

# STOCK & ASSOCIATES

Consulting Engineers, Inc.

257 Chesterfield Business Parkway  
 St. Louis, MO 63005  
 (636) 530-9100 FAX (636) 530-9130  
 E-Mail : [general@stockassoc.com](mailto:general@stockassoc.com)

## LETTER OF TRANSMITTAL

DATE: 05/19/23	JOB NO. 216-5759
ATTENTION: <b>Ms. Erin LoRusso, AICP-City Planner</b>	
RE: <b>Maryland Park Industrial Development</b>	
<b>14009 Creve Coeur Airport Road</b>	
<b>City of Maryland Heights, MO</b>	

**TO: City of Maryland Heights**  
 11191 Dorsett Road  
 Maryland Heights, MO 63043-2597

WE ARE SENDING YOU:  Attached  Under Separate cover via Hand Delivery the following items:

- Shop Drawings       Prints       Plans       Samples       Specifications  
 Copy of Letter       Change Order       \_\_\_\_\_

Copies	Date	No.	Description
1	05/19/23	1 pg.	Stormwater Narrative
1	05/19/23	C1.0-C4.0 1 of 1	Preliminary Development Plan/ Conceptual Development Plan/
1	05/19/23	L1-L6	Landscape Plans
1	05/19/23	A.1, A.2, A.3	Architectural Elevations
1	05/19/23	A.4	Line of Sight

THESE ARE TRANSMITTED as checked below:

- For Approval       Approved as Submitted       Resubmit \_\_\_\_\_ copies for approval  
 For your use       Approved as noted       Submit \_\_\_\_\_ copies for distribution  
 As requested       Returned for corrections       Return \_\_\_\_\_ corrected prints  
 For review and comment       \_\_\_\_\_  
 FOR BIDS DUE \_\_\_\_\_ 20 \_\_\_\_\_       PRINTS RETURNED AFTER LOAN TO US

REMARKS:

Sincerely,

SIGNED: *Ryan Schriber*  
 Ryan Schriber, P.E. – Associate

**COPY TO:**

- George M. Stock, P.E., President  
 Tim Stock, Executive Vice-President  
 Mark Venturella, Altus Properties ([mventure@altusproperties.com](mailto:mventure@altusproperties.com))  
 Scott Vogelsang, Arco ([svogelsang@arco1.com](mailto:svogelsang@arco1.com))  
 Dylan Ream, Arco ([dream@arco1.com](mailto:dream@arco1.com))

**STOCK & ASSOCIATES**  
**Consulting Engineers, Inc.**

May 19, 2023

Attn: Ms. Erin LoRusso, AICP – City Planner  
11911 Dorsett Road  
City of Maryland Heights, MO

Re: Stormwater Management Narrative  
Maryland Park Multi-Family / Commercial Retail Development, Maryland Heights, MO  
Stock Project No. 216-5759

Dear Ms. LoRusso,

This narrative was prepared by Stock & Associates Consulting Engineers, Inc. for the proposed Industrial development known as the Maryland Park Industrial Development located at the northwest quadrant of the Maryland Heights Expressway and Creve Coeur Airport Road. The Developer intends to construct a 30.00 acre development consisting of approximately three (3) buildings totaling 358,216 sf.

This project site is governed by the “Stormwater Management Facilities Report Interconnected Lake System w/ Missouri River Pump Station Creve Coeur Airport Sub-Area” Maryland Heights, MSD P-27770 dated May 17, 2010. The site is located within a portion of Zone 1E (43.6 Ac) which requires 680,985 CF of storage volume. The 30.00 Ac. Site requires 468,567 CF of storage volume. The proposed development will utilize wet retention lakes, if allowed by the Airport & FAA, to provide the necessary storage volume to satisfy stormwater detention requirements. Water Quality treatment will be provided through Best Management Practices (BMPs) in the form of Bio-Retention basins. Detention and Water Quality calculations will be in accordance with Metropolitan St. Louis Sewer District and the Howard Bend Levee District regulations.

The proposed wet lakes will be situated around the perimeter of the development providing additional “buffer” from the adjacent properties. The Bio-Retention basins are proposed throughout the site and will be planted with a variety of plant species to enhance the aesthetics of the site as well as integrate with the other site landscaping materials.

FEMA has updated their Flood Insurance Rate Maps on February 5, 2015. This update along with current internal stormwater modelling being performed by the Howard Bend Levee District may impact the previous drainage report from 2010.

Sincerely,

George M. Stock, P.E. - President

Cc: Tim Stock, Executive Vice-President  
Ryan Schriber, P.E. – Senior Associate  
Mr. Mark Venturella, ALTUS

**257 CHESTERFIELD BUSINESS PARKWAY • ST. LOUIS, MO 63005 • (636) 530-9100**  
**Fax (636) 530-9130 • E-MAIL ADDRESS: [general@stockassoc.com](mailto:general@stockassoc.com)**

# MARYLAND PARK INDUSTRIAL DEVELOPMENT

A TRACT OF LAND BEING LOT B OF THE "BD EXPRESSWAY" SUBDIVISION AS RECORDED IN P.B. 353 PGS. 824-825  
 OF PART OF U.S. SURVEY 3094 TOWNSHIP 46 NORTH RANGES 4 AND 5 EAST  
 CITY OF MARYLAND HEIGHTS, ST. LOUIS COUNTY, MISSOURI

## CONCEPT PLAN / PRELIMINARY DEVELOPMENT PLAN

### LEGEND

ELECTRIC MANHOLE	
EXISTING SANITARY SEWER	
EXISTING STORM SEWER	
EXISTING TREE	
EXISTING BUILDING	
EXISTING CONTOUR	
SPOT ELEVATION	
EXISTING UTILITIES	
PROPOSED CONTOUR	
PROPOSED SPOT	
PROPOSED STORM SEWER	
PROPOSED SANITARY SEWER	
FOUND 1/2" IRON PIPE	
SET IRON PIPE	
FOUND CROSS	
FOUND STONE	
FIRE HYDRANT	
LIGHT STANDARD	
BUSH	
SIGN	
NOTES PARKING SPACES	
GUY WIRE	
POWER POLE	
WATER MANHOLE	
WATER VALVE	
DENOTES RECORD INFORMATION	
HANDICAPPED PARKING	
PHONE MANHOLE	
OVERHEAD ELECTRIC	
UNDERGROUND TELEPHONE	
CONCRETE	
ASPHALT	
POLYVINYL CHLORIDE	
PVC	
DENOTES WITH	
TRANSFORMER	
SANITARY MANHOLE	
FLOW LINE	
SWALE	
SILT FENCE	

### ABBREVIATIONS

A.T.G.	- ADJUST TO GRADE	V.C.P.	- VETRIFIED CLAY PIPE
C.O.	- CLEANOUT	W	- WATER
DB.	- DEED BOOK	Y.D.	- YARD DRAIN
DND	- DO NOT DISTURB	(86°W)	- RIGHT-OF-WAY WIDTH
DS	- DOWNSPOUT	SV	- GAS VALVE
E	- ELECTRIC	GM	- GAS METER
FL	- FLOWLINE	WV	- WATER VALVE
FT	- FEET	WF	- WATER FAUCET
FND.	- FOUND / FOUNDATION	CO	- CLEAN OUT
G	- GAS	EB	- ELECTRIC BOX
GL	- GUTTER LINE	LS	- LIGHT STANDARD
M.B.	- MAILBOX	TS	- TRAFFIC SIGNAL
M.H.	- MANHOLE	EYL	- ELECTRIC YARD LIGHT
N/F	- NOW OR FORMERLY	TH	- TEST HOLE
PB.	- PLAT BOOK	FR	- FIRE HYDRANT
PG.	- PAGE	SG	- SIGN
PUMI	- PRIVATE UNDER MSD INSPECTION	AS	- ACCESSIBLE SPACE
P.V.C.	- POLYVINYL CHLORIDE PIPE		
R.C.P.	- REINFORCED CONCRETE PIPE		
RD	- ROOF DRAIN		
S.B.	- SIGNAL BOX		
SO.	- SQUARE		
T	- TELEPHONE CABLE		
T.B.R.	- TO BE REMOVED		
T.B.R.&R.	- TO BE REMOVED AND REPLACED		
T.B.R.&R.B.O.	- TO BE REMOVED AND REPLACED BY OTHERS		
U.I.P.	- USE IN PLACE		

### GENERAL NOTES:

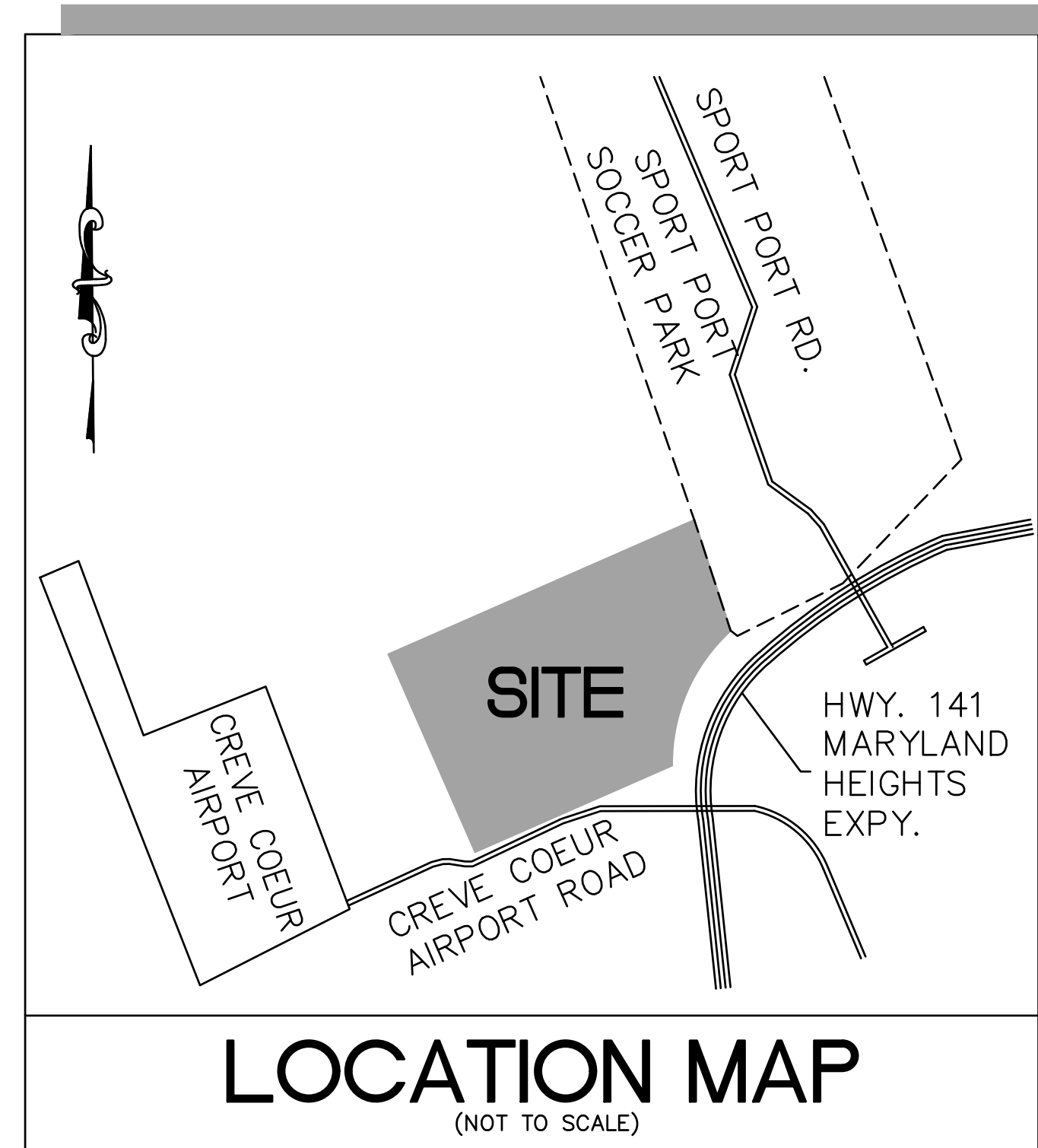
- BOUNDARY & TOPOGRAPHIC SURVEY INFORMATION TAKEN FROM ALTA/NSPS SURVEY AS PERFORMED BY STOCK & ASSOCIATES.
- ALL UTILITIES SHOWN HAVE BEEN LOCATED BY THE ENGINEER FROM AVAILABLE RECORDS. THEIR LOCATION SHOULD BE CONSIDERED APPROXIMATE. THE CONTRACTOR HAS THE RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES, PRIOR TO CONSTRUCTION, TO HAVE EXISTING UTILITIES FIELD LOCATED.
- NO UTILITY MEETINGS HAVE BEEN PERFORMED TO VERIFY EXISTING OR PROPOSED UTILITY FACILITIES AS WELL AS CONFIRMATION OF DESIGN REQUIREMENTS FOR THIS SITE. ALL PROPOSED UTILITY CONNECTIONS AND SITE DESIGN ELEMENTS ARE SUBJECT TO REVIEW & APPROVAL BY EACH RESPECTIVE AGENCY HAVING JURISDICTION OVER THIS SITE.
- NO GRADE SHALL EXCEED 3:1 SLOPE, UNLESS OTHERWISE NOTED AND ACTED UPON BY THE CITY OF MARYLAND HEIGHTS.
- PROJECT SIGNAGE PER THE CITY OF MARYLAND HEIGHTS CODE, TO BE REVIEWED UNDER SEPARATE SUBMITTAL.
- ALL PROPOSED STREET LIGHTING SHALL BE IN ACCORDANCE WITH THE CITY OF MARYLAND HEIGHTS REQUIREMENTS.
- STORMWATER POLLUTION PREVENTION MEASURES TO BE IN ACCORDANCE WITH CITY OF MARYLAND HEIGHTS MUNICIPAL CODE.
- ALL EXISTING AND PROPOSED UTILITIES TO BE INSTALLED UNDERGROUND AND LOCATED WITHIN EASEMENTS.
- STORMWATER MANAGEMENT SHALL BE IN ACCORDANCE WITH CITY OF MARYLAND HEIGHTS AND MSD REQUIREMENTS.
- ALL CONSTRUCTION MATERIALS, MEANS AND METHODS SHALL BE IN ACCORDANCE WITH CITY OF MARYLAND HEIGHTS REQUIREMENTS.
- IMPROVEMENTS SHOWN SUBJECT TO CHANGE PENDING FINAL ENGINEERING AND APPROVALS OF GOVERNING AGENCIES AND UTILITY COMPANIES.
- THE LOCATION OF STORM AND SANITARY SEWER IMPROVEMENTS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS AND SHALL BE INDICATED ON THE IMPROVEMENT PLANS.

### PROPERTY DESCRIPTION

#### LOT B OF THE "BD EXPRESSWAY" SUBDIVISION PB. 353, PGS 824-825

A TRACT OF LAND BEING PART OF LOT 4 OF A SUBDIVISION OF PART OF U.S. SURVEY 3094 TOWNSHIP 46 NORTH, RANGES 4 AND 5 EAST OF THE 5TH PRINCIPAL MERIDIAN MADE BY E.E. SAVERS FILED WITH THE REPORT OF SALE MADE IN THE MATTER OF JOSEPH BITTEL IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF MISSOURI ON MAY 18, 1871; CAUSE NO. 325; SAID SUBDIVISION BEING MORE COMMONLY CALLED CREVE COEUR TRACT IN U.S. SURVEY 3094, AS CONVEYED TO DONALD R. DAUSTER, TRUSTEE BY INSTRUMENT RECORDED IN DEED BOOK 3094, PAGE 2398 OF THE ST. LOUIS COUNTY RECORDER OF DEEDS OFFICE BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF ABOVE SAID LOT 4, SAID POINT BEING IN THE CENTER OF A 30 FEET WIDE ROAD, SAID POINT IS ALSO THE NORTHWEST CORNER OF LOT 3 OF ABOVE SAID CREVE COEUR TRACT; THENCE ALONG THE COMMON LINE BETWEEN SAID LOT 4 AND LOT 3 OF ABOVE SAID SUBDIVISION NORTH 67 DEGREES 41 MINUTES 06 SECONDS EAST 523.44 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED TRACT; THENCE DEPARTING LAST SAID COMMON LINE NORTH 22 DEGREES 05 MINUTES 23 SECONDS WEST 1155.87 FEET TO A POINT ON THE NORTHERLY LINE OF SAID LOT 4; THENCE ALONG LAST SAID NORTHERLY LINE NORTH 67 DEGREES 51 MINUTES 12 SECONDS EAST 1325.21 FEET TO THE POINT OF INTERSECTION WITH THE WESTERLY LINE OF TRACT OF LAND CONVEYED TO THE CITY OF MARYLAND HEIGHTS ACCORDING TO INSTRUMENTS RECORDED IN DEED BOOK 12906, PAGE 21; DEED BOOK 14527, PAGE 1844, AND SURVEYOR'S AFFIDAVIT IN DEED BOOK 14689, PAGE 15; THENCE ALONG THE WESTERLY AND NORTHERLY LINES OF LAST SAID TRACT THE FOLLOWING COURSES AND DISTANCES: SOUTH 22 DEGREES 07 MINUTES 00 SECONDS EAST 476.10 FEET; SOUTH 67 DEGREES 53 MINUTES 00 SECONDS WEST 20.00 FEET TO A POINT ON A NON-TANGENT CURVE TO THE RIGHT, FOR WHICH THE RADIUS POINT BEARS SOUTH 67 DEGREES 53 MINUTES 00 SECONDS WEST 200.00 FEET; THENCE ALONG LAST SAID CURVE WITH A CHORD WHICH BEARS SOUTH 01 DEGREES 09 MINUTES 08 SECONDS WEST 158.03 FEET AN ARC LENGTH OF 162.46 FEET TO A POINT OF TANGENCY; SOUTH 24 DEGREES 25 MINUTES 32 SECONDS WEST 600.67 FEET TO A POINT OF CURVATURE TO THE RIGHT FOR WHICH THE RADIUS POINT BEARS NORTH 63 DEGREES 34 MINUTES 28 SECONDS WEST 200.00 FEET; THENCE ALONG LAST SAID CURVE WITH A CHORD THAT BEARS SOUTH 46 DEGREES 03 MINUTES 19 SECONDS WEST 147.44 FEET AN ARC LENGTH OF 151.00 FEET; SOUTH 22 DEGREES 18 MINUTES 54 SECONDS EAST 20.00 FEET; SOUTH 67 DEGREES 41 MINUTES 06 SECONDS WEST 450.00 FEET; SOUTH 22 DEGREES 18 MINUTES 54 SECONDS EAST 45.00 FEET TO A POINT THE ABOVE SAID COMMON LINE BETWEEN LOT 4 AND LOT 3; THENCE ALONG LAST SAID COMMON LINE SOUTH 67 DEGREES 41 MINUTES 06 SECONDS WEST 220.66 FEET TO THE POINT OF BEGINNING AND CONTAINING 1,306,800 SQUARE FEET OR 30.000 ACRES MORE OR LESS ACCORDING TO CALCULATIONS PERFORMED BY STOCK & ASSOCIATES CONSULTING ENGINEERS, INC.



