CITY OF WEST DES MOINES
STAFF REPORT COMMUNICATION

Meeting Date: February 19, 2024

ITEM: Microsoft DSM 16, 1475 SE Maffitt Lake Road – Approve Major Modification to Site Plan to allow construction of a data center building – Microsoft Corporation – MaM-006298-2024

Resolution: Approval of Major Modification to Site Plan

Background: Bryan Dickerson with Navix Engineering, on behalf of the applicant and property owner, Microsoft Corporation, requests approval of the Major Modification to Site Plan for the approximately 124-acre property located at 1475 SE Maffitt Lake Road. The applicant proposes to construct an approximately 245,000 square foot data center building with associated parking lot.

Staff Review & Comment:

- *Financial Impact:* As part of the development agreement for this site, the City reconstructed and paved SE County Line Road from SE Soteria Avenue to Veterans Parkway with a pedestrian underpass on the Great Western Trail. As part of the street project, a water main was extended the full length of the street and a water main was installed from SE County Line Road up SE Soteria to former SE Maffitt Lake Road. The City installed a trail and streetlights on SE Soteria Avenue and a trail and streetlights on the north side of SE County Line Road. Previously constructed SE Maffitt Lake Road between Veterans Pkwy and SE Soteria Ave was removed and the right of way for SE Maffitt Lake Road vacated and obtained by the applicant.

- *History:* The Preliminary Plat for this site (Ginger East) was approved by the Planning and Zoning Commission on June 14, 2021, and the City Council on June 21, 2021. The Final Plat was approved by the City Council on September 7, 2021. The first data center building on this site (DSM 14) was approved by the City Council on September 20, 2021. The second data center building (DSM 15) was approved by the City Council on May 1, 2023, and is currently under construction. A total of 5 data center buildings are anticipated for this site. These buildings were noted on the preliminary plat and the site plan for the first building (DSM 14) and the successive buildings have been consistent with these approved plans in placement, size, and exterior design.

- *Key Development Aspects:*
    1. The applicant is proposing to reduce the number of landscape islands and only plant shrubs within the landscape islands in the parking lot instead of the required trees due to security concerns. Also, instead of planting grass, the applicant is proposing to install gravel in areas around the parking lot and buildings where access to utility structures for maintenance purposes is necessary. Grass will be planted between the main north/south access road and the parking lot. These changes were discussed with the Development & Planning Subcommittee as part of the requested approval of DSM 15 and was a compromise between the operational concerns and the code required landscaping. The City Council supported this approach as part of the site plan approval of DSM 15, which is the building directly north of this proposed data center building. The applicant has placed the required parking lot trees in the buffer areas surrounding the site. The areas of gravel in lieu of vegetation around the building's utility structures are screened from public view by the landscape buffer around the site. Staff believes these changes proposed to the landscaping on the site plan meet the intent of the code and are a reasonable accommodation for the specific operational requirements of this project. Recommended conditions of approval that these alternative methods be approved by the City Council have been added.

- *Traffic Impact Study Findings:* No traffic study was required of this Major Modification to Site Plan since a traffic study was already completed for this entire site, including the proposed building. Any modifications to surrounding streets required of the traffic study have been completed.

- *Development & Planning Subcommittee:* On December 19, 2022, the Development & Planning City Council Subcommittee discussed the use of gravel in and around the proposed parking lot and the omission of trees within the landscape islands in the parking lot for this site. The Subcommittee members were supportive of allowing shrubs to replace trees in the parking area in light of security concerns as presented by Microsoft's representative, waiving required landscape islands in the parking areas, and allowing partial use of gravel or paving near utilities for maintenance purposes while requiring the incorporation of vegetation to comply with code for the bulk of the landscaped areas adjacent to parking lots and any area visible from the perimeter of the site.

- *Vesting of Entitlement:* Per City Code, entitlement (approval to construct or implement) shall remain in effect so long as substantial site work has progressed beyond grading and completion of structural foundations and twenty-five percent (25%) of the total building area has occurred above grade within twenty-four (24) months of the effective date of the approval, unless a greater time period is authorized at time of the original entitlement, or by approval of an extension of the original entitlement. It is the responsibility of the developer to be aware of this deadline and request an extension of the approval prior to the expiration date.

Outstanding Issues: There are no outstanding issues.

Planning and Zoning Commission Action:

Date:	February 12, 2024
Vote:	5-0 for approval, with Commissioners Conlin and McCoy absent
Recommendation:	Approve the Major Modification to Site Plan

Recommendation: Approve the Major Modification to Site Plan request, subject to the applicant meeting all City Code requirements, and the following conditions of approval:

1. The City Council agreeing to not require landscape islands in the parking lot as required by City Code due to security concerns with trees in the parking lot. The applicant shall however add the required parking lot trees to the buffer plantings.

2. The City Council allowing shrubs in lieu of trees to be planted within parking lot islands due to security concerns with trees in the parking lot. The applicant shall however add the required parking lot trees to the buffer plantings.

3. The City Council allowing gravel to be implemented around industrial buildings on the site to allow access to utility structures for maintenance purposes.

Lead Staff Member: Brian Portz

Approval Meeting Dates:

Planning and Zoning Commission	February 12, 2024
City Council	February 19, 2024

Staff Report Reviews:

Planning & Zoning Commission	☒ Development Coordinator (or) ☒ Director	☒ Legal Department
City Council	☒ Director ☐ Appropriations/Finance	☒ Legal Department ☒ Agenda Acceptance

Publications (if applicable)

Published In:	Des Moines Register Community Section
Date(s) Published	n/a
Date(s) of Mailed Notices	n/a

Council Subcommittee Review (if applicable)

Subcommittee	Development & Planning
Date Reviewed	December 19, 2022 & February 5, 2024
Recommendation	☒ Yes ☐ No ☐ Split

Location Map

Vicinity Map – Land Uses

A RESOLUTION OF THE PLANNING AND ZONING COMMISSION

NO. PZC-24-005

WHEREAS, pursuant to the provisions of Title 9, Zoning of the West Des Moines Municipal Code, the applicant and property owner, Microsoft Corporation, request approval of the Major Modification to Site Plan for the approximately 124-acre property located at 1475 SE Maffitt Lake Road as depicted on the location map included in the staff report. The applicant requests approval to construct a 245,000 square foot data center building, and associated site improvements; and

WHEREAS, the Major Modification to Site Plan request complies with the findings stated in the applicable provisions of Title 9, the Comprehensive Plan and City Code.

NOW THEREFORE, the Planning and Zoning Commission of the City of West Des Moines recommends the City Council approve the Major Modification to Site Plan (MaM-006298-2024), subject to compliance with all the conditions of approval as stated in the staff report, including conditions added at the meeting, and attached hereto as Exhibit "A", if applicable.

PASSED AND ADOPTED on February 12, 2024.

Tina Shaw, Vice Chair
Planning and Zoning Commission

I HEREBY CERTIFY that the foregoing resolution was duly adopted by the Planning and Zoning Commission of the City of West Des Moines, Iowa, at a regular meeting on February 12, 2024, by the following vote:

AYES: Costa, Crowley, Davis, Hatfield, Shaw

NAYS:

ABSTENTIONS:

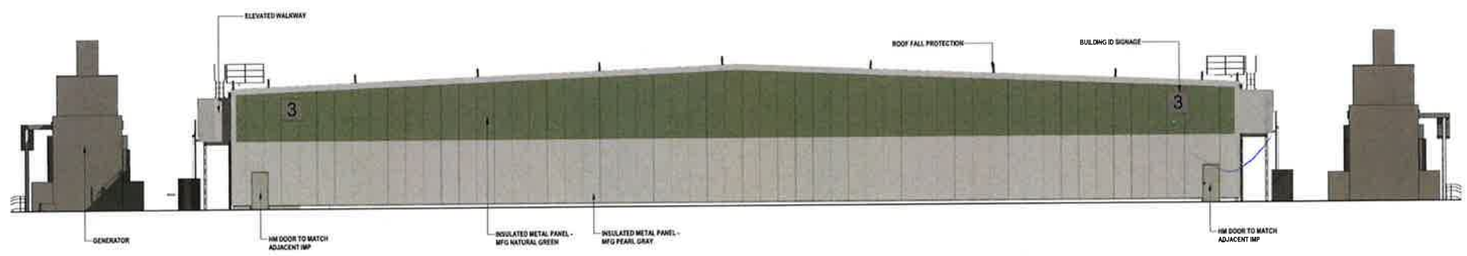
ABSENT: Conlin, McCoy

ATTEST:

Recording Secretary

PLANS INCLUDED ARE FOR ILLUSTRATIVE PURPOSES ONLY – APPROVED PLANS ON FILE WITH THE CITY

1 ARCHITECTURAL EXTERIOR ELEVATION - WEST
1" = 10'-0"



2 ARCHITECTURAL EXTERIOR ELEVATION - EAST
1" = 10'-0"

9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

Microsoft

DSM16
DATA CENTER
1475 SE MAFFIT LAKE ROAD
WEST DES MOINES, IA

Design BA
Drawn BP/MHE
Checked Checker
Date
BMcD Project No. 15361
M.S. Project No. F 20043

MICROSOFT
Design Manager JON NYORE
Lead Manager
Civil, Site Survey, Landscaping Technical Lead SONDWIP DHAR
Architectural & Structural Technical Lead LISA GALLANT / DAVID SIRANSON
Mech, Plumbing & Fire Protection Technical Lead STEVE TOURIN
Building Automation Systems (BAS) Technical Lead TYLER DIMARTINO
Electrical Technical Lead ANAGA KRISHNAN
Electrical Power Management Technical Lead SERGIO FRANCO
Telecommunications / Network Technical Lead MATT BENSON
Security Design Manager DANIEL PUTMAN

DESIGN TEAM
Civil Engineering Lead PAUL MANZER / NAVIX ENGINEERING
Structural Engineering Lead BAYAM JOMAL / BM&D
Architectural Lead NEAL CLEMENTS / BM&D
Mechanical Engineering Lead DUSTIN BREMNER / BM&D
Plumbing Engineering Lead ALEXANDER PLUM / BM&D
Fire Protection Engineering Lead ADAM DEGROFF / BM&D
AVE Engineering Lead DUSTIN BREMNER / BM&D
Electrical Engineering Lead JASON PHAM / BM&D
Telecommunications / Network Engineering Lead JOSHUA WUTHRICH / BM&D
Security Systems Engineering Lead MONICA BARBAT / INTROBA

Revisions

No.	Date	Description

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Package
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ARCHITECTURAL RENDERED EXTERIOR ELEVATIONS

DSM16-1

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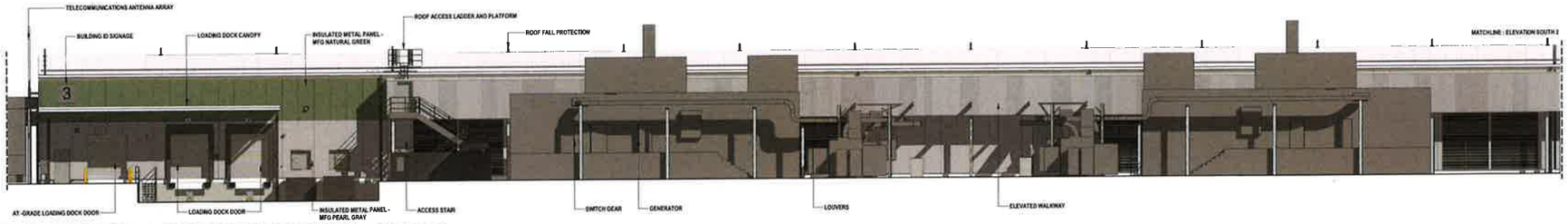

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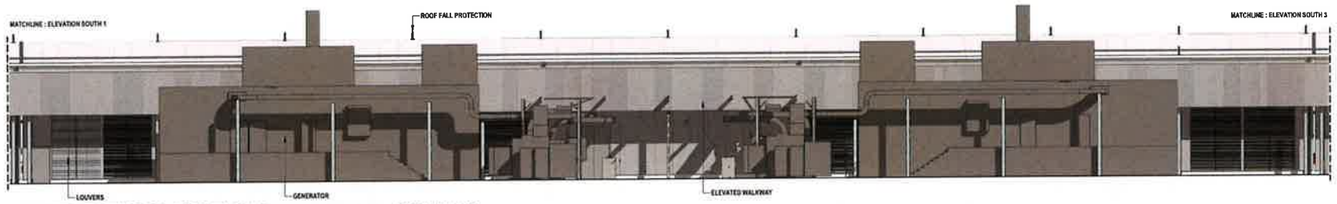
1" = 10'-0"



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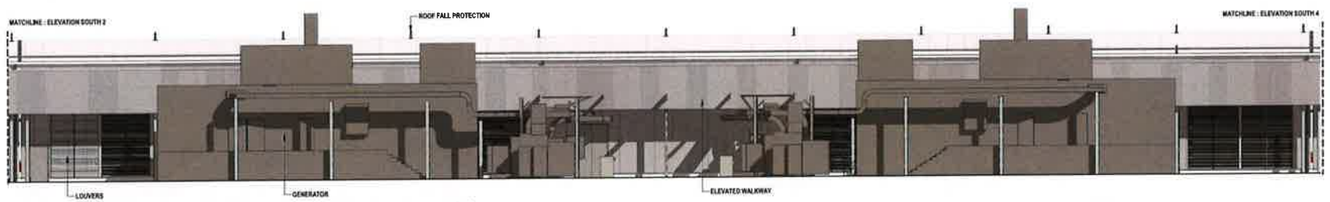

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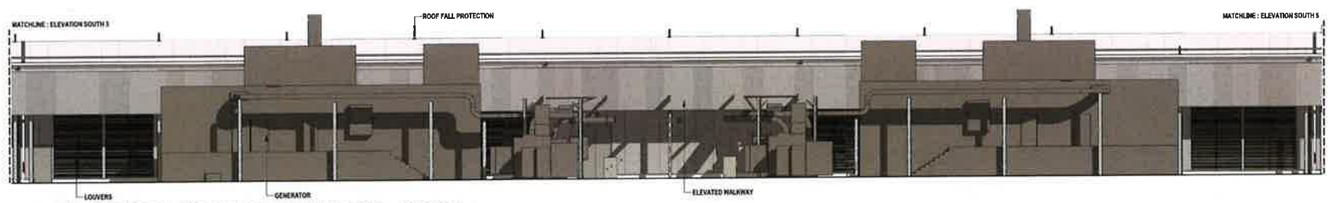

