



Special Use Permit Request *City of Johnston, Iowa*

November 2, 2015

BOA Case No. 15-09 Special Use Permit for an Electric Substation at 6750 Pioneer Parkway, Johnston IA.

MidAmerican Energy Company has submitted an application for a special use permit to construct an electric substation at 6750 Pioneer Parkway. Chapter 172.03.7 allows electric transmission and regulation facilities by issuance of a special use permit from the Board of Adjustment after review and recommendation from the Planning and Zoning Commission.

Applicants:

MidAmerican Energy Company
Attn: Steve Haacke
P.O. Box 657
Des Moines, IA, 50306

Meeting Schedule:

Planning and Zoning Commission Monday November 9th, 2015 7:00 P.M.
Board of Adjustment Thursday November 19th, 2015 6:30 P.M.

The meeting will be held in the Council Chambers of Johnston City Hall, 6221 Merle Hay Road. The public is welcome and invited to attend the above noted meetings and an opportunity will be provided for you to make comments on the proposed request.

Staff Contact:

Comments and questions about this application may be directed to:

Aaron Wolfe, AICP
Community Development Director
City of Johnston
6221 Merle Hay Road; P.O. Box 410
Johnston, IA 50131
Phone: 515-727-7775
awolfe@cityofjohnston.com

Attachments:

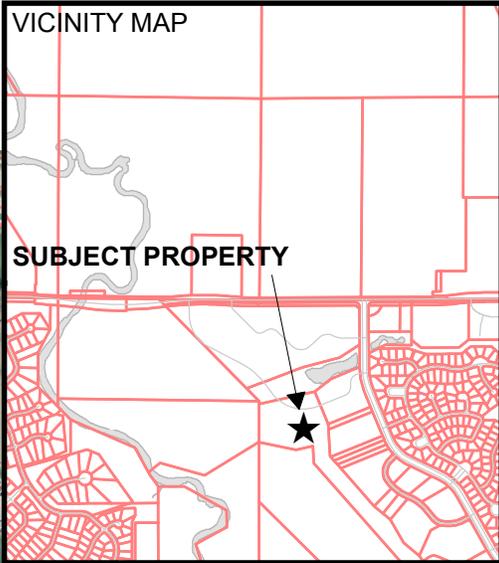
Vicinity Map
Site Plans

BOA Case No. 15-09
Special Use Permit for MidAmerican Energy Substation



VICINITY MAP

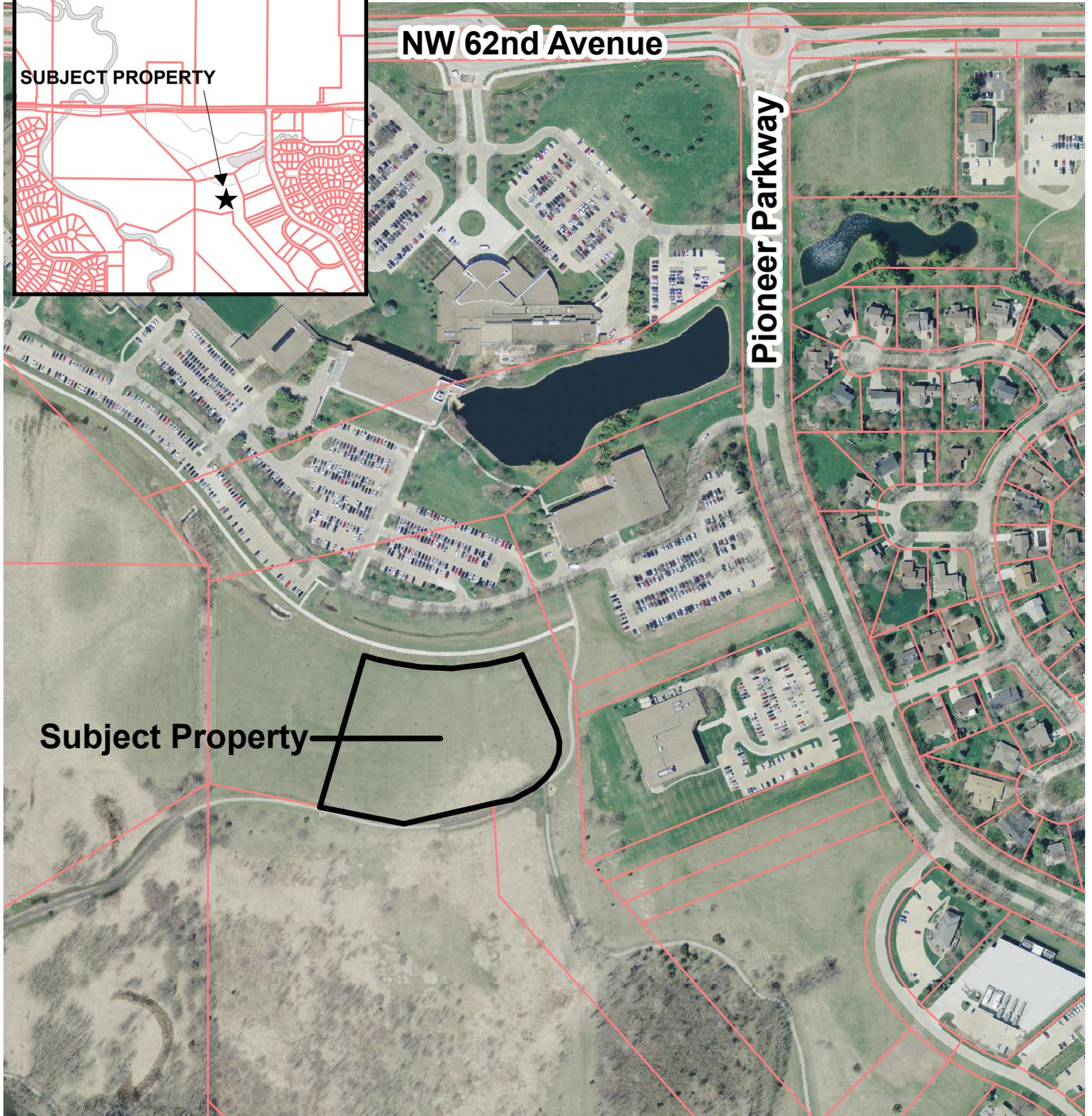
SUBJECT PROPERTY



NW 62nd Avenue

Pioneer Parkway

Subject Property

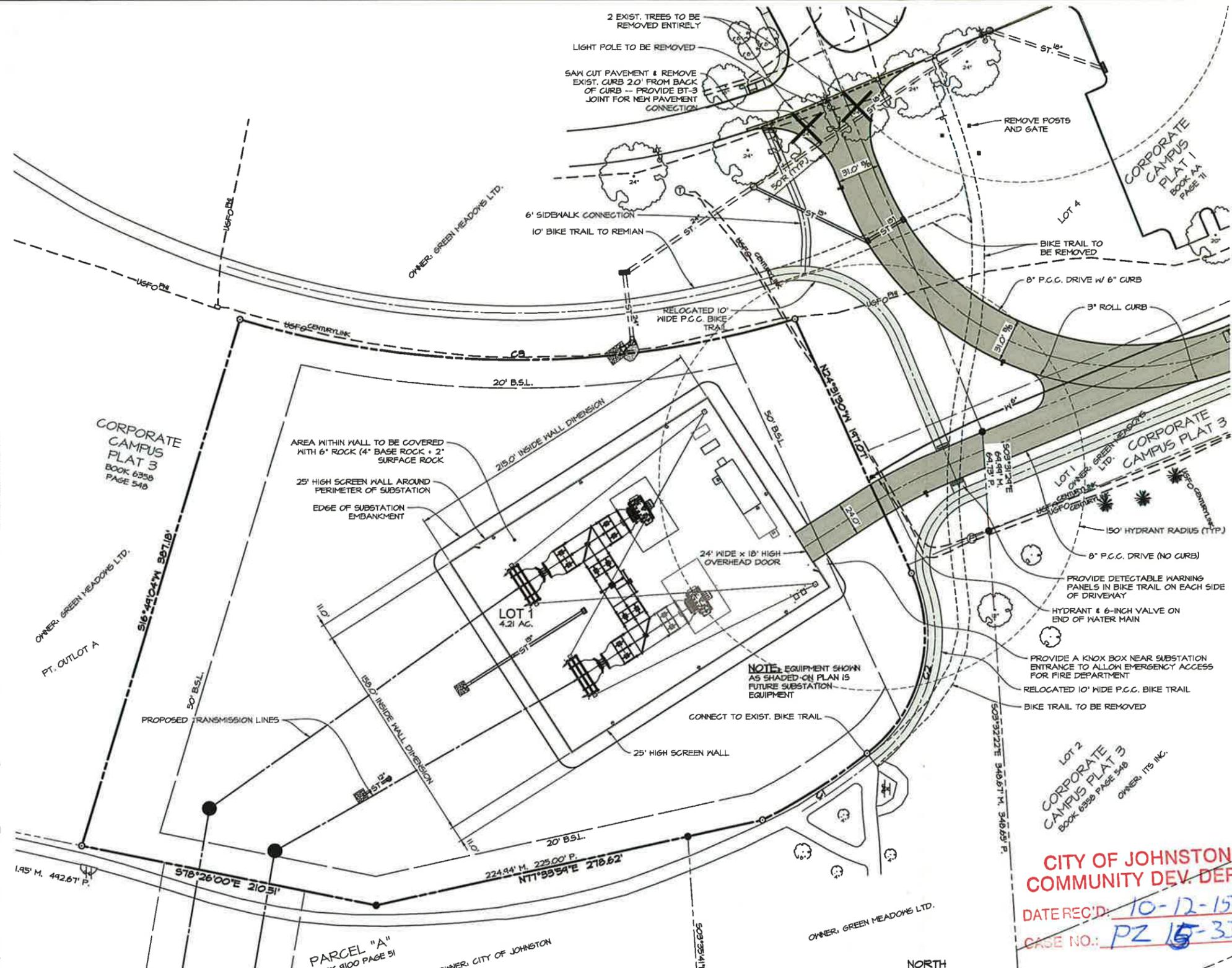


0 140 280 560 840 1,120 Feet

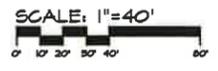
1 inch = 333 feet

Created by City of Johnston Department of Community Development
6221 Merle Hay Road, P.O. Box 410, Johnston, IA, 50131-0410 (515)278-2344 Fax:(515)278-2033

Q:\E-FILES\7000\071521_C3D Drawings\Construction Plans\071521 C21-40 Site Layout Plan.dwg, 10/12/2015 12:58:50 PM, mdoostalik, 1,2



CURVE	DELTA	RADIUS	LENGTH	TANGENT	CHORD	CH. BEARINGS
C1	10°39'21"	475.00'	87.71'	44.02'	87.66'	N51°37'05"E
C2	76°50'55"	105.00'	140.85'	83.24'	150.51'	N13°53'57"E
C3	33°40'21"	873.00'	345.54'	203.61'	384.81'	S84°54'11"W



IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com

NOTE:
NOTES & DETAILS SHOWN ON ONE DRAWING APPLY TO ALL DRAWINGS INsofar AS THEY MAY APPLY.