### SHEET LEGEND

C1.0	TITLE SHEET
C2.0	EXISTING CONDITIONS
C3.0	PRELIMINARY SITE & GRADING PLAN
C3.1	PRELIMINARY SITE SECTIONS
C4.0	OVERALL UTILITY PLAN
1 of 1	CONCEPT PLAN

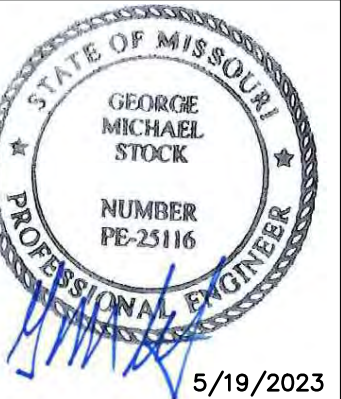
### PERTINENT DATA

SUBDIVISION	= BD EXPRESSWAY
LOT B	= 30.000 ACRES
OWNER	= N/F CORNERSTONE LAND CO L.L.C.
CARE OF	= ALTUS PROPERTIES L.L.C.
SITE ADDRESS	= 14009 CREVE COEUR AIRPORT ROAD
LOCATOR NO.	= 13Q520063 PB. 353 PGS. 824-825

UTILITY PROVIDERS:	= AMEREN
ELECTRIC:	= SPIRE
GAS:	= AT&T
PHONE:	= CHARTER
CABLE:	= MSD
SEWER:	= MAWC
WATER:	

### FEMA FLOOD NOTE:

SUBJECT PROPERTY LIES WITHIN FLOOD ZONES X SHADED (AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE); AND AREAS PROTECTED BY LEVES FROM 1% ANNUAL CHANCE FLOOD), AND AE (BASE FLOOD ELEVATION DETERMINED) ACCORDING TO THE NATIONAL FLOOD INSURANCE RATE MAP NUMBER 29189C0160K WITH AN EFFECTIVE DATE OF 2-4-2015



5/19/2023  
 GEORGE M. STOCK E-25116  
 CIVIL ENGINEER  
 CERTIFICATE OF AUTHORITY  
 NUMBER: 000996

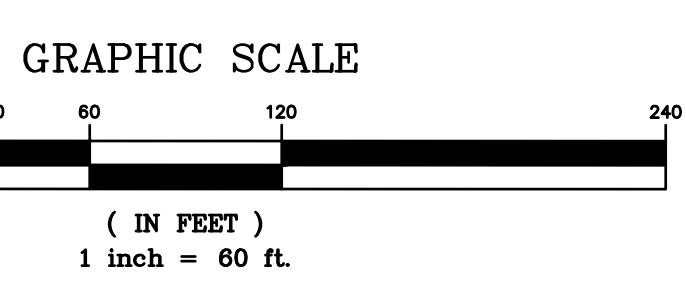
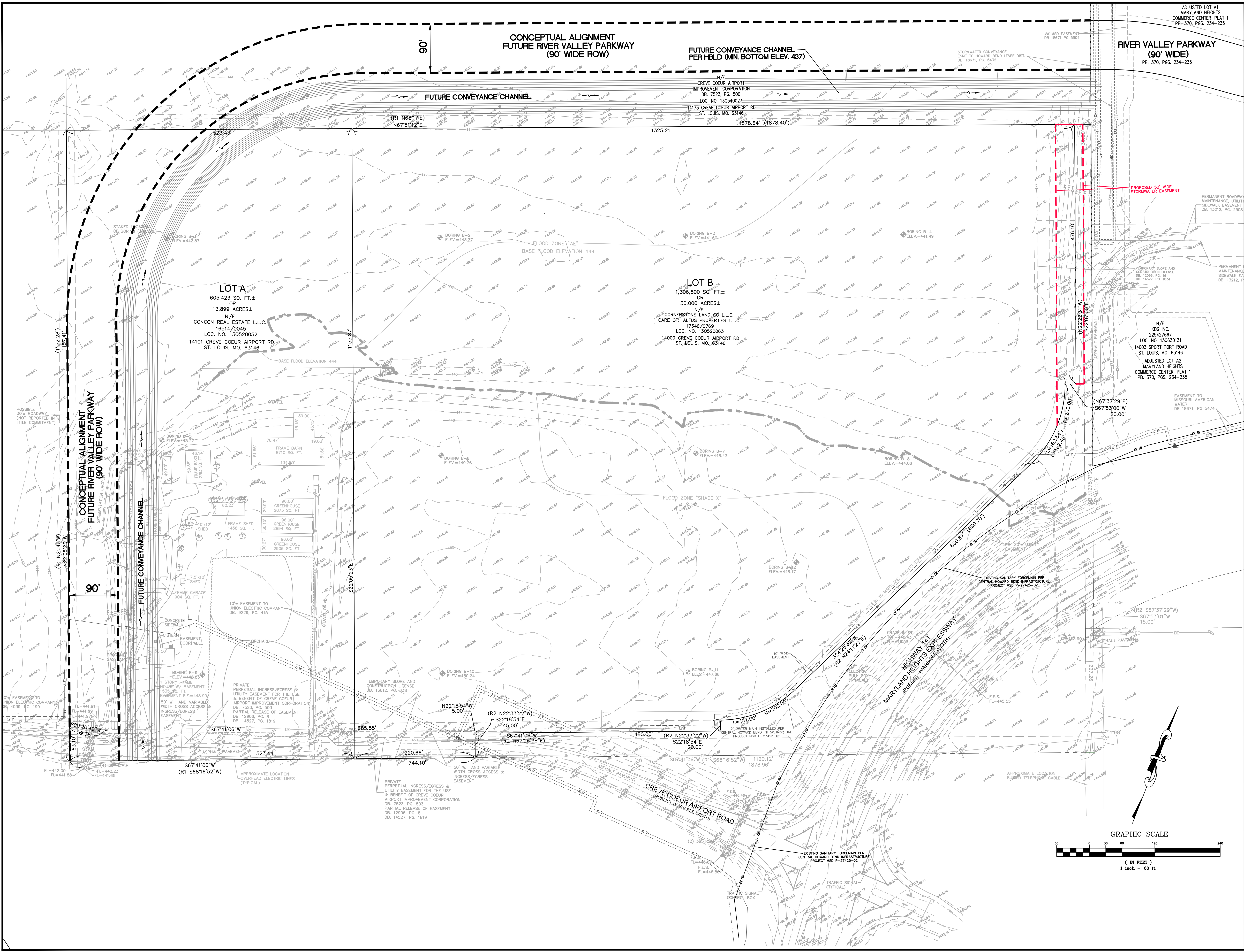
REVISIONS:	
1	05/19/2023

DRAWN BY:	C.M.S.	CHECKED BY:	G.M.S.
DATE:	2/17/2023	JOB NO.:	216-5758.2
REQ. P. #		BASE MAP #	120,130,140
S.L.C. MAT. #		MAT SUP. #	
M.D.N.R. #			
MO-			

SHEET TITLE:	TITLE SHEET
SHEET NO.:	C1.0



MoDOT LOCATE (314) 340-4100



257 Chesterfield Business Parkway  
St. Louis, MO 63105 PH: (636) 530-9300  
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Web: www.stockandassociates.com

**STOCK & ASSOCIATES**  
Consulting Engineers, Inc.

PREPARED BY:

**MARYLAND PARK INDUSTRIAL DEVELOPMENT**

CITY OF MARYLAND HEIGHTS  
ST. LOUIS COUNTY, MISSOURI



5/19/2023  
GEORGE M. STOCK E-25116  
CIVIL ENGINEER  
CERTIFICATE OF AUTHORITY  
NUMBER: 000996

REVISIONS:	DATE:	BY:	DESCRIPTION:
1	05/19/2023		

DRAWN BY:	CHEKED BY:
R.E.S.	G.M.S.
DATE:	JOB NO.:
2/17/2023	216-5759.2
REQ. P.#:	BASE MAP:
P-	120,130,140
SLC. MAT.#:	MAT. SUP. #:
M.D.N.R.#:	
MO-:	
SHEET TITLE:	
EXISTING CONDITIONS PLAN	
SHEET NO.:	
C2.0	

ADJUSTED LOT A1  
MARYLAND HEIGHTS  
COMMERCE CENTER-PLAT 1  
PB. 370, PGS. 234-235

RIVER VALLEY PARKWAY  
(90' WIDE)  
PB. 370, PGS. 234-235

FUTURE CONVEYANCE CHANNEL  
PER HBLD (MIN. BOTTOM ELEV. 437)

CONCEPTUAL ALIGNMENT  
FUTURE RIVER VALLEY PARKWAY  
(90' WIDE ROW)

**LOT A**  
605,423 SQ. FT.±  
OR  
13.899 ACRES±  
N/F  
CONCON REAL ESTATE L.L.C.  
16514/0045  
LOC. NO. 130520052  
14101 CREVE COEUR AIRPORT RD.  
ST. LOUIS, MO. 63146

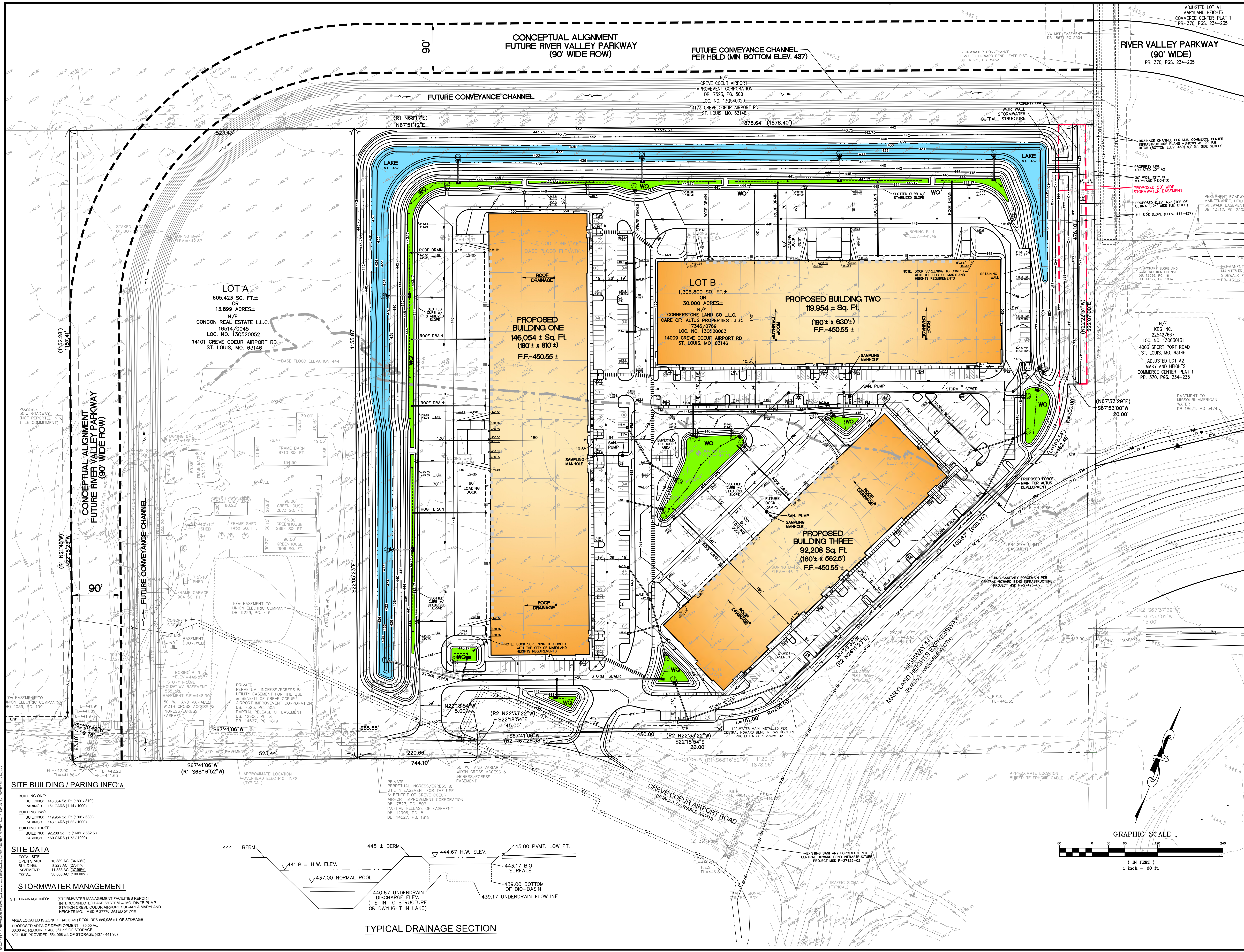
**LOT B**  
1,306,800 SQ. FT.±  
OR  
30.000 ACRES±  
N/F  
CORNERSTONE LAND CO L.L.C.  
CARE OF: ALTUS PROPERTIES L.L.C.  
17346/0769  
LOC. NO. 130520063  
14009 CREVE COEUR AIRPORT RD.  
ST. LOUIS, MO. 63146

N/F  
KRG INC.  
22542/667  
LOC. NO. 130630131  
14003 SPORT PORT ROAD  
ST. LOUIS, MO. 63146  
ADJUSTED LOT A2  
MARYLAND HEIGHTS  
COMMERCE CENTER-PLAT 1  
PB. 370, PGS. 234-235

CONCEPTUAL ALIGNMENT  
FUTURE RIVER VALLEY PARKWAY  
(90' WIDE ROW)

FUTURE CONVEYANCE CHANNEL  
PER HBLD (MIN. BOTTOM ELEV. 437)

RIVER VALLEY PARKWAY  
(90' WIDE)  
PB. 370, PGS. 234-235



**LOT A**  
605,423 SQ. FT.±  
OR  
13.899 ACRES±  
N/F  
CONCON REAL ESTATE L.L.C.  
16514/0045  
LOC. NO. 130520052  
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ST. LOUIS, MO. 63146

**LOT B**  
1,306,800 SQ. FT.±  
30.000 ACRES±  
N/F  
CORNERSTONE LAND CO L.L.C.  
CARE OF: ALTUS PROPERTIES L.L.C.  
17346/0769  
LOC. NO. 130520063  
14009 CREVE COEUR AIRPORT RD  
ST. LOUIS, MO. 63146

**PROPOSED BUILDING ONE**  
146,054 ± Sq. Ft.  
(180' ± x 810' ±)  
FF=450.55 ±

**PROPOSED BUILDING TWO**  
119,954 ± Sq. Ft.  
(190' ± x 630' ±)  
FF=450.55 ±

**PROPOSED BUILDING THREE**  
92,208 Sq. Ft.  
(160' ± x 562.5')  
FF=450.55 ±

**SITE BUILDING / PAVING INFO:**

- BUILDING ONE:**  
BUILDING: 146,054 Sq. Ft. (180' x 810')  
PAVING: 161 CARS (1.14 / 1000)
- BUILDING TWO:**  
BUILDING: 119,954 Sq. Ft. (190' x 630')  
PAVING: 148 CARS (1.22 / 1000)
- BUILDING THREE:**  
BUILDING: 92,208 Sq. Ft. (160' x 562.5')  
PAVING: 160 CARS (1.73 / 1000)

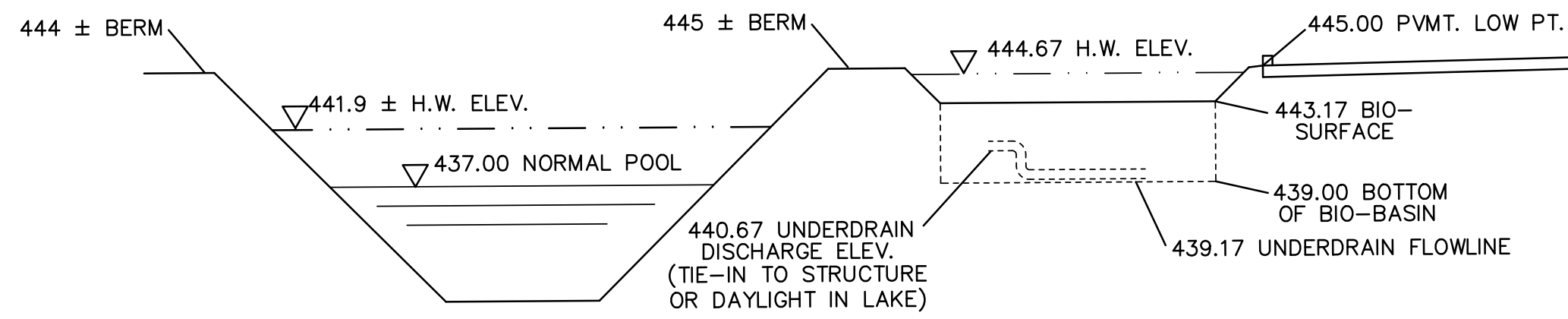
**SITE DATA**

- TOTAL SITE: 10.389 AC. (34.63%)
- OPEN SPACE: 8.223 AC. (27.41%)
- BUILDINGS: 11.389 AC. (32.96%)
- PAVEMENT: 30.000 AC. (100.00%)
- TOTAL: 30.000 AC.

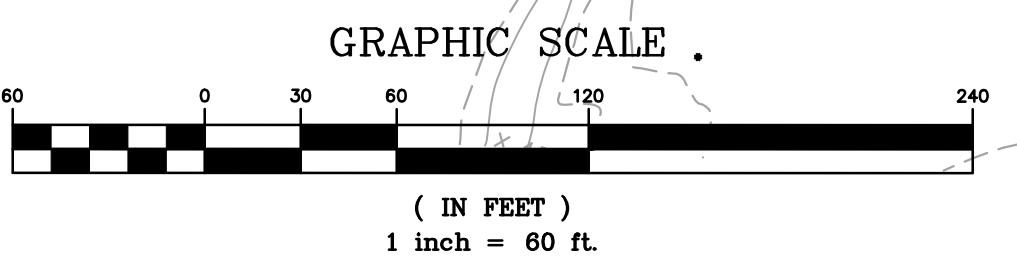
**STORMWATER MANAGEMENT**

SITE DRAINAGE INFO: (STORMWATER MANAGEMENT FACILITIES REPORT INTERCONNECTED LAKE SYSTEM w/ MO. RIVER PUMP STATION CREVE COEUR AIRPORT SUB-AREA MARYLAND HEIGHTS MO. - MSD P-27710 DATED 6/17/10)

AREA LOCATED IN ZONE 1E (43.6 AC.) REQUIRES 680,986 c.f. OF STORAGE  
PROPOSED AREA OF DEVELOPMENT = 30.00 AC.  
30.00 AC. REQUIRES 680,987 c.f. OF STORAGE  
VOLUME PROVIDED: 584,958 c.f. OF STORAGE (437 - 441.90)



TYPICAL DRAINAGE SECTION



PREPARED BY:  
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CONCEPT PLAN / PRELIMINARY DEVELOPMENT PLAN FOR:  
**MARYLAND PARK INDUSTRIAL DEVELOPMENT**  
CITY OF MARYLAND HEIGHTS  
ST. LOUIS COUNTY, MISSOURI



5/19/2023

GEORGE M. STOCK E-25116  
CIVIL ENGINEER  
CERTIFICATE OF AUTHORITY  
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**REVISIONS:**

1	05/19/2023
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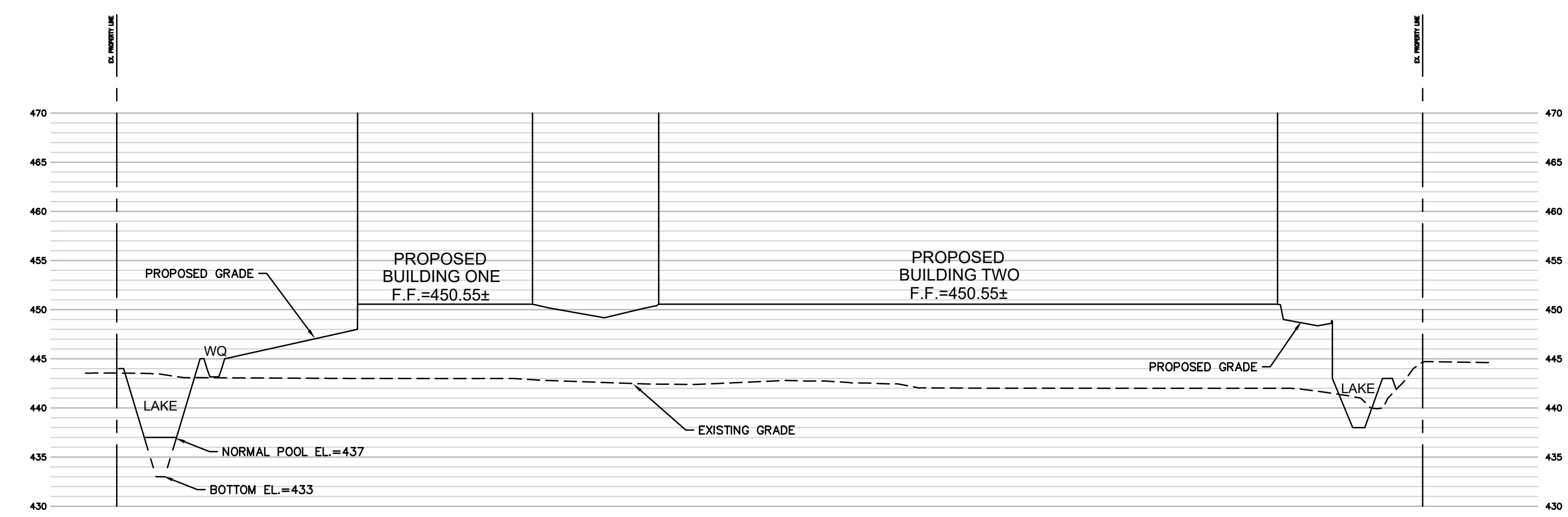
DRAWN BY:	CHEKED BY:
R.E.S.	G.M.S.
DATE:	JOB NO.:
2/17/2023	216-5759.2
REQ. P. #	BASE MAP:
P-	120,130,140
SLC. MAT. #	MAT. SUP. #
MO. #	

PRELIMINARY SITE & GRADING PLAN

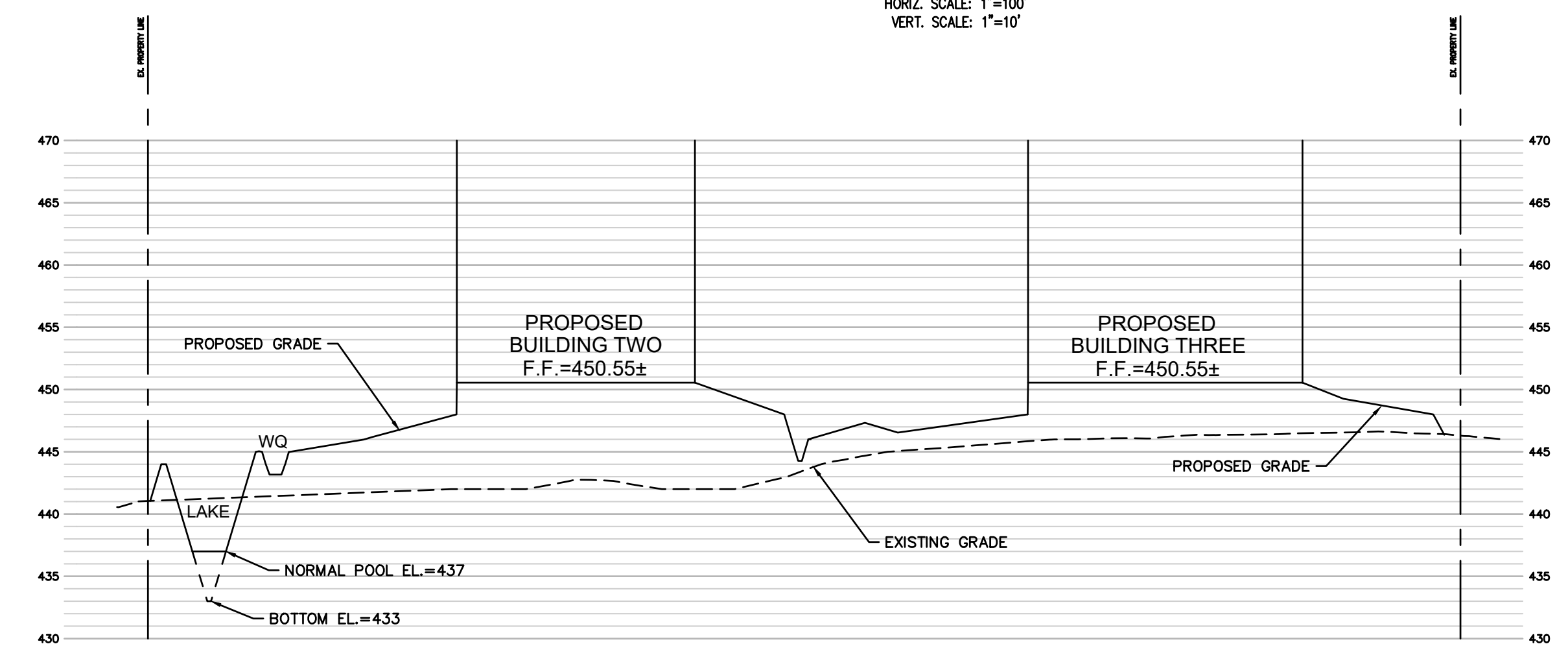
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PREPARED BY:

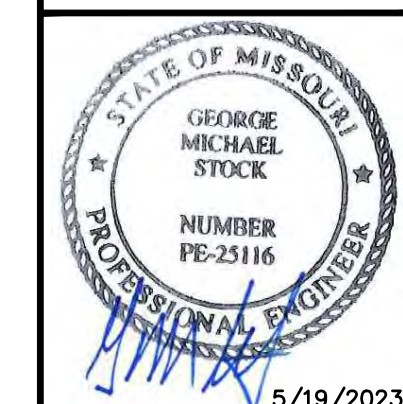
CONCEPT PLAN / PRELIMINARY DEVELOPMENT PLAN FOR:  
**MARYLAND PARK INDUSTRIAL DEVELOPMENT**  
 CITY OF MARYLAND HEIGHTS  
 ST. LOUIS COUNTY, MISSOURI



**SITE SECTION A-A**  
 HORIZ. SCALE: 1"=100'  
 VERT. SCALE: 1"=10'



**SITE SECTION B-B**  
 HORIZ. SCALE: 1"=100'  
 VERT. SCALE: 1"=10'



5/19/2023  
 GEORGE M. STOCK E-25116  
 CIVIL ENGINEER  
 CERTIFICATE OF AUTHORITY  
 NUMBER: 000996

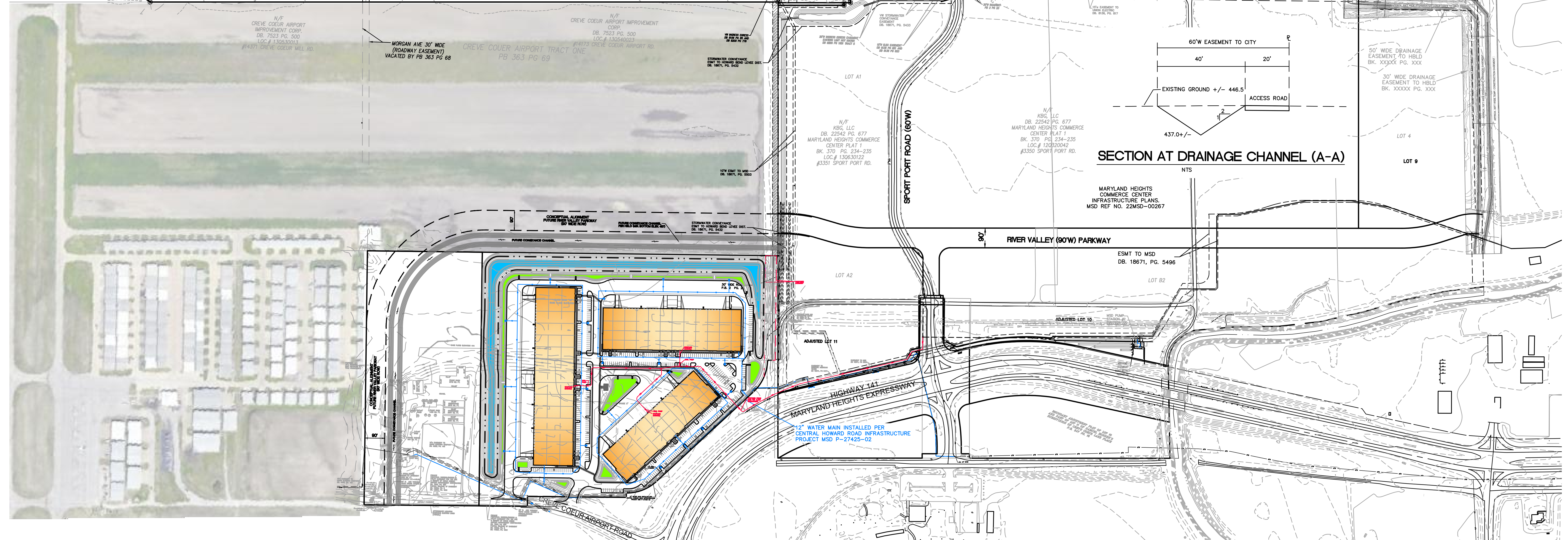
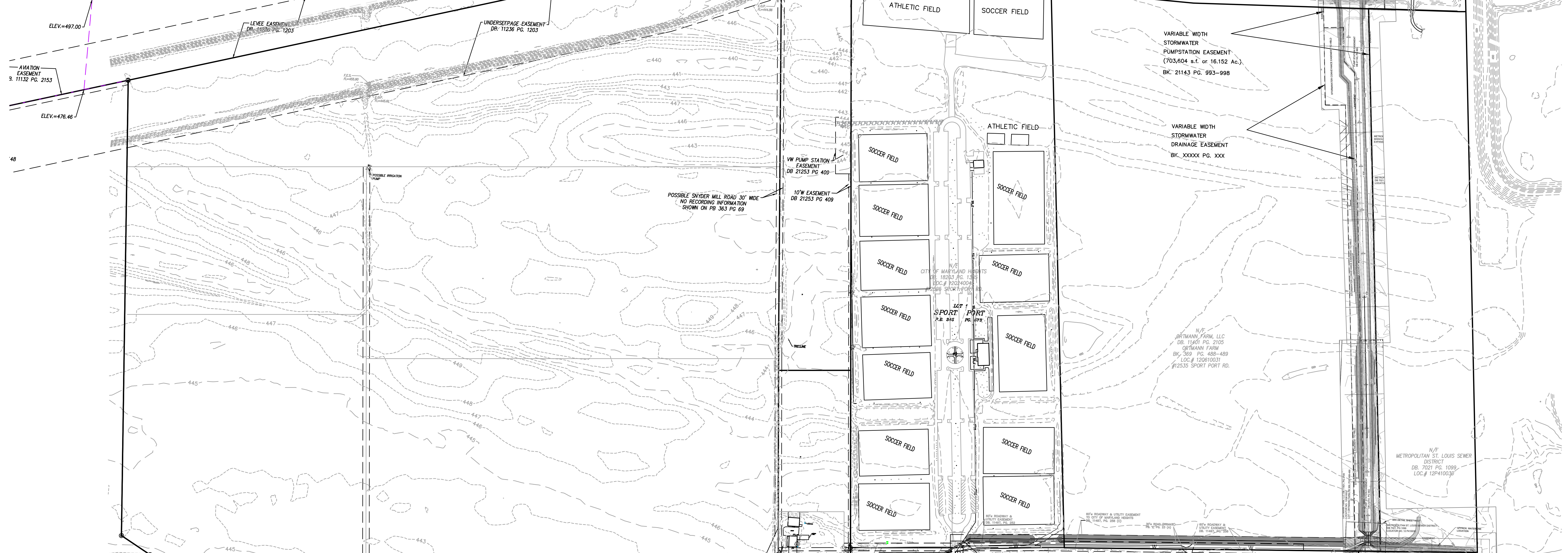
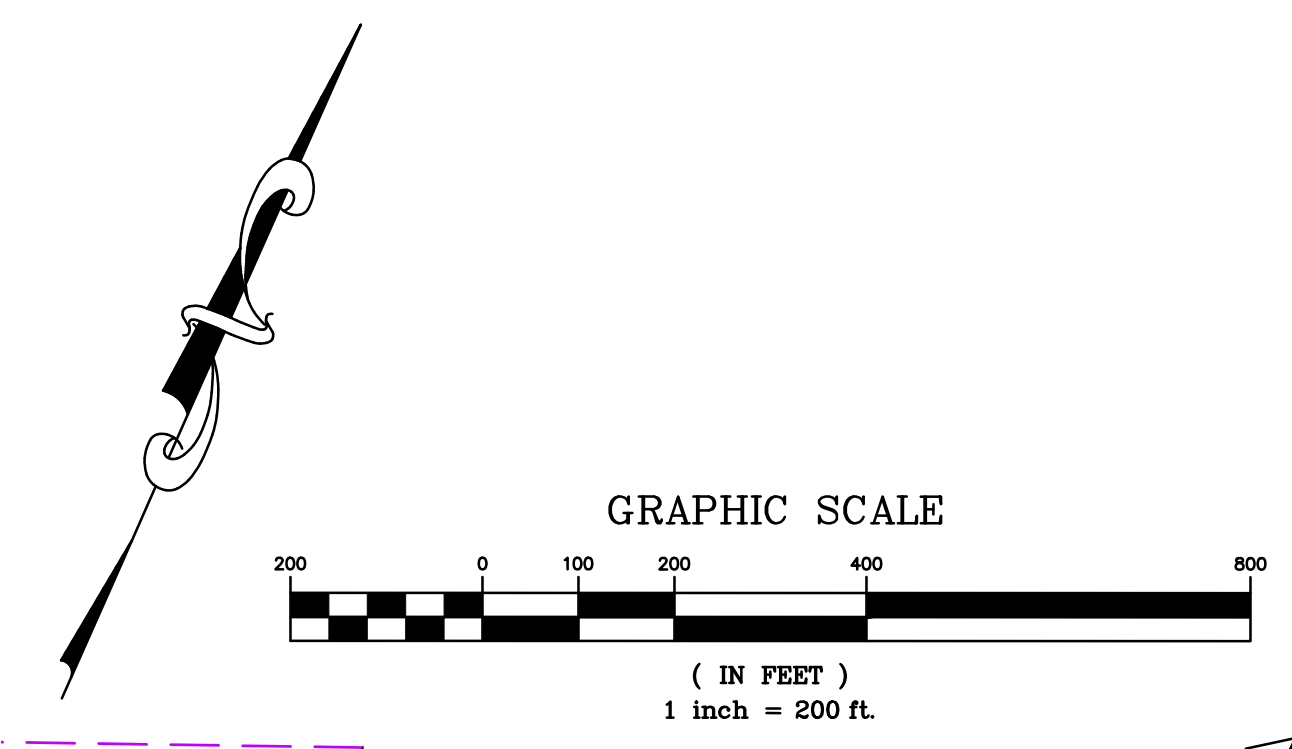
REVISIONS:

1	05/19/2023
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DATE: 2/17/2023	JOB NO. 216-5758.2
RES. P.# P-	BASE MAP # 120,130,140
S.L.C. MAT # -	MAT SUP. # -
M.D.N.R. # MO-	

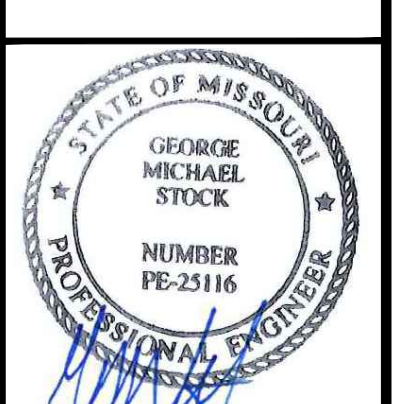
SHEET TITLE:  
**PRELIMINARY SITE SECTIONS**

SHEET NO.:  
**C3.1**



PREPARED BY:  
**STOCK & ASSOCIATES**  
Consulting Engineers, Inc.  
257 Chesterfield Business Parkway  
St. Louis, MO 63105 PH: (636) 530-9300  
530-9300 FAX: (636) 530-9300  
e-mail: general@stockassoc.com  
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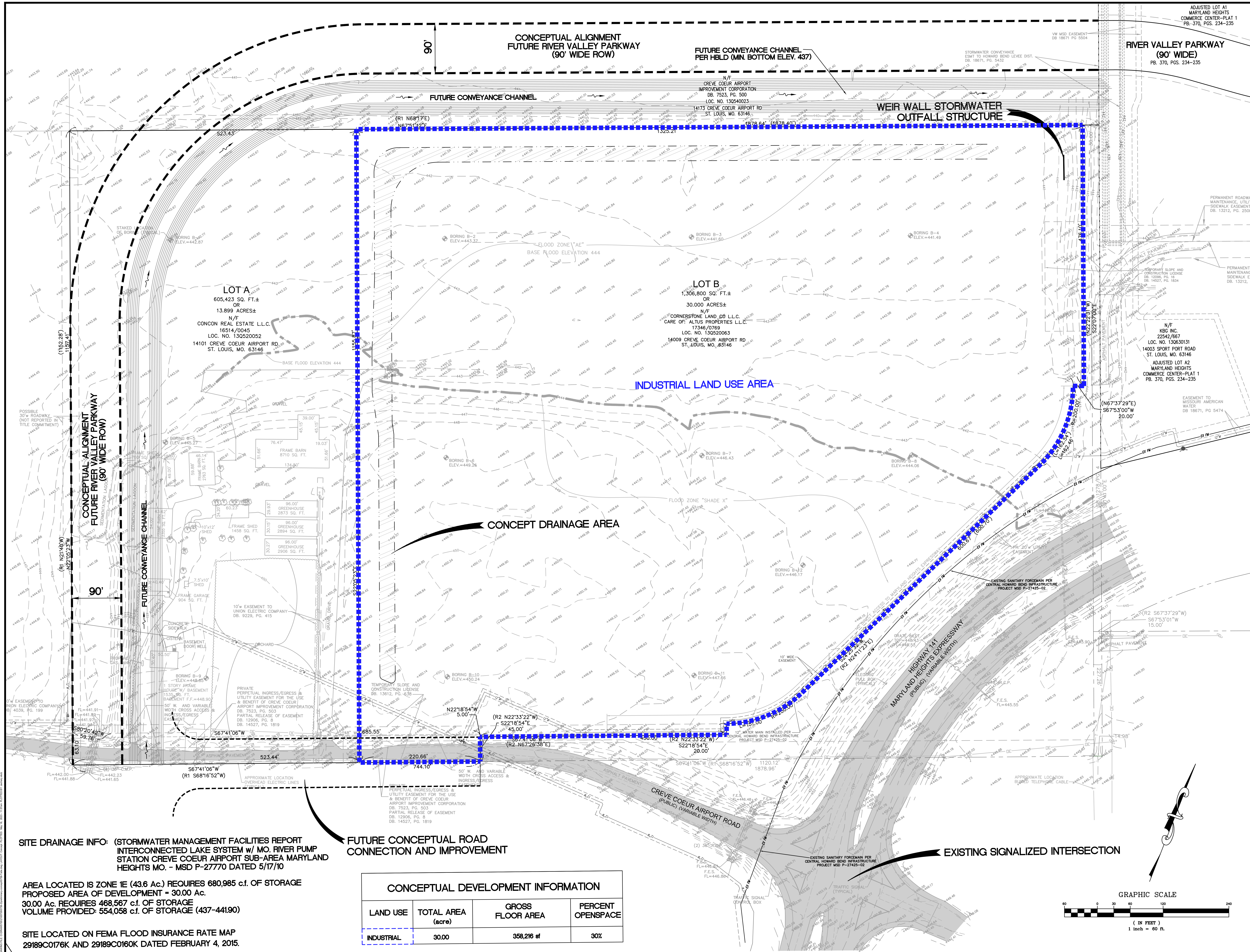
CONCEPT PLAN / PRELIMINARY DEVELOPMENT PLAN FOR:  
**MARYLAND PARK INDUSTRIAL DEVELOPMENT**  
CITY OF MARYLAND HEIGHTS  
ST. LOUIS COUNTY, MISSOURI



5/19/2023  
GEORGE M. STOCK E-25116  
CIVIL ENGINEER  
CERTIFICATE OF AUTHORITY  
NUMBER: 000996

REVISIONS:	
1	05/19/2023

DRAWN BY: R.E.S.	CHECKED BY: G.M.S.
DATE: 2/17/2023	JOB NO: 216-5759.2
W.S.D. P.#	R.F.W. MAP #
P-120,130,140	120,130,140
S.L.C. MAT #	MAT SUP. #
M.D.N.R. #	
MO-1	
SHEET TITLE	
OVERALL UTILITY PLAN	
SHEET NO.:	
C4.0	



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**Stock & Associates**  
 Consulting Engineers, Inc.

CONCEPT PLAN / PRELIMINARY DEVELOPMENT PLAN FOR:  
**MARYLAND PARK INDUSTRIAL DEVELOPMENT**  
 CITY OF MARYLAND HEIGHTS  
 ST. LOUIS COUNTY, MISSOURI

5/19/2023  
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REVISIONS:

1	05/19/2023	
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DRAWN BY: R.E.S. CHECKED BY: G.M.S.  
 DATE: 2/17/2023 JOB NO: 216-5759.2  
 RES. P. # P. # RATE MAP: 120,130,140  
 S.L.C. MAT. # MAT. SUP. #

SHEET TITLE:  
**CONCEPTUAL DEVELOPMENT PLAN**

SHEET NO.:  
**1 of 1**

**SITE DRAINAGE INFO:** (STORMWATER MANAGEMENT FACILITIES REPORT INTERCONNECTED LAKE SYSTEM w/ MO. RIVER PUMP STATION CREVE COEUR AIRPORT SUB-AREA MARYLAND HEIGHTS MO. - MSD P-27770 DATED 5/17/10)

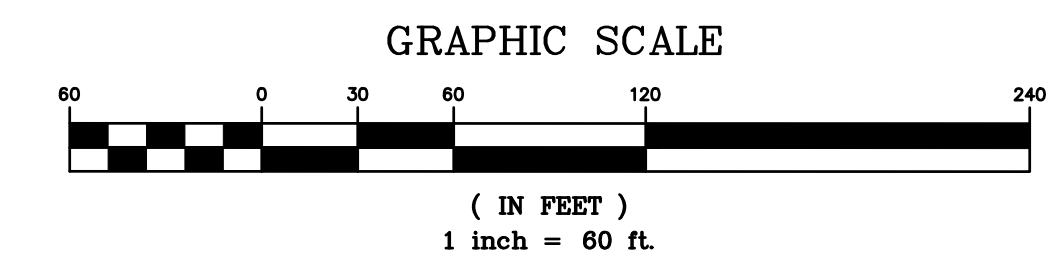
AREA LOCATED IS ZONE 1E (43.6 Ac.) REQUIRES 680,985 c.f. OF STORAGE  
 PROPOSED AREA OF DEVELOPMENT = 30.00 Ac.  
 30.00 Ac. REQUIRES 468,567 c.f. OF STORAGE  
 VOLUME PROVIDED: 554,058 c.f. OF STORAGE (437-441.90)

SITE LOCATED ON FEMA FLOOD INSURANCE RATE MAP  
 29189C0176K AND 29189C0160K DATED FEBRUARY 4, 2015.