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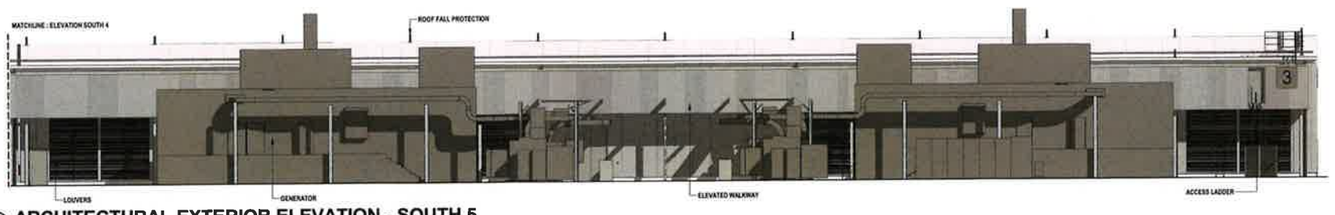

5 ARCHITECTURAL EXTERIOR ELEVATION - SOUTH 5
1" = 10'-0"

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

Microsoft

DSM16
DATA CENTER
1475 SE MAFFIT LAKE ROAD
WEST DES MOINES, IA

Design: XX
Drawn: MPWR
Checked: Checker
Date:
BMcD Project No: P. 142861
M.S. Project No: P. 30943

MICROSOFT
Design Manager: JON NYCINE
Lead Manager:
Civil Site Survey Landscaping Technical Lead: SONDRAP DHAR
Architectural & Structural Technical Lead: LISA GALLANT / DAVID SWANSON
Mech. Plumbing & Fire Protection Technical Lead: STEVE TOUPIN
Building Automation Systems (BAS) Technical Lead: TYLER DIMARTINO
Electrical Technical Lead: ANAGA KRISHNAN
Electrical Power Management Systems (EPMS) Technical Lead: SERGIO FRANCO
Telecommunications / Network Technical Lead: MATT BENSON
Security Design Manager: DANIEL PUTMAN

DESIGN TEAM
Civil Engineering Lead: PAUL MANZER / NAVIX ENGINEERING
Structural Engineering Lead: BRYAN JEMAL / BM&D
Architectural Lead: NEAL CLEMENTS / BM&D
Mechanical Engineering Lead: DUSTIN BREMNER / BM&D
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Security Systems Engineering Lead: MIRCEA BARBAT / INTROBA

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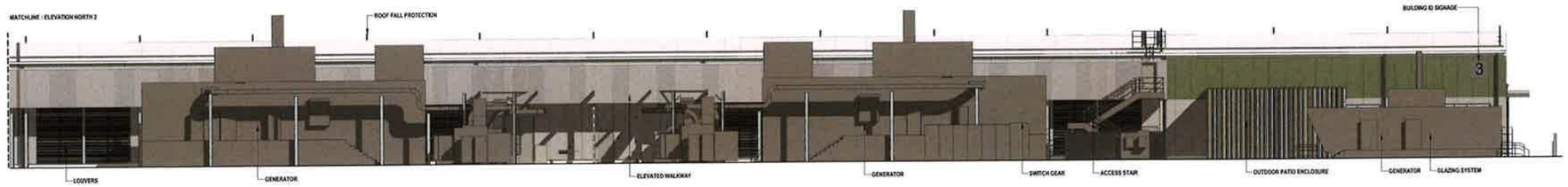

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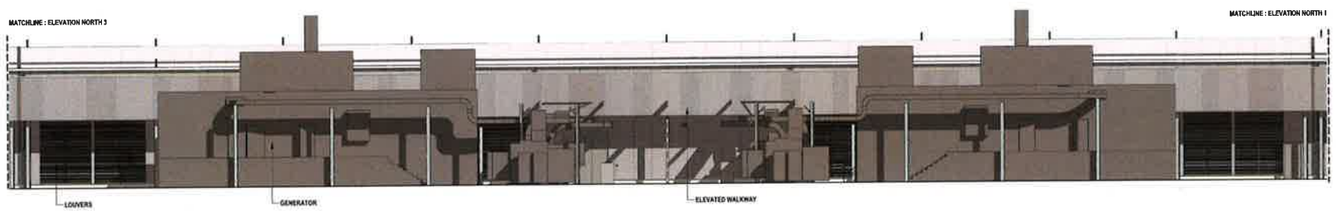

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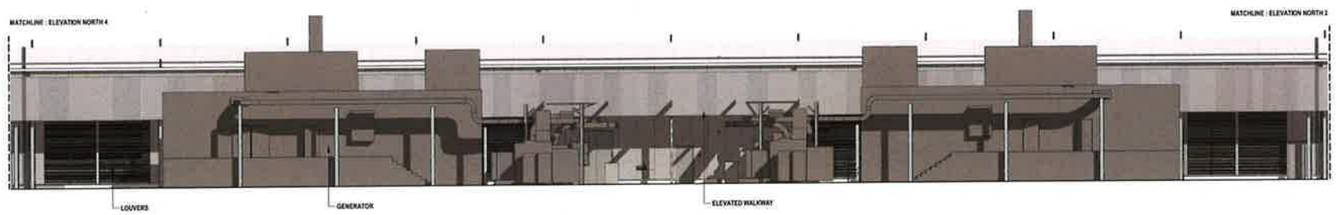

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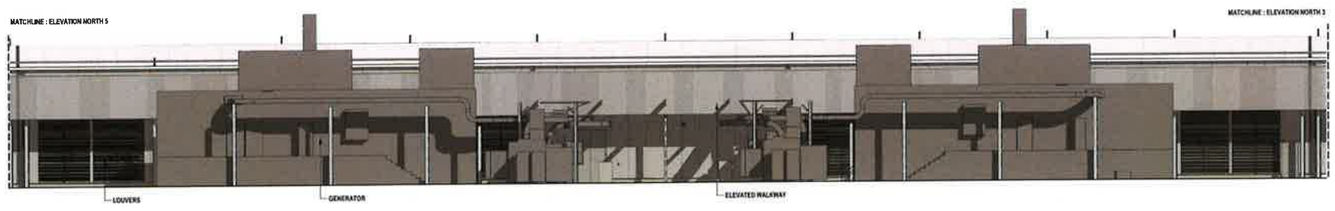

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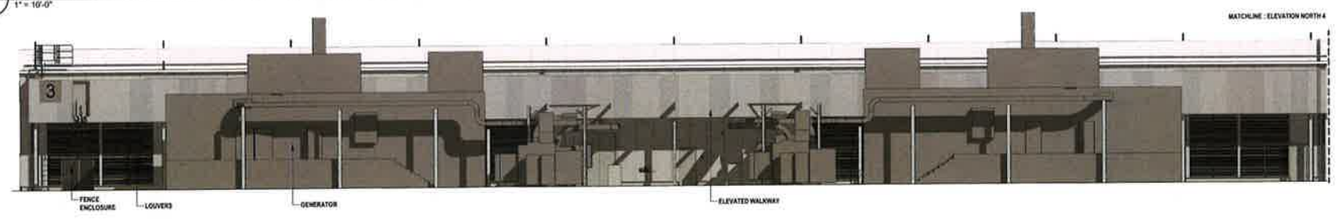

5 ARCHITECTURAL EXTERIOR ELEVATIONS - NORTH 5

1" = 10'-0"

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Microsoft

DSM16
DATA CENTER
1475 SE MAFFIT LAKE ROAD
WEST DES MOINES, IA

Design: SK
Drawn: WHHE
Checked: Checker
Date:
BMcD Project No. P-103861
M.S. Project No. P-20843

MICROSOFT

Design Manager: JON NYONG
Lead Manager:
Civil Site Survey Landscaping Technical Lead: SONDWIP DHAR
Architectural & Structural Technical Lead: LISA GALLANT / DAVID SIVANSON
Mech Plumbing & Fire Protection Technical Lead: STEVE TOUPIN
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GENERAL NOTES - STORM SHELTER

A. REFER TO A-A SERIES FOR GENERAL NOTES, SYMBOL LEGENDS, ABBREVIATIONS, AND MOUNTING HEIGHTS.

B. SEE SITE PLAN / CIVIL DRAWINGS FOR ORIENTATION.

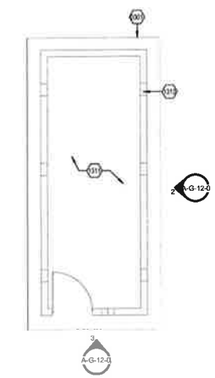
C. STORM SHELTER IS DELEGATED DESIGN. SEE SPECIFICATIONS 10 34 33 FABRICATED STORM SHELTER.

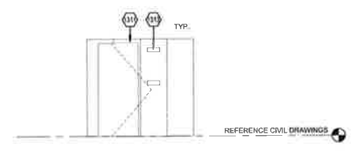
D. CONTRACTOR TO COORDINATE STRUCTURAL PAD, CIVIL GRADES, TELECOM SERVICE, LIGHTNING PROTECTION, AND ROUGH-INS TO STORM SHELTER. SEE CIVIL, STRUCTURAL, ELECTRICAL, AND TELECOM.

E. STORM SHELTER FINISH TO MATCH LOWER ADMIN PEMB COLOR AS APPROVED BY AE VIA SUMBITTAL.

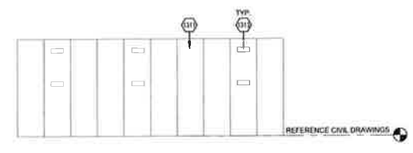
KEYED NOTES

0301 CONCRETE SLAB. REF STRUCTURAL
1311 PREFABRICATED STORM SHELTER
1313 STORM SHELTER AIR VENT W/ COVER

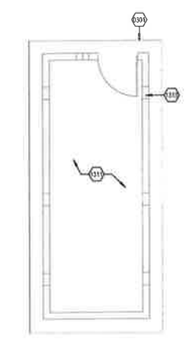




3 ELEVATION - STORM SHELTER - NORTH
1/4" = 1'-0"



2 ELEVATION - STORM SHELTER - WEST
1/4" = 1'-0"



1 PLAN - STORM SHELTER
1/4" = 1'-0"

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DSM16
DATA CENTER
1475 SE MAFFIT LAKE ROAD
WEST DES MOINES, IA

Design:	BK
Drawn:	BR/BHE
Checked:	NAC
Date:	26 JAN 2024
B&AD Project No:	P- 15361
M S Project No:	P- 70543

MICROSOFT

Design Manager	JOHN WYONE
Submit Manager	
Civil, Site Survey, Landscaping Technical Lead	SOMDWIP DHAR
Architectural & Structural Technical Lead	LISA GALLANT / DAVID SWANSON
Mech./Plumbing & Fire Protection Technical Lead	STEVE TOLPIN
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DESIGN TEAM

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Telecommunications / Network Engineering Lead	JOSHUA WUERMSER / B&AD
Security Systems Engineering Lead	MIRCEA BARBAT / INTROBA

Revisions

No	Date	Description
0	28 NOV 2023	50% IFR PACKAGE
1	29 DEC 2023	100% IFR PACKAGE
2	26 JAN 2024	ISSUE FOR PERMIT

Registration

LICENSED PROFESSIONAL ARCHITECT
NEAL A CLEMENTS
6761
IOWA

1-26-2024

Sector Key Plan

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ARCHITECTURAL - SITE - ENLARGED PLANS AND ELEVATIONS - STORM SHELTER

DSM16-A-G-12-0

A-G-12-0

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Microsoft

SITE PLAN PACKAGE
DSM16 DATA CENTER
WEST DES MOINES, IOWA 50265
CITY CASE #:MaM-006298-2024

VICINITY MAP
N.T.S.

OWNER/APPLICANT

MICROSOFT CORPORATION
ONE MICROSOFT WAY
REDMOND, WA 98052

CONSULTANTS

CIVIL:

NAVIX ENGINEERING
10135 SE SUNNYSIDE RD, SUITE 200
CLACKAMAS, OR 97015
(503) 659-2375
CONTACT: BRYAN DICKERSON / PAUL MANZER

CIVIL DESIGN ADVANTAGE, LLC
4121 NW URBANDALE DRIVE
URBANDALE, IA 50322
(515) 369-4400
CONTACT: RYAN HARDISTY

LANDSCAPE:

CIVIL DESIGN ADVANTAGE, LLC
4121 NW URBANDALE DRIVE
URBANDALE, IA 50322
(515) 369-4400
CONTACT: BOB GIBSON

SURVEYOR:

CIVIL DESIGN ADVANTAGE, LLC
4121 NW URBANDALE DRIVE
URBANDALE, IA 50322
(515) 369-4400
CONTACT: LOUIS KELHAN

ARCHITECT:

BURNS & MCDONNELL
530 W SPRING STREET
SUITE 200
COLUMBUS, OH 43215
(614) 453-7806
CONTACT: BONNIE KYLE

GEOTECH:

TERRACON CONSULTANTS
600 SW 7TH STREET, SUITE M
DES MOINES, IOWA 50309
(515) 244-3184
CONTACT: THEODORE BECHTUM

GOVERNING AGENCIES

REVIEW AGENCY:

CITY OF WEST DES MOINES
4200 MILLS CIVIC PARKWAY, SUITE 2D
WEST DES MOINES, IA 50265
(515) 222-3620
CONTACT: LYNNE TWEDT

FIRE DISTRICT:

CITY OF WEST DES MOINES
3421 ASHWORTH ROAD
WEST DES MOINES, IA 50265
(515) 222-3420
CONTACT: MIKE WHITSELL

UTILITIES

WATER:

WEST DES MOINES WATER WORKS
1505 RAILROAD AVENUE
WEST DES MOINES, IA 50265
(515) 222-3510
CONTACT: WILLIAM MABUCE

SANITARY SEWER:

CITY OF WEST DES MOINES
560 SOUTH 16TH STREET
WEST DES MOINES, IA 50265
(515) 222-3480
CONTACT: CLINT CARPENTER

BENCHMARK

BENCHMARK WDM-BM-132

CITY OF WDM STANDARD BENCHMARK LOCATED NEAR WESTBOUND IOWA HIGHWAY 5 BRIDGE OVER SOUTH 8TH STREET, 97 FEET SOUTHEAST OF CENTERLINE OF SOUTH 8TH STREET, 101 FEET NORTHEAST OF CENTERLINE OF WESTBOUND LANE IA-5, NORTH OF LOWER WALK PATH ON EAST SIDE OF SOUTH 8TH STREET.