GENERAL NOTES

- ONE WEEK PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY:
 - A. MIDAMERICAN ENERGY COMPANY (M.E.C.)
 - B. CITY OF JOHNSTON
 - C. CIVIL ENGINEERING CONSULTANTS, INC.
 - D. IOWA ONE-CALL
- ALL CONSTRUCTION IN STREET RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE "IOWA STATEWIDE URBAN DESIGN AND SPECIFICATIONS" (SUDAS) 2014 EDITION.
- ALL OTHER CONSTRUCTION SHALL BE IN ACCORDANCE WITH MIDAMERICAN ENERGY COMPANY'S SUBSTATION ENGINEERING CONTRACT DOCUMENTS.
- ALL DIMENSIONS ARE TO PROPERTY LINES, FENCES AND TO THE CENTERLINE OF THE DRIVE.
- THE LOCATION OF THE UTILITIES SHOWN ON THIS PLAN ARE FROM VERBAL LOCATIONS PROVIDED BY THE UTILITY COMPANIES. LOCATION OF UTILITIES SHOWN ARE APPROXIMATE AND MUST BE VERIFIED (1-800-292-8989).
- CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND PAY ALL FEES REQUIRED.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES AND UTILITIES. ANY DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE TO THE FULL SATISFACTION OF THE UTILITY OWNER.
- ALL DEBRIS SETTLED ON ADJOINING PROPERTIES & STREETS DURING CONSTRUCTION SHALL BE PICKED UP IN A TIMELY MANNER.

SURFACING NOTES

- JUST PRIOR TO PLACING ROCK SURFACING, COMPACT SUBGRADE TO 95% STANDARD PROCTOR DENSITY FOR A DEPTH OF ONE FOOT.
- REMOVE & REPLACE SOIL AS REQUIRED IN AREAS OF CUT OR TRANSITIONS.
- PROOF ROLL ALL SURFACING SUBGRADES IN THE PRESENCE OF A GEOTECHNICAL ENGINEER TO LOCATE SOFT SPOTS. ALL SOFT SPOTS TO BE REPAIRED PRIOR TO TESTING FOR DENSITY.
- PROVIDE IN-PLACE FIELD DENSITY TESTS AS DIRECTED BY A GEOTECHNICAL ENGINEER, RECOMPACT & RETEST AREAS THAT FAIL DENSITY SPECS AT NO COST TO OWNER.
- ALL ON-SITE SURFACING SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST M.E.C. SPECIFICATIONS.

ROCK NOTES

- THE SURFACE OF THE SUBSTATION YARD SHALL BE COVERED WITH 6" OF CRUSHED ROCK CONSISTING OF 4" OF BASE ROCK AND 2" OF SURFACE ROCK.
- THE AREA 10-FEET OUTSIDE OF THE SUBSTATION WALL SHALL BE COVERED WITH 6" OF BASE ROCK ONLY.
- BASE ROCK SHALL BE CRUSHED LIMESTONE THAT SATISFIES IDOT SECTION 4122.02, MACADAM STONE BASE, GRADATION #13.
- SURFACE ROCK SHALL BE CRUSHED LIMESTONE THAT SATISFIES IDOT SECTION 4120, GRADATION #11.

SITE AREAS (IN SQUARE FEET)

POWER DISTRIBUTION CENTER	540	(0.3%)
ROCKED SUBSTATION PAD	41,712	(22.2%)
GREEN SPACE	134,675	(76.1%)
PAVED DRIVE	1,433	(0.8%)
TOTAL SITE	183,480	(100.00%)
	(4.21 AC)	

LIST OF SITE PLAN DRAWINGS

SHEET NO.	DESCRIPTION
C21-40	SUBSTATION LAYOUT & NOTES
C21-41	DRIVE & TRAIL LAYOUT
C24-10	GRADING & DRAINAGE
C24-40	ON-SITE LANDSCAPING
C24-41	OFF-SITE LANDSCAPING
C24-50 & 51	DRIVEWAY PLANS
C24-55 & 56	DRIVEWAY PROFILES

LEGEND

- PROPERTY BOUNDARY
- ▲ FOUND SECTION CORNER
- SET / FOUND PROPERTY CORNER
- - - SECTION LINE
- x - x - BUILDING SETBACK / EASEMENT LINE
- x - x - SUBSTATION FENCE
- - - PROPOSED TRANSMISSION LINE
- ST - EXIST. STORM SEWER
- K - WALL MOUNTED SITE LIGHT
- P - POWER POLE
- ST - PROPOSED STORM SEWER
- W - EXIST. WATER MAIN
- W - PROPOSED WATER MAIN
- SITE LIGHT



2400 86th Street, Unit 12, Des Moines, Iowa 50322
515.276.4884 • Fax: 515.276.7084 • mail@ceclac.com

OWNER
GREEN MEADOWS LTD.
7100 NW 62nd AVE.
P.O. BOX 1014
JOHNSTON, IOWA 50131
515-535-3443
kther.lehman@pioneer.com

PROSPECTIVE OWNER/APPLICANT
MIDAMERICAN ENERGY COMPANY
P.O. BOX 657
DES MOINES, IOWA 50306-0657
563-333-8388
shhaacke@midamerican.com

SITE ADDRESS
6750 PIONEER PARKWAY

ZONING
PC - PROFESSIONAL COMMERCE PARK WITH A PORTION OF THE SITE IN THE FLOOD FRINGE OVERLAY DISTRICT

FIRM MAP DESIGNATION
MAP NO. 1915SC0187F (PRELIMINARY DATED 05/11/15)
100-YEAR FLOOD ELEV. = 813.5
500-YEAR FLOOD ELEV. = 815.15

LEGAL DESCRIPTION
LOT 1, CORPORATE CAMPUS PLAT 3, AN OFFICIAL PLAT NOW INCLUDED IN AND FORMING A PART OF THE CITY OF JOHNSTON, POLK COUNTY, IOWA AND CONTAINING 4.21 ACRES, MORE OR LESS.

PARKING
THE AREA INSIDE THE WALL IS AVAILABLE FOR SERVICE VEHICLES.

HEIGHTS

POWER DIST. CENTER EQUIPMENT	16' TO 24' AVG.
DEAD-END STRUCTURES	30'
SHIELD MASTS	32'
PERIMETER WALL	25'

NOTE: SHIELD WIRES ARE USED AS LIGHTNING PROTECTION TO PREVENT DAMAGE TO THE SUBSTATION EQUIPMENT DURING THUNDERSTORMS. THE HEIGHT PROVIDES THE REQUIRED CLEARANCE TO THE EQUIPMENT.

UTILITIES
NO UTILITIES ARE REQUIRED

NOISE
NO OUTSIDE HORNS, LOUDSPEAKERS, P.A. SYSTEMS, BUZZERS, WHISTLES, BELLS, ETC. WILL BE INSTALLED

SIGNS
THERE WILL BE NO SIGNS FOR THIS PROJECT OTHER THAN "WARNING" SIGNS MOUNTED ON THE SUBSTATION FENCE.

OUTSIDE STORAGE
THERE WILL BE NO OUTSIDE STORAGE OF MATERIALS, SUPPLIES OR EQUIPMENT ON THIS SITE.

LIGHTING NOTES

- THE SITE LIGHTING SHALL CONSIST OF 400 WATT H.P.S. MOUNTED AT A HEIGHTS OF 10 AND 24 FEET WITHIN THE SUBSTATION WALL.
- FIXTURES SHALL BE DOWNWARD FACING AND SHIELDED TO ELIMINATE GLARE AND SPILLOVER ILLUMINATION.
- FLOOD LIGHTS AT HEIGHT OF 24 FEET WILL ONLY BE USED WHEN NEEDED AND WILL NOT NORMALLY BE CONTROLLED BY PHOTOCELL.
- FLOOD LIGHTS AT HEIGHT OF 10 FEET WILL BE PHOTOCELL CONTROLLED FOR SECURITY.

CERTIFICATIONS

I HEREBY CERTIFY THAT THE PORTION OF THIS TECHNICAL SUBMISSION DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND RESPONSIBLE CHARGE. I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF IOWA.

BY: *M. Dostalick* DATE: 10-12-15

MARTIN M. DOSTALICK, IOWA REG. NO. 344
PAGES OR SHEETS COVERED BY THIS SEAL:
C21-40, C21-41, C24-40, C24-41, C24-50, C24-51, C24-55 & C24-56

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.

BY: *P. Shepard* DATE: 10-12-15

PATRICK J. SHEPARD, IOWA LIC. NO. 12265 DATE MY LICENSE RENEWAL DATE IS DECEMBER 31, 2015
PAGES OR SHEETS COVERED BY THIS SEAL:
C24-10

VICINITY SKETCH



REV	DATE	DFTR	APP	DESCRIPTION	REV	DATE	DFTR	APP	DESCRIPTION
10					05				
09					04				
08					03				
07					02				
06					01	10-09-2015	C.E.C.	RCN	REVISE PER CITY COMMENTS LETTER 08-11-15

CONFIDENTIAL:
THIS DOCUMENT SHALL BE MAINTAINED CONFIDENTIALLY AS CRITICAL ENERGY INFRASTRUCTURE INFORMATION AND IS AVAILABLE TO MIDAMERICAN ENERGY COMPANY EMPLOYEES, BUT NOT TO MIDAMERICAN ENERGY COMPANY EMPLOYEES WORKING IN THE UNREGULATED RETAIL SERVICES DIVISION. PRIOR WRITTEN AUTHORIZATION IS REQUIRED FOR ACCESS BY ANY OTHER PERSON.



