2022-05076
RECORDED: 04/11/2022 01:12:05 PM
RECORDING FEE: 142.00
IOWA E-FILING FEE: 3.00
TOTAL FEE: 145.00
TRANSFER TAX: 0.00
MARILYN HEBING, RECORDER
POTTAWATTAMIE COUNTY, IOWA

Lica Tomizuka, Faegre Drinker Biddle & Reath LLP, 90 South Seventh Street, #2200, Minneapolis, MN 55402, Phone: 612-766-7000

Preparer Information: (Individual's Name, Street Address, City, Zip, Phone)

Opus Development Company, L.L.C., 10350 Bren Road West, Minnetonka, MN 55343, Phone 612-327-5300

Taxpayer Information: (Individual/Company Name, Street Address, City, Zip, Phone)

First American Title-NCS, 121 South 8th Street, Suite 1250, Minneapolis, MN 55402, Phone: 612-305-2000

Return Document to: (Individual/Company Name, Street Address, City, Zip, Phone)

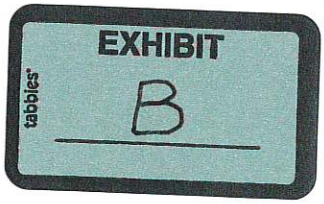
Type of Document: Public Storm Sewer Agreement

Grantors: Opus Development Company, L.L.C.

Grantees: City of Council Bluffs, Iowa

See Page 2 **for Legal Description:**

Book & Page Reference: Book 102, Page 26672 and Book 102, Page 28674



AGREEMENT BETWEEN THE CITY OF COUNCIL BLUFFS, IOWA AND OPUS DEVELOPMENT COMPANY, L.L.C., REGARDING THE DESIGN, CONSTRUCTION, DEDICATION AND ACCEPTANCE OF A PUBLIC STORM SEWER TO SERVICE LOT 1 IN RIVER ROAD SUBDIVISION, AN OFFICIAL PLAT IN THE CITY OF COUNCIL BLUFFS, POTTAWATTAMIE COUNTY, IOWA

RECITALS

Opus Development Company, L.L.C. ("Developer") has entered into a purchase agreement with the City of Council Bluffs, Iowa ("City") to acquire a parcel of land from City described as Lot 1 in River Road subdivision, an official plat in the City of Council Bluffs, Pottawattamie County, Iowa ("Parcel").

It is Developer's intent to construct a storm sewer to service the Parcel as depicted in **Exhibit A** hereto and to dedicate to City the portion of this storm sewer (the "Storm Sewer") that will be constructed within the existing storm water easement areas as established and defined in the Permanent Easement for Storm Water Drainage, Storm Sewer and Sanitary Sewer Right-of-Way dated September 20, 2001, recorded October 11, 2001, in Book 102, Page 26672 in the official records of Pottawattamie County, Iowa, and in the Permanent Easement for Storm Water Drainage, Storm Sewer and Sanitary Sewer Right-of-Way dated October 16, 2001, recorded October 22, 2001, in Book 102, Page 28674 (the "Permanent Pipeline Easement"; the easement areas defined therein, the "Permanent Pipeline Easement Area").

AGREEMENT

1. Storm Sewer Construction and Dedication. Developer shall contract with Opus Design Build, L.L.C. or another reputable contractor to construct the Storm Sewer in the manner depicted in the Plans and Specifications attached hereto and identified as **Exhibit B**. Upon the completion of the Storm Sewer, Developer shall tender the Storm Sewer to the City (a) an Offer of Dedication in the form attached as **Exhibit C** establishing that the Storm Sewer is free from lien, and a (b) a certification that the Storm Sewer was built in accordance with the aforementioned Plans and Specifications signed by an Iowa licensed engineer.

2. Acceptance of Dedication. Upon its receipt of the Offer of Dedication and Engineer's certification, City shall adopt a resolution accepting the Offer of Dedication from the Developer.

3. Miscellaneous.

a. Each of the parties herein represents and warrant that the execution, delivery, and performance of this agreement has been duly authorized.

b. This agreement embodies the entire agreement between City and Developer, and supersedes any prior oral or written agreements, relating to the dedication of the Storm Sewer. This agreement may not be amended, modified or supplemented except in writing executed by both Developer and City.

c. This agreement shall be construed under and governed by the laws of the State of Iowa.

d. If any term of this agreement or any application thereof shall be invalid or unenforceable, the remainder of this agreement and any other application of such term shall not be affected thereby.

e. The terms of this agreement shall be binding upon and inure to the benefit of the parties hereto, their permitted successors and assigns.

f. This agreement shall automatically terminate without further action from either party upon acceptance of the Offer of Dedication by the City.

g. Promptly upon execution, this agreement shall be recorded in the real property records of Pottawattamie County, Iowa.

h. This agreement may be executed in any number of counterparts, each of which shall, when executed, be deemed an original and all of which shall be deemed to be one and the same instrument.

[SIGNATURE PAGES FOLLOW]

SIGNATURE PAGE
TO
AGREEMENT BETWEEN THE CITY OF COUNCIL BLUFFS, IOWA AND OPUS DEVELOPMENT COMPANY, L.L.C., REGARDING THE DESIGN, CONSTRUCTION, DEDICATION AND ACCEPTANCE OF A PUBLIC STORM SEWER TO SERVICE LOT 1 IN RIVER ROAD SUBDIVISION, AN OFFICIAL PLAT IN THE CITY OF COUNCIL BLUFFS, POTTAWATTAMIE COUNTY, IOWA

In witness of this agreement and as authorized representatives of our respective parties we have affixed our signatures below on this 18th day of March, 2022.

CITY OF COUNCIL BLUFFS, IOWA,
a municipal corporation

By: _____
Name: Matthew J Walsh
Its: Mayor

STATE OF IOWA)
) ss.
COUNTY OF POTTAWATTAMIE)

The foregoing was acknowledged before me this 18th day of March, 2022, by Matthew Walsh, the Mayor of the City of Council Bluffs, Iowa, a municipal corporation.

NOTARIAL SEAL IOWA
JESSICA MAAS
Commission Number 755664
MY COMMISSION EXPIRES
11-5-2023

Jessica Maas
Notary Public

SIGNATURE PAGE
TO
AGREEMENT BETWEEN THE CITY OF COUNCIL BLUFFS, IOWA AND OPUS DEVELOPMENT COMPANY, L.L.C., REGARDING THE DESIGN, CONSTRUCTION, DEDICATION AND ACCEPTANCE OF A PUBLIC STORM SEWER TO SERVICE LOT 1 IN RIVER ROAD SUBDIVISION, AN OFFICIAL PLAT IN THE CITY OF COUNCIL BLUFFS, POTTAWATTAMIE COUNTY, IOWA

DEVELOPER:

OPUS DEVELOPMENT COMPANY, L.L.C.,
a Delaware limited liability company

By: _____
Name: Philip Cattanach
Its: Vice President, General Manager

STATE OF MINNESOTA)
) ss.
COUNTY OF HENNEPIN)

The foregoing was acknowledged before me this 5 day of April, 2022, by Philip Cattanach, the Vice President, General Manager of Opus Development Company, L.L.C., a Delaware limited liability company.

SUSAN MARIE CLOUGH
Notary Public-Minnesota
My Commission Expires Jan 31, 2025

_____
Notary Public

EXHIBIT A

DEPICTION OF STORM SEWER LINE

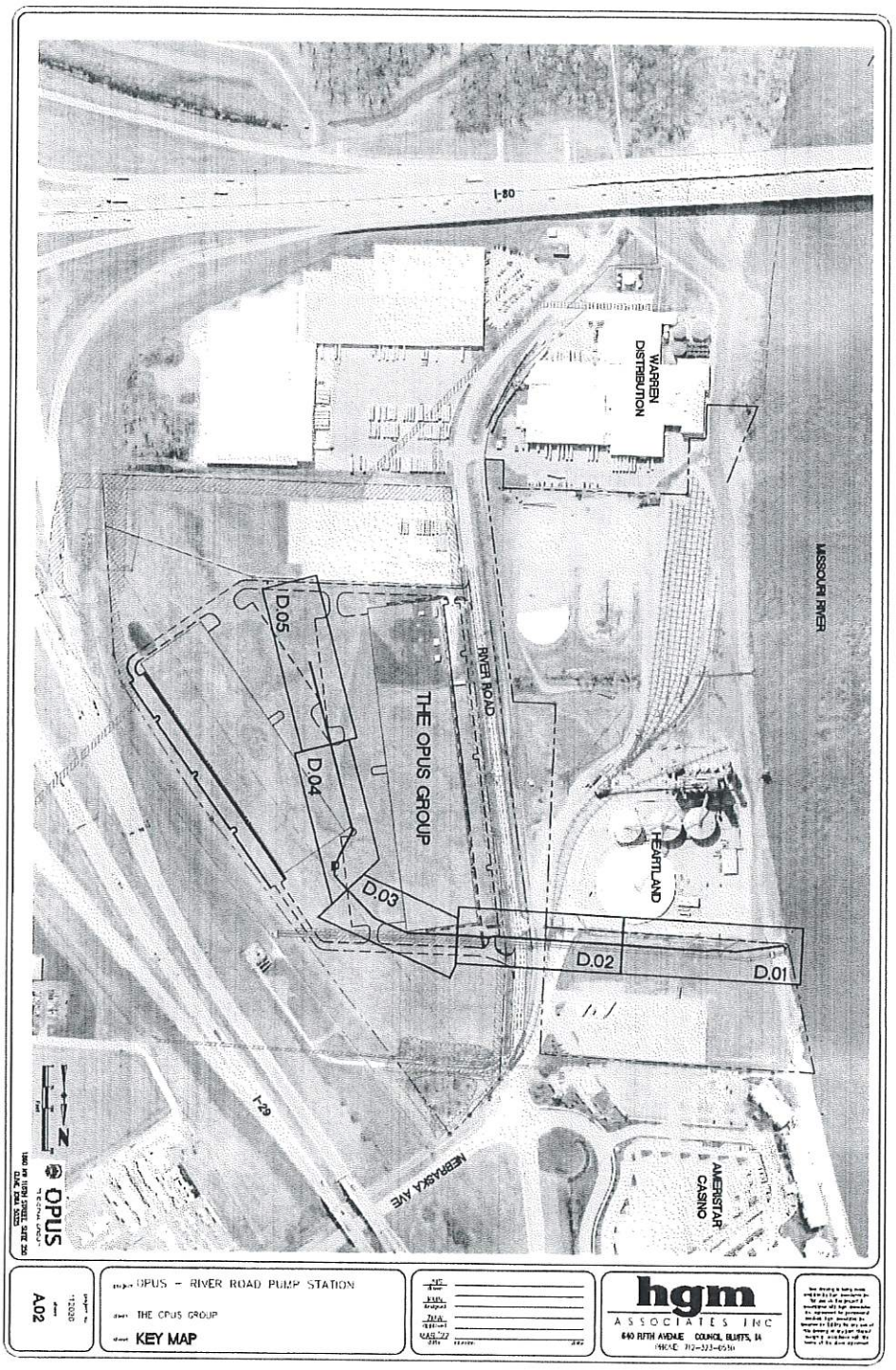


EXHIBIT B

PLANS AND SPECIFICATIONS FOR STORM SEWER

[See attached.]

OPUS - RIVER ROAD PUMP STATION

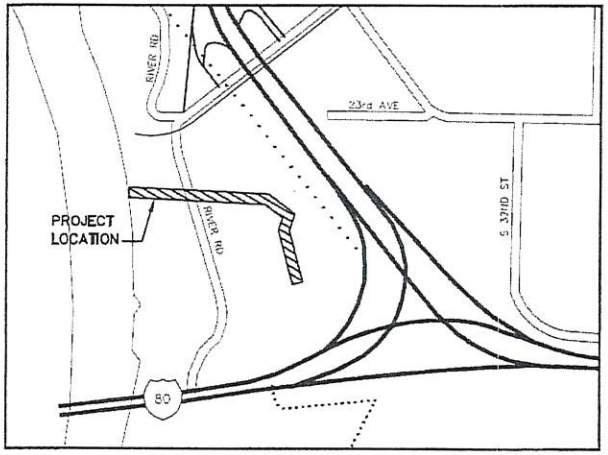
COUNCIL BLUFFS, IOWA

VERTICAL CONTROL

BENCHMARK OF ORION: NGS E182, 1999 NAVD '88 ELEVATION = 992.37

IN COUNCIL BLUFFS, AT 0.95 MI. EASTERLY ALONG 14TH AVENUE FROM ITS JUNCTION WITH 35TH STREET, 62.7 FEET SOUTH OF THE CENTER OF THE AVENUE, 22.6 FEET NORTH OF THE NORTHEAST CORNER OF A REPAIR SHOP, 22.5 FEET SOUTH OF THE NEAR RAIL OF THE UNION PACIFIC RAILROAD, 2.3 FEET EAST OF A FENCE CORNER, 1.0 FEET NORTH OF A WITNESS POST AND FENCE, AND 1.0 FEET BELOW THE LEVEL OF THE TRACK

NOTE – – ACCESS TO THE DATUM POINT IS THROUGH A 5-INCH LOGO CAP



– INDICATES PROJECT LOCATION

LOCATION MAP
COUNCIL BLUFFS, IOWA
NO SCALE

INDEX

PAGE NO.	DESCRIPTION
A.01	TITLE SHEET
A.02	KEY MAP
B.01–B.03	CIVIL DETAILS
B.04	LEVEE SECTION EXHIBIT
B.05	LIFT STATION DESIGN AND DETAILS
B.06	STORM WATER PUMP STATION DETAIL
C.01	GENERAL NOTES AND LEGEND
D.01–D.05	FORCE MAIN PLAN AND PROFILE
S1.0–S1.4	PUMP STATION STRUCTURAL NOTES AND DETAILS

SPECIFICATIONS

THE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, 2022, AND CITY OF COUNCIL BLUFFS SUPPLEMENTAL SPECIFICATIONS 2022, SHALL APPLY TO THIS PROJECT.