ELEVATION = 959.19 (DATUM: NAVD 88, FEET)
ELEVATION = 185.18 (DATUM: WDM, FEET)

BENCHMARK WDM-BM-134

CITY OF WDM STANDARD BENCHMARK LOCATED LOCATED ON NORTH SIDE OF COUNTY LINE ROAD AT 45TH LANE, 5 FEET EAST OF CENTERLINE 45TH LANE, 25 FEET NORTH OF CENTERLINE OF COUNTY LINE ROAD, 3 FEET WEST OF POWER POLE.

ELEVATION = 939.28 (DATUM: CITY NAVD 88, FEET)
ELEVATION = 165.27 (DATUM: CITY WDM, FEET)

LEGAL DESCRIPTION

LOT 1, GINGER EAST PLAT 1, AN OFFICIAL PLAT IN THE CITY OF WEST DES MOINES, POLK COUNTY, IOWA

PROPERTY CONTAINS 124.20 ACRES (5,410,254 SQUARE FEET).

PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS OF RECORD.

SITE DATA (LOT 1)

TOTAL SITE AREA = 124.20 ± ACRES

EXISTING USE = LIGHT INDUSTRIAL (DATA CENTER)

PROPOSED USE = LIGHT INDUSTRIAL (DATA CENTER)

COMPREHENSIVE PLAN	INDUSTRIAL HIGH
ZONING	LIGHT INDUSTRIAL
MIN REQUIRED SETBACK:	30 FT

SITE AREA SUMMARY

EXISTING:	IMPERVIOUS	73.5 ACRES (3,119,572 SF) (57.9%) ±
	PERVIOUS	50.7 ACRES (2,210,580 SF) (40.8%) ±
PROPOSED:	IMPERVIOUS	80 ACRES (3,400,645 SF) (64.4%) ±
	PERVIOUS	44.2 ACRES (1,929,507) (35.6%) ±
TOTAL LAND AREA:		124.2 ACRES (3,531,890 SF) ±
OPEN SPACE AREA:	REQUIRED	18.42 ACRES (802,266 SF) (20% MIN) ±
	PROVIDED	62.66 ACRES (2,729,624 SF) (68.04%) ±

PARKING SUMMARY

DSM15:

TOTAL BUILDING AREA	= 244,676 SF ±
TOTAL ADMIN OFFICE / BUSINESS PROCESSING AREA	= 8,554 SF ±
MIN PARKING REQUIRED	= 30 SPACES (3.5 SPACES PER 1,000 SF)
PARKING PROVIDED	= 58 SPACES

GENERAL NOTES

1. SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE PROJECT SPECIFICATIONS AND THE CURRENT CITY OF WEST DES MOINES STANDARD SPECIFICATIONS FOR SUBDIVISIONS AND ADDENDUMS.
2. THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS. THIS PLAN DOES NOT REPRESENT A DETAILED FIELD SURVEY. THE EXISTING CONDITIONS SHOWN ON THIS PLAN SHEET ARE BASED UPON SURVEY PREPARED BY CIVIL DESIGN ADVANTAGE DATED 8/31/2020, THE DSM14 EARLY GRADING PLAN SET BY NAVIX DATED 03/17/2021, THE DSM14 SITE PLAN PACKAGE PLANS BY NAVIX DATED 01/22/2022, AND THE DSM15 ISSUE FOR CONSTRUCTION PACKAGE PLANS BY NAVIX DATED 05/05/2023. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED SITEWORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITEWORK WHICH WOULD BE AFFECTED. IF CONTRACTOR DOES NOT ACCEPT EXISTING SURVEY, INCLUDING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, HE SHALL HAVE MADE, AT HIS/HER OWN EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.
3. REFER TO GEOTECHNICAL REPORTS BY TERRACON, INCLUDING THE DSM14-INITIAL PHASE, DATED 10/2/2020, THE DSM15 REPORT, DATED 12/20/2022, AND THE DSM POND SLOPE STABILITY ANALYSIS, DATED 05/02/2023.
4. CAUTION - NOTICE TO CONTRACTOR
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, PRIOR PHASE DESIGN INFORMATION AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
5. ALL CONSTRUCTION WITHIN PUBLIC ROW/EASEMENTS, AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS SHALL COMPLY WITH THE WEST DES MOINES STANDARD CONSTRUCTION SPECIFICATIONS FOR SUBDIVISIONS, DSM METRO DESIGN STANDARDS, AND WDM ADDENDUMS.
6. AT LEAST ONE WEEK PRIOR TO ANY CONSTRUCTION WITHIN PUBLIC ROW/EASEMENTS AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, THE CONTRACTOR SHALL CONTACT THE WDM ENGINEERING SERVICES 515-222-3475 TO SCHEDULE ANY REQUIRED INSPECTIONS. IT IS IMPORTANT TO NOTE CITY APPROVAL OF THIS PLAN IS SUBJECT TO THE APPLICANT OBTAINING ALL NECESSARY EASEMENTS/ AGREEMENTS AND APPLICABLE PERMITS.
7. IN THE EVENT OF CONFLICTS BETWEEN THE VARIOUS PROVISIONS OF THIS PLAN SET, THE MORE STRINGENT PROVISION APPLY.

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DSM16-C-D2-01	CIVIL FINISHED GRADING PLAN OVERALL
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DSM16-C-E2-C03	CIVIL CLEAR WATER DISCHARGE AND SANITARY SEWER PLAN
DSM16-C-E2-C04	CIVIL CLEAR WATER DISCHARGE AND SANITARY SEWER PLAN
DSM16-C-E3-01	CIVIL WATER PROFILES
DSM16-C-E3-02	CIVIL WATER PROFILES
DSM16-C-E3-03	CIVIL WATER PROFILES
DSM16-C-E3-04	CIVIL WATER PROFILES
DSM16-C-F-01	CIVIL T.E.S.C. DETAILS
DSM16-C-F-02	CIVIL T.E.S.C. DETAILS
DSM16-C-F-10	CIVIL SITE DETAILS
DSM16-C-F-11	CIVIL SITE DETAILS
DSM16-C-F-12	CIVIL SITE DETAILS
DSM16-C-F-20	CIVIL SEWER DETAILS
DSM16-C-F-21	CIVIL SEWER DETAILS
DSM16-C-F-22	CIVIL SEWER DETAILS
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DSM16-L-A1-C02	LANDSCAPE PLAN

PAUL JEFFREY MANZER P18695 — LICENSED PROFESSIONAL ENGINEER — IOWA

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

PAUL JEFFREY MANZER, P.E. DATE

LICENSE NUMBER P18695
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2025
PAGES OR SHEETS COVERED BY THIS SEAL:
APPLIES TO SHEETS NOTED ABOVE EXCEPT LANDSCAPE SHEETS (DSM16-L-A1-XX)

IOWA ONE CALL AT 811 OR
1-800-292-8989
CONTRACTORS WEB TICKET ENTRY

811

CITY OF WEST DES MOINES
APPROVED BY: DATE:

NAVIX
10135 s.e. sunnyside road suite 200 clackamas, or 97015
t 503 659 9500 f 503 659 2375 www.navixeng.com

BURNS McDONNELL
8400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

Civil Design Advantage
4121 NW Urbandale Drive
Urbandale, IA 50322

Microsoft

DSM 16 DATACENTER

1475 SE MAFFITT LAKE RD.
WEST DES MOINES, IA 50265

Date: 21 NOV 2023

MICROSOFT

Design Manager	JON WYONE
Layout Manager	
Civil, Site, Survey, Landscaping Technical Lead	SONDWIP DHAR
Architectural & Structural Technical Lead	LISA GALLANT / DAVID SWANSON
Mech, Plumbing & Fire Protection Technical Lead	STEVEN TOUPIN
Building Automation Systems (BAS) Technical Lead	TYLER DIMARTINO
Electrical Technical Lead	ANAGA KRISHNAN
Electrical Power Management Systems (EPMS) Technical Lead	SERGIO FRANCO
Telecommunications / Network Technical Lead	MATT BENSON
Security Design Manager	DANIEL PUTNAM

DESIGN TEAM

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Structural Engineering Lead	BINYAM JEMAL / BMcD
Architectural Lead	NEAL CLEMENTS / BMcD
Mechanical Engineering Lead	DUSTIN BREMNER / BMcD
Plumbing Engineering Lead	ALEXANDER PLUM / BMcD
Fire Protection Engineering Lead	ADAM DEGROFF / BMcD
BAS Engineering Lead	DUSTIN BREMNER / BMcD
Electrical Engineering Lead	JASON PHAM / BMcD
Telecommunications / Network Engineering Lead	JOSHUA WUTHNOW / BMcD
Security Systems Engineering Lead	MIRCEA BARBAT / INTROBA

Revisions

No.	Date	Description
0	28 NOV 2021	50% IFR PACKAGE
1	29 DEC 2023	100% IFR PACKAGE
2	29 DEC 2023	SITE DEVELOPMENT PERMIT
3	23 JAN 2024	MAJOR MOD RESUBMITTAL

Registration

PRELIMINARY

Sector Key Plan

Bar Code

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Package
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Sheet Title/Number

COVER SHEET

DSM16-C-A-01

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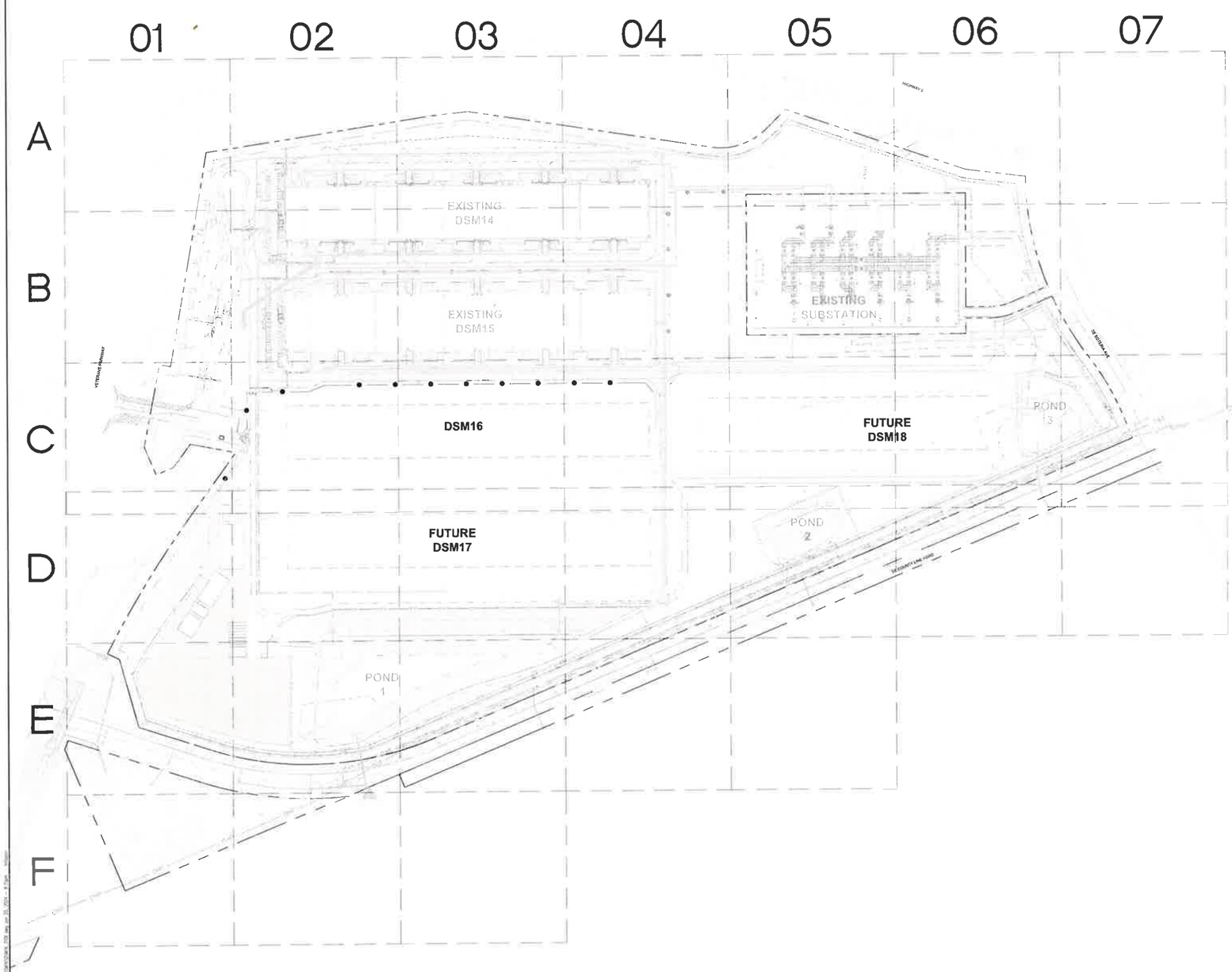

0 75 150 300
SCALE: 1 inch = 150ft

GENERAL DEMOLITION NOTES

1. DEMOLITION NOTES ARE FOR CLARIFICATION ONLY AND ARE SHOWN FOR THE CONTRACTOR'S BENEFIT. THESE NOTES ARE NOT INTENDED TO BE COMPREHENSIVE. THE CONTRACTOR SHALL REMOVE, ADJUST, OR RELOCATE ALL EXISTING IMPROVEMENTS AS NECESSARY TO ACCOMMODATE THE PROPOSED CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL (IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES) ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE, STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE SPECIFICATIONS AND GEOTECHNICAL REPORT.
3. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
4. THE CONTRACTOR SHALL MAINTAIN AND PROTECT ALL UTILITY SERVICES TO REMAIN AT ALL TIMES.
5. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES.
6. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ONSITE LOCATIONS OF EXISTING UTILITIES.
7. ALL EXISTING SEWERS, PIPING AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK. UTILITIES DETERMINED TO BE ABANDONED AND LEFT IN PLACE SHALL BE GROUTED IF UNDER BUILDING.
8. ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE EFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. CONTRACTOR SHALL PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN PUBLIC STREET RIGHT OF WAY DURING CONSTRUCTION.
9. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC., (AND OTHER APPROPRIATE BEST MANAGEMENT PRACTICES) AS APPROVED BY THE CITY INSPECTOR.
10. PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED PER EROSION AND SEDIMENT CONTROL PLANS.
11. SHOULD REMOVAL AND/OR RELOCATION ACTIVITIES DAMAGE UTILITIES AND STRUCTURES TO REMAIN, THE CONTRACTOR SHALL PROVIDE NEW MATERIALS / STRUCTURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND APPLICABLE AGENCY SPECIFICATIONS, EXCEPT FOR MATERIALS DESIGNED TO BE RELOCATED, ALL CONSTRUCTION MATERIALS SHALL BE NEW.
12. CONTRACTOR SHALL LIMIT SAW-CUT & PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS, BUT IF ANY DAMAGE HAS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IT'S REMOVAL AND REPAIR.
13. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
14. CONTRACTOR TO REMOVE EXISTING LANDSCAPING (SHRUBS AND GROUNDCOVER PLANTS ONLY) IN CONFLICT WITH PROPOSED IMPROVEMENTS. CONTRACTOR SHALL PRESERVE AND PROTECT EXISTING TREES THAT HAVE NOT BEEN DESIGNATED TO BE REMOVED. DAMAGED OR REMOVED TREES DESIGNATED TO BE RETAINED WILL BE REQUIRED TO BE REPLACED WITH SIMILAR SPECIES AND SIZE.
15. CONTRACTOR SHALL ADJUST ALL EXISTING MANHOLE RIMS, DRAINAGE STRUCTURES, VALVE BOXES, VAULT LIDS, AND UTILITY ACCESS STRUCTURES TO FINISHED GRADE WITHIN AREAS AFFECTED BY PROPOSED CONSTRUCTION.