DATE: 08-26-2015
DESIGNED: MMD
DRAWN: MMD
APPROVED: RCN
SCALE: NONE

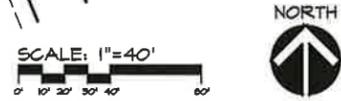
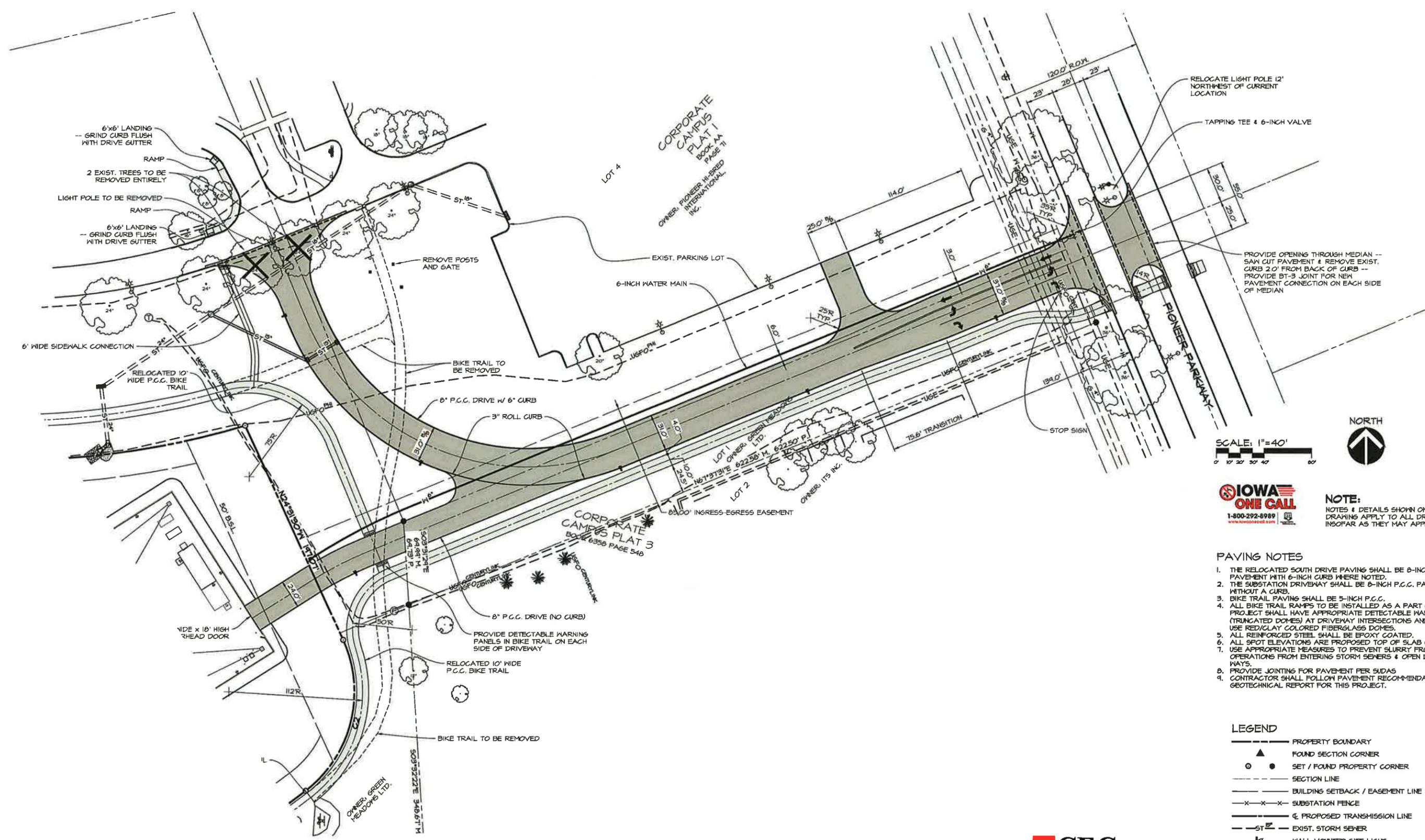
JOHNSTON SUBSTATION
JOHNSTON, IOWA

LAYOUT SITE PLAN

DGE

DGE C21-40

Q:\E-FILES\7000\7152\C3D Drawings\Construction Plans\E7152 C21-41 Off-site Layout Plan.dwg, 10/12/2015 12:59:04 PM, mdozialik, 1:2



NOTE:
NOTES & DETAILS SHOWN ON ONE DRAWING APPLY TO ALL DRAWINGS INsofar AS THEY MAY APPLY.

- PAVING NOTES**
1. THE RELOCATED SOUTH DRIVE PAVING SHALL BE 8-INCH P.C.C. PAVEMENT WITH 6-INCH CURB WHERE NOTED.
 2. THE SUBSTATION DRIVEWAY SHALL BE 8-INCH P.C.C. PAVEMENT WITHOUT A CURB.
 3. BIKE TRAIL PAVING SHALL BE 5-INCH P.C.C.
 4. ALL BIKE TRAIL RAMP TO BE INSTALLED AS A PART OF THIS PROJECT SHALL HAVE APPROPRIATE DETECTABLE WARNINGS (TRUNCATED DOMES) AT DRIVEWAY INTERSECTIONS AND RAMP. USE RED/CLAY COLORED FIBERGLASS DOMES.
 5. ALL REINFORCED STEEL SHALL BE EPOXY COATED.
 6. ALL SPOT ELEVATIONS ARE PROPOSED TOP OF SLAB GRADE.
 7. USE APPROPRIATE MEASURES TO PREVENT SLURRY FROM SAUCUT OPERATIONS FROM ENTERING STORM SEWERS & OPEN DRAINAGE WAYS.
 8. PROVIDE JOINTING FOR PAVEMENT PER SUDAS.
 9. CONTRACTOR SHALL FOLLOW PAVEMENT RECOMMENDATIONS IN GEOTECHNICAL REPORT FOR THIS PROJECT.

- LEGEND**
- — — — — PROPERTY BOUNDARY
 - ▲ FOUND SECTION CORNER
 - ● SET / FOUND PROPERTY CORNER
 - - - - - SECTION LINE
 - - - - - BUILDING SETBACK / EASEMENT LINE
 - x - x - x - SUBSTATION FENCE
 - — — — — PROPOSED TRANSMISSION LINE
 - ST - - - - - EXIST. STORM SEWER
 - — — — — WALL MOUNTED SITE LIGHT
 - — — — — POWER POLE
 - SD - - - - - EXIST. SUB-DRAIN
 - W - - - - - EXIST. WATER MAIN
 - SITE LIGHT



Civil Engineering Consultants, Inc.

2400 86th Street, Unit 12, Des Moines, Iowa 50322
515.276.4884, Fax: 515.276.7084, mail@cecinc.com

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DATE: 07-30-2015
DESIGNED: MMD
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APPROVED: RCN
SCALE: NONE

JOHNSTON SUBSTATION
JOHNSTON, IOWA
OFF-SITE LAYOUT
SITE PLAN

D
G
E

DGE
C21-41

Q:\E-FILES\B-7000\B7152_C3D Drawings\Construction Plans\B7152-C24-10 Grading Plan.dwg, 10/12/2015 12:59:53 PM, mdozialik, 1.2

BENCHMARK
VERTICAL AND HORIZONTAL CONTROL - JOHNSTON, IOWA

BM-7
LOCATION: LOCATED AT THE NORTHEAST CORNER OF 60th STREET AND MERLE HAY ROAD, 1.1 FEET EAST OF THE NORTH SOUTH SIDEWALK AND 34.8 FEET NORTH OF THE NORTH EDGE OF PAVEMENT OF 60th STREET.
DESCRIPTION: CITY OF JOHNSTON STANDARD 3" ROUND BRASS CAP IN A 6" CONCRETE MONUMENT.
NORTH 608308.961 EAST 1586431.912 ELEV 831.7 NAVD 88