THESE DOCUMENTS SHALL NOT BE SCANNED, COPIED, OR DUPLICATED IN ANY MANNER.

LICENSED PROFESSIONAL ENGINEER ZACHARY U WHEAT 22974 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.

ZACHARY U. WHEAT 3/23/22

My license renewal date is December 31, 2023

Pages or sheets covered by this seal: A.01, A.02, B.01–B.06, C.01, D.01–D.05, S1.0–S1.4

LICENSED PROFESSIONAL ENGINEER PAYTON D SEAGER 24298 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.

PAYTON D. SEAGER 3/23/22

My license renewal date is December 31, 2022

Pages or sheets covered by this seal: S1.0–S1.4

OPUS
THE OPUS GROUP
1650 NW 118TH STREET, SUITE 250
CLIVE, IOWA 50325

hgm ASSOCIATES INC
640 FIFTH AVENUE COUNCIL BLUFFS, IA
PHONE 712-371-0530

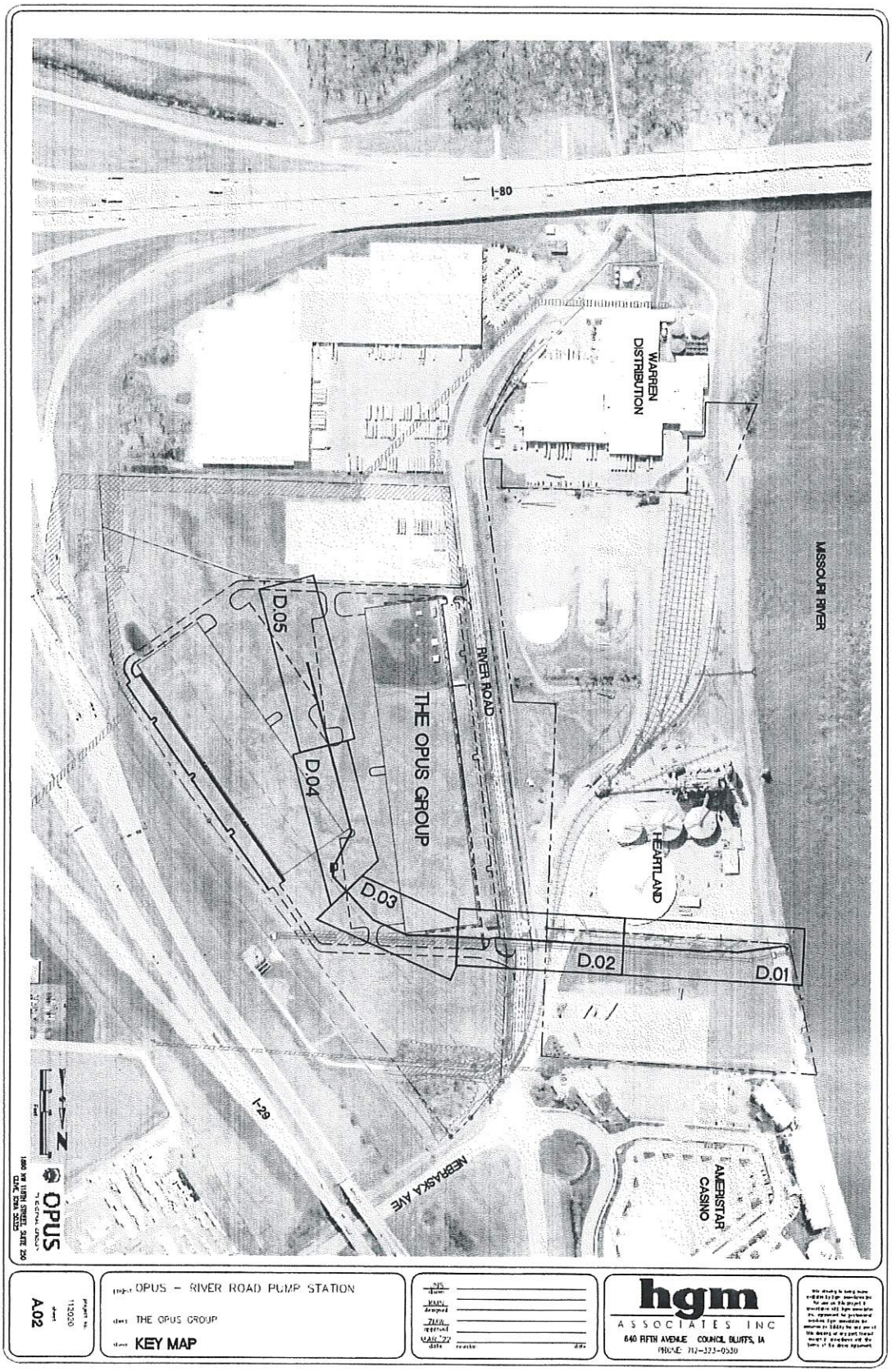
project OPUS – RIVER ROAD PUMP STATION
client THE OPUS GROUP
title TITLE SHEET

project no. 112020
sheet A.01

B-2

S:\Civil_Revit\Projects\112020 OPUS RIVER ROAD PUMP STATION\Engineering\Design\Design\112020 PUMP STATION DESIGN (REVISED 3-15-22).dwg, 3/23/2022 12:20:11 PM, Adobe PDF

S:\Rivr_Team\Projects\112020 OPUS RIVER ROAD IMPROVEMENTS\Engineering\Design\Design\112020 PUMP STATION DESIGN REALIGNED 1-6-21.dwg 3/9/2022 9:19:41 AM, 1to1 Adobe PDF.ctb,ctb,pc3



project OPUS – RIVER ROAD PUMP STATION

client THE OPUS GROUP

sheet **KEY MAP**

project no. 112020

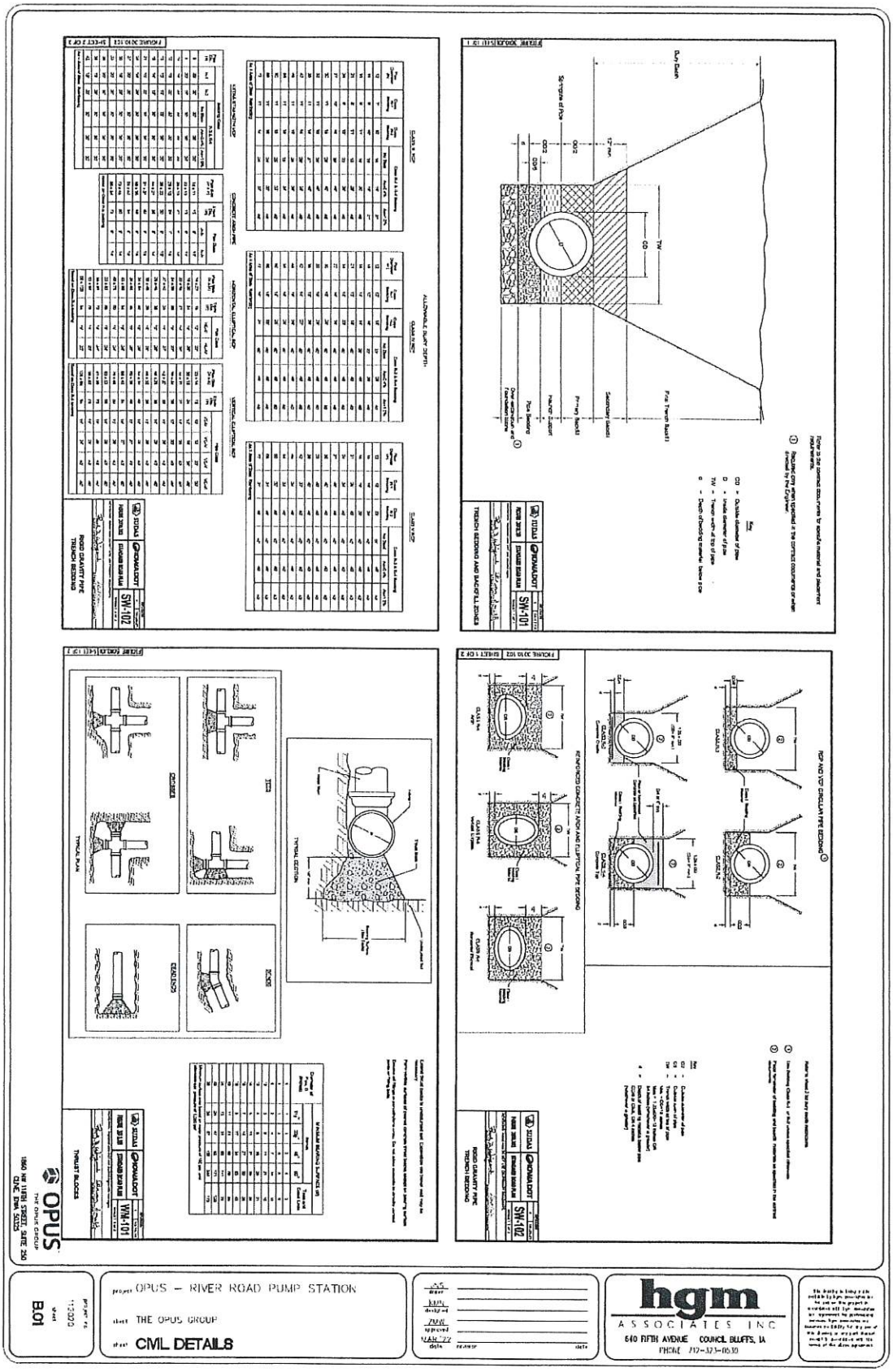
sheet A.02

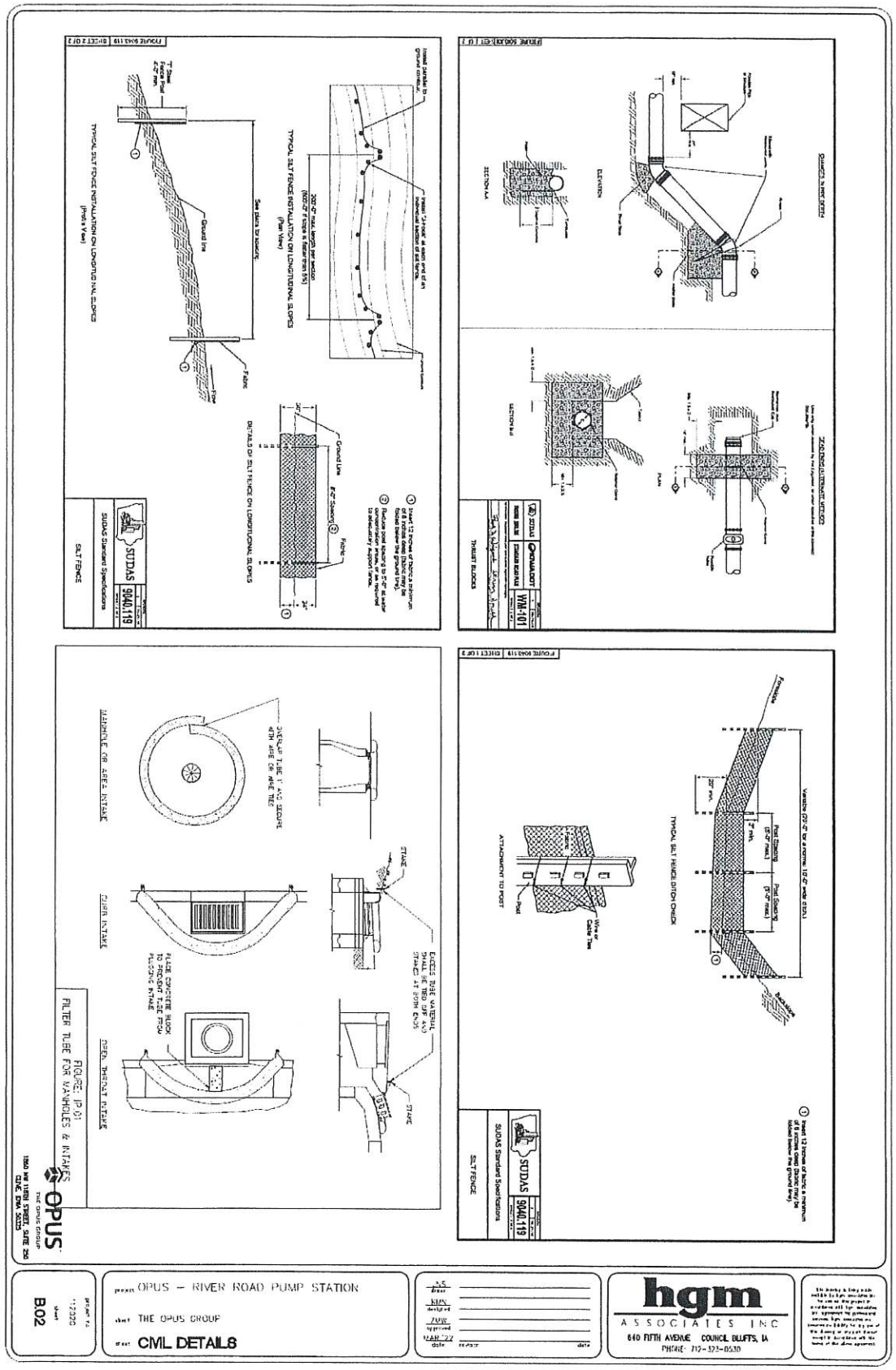
PS sheet	
MWH designed	
ZWA approved	
date "22"	
revision	date