LEGEND

PROPERTY LINE	
EXISTING CONTOUR	184

811

CITY OF WEST DES MOINES
APPROVED BY: DATE:

NAVIX
10835 s.e. sunnyside road
suite 200
clackamas, or 97015
t 503 659 5500
f 503 659 2375
www.navixeng.com

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9400 Ward Parkway
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www.burnsmcd.com

Civil Design Advantage
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Urbandale, IA 50322

Microsoft

DSM 16
DATACENTER

1475 SE MAFFITT LAKE RD.
WEST DES MOINES, IA 50265

Scale: SHOW SCALE ON
Drawn: JACK SCOTTO OR / ANDY TAKAHI
Checked: BRYAN DICKERSON / TRAVIS WINIZER
Date: 21 NOV 2023
BNSF Project No: P-100861
MS Project No: P-20693

MICROSOFT

Design Manager: JON MYONE
Layout Manager:
Civil Site Survey, Landscaping Technical Lead: SONOVIP DHAR
Foundation & Structural Technical Lead: LISA DALLANT / DAVID SWANSON
Mech, Plumbing & Fire Protection Technical Lead: STEVEN HOWARD
Building Automation System Technical Lead: TYLER DIMARTINO
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Security Systems Engineering Lead: MIRCEA BARBAT / INTROBA

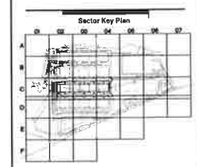
Revisions

No.	Date	Description
0	08 NOV 2023	90% IFR PACKAGE
1	29 DEC 2023	100% IFR PACKAGE
2	29 DEC 2023	SITE DEVELOPMENT PERMIT
3	23 JAN 2024	MAJOR MOD RESUBMITTAL

Registration

PRELIMINARY

Sector Key Plan



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Package
FULL BUILDOUT

Sheet Title/Number

CIVIL DEMOLITION AND BASE CONDITIONS PLAN OVERALL

DSM16-C-B1-01

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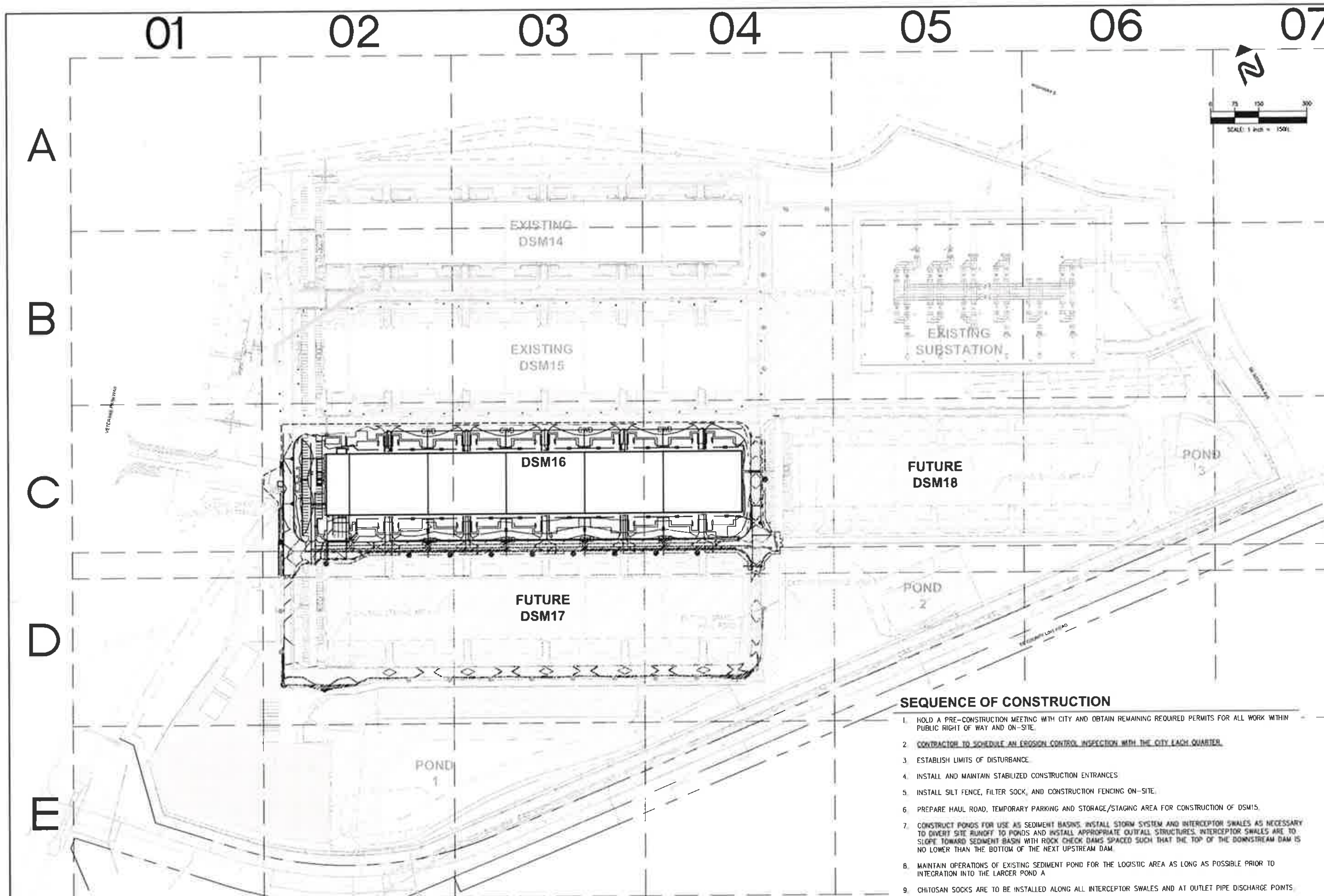

GENERAL EARTHWORK NOTES

1. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE WAYS ONLY. THE CONTRACTOR SHALL CALL FOR UNDERGROUND LOCATES AND DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING WORK.
2. ALL GRADING SHALL BE DONE IN CONFORMANCE WITH RECOMMENDATIONS PROVIDED IN THE GEOTECH REPORT BY TERRACON, INLCUDING THE DSM14-INITIAL PHASE, DATED 10/02/2020 AND THE DSM15 REPORT, DATED 12/20/2022.
3. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDING PAD AND SHALL GRADE ALL AREAS TO PRECLUDE PONDING OF WATER.
4. ALL POLLUTANTS OTHER THEN SEDIMENT ON-SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER. THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS AS OUTLINED IN THE GENERAL NPDES PERMIT FOR STORMWATER CONSTRUCTION DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES AND THE SWPPP PLAN.
5. PROPERTIES DOWNSTREAM OF THE SITE SHALL BE PROTECTED FROM EROSION DUE TO PROJECT CONSTRUCTION ACTIVITIES.
6. CONTRACTOR TO KEEP MUD AND ROCKS OFF OF PUBLIC STREETS DURING GRADING ACTIVITIES.
7. CONTRACTOR TO ENSURE POSITIVE DRAINAGE TO ONSITE CONVEYANCE MEASURES, TYP.
8. CONTRACTOR TO COORDINATE AND OBTAIN OWNER APPROVAL FOR PLACEMENT LOCATION OF TOPSOIL STRIPPING.
9. CONTRACTOR TO COORDINATE WITH GEOTECH FOR THE IMPLEMENTATION OF A SETTLEMENT MONITORING PROGRAM WITHIN THE SUBSTATION PAD AND FILL AREAS.
10. FOR SURFACE RESTORATION, REFER TO PART 9 OF THE CITY OF WDM STANDARD CONSTRUCTION SPECIFICATIONS MANUAL, SECTION 3, PREPARATION OF OF SEED BED:
   - A. AREAS ACCESSIBLE TO MACHINERY: AREAS ACCESSIBLE TO FIELD MACHINERY SHALL BE THOROUGHLY WORKED TO A DEPTH OF NOT LESS THAN THREE INCHES (3"). THE SOIL SHALL BE BROUGHT TO A LOOSE, FRIABLE CONDITION, AND SHALL BE PICKED FREE OF ROCKS AND CONCRETE CHUNKS IN EXCESS OF ONE INCH (1") DIAMETER WHERE WEED GROWTH HAS DEVELOPED EXTENSIVELY, THE USE OF A DISK WILL BE ALLOWED TO DISK THESE WEEDS INTO THE GROUND IF THE WEEDS CAN BE COMPLETELY COVERED BY THIS METHOD.
   - B. AREAS INACCESSIBLE TO MACHINERY: AREAS INACCESSIBLE TO FIELD MACHINERY SHALL BE PREPARED BY HAND TO A DEPTH OF NOT LESS THAN ONE AND ONE-HALF INCHES (1-1 /2"). THE SOIL SHALL BE BROUGHT TO A LOOSE FRIABLE CONDITION.
   - C. THE SEEDBED SHALL BE INSPECTED AND APPROVED BY THE CITY ENGINEER PRIOR TO SEEDING.