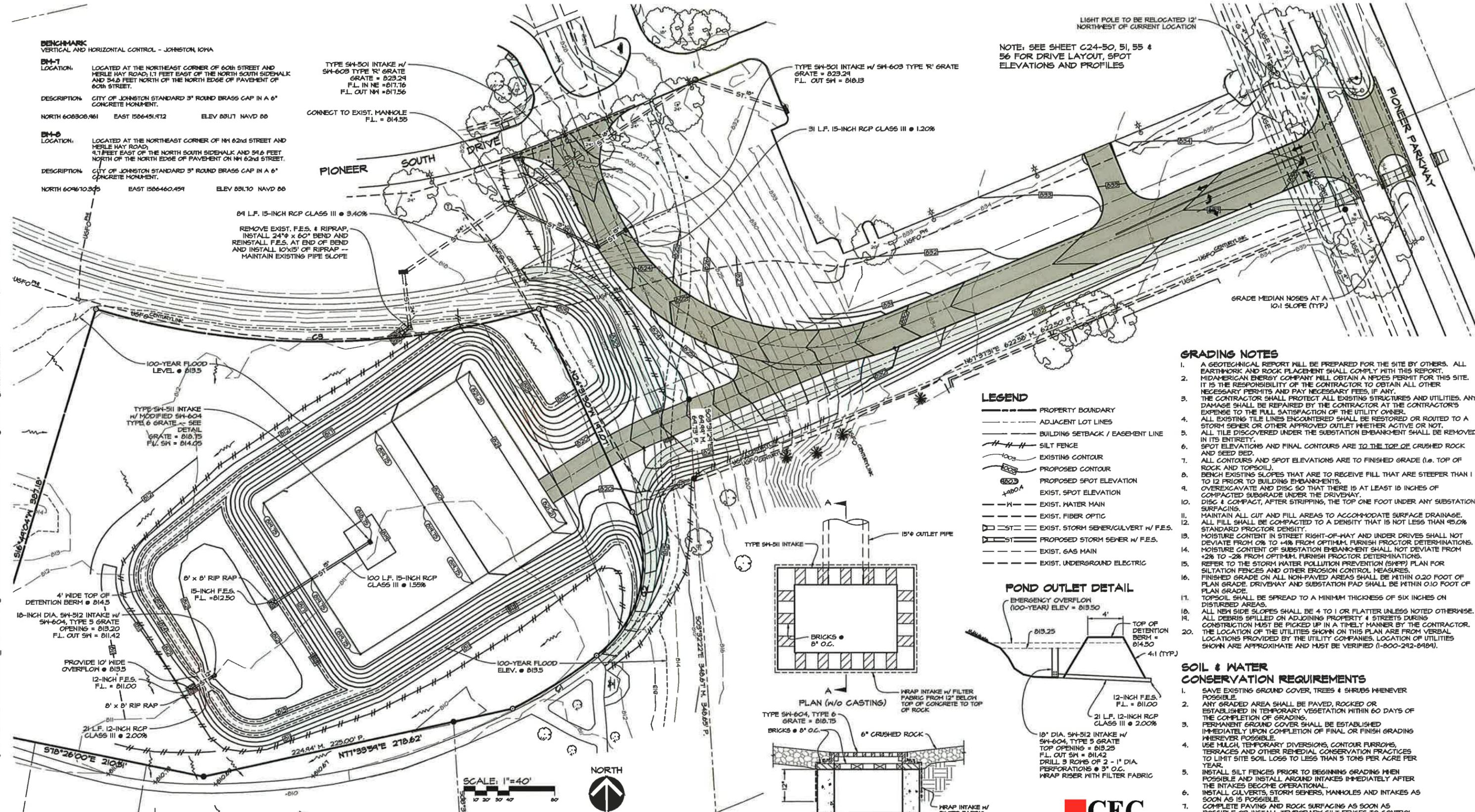
BM-8
LOCATION: LOCATED AT THE NORTHEAST CORNER OF NH 62nd STREET AND MERLE HAY ROAD, 9.1 FEET EAST OF THE NORTH SOUTH SIDEWALK AND 51.6 FEET NORTH OF THE NORTH EDGE OF PAVEMENT ON NH 62nd STREET.
DESCRIPTION: CITY OF JOHNSTON STANDARD 3" ROUND BRASS CAP IN A 6" CONCRETE MONUMENT.
NORTH 609670.305 EAST 1586460.494 ELEV 831.70 NAVD 88

TYPE SM-501 INTAKE W/
SM-603 TYPE R' GRATE
GRATE = 823.24
F.L. IN NE = 817.16
F.L. OUT SW = 815.56
CONNECT TO EXIST. MANHOLE
F.L. = 814.55

TYPE SM-501 INTAKE W/ SM-603 TYPE R' GRATE
GRATE = 823.24
F.L. OUT SW = 818.13

NOTE: SEE SHEET C24-50, 51, 55 & 56 FOR DRIVE LAYOUT, SPOT ELEVATIONS AND PROFILES

LIGHT POLE TO BE RELOCATED 12' NORTHWEST OF CURRENT LOCATION



84 L.F. 15-INCH RCP CLASS III @ 3.40%
REMOVE EXIST. F.E.S. & RIPRAP, INSTALL 24" x 60" BEND AND REINSTALL F.E.S. AT END OF BEND AND INSTALL 10'x15' OF RIPRAP - MAINTAIN EXISTING PIPE SLOPE

100-YEAR FLOOD LEVEL @ 819.5

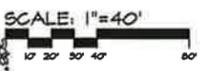
TYPE SM-511 INTAKE W/ MODIFIED SM-604 TYPE 6 GRATE - SEE DETAIL
GRATE = 818.75
F.L. SW = 814.05

18-INCH DIA. SM-512 INTAKE W/ SM-604, TYPE 5 GRATE
OPENING = 813.20
F.L. OUT SW = 811.42

PROVIDE 10' WIDE OVERFLOW @ 813.5
12-INCH F.E.S. F.L. = 811.00

21 L.F. 12-INCH RCP CLASS III @ 2.00%

100 L.F. 15-INCH RCP CLASS III @ 1.55%

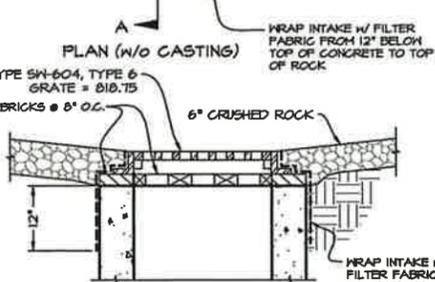
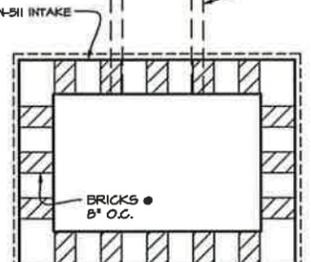
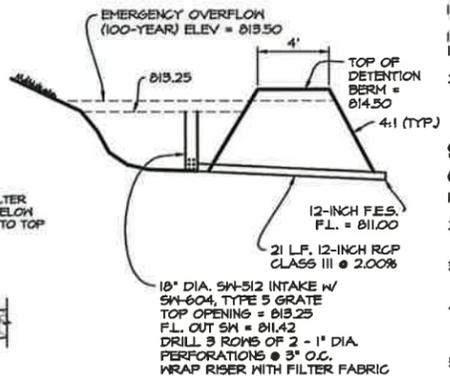


NOTE:
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LEGEND

- PROPERTY BOUNDARY
- ADJACENT LOT LINES
- BUILDING SETBACK / EASEMENT LINE
- SILT FENCE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXIST. SPOT ELEVATION
- EXIST. WATER MAIN
- EXIST. FIBER OPTIC
- EXIST. STORM SEWER/CULVERT W/ F.E.S.
- PROPOSED STORM SEWER W/ F.E.S.
- EXIST. GAS MAIN
- EXIST. UNDERGROUND ELECTRIC

POND OUTLET DETAIL



SECTION A-A
SUBSTATION INTAKE DETAILS
SCALE: 1" = 1'-0"

GRADING NOTES

1. A GEOTECHNICAL REPORT WILL BE PREPARED FOR THE SITE BY OTHERS. ALL EARTHWORK AND ROCK PLACEMENT SHALL COMPLY WITH THIS REPORT.
2. MIDAMERICAN ENERGY COMPANY WILL OBTAIN A NPDES PERMIT FOR THIS SITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL OTHER NECESSARY PERMITS AND PAY NECESSARY FEES, IF ANY.
3. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES AND UTILITIES. ANY DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE TO THE FULL SATISFACTION OF THE UTILITY OWNER.
4. ALL EXISTING TILE LINES ENCOUNTERED SHALL BE RESTORED OR ROUTED TO A STORM SEWER OR OTHER APPROVED OUTLET WHETHER ACTIVE OR NOT.
5. ALL TILE DISCOVERED UNDER THE SUBSTATION EMBANKMENT SHALL BE REMOVED IN ITS ENTIRETY.
6. SPOT ELEVATIONS AND FINAL CONTOURS ARE TO THE TOP OF CRUSHED ROCK AND SEED BED.
7. ALL CONTOURS AND SPOT ELEVATIONS ARE TO FINISHED GRADE (i.e. TOP OF ROCK AND TOPSOIL).
8. BENCH EXISTING SLOPES THAT ARE TO RECEIVE FILL THAT ARE STEEPER THAN 1 TO 12 PRIOR TO BUILDING EMBANKMENTS.
9. OVEREXCAVATE AND DISC SO THAT THERE IS AT LEAST 18 INCHES OF COMPACTED SUBGRADE UNDER THE DRIVEWAY.
10. DISC & COMPACT, AFTER STRIPPING, THE TOP ONE FOOT UNDER ANY SUBSTATION SURFACING.
11. MAINTAIN ALL CUT AND FILL AREAS TO ACCOMMODATE SURFACE DRAINAGE.
12. ALL FILL SHALL BE COMPACTED TO A DENSITY THAT IS NOT LESS THAN 95.0% STANDARD PROCTOR DENSITY.
13. MOISTURE CONTENT IN STREET RIGHT-OF-WAY AND UNDER DRIVES SHALL NOT DEVIATE FROM 0% TO +4% FROM OPTIMUM. FURNISH PROCTOR DETERMINATIONS.
14. MOISTURE CONTENT OF SUBSTATION EMBANKMENT SHALL NOT DEVIATE FROM +2% TO -2% FROM OPTIMUM. FURNISH PROCTOR DETERMINATIONS.
15. REFER TO THE STORM WATER POLLUTION PREVENTION (SWPP) PLAN FOR SILTATION FENCES AND OTHER EROSION CONTROL MEASURES.
16. FINISHED GRADE ON ALL NON-PAVED AREAS SHALL BE WITHIN 0.20 FOOT OF PLAN GRADE. DRIVEWAY AND SUBSTATION PAD SHALL BE WITHIN 0.10 FOOT OF PLAN GRADE.
17. TOPSOIL SHALL BE SPREAD TO A MINIMUM THICKNESS OF SIX INCHES ON DISTURBED AREAS.
18. ALL NEW SIDE SLOPES SHALL BE 4 TO 1 OR FLATTER UNLESS NOTED OTHERWISE.
19. ALL DEBRIS SPILLED ON ADJOINING PROPERTY & STREETS DURING CONSTRUCTION MUST BE PICKED UP IN A TIMELY MANNER BY THE CONTRACTOR.
20. THE LOCATION OF THE UTILITIES SHOWN ON THIS PLAN ARE FROM VERBAL LOCATIONS PROVIDED BY THE UTILITY COMPANIES. LOCATION OF UTILITIES SHOWN ARE APPROXIMATE AND MUST BE VERIFIED (1-800-242-8484).