hgm
ASSOCIATES INC
640 FIFTH AVENUE COUNCIL BLUFFS, IA
PHONE: 712-323-0530

this drawing is being made available in pdf format for use on the project it was prepared for. agreement to permit use on other projects, extensions to this project, or any use by third parties will be granted only upon written permission and consent of hgm associates inc. any unauthorized use, reuse, or modification of this drawing without such permission and consent will be at user's sole risk and without liability to hgm associates inc. submission or distribution of this drawing to meet official regulatory requirements or for similar purposes is not to be construed as publication in derogation of hgm associates inc. reserved rights.

S:\Blue_Team\Projects\112020 OPUS RIVER ROAD INDUSTRIAL\Engineering\Dwgs\Design\112020 PUMP STATION DESIGN REALIGNED 1-5-21.dwg 2/3/2022 3:20:49 AM Adobe PDF pt3



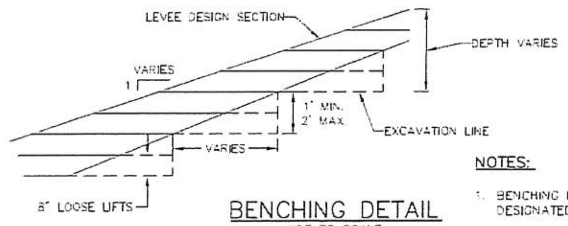

SUDAS 9040.119
SILT FENCE
SUDAS Standard Specifications
WM-101
THRUST BLOCKS
TYPICAL SILT FENCE INSTALLATION ON LONGITUDINAL SLOPES
DETAILS OF SILT FENCE ON LONGITUDINAL SLOPES
TYPICAL SILT FENCE DITCH CHECK
ATTACHMENT TO POST
MANHOLE OR AREA INTAKE
CURB INTAKE
OPEN THROAT INTAKE
FILTER TUBE FOR MANHOLES & INTAKES
FIGURE: IP.01
OPUS
THE OPUS GROUP
1800 NW 114TH STREET, SUITE 250
CLIVE, IOWA 50325
OPUS – RIVER ROAD PUMP STATION
THE OPUS GROUP
CIVIL DETAILS
B.02
hgm
ASSOCIATES INC
640 FIFTH AVENUE COUNCIL BLUFFS, IA
PHONE: 712-323-0530

ALIGNMENT CONTROL

DESCRIPTION / PARAMETER	PT STATION / VALUE	TANGENT DATA NORTHING / PARAMETER	EASTING / VALUE
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	100+00.000	460706.740	977652.669
END:	100+20.601	460688.157	977677.233
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	20.601	COURSE:	S 52° 53' 29.5721" E
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	100+20.601	460688.157	977677.233
END:	101+49.075	460704.396	977794.397
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	118.274	COURSE:	N 82° 06' 30.4277" E
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	101+49.075	460704.396	977794.397
END:	101+78.878	460714.165	977822.542
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	29.803	COURSE:	N 70° 51' 30.4277" E
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	101+78.878	460714.166	977822.542
END:	102+39.894	460710.679	977882.456
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	60.016	COURSE:	S 86° 40' 01.0352" E
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	102+38.894	460710.679	977882.458
END:	103+19.009	460709.775	977962.548
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	80.115	COURSE:	S 88° 39' 18.6997" E
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	103+19.009	460708.775	977962.548
END:	110+70.660	460664.742	978712.908
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	751.651	COURSE:	S 86° 39' 29.5722" E
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	110+70.660	460664.742	978712.908
END:	110+83.725	460669.026	978725.252
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	13.066	COURSE:	N 70° 51' 30.4276" E
LENGTH:			
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	110+83.734	460669.026	978725.252
END:	111+63.356	460664.261	978804.740
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	79.625	COURSE:	S 86° 38' 29.5722" E
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	111+63.356	460664.261	978804.740
END:	112+61.034	460660.342	978902.332
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	97.675	COURSE:	S 87° 38' 29.5722" E
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	112+61.034	460660.342	978902.332
END:	113+81.876	460657.313	979023.136
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	120.842	COURSE:	S 86° 33' 50.4125" E
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	113+81.876	460657.313	979023.136
END:	115+11.589	460604.687	979141.694

ALIGNMENT CONTROL

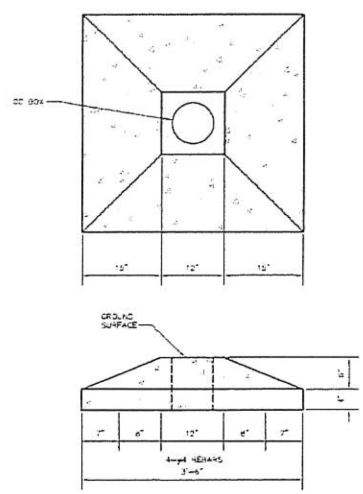
DESCRIPTION / PARAMETER	PT STATION / VALUE	TANGENT DATA NORTHING / PARAMETER	EASTING / VALUE
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	129.714	COURSE:	S 66° 03' 50.4125" E
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	115+11.589	460604.687	979141.694
END:	117+18.288	460454.936	979284.169
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	206.699	COURSE:	S 43° 34' 25.4265" E
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	117+18.288	460454.936	979284.169
END:	117+43.082	460430.148	979283.620
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	24.794	COURSE:	S 01° 16' 12.3229" W
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	117+43.082	460430.148	979283.620
END:	117+64.840	460409.299	979277.395
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	21.758	COURSE:	S 16°37'21.3070" W
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	117+64.840	460409.299	979277.395
END:	118+92.549	460295.441	979219.548
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	127.709	COURSE:	S 26°56'01.7772" W
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	118+92.549	460295.443	979219.548
END:	126+00.000	459611.147	979399.064
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	707.451	COURSE:	S 14° 41' 56.4831" E



BENCHING DETAIL
NOT TO SCALE

NOTES:

1. BENCHING IS REQUIRED FOR AREAS DESIGNATED FOR COMPACTED FILL.



CC BOX

NOTES:

1. ALL REBAR SHALL BE ASTM A-615 GRADE 60, DEFORMED
2. CONCRETE SHALL BE 4000 PSI COMPRESSIVE STRENGTH

CC BOX COVER
NOT TO SCALE

OPUS
THE OPUS GROUP
1860 NW 118TH STREET, SUITE 250
CLIVE, IOWA 50325

project OPUS – RIVER ROAD PUMP STATION
client THE OPUS GROUP
sheet CIVIL DETAILS/ALIGNMENT CONTROL

JNS drawn
RUN designed
ZWW approved
MAR '22 date
revision

hgm
ASSOCIATES INC
640 FIFTH AVENUE COUNCIL BLUFFS, IA
PHONE: 712-323-0530

project no. 117020
sheet B.03

EXISTING LEVEE CROSS SECTION
NO SCALE
TYPICAL SECTION – RIVER SIDE OF LEVEE
NO SCALE
PROP VERTICAL BEND
PROP 24" DUCTILE IRON PIPE
OPUS
THE OPUS GROUP
1500 4th 16TH STREET, SUITE 350
CLIVE, IOWA 50325
project OPUS – RIVER ROAD PUMP STATION
client THE OPUS GROUP
sheet LEVEE SECTION EXHIBIT
project no 112020
sheet B.04
hgm
ASSOCIATES INC
610 FIFTH AVENUE COUNCIL BLUFFS, IA
PHONE 712-323-0630

S:\Box_Team\Projects\112020 OPUS RIVER ROAD INDUSTRIAL\Engineering\Design\Design\112020 PUMP STATION DESIGN REALIGNED 1-5-21.dwg, 3/3/2022 7:30:06 AM, Adobe PDF pc3

PROJECT SPECIFIC ELEVATIONS

	PUMP
RIM ELEVATION	973.3
HIGH WATER LEVEL ALARM ELEV. (ft)	972.0
INLET INVERT	964.4
SINGLE PUMP ON ELEV. (ft)	966.4
ALL PUMPS OFF ELEV. (ft)	964.0
LOW WATER ALARM ELEV. (ft)	962.4
WET WELL FLOOR ELEV. (ft)	960.3

ADDITIONAL PUMP SPECIFIC ELEV.

PUMP 1 ON ELEV. (ft)	966.4
PUMP 1 OFF ELEV. (ft)	964.0
PUMP 2 ON ELEV. (ft)	969.0
PUMP 2 OFF ELEV. (ft)	967.0
PUMP 3 ON ELEV. (ft)	970.0
PUMP 3 OFF ELEV. (ft)	968.0
PUMP 4 ON ELEV. (ft)	971.0
PUMP 4 OFF ELEV. (ft)	969.0

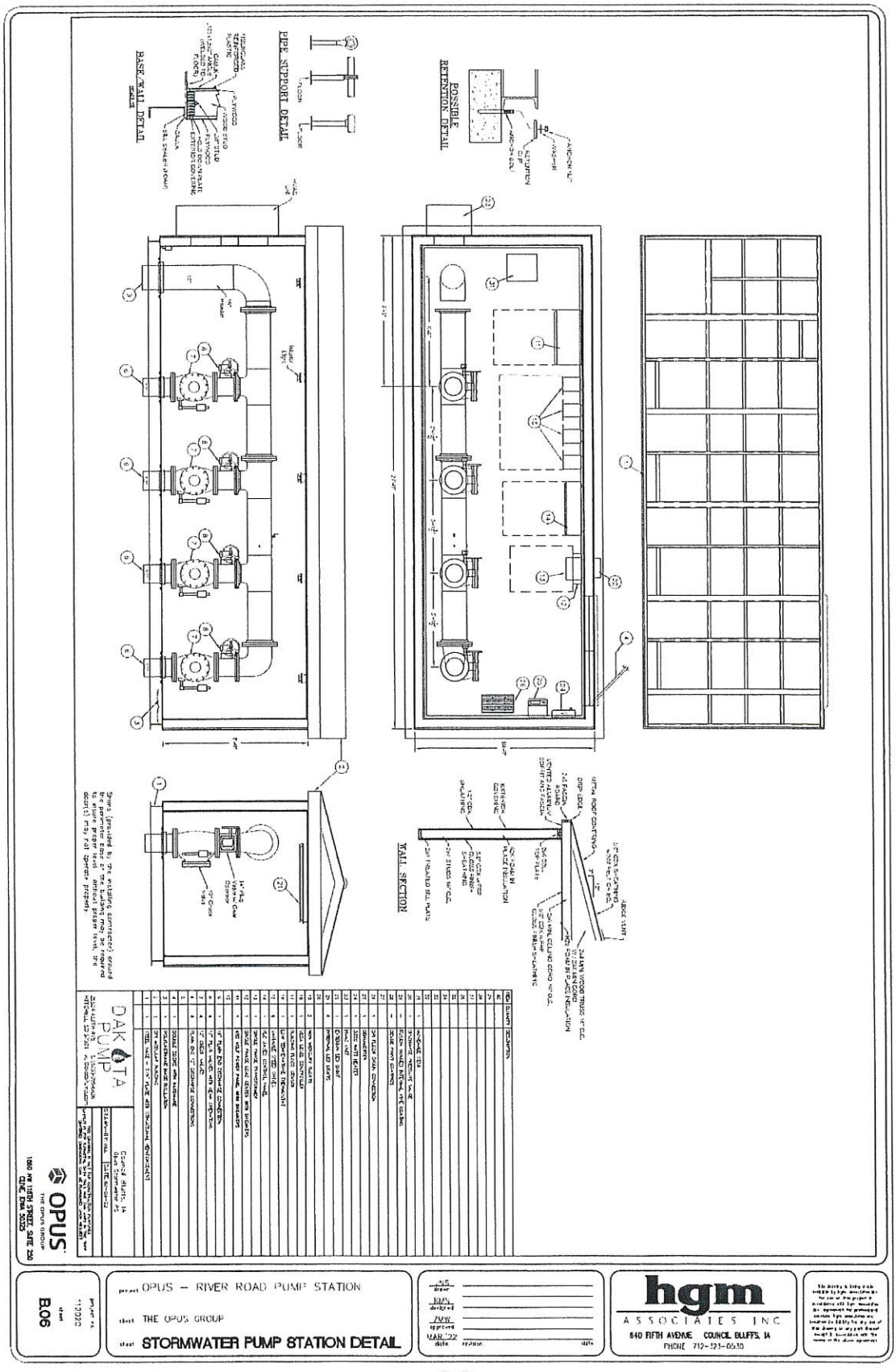
OPUS
THE OPUS GROUP
1650 W 16TH STREET, SUITE 250
DENVER, CO 80202