GENERAL NAVIX TESC NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE MOST CURRENT APPLICABLE LOCAL, STATE, AND FEDERAL STANDARDS, INCLUDING THE REQUIREMENTS SET FORTH IN THE IOWA CONSTRUCTION SITE EROSION CONTROL MANUAL AND THE IOWA NPDES GENERAL PERMIT NO. 2.
2. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES FOR PREVENTING SILT-LADEN RUNOFF FROM DISCHARGING FROM THE PROJECT SITE. FAILURE BY THE CONTRACTOR CAN RESULT IN A FINE. THE DESIGNATED TEMPORARY CONTACT PERSON NOTED ON THIS PLAN MUST BE AVAILABLE FOR CONTACT BY TELEPHONE ON A 24 HOUR BASIS THROUGHOUT CONSTRUCTION AND UNTIL THE PROJECT HAS BEEN COMPLETED AND APPROVED BY THE GOVERNMENTAL AGENCY WITH JURISDICTION.
3. THE IMPLEMENTATION OF THESE TESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR FROM THE BEGINNING OF CONSTRUCTION UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED BY THE GOVERNMENTAL AGENCY WITH JURISDICTION AND THE SITE IS STABILIZED.
4. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED AND INSPECTED BY THE LOCAL JURISDICTION PRIOR TO ANY CLEARING OR CONSTRUCTION TAKING PLACE. DURING CONSTRUCTION, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE OWNER AND/OR CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.
5. THE EROSION AND SEDIMENTATION CONTROL FACILITIES SHOWN ON THIS PLAN ARE TO BE CONSIDERED ADEQUATE BASIC REQUIREMENTS FOR THE ANTICIPATED SITE CONDITIONS. DURING CONSTRUCTION, DEVIATIONS FROM THIS PLAN MAY BE NECESSARY IN ORDER TO MAINTAIN WATER QUALITY.
6. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED BY THE CONTRACTOR ON A FREQUENT BASIS AND IMMEDIATELY AFTER EACH RAINFALL, AND MAINTAINED AS NECESSARY TO INSURE THEIR CONTINUED FUNCTIONING. ALL SEDIMENT MUST BE REMOVED FROM SILT FENCES, STRAW BALES, SEDIMENT PONDS, ETC. PRIOR TO THE SEDIMENT REACHING 1/2 ITS MAXIMUM POTENTIAL DEPTH.
7. AT NO TIME SHALL CONCRETE, CONCRETE BYPRODUCTS, VEHICLE FLUIDS, PAINT, CHEMICALS, OR OTHER POLLUTING MATTER BE PERMITTED TO DISCHARGE TO THE TEMPORARY OR PERMANENT DRAINAGE SYSTEM, OR TO DISCHARGE FROM THE PROJECT SITE.
8. THE CONTRACTOR PERFORMING THE WORK SHALL MAINTAIN A SET OF THE APPROVED CONSTRUCTION DRAWINGS ON SITE AT ALL TIMES WHILE CONSTRUCTION IS IN PROGRESS.
9. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING THE WORK TO OBTAIN ALL NECESSARY PERMITS FROM THE LOCAL JURISDICTION PRIOR TO COMMENCING ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
10. THE CONTRACTOR PERFORMING THE WORK SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE TRAFFIC CONTROL AT ALL TIMES DURING CONSTRUCTION ALONGSIDE OR WITHIN ALL PUBLIC ROADWAYS.
11. THIS APPROVED "TEMPORARY EROSION AND SEDIMENTATION CONTROL PLAN" MUST BE IMPLEMENTED PRIOR TO ANY SITE WORK. SEE THE PLANS AND DETAILS FOR FURTHER INFORMATION.
12. CONTRACTOR SHALL ADHERE TO THE DESIGN REQUIREMENTS LISTED HERE, THE PROJECT SPECIFICATIONS, AND THE GEOTECHNICAL REPORT.
13. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER IN THE EVENT OR DISCOVERY OF POOR SOILS, GROUNDWATER OR DISCREPANCIES IN THE EXISTING CONDITIONS AS NOTED ON THE PLANS AND GEOTECH REPORT.
14. MAXIMUM SLOPES SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
15. ROCKERIES OR OTHER RETAINING FACILITIES EXCEEDING 4' IN HEIGHT REQUIRE A SEPARATE PERMIT.
16. ALL AREAS DISTURBED DURING CONSTRUCTION WHERE PERMANENT LANDSCAPING WILL NOT BE PROVIDED WITHIN 21 DAYS SHALL BE HYDROSEEDED OR OTHERWISE STABILIZED, AS REQUIRED. STRAW MULCHING OR PLASTIC SHEETING ARE ACCEPTABLE ALTERNATIVES TO TEMPORARY HYDROSEEDING DURING PERIODS OF LOW GROWTH.
17. SLOPE STABILIZATION. CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. ROUGHENED SOIL SURFACES ARE PREFERRED TO SMOOTH SURFACES. INTERCEPTORS SHOULD BE CONSTRUCTED AT THE TOP OF LONG, STEEP SLOPES WHICH HAVE SIGNIFICANT AREAS ABOVE THAT CONTRIBUTE RUNOFF. CONCENTRATED RUNOFF SHOULD NOT BE ALLOWED TO FLOW DOWN THE FACE OF A CUT OR FILL SLOPE UNLESS CONTAINED WITHIN AN ADEQUATE CHANNEL OR PIPE SLOPE DRAIN. WHEREVER A SLOPE FACE CROSSES A WATER SEEPAGE PLANE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHOULD BE PROVIDED. IN ADDITION, SLOPES SHOULD BE STABILIZED IN ACCORDANCE WITH ITEM 16 ABOVE.
18. STORM DRAIN INLET PROTECTION. ALL STORM DRAIN INLETS MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT STORMWATER RUNOFF SHALL NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
19. CONTRACTOR TO ENSURE POSITIVE DRAINAGE TO ONSITE CONVEYANCE MEASURES.
20. CONTRACTOR TO COMPLETELY REMOVE ALL STRUCTURES AND ASSOCIATED APPURTENANCES, AS NEEDED TO ACCOMMODATE PROJECT IMPROVEMENTS, IN ACCORDANCE WITH APPLICABLE CODES AND ENVIRONMENTAL STUDIES.
21. REFER TO PROJECT SPECIFICATIONS FOR STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE.
22. AREAS DISTURBED DURING CONSTRUCTION THAT ARE OUTSIDE THE PROPOSED LANDSCAPE AND PAVED IMPROVEMENT AREAS SHALL BE STABILIZED BY SEEDING, MULCH, GRAVEL, OR AS DIRECTED BY CITY INSPECTORS PRIOR TO OCCUPANCY.
23. PREPARATION OF SEED BED SHALL FOLLOW SECTION 3 OF PART 9-SURFACE RESTORATION OF THE CITY OF WEST DES MOINES STANDARD CONSTRUCTION SPECIFICATIONS MANUAL.
24. PERVIOUS SURFACE RESTORATION SHALL FOLLOW SECTIONS 1-7 OF PART 9-SURFACE RESTORATION OF THE CITY OF WEST DES MOINES STANDARD CONSTRUCTION SPECIFICATIONS MANUAL.
25. CONTRACTOR SHALL MONITOR AND ENSURE THAT VEHICLE TRACK OUT OF MUD/DEBRIS ONTO AND ADJACENT STREETS DO NOT OCCUR. TRACK OUTS ARE TO BE CLEANED. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, WHEEL WASH, STREET SWEEPING, AND/OR VACUUMING MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

DUST CONTROL NOTES:

THE CONTRACTOR SHALL PROVIDE FOR ONSITE DUST CONTROL MANAGEMENT. DUST SHALL BE MANAGED AND CONTROLLED BY ONE OF THE FOLLOWING PREVENTIVE MEASURES:

1. MINIMIZE THE PERIOD OF SOIL EXPOSURE THROUGH THE USE OF TEMPORARY GROUND COVER OR OTHER TEMPORARY STABILIZATION METHODS.
2. SPRINKLE THE SITE WITH WATER UNTIL SURFACE IS WET.
3. SPRAY THE EXPOSED SOIL WITH A DUST PALLIATIVE. NOTE: USE OF PETROLEUM PRODUCTS OR HAZARDOUS MATERIALS IS PROHIBITED.
4. DUST CONTROL WATER TRUCK SHALL BE ONSITE AT ALL TIMES DURING DRY SEASON.

SEQUENCE OF CONSTRUCTION

1. HOLD A PRE-CONSTRUCTION MEETING WITH CITY AND OBTAIN REMAINING REQUIRED PERMITS FOR ALL WORK WITHIN PUBLIC RIGHT OF WAY AND ON-SITE.
2. CONTRACTOR TO SCHEDULE AN EROSION CONTROL INSPECTION WITH THE CITY EACH QUARTER.
3. ESTABLISH LIMITS OF DISTURBANCE.
4. INSTALL AND MAINTAIN STABILIZED CONSTRUCTION ENTRANCES.
5. INSTALL SILT FENCE, FILTER SOCK, AND CONSTRUCTION FENCING ON-SITE.
6. PREPARE HAUL ROAD, TEMPORARY PARKING AND STORAGE/STAGING AREA FOR CONSTRUCTION OF DSM15.
7. CONSTRUCT PONDS FOR USE AS SEDIMENT BASINS. INSTALL STORM SYSTEM AND INTERCEPTOR SWALES AS NECESSARY TO DIVERT SITE RUNOFF TO PONDS AND INSTALL APPROPRIATE OUTFALL STRUCTURES. INTERCEPTOR SWALES ARE TO SLOPE TOWARD SEDIMENT BASIN WITH ROCK CHECK DAMS SPACED SUCH THAT THE TOP OF THE DOWNSTREAM DAM IS NO LOWER THAN THE BOTTOM OF THE NEXT UPSTREAM DAM.
8. MAINTAIN OPERATIONS OF EXISTING SEDIMENT POND FOR THE LOGISTIC AREA AS LONG AS POSSIBLE PRIOR TO INTEGRATION INTO THE LARGER POND A.
9. CHITOSAN SOCKS ARE TO BE INSTALLED ALONG ALL INTERCEPTOR SWALES AND AT OUTLET PIPE DISCHARGE POINTS.
10. STABILIZE ALL PONDS UPON COMPLETION OF EXCAVATION.
11. INSTALL RIP RAP AROUND INLET AND OUTLET STRUCTURES.
12. CLEAR AND GRUB THE SITE AS CONSTRUCTION ACTIVITIES REQUIRE.
13. BEGIN ROUGH GRADING THE SITE. REVISE INTERCEPTOR SWALES AS REQUIRED TO ENSURE POSITIVE DRAINAGE AS TOPOGRAPHY CHANGES OCCUR.
14. TEMPORARILY STABILIZE DENUDED AREAS. PROTECT ALL EXPOSED SLOPES WITH EROSION CONTROL BLANKETS.
15. COMPLETE ROUGH GRADING ACTIVITIES. REVISE INTERCEPTOR SWALES AND HAUL ROADS AS NECESSARY.
16. COORDINATE GROUND IMPROVEMENTS OPERATION WITH GROUND IMPROVEMENT CONTRACTOR. PROVIDE AND REVISE EROSION AND SEDIMENT CONTROL MEASURES AS NEEDED TO SUPPORT GROUND IMPROVEMENT OPERATIONS.
17. CONSTRUCT SITE IMPROVEMENTS AS SITE DEVELOPMENT AND BUILDING PERMITS ARE OBTAINED.
18. REMOVE ALL TEMPORARY SEDIMENT AND EROSION CONTROL AFTER INSPECTOR HAS DETERMINED THE SITE IS COMPLETELY STABILIZED, WITH PERMANENT STABILIZATION AND/OR LANDSCAPING.

DISCHARGE POINT SUMMARY

STORM WATER WILL FLOW OVERLAND TOWARDS INTAKES/STORM SEWER THAT DISCHARGE INTO A DETENTION/TEMPORARY SEDIMENT BASINS. WATER IS OUTLETTED FROM THE BASINS INTO CULVERTS UNDER S. COUNTY LINE RD. TO DRAINAGE SWALES FLOWING TO AN EXISTING POND. EVENTUALLY DISCHARGES INTO AN UNNAMED TRIBUTARY OF MIDDLE CREEK.

STORMWATER MANAGEMENT

THE STORMWATER MANAGEMENT PLAN MUST IDENTIFY THE SELECTED MEASURES THAT WILL BE INSTALLED DURING CONSTRUCTION TO CONTROL POLLUTANTS IN STORMWATER DISCHARGES THAT WILL OCCUR AFTER CONSTRUCTION HAS BEEN COMPLETED. AFTER THE PROJECT IS COMPLETED AND FINAL STABILIZATION IS REACHED, THE SITE'S CAPACITY FOR EROSION MUST BE DETERMINED. A GOAL OF 80% REMOVAL OF SEDIMENT SHOULD BE USED IN DESIGNING AND INSTALLING STORMWATER MANAGEMENT PRACTICES. PERMANENT CONTROLS MAY BE NEEDED TO CONTROL EROSION FROM THE SITE. INCREASED RUNOFF FROM THE SITE MAY CAUSE INCREASED EROSION DOWNSTREAM. VELOCITY DISSIPATION DEVICES SHALL BE PLACED AT THE DISCHARGE LOCATION AND ALONG THE LENGTH ON ANY OUTFALL GRASS CHANNEL AS NECESSARY TO PROVIDE A NON-EROSIVE FLOW FROM THE STRUCTURE TO A RECEIVING WATERCOURSE.

INSPECTION AND MAINTENANCE

ONCE A WEEK AND WITHIN 24 HOURS AFTER A 0.5 INCH RAINFALL EVENT, EROSION AND SEDIMENT CONTROL PRACTICES MUST BE INSPECTED. THE PRACTICES SHOULD BE PROPERLY MAINTAINED AND RECORDS SHOULD BE KEPT. IF AN EXISTING PRACTICE IS NOT WORKING, CONTINUED USE OF THAT PRACTICE SHOULD BE RE-EVALUATED.

WEEKLY EROSION AND SEDIMENT CONTROL INSPECTIONS WILL BE SENT TO THE CITY AT SWPPP@WDM.IOWA.GOV.

RECORD KEEPING

RECORDS OF LAND-DISTURBING ACTIVITIES SHOULD BE KEPT TO DETERMINE WHICH AREAS NEED TO BE STABILIZED. RECORDS ON THE MAINTENANCE AND INSPECTION OF EROSION AND SEDIMENT CONTROL PRACTICES MUST BE KEPT.

RUN-ON CONTROLS:

1. DIVERT OFF-SITE STORMWATER (RUN-ON) OR GROUND WATER AWAY FROM SLOPES AND DISTURBED AREAS WITH INTERCEPTOR DIKES, PIPES, AND/OR SWALES. OFF-SITE STORMWATER SHALL BE MANAGED SEPARATELY FROM STORMWATER GENERATED ON THE SITE.
2. TO THE DEGREE POSSIBLE, RUN-ON FROM THE UNDISTURBED AREAS SHALL BE DIVERTED FROM THE DISTURBED AREAS OF THE CONSTRUCTION SITE TO MINIMIZE THE AMOUNT OF AREA DRAINED FOR WHICH CONTROLS MUST BE PROVIDED.

STABILIZATION PRACTICES

STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. IN DROUGHT-STRICKEN AREAS AND AREAS THAT HAVE RECENTLY RECEIVED SUCH HIGH AMOUNTS OF RAIN THAT SEEDING WITH FIELD EQUIPMENT IS IMPOSSIBLE AND INITIATING VEGETATIVE STABILIZATION IMMEDIATELY IS INFEASIBLE, ALTERNATIVE STABILIZATION MEASURES MUST BE EMPLOYED AS SPECIFIED BY THE DEPARTMENT. IN LIMITED CIRCUMSTANCES, STABILIZATION MAY NOT BE REQUIRED IF THE INTENDED FUNCTION OF A SPECIFIC AREA OF THE SITE NECESSITATES THAT IT REMAIN DISTURBED.

TEMPORARY STABILIZATION – TEMPORARY EROSION CONTROL MEASURES INCLUDE TEMPORARY SEEDING, MULCHING, GEOTEXTILES, ETC.

PERMANENT STABILIZING – PLANNED VEGETATION OR STRUCTURAL MEASURES MUST BE INSTALLED TO PERMANENTLY PREVENT A CONSTRUCTED AREA OR FINISHED SITE FROM ERODING.

SEE IOWA CONSTRUCTION SITE EROSION CONTROL MANUAL, TABLES 1.3-1.5 FOR ACCEPTABLE METHODS.

DEWATERING

DEWATERING DISCHARGES FROM DEWATERING ACTIVITIES, INCLUDING DISCHARGES FROM DEWATERING OF TRENCHES AND EXCAVATIONS, ARE PROHIBITED UNLESS MANAGED BY APPROPRIATE CONTROLS.

STRUCTURAL SEDIMENT CONTROL

IF THE AREA IS 10 OR MORE ACRES AND THERE IS A COMMON DRAINAGE WAY, A SEDIMENT BASIN WITH A HOLDING CAPACITY OF 3,600 CUBIC FEET PER ACRE DRAINED (INCLUDING OFF-SITE AREA DRAINAGE) IS TO BE PROVIDED. IF A SEDIMENT BASIN IS NOT FEASIBLE, COMPARABLE EROSION CONTROL MEASURES ON THE DOWNSLOPE AND SIDESLOPES OF THE PROJECT PERIMETER ARE TO BE PROVIDED. FOR DRAINAGE LOCATIONS SERVING 10 OR FEWER ACRES, STRUCTURAL CONTROLS ARE REQUIRED FOR ALL SIDESLOPE AND DOWNSLOPE BOUNDARIES OF THE CONSTRUCTION AREA OR A SEDIMENT BASIN PROVIDING STORAGE FOR 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED MUST BE PROVIDED.

