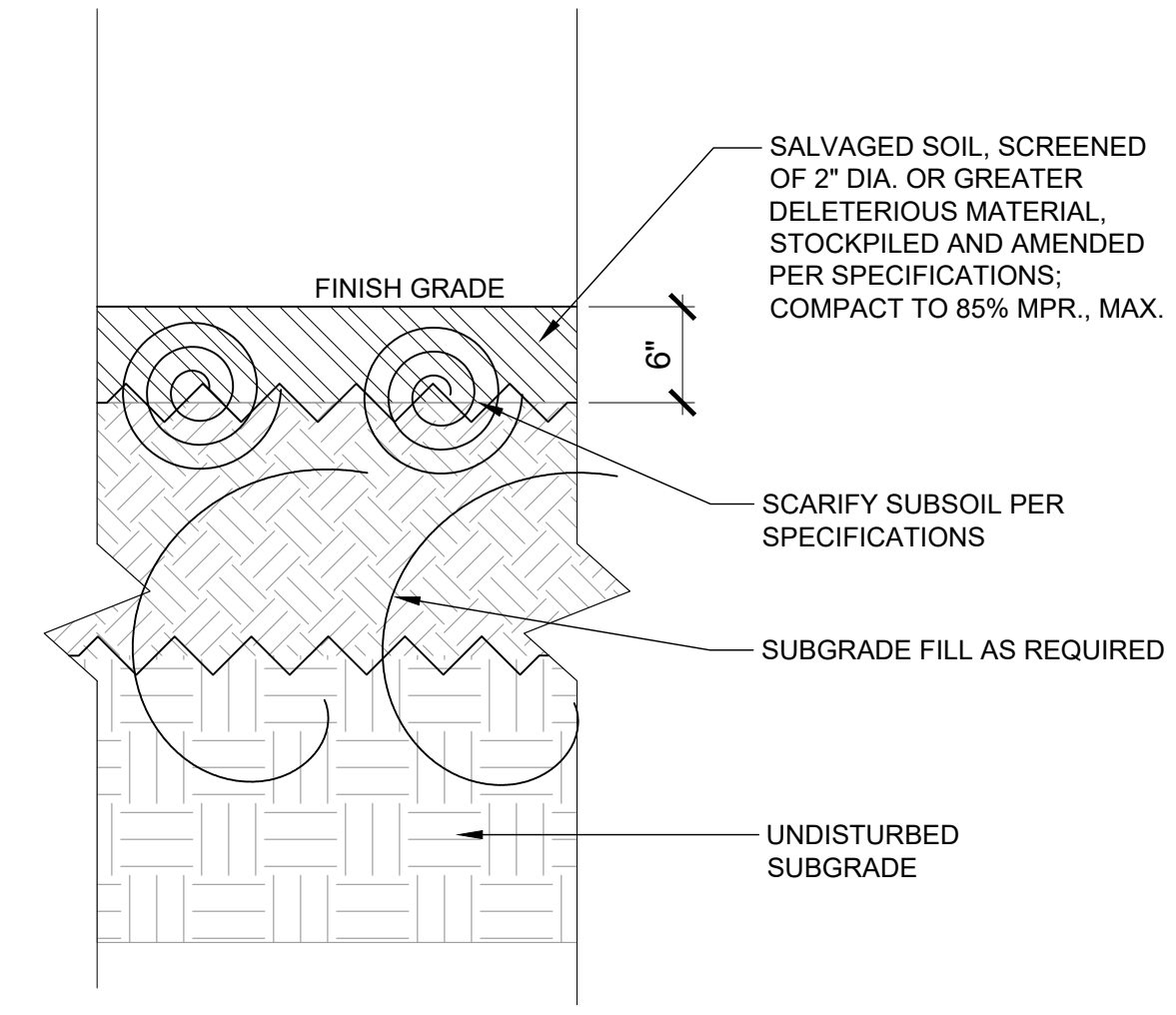
- NOTES:
 1. REMOVE SPENT FLOWERS PRIOR TO PLANTING.
 2. LOOSEN ROOT MASS AT BOTTOM OF ROOT BALL.
 3. TOP OF ROOT BALL STRIPPED OF 1/2" SURFACE GROWING MEDIA AND COVERED WITH 1/2" LANDSCAPE BED MIX PLUS SURFACE MULCH.
 4. GROUNDCOVER SPACING SHALL BE AS NOTED IN PLANTING SCHEDULE.

D GROUNDCOVER/PERENNIAL PLANTING
SCALE: 1"=1'



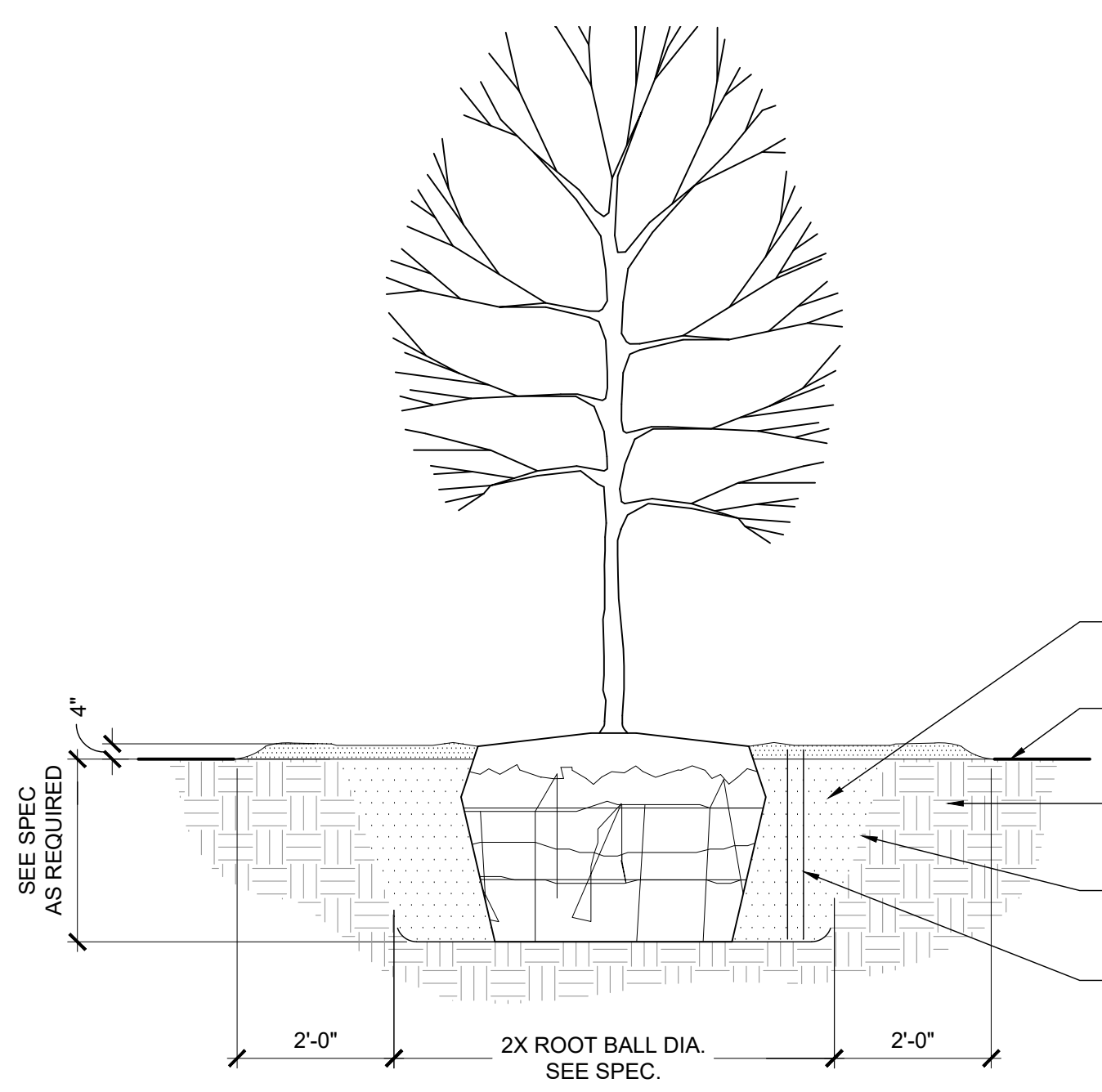
- NOTE:
 1. MPR = MATERIALS MODIFIED PROCTOR - ASTM 1557 - MAXIMUM DRY DENSITY.
 2. SEE SPECIFICATIONS FOR MORE INFORMATION.
 3. SOIL TESTS TO BE CONDUCTED PER SOILS SPECIFICATIONS.
 4. SOIL PLACEMENT DETAILS ARE FOR GENERAL SOIL PREPARATION.
 5. ALL PLANTING DETAILS SHALL BE FOLLOWED PER PLANTING SPECIFICATIONS.