B.05

project OPUS – RIVER ROAD PUMP STATION
client THE OPUS GROUP
sheet EAST LIFT STATION DESIGN DETAILS

JNS drawn
TWA designed
JWW approved
MAR '22 date
revisions date

hgm
ASSOCIATES INC
640 FIFTH AVENUE COUNCIL BLUFFS, IA
PHONE 712-323-0630


PIPE SUPPORT DETAIL
POSSIBLE RETENTION DETAIL
BASE WALL DETAIL
WALL SECTION
DAKOTA PUMP
OPUS – RIVER ROAD PUMP STATION
THE OPUS GROUP
STORMWATER PUMP STATION DETAIL
hgm ASSOCIATES INC
640 FIFTH AVENUE COUNCIL BLUFFS, IA
PHONE 712-323-0630
OPUS
B.06

S:\Misc_Team\Projects\112020 OPUS RIVER ROAD PUMP STATION\Engineering\Design\Design\112020 PUMP STATION DESIGN (REVISED 3-15).dwg, 3/15/2022 2:23:04 PM, Adobe PDF.pc3

GENERAL NOTES

1. ACCORD TO THE SPECIFICATIONS AND STANDARD DETAILS FOR PUBLIC IMPROVEMENTS, 2022, AND CITY OF COUNCIL BLUFFS SUPPLEMENTAL SPECIFICATIONS, 2022.
2. UTILITY FIGURES SHOWN ARE FROM LOCATIONS OR RECORDS PROVIDED BY OTHERS. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND THEIR LOCATION MAY NOT BE PRESENTLY KNOWN OR RECORDED IN THE PLANS. THE ENGINEER MAKES NO GUARANTEE THAT THE UTILITIES SHOWN IN THE PLANS CONSTITUTE ALL UTILITIES WITHIN THE AREA OF THE WORK OR THAT THE UTILITIES ARE IN THE EXACT LOCATION INDICATED. THE CONTRACTOR SHALL NOTIFY ALL UNDERGROUND UTILITY FACILITIES WITHIN THE CONSTRUCTION AREA.
3. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL PUBLIC AND PRIVATE UTILITY FACILITIES LOCATED WITHIN THE CONSTRUCTION AREA TO AVOID DAMAGE OR INTERRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THESE FACILITIES BY HIS OPERATIONS AND SHALL REPAIR OR REPLACE THEM WITHOUT COST TO THE OWNER OR ENGINEER.
4. WHERE EXISTING UTILITY FACILITIES ARE SHOWN IN THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, THE CONTRACTOR SHALL VERIFY THE UTILITY SHALL BE RESPONSIBLE FOR NOTIFYING OWNERS AND REQUESTING FIELD UTILITY FIGURES REQUIRED BY SECTION 1834 CODE OF IOWA.
5. THE CONTRACTOR SHALL COOPERATE WITH UTILITY COMPANIES IN THEIR EFFORTS TO EXPOSE THEIR FACILITIES AND SHALL TAKE ALL REASONABLE PRECAUTIONS TO PROTECT UTILITY FACILITIES FROM DAMAGE. ANY DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. ALL COSTS ASSOCIATED WITH DELAYS CAUSED BY UTILITY CONFLICTS SHALL BE BORNE BY THE CONTRACTOR AND NOT BE REIMBURSED BY THE OWNER OR ENGINEER.
6. THE CONTRACTOR SHALL REVIEW ALL UTILITIES SHOWN ON THE PLANS AND COORDINATE WITH ALL UTILITY COMPANIES NECESSARY TO RELOCATE WORK PLAN UTILITY CONFLICTS. ALL UTILITIES SHOWN ON THE PLANS ARE NOT NECESSARILY TO BE RELOCATED OR SHOWN IN THEIR ACTUAL LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING WHICH UTILITIES ARE TO BE RELOCATED AND SHALL NOT BE ENTITLED TO ANY ADDITIONAL COMPENSATION FOR DELAYS OR INCONVENIENCE CAUSED BY UTILITY RELOCATIONS.
7. REMOVAL OF ABANDONED UTILITIES THAT ARE SHOWN ON THE PLANS AND ENCOUNTERED DURING TRENCH EXCAVATION SHALL BE INCIDENTAL TO THE CONTRACT UNLESS OTHERWISE SPECIFIED ON THE PLANS.
8. PRIOR TO BEGINNING WORK ON THE FOLLOWING ITEMS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW PLANS FOR PROPOSED TRENCH SHORING OR SHEETING, DEWATERING, TRENCH BACKFILL, AND OTHER WORK AS CONSTRUCTION UTILITIES THAT MUST REMAIN IN SERVICE.
9. THE CONTRACTOR SHALL KEEP SANITARY SEWER AND STORM SEWER LINES AND STRUCTURES CLEAN AND FREE OF DEBRIS THAT RESULTS FROM THE CONTRACTOR'S OPERATIONS. FINAL CLEANING SHALL BE COMPLETED AT THE DISCRETION OF THE ENGINEER.
10. THE CONTRACTOR SHALL MAKE ACCESS AVAILABLE TO ADJACENT PROPERTIES AT ALL TIMES. ACCESS SHALL BE RESTORED AT THE END OF EACH WORK DAY. TRAFFIC THE CONTRACTOR SHALL NOTIFY RESIDENTS AT LEAST 24 HOURS PRIOR TO CLOSING ANY ROAD TO DRIVEWAY ACCESS. THE CONTRACTOR SHALL DIRECTLY NOTIFY EMERGENCY SERVICES OF ANY ROAD CLOSURE. ALL TRAFFIC CONTROL DEVICES SHALL BE IN CONFORMANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND THE IOWA DEPARTMENT OF TRANSPORTATION.
11. REMOVAL AND RESTORATION OF VEGETATION SHALL BE INCIDENTAL TO THE CONTRACT. THE CONTRACTOR SHALL PROTECT TREES AND SHRUBS FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGED TREES OR SHRUBS SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
12. REMOVAL AND DISPOSAL OF HAZARDOUS MATERIALS ENCOUNTERED DURING CONSTRUCTION SHALL BE INCIDENTAL TO THE CONTRACT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY SUSPECTED HAZARDOUS MATERIALS. THE CONTRACTOR SHALL NOT DISTURB SUSPECTED HAZARDOUS MATERIALS UNTIL DIRECTED BY THE ENGINEER.
13. ALL DISTURBED AREAS OUTSIDE OF PAVEMENT SHALL BE SEEDED, MULCHED AND FERTILIZED.

GENERAL NOTES

14. THE CONTRACTOR SHALL CONFINE CONSTRUCTION, DEBRIS, AND VEHICLES ACTIVITIES TO THE PROJECT RIGHT-OF-WAY AND EASEMENTS. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ANY ADDITIONAL TEMPORARY EASEMENTS OR LICENSES REQUIRED FOR STAGING, PARKING OR STORAGE OF EQUIPMENT AND MATERIALS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS CAUSED BY THE CONTRACTOR'S FAILURE TO OBTAIN ADDITIONAL EASEMENTS OR RESTRICTIONS ON WORK HOURS.
15. THE CONTRACTOR SHALL TAKE STEPS TO CONTROL SOIL EROSION AND FUGITIVE DUST CONTAMINATION AT ALL TIMES. DUST CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE APPROVED EROSION CONTROL PLAN AND SHALL BE USED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE WATER AS NEEDED TO CONTROL DUST AND SHALL NOT ALLOW WATER TO RUN OR POND ON PAVED SURFACES. THE CONTRACTOR SHALL NOT BE ENTITLED TO ANY ADDITIONAL COMPENSATION FOR DUST CONTROL MEASURES.
16. THE CONTRACTOR SHALL CONSTRUCT THE NECESSARY EROSION CONTROL AND SEDIMENT CONTROL FACILITIES AS SHOWN ON THE PLANS AND AS REQUIRED BY THE PERMITTING AUTHORITIES. THE CONTRACTOR SHALL MAINTAIN AND ALTER THESE FACILITIES AS NECESSARY TO MEET CHANGING CONDITIONS AND STAGES OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL EROSION CONTROL WORK AS DIRECTED BY THE ENGINEER OR REQUIRED BY THE PERMITTING AUTHORITIES.
17. ALL CONCRETE TRUCK SHALL REPORT TO THE PLANT TO WASH OUT UNLESS THERE IS A DESIGNATED WASHOUT AREA ON THE JOB SITE. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND CLEAN UP OF THE WASH OUT LOCATION.
18. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN FINAL GRADING HAS BEEN COMPLETED AND THE SITE IS READY FOR FINAL INSPECTION. THE CONTRACTOR SHALL NOT BE ENTITLED TO ANY ADDITIONAL COMPENSATION DUE TO DELAYS CAUSED BY THE CONTRACTOR'S FAILURE TO COMPLY WITH THE FINAL GRADING TIME LIMITS. ANY DELAYS CAUSED BY THE CONTRACTOR'S FAILURE TO COMPLETE FINAL GRADING AND SEEDING WITHIN THE ALLOTTED TIME SHALL BE CONSIDERED INCIDENTAL WORK AND SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
19. THE CONTRACTOR SHALL NOT INSTALL ORNAMENTAL GRASS IN MANHOLE RIMS UNTIL AFTER THE PROJECT HAS BEEN ACCEPTED. THE OWNER WILL NOT BE RESPONSIBLE FOR REPLACEMENT OF ORNAMENTAL GRASS DAMAGED BY MOWING OPERATIONS PRIOR TO ACCEPTANCE.
20. CONTRACTOR SHALL TAKE NECESSARY STEPS REQUIRED TO PROTECT EXISTING VEGETATION, PLANTINGS, AND OTHER IMPROVEMENTS THAT ARE TO REMAIN. ANY DAMAGE CAUSED BY CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
21. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMIT APPLICATIONS AND FEES REQUIRED FOR THE PROJECT AND SHALL OBTAIN ALL PERMITS PRIOR TO CONSTRUCTION.
22. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES AND CITY DEPARTMENTS TO LOCATE AND PROTECT ALL UTILITIES AND FACILITIES DURING CONSTRUCTION. ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
23. SELECT TOPSOIL SHALL ONLY BE USED IF SUITABLE TOPSOIL IS NOT AVAILABLE ONSITE. SUITABLE TOPSOIL SHALL BE DEFINED AS A FRIABLE LOAM, SILT LOAM, OR SANDY LOAM SOIL CONTAINING NO MORE THAN 5% BY VOLUME OF CLAY LUMPS, GRAVEL, STONES, ROOTS, OR OTHER OBJECTS LARGER THAN 1" IN DIAMETER. SUITABLE TOPSOIL SHALL BE FREE OF SUBSOIL, DEBRIS, STONES, ROOTS, BRUSH, HEAVY, STIFF CLAY, NOXIOUS WEEDS, OR OTHER MATERIAL THAT WOULD INTERFERE WITH PLANTING AND MAINTENANCE OPERATIONS. SELECT TOPSOIL SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND SHALL NOT RESULT IN ADDITIONAL COSTS TO THE OWNER.
24. ALL EXCESS MATERIALS REMOVED AS PART OF THE CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFFSITE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FOR DISPOSAL SITES AND SHALL NOT RESULT IN ADDITIONAL COSTS TO THE OWNER.
25. ALL EXCAVATED MATERIALS REQUIRED FOR FILL SHALL BE HAULED SPOILS AND PLACED IN THE PROJECT AND SHALL NOT RESULT IN ADDITIONAL COSTS TO THE OWNER.
26. ALL DISTURBED AREAS SHALL BE RESTORED TO EQUAL OR BETTER THAN EXISTING CONDITIONS. ANY DAMAGE TO EXISTING VEGETATION, STRUCTURES, OR OTHER IMPROVEMENTS SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
27. CONTRACTOR SHALL PROVIDE ADEQUATE TRAFFIC CONTROL AND SAFETY MEASURES THROUGHOUT THE PROJECT AREA. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE IOWA DOT STANDARDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OR INJURY RESULTING FROM INADEQUATE OR IMPROPER TRAFFIC CONTROL.
28. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WATER, UTILITY COSTS AND FEES ASSOCIATED WITH THE PROJECT.
29. ALL DISTURBED AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION IN ACCORDANCE WITH THE APPROVED EROSION CONTROL PLAN AND APPLICABLE REGULATIONS. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN ALL NECESSARY EROSION CONTROL MEASURES, INCLUDING BUT NOT LIMITED TO SILT FENCES, STRAW BALES, AND TEMPORARY SEEDING, AS REQUIRED BY THE NPDES PERMIT AND LOCAL ORDINANCES. FAILURE TO IMPLEMENT ADEQUATE EROSION CONTROL MEASURES MAY RESULT IN STOP-WORK ORDERS AND FINES.
30. ALL DISTURBED AREAS OUTSIDE OF PAVEMENT SHALL BE SEEDED, MULCHED AND FERTILIZED.