STABILIZATION QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
1	SILT FENCE	LF	11,300
2	FILTER SOCK	LF	2950
3	SEEDING AND MULCHING	AC	30
4	INLET PROTECTION	EA	30
5	CONCRETE WASHOUT PIT	EA	1
6	CONSTRUCTION ENTRANCE	EA	2

TOTAL PROJECT ACREAGE SUMMARY

(IN ACRES)

TOTAL SITE AREA	124.2±
ON-SITE DISTURBED AREA	*91±
OFF-SITE DISTURBED AREA	0
TOTAL LIMIT OF DISTURBED AREA	*91±

* ROUNDED UP TO NEAREST ACRE

PROJECT PHASING TABLE

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
ROUGH GRADE/SEDIMENT CONTROL																		
TEMPORARY CONTROL MEASURES																		
STRIP & STOCKPILE TOPSOIL																		
STORM FACILITIES																		
TEMPORARY CONSTRUCTION ROADS																		
FOUNDATION/BUILDING CONSTRUCTION																		
SITE CONSTRUCTION																		
PERMANENT CONTROL STRUCTURES																		
FINISH GRADING																		
LANDSCAPING/SEED																		
FINAL STABILIZATION																		

CITY OF WEST DES MOINES
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Revisions

No.	Date	Description
0	28 NOV 2023	50% IFR PACKAGE
1	[illegible]	100% IFR PACKAGE
2	29 DEC 2023	SITE DEVELOPMENT PERMIT
3	23 JAN 2024	MAJOR MOD RESUBMITTAL

Registration

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Sector Key Plan

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CIVIL T.E.S.C. PLAN OVERALL

DSM16-C-B2-01

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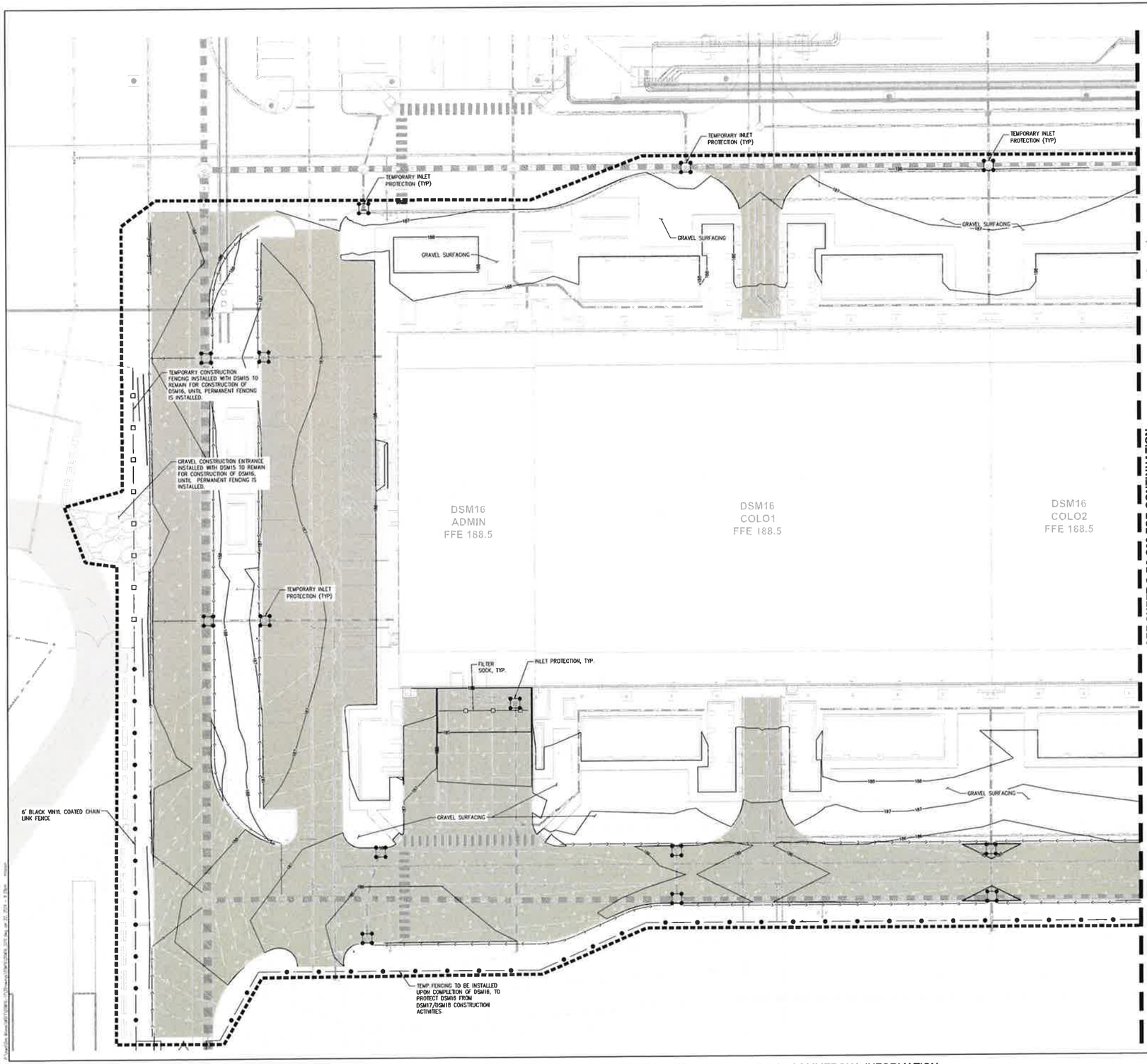

SCALE: 1 inch = 20 ft.

LEGEND

- PROPERTY LINE
- CONSTRUCTION ENTRANCE (9 / C-F-09)
- GRAVEL SURFACING (7,14 / C-F-09)
- FINAL STABILIZATION VIA SEEDING, LANDSCAPING, GROUNDCOVER, MULCHING – SEE LANDSCAPE PLANS
- SILT FENCE (7,8 / C-F-09)
- FILTER SOCK (1 / C-F-09)
- LIMITS OF DISTURBANCE
- TEMPORARY INLET PROTECTION (3,4 / C-F-09)
- EXISTING FLOW DIRECTION
- XXX PROPOSED FLOW DIRECTION

NOTES

1. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN SERVE AS THE INTENDED BASIS FOR STORMWATER POLLUTION PREVENTION PLANNING. AS GRADING AND SITEWORK PROGRESS IS MADE AND WEATHER CONDITIONS CHANGE, THE CONTRACTOR IS EXPECTED TO MODIFY THE MEASURES AS NEEDED IN ACCORDANCE WITH THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP). MATERIAL QUANTITIES TO ADDRESS CHANGES IN TESC NEEDS ARE TO BE CONSIDERED IN BID.
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3. WHEN A DOUBLE ROW OF SILT FENCE IS CALLED FOR ON THE PLANS, THE TWO ROWS SHALL HAVE A MINIMUM SPACING OF 3 FEET AND A MAXIMUM SPACING OF 5 FEET.

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M.S. Project No.: P 20663

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Revisions

No.	Date	Description
0	28 NOV 2023	50% IFR PACKAGE
1	29 DEC 2023	100% IFR PACKAGE
2	29 DEC 2023	SITE DEVELOPMENT PERMIT
3	22 JAN 2024	BUILDER MOD REQUIREMENTS

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Sector Key Plan

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CIVIL T.E.S.C. PLAN

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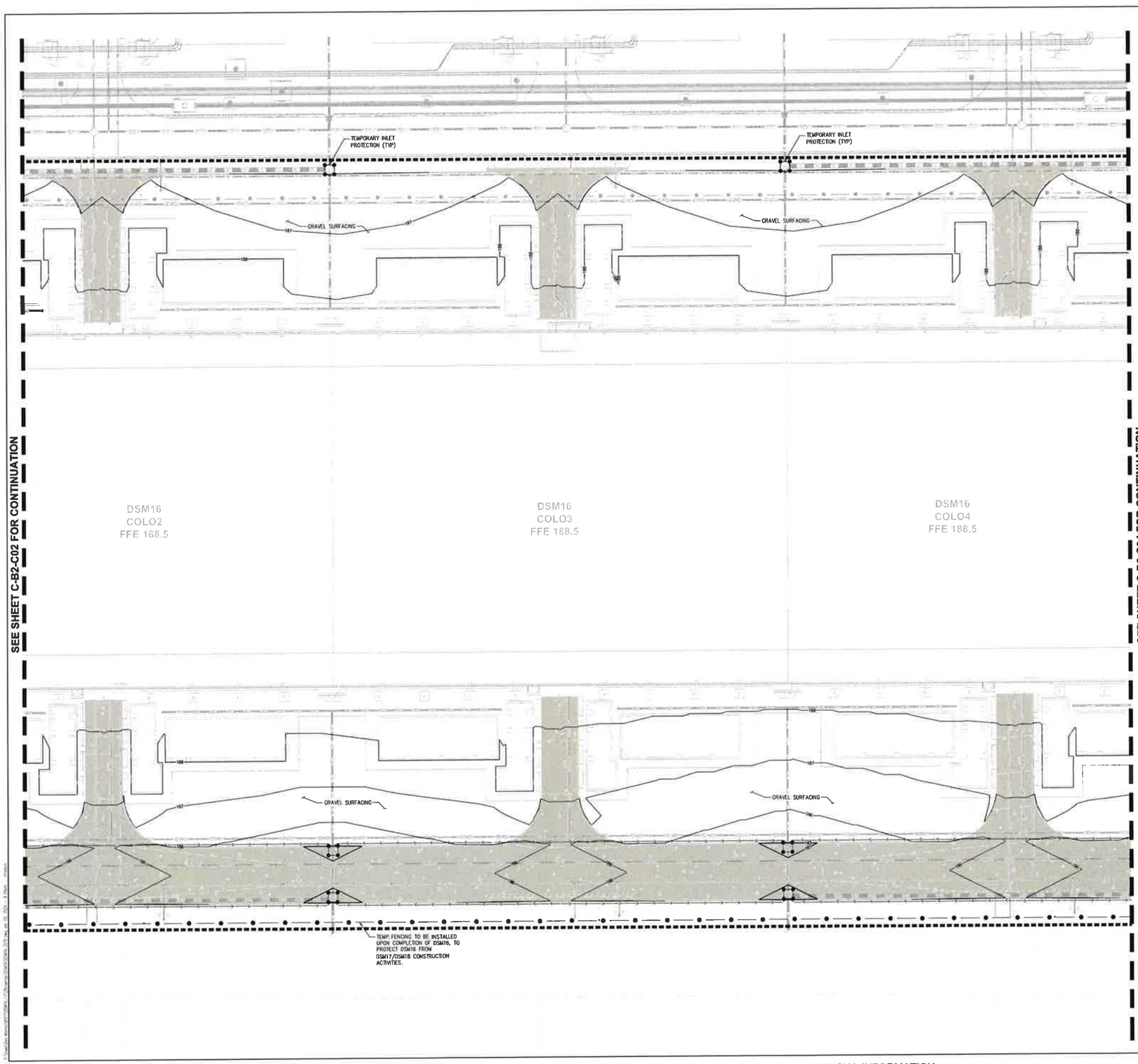

SCALE: 1 inch = 20 ft.

LEGEND

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- CONSTRUCTION ENTRANCE (9 / C-F-09)
- GRAVEL SURFACING (7,14 / C-F-09)
- FINAL STABILIZATION VIA SEEDING, LANDSCAPING, GROUNDCOVER, MULCHING – SEE LANDSCAPE PLANS
- SILT FENCE (1,8 / C-F-09)
- FILTER SOCK (1 / C-F-09)
- LIMITS OF DISTURBANCE
- TEMPORARY INLET PROTECTION (2,4 / C-F-09)
- EXISTING FLOW DIRECTION
- XX% PROPOSED FLOW DIRECTION

NOTES

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IMAGE Project No: P. 16381
M.S. Project No: P. 20843

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Revisions

No.	Date	Description
5	29-NOV-2023	50% IFR PACKAGE
1	29-DEC-2023	100% IFR PACKAGE
2	29-DEC-2023	SITE DEVELOPMENT PERMIT
3	22-JAN-2024	MAJOR MOD PC SUBMITTAL

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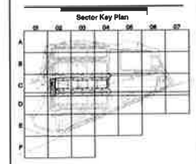
Sector Key Plan



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CIVIL T.E.S.C. PLAN

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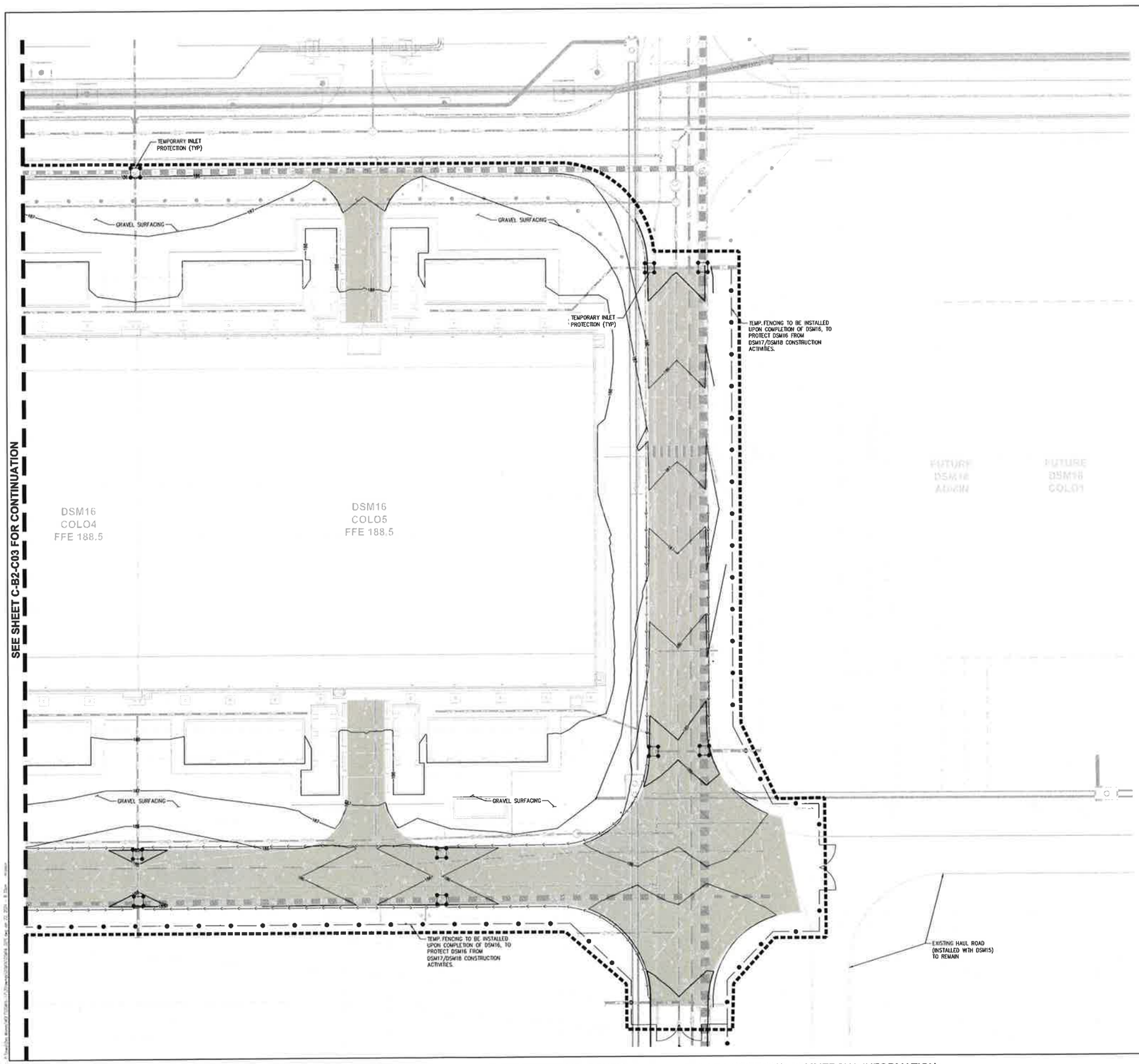

SCALE: 1 inch = 20 ft.