F TURF SOIL AMENDMENT DETAIL
SCALE: 1"=1'



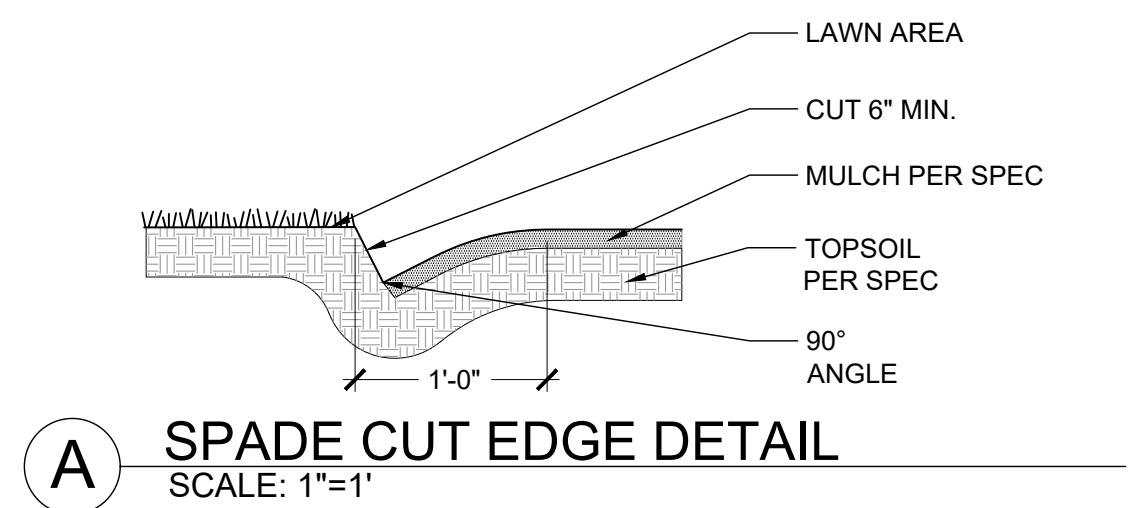
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 5. ALL PLANTING DETAILS SHALL BE FOLLOWED PER PLANTING SPECIFICATIONS.

E PLANTING SOIL DETAIL
SCALE: 1"=1'



- NOTES:
 1. THIS DETAIL APPLIES TO ALL TREE TYPES, CANOPY, FLOWERING, AND EVERGREEN TREES.
 2. DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
 3. IF PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, CUT THE WIRE BASKET IN FOUR PLACES AND FOLD DOWN 8 IN. INTO PLANTING HOLE.
 4. WRAP TREE TRUNKS ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT. SEE WRAPPING DETAIL.
 5. MARK THE NORTH SIDE OF THE TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHEN EVER POSSIBLE.
 6. SET TOP OF ROOT BALL FLUSH TO GRADE OR 1-2 IN. HIGHER IN SLOWLY DRAINING SOILS.
 7. 2 IN. MULCH. DO NOT PLACE MULCH IN CONTACT WITH TREE TRUNK. MULCH RING 6 FT. DIAMETER MINIMUM, 8FT. DIAMETER PREFERRED.
 8. STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT SEE STAKING DETAIL.
 9. PLACE ROOT BALL ON UNEXCAVATED OR TAMPED SOIL.
 10. TAMP SOIL AROUND ROOT BALL BASE FIRMLY WITH FOOT PRESSURE SO THAT ROOT BALL DOES NOT SHIFT.
 11. EACH TREE MUST BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.
 12. 4 INCHES (100MM) HIGH EARTH SAUCER BEYOND EDGE OF ROOT BALL.
 13. REMOVE ALL TWINE, ROPE AND WIRE, AND BURLAP FROM TOP HALF OF ROOT BALL.

C TREE PLANTING DETAIL
SCALE: 1"=2'



A SPADE CUT EDGE DETAIL
SCALE: 1"=1'

PLANT SCHEDULE						
TREES	QTY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	COMMENTS
AF	2	Acer saccharum 'Fall Fiesta'	Sugar Maple	As Shown	2.5"Cal	Per Details, B&B, 6' Clear Trunk Ht.
PE	1	Platanus x acerifolia 'Exclamation' TM	Exclamation London Plane Tree	As Shown	2.5"Cal	Per Details, B&B, 6' Clear Trunk Ht.
FLOWERING TREES	QTY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	COMMENTS
CC	1	Cornus florida 'Cherokee Brave'	Cherokee Brave Dogwood	As Shown	2"Cal	Per Details, B&B
HC	1	Halesia carolina	Snowdrop Tree	As Shown	2"Cal	Per Details, B&B
MM	1	Magnolia virginiana 'Moon Glow'	Sweet Bay	As Shown	8' Ht.	Per Details, B&B
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	COMMENTS
HW	5	Hydrangea quercifolia 'Pee Wee'	Oakleaf Hydrangea	3' O.C.	#5	Per Details, Cont.
PS	5	Physocarpus opulifolius 'Seward'	Seward Ninebark	3' O.C.	#5	Per Details, Cont.
GRASSES	QTY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	COMMENTS
CP	49	Carex praegracilis	Slender Sedge	18" O.C.	#1	Per Details, Cont.
SH	15	Sporobolus heterolepis	Prairie Dropseed	24" O.C.	#1	Per Details, Cont.
SP	15	Schizachyrium scoparium 'Prairie Blues'	Little Bluestem Grass	24" O.C.	#1	Per Details, Cont.
PERENNIALS	QTY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	COMMENTS
EL	16	Eupatorium purpureum 'Little Joe'	Dwarf Joe-Pye Weed	24" O.C.	#1	Per Details, Cont.
LS	26	Leucanthemum x superbum 'Snowcap'	Snowcap Shasta Daisy	18" O.C.	#1	Per Details, Cont.
RS	20	Rudbeckia fulgida sullivantii 'Little Goldstar'	Coneflower	18" O.C.	#1	Per Details, Cont.
SOD/SEED	QTY	BOTANICAL NAME	COMMON NAME	TYPE	-	COMMENTS
	10,383 sf	Turf Seed	Drought Tolerant Fescue Blend	#1		
	4,355 sf	Turf Sod	Drought Tolerant Fescue Blend	#1		Per Specifications; 3 Improved Cultivars, Min.

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SANITARY SEWER NOTES

- 1) ALL STORM AND SANITARY SEWER STRUCTURES AND APPURTENANCES TO BE DEDICATED TO MSD, OR TO BE PRIVATE UNDER MSD INSPECT SHALL CONFORM TO THE METROPOLITAN ST. LOUIS SEWER DISTRICT... STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES, 2009... THAT WILL INCLUDE STANDARD DETAILS SHOWN THEREIN...

SILTATION CONTROL NOTES

GENERAL NOTES

- 1) INSTALLATION OF ALL PERMETER SEDIMENT CONTROL SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING AND WITHIN SEVEN (7) DAYS OF GRUBBING THE SITE.

PRINCIPALS & STANDARDS

SILTATION CONTROL SCHEDULE IMPLEMENTATION

- 1) PERMETER SILTATION CONTROL AND CONSTRUCTION ENTRANCES TO BE INSTALLED.

TEMPORARY ACCESS ROADS AND PARKING AREAS SPECIFICATIONS

- 1) TEMPORARY ROADS SHALL FOLLOW THE CONTOUR OF THE NATURAL TERRAIN TO THE EXTENT POSSIBLE. SLOPES SHOULD NOT EXCEED 10 PERCENT.

- 2) GRADES SHOULD BE SUFFICIENT TO PROVIDE DRAINAGE, BUT SHOULD NOT EXCEED 4 PERCENT.

- 3) ROADBEDS SHALL BE AT LEAST 24 FEET WIDE.

- 4) ALL CUTS AND FILLS SHALL BE 3:1 OR FLATTER TO THE EXTENT POSSIBLE.

- 5) DRAINAGE DITCHES SHALL BE PROVIDED AS NEEDED.

- 6) THE ROADBED PARKING SURFACE SHALL BE CLEARED OF ALL VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIALS AND OBJECTS.

- 7) AN 8-INCH COURSE OF 2" MINUS AGGREGATE SHALL BE APPLIED IMMEDIATELY AFTER GRADING OR THE COMPLETION OF UTILITY INSTALLATION WITHIN THE RIGHT-OF-WAY. FILTER FABRIC (MIRAFI 500X) MAY BE APPLIED TO THE ROADBED FOR ADDITIONAL STABILITY IN ACCORDANCE WITH FABRIC MANUFACTURER'S SPECIFICATIONS.

- 8) ALL EXCAVATIONS, GRADING, OR FILLING SHALL HAVE A FINISHED GRADE NOT TO EXCEED A 2.0:1 SLOPE (50%). STEEPER GRADES MAY BE APPROVED BY THE GEOTECHNICAL ENGINEER IF THE EXCAVATION IS THROUGH ROCK OR THE EXCAVATION OR THE FILL IS ADEQUATELY PROTECTED (A DESIGNED HEAD WALL OR TIE WALL MAY BE REQUIRED); RETAINING WALLS THAT EXCEED A HEIGHT OF FOUR (4) FEET SHALL REQUIRE APPROVAL BY THE BUILDING DEPARTMENT.

- 9) SEDIMENT AND EROSION CONTROL PLANS FOR SITES THAT EXCEED 20,000 SQUARE FEET OF GRADING SHALL PROVIDE FOR SEDIMENT OR DEBRIS BASINS, SILT TRAPS OR FILTERS, STAKED STRAW BALES OR OTHER APPROVED MEASURES TO REMOVE SEDIMENT FROM RUN-OFF WATERS. THE DESIGN IS TO BE APPROVED BY THE DESIGNATED OFFICIAL. TEMPORARY SILTATION CONTROL MEASURES SHALL BE MAINTAINED UNTIL VEGETATIVE COVER IS ESTABLISHED AT A SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE. REFER TO APPROVED SWPPP (PHASE #1-ADVANCE GRADING) PLAN FOR ALL REQUIRED CONTROL MEASURES AND DETAILS.