SOIL & WATER CONSERVATION REQUIREMENTS

1. SAVE EXISTING GROUND COVER, TREES & SHRUBS WHENEVER POSSIBLE.
2. ANY GRADED AREA SHALL BE PAVED, ROCKED OR ESTABLISHED IN TEMPORARY VEGETATION WITHIN 60 DAYS OF THE COMPLETION OF GRADING.
3. PERMANENT GROUND COVER SHALL BE ESTABLISHED IMMEDIATELY UPON COMPLETION OF FINAL OR FINISH GRADING WHEREVER POSSIBLE.
4. USE MULCH, TEMPORARY DIVERSIONS, CONTOUR FURROWS, TERRACES AND OTHER REMEDIAL CONSERVATION PRACTICES TO LIMIT SITE SOIL LOSS TO LESS THAN 5 TONS PER ACRE PER YEAR.
5. INSTALL SILT FENCES PRIOR TO BEGINNING GRADING WHEN POSSIBLE AND INSTALL AROUND INTAKES IMMEDIATELY AFTER THE INTAKES BECOME OPERATIONAL.
6. INSTALL CULVERTS, STORM SEWERS, MANHOLES AND INTAKES AS SOON AS IS POSSIBLE.
7. COMPLETE PAVING AND ROCK SURFACING AS SOON AS POSSIBLE OR INSTALL TEMPORARY SILT FENCES TO CONTROL EROSION.



Civil Engineering Consultants, Inc.
2400 86th Street - Unit 12 - Des Moines, Iowa 50322
515.276.4884 - Fax: 515.276.7084 - Email: ceclnc@gmail.com

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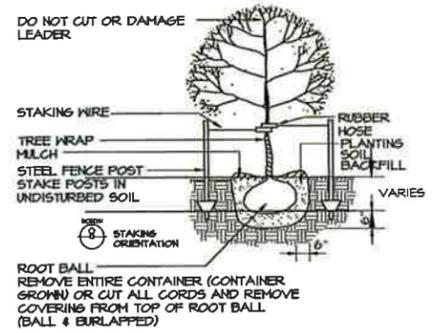
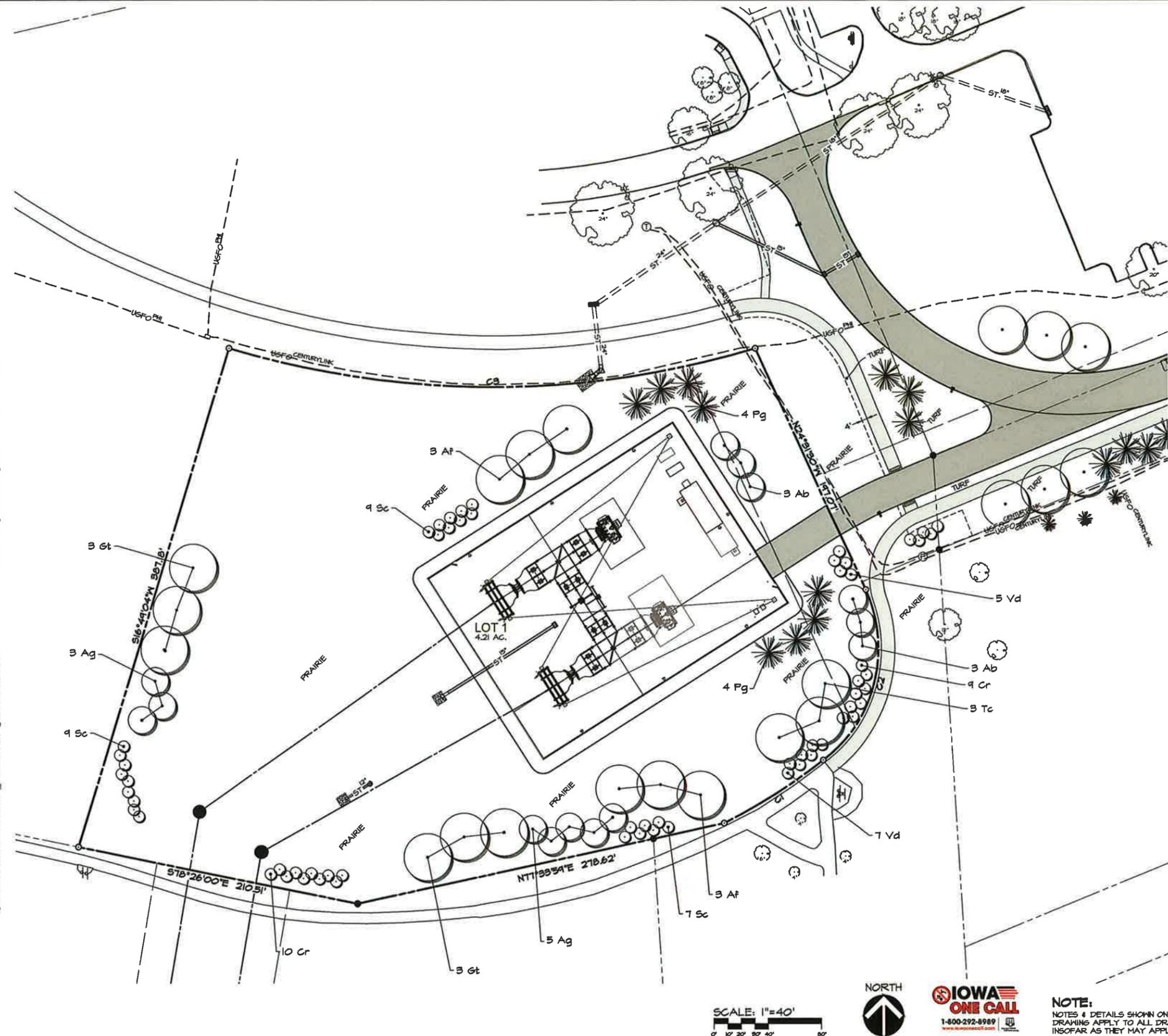


DATE: 07-30-2015
DESIGNED: MMD
DRAWN: MMD
APPROVED: RCN
SCALE: NONE

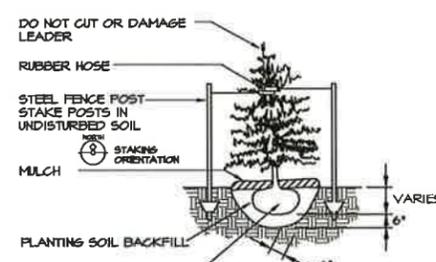
JOHNSTON SUBSTATION
JOHNSTON, IOWA
GRADING & DRAINAGE
SITE PLAN

D
G
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C24-10

Q:\E-FILES\IE-7000\IE7152_C3D Drawings\Construction Plans\IE7152 C24-40 Landscape Plan.dwg, 10/12/2015 1:00:40 PM, mdoostalik, 1:2



DECIDUOUS TREE PLANTING AND STAKING DETAIL
NO SCALE



EVERGREEN TREE PLANTING AND STAKING DETAIL
NO SCALE

- PLANTING NOTES**
1. ALL SITEWORK, SEEDING, SODDING AND LANDSCAPING IN THE STREET ROW SHALL BE IN ACCORDANCE WITH THE 'URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS.'
 2. ALL ON-SITE SEEDING, SODDING AND LANDSCAPING SHALL BE IN ACCORDANCE WITH MIDAMERICAN ENERGY COMPANY'S CONTRACT SPECIFICATIONS.
 3. THE CONTRACTOR SHALL REMOVE THE TREE STAKES ONE YEAR AFTER INSTALLATION.
 4. NO PLANT MATERIAL SHALL BE SUBSTITUTED WITHOUT AUTHORIZATION OF THE OWNER'S REPRESENTATIVE.
 5. ALL TREES AND SHRUBS SHALL BE MULCHED WITH AT LEAST 3" SHREDDED BARK MULCH UNLESS NOTED OTHERWISE.
 6. UNLESS NOTED OTHERWISE, ALL DECIDUOUS TREES SHALL BE PLANTED AT LEAST 5' INSIDE THE PROPERTY LINE AND CONIFEROUS TREES AT LEAST 10' INSIDE THE PROPERTY LINE.
 7. ALL DISTURBED AREAS SHALL BE SEEDDED AS NOTED ON THE LANDSCAPING PLAN.
 8. ALL PLANT MATERIAL SHALL COMPLY WITH THE STANDARDS OF 'AMERICAN STANDARD FOR NURSERY STOCK'.
 9. THE LOCATION OF THE UTILITIES SHOWN ON THIS PLAN ARE FROM VERBAL LOCATIONS PROVIDED BY THE UTILITY COMPANIES. LOCATION OF UTILITIES SHOWN ARE APPROXIMATE AND MUST BE VERIFIED (1-800-242-8484).
 10. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND PAY ALL FEES REQUIRED.

- SEEDING NOTES**
1. ALL DISTURBED SITE AREAS ON THE MEC PARCEL NOT RECEIVING ROCK OR PAVING SHALL BE SEEDDED WITH A PRAIRIE SEED MIX AS NOTED BELOW.
 2. SEE SHEET C24-41 FOR SEEDING OFF-SITE
 3. FERTILIZER (16-16-16) SHALL BE APPLIED TO THE AREA TO BE SEEDDED AT A RATE OF 650 LBS/ACRE.
 4. THE AREA TO BE SEEDDED SHALL BE SMOOTH, AND ALL WASHED AND GULLIES FILLED TO MEET THE DESIRED CROSS SECTION. AREAS ACCESSIBLE TO MACHINERY SHALL BE CULTIVATED TO A DEPTH OF 3". AREAS INACCESSIBLE TO MACHINERY SHALL BE CULTIVATED TO A DEPTH OF 1 1/2" INCHES.
 5. THE FERTILIZER SHALL BE INCORPORATED INTO THE SOIL TO A DEPTH OF 3" WITH A MECHANICAL ROCK PICKER OR A SPRING TOOTH CULTIVATOR.
 6. ALL SEEDDED AREAS SHALL BE WATERED ARTIFICIALLY A MINIMUM OF THICE A DAY FOR THE FIRST WEEK AFTER INSTALLATION, AND ONCE A DAY DURING THE SECOND AND THIRD WEEK AFTER INSTALLATION.