LEGEND

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1. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN SERVE AS THE INTENDED BASIS FOR STORMWATER POLLUTION PREVENTION PLANNING. AS GRADING AND SITEWORK PROGRESS IS MADE AND WEATHER CONDITIONS CHANGE, THE CONTRACTOR IS EXPECTED TO MODIFY THE MEASURES AS NEEDED IN ACCORDANCE WITH THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP). MATERIAL QUANTITIES TO ADDRESS CHANGES IN TESC NEEDS ARE TO BE CONSIDERED IN BID.
2. ALL DISTURBED AREAS SHALL BE STABILIZED. REFER TO LANDSCAPE PLAN FOR SEEDING MIXTURE.
3. WHEN A DOUBLE ROW OF SILT FENCE IS CALLED FOR ON THE PLANS, THE TWO ROWS SHALL HAVE A MINIMUM SPACING OF 3 FEET AND A MAXIMUM SPACING OF 5 FEET.

CITY OF WEST DES MOINES
APPROVED BY: DATE:

NAVIX SITE CIVIL
10135 s.e. sunnyside road
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www.burnsmcd.com

Civil Design Advantage
4121 NW Urbandale Drive
Urbandale, IA 50322

Microsoft

DSM 16 DATACENTER

1475 SE MAFFITT LAKE RD.
WEST DES MOINES, IA 50265

Design: ZACH SCOTTLOR
Drawn: ZACH SCOTTLOR / ANDY FANGIN
Engineer: BRYAN DICKERSON / PAUL MINATER
Date: 23 NOV 2023
BBID Project No: P. 10387
MS Project No: P. 28843

MICROSOFT

Design Manager: JON NYONE
Layout Manager: SONDWIP DHAR
Civil, Site Survey, Landscaping Technical Lead: LISA GALLANT / DAVID SWANSON
Architectural & Structural Technical Lead: STEVEN TOLPIN
Mech, Plumbing & Fire Protection Technical Lead: TYLER DAMASTINO
Building Automation Systems (BAS) Technical Lead: ANAGA KRISHNAN
Electrical Technical Lead: SERGIO FRANCO
Electrical Power Management Systems (EPMS) Technical Lead: MATT BENSON
Telecommunications / Network Technical Lead: DANIEL PUTNAM
Security Design Manager:

DESIGN TEAM

Civil Engineering Lead: PAUL MINATER / NAVIX ENGINEERING
Structural Engineering Lead: BINYAMIN JEMAL / BM&D
Architectural Lead: NEAL CLEMENTS / BM&D
Mechanical Engineering Lead: GUSTIN BRESNAHAN / BM&D
Plumbing Engineering Lead: ALEXANDER PLEHU / BM&D
Fire Protection Engineering Lead: ADAM DEGROFF / BM&D
BAS Engineering Lead: DUSTIN BRESNAHAN / BM&D
Electrical Engineering Lead: JASON PHAM / BM&D
Telecommunications / Network Engineering Lead: JOSHUA WUTHRICH / BM&D
Security Systems Engineering Lead: MIRCEA BARBAT / INTROSA

Revisions

No.	Date	Description
6	29 NOV 2023	90% IFR PACKAGE
1	29 DEC 2023	100% IFR PACKAGE
2	29 DEC 2023	SITE DEVELOPMENT PERMIT
3	23 JAN 2024	MAJOR MOD RESUBMITTAL

Registration

PRELIMINARY

Sector Key Plan

Bar Code

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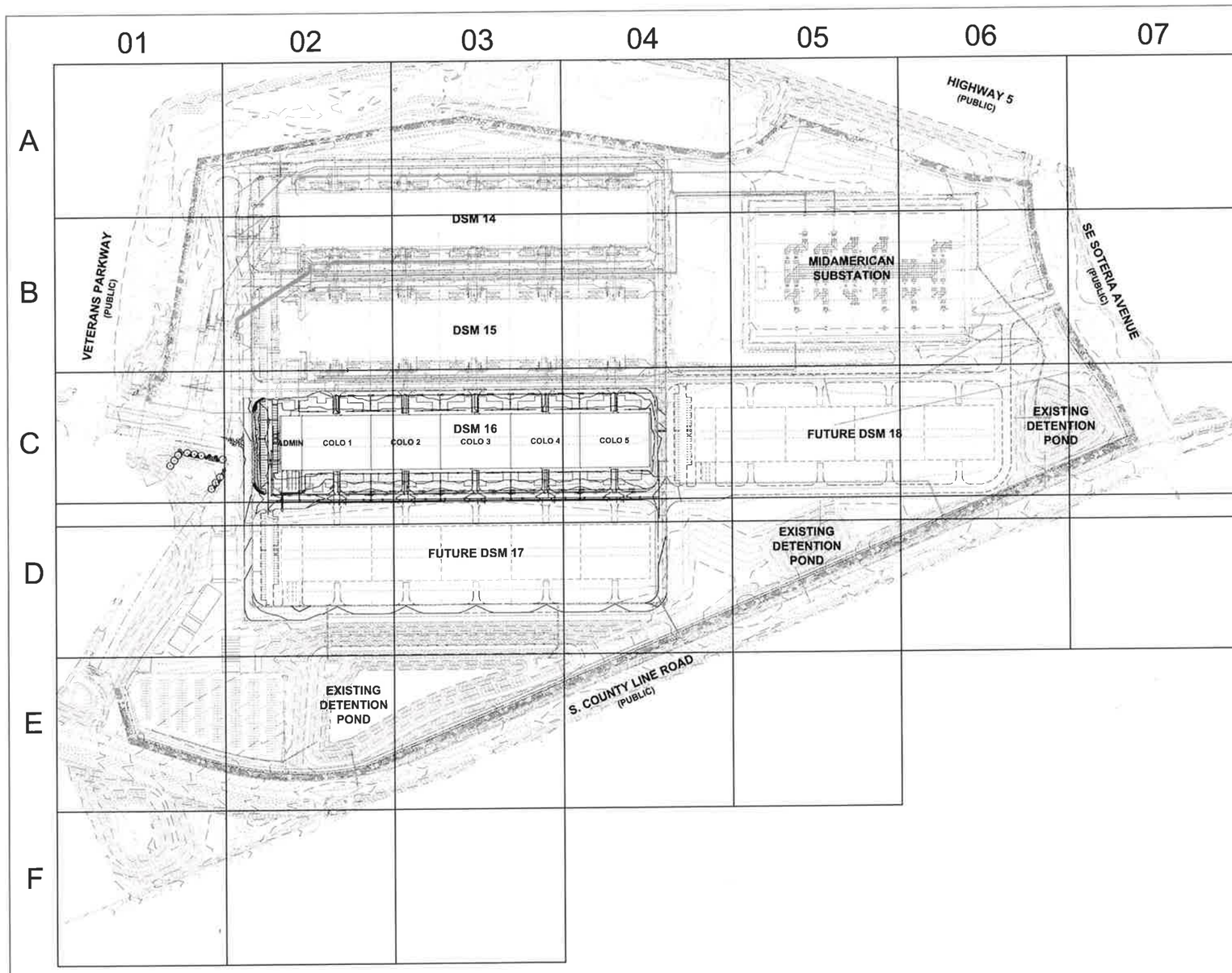
Package
FULL BUILDOUT

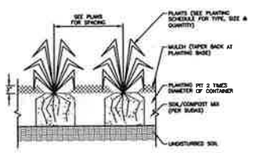
Sheet Title/Number

CIVIL T.E.S.C. PLAN

DSM16-C-B2-C04

[PROPRIETARY AND CONFIDENTIAL - TRADES SECRET AND COMMERCIAL INFORMATION - EXEMPT FROM RELEASE UNDER FOIA (5 U.S.C. ss 552 (b)(4)) AND STATE PUBLIC DISCLOSURE LAW]





SHRUB PLANTING

LANDSCAPE NOTES

1. LOCATE ALL UTILITIES BEFORE ANY PLANTING BEGINS.
2. ALL LANDSCAPE CONSTRUCTION SHALL CONFORM TO THE MOST RECENT EDITION OF THE WEST DES MOINES STANDARDS FOR SUBDIVISIONS.
3. BACKFILL TO TOP OF CURB. (MINUS 1 1/2" FOR SOD, IF REQ.)
4. WEED PREVENTER (PRE-EMERGENT) SHALL BE SPREAD OVER SOIL AFTER PLANTING AND BEFORE MULCHING IN ALL PLANTING BEDS PER MANUFACTURER'S RECOMMENDATIONS.
5. PLANT QUANTITIES ARE SHOWN FOR INFORMATION ONLY, THE DRAWING SHALL PREVAIL IF ANY CONFLICTS ARISE.
6. ALL DEBRIS SPILLED IN ANY PUBLIC R.O.W. SHALL BE PICKED UP BY THE CONTRACTOR AT THE END OF EACH WORK DAY.
7. NO OVERSTORY TREES SHALL BE PLANTED IN ANY CITY OF WEST DES MOINES PUBLIC UTILITY EASEMENT.
8. ROCK MULCH SHALL BE RIVER ROCK, MINIMUM DEPTH OF 3" OVER MIRASCAPE LANDSCAPE FABRIC (OR EQUAL). EDGING BETWEEN ROCK MULCH AND GRASS SHALL BE 4" STEEL LANDSCAPE EDGING.
9. MAINTAIN 10' CLEARANCE OF ANY PLANTINGS ON EACH SIDE OF THE PERIMETER FENCE.
10. SEED ALL DISTURBED AREAS (LESS PLANTING BEDS) WITH SEED TYPE #1 PERMANENT LAWN MIXTURE.
    REFER TO SPECIFICATIONS.
11. AREAS DISTURBED DURING CONSTRUCTION THAT ARE OUTSIDE PROPOSED LANDSCAPE AND PAVED IMPROVEMENT AREAS SHALL BE STABILIZED BY SEEDING, MULCH, GRAVEL, OR AS DIRECTED BY CITY INSPECTORS PRIOR TO OCCUPANCY.

OPEN SPACE

SITE AREA: =4,011,328 S.F. (92.09 AC.)

OPEN SPACE REQUIRED: =802,266 S.F. (18.42 AC. 20%)
OPEN SPACE PROVIDED: =2,728,824 S.F. (62.68 AC 68.04%)

OPEN SPACE REQUIREMENTS –

PER WDM LANDSCAPE PROVISIONS 9-18-8-I:
2 TREES & 3 SHRUBS/ 3000 S.F. WITH 50% AS OVERSTORY/EVERGREEN

535 TREES REQUIRED
803 SHRUBS REQUIRED

487* TREES PROVIDED (SURPLUS FROM DSM14 AND BUFFER)
803 SHRUBS PROVIDED (SURPLUS FROM DSM14 AND BUFFER)

*REMAINING OPEN SPACE TREES WILL BE ADDED AS SITE IS FULLY DEVELOPED.

PARKING LOT ISLAND PLANT MATERIAL REQUIRED
1 PER ISLAND =6 TREES

TREES PROVIDED =6 TREES (ADDED TO BUFFER)

BUFFER

DSM 16 AND REMAINING SITE BUFFER REQUIREMENTS –

30' BUFFER REQ PER WDM LANDSCAPE PROVISIONS 9-19-8-E-3-B
1 OVERSTORY/EVERGREEN TREE/ 35 L.F, 2 UNDERSTORY TREES/ 35 L.F, 6 SHRUBS/ 35 L.F.

BUFFER LENGTH: 4450 L.F.

BUFFER PLANTINGS REQUIRED
128 OVERSTORY/EVERGREEN TREES REQUIRED
255 UNDERSTORY TREES REQUIRED
763 SHRUBS REQUIRED

BUFFER PLANTINGS PROVIDED
128 OVERSTORY/EVERGREEN TREES PROVIDED (+251 SURPLUS)**
255 UNDERSTORY TREES PROVIDED (+152 SURPLUS)**
763 SHRUBS PROVIDED (+641 SURPLUS)**

**SURPLUS PLANT MATERIAL TO BE CREDITED TOWARDS OPEN SPACE REQUIREMENTS
REMAINING VETERAN'S PARKWAY BUFFER AND OPEN SPACE PLANTINGS WILL BE PLANTED WITH FINAL BUILD-OUT.