LEGEND

- SEWER LINE
- CONSTRUCTION LIMITS
- CENTERLINE OF DITCH
- RCP
- FENCE - CHAIN LINK
- FENCE - WIRE
- FENCE - SPLIT RAIL
- FENCE - PRIVACY
- FENCE - ASPHALT
- SEEDING ALL
- SEEDING
- TOP OF BANK
- TOP OF MASONRY WALL
- TOP OF CURB
- BACK OF CURB
- PORTLAND CEMENT CONCRETE
- SAW CUT CONTROLLED JOINT
- BUILDING SETBACK
- BUILDING SEN
- SPRING LOCATION
- FLAT SIGN
- FLAT SIGN - POST MOUNTED
- MANHOLE
- NO PARKING SIGN
- FLOWERPOT
- SIGN POST
- POST SIGN
- STREET SIGN
- STOP SIGN
- BURIED OPTIC CABLE
- UNDERGROUND ELECTRIC CABLE
- UNDERGROUND TELEPHONE CABLE
- UNDERGROUND TELEVISION CABLE
- ELECTRICAL MANHOLE
- ELECTRICAL PULL BOX
- ELECTRICAL TRANSFORMER
- ELECTRICAL TRANSFORMER ON POLE
- SIGN POST
- LIGHT POLE
- LUMINAIRE
- HIGH MAST LIGHT POLE
- POWER POLE
- POWER POLE W/ TRANSFORMER
- PULL BOX
- TRAFFIC CONTROL BOX
- TELEPHONE MANHOLE
- TELEPHONE TERMINAL BOX
- TRAFFIC SIGNAL
- HAND HOLE
- GAS MAIN
- GAS VALVE
- GAS VENT
- RAILROAD CONTROL BOX
- RAILROAD CROSS BUCK SIGN
- RAILROAD
- RAILROAD CENTER OF SWITCH
- RAILROAD SIGNAL
- RAILROAD TRACK
- CABLE TV
- CABLE TV MANHOLE
- SANITARY SEWER
- STORM SEWER
- CLEAN-OUT
- FLARE END SECTION
- INLET-CURB
- INLET-DROP
- INLET-COMBINATION
- INLET-STORM (SQUARE)
- MANHOLE (SQUARE)
- BENCH MARK
- CONTROL POINT
- POND CONCRETE MONUMENT
- POND MONUMENT
- SET PIN
- PLUG
- REBAR
- EXISTING TREE
- STUMP W/ DIAMETER

hgm ASSOCIATES INC
640 FIFTH AVENUE COUNCIL BLUFFS, IA
PHONE: 712-323-0930

The drawings, plans, specifications, and other documents prepared by hgm Associates Inc. for this project are instruments of service for use solely with respect to this project and, unless otherwise provided, hgm Associates Inc. shall be deemed the author of these documents and shall retain all common law, statutory and other reserved rights, including the copyright thereto. In the event of publication, the following boilerplate notice shall apply: These documents were prepared by hgm Associates Inc. and we reserve all of our common law, statutory and other reserved rights, including the copyright thereto.