- 10) WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION SHALL BE RE-ESTABLISHED IN SUCH A DENSITY AS TO PREVENT EROSION. PERMANENT VEGETATION SHALL BE ESTABLISHED AS SOON AS POSSIBLE DURING THE NEXT SEEDING PERIOD AFTER GRADING HAS BEEN COMPLETED.

- 11) WHEN GRADING OPERATIONS ARE COMPLETED OR SUSPENDED FOR MORE THAN 30 DAYS PERMANENT VEGETATION MUST BE ESTABLISHED AT SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE. BETWEEN PERMANENT GRASS SEEDING PERIODS, TEMPORARY COVER SHALL BE PROVIDED ACCORDING TO THE ENGINEER'S RECOMMENDATIONS. ALL FINISHED GRADES (AREAS NOT TO BE DISTURBED BY FUTURE IMPROVEMENT) IN EXCESS OF 20% SLOPES (5:1) SHALL BE MULCHED AND TACKED AT THE RATE OF 10 POUNDS PER 1,000 SQUARE FEET WHEN SEEDED.

- 12) PROVISIONS SHALL BE MADE TO ACCOMMODATE THE INCREASED RUNOFF CAUSED BY CHANGED SOILS AND SURFACE CONDITIONS DURING AND AFTER GRADING. UNVEGETATED OPEN CHANNELS SHALL BE DESIGNED SO THAT GRADIENTS RESULT IN VELOCITIES OF 2 FPS (FEET PER SECOND) OR LESS. OPEN CHANNELS WITH VELOCITIES MORE THAN 2 FPS AND LESS THAN 5 FPS SHALL BE ESTABLISHED IN PERMANENT VEGETATION BY USE OF COMMERCIAL EROSION CONTROL BLANKETS OR LINED WITH ROCK RIP RAP OR CONCRETE OR OTHER SUITABLE MATERIALS AS APPROVED BY THE ENGINEER. DETENTION BASINS, DIVERSIONS, OR OTHER APPROPRIATE STRUCTURES SHALL BE CONSTRUCTED TO PREVENT VELOCITIES ABOVE 5 FPS.

- 13) LAND ADJACING DEVELOPMENT SITES SHALL BE PROVIDED WITH PROTECTION FROM ACCELERATED AND INCREASED SURFACE WATER, SILT FROM EROSION, AND ANY OTHER CONSEQUENCE OF EROSION. RUN-OFF WATER FROM DEVELOPED AREAS (PARKING LOTS, PAVED SITES AND BUILDINGS) ABOVE THE AREA TO BE DEVELOPED SHALL BE DIRECTED TO DIVERSIONS, DETENTION BASINS, CONCRETE GUTTERS AND/OR UNDERGROUND OUTLET SYSTEMS. SUFFICIENTLY ANCHORED STRAW BALES MAY BE TEMPORARILY SUBSTITUTED WITH THE APPROVAL OF THE COUNTY ENGINEER.

- 14) DISTURBED AREA SHALL BE SEEDED AND MULCHED AT THE MINIMUM RATES DEFINED OR SODDED BEFORE AN OCCUPANCY PERMIT SHALL BE ISSUED EXCEPT THAT A TEMPORARY OCCUPANCY PERMIT MAY BE ISSUED BY THE BUILDING DEPARTMENT IN CASES OF UNDUE HARDSHIP BECAUSE OF UNFAVORABLE GROUND CONDITIONS.

VEGETATIVE ESTABLISHMENT RATES FOR DEVELOPMENT SITES

Table with columns for SEEDING RATES, PERMANENT (TALL FESCUE, COMBINED FESCUE & BROME), TEMPORARY (WHEAT OR RYE, OATS), SEEDING PERIODS (FESCUE OR BROME, WHEAT OR RYE, OATS), MULCH RATES, and FERTILIZER RATES (NITROGEN, PHOSPHATE, POTASSIUM, LIME).

* ENM = EFFECTIVE NEUTRALIZING MATERIAL AS PER STATE EVALUATION OF QUARRIED ROCK.

VEGETATION

REFER TO LANDSCAPES SPECIFICATIONS.

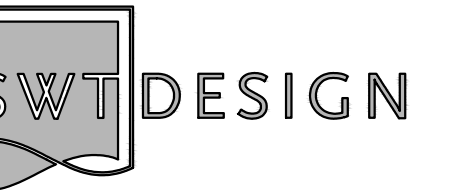
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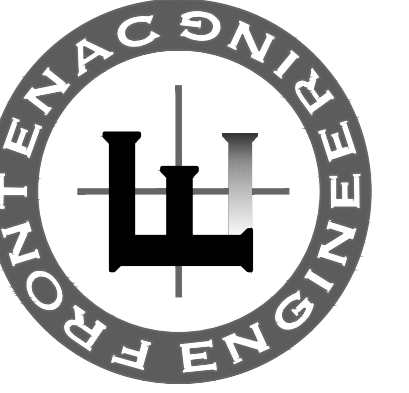
Project: Bissell Hills Park: Phase One Implementation

Landscape Architect:



7722 Big Bend Blvd. St. Louis, MO 63119 t. 314.644.5700

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NOT FOR CONSTRUCTION

WILLIAM K. BERTHOLD, PROFESSIONAL ENGINEER LICENSE # E-26119

KEY PLAN

Table with columns: Issuances, No., Description, Date. Rows include Schematic Design, Design Development, 50% CD Set, 100% CDs, Issue for Bid.

Table with columns: Revisions, No., Description, Date. Multiple empty rows for revisions.