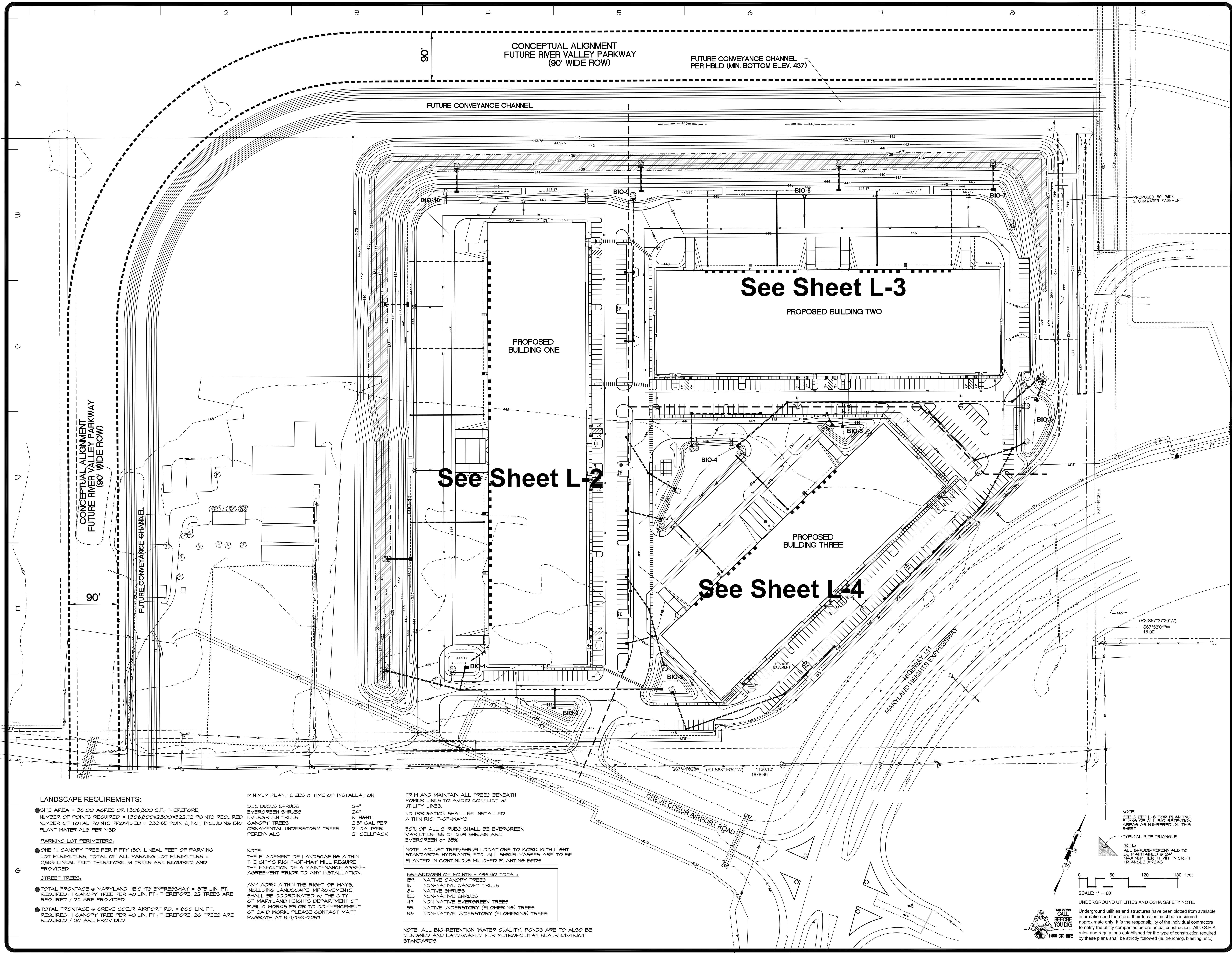
**FUTURE CONCEPTUAL ROAD CONNECTION AND IMPROVEMENT**

**CONCEPTUAL DEVELOPMENT INFORMATION**

LAND USE	TOTAL AREA (acre)	GROSS FLOOR AREA	PERCENT OPENSOURCE
INDUSTRIAL	30.00	358,216 sf	30%







**LANDSCAPE REQUIREMENTS:**

- SITE AREA = 90.00 ACRES OR 1306,800 S.F.; THEREFORE, NUMBER OF POINTS REQUIRED =  $1306,800 \div 2,500 = 522.72$  POINTS REQUIRED
- NUMBER OF TOTAL POINTS PROVIDED = 383.65 POINTS, NOT INCLUDING BIO PLANT MATERIALS PER MSD
- PARKING LOT PERIMETERS:
  - ONE (1) CANOPY TREE PER FIFTY (50) LINEAL FEET OF PARKING LOT PERIMETERS, TOTAL OF ALL PARKING LOT PERIMETERS = 2595 LINEAL FEET, THEREFORE, 51 TREES ARE REQUIRED AND PROVIDED
  - STREET TREES:
    - TOTAL FRONTAGE @ MARYLAND HEIGHTS EXPRESSWAY = 815 LIN. FT. REQUIRED; 1 CANOPY TREE PER 40 LIN. FT.; THEREFORE, 22 TREES ARE REQUIRED / 22 ARE PROVIDED
    - TOTAL FRONTAGE @ CREVE COEUR AIRPORT RD. = 800 LIN. FT. REQUIRED; 1 CANOPY TREE PER 40 LIN. FT.; THEREFORE, 20 TREES ARE REQUIRED / 20 ARE PROVIDED

**MINIMUM PLANT SIZES @ TIME OF INSTALLATION:**

- DECIDUOUS SHRUBS 24"
- EVERGREEN SHRUBS 24"
- EVERGREEN TREES 6' HGHT.
- CANOPY TREES 2.5" CALIPER
- ORNAMENTAL UNDERSTORY TREES 2" CALIPER
- PERENNIALS 2" CELLPACK

NOTE: THE PLACEMENT OF LANDSCAPING WITHIN THE CITY'S RIGHT-OF-WAY WILL REQUIRE THE EXECUTION OF A MAINTENANCE AGREEMENT PRIOR TO ANY INSTALLATION.

ANY WORK WITHIN THE RIGHT-OF-WAYS, INCLUDING LANDSCAPE IMPROVEMENTS, SHALL BE COORDINATED w/ THE CITY OF MARYLAND HEIGHTS DEPARTMENT OF PUBLIC WORKS PRIOR TO COMMENCEMENT OF SAID WORK. PLEASE CONTACT MATT MCGRATH AT 314/758-2251

**TRIM AND MAINTAIN ALL TREES BENEATH POWER LINES TO AVOID CONFLICT w/ UTILITY LINES.**

NO IRRIGATION SHALL BE INSTALLED WITHIN RIGHT-OF-WAYS  
50% OF ALL SHRUBS SHALL BE EVERGREEN VARIETIES, 15% OF 254 SHRUBS ARE EVERGREEN OR 65%.

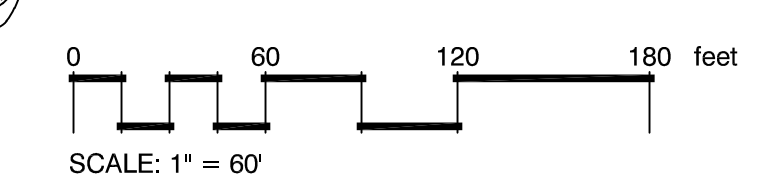
**BREAKDOWN OF POINTS = 441.80 TOTAL:**

154	NATIVE CANOPY TREES
154	NON-NATIVE CANOPY TREES
84	NATIVE SHRUBS
155	NON-NATIVE SHRUBS
44	NON-NATIVE EVERGREEN TREES
55	NATIVE UNDERSTORY (FLOWERING) TREES
56	NON-NATIVE UNDERSTORY (FLOWERING) TREES

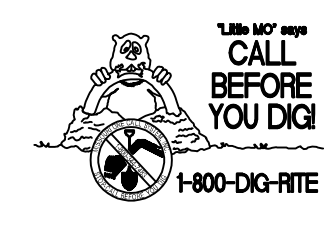
NOTE: ALL BIO-RETENTION (WATER QUALITY) PONDS ARE TO ALSO BE DESIGNED AND LANDSCAPED PER METROPOLITAN SEWER DISTRICT STANDARDS

NOTE: SEE SHEET L-6 FOR PLANNING PLAN OF ALL BIO-RETENTION AREAS AS NUMBERED ON THIS SHEET

NOTE: ALL SHRUBS/PERENNIALS TO BE MAINTAINED @ 24" MAXIMUM HEIGHT WITHIN SIGHT TRIANGLE AREAS



**UNDERGROUND UTILITIES AND OSHA SAFETY NOTE:**  
Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction. All O.S.H.A. rules and regulations established for the type of construction required by these plans shall be strictly followed (i.e. trenching, blasting, etc.)



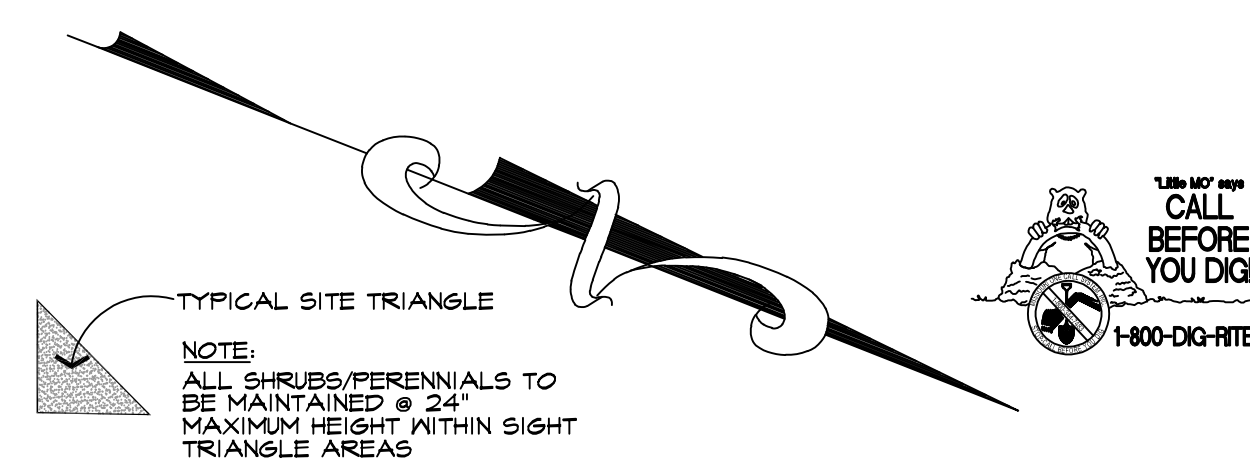
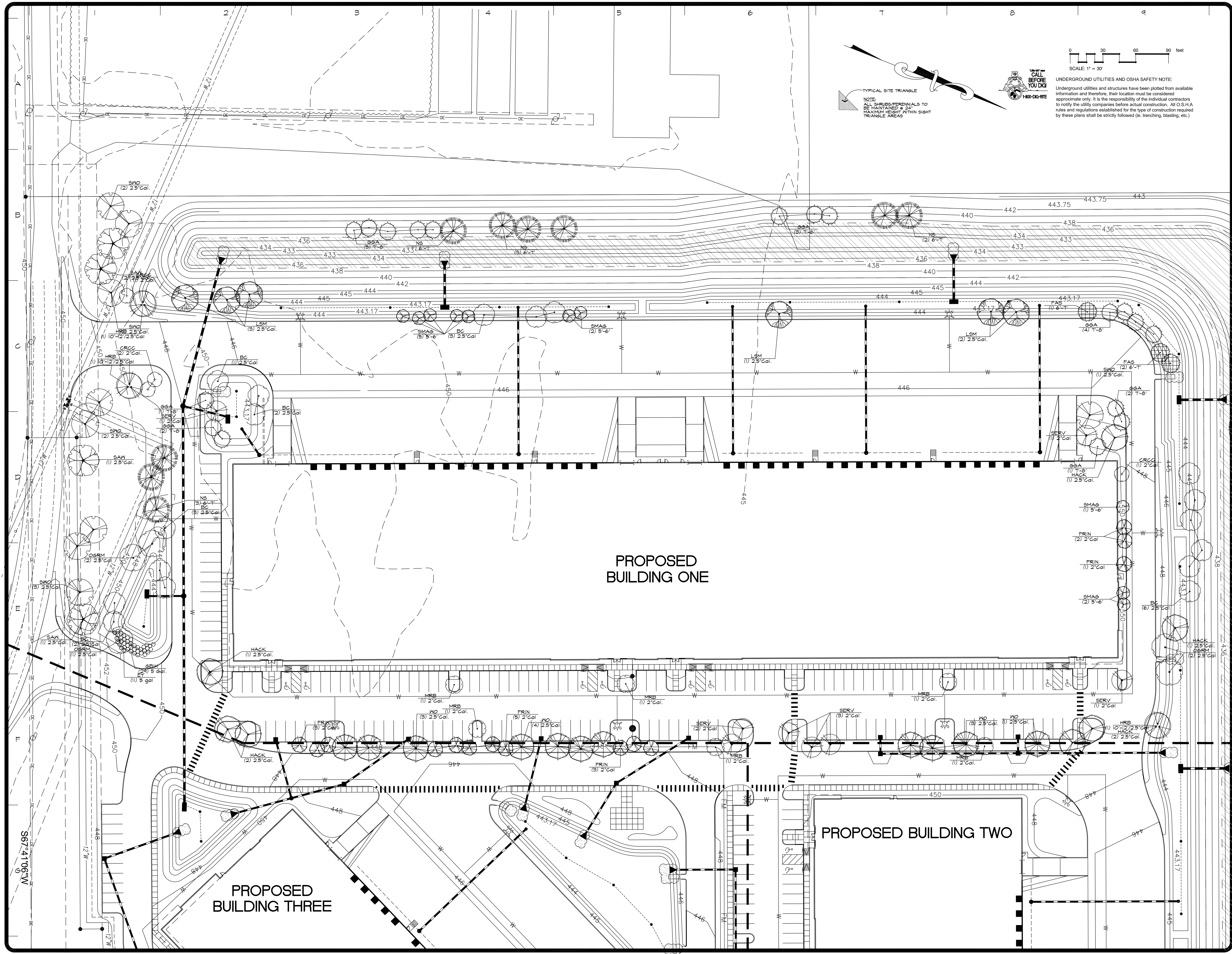
REVISIONS	BY

**landscape TECHNOLOGIES**  
61 Jacobs Creek Drive  
St. Charles, Missouri 63041  
Tel: (636) 426-1200  
Fax: (636) 426-1205

RANDALL W. WARDIS  
MISSOURI LANDSCAPE ARCHITECT #000019  
DATE: 5/14/2023

**PLANNING PLAN FOR THE PROPOSED  
Maryland Park Industrial Development  
MARYLAND HEIGHTS, MISSOURI**

DRAWN	R. WARDIS
CHECKED	R. WARDIS
DATE	5/14/2023
SCALE	1" = 60'-0"
JOB No.	2023-110
SHEET	L-1
OF FIVE SHEETS	



**UNDERGROUND UTILITIES AND OSHA SAFETY NOTE:**  
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**TYPICAL SITE TRIANGLE**  
 NOTE: ALL SHRUBS/PERENNIALS TO BE MAINTAINED @ 24" MAXIMUM HEIGHT WITHIN SIGHT TRIANGLE AREAS

REVISIONS	BY

**landscape TECHNOLOGIES**  
 67 Jacobs Creek Drive (636) 432-1250  
 St. Charles, Missouri 63041 Fax: (636) 432-1252

RANDALL N. WARDIS MISSOURI LANDSCAPE ARCHITECT #000019  
 DATE: 5/11/2023

MAY 11 2023  
 MISSOURI  
 LANDSCAPE ARCHITECT  
 REGISTERED

**PLANTING PLAN FOR THE PROPOSED BUILDING #1:  
 Maryland Park Industrial Development  
 MARYLAND HEIGHTS, MISSOURI**

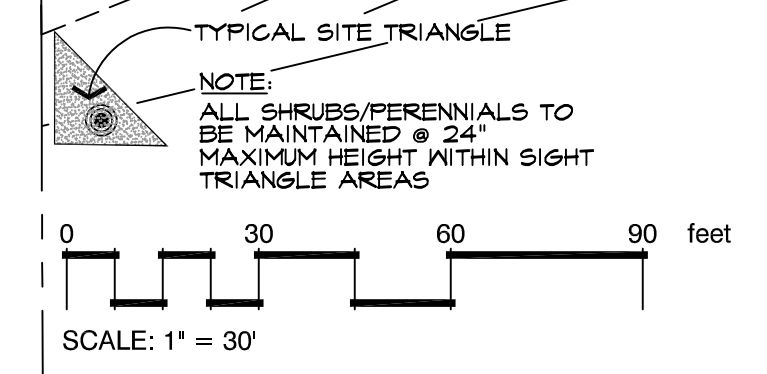
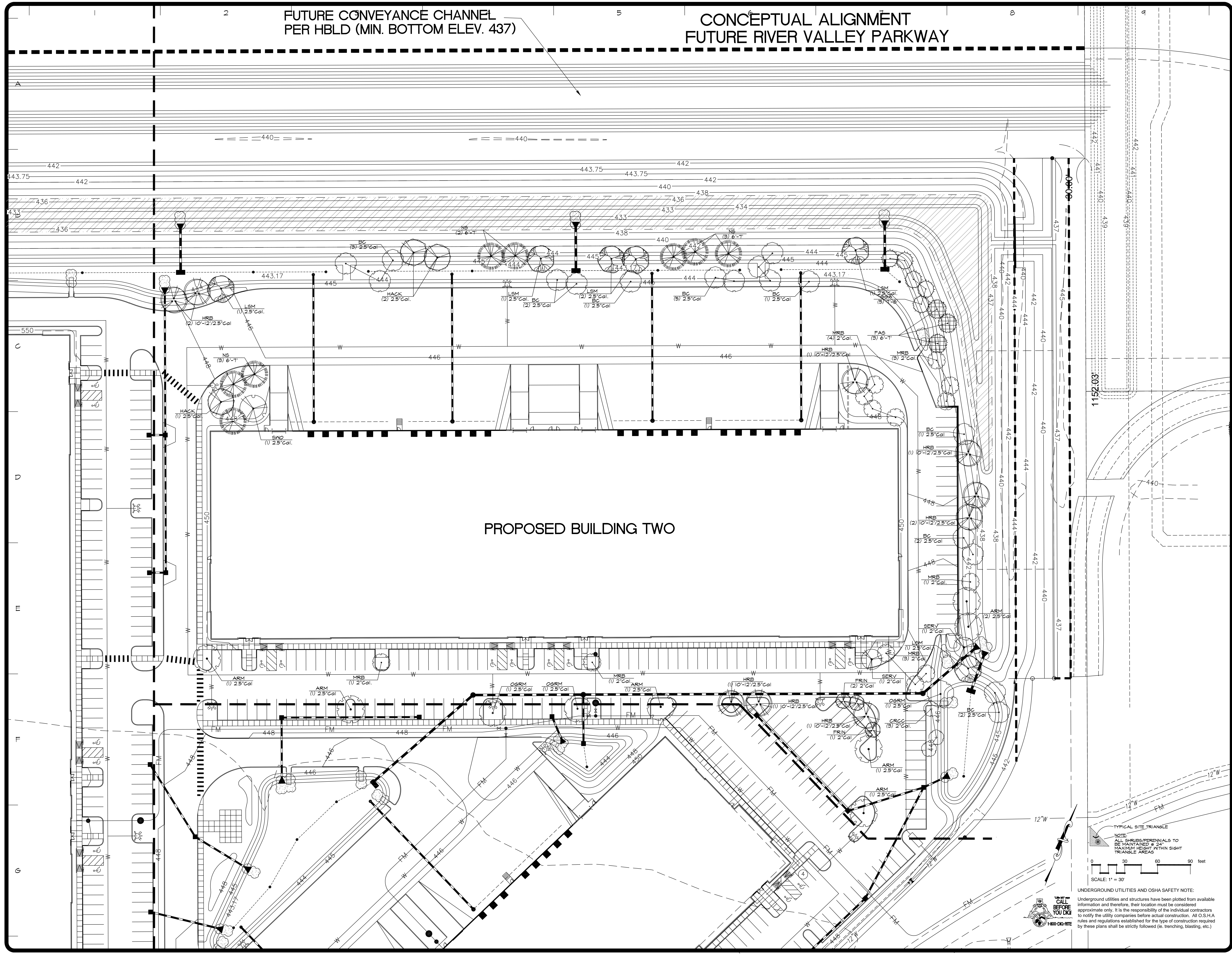
DRAWN BY: R. WARDIS  
 CHECKED BY: RMM/EL  
 DATE: 5/11/2023  
 SCALE: 1"=30'-0"  
 JOB No: 2023-110  
 SHEET

**L-2**  
 OF FIVE SHEETS

FUTURE CONVEYANCE CHANNEL  
PER HBLD (MIN. BOTTOM ELEV. 437)

CONCEPTUAL ALIGNMENT  
FUTURE RIVER VALLEY PARKWAY

PROPOSED BUILDING TWO



TYPICAL SITE TRIANGLE  
NOTE:  
ALL SHRUBS/PERENNIALS TO  
BE MAINTAINED @ 24"  
MAXIMUM HEIGHT WITHIN SIGHT  
TRIANGLE AREAS

UNDERGROUND UTILITIES AND OSHA SAFETY NOTE:  
Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction. All O.S.H.A. rules and regulations established for the type of construction required by these plans shall be strictly followed (i.e. trenching, blasting, etc.)