SEED MIXES

SEED MIX	PERCENTAGE
URBAN (TURF) GRASS SEED MIXTURE (% BY WEIGHT)	
COMMON KENTUCKY BLUEGRASS	15%
CREeping RED FESCUE	10%
PERENNIAL RYEGRASS (FINE LEAF)	25%
	100%
PRAIRIE SEED MIXTURE (VERSAGRASS)	
BROMEGRASS	25%
GESTULOLIUM	25%
PERENNIAL RYEGRASS	25%
TIMOTHY	25%

LANDSCAPE CALCULATIONS

PLANTS REQUIRED:
 1 TREE PER 1,500 S.F. OF MINIMUM REQ'D OPEN SPACE
 1 SHRUB PER 1,000 S.F. OF MINIMUM REQ'D OPEN SPACE

55,034 / 1,500 = 37 TREES
 55,034 / 1,000 = 56 SHRUBS

OPEN SPACE (IN SQUARE FEET)

OPEN SPACE REQUIRED	PERCENTAGE OF SITE	AREA
30% OF SITE	30%	55,044
16% OF SITE	16%	19,475
TOTAL SITE AREA		193,480 (4.21 AC)

PLANTING SCHEDULE

KEY	QUANT.	BOTANICAL/COMMON NAME	INSTALLED SIZE	MATURE SIZE (HEIGHT x WIDTH)	COMMENTS
Ag	8	Acer ginnala 'Flame'	8' HEIGHT	20' x 20'	Multi-stemmed B/B
Af	6	Amur Flame Maple	2 1/2" Ø	60' x 40'	B/B or TS
		Acer x freemanii 'Jeffersred'			
		Autumn Blaze Maple			
Ab	6	Amelanchier x grandiflora	8' HEIGHT	25' x 20'	Multi-stemmed B/B
		Autumn Brilliance Serviceberry			
Cr	14	Cornus racemosa	24" HEIGHT	12' x 12'	CONT.
		Gray Dogwood			
Et	6	Gleditsia triacanthos 'Skyline'	2 1/2" Ø	45' x 30'	B/B
		Skyline Honeylocust			
Pg	8	Picea glauca densata	8' HEIGHT	40' x 30'	B/B or TS
		Black Hills Spruce			
Sc	25	Sambucus canadensis	24"	10' x 10'	CONT.
		Elderberry			
Tc	3	Tilia cordata 'Greenspire'	2 1/2" Ø	50' x 35'	B/B or TS
		Greenspire Linden			
Vd	12	Viburnum dentatum 'Morton'	24" HEIGHT	12' x 12'	CONT.
		Northern Burgundy Viburnum			

B/B = BALLED & BURLAPPED
 TS = TREE SPADE
 CONT. = CONTAINER GROWN

LEGEND

- PROPERTY BOUNDARY
- SECTION LINE / 1/4, 1/4 SECTION LINE
- BUILDING SETBACK / EASEMENT LINE
- x-x-x- FARM FENCE
- W- EXIST. WATER MAIN
- OH- EXIST. OVERHEAD WIRES
- ST- EXIST. STORM SEWER/CULVERT
- PROPOSED CULVERT w/ F.E.S.
- SITE LIGHT



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NOTE:
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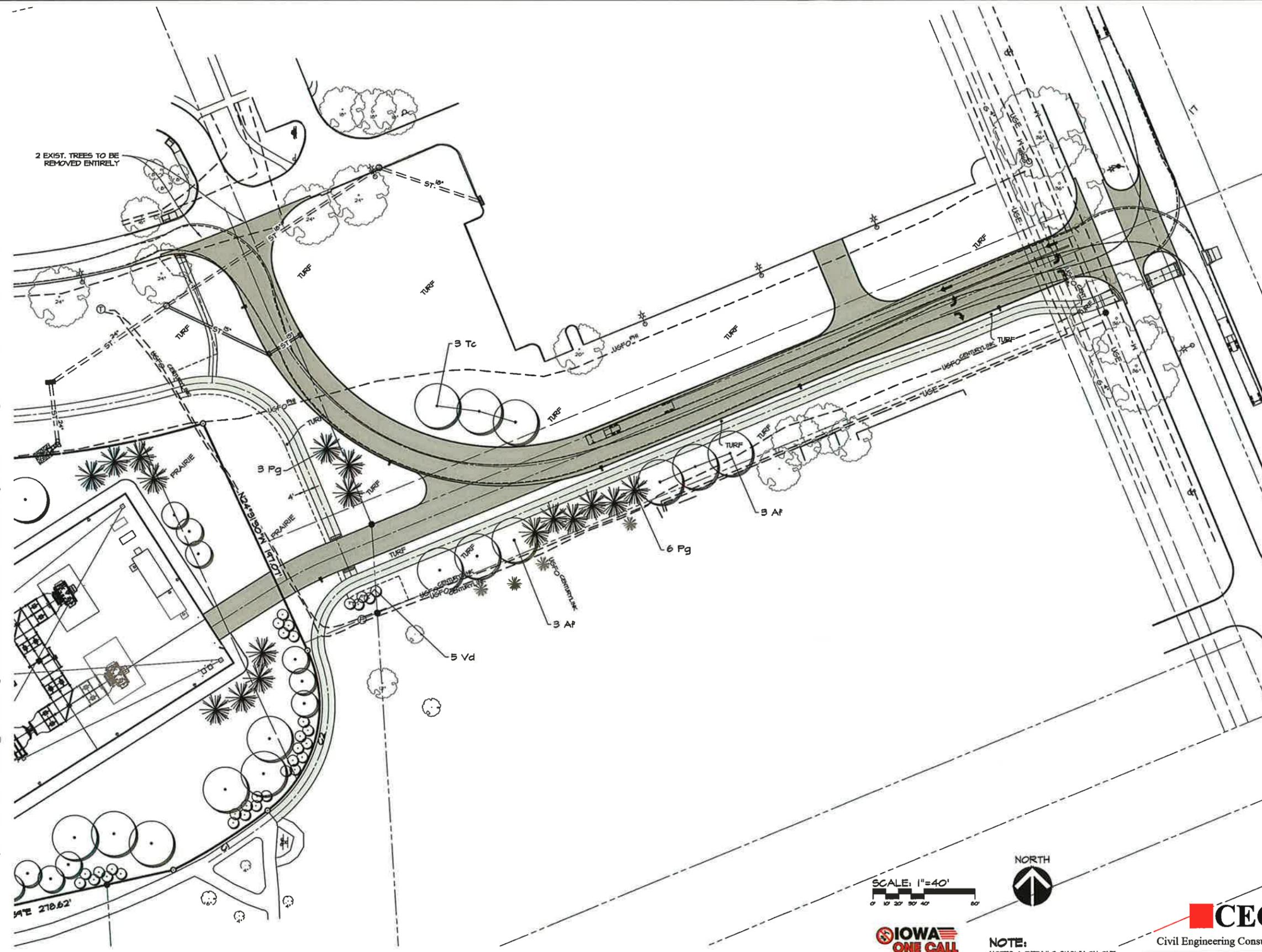


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JOHNSTON SUBSTATION
 JOHNSTON, IOWA
 LANDSCAPING
 SITE PLAN

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C24-40

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2 EXIST. TREES TO BE REMOVED ENTIRELY

SEEDING NOTES

- SEE SEEDING NOTES AND SEED MIXES ON SHEET C24-40.
- AREAS NOTED AS "TURF" SHALL BE SEEDDED WITH THE URBAN SEED MIX.
- AREAS NOTED AS "PRAIRIE" SHALL BE SEEDDED WITH THE PRAIRIE SEED MIX.

PLANTING NOTES

SEE SHEET C24-40 FOR PLANTING NOTES AND DETAILS

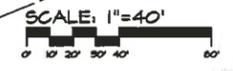
PLANTING SCHEDULE

KEY	QUANT.	BOTANICAL/COMMON NAME	INSTALLED SIZE	MATURE SIZE (HEIGHT x WIDTH)	COMMENTS
AF	6	Acer x Freemanii 'Jeffersred' Autumn Blaze Maple	2 1/2' Ø	60' x 40'	B/B or TS
Pg	4	Picea glauca densata Black Hills Spruce	6' HEIGHT	40' x 30'	B/B or TS
Tc	3	Tilia cordata 'Greenspire' Greenspire Linden	2 1/2' Ø	50' x 35'	B/B or TS
Vd	5	Viburnum dentatum 'Morton' Northern Burgundy Viburnum	24" HEIGHT	12' x 12'	CONT.

B/B = BALLED & BURLAPPED
 TS = TREE SPADE
 CONT. = CONTAINER GROWN

LEGEND

- PROPERTY BOUNDARY
- ADJACENT LOT LINES
- BUILDING SETBACK / EASEMENT LINE
- EXIST. WATER MAIN
- EXIST. FIBER OPTIC
- EXIST. STORM SEWER/CULVERT W/ F.E.S.
- PROPOSED STORM SEWER W/ F.E.S.
- EXIST. GAS MAIN
- EXIST. UNDERGROUND ELECTRIC
- SITE LIGHT