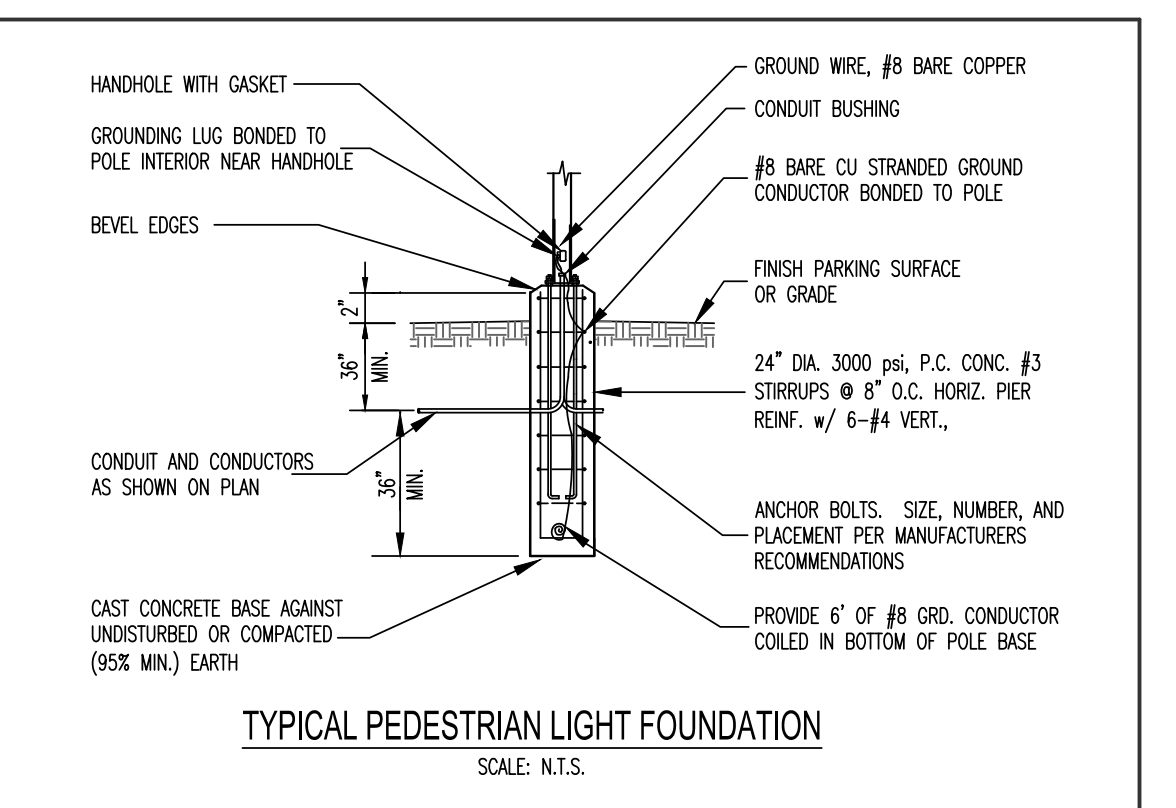
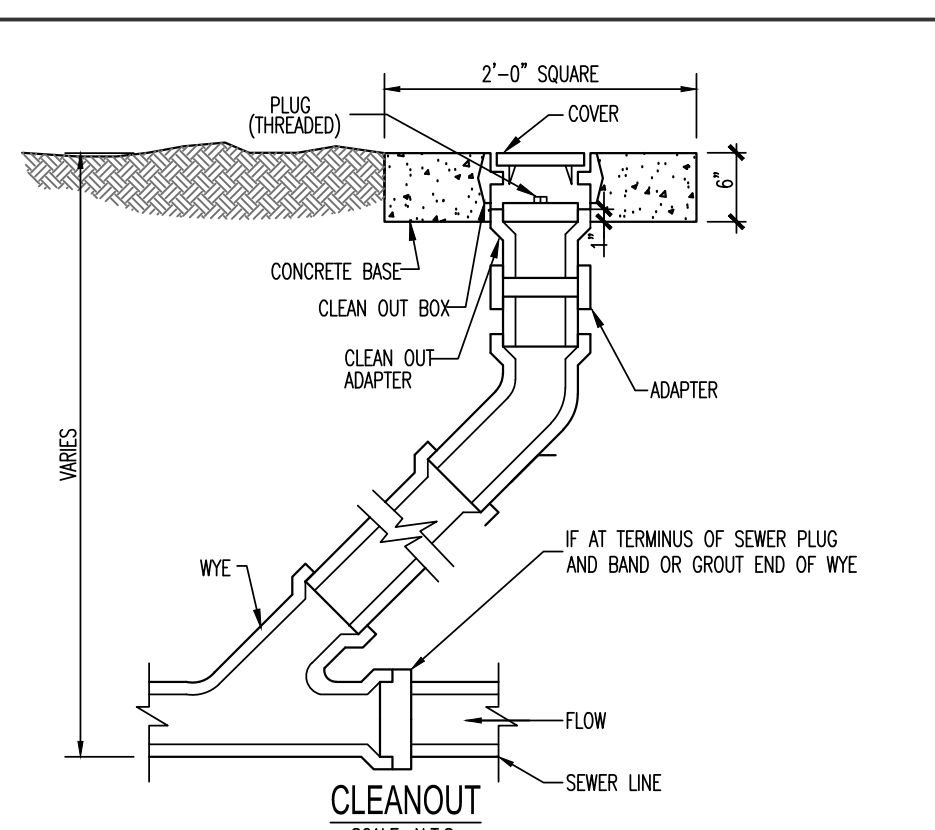
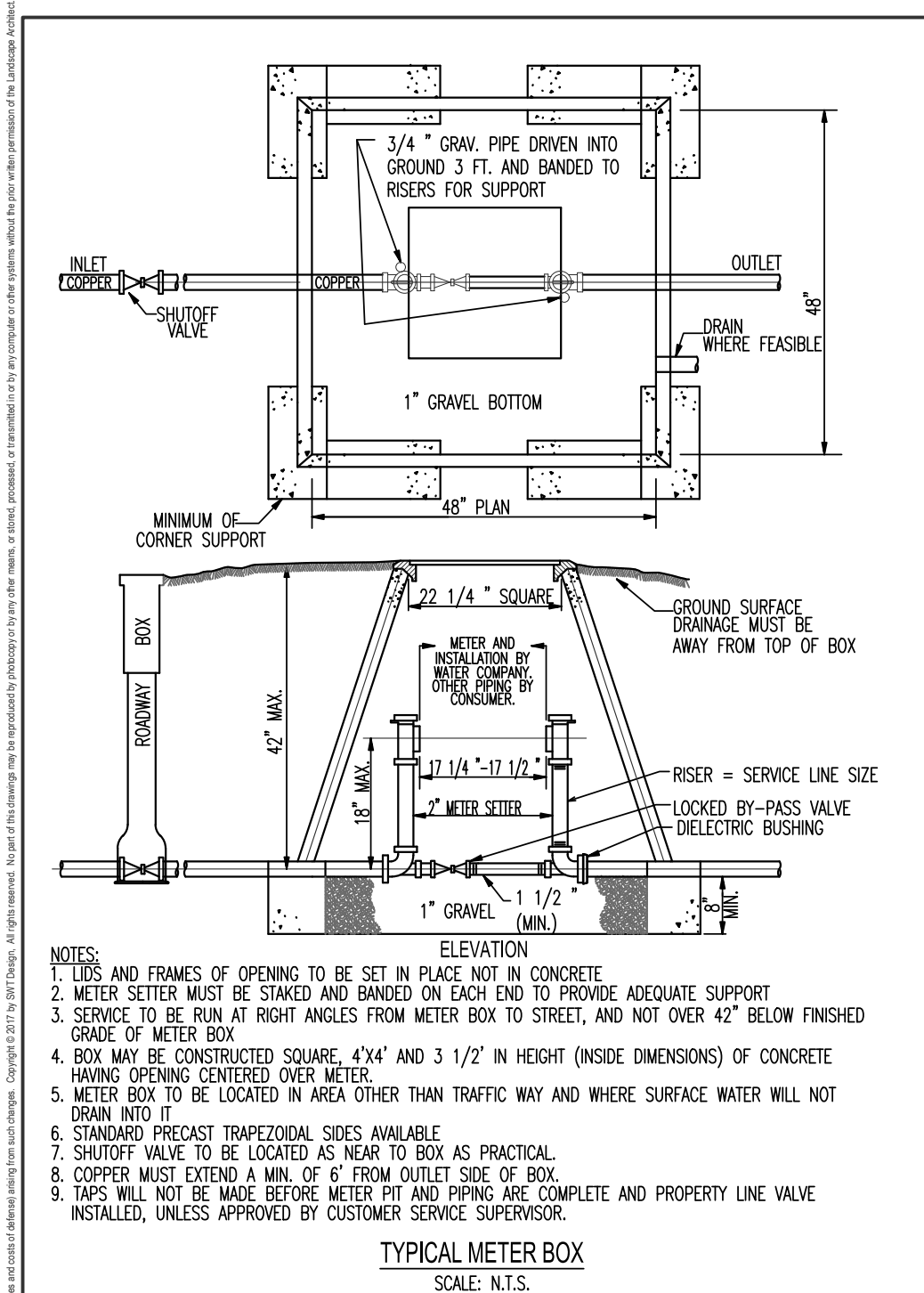
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Sheet Title SPECIFICATION SHEET

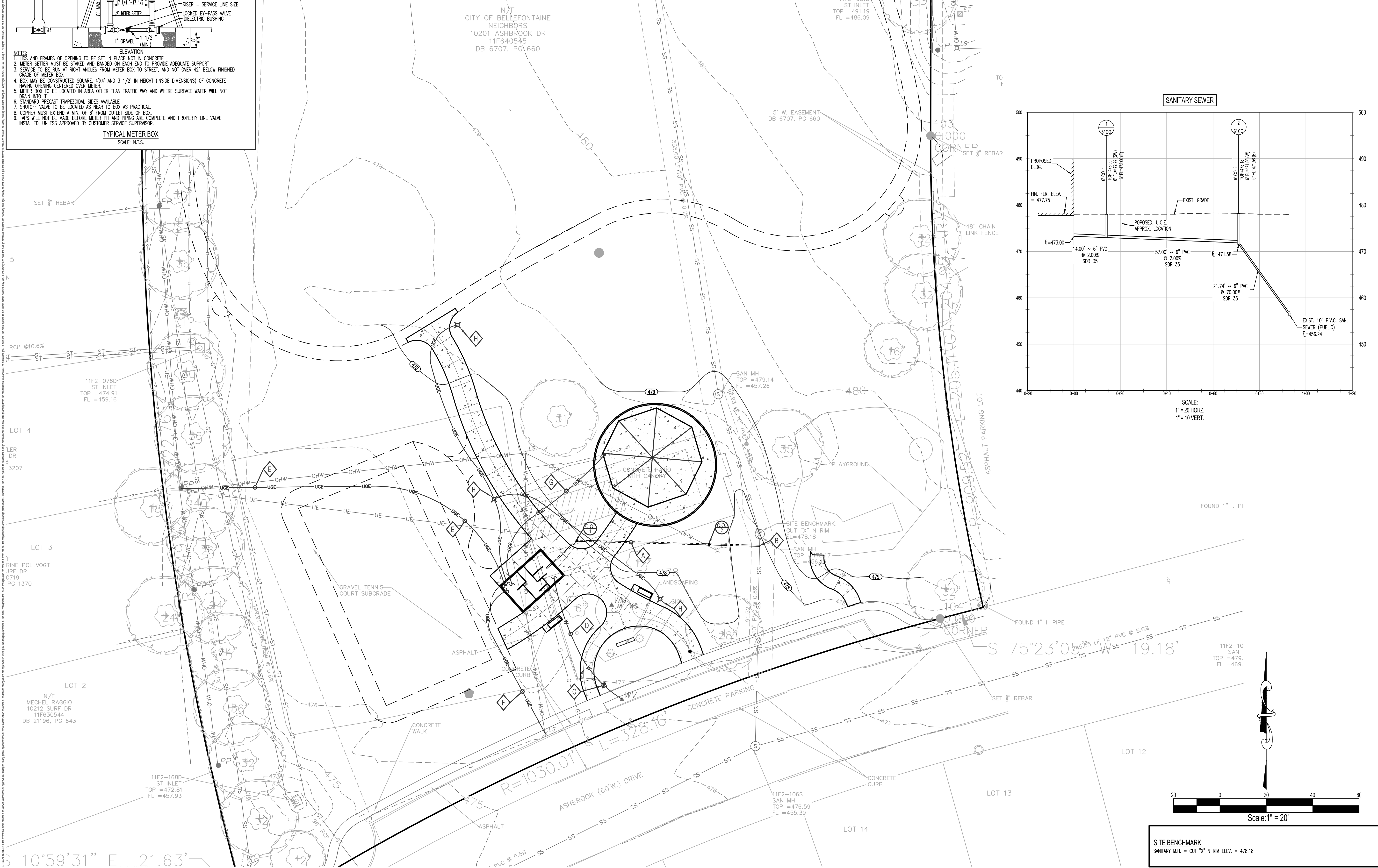
Number

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SITE BENCHMARK: SANITARY M.H. = CUT "X" N RIM ELEV. = 478.18