REVISIONS	BY

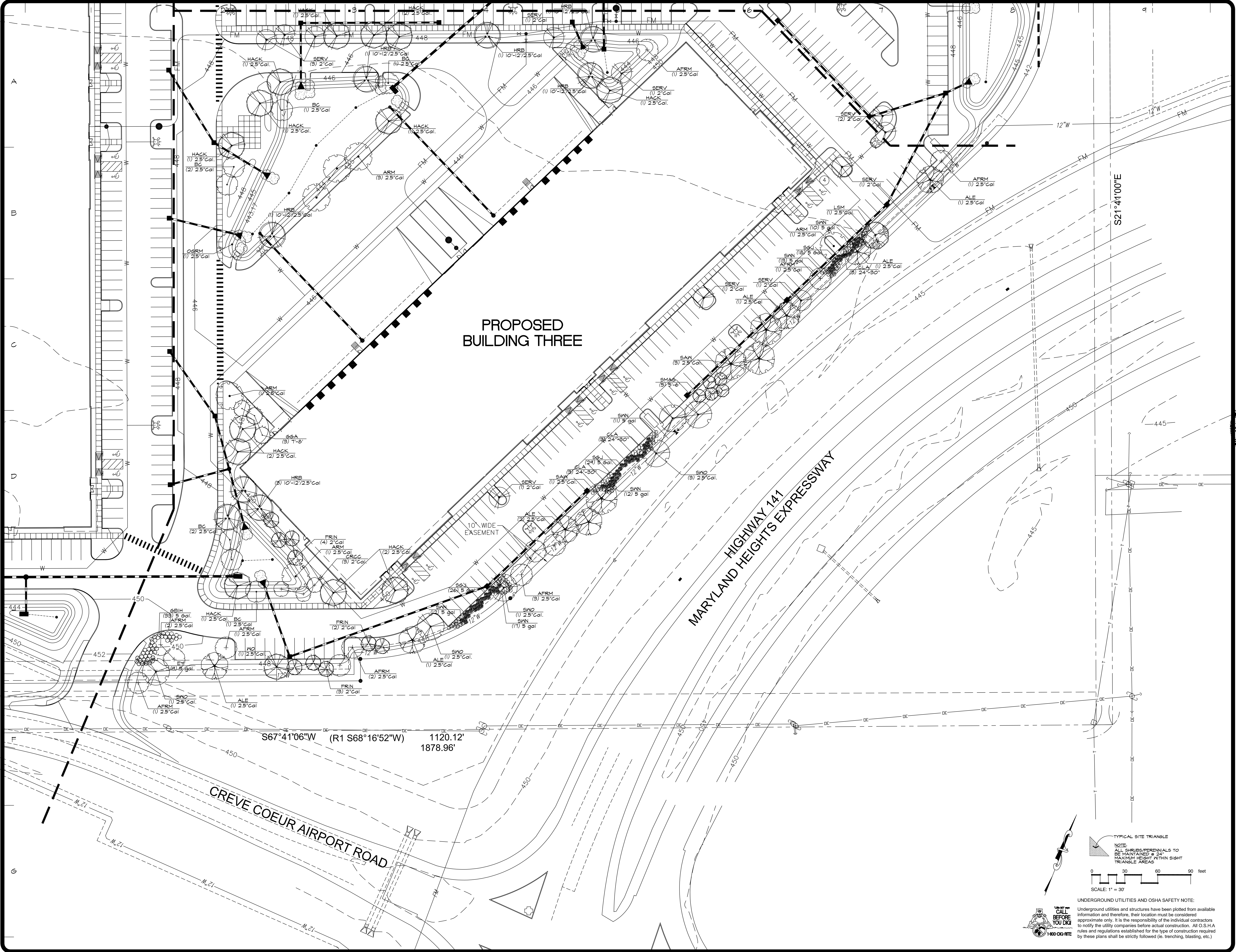
**landscape TECHNOLOGIES**  
61 Jacobs Creek Drive  
St. Charles, Missouri 63041  
Tel: (636) 426-1200  
Fax: (636) 426-1205

**PLANTING PLAN FOR THE PROPOSED BUILDING #2:  
Maryland Park Industrial Development  
MARYLAND HEIGHTS, MISSOURI**

DATE: 5/14/2023  
JOB No: 2023-110  
SHEET

DRAWN BY: R. WARDIS  
CHECKED BY: RMM/EL  
DATE: 5/14/2023  
SCALE: 1"=30'-0"  
JOB No: 2023-110  
SHEET

**L-3**  
OF FIVE SHEETS



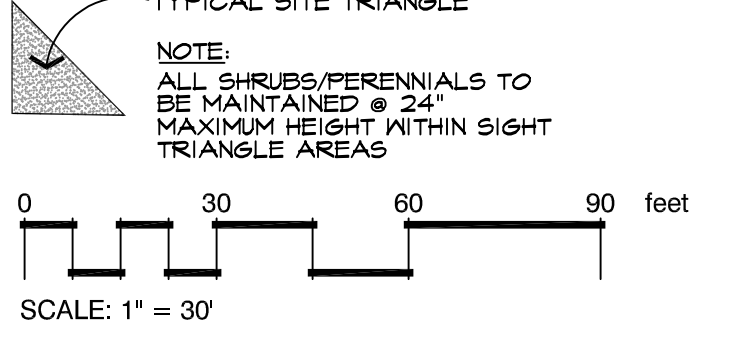
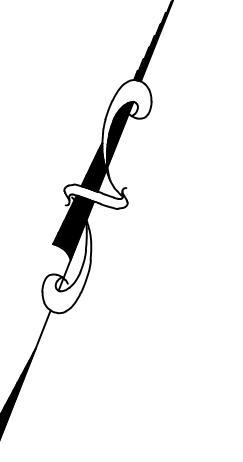
**PROPOSED BUILDING THREE**

**MARYLAND HEIGHTS EXPRESSWAY**

**CREVE COEUR AIRPORT ROAD**

S67°41'06"W (R1 S68°16'52"W) 1120.12'  
1878.96'

S21°41'00"E



**UNDERGROUND UTILITIES AND OSHA SAFETY NOTE:**  
Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction. All O.S.H.A. rules and regulations established for the type of construction required by these plans shall be strictly followed (i.e. trenching, blasting, etc.)

REVISIONS	BY

**landscape**  
**TECHNOLOGIES**  
611 Jacobs Creek Drive  
St. Charles, Missouri 63041  
(636) 435-1250  
Fax: (636) 435-1255

REGISTERED  
MAYOR'S NUMBER 10317  
DATE 5/11/2023

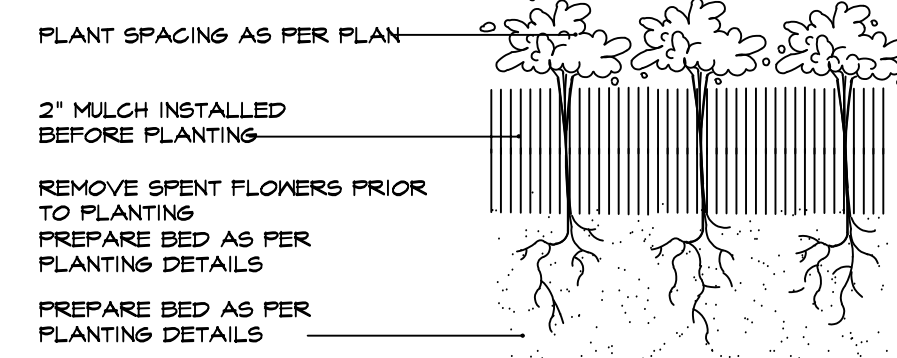
**PLANTING PLAN FOR THE PROPOSED BUILDING #3:**  
**Maryland Park Industrial Development**  
MARYLAND HEIGHTS, MISSOURI

DRAWN BY R. WARDIS  
CHECKED BY M.W.M.E.L.  
DATE 5/14/2023  
SCALE 1"=30'-0"  
JOB No. 2023-110  
SHEET **L-4**  
OF FIVE SHEETS

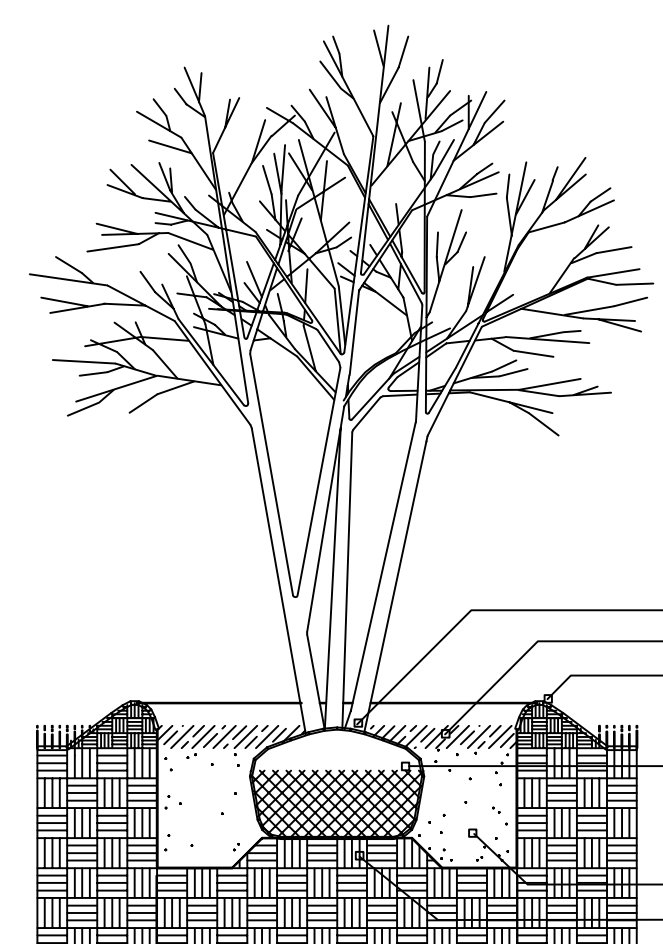
# LANDSCAPE GUIDELINE SPECS:

## GENERAL:

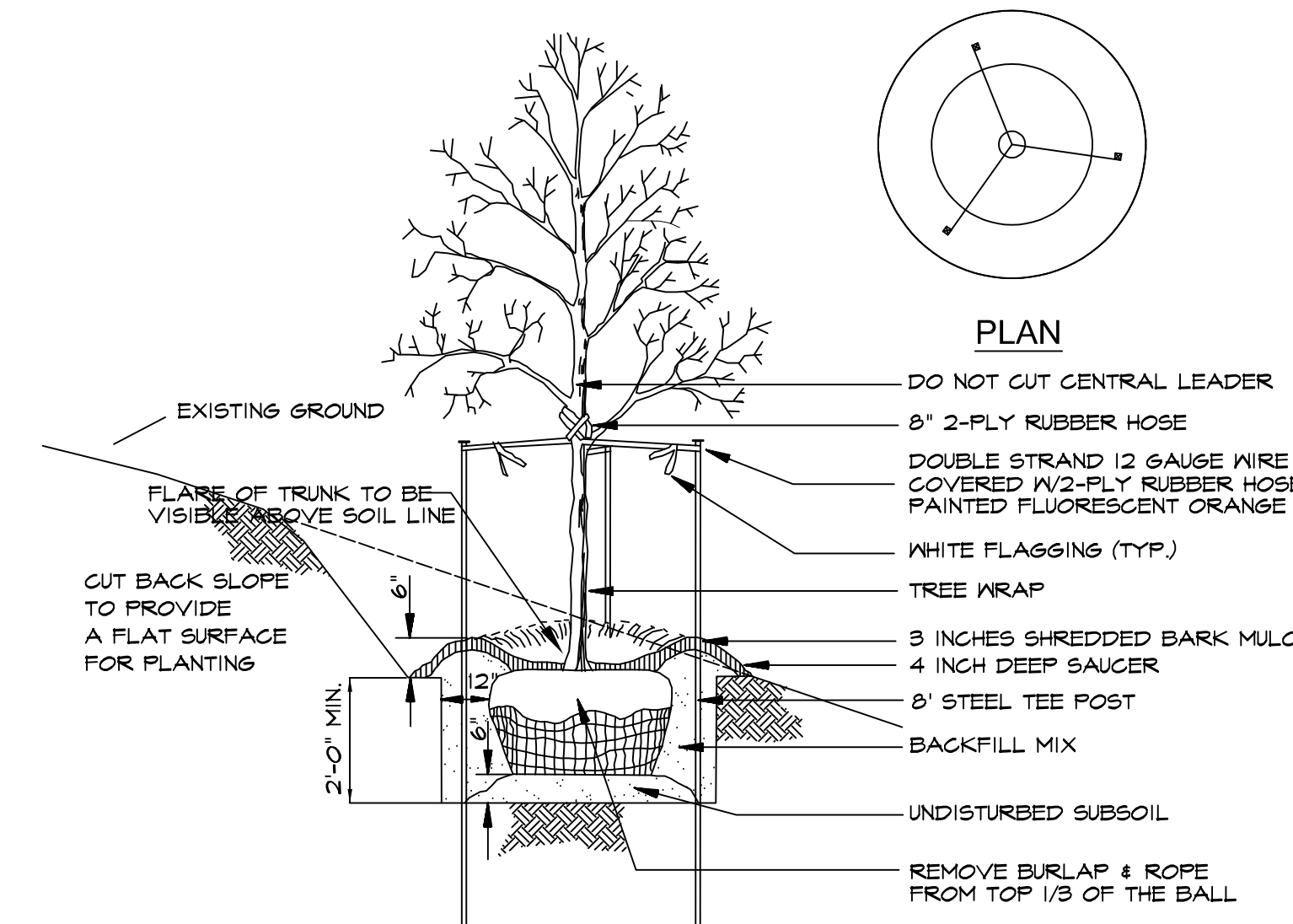
- All natural vegetation shall be maintained where it does not interfere with construction or the permanent plan of operation. Every effort possible shall be made to protect existing structures or vegetation from damage due to equipment usage. Contractor shall at all times protect all materials and work against injury to public.
  - The landscape contractor shall be responsible for city coordination and sequencing with other site related work, being performed by other contractors. Refer to additional drawings for further coordination of work to be done.
  - Underground facilities, structures and utilities must be considered approximate only. There may be others not previously known or shown. It shall be the landscape contractor's responsibility to determine or verify the existence and exact location of the above (Call 1-800-DIG-RITE in Missouri).
  - Plant material to be planted in the same relationship to grade as was grown in nursery conditions. All planting beds shall be cultivated to 6" depth minimum and graded smooth immediately before planting of plants. Plant groundcover to within 12" of trunk of trees or shrubs planted within the area.
  - It shall be the landscape contractor's responsibility to:
    - Verify all existing and proposed features shown on the drawings prior to commencement of work.
    - Report all discrepancies found with regard to existing conditions or proposed design to the landscape architect immediately for a decision.
    - Stake the locations of all proposed plant material and obtain the approval of the owner's representative or landscape architect ten (10) days prior to installation.
  - Items shown on this drawing take precedence over the material list. It shall be the landscape contractor's responsibility to verify all quantities and conditions prior to implementation of this plan. No substitutions of types or size of plant materials will be accepted without written approval from the landscape architect.
  - Provide single-stem trees unless otherwise noted in plant schedule.
  - All plant material shall comply with the recommendations and requirements of ANSI Z60.1 "American Standards for Nursery Stock".
  - It shall be the contractor's responsibility to provide for inspection of the plant material by the Landscape Architect (or Owner's Representative) prior to acceptance. Inspections may take place before, during or after installation. Plants not conforming exactly to the plant list will not be accepted and shall be replaced at the landscape contractor's expense.
  - All bids are to have unit prices listed. The Owner has the option to delete any portion of the contract prior to signing the contract or beginning work. This will be a unit price basis and shall be valid for 12 months.
  - Should auger equipment be utilized in excavating any plant pits, vertical sides of plant pits shall be thoroughly scarified to avoid creation of "polished sides walls" prior to plant material installation.
  - All excess topsoil, rocks, debris and/or tainted soils shall be removed by the general contractor prior to point project is turned over to the landscape contractor to commence landscape installation.
  - Transplanted material will not be guaranteed by the landscape contractor.
  - Keep all plant material (except turf) a minimum of 36" clear of fire hydrants.
  - Landscape contractor shall kill & remove all existing weeds within the project site.
  - All tags, nursery stakes, labels, etc. shall be removed by the landscape contractor at completion of all landscape installation.
  - Landscape contractor shall be in compliance with all Federal, state and local laws / regulations relating to insect infestation and/or plant diseases.
- PRUNING:**
- Lightly prune trees at time of planting. Prune only the crossover limbs, interfering leaders and/or any broken branches. Some interior limbs and lateral branches may be pruned. However, do not remove the terminal buds of branches that extend to the edge of the crown.
  - All pruning shall comply with ANSI A300 standards.
- INSURANCE:**
- The landscape contractor shall submit certificates of insurance for workman's compensation and general liability.
- MULCH:**
- All mulch to be shredded oak bark mulch at 3" depth (after compaction) unless otherwise noted. Mulch shall be clean and free of all foreign materials, including weeds, mold, deleterious materials, etc.
  - No plastic sheeting or filter fabric shall be placed beneath shredded bark mulch beds. Miral fabric shall be used beneath all gravel mulch beds. Edge all beds with spade-cut edge unless otherwise noted.
- MAINTENANCE:**
- Landscape Contractor shall provide a separate proposal to maintain all plants, shrubs, groundcover, perennials and annuals for a period of 12 months after acceptance.
  - Contractor shall ensure that only competent and trained personnel shall provide such services and that such services be provided in a timely manner.
- SIGHT TRIANGLES:**
- No landscape material or other obstructions shall be placed or be maintained within the sight distance area so as not to impede the vision between a height of thirty inches (30") and ten feet (10') above the adjacent street or paving surfaces.
  - Sight triangles at the intersection of a public street and a private access way (except for single family residences) shall also be formed by measuring from the point of intersection of the street frontage curbs and the entrance curb lines a distance of 25' and connecting the points so established to form the sight triangle area.
- TOPSOIL:**
- Topsoil mix for all proposed landscape plantings shall be five (5) parts well-drained screened organic topsoil to one (1) part Canadian sphagnum peat moss as per planting details. Roto-till topsoil mix to a depth of 6" minimum and grade smooth.
  - Provide a soil analysis, as requested, made by an independent soil-testing agency, outlining the % of organic matter, inorganic matter, deleterious material, pH and mineral content.
  - Any foreign topsoil used shall be free of roots, stumps, weeds, brick stakes (larger than 1") litter or any other extraneous or toxic material. Landscape contractor shall be fully responsible for correcting all negative soil issues prior to plant installation. Killing and removal of all weeds shall be the responsibility of the landscape contractor as part of this task.
  - Landscape contractor to apply pre-emergent herbicide to all planting beds upon completion of planting operations and before application of shredded bark mulch.
  - Install siltation controls prior to commencement of any grading operations, inspect and maintain siltation fences on a weekly basis until vegetation is established.
- TURF:**
- All disturbed lawn areas to be seeded with a mixture of Turf-Type Fescue (300# per acre) and Bluegrass (10# per acre). Lawn areas shall be unconditionally warranted for a period of 40 days from date of final acceptance. Bare areas more than one square foot per one (1) square foot shall be replaced.
  - The turf contractor shall be responsible for protection of finished grade, restore and repair any erosion or water damage and obtain owners approval prior to seeding or sod installation.
  - Landscape contractor shall offer an alternate price for sod in lieu of seed. Sod shall be cut at a uniform thickness of 3/4". No broken pieces, irregular pieces or torn pieces will be accepted.
  - Any points carrying concentrated water loads and all slopes of 10% or greater shall be sodded.
  - All sod shall be placed a maximum of 24 hours after harvesting.
  - Recondition existing lawn areas damaged by Contractor's operations including equipment/material storage and movement of vehicles.
  - Sod Contractor to ensure sod is placed below sidewalk and all paved area elevations to allow for proper drainage.
- EROSION CONTROL BLANKET (Where applicable):**
- All seeded areas shall receive an erosion control blanket which shall consist of loose straw mat and anchor pins as manufactured by North American Green, DS-75 or approved equal. Install per manufacturer's recommendations.
- PLUG PLANTING NOTES:**
- All plugs to be 4-1/2" deep X 2" diameter minimum.
  - Plugs are to be planted in a hole dug with a trowel, spade or planting bar such that the hole is of a minimum diameter and depth to accommodate the plug and its roots, without damage.
  - Plugs shall be spaced in a triangulated layout approximately 24" on center. Plugs shall be planted through erosion control blanket where appropriate.
  - Obtain plugs from a reputable nursery.
  - Water plugs upon completion of planting so that soil is moist but not saturated.
  - If planting is delayed more than six hours after delivery, store plugs in the shade, protect from weather and mechanical damage and keep them moist and cool. All plugs shall be planted within 24 hours after delivery.
- WARRANTY:**
- All plant material (excluding ground cover, perennials and annuals) are to be warranted for a period of 12 months after complete installation of all landscape material at 100% of the installed price.
  - Any plant material found to be defective shall be removed and replaced within 30 days of notification or in growth season determined to be best for that plant.
  - Only one replacement per tree or shrub shall be required at the end of the warranty period, unless loss is due to failure to comply with warranty.
  - Lawn establishment period will be in effect once the lawn has been mowed three times. Plant establishment period shall commence on the date of acceptance and 100% completion.
  - A written guarantee shall be provided to the owner per conditions outlined in #1 above.
- IRRIGATION:**
- All planting beds and lawn areas are to be irrigated with a fully automatic, in-ground irrigation system (by others).



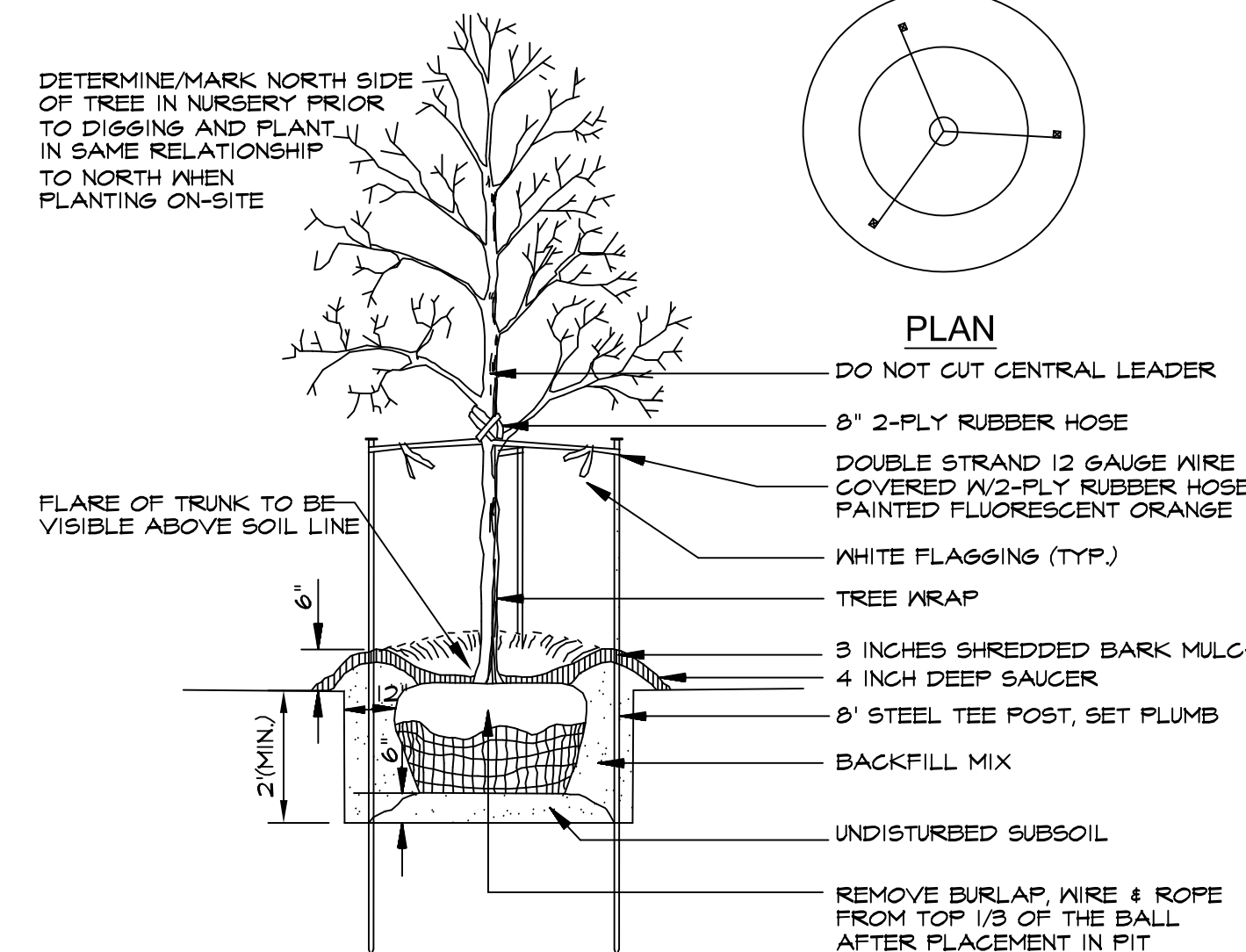
SHRUB PLANTING  
N.T.S.