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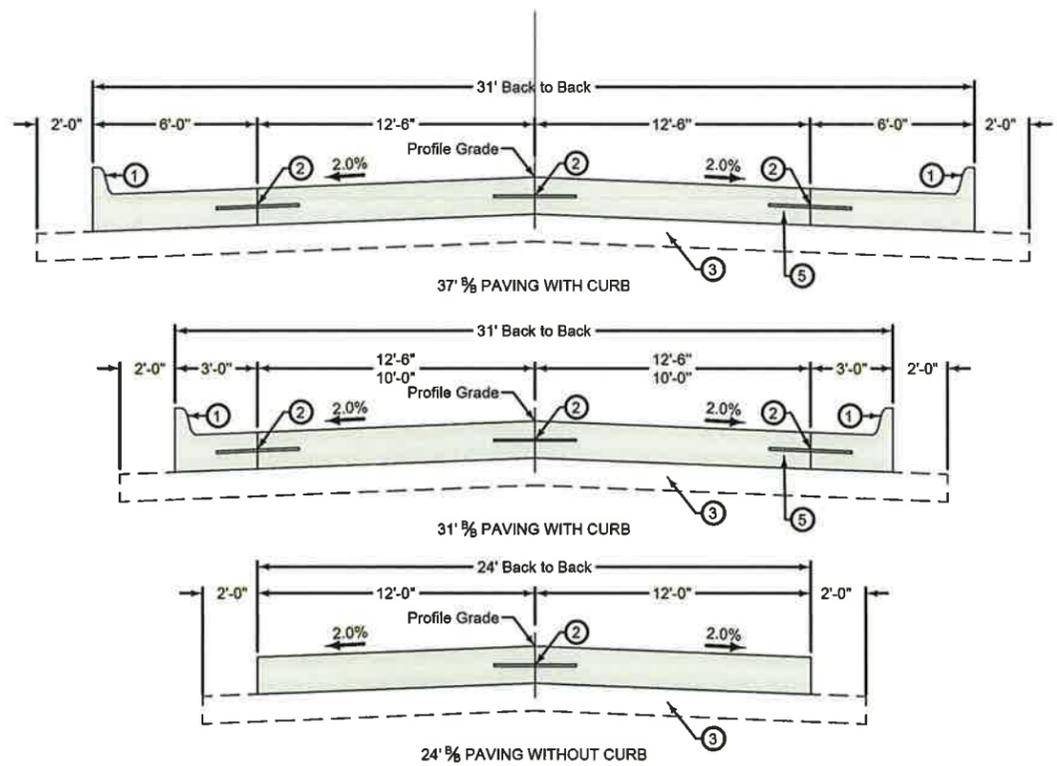
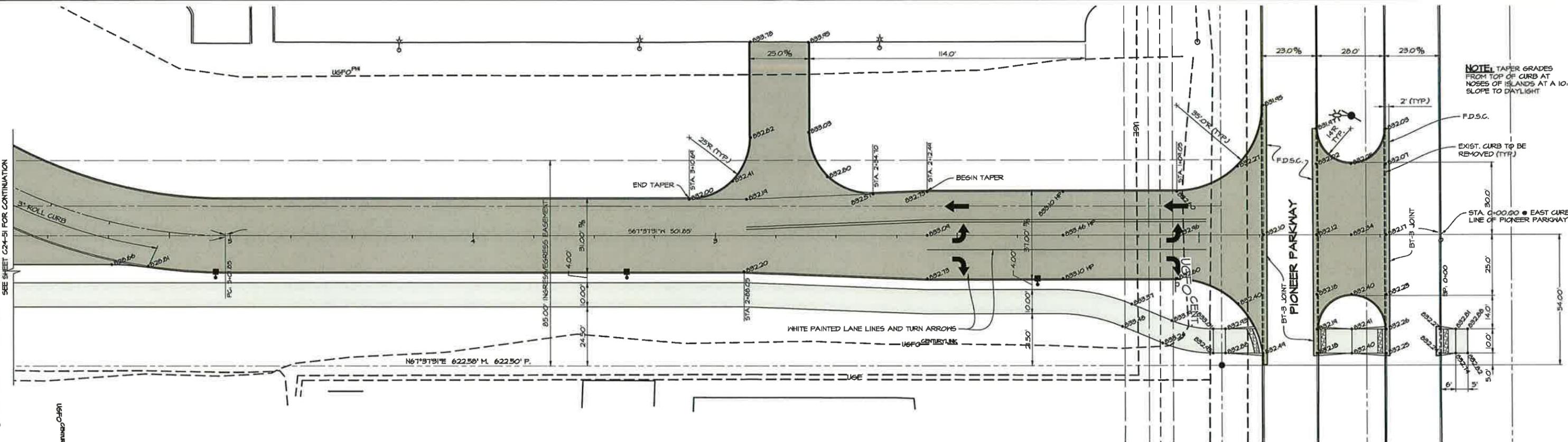
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JOHNSTON SUBSTATION
 JOHNSTON, IOWA
 OFF-SITE LANDSCAPING
 SITE PLAN

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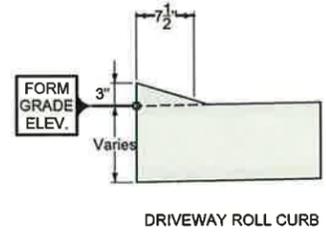
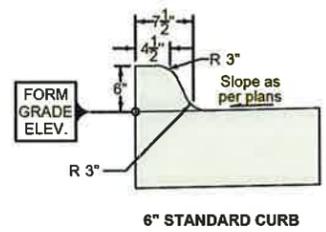
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SEE SHEET C24-51 FOR CONTINUATION



- ① 6 inch standard curb.
- ② BT, KT, or L joint depending on pavement thickness and construction staging.
- ③ Subbase or subgrade as specified.
- ④ Unless otherwise specified in the contract documents.
- ⑤ No dowels within 24" of the back of curb. With gutterline joint, place first dowel 6 inches from the joint. See Figure 7010.101, Sheet 8.

TRANSVERSE JOINT REQUIREMENTS ④		
Pavement Thickness	Transverse Joint Type	Transverse Joint Spacing
6"	C	12'
7"	C	15'
8"	CD ⑤	15'
9"	CD ⑤	15'
≥10"	CD ⑤	20'



SUDAS Iowa Department of Transportation FIGURE 7010.102 STANDARD ROAD PLAN REVISIONS: Add the Jointing Diagram for Curb and Outer and page 2.	REVISION 3 04-15-14 PV-102 SHEET 1 of 2
	SUDAS ENGINEER DESIGN METHOD ENGINEER

- LEGEND**
- PROPERTY BOUNDARY
 - - - SECTION LINE / 1/4, 1/4 SECTION LINE
 - - - BUILDING SETBACK / EASEMENT LINE
 - - - EXIST. WATER MAIN
 - - - EXIST. OVERHEAD WIRES
 - - - EXIST. STORM SEWER/CULVERT
 - SITE LIGHT



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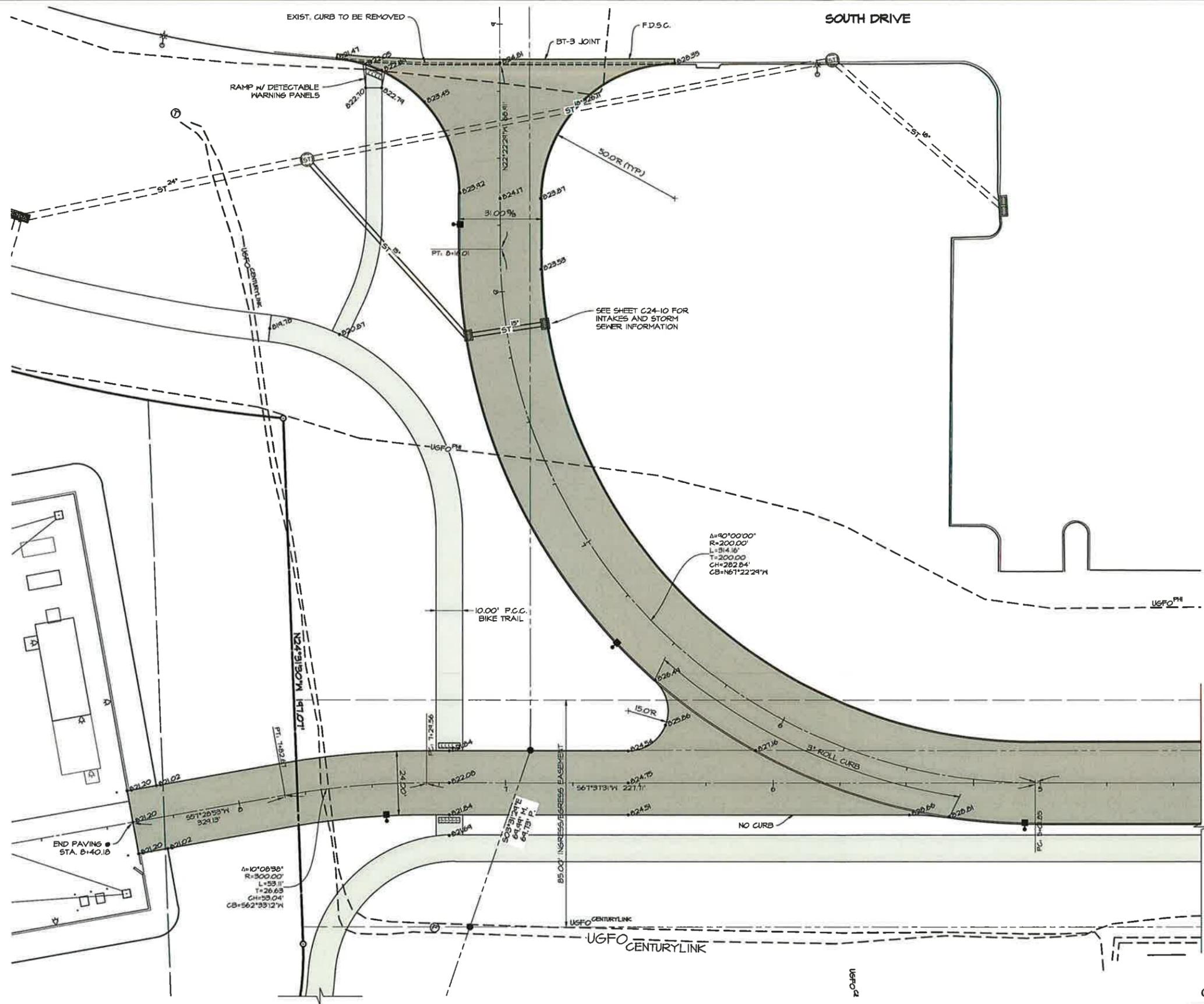


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JOHNSTON SUBSTATION
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LEGEND

	PROPERTY BOUNDARY
	FOUND SECTION CORNER
	SET / FOUND PROPERTY CORNER
	LOT LINE
	BUILDING SETBACK / EASEMENT LINE
	EXIST. STORM SEWER
	EQUIPMENT MOUNTED SITE LIGHT
	POWER POLE
	PROPOSED STORM SEWER
	EXIST. WATER MAIN
	PROPOSED WATER MAIN
	SITE LIGHT