DES.	
DRWN.	
CHKD.	
APPROVED	ZWW
DATE	MAR '22

no.	revision	date

project OPUS – RIVER ROAD PUMP STATION

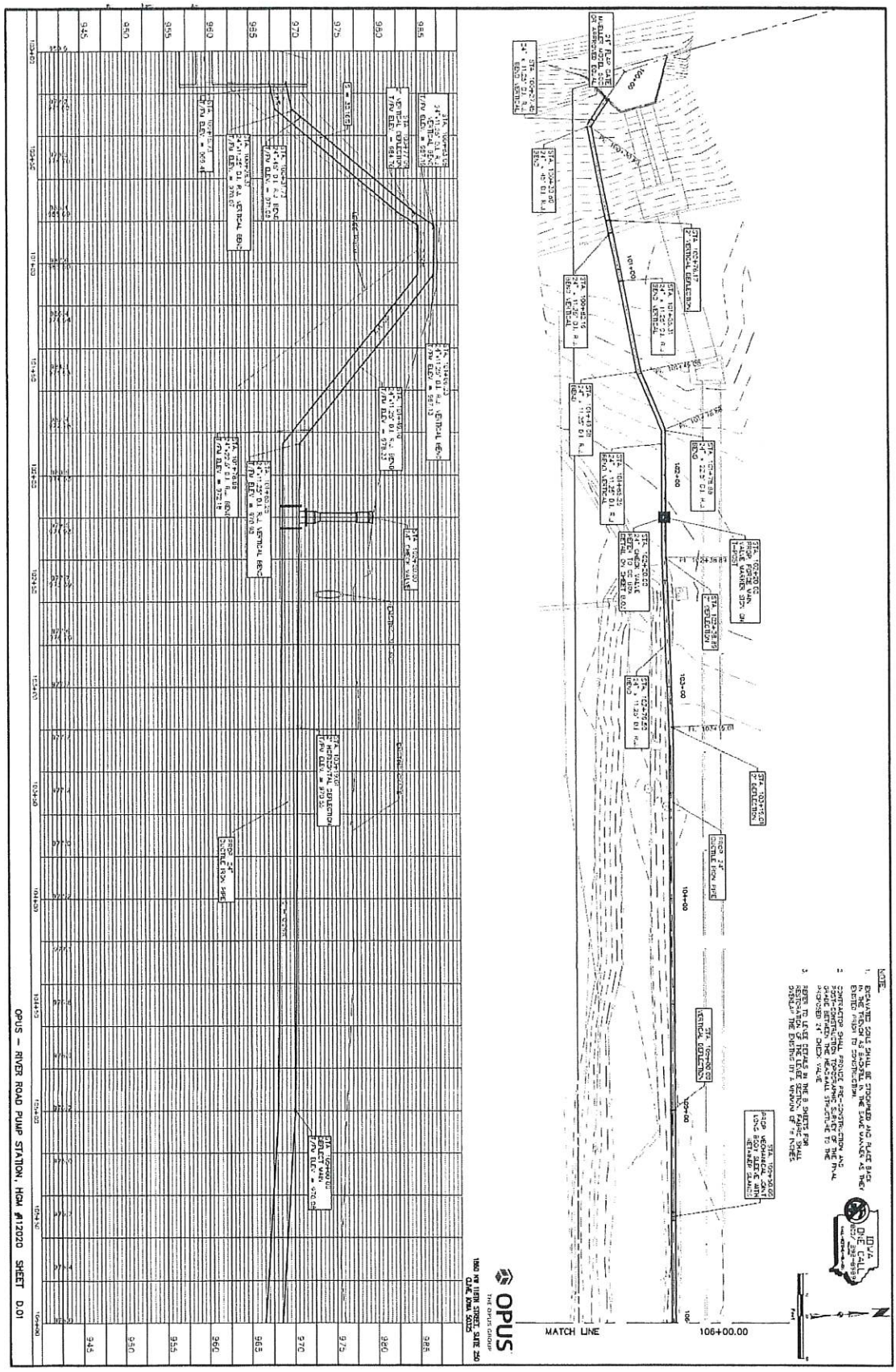
client THE OPUS GROUP

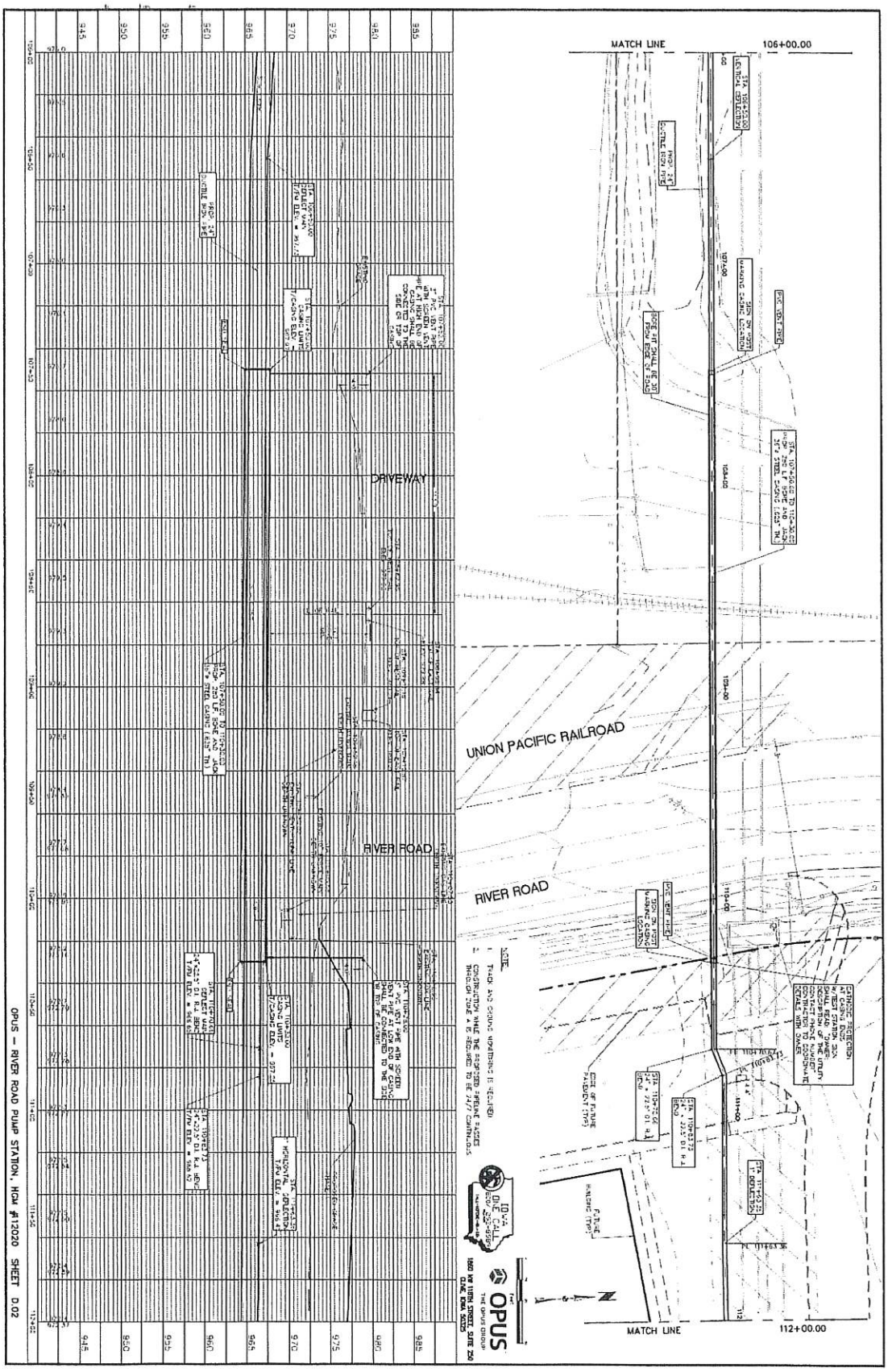
sheet GENERAL NOTES AND LEGEND

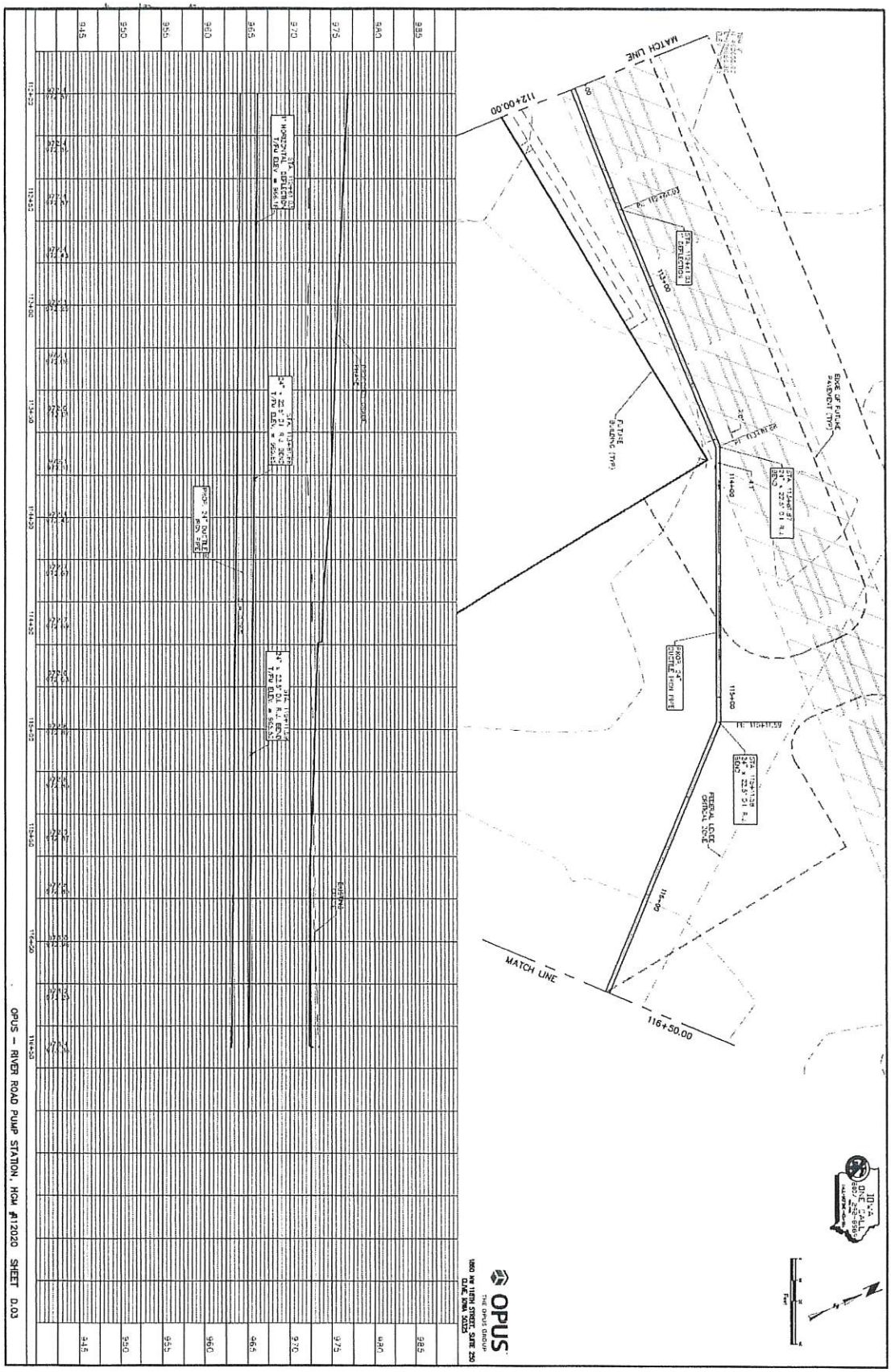
project no. 112020

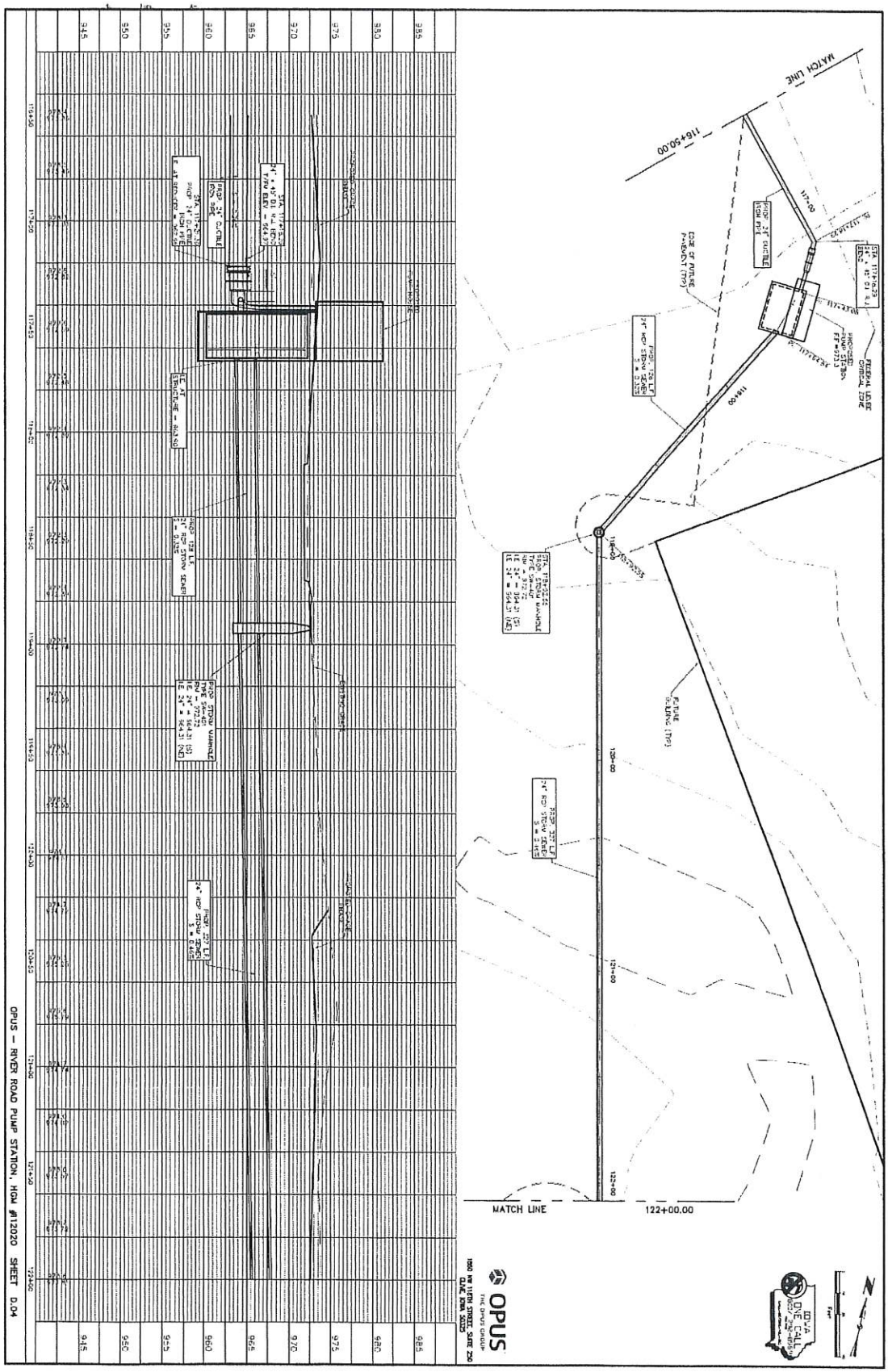
sheet no. C.01

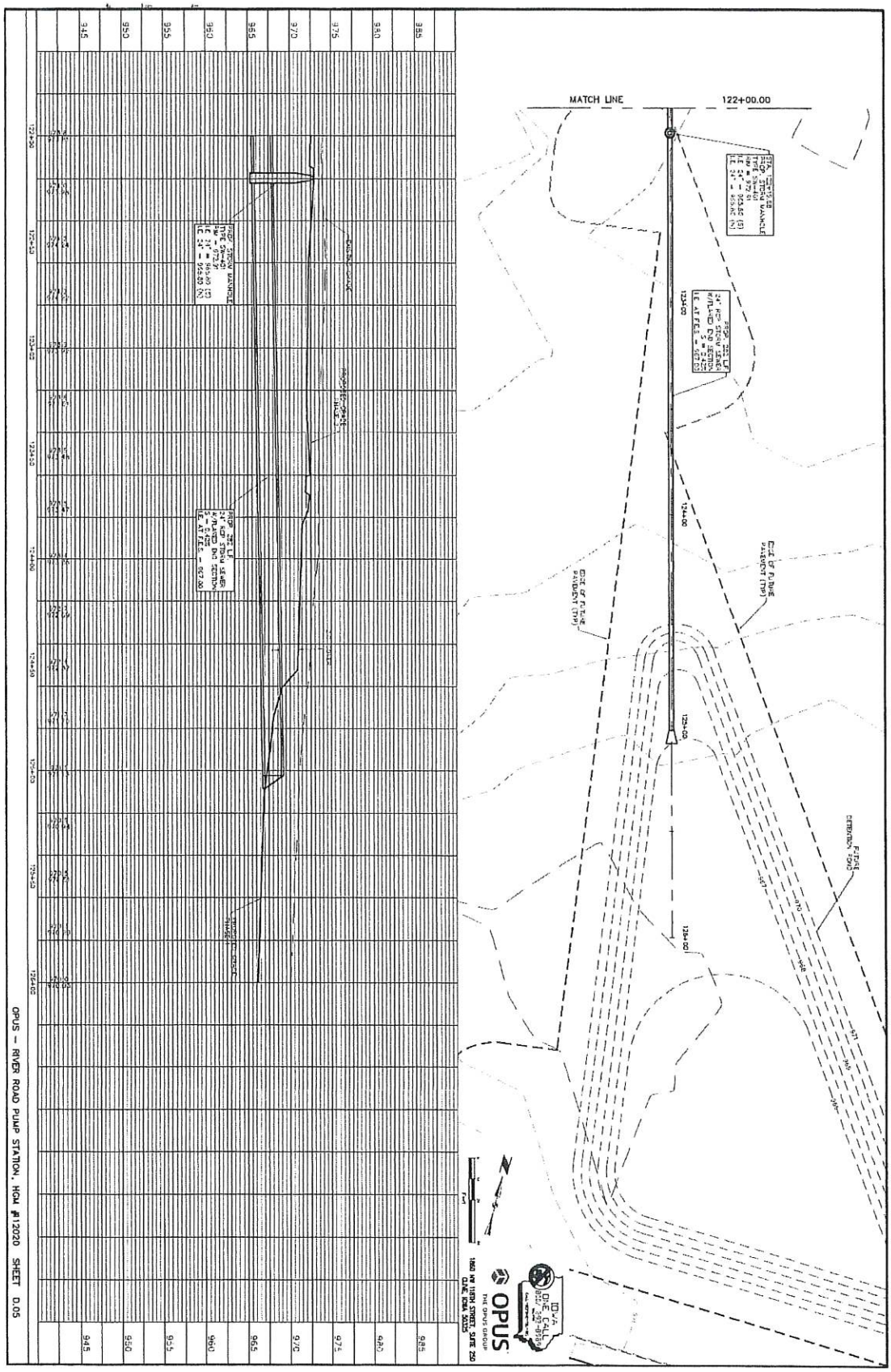
OPUS
THE OPUS GROUP
1650 WESTLAKE AVENUE N., SUITE 250
SEATTLE, WASHINGTON 98109


OPUS – RIVER ROAD PUMP STATION, HGM #12020 SHEET D.01
OPUS
THE OPUS GROUP
1560 NW 118TH STREET, SUITE 250
CLIVE, IOWA 50325
MATCH LINE
106+00.00
IDNA
ONE CALL
811
NOTE
1. EXCAVATED SOILS SHALL BE STOCKPILED AND PLACED BACK IN THE TRENCH AS BACKFILL IN THE SAME MANNER AS THEY EXISTED PRIOR TO CONSTRUCTION.
2. PRIOR TO CONSTRUCTION, CONTRACTOR AND CONSTRUCTION TOPOGRAPHIC SURVEY OF THE FINAL GRADE BETWEEN THE PROPOSED STRUCTURE TO THE PROPOSED 24" CHECK VALVE.
3. REFER TO LAYOUT SHEETS FOR ADDITIONAL DETAILS ON THE FORCE MAIN ALIGNMENT AND OVERALL PLAN VIEW OF THE ENTIRE 10'± MINIMUM OF 24 INCHES.


MATCH LINE
106+00.00
UNION PACIFIC RAILROAD
RIVER ROAD
RIVER ROAD
DRIVEWAY
MATCH LINE
112+00.00
OPUS
OPUS – RIVER ROAD PUMP STATION, HDR #12020 SHEET D.02


MATCH LINE
112+00.00
EDGE OF FUTURE PAVEMENT (TYP.)
FUTURE BUILDING (TYP.)
PROP. 24" DUCTILE IRON PIPE
FEDERAL LEVEE CRITICAL ZONE
MATCH LINE
116+50.00
OPUS
THE OPUS GROUP
1860 NW 136TH STREET, SUITE 250
CLIVE, IOWA 50325
Feet


MATCH LINE
116+50.00
MATCH LINE
122+00.00
OPUS
OPUS — RIVER ROAD PUMP STATION, HGM #12020 SHEET D.04


MATCH LINE
122+00.00
OPUS – RIVER ROAD PUMP STATION, HGM #12020 SHEET D.05

S:\Blue_Team\Projects\112020 OPUS RIVER ROAD INDUSTRIAL\Engineering\Dwgs\Design\112020 PUMP STATION DESIGN REALIGNED 1-4-21.dwg, 3/3/2022 2:40:05 AM, Adobe PDF pc3

DESIGN NOTES

1. DESIGNED IN ACCORDANCE WITH ACI 350-06.
2. THE USBR STANDARD SPECIFICATIONS FOR PUBLIC WORKS/CONTRACTS, 2021, SHALL ALSO APPLY.
3. CONCRETE SHALL HAVE A MINIMUM 28-DAY STRENGTH OF 4,000 PSI.
4. REINFORCING BARS SHALL BE EPOXY COATED AND CONFORM TO THE REQUIREMENTS OF ASTM A615, GRADE 60.
5. DESIGN LIQUID LEVEL CONSIDERED BOTH FULL AND EMPTY LOAD CASES.
6. LIVE LOAD TYPE 3 LEGAL TRUCK, 25 TON GVW WITHIN 5'-0" OF EDGE OF TANKS.
7. TANK STRUCTURES HAVE BEEN DESIGNED FOR LEAKAGE-RESISTANCE TESTING WITH FULL WEIGHT FILLED PRESSURE OR RISE OF TANKS PRIOR TO BACKFILLING.
8. NO CONSTRUCTION JOINTS ARE PERMITTED OTHER THAN THOSE INDICATED.