PLANT SCHEDULE

CODE	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE	CAL	SIZE
EVERGREEN TREES						
PS	4	White Pine	Pinus strobus	B&B, 40-60' MAT. HEIGHT		6' HEIGHT
OVERSTORY TREES						
AB	5	Autumn Blaze Red Maple	Acer rubrum 'Autumn Blaze'	B&B	2"	
AE	4	Endowment Maple	Acer saccharum 'Endowment'	B&B	2"	
QA	5	White Oak	Quercus alba	B&B, 80-100' MAT. HEIGHT	2"	25" DIA
CODE	QTY	COMMON NAME	BOTANICAL NAME	CONDITION AND SIZE		
SHRUBS						
CG	9	Gray Dogwood	Cornus racemosa	3' HEIGHT		
CH	8	Ivory Halo Dogwood	Cornus alba 'Bailhalo' TM	24" HEIGHT		
JB	16	Buffalo Juniper	Juniperus sabina 'Buffalo'	24" HEIGHT		
PJ	12	Jackman's Potentilla	Potentilla fruticosa 'Jackmanii'	15" HEIGHT		
VB	10	Blackhaw Viburnum	Viburnum prunifolium	3' HEIGHT		

SCALE
0 75 150 300

811

CITY OF WEST DES MOINES
APPROVED BY: DATE:

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Urbandale, IA 50322

Microsoft

DSM 16
DATA CENTER

1475 SE MAFFIT LAKE RD
WEST DES MOINES, IA

Design NDM-JB
Drawn NJM-JE
Checked KAH
Date 01/05/2024
BMD Project No. P 100661
MS Project No. P 20641

MICROSOFT
Design Manager JON MYONE
Lead Manager
Civil Site Survey Landscaping Technical Lead SOADNAP EMAR
Architectural & Structural Technical Lead LISA GALLANT / DAVID SWANSON
Mech. Plumbing & Fire Protection Technical Lead STEVE FOURIN
Building Automation Systems (BAS) Technical Lead TYLER DINSMORE
Electrical Technical Lead ANAGA KRISHNAN
Electrical Power Management Systems (EPMS) Technical Lead SERGIO FRANCO
Telecommunications / Network Technical Lead MATT BENSON
Security Design Manager DANIEL PUTMAN

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Plumbing Engineering Lead ALEXANDER PLUM / BMJD
Fire Protection Engineering Lead ADAM DEGROFF / BMJD
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Electrical Engineering Lead JASON PHAM / BMJD
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Security Systems Engineering Lead MIRCEA BARBAS / INTROSA

Revisions

No.	Date	Description
0	15 NOV 2021	90% IFR PACKAGE
1	22 DEC 2021	100% IFR PACKAGE
2	26 DEC 2021	SITE DEVELOPMENT PERMIT
3	20 JAN 2022	MINOR MOD RESUBMITTAL

Registration

PRELIMINARY

Sector Key Plan

Bar Code

Package
FULL BUILDOUT

Sheet Title/Number
LANDSCAPE
PLAN
OVERALL

DSM16-L-A1-01

DSM16-L-A1-01

[PROPRIETARY AND CONFIDENTIAL – TRADES SECRET AND COMMERCIAL INFORMATION –
EXEMPT FROM RELEASE UNDER FOIA (5 U.S.C. § 552 (b)(4)) AND STATE PUBLIC DISCLOSURE LAW]

LANDSCAPE KEY (ALL CALLOUTS ARE TYPICAL)

- PS WHITE PINE
- AB AUTUMN BLAZE RED MAPLE
- AE ENDOWMENT MAPLE
- OA WHITE OAK
- CG GRAY DOGWOOD
- CH IVORY HALO DOWGWOOD
- JB BUFFALO JUNIPER
- PJ JACKMAN'S POTENTILLA
- VB BLACKHAW VIBURNUM

FULL PLANT MATERIAL SCHEDULE ON SHEET L-A1-01

SCALE
0 10 20 40

811

CITY OF WEST DES MOINES
APPROVED BY: DATE:

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Microsoft

DSM 16
DATA CENTER

1475 SE MAFFIT LAKE RD
WEST DES MOINES, IA

Design NEW / ZS
Drawn NEW / ZS
Checked JMM
Date 01/05/2021
SWCO Project No P. 16381
WS Project No P. 28641

MICROSOFT
Design Manager JON NYGNE
Layout Manager
Civil Site Survey Land Managing Technical Lead SONDAAP DHAR
Architectural & Structural Technical Lead LISA GALLANO / DAVID SAMANDIN
Mech. Plumbing & Fire Protection Technical Lead STEVE TOUPIN
Building Automation Systems (BAS) Technical Lead TYLER DIMARTINO
Electrical Technical Lead RAJACA KRISHNAN
Electrical Power Storage Lead Systems (ESS) Technical Lead SERGIO FRANCO
Telecommunications / Network Technical Lead MATT BENSON
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Fire Protection Engineering Lead ADAM DEGROFF / BMJD
BAS Engineering Lead DUSTIN BREMNER / BMJD
Instrumentation Electrical Engineering Lead JASON PHAM / BMJD
Telecommunications / Network Engineering Lead JOSHUA HUTCHCRAFT / BMJD
Security Systems Engineering Lead MIRCEA BARBAT / INTROBA

Revisions

No.	Date	Description
0	20 NOV 2020	50% IFR PACKAGE
1	21 DEC 2020	100% IFR PACKAGE
2	29 DEC 2020	NTE SITE DEVELOPMENT PERMIT
3	22 JAN 2021	MINOR SITE RESUBMITTAL

Registration

PRELIMINARY

Sector Key Plan

Bar Code

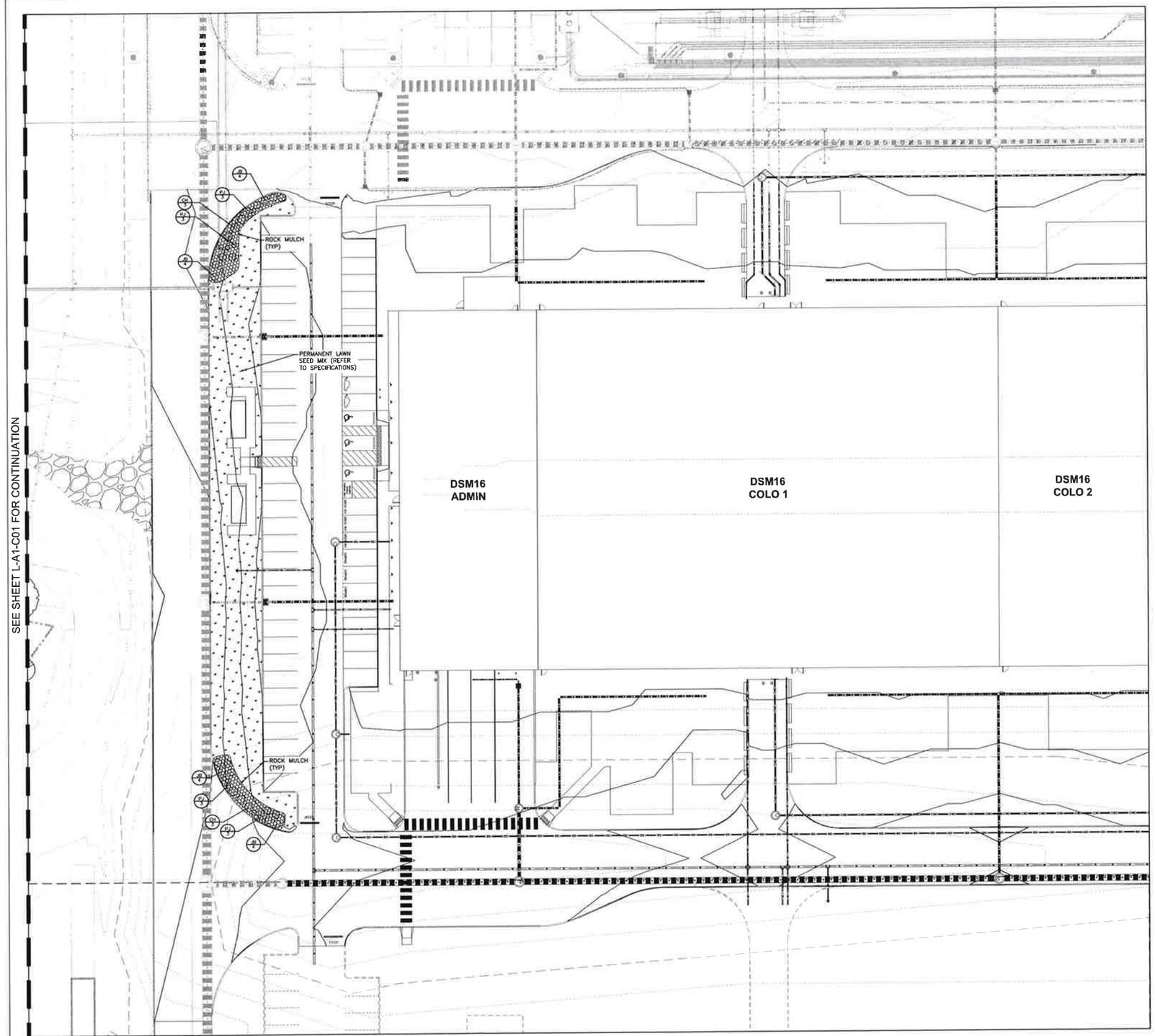
Package
FULL BUILDOUT

Sheet Title/Number
LANDSCAPE PLAN

DSM16-L-A1-C01

DSM16-L-A1-C01

[PROPRIETARY AND CONFIDENTIAL – TRADES SECRET AND COMMERCIAL INFORMATION – EXEMPT FROM RELEASE UNDER FOIA (5 U.S.C. § 552 (b)(4)) AND STATE PUBLIC DISCLOSURE LAW]



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- JB BUFFALO JUNIPER
- PJ JACKMAN'S POTENTILLA
- VR BLACKHAW VIBURNUM

FULL PLANT MATERIAL SCHEDULE ON SHEET L-A1-01

SCALE 0 10 20 40

811

CITY OF WEST DES MOINES
APPROVED BY: DATE:

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Civil Design Advantage
4121 NW Urbandale Drive
Urbandale, IA 50322

Microsoft

DSM 16 DATA CENTER

1475 SE MAFFIT LAKE RD
WEST DES MOINES, IA

Design: NEW JR
Draft: NEW JR
Checked: RJM
Date: 2/18/2021
BMcD Project No: P. 70087
MS Project No: P. 28910

MICROSOFT

Design Manager: JON NYONE
Layout Manager:
Civil Site Survey, Landscaping Technical Lead: EONDWIP DHAR
Architectural & Electrical Technical Lead: LISA GALLANT / DAVID SWANSON
Mech, Plumbing & Fire Protection Technical Lead: STEVE TOUPIN
Building Automation Systems (BAS) Technical Lead: TYLER DIMARTINO
Electrical Technical Lead: ANAJA KRISHNAN
Electrical Power Management Systems (EPMS) Technical Lead: SERGIO FRANCO
Telecommunications / Network Technical Lead: MAST BENSON
Security Design Manager: DANIEL PUTMAN

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Revisions

No.	Date	Description
6	30 NOV 2021	90% IFP PACKAGE
1	29 DEC 2021	100% IFP PACKAGE
2	29 DEC 2021	CITY DEVELOPMENT PERMIT
3	31 JAN 2024	SAUDA 1000 RESUBMITTAL

Registration

PRELIMINARY

Sector Key Plan

Bar Code

Package
FULL BUILDOUT

Sheet Title/Number
LANDSCAPE PLAN

DSM16-L-A1-C02

DSM16-L-A1-C02

[PROPRIETARY AND CONFIDENTIAL – TRADES SECRET AND COMMERCIAL INFORMATION –
EXEMPT FROM RELEASE UNDER FOIA (5 U.S.C. § 552 (b)(4)) AND STATE PUBLIC DISCLOSURE LAW)

Prepared by: Brian Portz, City of West Des Moines Development Services Dept., PO Box 65320, West Des Moines, Iowa 50265-0320 515-222-3620
When Recorded, Return to: City Clerk, City of West Des Moines, PO Box 65320, West Des Moines, IA 50265-0320

RESOLUTION

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF WEST DES MOINES, APPROVING A MAJOR MODIFICATION TO SITE PLAN TO ALLOW CONSTRUCTION OF A DATA CENTER BUILDING

WHEREAS, pursuant to the provisions of Title 9, Zoning, of the West Des Moines Municipal Code, the applicant and property owner, Microsoft Corporation, requests approval of DSM 16 Major Modification to Site Plan for that property located at 1475 SE Maffitt Lake Road and legally described in attached Exhibit "B" for the purpose of constructing a 245,000 square foot data center building with associated parking lot; and

WHEREAS, studies and investigations were made, and staff reports, and recommendations were submitted which is made a part of this record and herein incorporated by reference; and

WHEREAS, the Major Modification to Site Plan complies with findings stated in the applicable provisions of Title 9, Chapter 1, Subsection 8, the Comprehensive Plan and City Code; and

WHEREAS, on February 12, 2024, the Planning and Zoning Commission recommended to the City Council, by a 5-0 vote, approval of the Major Modification to Site Plan; and

WHEREAS, on this day the City Council held a duly noticed meeting to consider the application for the Major Modification to Site Plan.

NOW, THEREFORE, The City Council does approve the DSM 16 Major Modification to Site Plan (MaM-006298-2024), subject to compliance with all of the conditions of approval, including any conditions added at the meeting, attached hereto as Exhibit "A". Violation of any such conditions shall be grounds for revocation of the permit, as well as any other remedy which is available to the City.

PASSED AND ADOPTED on February 19, 2024.

_____
Russ Trimble, Mayor

ATTEST:

_____
Ryan Jacobson, City Clerk

I HEREBY CERTIFY that the foregoing resolution was duly adopted by the City Council of the City of West Des Moines, Iowa, at a regular meeting held on February 19, 2024, by the following vote.

Exhibit A: Conditions of Approval

1. The City Council agreeing to not require landscape islands in the parking lot as required by City Code due to security concerns with trees in the parking lot. The applicant shall however add the required parking lot trees to the buffer plantings.
2. The City Council allowing shrubs in lieu of trees to be planted within parking lot islands due to security concerns with trees in the parking lot. The applicant shall however add the required parking lot trees to the buffer plantings.
3. The City Council allowing gravel to be implemented around industrial buildings on the site to allow access to utility structures for maintenance purposes.

Exhibit B: Legal Description

LOT 1, GINGER EAST PLAT 1, AN OFFICIAL PLAT IN THE
CITY OF WEST DES MOINES, POLK COUNTY, IOWA.