- KEYED UTILITY AND SEWER NOTES:**
- A CONSTRUCT NEW 6" SCH. 40 P.V.C. SANITARY SEWER LATER. MINIMUM DEPTH AT NEW RESTROOM BUILDING = 36 INCHES. MINIMUM SLOPE = 2%. REFER TO PIPE BEDDING SECTION.
 - B CONNECT NEW SANITARY LATERAL TO EXISTING SANITARY SEWER MAIN. REFER TO MSD STANDARD CONNECTION DETAIL.
 - C FURNISH AND INSTALL NEW METER PIT AND WATER METER FOR 1 INCH WATER SERVICE. UTILIZE EXISTING WATER TAP. REFER TO DETAIL.
 - D CONSTRUCT NEW 1 INCH TYPE K COPPER WATER SERVICE TO NEW RESTROOM BUILDING.
 - E FURNISH AND INSTALL TWO (2) 2 INCH P.V.C. BURED ELECTRICAL CONDUITS FROM POLE TO NEW RESTROOM BUILDING. INSTALL 400 AMP SERVICE PANEL AND METER ON RESTROOM BUILDING. FURNISH AND INSTALL ALL WIRE FROM POLE TO ENERGIZE PANEL.
 - F CONSTRUCT UNDERGROUND ELECTRICAL SERVICE IN CONDUIT FROM NEW SERVICE PANEL TO POWER EXISTING POLE LIGHT.
 - G CONSTRUCT 120V, 30 AMP SERVICE IN UNDERGROUND CONDUIT FROM NEW SERVICE PANEL IN RESTROOM TO POWER LIGHTING AND RECEPTACLES IN NEW PAULION.
- ALTERNATE BID:**
- H PEDESTRIAN LIGHT POLE (TYP. 3 PLACES). CONSTRUCT 120V, 30 AMP SERVICE IN UNDERGROUND CONDUIT FROM NEW SERVICE PANEL TO NEW PEDESTRIAN LIGHTS. CONSTRUCT CONCRETE BASES PER DETAIL AND INSTALL LIGHT FIXTURES.



Prepared For:

9641 Bellefontaine Road
St. Louis, MO 63137

Project:
**Bissell Hills Park:
Phase One
Implementation**

Landscape Architect:

7722 Big Bend Blvd.
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NO. CERTIFICATE OF AUTHORITY:
CIVIL / STRUCTURAL ENGINEERING: 001225
LAND SURVEYING: 000282

KEY PLAN

WILLIAM K. BERTHOLD, PROFESSIONAL ENGINEER
LICENSE # E-26119

Issuances

No.	Description	Date
01	Schematic Design	05/04/18
02	Design Development	06/18/18
03	50% CD Set	07/13/18
04	100% CDs	07/24/18
05	Issue for Bid	08/16/18

Revisions

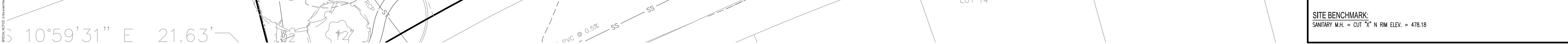
No.	Description	Date

SWT No. 20388
MSD No. P-XXX

Drawn: [Name]
A.P. [Name]
Reviewed: [Name]
W.K.B.

Sheet Title
UTILITY AND SEWER SERVICE PLAN

Number
C1.0



DIVISION 1- GENERAL REQUIREMENTS

- 1.1 CONSTRUCTION MEANS AND METHODS
A. Contractor agrees that Contractor shall assume sole and complete responsibility for job site conditions during the course of the work, including safety of all persons and property...

- 1.2 SUBMITTALS
A. Submittals prepared by Subcontractors shall be reviewed by Contractor prior to submitting to Architect.
B. Reproduction of the Contract Documents for Shop Drawings is not permitted.

- 1.3 QUALITY REQUIREMENTS
A. Reference to standard specifications or codes of any technical society, organization, or association or to codes of local or state authorities shall mean the standards in effect as of the date of the Contract Documents unless otherwise noted.
B. Contractor shall verify the structurally supported equipment weights opening sizes, and locations indicated on the Structural Drawings with Documents from other disciplines and notify Architect of any discrepancies.

- 1.4 SPECIAL INSPECTIONS
A. Special inspections shall be in accordance with the 2009 International Building Code, Ch.17.
B. Special inspection reports shall be furnished to Building Official, Owner, Architect, Structural Engineer, and Contractor.

- 1.5 DESIGN CRITERIA
A. The structure is designed in accordance with the International Building Code, 2009 Edition.
B. No Provisions have been made for future building horizontal or vertical expansion.
C. Gravity Loads: 1. Uniform Roof Live Loads: a. Live Load: 20 psf b. Snow Load: i. Ground Snow Load: 20 psf ii. Flat Roof Snow Load: 20 psf iii. Snow Exposure Factor: 1.0 iv. Snow Importance Factor: 1.0 v. Snow Thermal Factor: 1.0

- 2.1 GENERAL
A. Contractor shall hire soils engineer to judge the suitability of underlying material to support foundations and shall approve bearing material before foundation installation.
B. Prepare site and place fill in accordance with the recommendations in the soils report noted above.
C. Construct non-basement floor slabs on the granular fill layer required by the plan notes.

- 2.2 FOOTINGS
A. Total load soil bearing pressure used in design: 1500 psf
B. Slab on grade Subgrade Reaction Modulus: 100 pci
C. Coefficient of horizontal friction between concrete and soil = 0.30
D. Minimum depth from exterior ground surface to bottom of foundations = 30 inches
E. Equivalent fluid pressure of soil against cantilever retaining walls = 35 pc'

- 2.3 CONCRETE
A. SUBMITTALS: 1. Submit a copy of each concrete mixture, including data and submittals to comply with the requirements in ACI 301.
B. QUALITY ASSURANCES: 1. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C requirements for production facilities and equipment.

- 2. Comply with the current version of ACI 117, "Specifications for Tolerances for Concrete Construction and Materials"
REINFORCING:
A. Reinforcing steel shall be ASTM A615 Grade 60, deformed bars, unless noted otherwise.
B. Reinforcing Steel to be welded shall be ASTM 705, Grade 60, deformed bars.
C. Welded Wire Fabric shall be ASTM A185 and shall be contact lap spliced two full wire spans.

- 3. CAST-IN-PLACE CONCRETE
A. MATERIALS:
1. Cementitious Material: Use the following cementitious materials of the same type, brand, and source throughout Project: a. Portland Cement: ASTM C 150, Type I. Supplement with the following as necessary: i. Fly Ash: ASTM C 618, Class C or F. ii. Normal-Weight Aggregate: ASTM C 33, graded, 1-inch nominal maximum aggregate size. iii. Lightweight Aggregate: ASTM C 330, 3/4-inch nominal maximum aggregate size. iv. Water: ASTM C 94/C 94M, potable. v. Air-Entraining Admixture: ASTM C 260. vi. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete.

- 3.4 TESTING AND INSPECTING
A. Owners will engage a qualified testing agency to perform field test and inspection and to prepare reports.
B. INSPECTIONS: a. Steel reinforcement placement b. Steel reinforcement welding c. Headed bolts and studs d. Verification of use of required design mixtures e. Concrete placement, including conveying and depositing f. Curing procedures and maintenance of curing temperatures
TESTS: Performed according to ACI 301. a. Testing frequency: One composite sample for each day's pours of each concrete mix exceeding 5 cu. yd., but less than 25 cu.yd., plus one set for each additional 50 cu. yd. of fraction there of.

- 3.5 REPAIR:
A. Remove and replace concrete that does not comply with the requirements mentioned above.

DIVISION 5 - METALS

- 5.1 STRUCTURAL STEEL
A. GENERAL:
1. Structural steel shall be fabricated and erected in accordance with the current version of AISC 360 "Specification for Structural Steel Buildings".
2. All steel permanently exposed to view shall be designated as architecturally exposed structural steel.
3. Materials shall conform to the following, unless noted otherwise: a. Plates & other shapes: ASTM A36 b. Bolts, hex head: ASTM A325, 3/4" diameter (MIN) c. Anchor Rods & heavy hex nuts: ASTM F1554, Grade 36 with A36 washers d. Threaded Rod: ASTM A36 e. Headed Studs: AWS D1.1, Type B f. Electrodes Matching strength, 70 ksi MIN (60 ksi MIN for welding light gauge)

- and extent to that indicated for this Project and with a record of successful in-service performance.
Fabricator Qualifications: A qualified fabricator who participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category 50d.
Professional Engineer Qualifications: A professional engineer who is legally authorized to practice in the jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated.
Welding: Comply with applicable provisions of AWS D11.2000, "Structural Welding Code-Steel".
a. Present evidence that each welder has current AWS qualifications for the work.
b. Comply with applicable provisions of the following specifications and documents: i. AISC's "Load and Resistance Factor Design (LRFD) Specification for Structural Steel Buildings," 1993 with Supplement No.1

- 1. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to inspect field welds.
2. Welded Connections: Field welds will be visually inspected according to AWS D11.
3. In addition to visual inspection, 15 percent of fillet field-welded connections and 100 percent of complete and partial joint penetration fillet-welded connections will be inspected and tested according to AWS D11.
E. ERECTION:
1. Set structural steel accurately in locations and to elevations indicated and according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and "Load and Resistance Factor Design Specification for Structural Steel Buildings".
2. Base and Bearing Plates: Clean concrete and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting base and bearing plates.
3. Weld plate washers to top of base plate.
4. Finish thermally cut sections within smoothness limits in AWS D11.
5. Thermal cutting torches may be used in the field for correcting fabrication errors in structural framing only with the approval of the Architect.