INSPECTION

THE FOLLOWING INFORMATION REFERS TO CHAPTER 1 AND 26.5-26 FOR EASE OF REFERENCE. REFER TO FULL DOCUMENT FOR COMPLETE OVERVIEW.

1. CONCRETE CONSTRUCTION SHALL BE INSPECTED AS REQUIRED BY THE UNIFORM BUILDING CODE.
2. UNLESS SPECIFIED OTHERWISE IN THE UNIFORM BUILDING CODE, SPECIFICATIONS FOR LIST OF REQUIREMENTS FOR INSPECTION, SEE SECTION 1.2.2 OF ACI 350-06 AND 4.
3. INSPECTION RECORDS SHALL BE RETAINED BY THE INSPECTING ENGINEER FOR 2 YEARS AFTER COMPLETION OF THE PROJECT.

STANDARDS FOR TESTS AND MATERIALS

THE FOLLOWING INFORMATION REFERS TO CHAPTER 3 AND 26.5-26 FOR EASE OF REFERENCE. REFER TO FULL DOCUMENT FOR COMPLETE OVERVIEW.

1. TESTS OF MATERIALS AND CONCRETE SHALL BE MADE IN ACCORDANCE WITH STANDARDS LISTED IN SECTION 3.8.
2. A COMPLETE RECORD OF TESTS OF MATERIALS AND CONCRETE SHALL BE COMPILED BY THE INSPECTOR FOR 2 YEARS AFTER COMPLETION OF THE PROJECT.
3. CEMENT SHALL CONFORM TO ASTM C150 OR ASTM C595.
4. SEE SECTION 3.3 FOR SPECIFICATION REQUIREMENTS FOR AGGREGATES.
5. SEE SECTION 3.4 FOR SPECIFICATION REQUIREMENTS FOR WATER.
6. SEE SECTION 3.5 FOR SPECIFICATION REQUIREMENTS FOR STEEL REINFORCEMENT.
7. SEE SECTION 3.6 FOR SPECIFICATION REQUIREMENTS FOR ADMIXTURES.
8. SEE SECTION 3.7 FOR SPECIFICATION REQUIREMENTS FOR STORAGE OF MATERIALS.

DURABILITY

THE FOLLOWING INFORMATION REFERS TO CHAPTER 4 AND 26.5-26 FOR EASE OF REFERENCE. REFER TO FULL DOCUMENT FOR COMPLETE OVERVIEW.

1. SEE TABLE 4.2.1 FOR MAXIMUM WATER-CEMENT RATIO.
2. SEE TABLE 4.2.1 FOR MINIMUM AIR CONTENT FOR MODERATE EXPOSURE.
3. MAXIMUM WATER-SOLUBLE CHLORIDE ION CONTENT FOR MODERATE EXPOSURE SHALL BE 0.15.
4. THE AMERICAN CONCRETE STRENGTH SHALL BE 4,000 PSI THE 7-DAY CONCRETE STRENGTH SHALL BE 70 PERCENT OF THE 28-DAY CONCRETE STRENGTH.
5. FOR SECTION 4.2, WHEN LIMITS ARE USED, TESTS SHALL BE PERFORMED FOR THE DEPTH OF PENETRATION OF WATER UNDER PRESSURE USING FLAT CONCRETE SPECIMENS. THE CONCRETE THICKNESS SHALL BE MEASURED USING FLAT SPECIMENS CAST IN STEEL MOLDS. TESTS SHALL BE PERFORMED AT 28 DAYS UNLESS OTHERWISE SPECIFIED. THE AVERAGE DEPTH OF PENETRATION SHALL NOT EXCEED 50 MM (2 IN.) AND NO INDIVIDUAL SPECIMEN SHALL EXCEED 65 MM (2.5 IN.).
6. SEE SECTION 4.3 FOR SPECIFICATION REQUIREMENTS FOR CONCRETE MIXTURE PROPORTIONING. THE CONCRETE MIXTURE SHALL BE DESIGNED TO ENSURE THE AVERAGE STRENGTH EXCEEDS THE SPECIFIED COMPRESSIVE STRENGTH, f'c, AS REQUIRED BY SECTION 4.3.2. THE CONCRETE MIXTURE SHALL BE CHECKED FOR DURABILITY, WITH SURFACE CRACKING WHERE SUBJECT TO FREEZING AND THAWING. THE CONCRETE MIXTURE SHALL BE CHECKED FOR STRENGTH AND DURABILITY. THE CONCRETE MIXTURE SHALL BE CHECKED FOR STRENGTH AND DURABILITY. THE CONCRETE MIXTURE SHALL BE CHECKED FOR STRENGTH AND DURABILITY. THE CONCRETE MIXTURE SHALL BE CHECKED FOR STRENGTH AND DURABILITY.
7. SEE SECTION 4.4 FOR SPECIFICATION REQUIREMENTS FOR CONCRETE MIXING AND DELIVERY.
8. SEE SECTION 4.5 FOR SPECIFICATION REQUIREMENTS FOR CONCRETE PLACEMENT.
9. SEE SECTION 4.6 FOR SPECIFICATION REQUIREMENTS FOR CURING.
10. SEE SECTION 4.7 FOR SPECIFICATION REQUIREMENTS FOR FORMWORK, EMBEDDED PIPES, AND CONSTRUCTION AND MOVEMENT JOINTS.
11. SEE SECTION 4.8 FOR SPECIFICATION REQUIREMENTS FOR CONCRETE SURFACE FINISHES.
12. SEE SECTION 4.9 FOR SPECIFICATION REQUIREMENTS FOR CONCRETE SURFACE REPAIR.

CONCRETE QUALITY, MIXING, AND PLACING

THE FOLLOWING INFORMATION REFERS TO CHAPTER 5 AND 26.5-26 FOR EASE OF REFERENCE. REFER TO FULL DOCUMENT FOR COMPLETE OVERVIEW.

1. SEE SECTION 5.2 FOR SELECTION OF CONCRETE PROPORTIONS.
2. CONCRETE SHALL BE PROPORTIONED TO PROVIDE AN AVERAGE COMPRESSIVE STRENGTH (f'cr) AS SPECIFIED IN TABLE 5.3.2.1 WHEN A CONCRETE PRODUCTION FACILITY HAS RECORD OF STRENGTH TESTS THAT ARE REPRESENTATIVE OF THE CONCRETE AND THE CONDITIONS TO BE SPECIFIED, AND WHEN THE FACILITY DOES NOT MEET STANDARD DEVIATION VALUES DEMANDED.
3. SEE SECTION 5.3.3 FOR DOCUMENTATION OF AVERAGE COMPRESSIVE STRENGTH WHEN AN EXPERIENCE RECORD MEETING THE REQUIREMENTS OF SECTION 5.3.3 IS NOT AVAILABLE.
4. SEE SECTION 5.4 FOR THE ACCEPTANCE OF A REVISED AVERAGE COMPRESSIVE STRENGTH AS DATA BECOME AVAILABLE DURING CONSTRUCTION.
5. SEE SECTION 5.5 FOR REQUIREMENTS OF TESTING FREQUENCY, LAB-CURED SPECIMENS, FIELD-CURED SPECIMENS, AND INVESTIGATION OF LOW-STRENGTH TEST RESULTS.
6. SEE SECTION 5.6 FOR PREPARATION OF FORMS, REINFORCEMENT, EQUIPMENT, AND PLACEMENT.
7. SEE SECTION 5.7 FOR CONCRETE MIXING.
8. SEE SECTION 5.8 FOR CONVEYANCE OF CONCRETE.
9. SEE SECTION 5.9 FOR DEPOSIT OF CONCRETE.
10. SEE SECTION 5.10 FOR CURING REQUIREMENTS OF CONCRETE.
11. SEE SECTION 5.11 FOR COLD WEATHER REQUIREMENTS.
12. SEE SECTION 5.12 FOR HOT WEATHER REQUIREMENTS.
13. THE TEMPERATURE OF THE MIXED CONCRETE SHALL NOT BE LESS THAN 50°F AS DELIVERED.
14. WHEN THE AIR TEMPERATURE IS ABOVE 80°F (27°C), THE CONCRETE TEMPERATURE SHALL NOT BE LESS THAN 50°F (10°C) AND, WHEN THE AIR TEMPERATURE IS BELOW 40°F (4°C), THE CONCRETE TEMPERATURE SHALL NOT BE LESS THAN 50°F (10°C). THE TEMPERATURE OF CONCRETE AS PLACED SHALL NOT BE LESS THAN 50°F (10°C) AT THE TIME OF PLACEMENT.
15. REFRIGERATED CONCRETE MAY BE HEATED BY THE USE OF DRY HEAT OR STEAM. ACCELERATED SHALL NOT BE HEATED DIRECTLY BY GAS OR OIL FLAME OR BY DIRECT CONTACT WITH STEAM PIPES. AGGREGATES MAY BE HEATED BY ANY METHOD WHEN PLACED IN THE MIXER DRUM, THE TEMPERATURE SHALL NOT EXCEED 150°F (66°C). AGGREGATES CONTAINING FROZEN LUMPS OR ICE SHALL NOT BE USED. THE AGGREGATES SHALL BE FREE FROM ICE, SNOW, OR FROZEN LUMPS BEFORE BEING BATCHED.
16. MECHANICAL EQUIPMENT OR METHODS WHICH ALTER OR PREVENT THE ENTRAINMENT OF THE REQUIRED AMOUNT OF AIR IN THE CONCRETE SHALL NOT BE USED. THE AIR-ENTRAINING ADMIXTURE SHALL BE ADDED TO THE CONCRETE MIXTURE IN THE FORM OF A STABLE SOLUTION OF KNOWN CONCENTRATION. THE ADMIXTURE SHALL BE DISTRIBUTED THROUGHOUT THE MIXING WATER OF EACH BATCH OF CONCRETE WITHIN THE TIME LIMITS SPECIFIED. AIR-ENTRAINING ADMIXTURES SHALL BE ADDED TO THE CONCRETE AS TO PRECLUDE THE POSSIBILITY OF SEPARATE CONCENTRATED ADMIXTURE AND MIXING WATER COMING IN CONTACT WITH CEMENT. AIR-ENTRAINING ADMIXTURES SHALL BE ADDED TO THE CONCRETE AS TO PRECLUDE THE POSSIBILITY OF SEPARATE CONCENTRATED ADMIXTURE AND MIXING WATER COMING IN CONTACT WITH CEMENT. AIR-ENTRAINING ADMIXTURES SHALL BE ADDED TO THE CONCRETE AS TO PRECLUDE THE POSSIBILITY OF SEPARATE CONCENTRATED ADMIXTURE AND MIXING WATER COMING IN CONTACT WITH CEMENT.

FORMWORK, EMBEDDED PIPES, AND CONSTRUCTION AND MOVEMENT JOINTS

THE FOLLOWING INFORMATION REFERS TO CHAPTER 6 AND 26.5-26 FOR EASE OF REFERENCE. REFER TO FULL DOCUMENT FOR COMPLETE OVERVIEW.

1. SEE SECTION 6.1 FOR DESIGN OF FORMWORK.
2. FORM OIL OR RELEASE AGENT SHALL BE COMPATIBLE WITH SURFACE COATING.
3. FORM TIE ASSEMBLIES AND SYSTEMS FOR USE IN WATER-CONTAINMENT STRUCTURES SHALL BE SUITABLE FOR PRODUCING A LIQUID TIGHT STRUCTURE. FORM TIES SHALL INCORPORATE PLASTIC END CONES A MINIMUM OF 1" DIAMETER AND 1 1/2" LONG.
4. FORM TIES THAT ARE TO REMAIN IN THE CONCRETE SHALL BE PROVIDED WITH DEVICES FOR PREVENTING LEAKAGE OF MOISTURE ALONG THE TIE. FORM TIES SHALL BE AS FOLLOWS: SNAP-OFF TYPE WITH CONCRETE INSERT FORM TIE AND WEDGE SURFACE, OR NUT-TYPE WITH CONCRETE FORM TIE AND WEDGE SURFACE.
5. FORM TIE END SHALL BE RECESSED AT LEAST 1 1/2" FROM THE SURFACE OF THE CONCRETE.
6. IF TAPERED TIES ARE TO BE USED, THE LARGE END SHALL BE PLACED ON THE INSIDE FACE OF THE WALL.
7. SEE SECTION 6.2 REMOVAL OF FORMS, SHORES, AND RESHORING.
8. SEE SECTION 6.3 FOR EMBEDDED PIPE OR CONDUITS.
9. SEE SECTION 6.4 FOR CONSTRUCTION JOINTS.
10. THE ELAPSED TIME BETWEEN CASTING ADJOINING CONCRETE ROWS SHALL BE AT LEAST 72 HOURS.
11. SEE SECTION 6.5 FOR MOISTURE JOINTS AND EXPANSION OR CONTRACTION JOINTS HAVE BEEN DESIGNED FOR THESE STRUCTURES.