SHRUB PLANTING ON SLOPE  
N.T.S.



TREE PLANTING ON SLOPE  
N.T.S.



DECIDUOUS TREE PLANTING  
N.T.S.

MULTI-STEM TREE PLANTING  
N.T.S.

EVERGREEN TREE PLANTING  
N.T.S.

## PLANT SCHEDULE

TREES	QTY	COMMON / BOTANICAL NAME	SIZE
ARM	13	ARMSTRONG RED MAPLE / ACER RUBRUM 'ARMSTRONG'	2.5" CAL
ALE	7	ATHENA LACEBARK ELM / ULMUS PARVIFOLIA 'EMER I'	2.5" CAL
BC	41	BALD CYPRESS / TAXODIUM DISTICHUM	2.5" CAL
HACK	23	COMMON HACKBERRY / CELTIS OCCIDENTALIS	2.5" CAL
HRB	20	HERITAGE RIVER BIRCH / BETULA NIGRA 'HERITAGE IMPROVED'	10'-12'/2.5" CAL
LSM	13	LEGACY SUGAR MAPLE / ACER SACCHARUM 'LEGACY'	2.5" CAL
SAN	8	SAWTOOTH OAK / QUERCUS ACUTISSIMA	2.5" CAL
SNO	16	SWAMP WHITE OAK / QUERCUS BICOLOR	2.5" CAL
WO	12	WILLOW OAK / QUERCUS PHELLOS	2.5" CAL
AFRM	12	'AUTUMN FLAME' MAPLE / ACER RUBRUM 'AUTUMN FLAME'	2.5" CAL
OGRM	9	'OCTOBER GLORY' MAPLE / ACER RUBRUM 'OCTOBER GLORY'	2.5" CAL

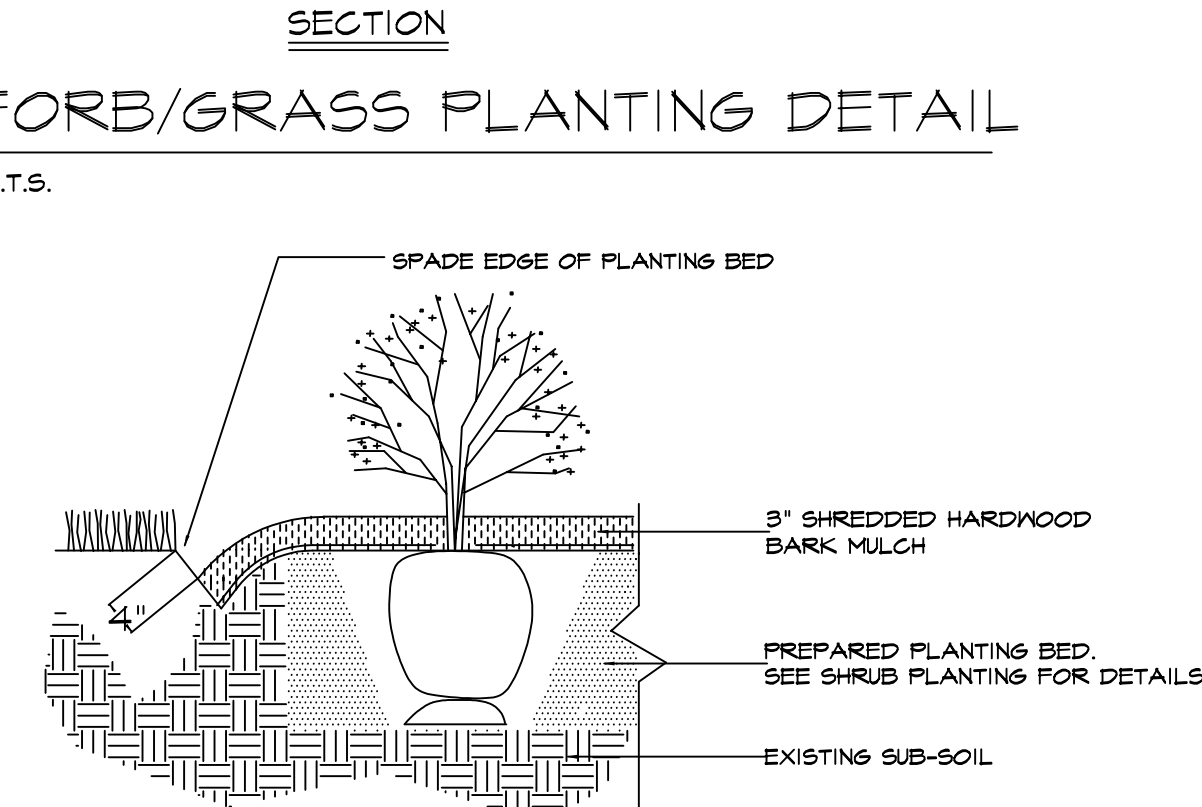
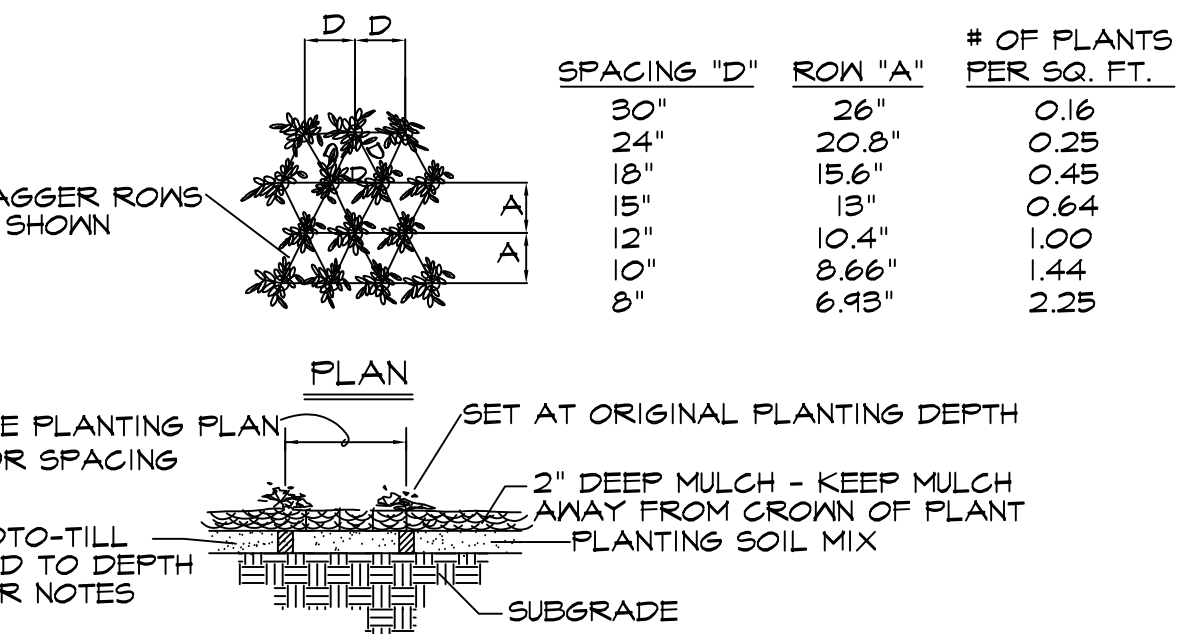
EVERGREEN TREES	QTY	COMMON / BOTANICAL NAME	SIZE
FAS	6	FAT ALBERT SPRUCE / PICEA PUNGENS 'FAT ALBERT'	6'-7'
GGA	26	GREEN GIANT ARBORVITAE / THUJA PLICATA 'GREEN GIANT'	7'-8'
NS	17	NORWAY SPRUCE / PICEA ABIES	6'-7'

FLOWERING TREES	QTY	COMMON / BOTANICAL NAME	SIZE
CRCC	10	CANADA RED CHOKECHERRY / PRUNUS VIRGINIANA 'CANADA RED'	2" CAL
MRB	19	MERLOT REDBUD / CERCIS X 'MERLOT'	2" CAL
SMAG	15	SAUCER MAGNOLIA / MAGNOLIA X SOULANGIANA	5'-6'
FRIN	26	WHITE FRINGETREE / CHIONANTHUS VIRGINICUS	2" CAL
SERV	21	'AUTUMN BRILLIANCE' SERVICEBERRY / AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	2" CAL

SHRUBS	QTY	COMMON / BOTANICAL NAME	SIZE
CLA	9	CHICAGO LUSTER ARROWWOOD / VIBURNUM DENTATUM 'CHICAGO LUSTER'	24"-30"
EY	20	EVERLOW YEW / TAXUS X MEDIA 'EVERLOW'	5 GAL
GBIH	62	GEM BOX INKBERRY HOLLY / ILEX GLABRA 'GEM BOX'	5 GAL
SGJ	73	SEA GREEN JUNIPER / JUNIPERUS CHINENSIS 'SEA GREEN'	5 GAL
SWN	75	SUMMER WINE NINEBARK / PHYSOCARPUS OPULIFOLIUS 'SUMMER WINE'	5 GAL

FORBS	QTY	COMMON / BOTANICAL NAME	SIZE
CI	1,981	COPPER IRIS / IRIS FULVA 'LOUISIANA'	2 QT. @ 18" OC
ROSEM	1,240	ROSE MALLOW / HIBISCUS LAEVIS	1 GAL @ 30" OC
SMW	1,989	SWAMP MILKWEED / ASCLEPIAS INCARNATA	2 QT. @ 24" OC

NATIVE GRASSES	QTY	COMMON / BOTANICAL NAME	SIZE
	2,138	BROWN FOX SEDGE / CAREX VULPINOIDEA	PLUG AT 18" OC
	2,857	GREAT GREEN BULRUSH / SCIRPUS ATROVIRENS	PLUG AT 18" OC
	2,216	MORNING STAR SEDGE / CAREX GRAYI	PLUG AT 18" OC
	1,780	PALM SEDGE / CAREX MUSKINGUMENSIS	PLUG AT 18" OC



SPADE-CUT EDGE DETAIL  
N.T.S.

REVISIONS	BY

**Landscape TECHNOLOGIES**

61 Jacobs Creek Drive  
Moberly, Missouri 65004  
Fax: (565) 528-8965

**REGISTERED ARCHITECT**

MARCO M. WARDIS  
NUMBER 019  
DATE 5/14/2023

RANDALL M. WARDIS  
MISSOURI LANDSCAPE ARCHITECT #000019  
DATE 5/14/2023

**PLANTING PLAN FOR THE PROPOSED Maryland Park Industrial Development MARYLAND HEIGHTS, MISSOURI**

DRAWN BY: MARCO M. WARDIS  
CHECKED BY: RYAN M. WARDIS  
DATE: 5/14/2023  
SCALE: N.A.  
JOB No: 2023-110  
SHEET

**MAINTENANCE PLAN @ RAIN GARDEN and/or BIO-RETENTION BASIN:**

ROUTINE INSPECTIONS AND ATTENTION TO MAINTENANCE NEEDS ARE REQUIRED IN BOTH RAIN GARDENS AND BIO-RETENTION BASINS IF THEY ARE TO FUNCTION PROPERLY AND AS DESIGNED. AS THE PLANT MATERIAL MATURES, HOWEVER, THE AMOUNT OF MAINTENANCE DECREASES. A PROPERLY TRAINED TEAM OF LAWN MAINTENANCE CONTRACTORS SHOULD BE ABLE TO MAINTAIN THE SYSTEM PROPERLY. THE BOTTOM LINE: RAIN GARDENS AND BIO-RETENTION BASINS DO NOT REQUIRE AS MUCH MAINTENANCE AS A LAWN.

THE PRIMARY MAINTENANCE INVOLVES INSPECTING THE BEDS ON A REGULAR BASIS AND REPAIRING DAMAGE AND/OR REPLACING PLANT MATERIAL AS NEEDED. EACH OF THESE AREAS REQUIRE MINIMAL USE OF PESTICIDES, FERTILIZERS AND SUPPLEMENTAL WATERING. OVER TIME, THE PLANT GROWTH, ROOT ESTABLISHMENT AND ORGANIC DECOMPOSITION WILL CREATE A NATURAL SOIL HORIZON. THIS WILL RESULT IN THE NEED FOR LESS MAINTENANCE AND A LONGER LIFE SPAN.

AFTER INSTALLATION OF ALL PLANT MATERIAL, WATER THE PLANTS DAILY FOR AT LEAST TWO WEEKS. THEREAFTER, THE SYSTEM WILL NEED ABOUT 1" OF NATURAL RAINFALL OR SUPPLEMENTAL WATERING UNTIL IT IS ESTABLISHED. INITIALLY, WEEDING (BI-WEEKLY) OF NEW RAIN GARDENS/BIO-RETENTION BASINS IS CRITICAL FOR THE FIRST FEW MONTHS AFTER THE PLANTING IS COMPLETED. MULCH WILL HELP TO KEEP WEED GERMINATION AND EROSION ISSUES TO A MINIMUM. IT IS VERY IMPORTANT TO RE-MULCH ALL VOID AREAS AND TO MAINTAIN A GOOD COVERAGE.

ACCUMULATION OF SEDIMENT IS A SIGN THAT THE SYSTEM IS WORKING PROPERLY. HOWEVER, SEDIMENT AND DEBRIS REMOVAL (APPROXIMATELY TWICE A YEAR), ESPECIALLY AT THE POINT OF INFLOW, WILL BE THE MOST IMPORTANT TASK THEREAFTER TO MAINTAIN THE RAIN GARDENS AND BIO-RETENTION BASINS. REPLACEMENT OF DEAD PLANT MATERIAL, REPAIR OF SOIL EROSION, ANNUAL RE-MULCHING WITH PEA GRAVEL, UNCLOGGING DRAINS AND THE REPAIR OF THE OVERFLOW STRUCTURES MAY BE NECESSARY AS THEY DEVELOP AND MATURE. UNFORTUNATELY, OVER THE SPAN OF ABOUT TEN (10) YEARS, THE SOILS MAY NEED TO BE REPLACED DUE TO THE EXCHANGE CAPACITY OF THE CELLS AS THEY BECOME CLOSED AND THE DRAINAGE QUALITIES WILL DETERIORATE.

DENSE SHRUB GROWTH WILL INCREASE THE FILTERING CAPACITY. SCRUFFY OR DISCOLORED PLANTS SHOULD BE CUT BACK AFTER THE SPRINGS GROWTH IS 6" TALL. IF POSSIBLE RAISING A MOVER DECK TO A HEIGHT OF 6" WILL MAKE THIS JOB EASIER. BY DEAD-HEADING THE FLOWERS, NEW GROWTH WILL RESULT. LEAVING SEED HEADS AND FRUIT SHOULD BE ENCOURAGED TO PROVIDE WINTER INTEREST, BIRD FOOD AND WILDLIFE COVERAGE.

SOIL TESTING SHOULD BE DONE BEFORE PLANTING OPERATIONS AND, THEREAFTER, EVERY TWELVE (12) MONTHS TO DETERMINE THE pH (ACIDITY) LEVEL AND THE NUTRIENT LEVELS. A pH RANGE OF 5.2 TO 7.6 IS APPROPRIATE FOR THE PLANTS CHOSEN. TO TREAT LOW pH, ADD IRON SULFATE AND SULFUR.

USE CONTROLLED BURNING AS A TOOL ONLY UNDER THE APPROVAL AND SUPERVISION OF THE FIRE DEPARTMENT/DISTRICT. NO FERTILIZATION IS REQUIRED OR DESIRABLE. THE RAIN GARDENS AND BIO-RETENTION BASINS SHOULD BE SELF-SUSTAINING WITH THE HELP OF THE ORGANIC MATERIAL IN THE TOPSOIL. IN FACT, THE PRESENCE OF FERTILIZER WILL ENCOURAGE WEED GROWTH.

ADDITIONAL MAINTENANCE MIGHT INCLUDE TREATMENT OR REMOVAL OF PLANTS PRESENTING DISEASES AND/OR FUNGAL PROBLEMS. REMOVAL OF LITTER AND LARGER DEBRIS, SEED COLLECTION AND HARVESTING CUTTINGS, MOVING ROCKS THAT MAY DIVERT WATER FLOW, PLANTING MORE OF A SUCCESSFUL SPECIES, BUILD-UP OF AREAS NEEDING MORE PROTECTION, ETC.

**TASKS SCHEDULE:**

**IMMEDIATE TASKS:** WATER PLANT MATERIAL FOR FOURTEEN (14) CONSECUTIVE DAYS UNLESS SUFFICIENT RAINFALL IS RECORDED.

**WEEKLY:** NEED BEDS. INSPECT FOR MOSQUITO LARVA (AFTER FOUR (4) DAYS OF STANDING WATER). RE-MULCH ANY VOID AREAS BY HAND. WATER DURING EXTREME DROUGHT PERIODS, EARLY IN THE MORNING, AS NEEDED.

**MONTHLY:** VISUALLY INSPECT AND REPAIR EROSION. ALSO VISUALLY INSPECT FOR PEST INFESTATION AND/OR DISEASE (USE LEAST TOXIC APPROACH). INSPECT DRAINAGE PATHS AND CELLS TO ASSURE PROPER DISSIPATION OF WATER.

**TRICE A YEAR:** REMOVE EXCESS SEDIMENT AND DEBRIS. APPLY FRESH MULCH LAYER. BETWEEN MARCH (3RD)-APRIL (30TH) AND AGAIN BETWEEN OCTOBER (1ST)-NOVEMBER (30TH). REMOVE AND REPLACE ALL DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT.

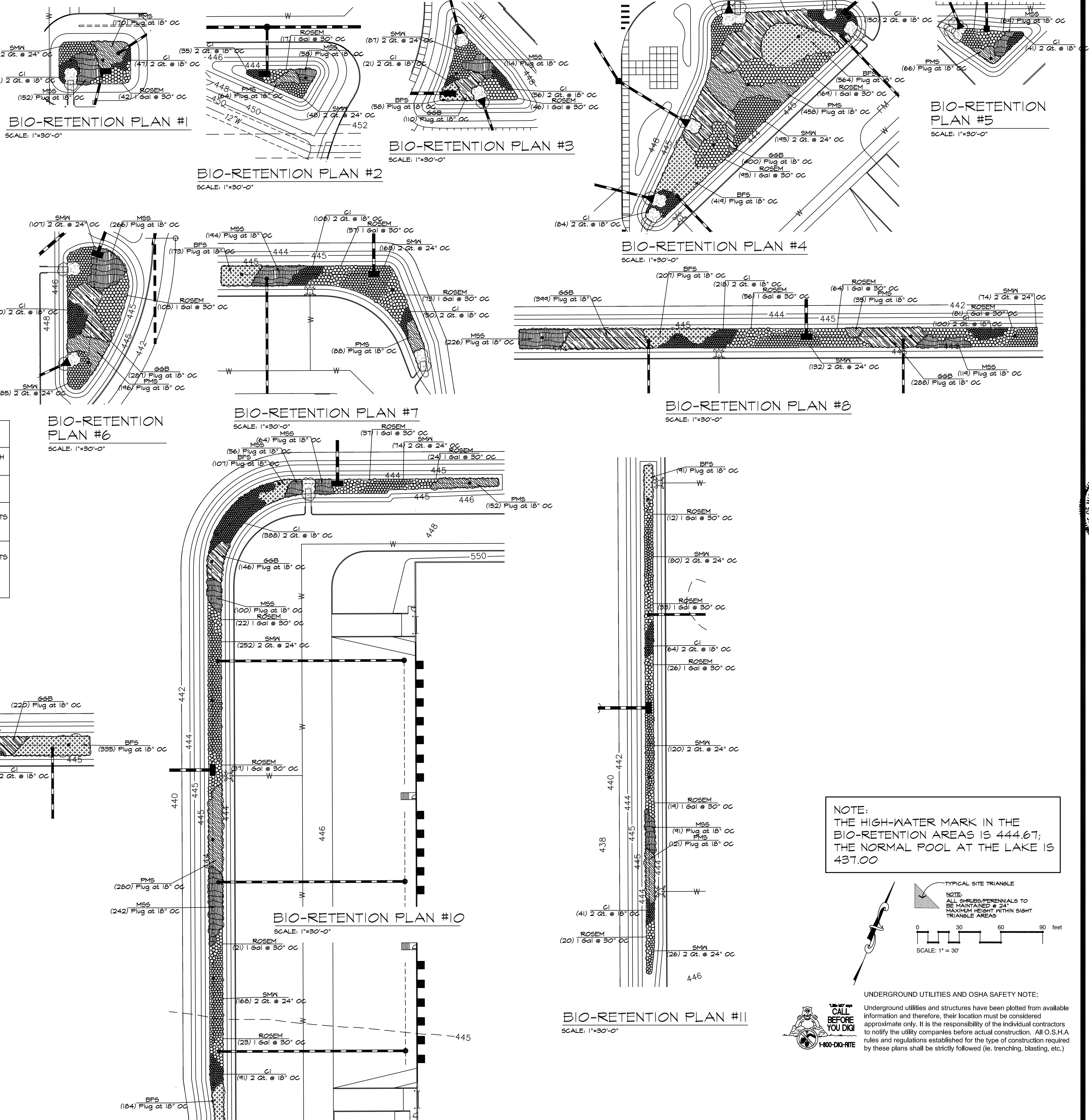
**ONCE A YEAR:** CHECK THE pH. PRUNE EXCESS GROWTH AND RECYCLE ANY REMOVED VEGETATION MATERIAL IF NO DISEASE IS PRESENT. REMOVE ANY STAKES AND WIRES THAT REMAIN ON TREES.