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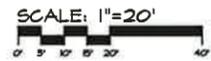
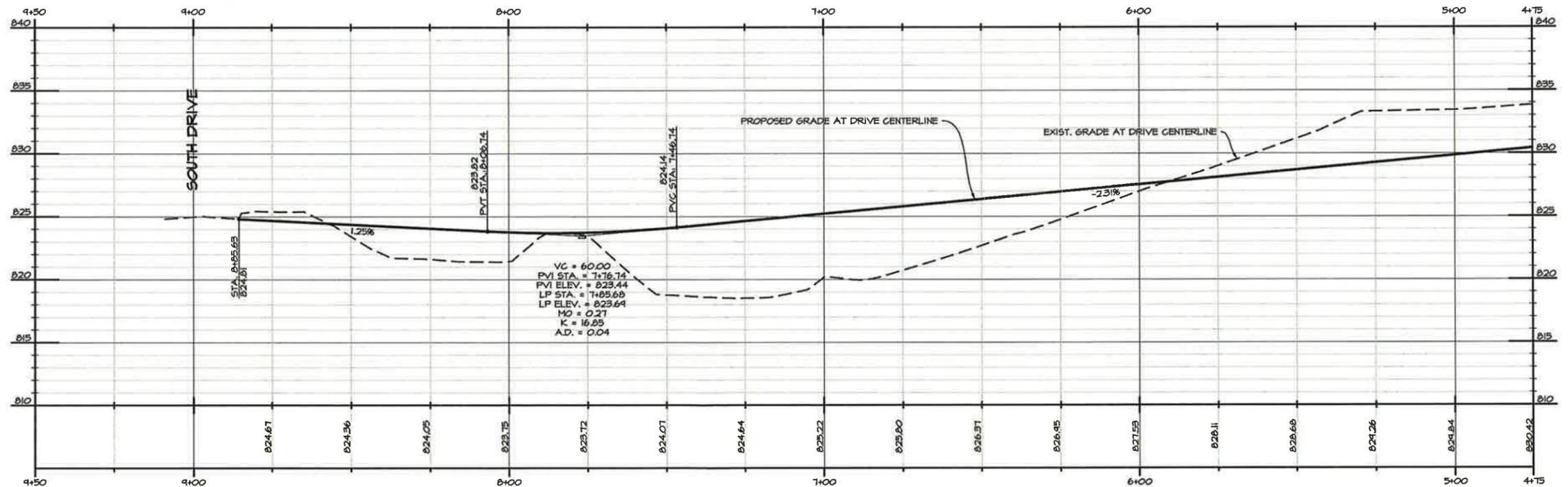
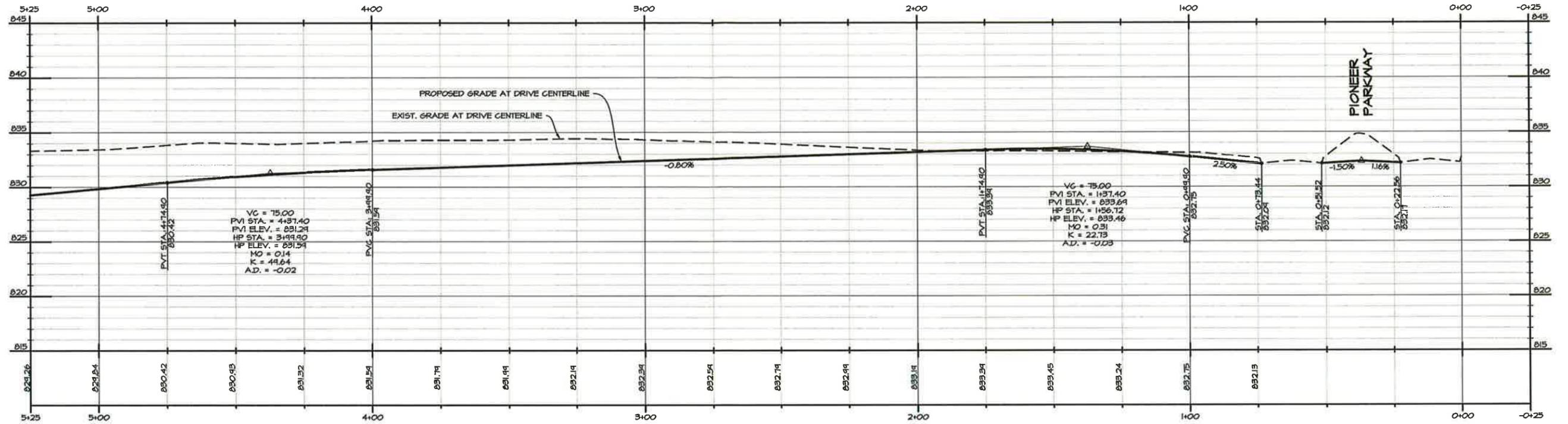
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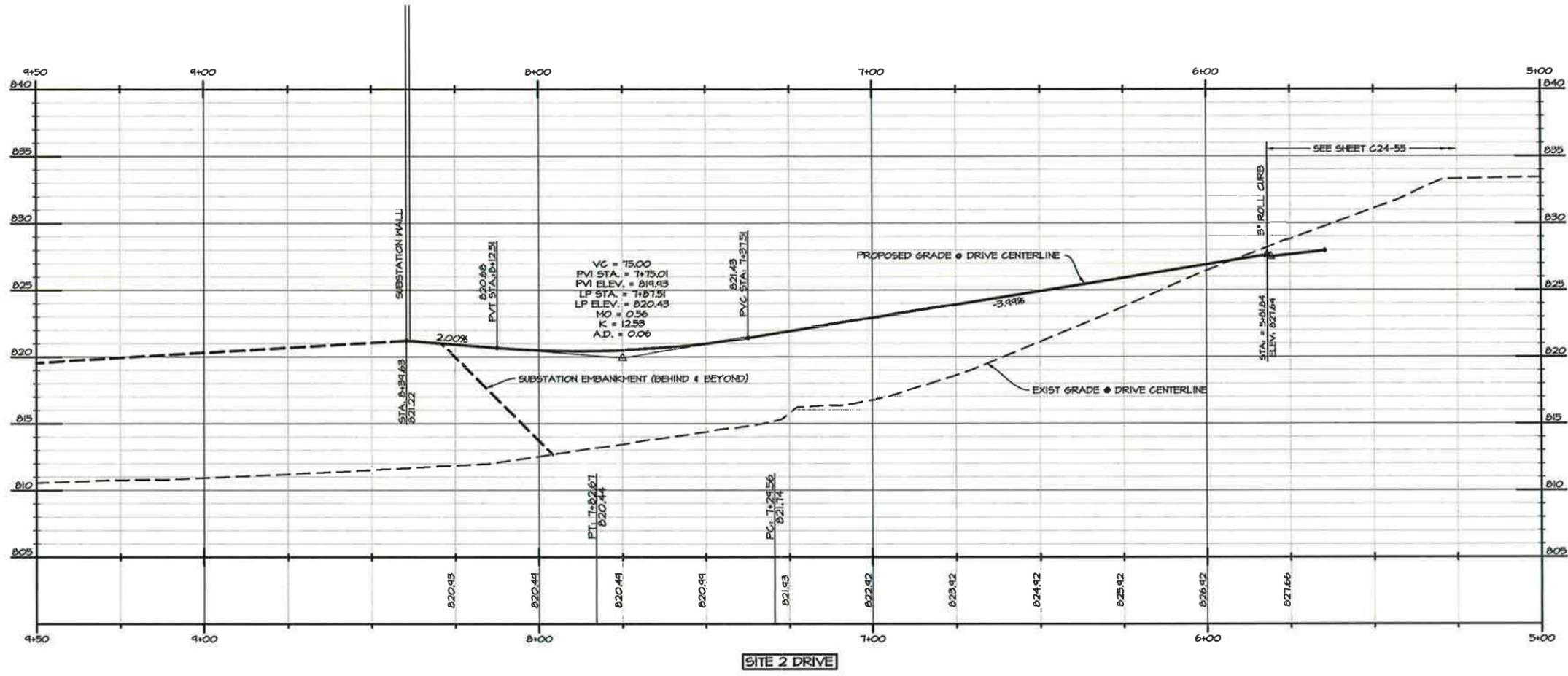
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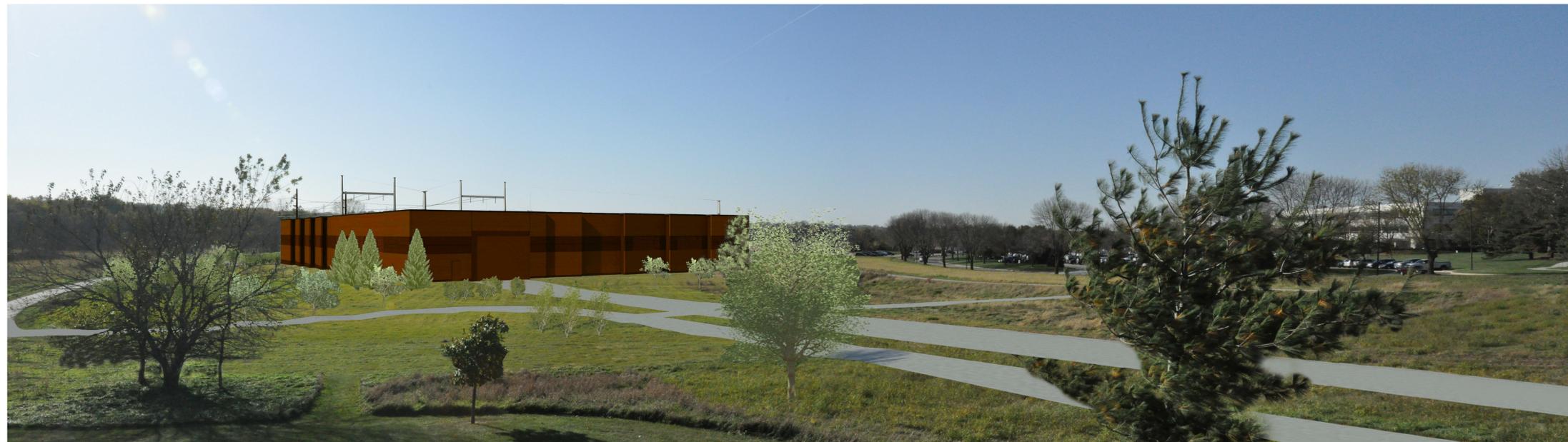
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SUBSTATION DRIVEWAY
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Option 3C

View from ITS/Shazam building