- DIVISION 7-MISCELLANEOUS
A. GENERAL:
1. Become thoroughly familiar with the contract documents during the bid period, resolve apparent deficiencies, omissions, contradictions, inconsistencies and ambiguities in contract documents with architect/engineer during the bid period.
2. Prior to starting construction, excavation, shop drawings, and prior to ordering materials: a. Check dimensions and elevations shown on structural drawings against architectural drawings.
3. Use structural drawings with other contract documents, including those issued before and after the structural documents, and combine requirements into shop drawings and work.
4. Typical details, typical notes and general notes are applicable to all occurrences of the conditions depicted in the details or described in the notes unless other details or notes are provided for the condition.

- E. SUPPORT AND BRACING OF WORK NOT SHOWN ON STRUCTURAL DRAWINGS.
1. Do not induce loads on or hang loads from deck, unless shown on drawings, including but not limited to these items: ceilings, pipes, ducts, equipment, etc.
2. Do not suspend point loads from slabs totaling more than 500 lbs within any 50 square feet of contiguous floor slab area.
3. Supports, bracing, sub-framing, light gauge framing, miscellaneous steel, bracket connectors and attachments not shown on the structural drawings are the contractor's responsibility and shall be engineered and provided by the trade contractor with items being supported or braced at the trade contractor's expense.
4. If structural drawings are referenced by other drawings for items not fully defined on Structural Drawings (and associated specifications) then engineer and provide such items on a performance basis in compliance with the governing building code.
5. Support and bracing systems shall not transmit lateral loads to columns between floors or to the bottoms or sides of steel beams or joists.
6. Facade and wall system attachments to the structure (excluding stone panel systems and sculptures where indicated): a. Shall not assume the structure provides moment resistance at the point of attachment. b. Shall be to the edge of the floor slab or roof deck only unless noted on the Structural Drawings. c. Shall not restrict independent vertical or lateral movement of the building levels.

DIVISION 8-MECHANICAL FASTENERS

- 8.1 POST-INSTALLED ANCHORS
A. Post-installed anchors shall only be used where specified on the construction documents.
1. Mechanical Anchors for use in cracked and uncracked concrete shall have been tested and qualified for use in accordance with aci 308.2 and aci-es ac308.2.
B. Concrete Anchors: a. Simpson Strong-tie "iten-hd" (icc-es-esh-2713) b. Simpson Strong-tie "strong-bolt" (icc-es-esh-1772) c. Simpson Strong-tie "torg-ctrl" (icc-es-esh-909)