**EVERY TWO TO THREE YEARS:** REMOVE OLD MULCH LAYER BEFORE APPLYING A NEW LAYER.

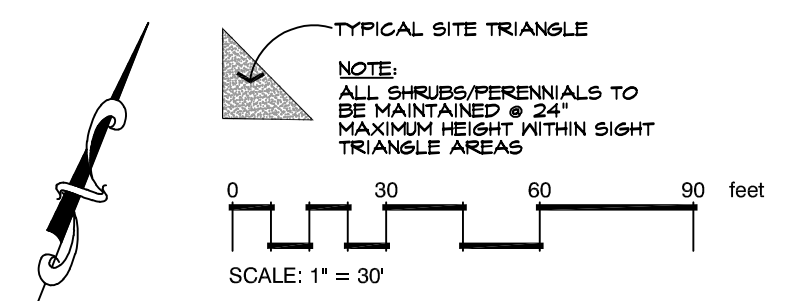
**PLANTING, WATER and MULCH REQUIREMENTS**

WATER AVAILABILITY	REQUIRED PLANTING PERIOD	MINIMUM CONTAINER SIZE	WATER REQUIREMENT FIRST 3 WEEKS	WATER REQUIREMENT AFTER 3 WEEKS	MAXIMUM MULCH DEPTH
NO AVAILABILITY TO WATER AFTER	LATE FEB. - APRIL ONLY	2.25'x3.75' OR LARGER	WATER EACH PLUG IMMEDIATELY		1.5" FOR PLUGS
MANUAL WATERING WITH STANDARD SPRINKLER	LATE FEB. - EARLY JUNE or SEPT. - OCTOBER	4.5'x5 OR" LARGER IN SUMMER & FALL	1" (60 MIN) EVERY 4 DAYS	1" (60 MIN) EVERY 7 DAYS UNTIL PLANTS ESTABLISHED	1.5" FOR PLUGS 2.5" FOR QUARTS
AUTOMATIC IRRIGATION (WATER MORE FREQUENTLY THAN NORMAL DURING FIRST TWO MONTHS AFTER PLANTING)	LATE FEB. - EARLY OCTOBER	2.25'x3.75' OR LARGER 4.5'x5 OR" LARGER IN SUMMER & FALL	1" (60 MIN) EVERY 4 DAYS IN SPRING AND FALL 1" (60 MIN) EVERY 3 DAYS IN SUMMER	1" (60 MIN) EVERY 7 DAYS UNTIL PLANTS ESTABLISHED	1.5" FOR PLUGS 2.5" FOR QUARTS

CONTRACTOR TO PROVIDE SIGNED AND SEALED SHOP DRAWINGS TO BE APPROVED BY THE PROJECT ENGINEER AND MSD. CONTACT MSD AT 314-955-2072.



**NOTE:**  
THE HIGH-WATER MARK IN THE BIO-RETENTION AREAS IS 444.67;  
THE NORMAL POOL AT THE LAKE IS 437.00



**UNDERGROUND UTILITIES AND OSHA SAFETY NOTE:**  
Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction. All O.S.H.A. rules and regulations established for the type of construction required by these plans shall be strictly followed (ie. trenching, blasting, etc.)

**CALL BEFORE YOU DIG!**  
1-800-DIG-RITE

REVISIONS BY

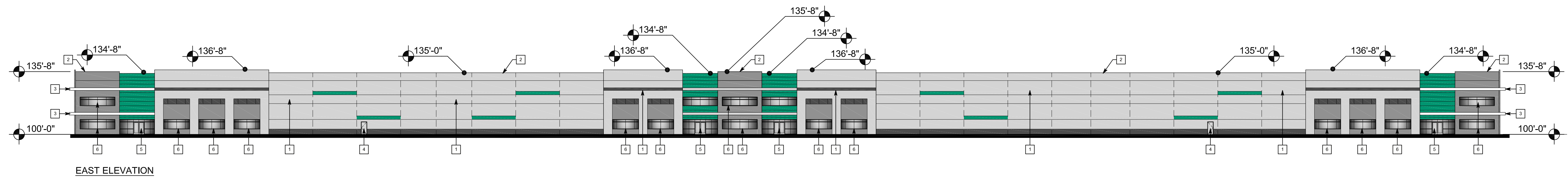
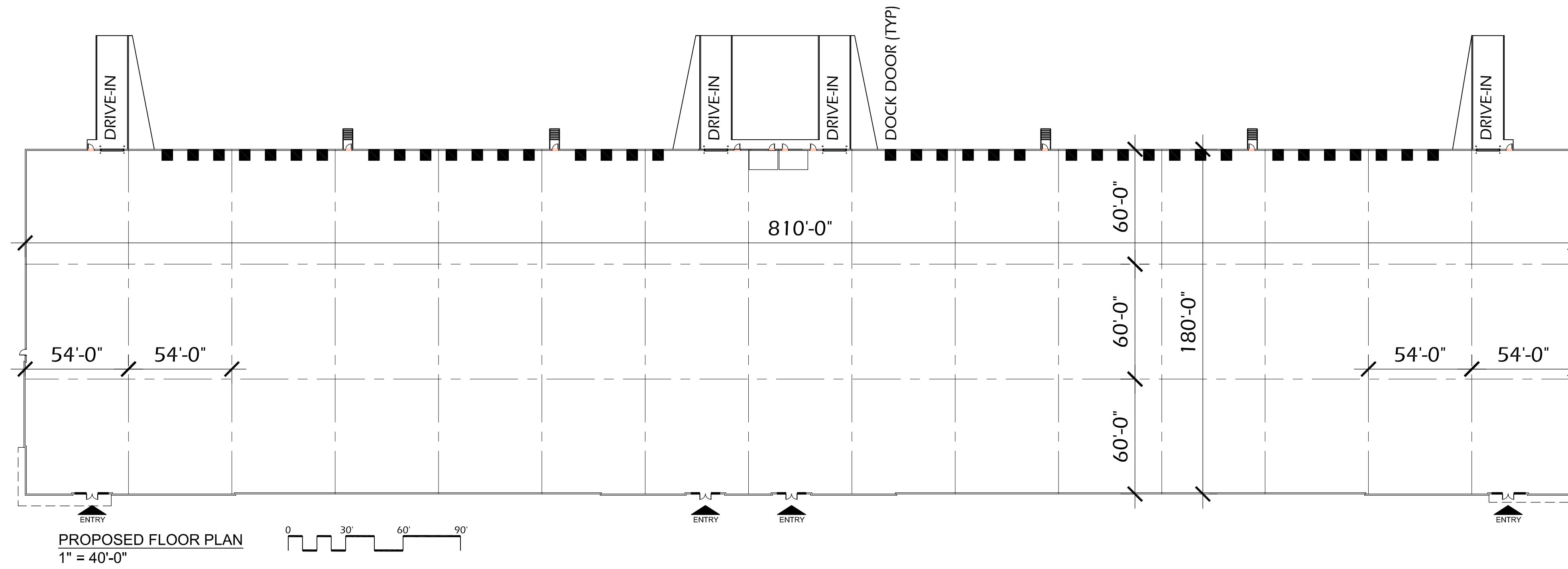

**LANDSCAPE TECHNOLOGIES**  
117 Jacobs Center Drive  
St. Charles, Missouri 63304  
Phone: (636) 922-4593

REGISTERED ARCHITECT  
MARDIS NUMBER 019  
DATE: 5/16/2023

RANDALL K. MARDIS  
MISSOURI LANDSCAPE ARCHITECT #000019  
DATE: 5/16/2023

**PLANTING PLAN FOR THE PROPOSED Maryland Park Industrial Development MARYLAND HEIGHTS, MISSOURI**

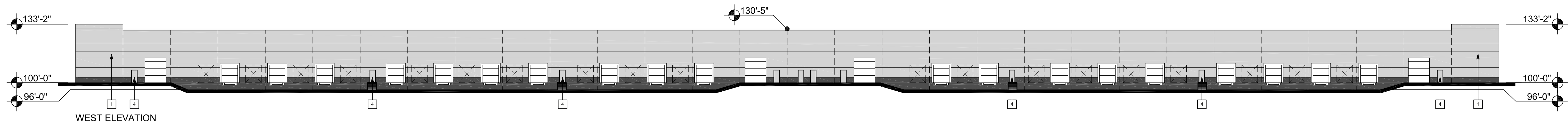
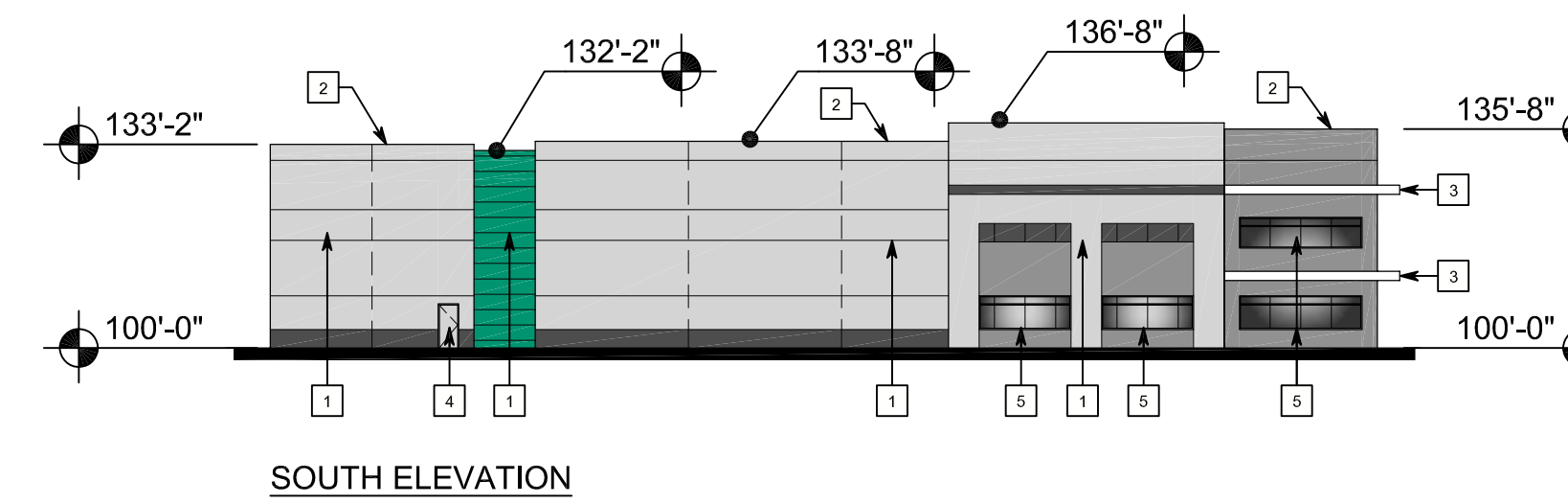
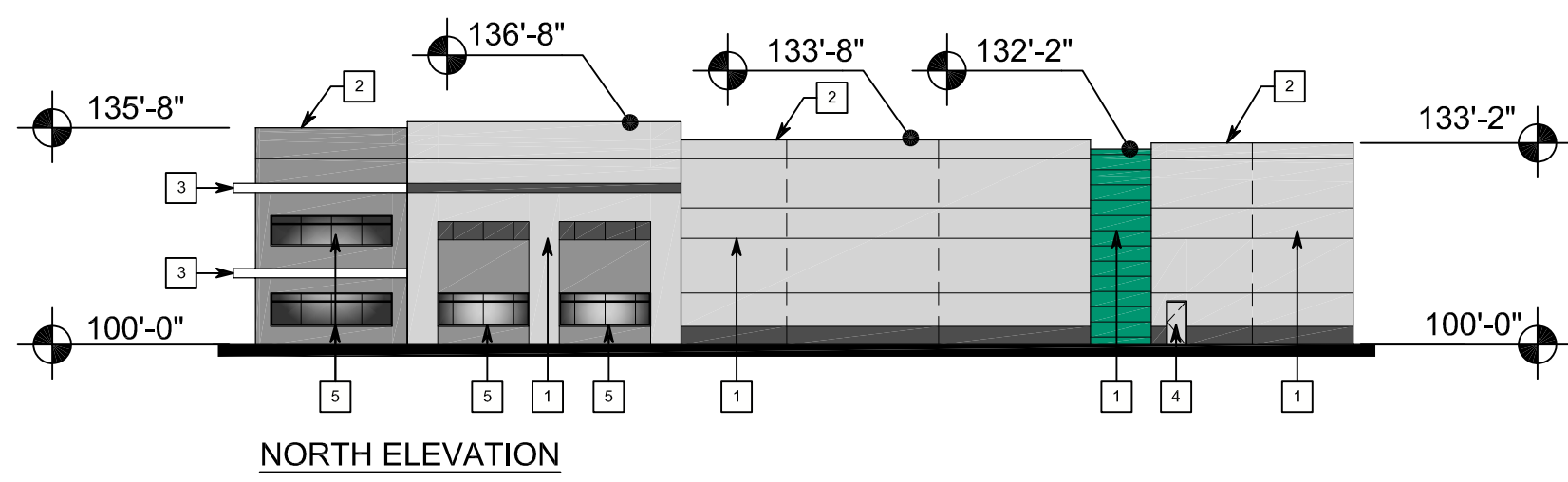
DRAWN	R. MARDIS
CHECKED	RAMMEL
DATE	5/16/2023
SCALE	1"=30'-0"
JOB NO.	2023-110
SHEET	

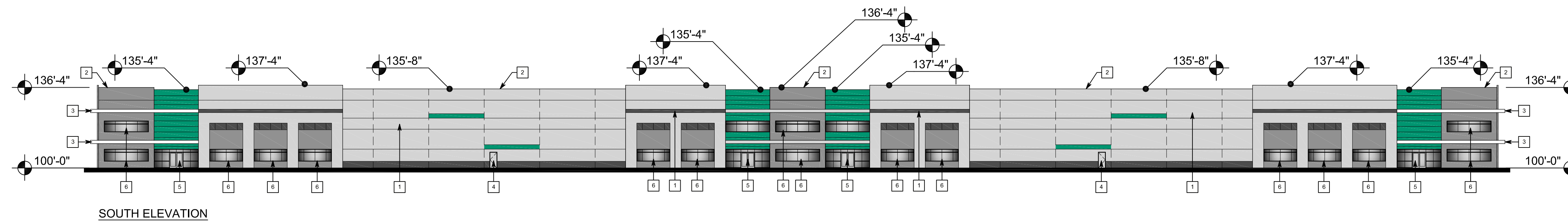
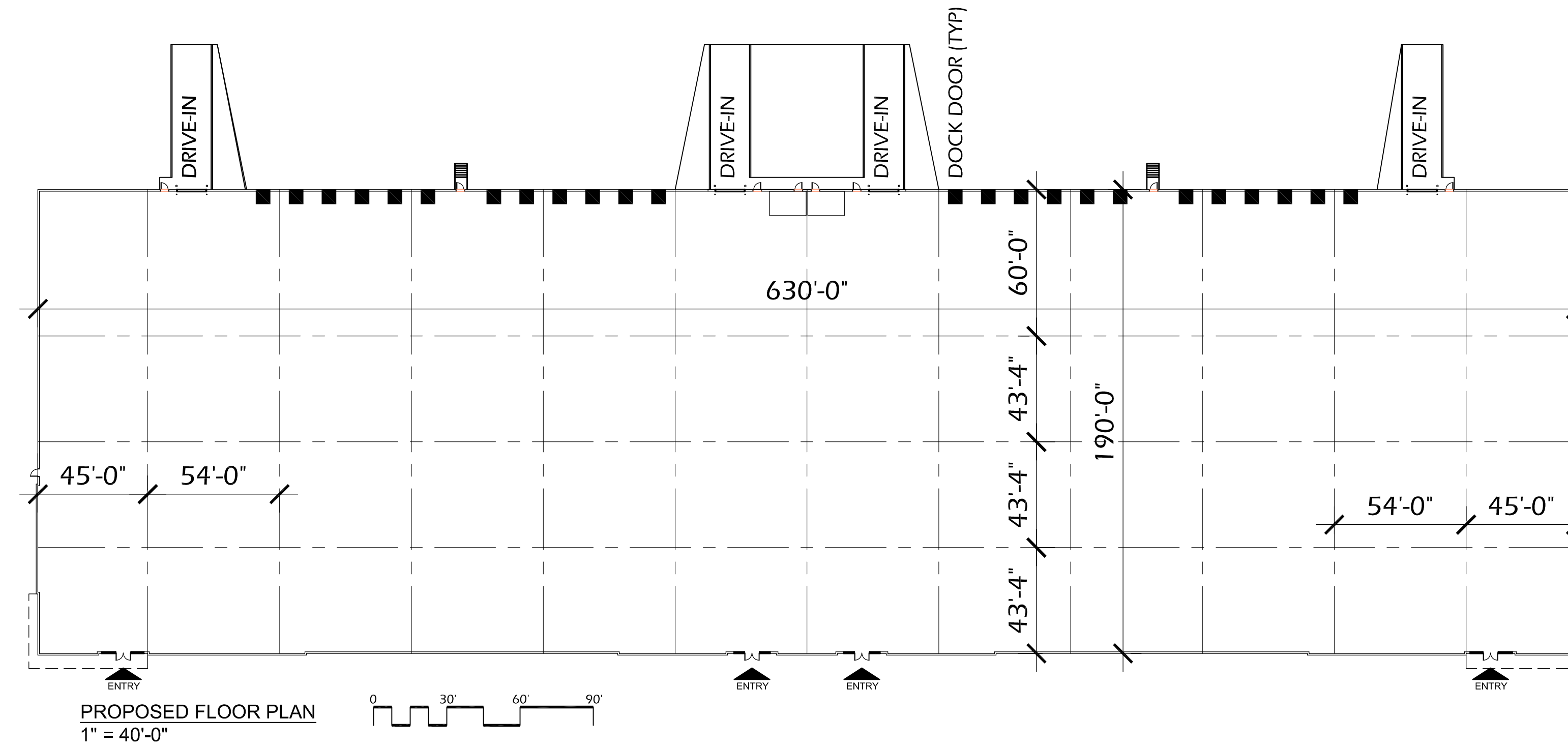


ELEVATION KEYNOTES	
1	TEXTURED PAINTED CONCRETE PANELS - COLOR LEGEND
2	PREFINISHED ALUMINUM COPING CAP - MATCH PAINT
3	PREFABRICATE ALUMINUM CANOPY
4	HM MAN DOOR & FRAME - MATCH ADJ PAINT
5	STOREFRONT ENTRY - CLEAR ANODIZED ALUMINUM
6	GLAZING - CLEAR W/ LOW-E COATING

PAINT COLOR LEGEND	
[Light Gray Box]	FIELD COLOR - SW 7072 - ONLINE
[Medium Gray Box]	ACCENT GRAY - SW 7067 - CITYSCAPE
[Dark Gray Box]	ACCENT DARK GRAY - SW 7069 - IRON ORE
[Green Box]	ACCENT BLUE - GREEN - BG2



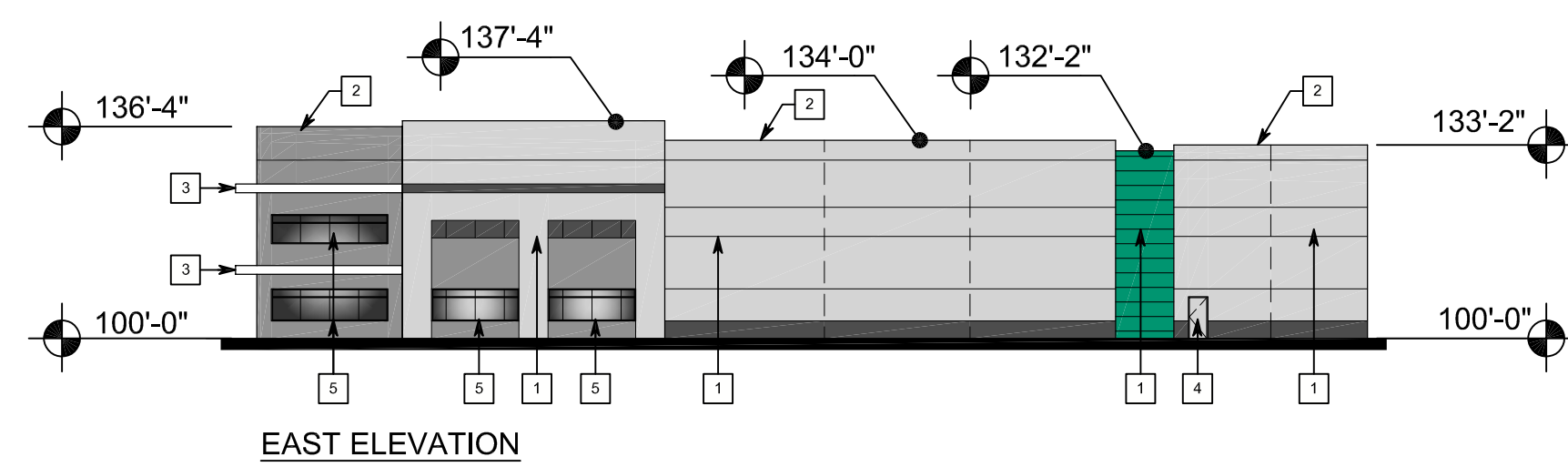


SOUTH ELEVATION

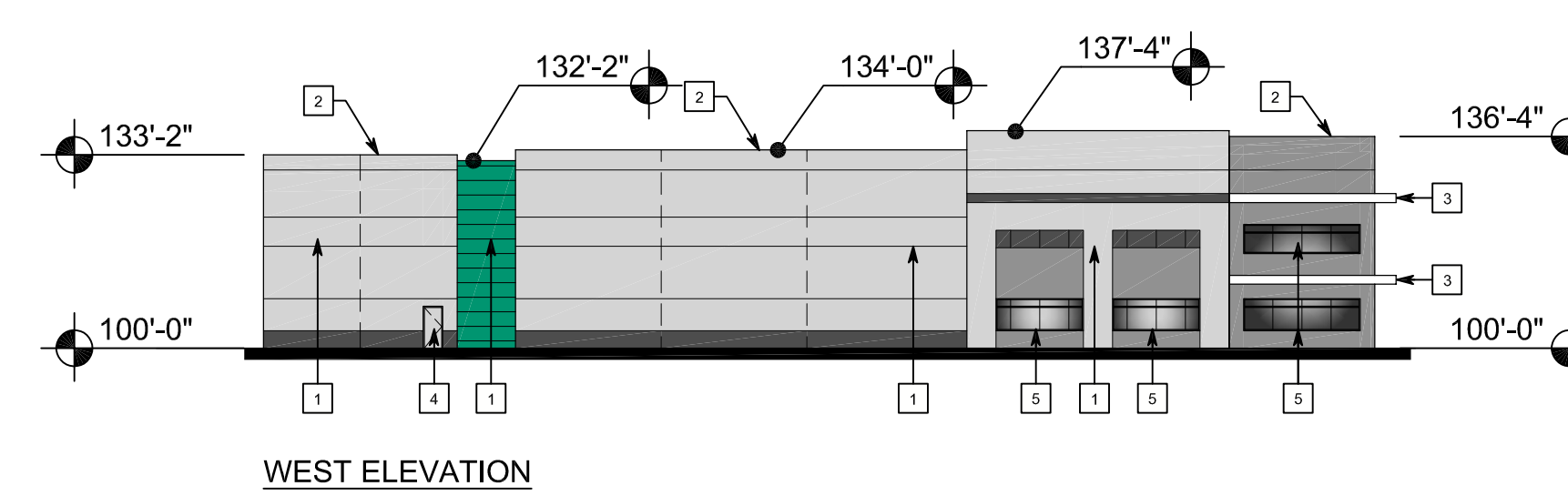
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2	PREFINISHED ALUMINUM CORING CAP - MATCH PAINT
3	PREFABRICATE ALUMINUM CANOPY
4	HM MAN DOOR & FRAME - MATCH ADJ PAINT
5	STOREFRONT ENTRY - CLEAR ANODIZED ALUMINUM
6	GLAZING - CLEAR W/ LOW-E COATING

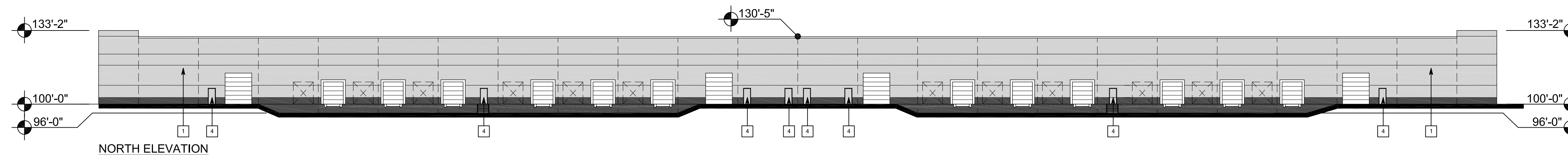
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<span style="display:inline-block; width:15px; height:10px; background-color:#808080;"></span>	ACCENT GRAY - SW 7067 - CITYSCAPE
<span style="display:inline-block; width:15px; height:10px; background-color:#444444;"></span>	ACCENT DARK GRAY - SW 7069 - IRON ORE
<span style="display:inline-block; width:15px; height:10px; background-color:#008080;"></span>	ACCENT BLUE - GREEN - BG2



EAST ELEVATION



WEST ELEVATION



NORTH ELEVATION



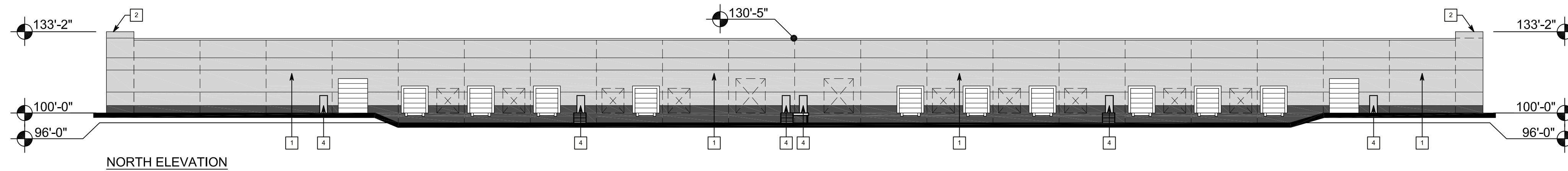
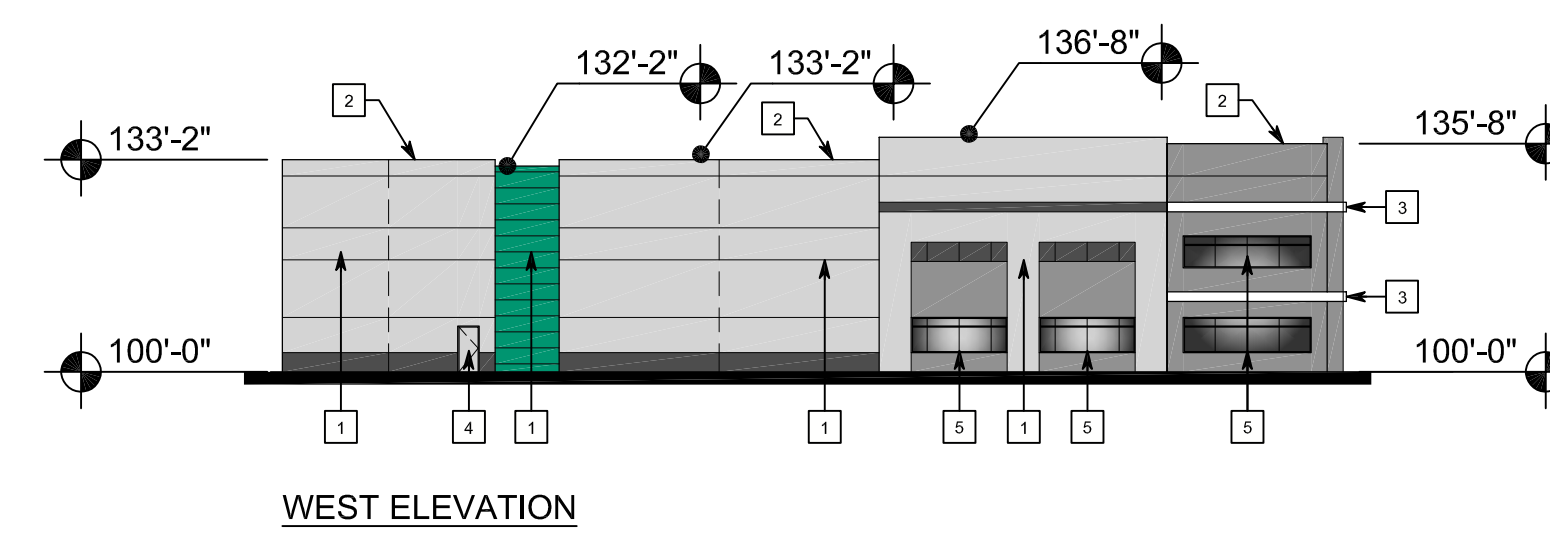
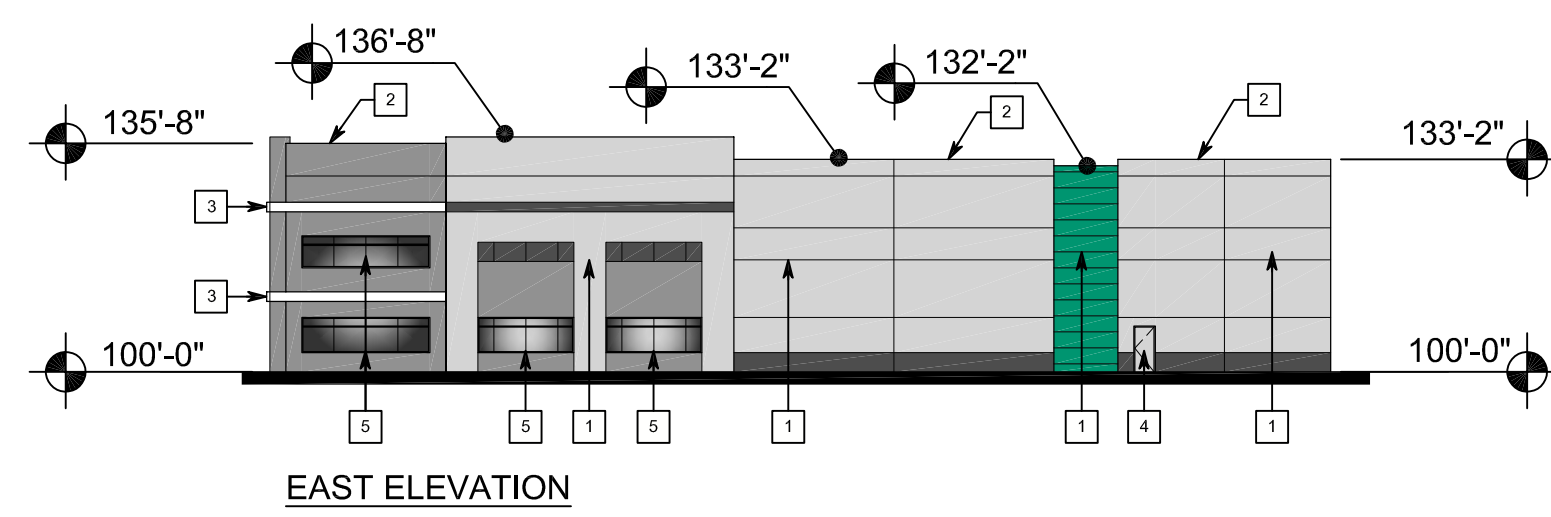
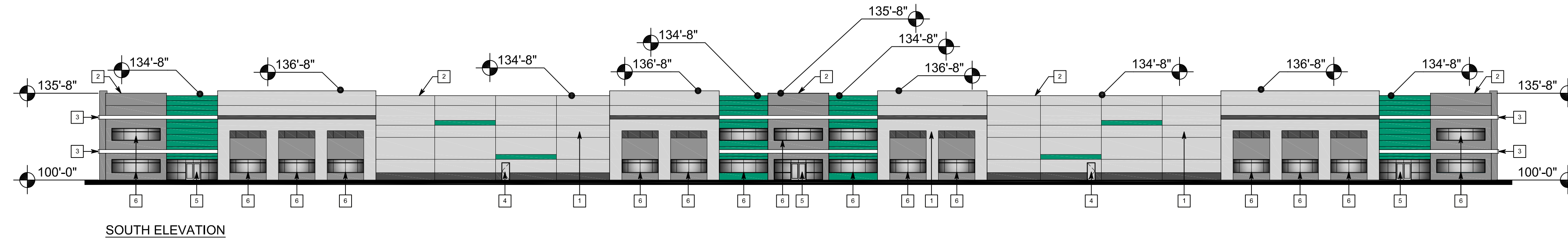
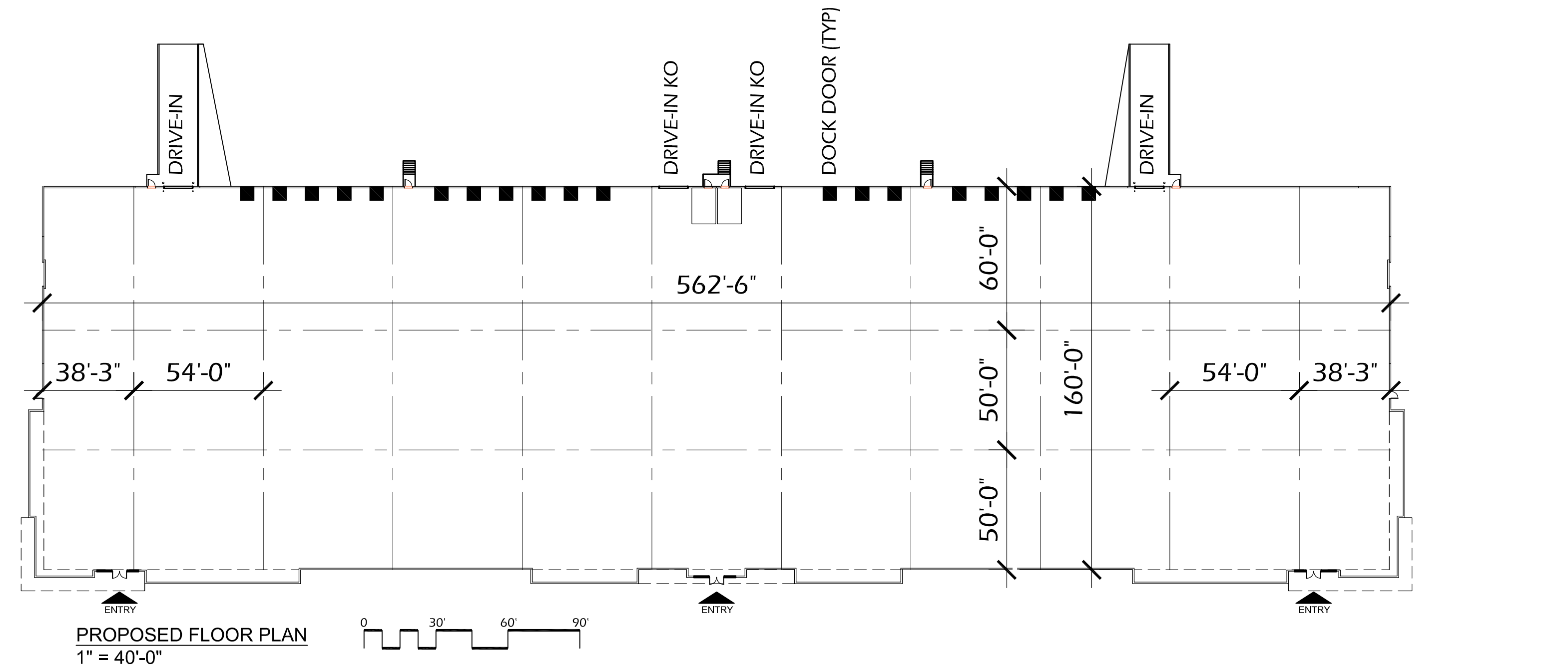
# A.2

## CONCEPTUAL ELEVATIONS - BLDG B

SCALE : 1" = 30'-0"







ELEVATION KEYNOTES	
1	TEXTURED PAINTED CONCRETE PANELS - COLOR LEGEND
2	PREFINISHED ALUMINUM COPING CAP - MATCH PAINT
3	PREFABRICATE ALUMINUM CANOPY
4	HM MAN DOOR & FRAME - MATCH ADJ PAINT
5	STOREFRONT ENTRY - CLEAR ANODIZED ALUMINUM
6	GLAZING - CLEAR W/ LOW-E COATING

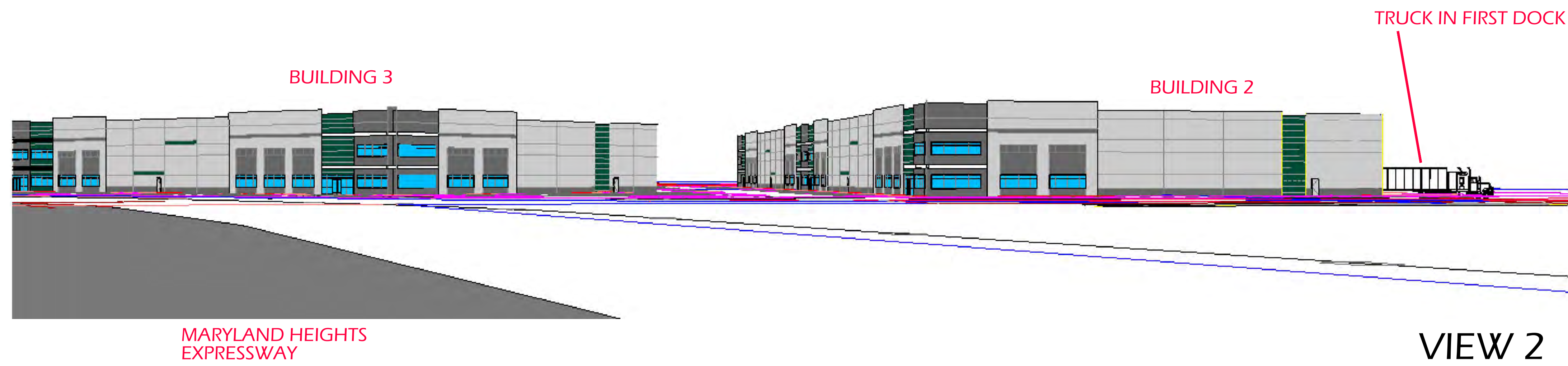
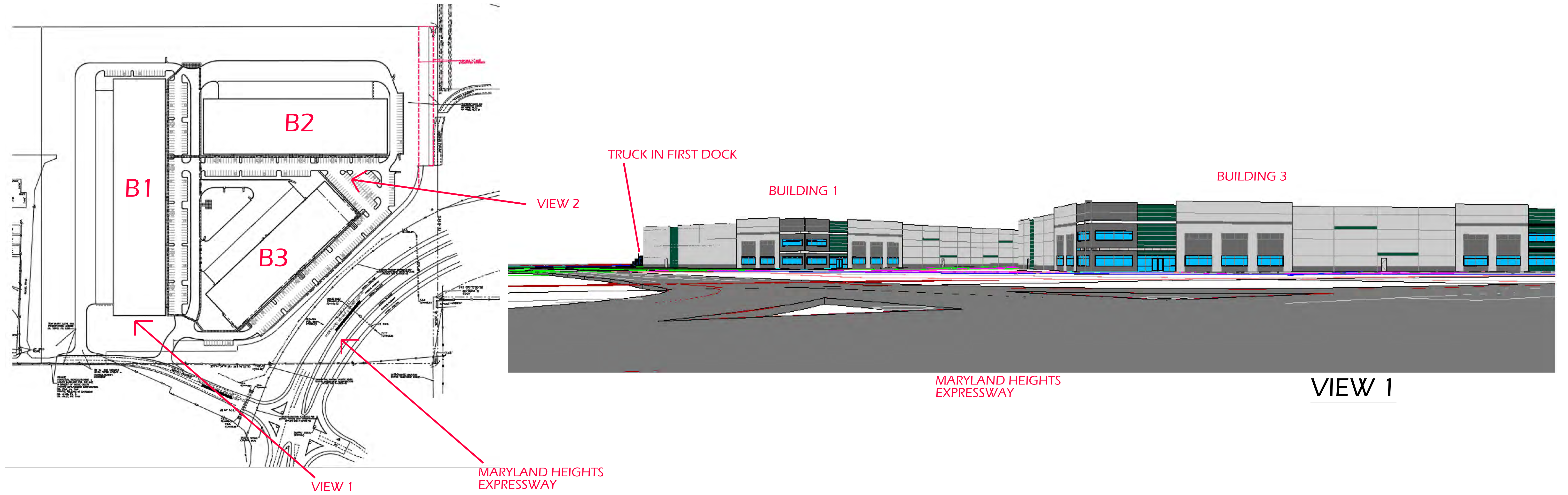
PAINT COLOR LEGEND	
[Light Gray Box]	FIELD COLOR - SW 7072 - ONLINE
[Medium Gray Box]	ACCENT GRAY - SW 7067 - CITYSCAPE
[Dark Gray Box]	ACCENT DARK GRAY - SW 7069 - IRON ORE
[Green Box]	ACCENT BLUE - GREEN - BQ2



A.3

CONCEPTUAL ELEVATIONS - BLDG C  
SCALE : 1" = 30'-0"





A.4

LINE OF SIGHT  
SCALE : N.T.S.