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NOT FOR CONSTRUCTION

WILLIAM K. BERTHOLO, PROFESSIONAL ENGINEER LICENSE # 6-2219

KEY PLAN

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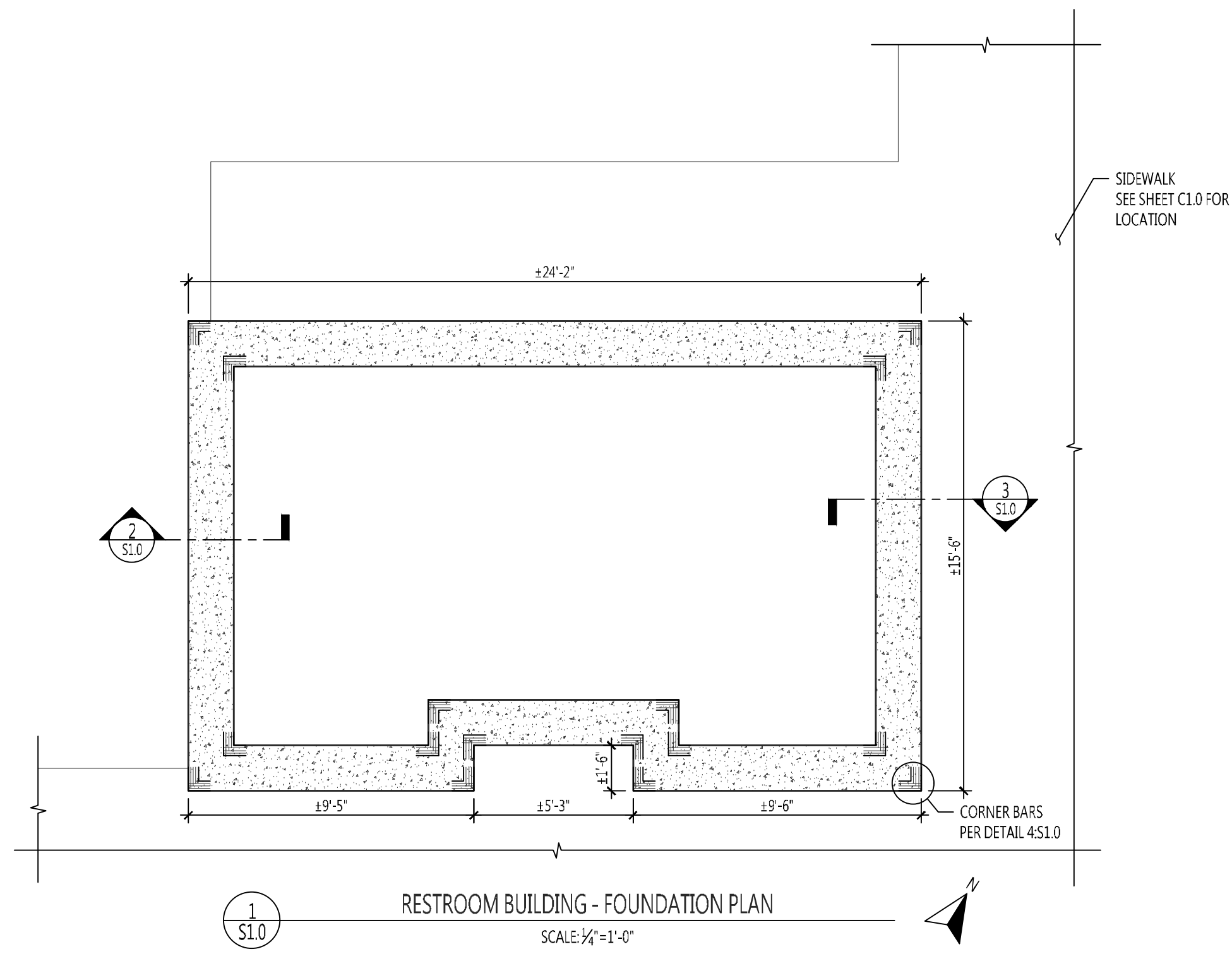
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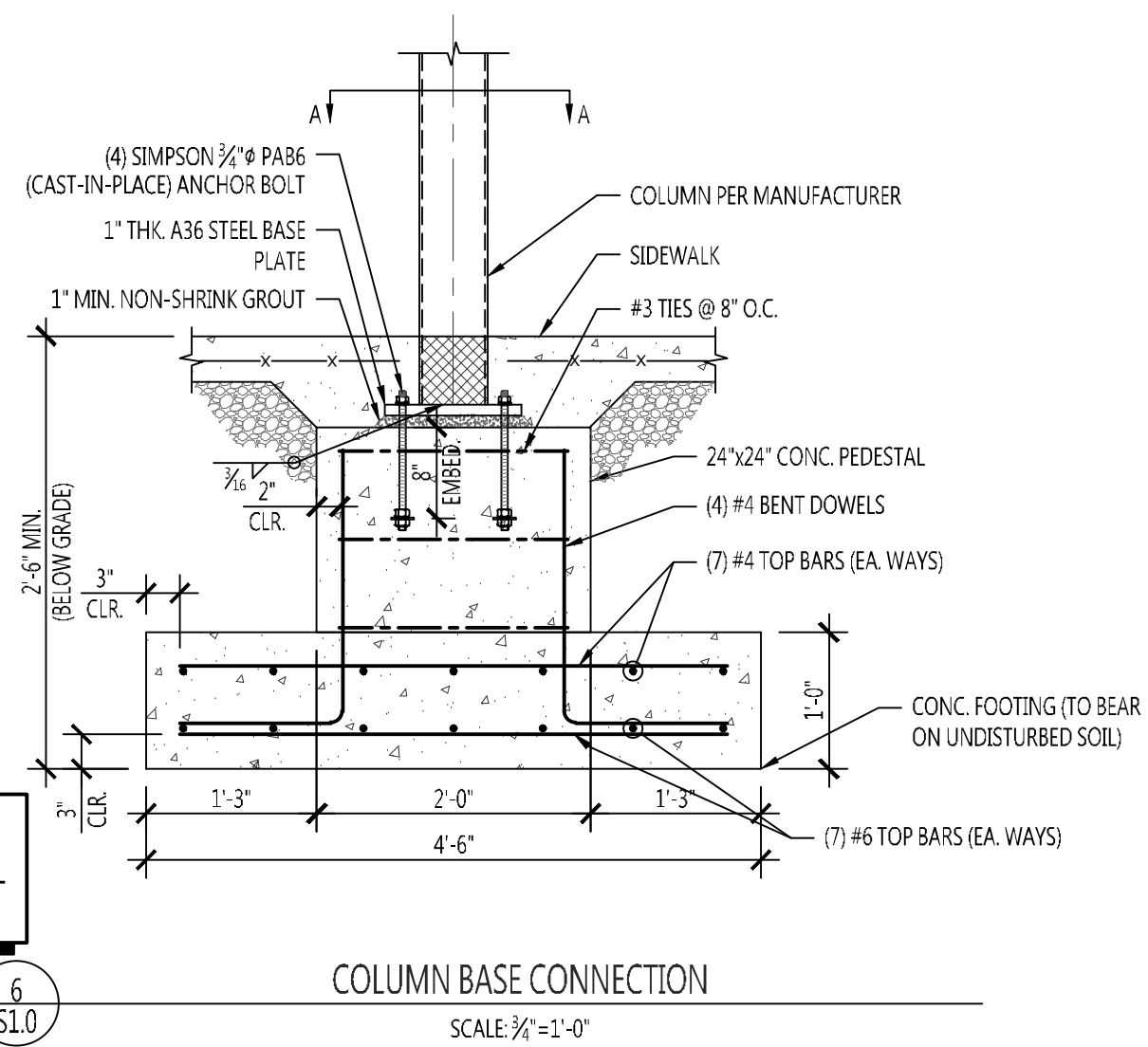
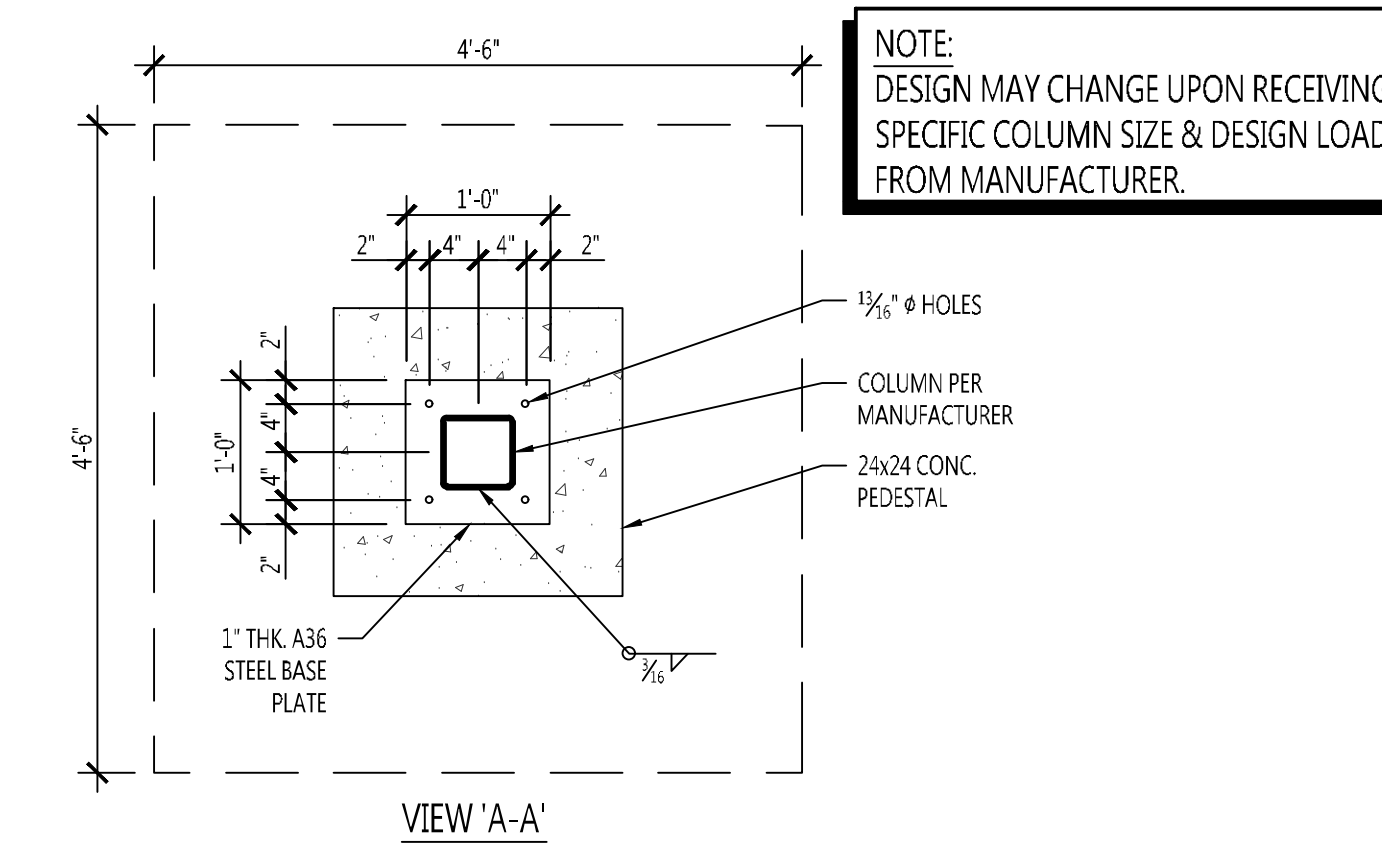
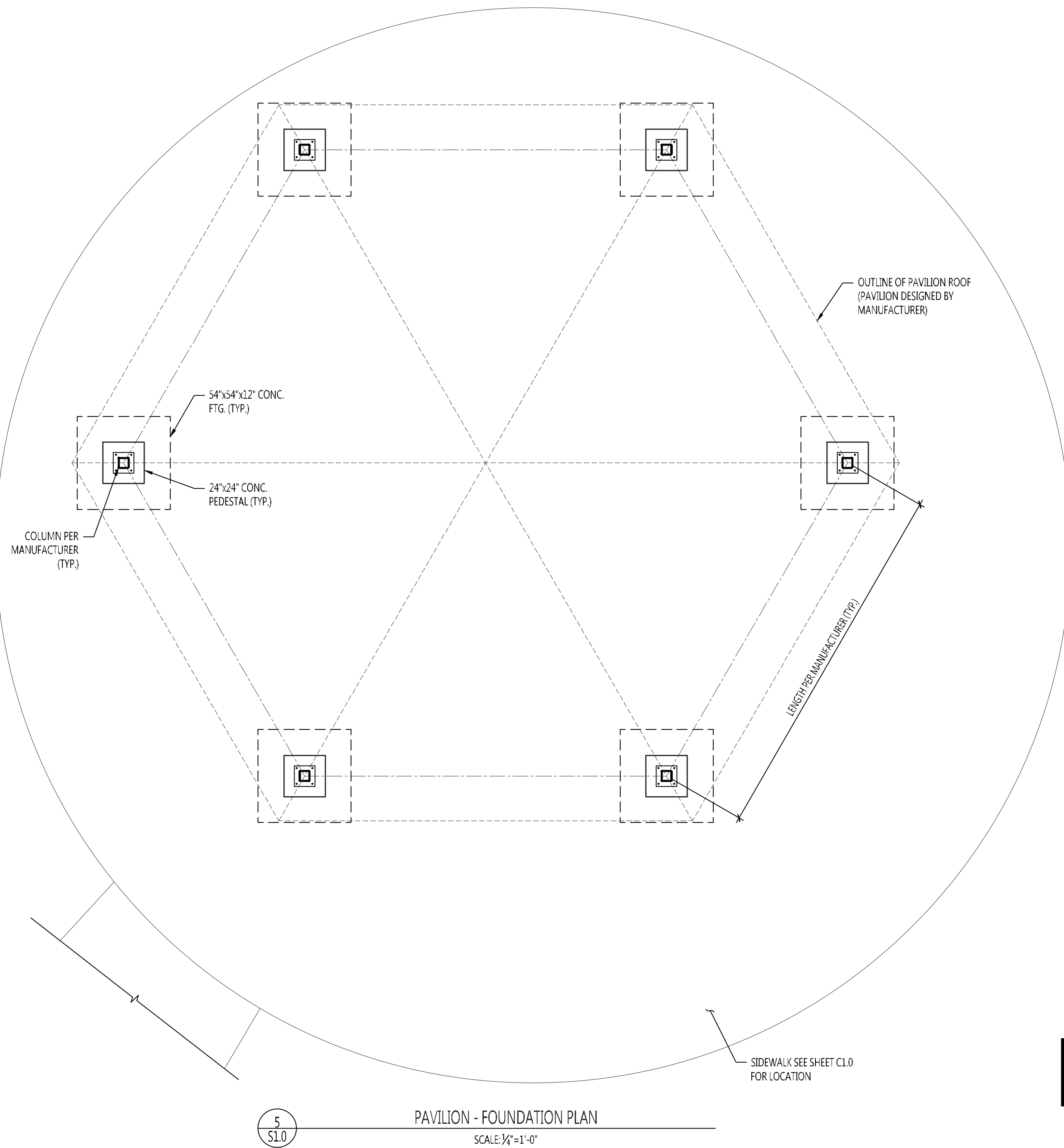
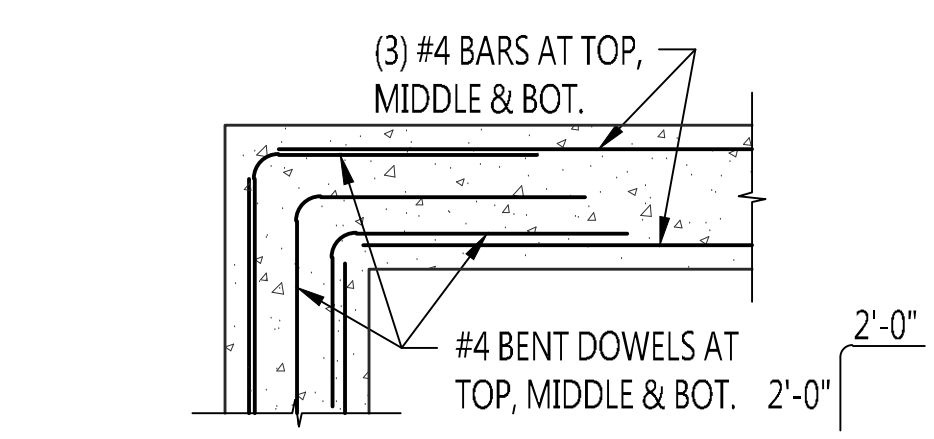
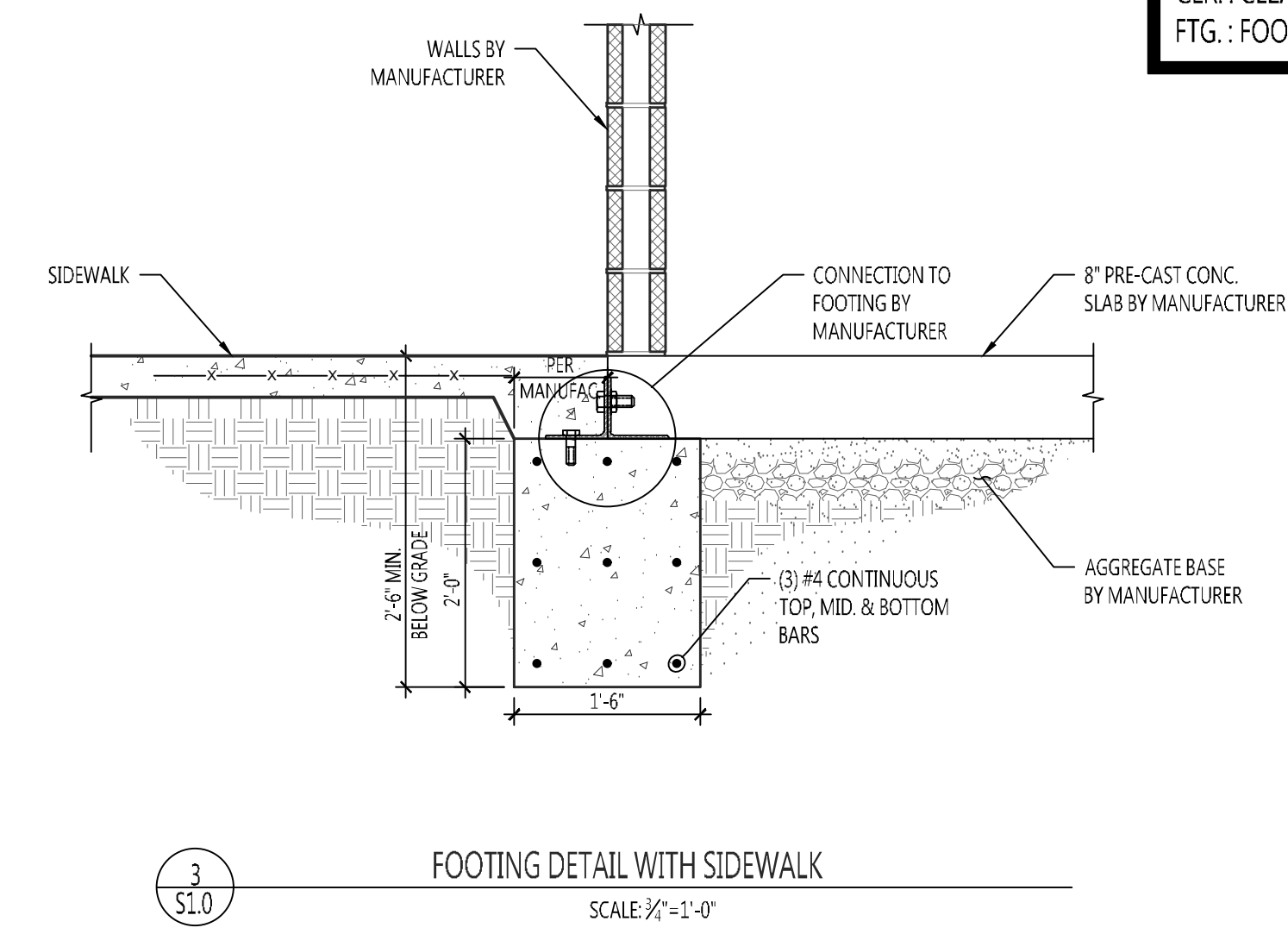
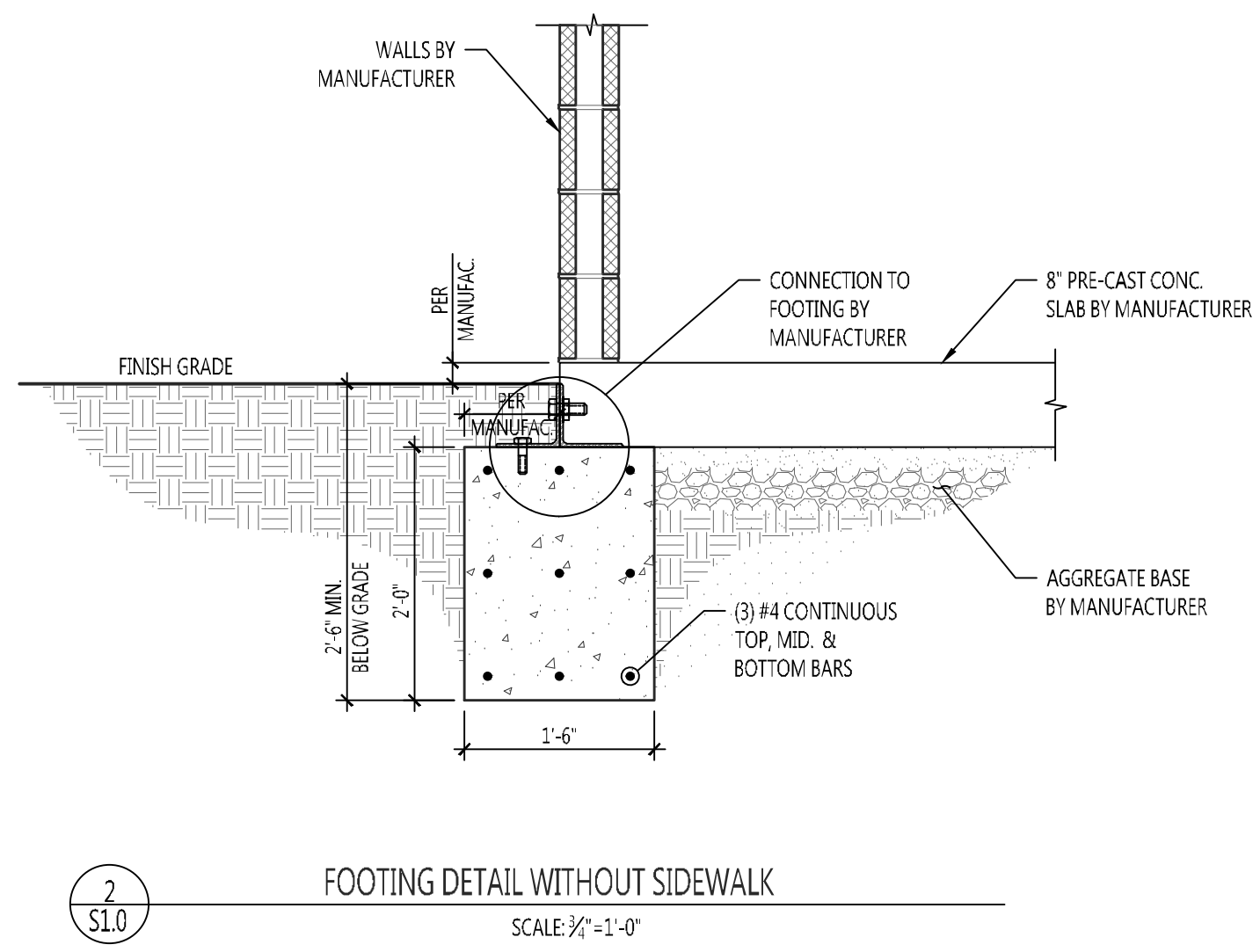
Number

SWT No. 20388 MSD No. P-XXX Drawn H.S.R. Reviewed W.K.B.

August 16, 2018 ISSUE FOR BID



NOTE:
CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH MANUFACTURER PLANS & NOTIFY E.O.R. OF ANY DISCREPANCIES.



NOTE:
APPLY GALVANIZED PAINT TO ALL STEEL BELOW CONC. SLAB

LEGEND

P.R.C.:	PUBLIC RESTROOM COMPANY
TYP.:	TYPICAL
CONC.:	CONCRETE
THK.:	THICKNESS
EA.:	EACH
CLR.:	CLEAR
FTG.:	FOOTING

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KEY PLAN

Issues

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01	Schematic Design	05/04/18
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Revisions

No.	Description	Date

SWT No.	20388	Reviewed
MSD No.	P-XXX	W.K.B.
Drawn	H.S.R.	

Sheet Title

FOUNDATION PLANS & DETAILS

Number

S1-0