CONCRETE SURFACE COATING

1. APPLY ONE (1) COAT OF EPOXY CONCRETE SEALER ON THE ENTIRE FLOOR AREA OF THE WET WELL, ON THE WALLS UP TO A HEIGHT OF 3'-0" ABOVE THE TOP OF THE FLOOR, AND ON THE ROOF SLAB. SEE PRODUCT DATA SHEET FOR SURFACE PREPARATION, MIXING AND APPLICATION, CURING, STORAGE, ETC.
2. APPLY TWO (2) TO THREE (3) COATS OF CHLORINATED RUBBER COATING ON THE INTERIOR WALLS AND CEILING OF THE VALVE VAULT, ON THE EXTERIOR SURFACES OF THE WET WELL AND THE VALVE VAULT, AND ON THE EXPOSED SURFACE OF THE TOP SLAB. THE FIRST COAT OF PAINT SHALL BE THINNED AS RECOMMENDED BY THE MANUFACTURER FOR SPRAY APPLICATION. SEE PRODUCT DATA SHEET FOR SURFACE PREPARATION, MIXING, APPLICATION, AND ANNE BLUSH.

MISCELLANEOUS NOTES

STEEL ACCESS DOORS TO BE MALLEABLE PRODUCTS CO. 4'-0" SERIES #25 ACCESS DOOR OR APPROVED EQUAL.

ALL WELDS CLEANED SHALL BE 3/16" EXCEPT AS FOLLOWS:
WALL VERTICAL BOTTOM = 1/4"
BOTTOM OF FLOOR = 3/16"
KEYWAY SIZE SHALL BE 2" x 6"

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF THE ENGINEER AND SHALL NOT BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF THE ENGINEER. ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING COPYRIGHT, ARE RESERVED.

hgm ASSOCIATES INC
640 FIFTH AVENUE COUNCIL BLUFFS, IA
PHONE 712-323-0536

MAR 22		
date	revision	date

project OPUS – RIVER ROAD PUMP STATION
client THE OPUS GROUP
sheet **PUMP STATION STRUCTURAL NOTES**

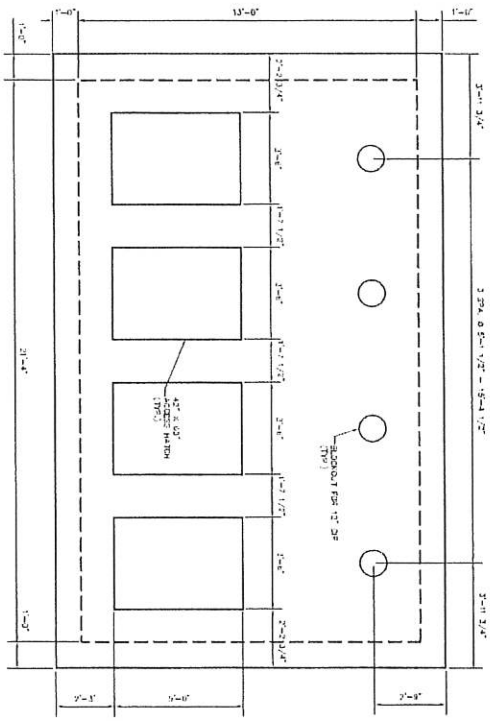
project no 112020
sheet **S10**

OPUS
THE OPUS GROUP
1650 WEST FIFTH STREET, SUITE 250
DAVENPORT, IOWA 52808

S:\Shue_Team\Projects\112E20 OPUS RIVER ROAD INDUSTRIAL\Engineering\Dwg\Design\112020 PUMP STATION DESIGN REALIGNED 1=0=21.dwg 3/31/2022 9:40:39 AM Adobe PDF pt3

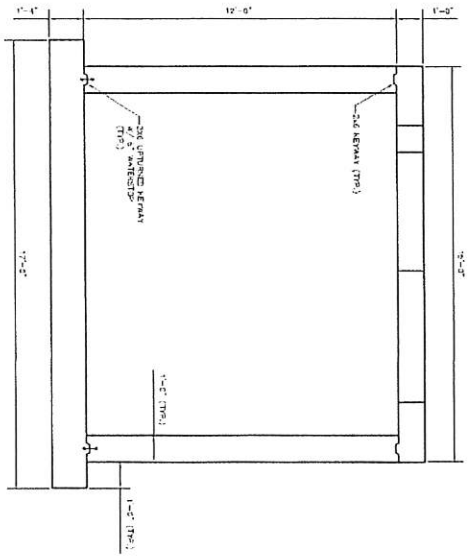
PLAN VIEW - TOP SLAB

SCALE: 1/2" = 1'-0"



ELEVATION VIEW - SECTION A-A

SCALE: 1/2" = 1'-0"



OPUS
THE OPUS GROUP

project OPUS – RIVER ROAD PUMP STATION

client THE OPUS GROUP

sheet SLAB PLAN AND SECTION DIMENSIONS

project no 112020

sheet S11

KNS drawn		
BDS designed		
BDS approved		
MAR '22 date	revisions	date

hgm ASSOCIATES INC
640 FIFTH AVENUE COUNCIL BLUFFS, IA
PHONE 712-323-0530

The drawings & plans and materials from which they are derived are the property of the project & contain work that remains the exclusive property of hgm associates inc. Any use of these documents without the written permission of hgm associates inc. will be without liability to hgm associates inc. & will be unlawful. Any unauthorized use of these drawings or any part thereof shall be considered a violation of the terms of the above agreement.

S:\Blue_Team\Projects\112020 OPUS RIVER ROAD INDUSTRIAL\Engineering\Design\Design\112020 PUMP STATION DESIGN REALIGNED 1-6-21.dwg 3/3/2022 3:41:30 AM, Adobe PDF pt3

S:\Blue_Team\Projects\112020 OPUS RIVER ROAD INDUSTRIAL\Engineering\Dwgs\Design\112020 PUMP STATION DESIGN REALIGNED 1-6-21.dwg, 2/3/2022 9:42:19 AM, Adobe PDF pc3

ADDITIONAL REINFORCING AROUND PIPE PENETRATION IN TOP OF SLAB

SCALE: 1" = 1'-0"

ADDITIONAL REINFORCING AROUND ACCESS GRATE OPENINGS

SCALE: 1" = 1'-0"

ADDITIONAL REINFORCING AROUND PIPE PENETRATION IN WALLS

SCALE: 1" = 1'-0"

OPUS
THE OPUS GROUP
1650 NW 118TH STREET, SUITE 250
CLIVE, IOWA 50325

project OPUS – RIVER ROAD PUMP STATION

client THE OPUS GROUP

sheet REINFORCING DETAILS

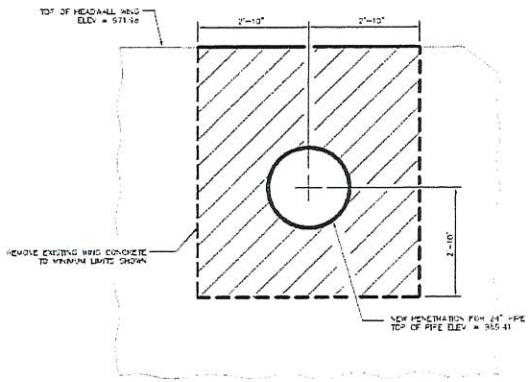
project no. 112020

sheet S13

AJS drawn	
KWH designed	
ZWW approved	
MAR '22 date	revisions date

hgm ASSOCIATES INC
640 FIFTH AVENUE COUNCIL BLUFFS, IA
PHONE 712-323-0530

The drawings in this presentation are not to be used for construction purposes. All use of this project and/or any part thereof without written agreement for professional services by hgm Associates Inc. and payment to hgm Associates Inc. for such services, will be at the user's sole risk and without liability to hgm Associates Inc. The reuse of any part thereof without written agreement and the terms of the above agreement.

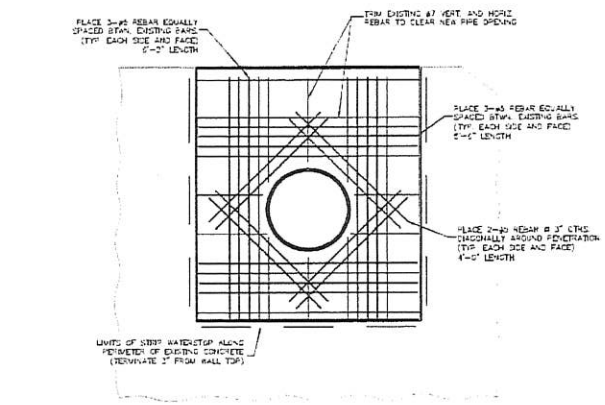


ELEVATION OF HEADWALL WING REMOVALS

SCALE: 3/4" = 1'-0"

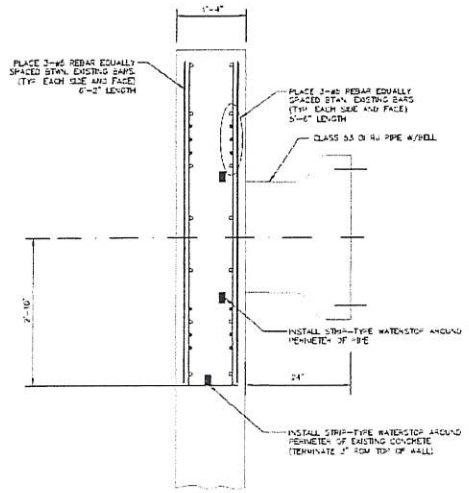
REMOVAL NOTES

- EXISTING REINFORCEMENT TO BE INCORPORATED INTO THE NEW WORK. CONTRACTOR SHALL AVOID DAMAGE TO EXISTING STEEL DURING CONCRETE REMOVALS. DAMAGE TO EXISTING STEEL SHALL BE REPAIRED AT THE DIRECTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL INITIATE REMOVALS WITH A 1" DEEP SAW CUT AROUND THE PERIMETER OF THE REMOVALS TO FACILITATE A CLEAN AND SQUARE REMOVAL LINE. CONCRETE SHALL BE REMOVED PER THE "HEADWALL MODIFICATION NOTES" ON THIS SHEET.
- EXISTING CONCRETE SURFACES AND REINFORCING STEEL SHALL BE THOROUGHLY BLASTED AND CLEANED OF ALL LAITANCE AND DEBRIS PRIOR TO PLACEMENT OF NEW MATERIALS.



ELEVATION OF HEADWALL WING CONSTRUCTION

SCALE: 3/4" = 1'-0"



SECTION OF HEADWALL WING CONSTRUCTION

SCALE: 1" = 1'-0"

HEADWALL MODIFICATION NOTES

- CONCRETE FOR HEADWALL MODIFICATION SHALL HAVE A 28-DAY STRENGTH OF 4,500 PSI.
- ALL REINFORCING STEEL SHALL BE EPOXY COATED AND CONFORM TO THE REQUIREMENTS OF ASTM A615/A615M, GRADE 60 STEEL.
- THE MINIMUM CLEARANCE, MEASURED FROM THE FACE OF THE CONCRETE TO THE SURFACE OF ANY REINFORCING BAR, SHALL BE 3", EXCEPT WHERE OTHERWISE NOTED.
- FIELD BEND AND/OR CUT REINFORCING BARS TO MAINTAIN MINIMUM CLEARANCE. EPOXY COAT CUPPED ENDS.
- ALL EXISTING CONCRETE SURFACES TO BE IN CONTACT WITH THE NEW CONSTRUCTION SHALL BE THOROUGHLY ROUGHENED AND CLEANED BEFORE PLACING ANY NEW CONCRETE.
- CHAMFER ALL EXPOSED EDGES OF CONCRETE.
- THE CONTRACTOR SHALL PLACE A 1" DEEP SAW CUT AT THE LIMITS OF THE REMOVAL TO FACILITATE A CLEAN, SMOOTH LINE WHEN BREAKING BACK EXISTING CONCRETE.
- WHEN BREAKING EXISTING CONCRETE, THE USE OF A 15 LB. MAXIMUM HAMMER APPLIED AT A 45° ANGLE IS REQUIRED TO CHIP ALONG THE EDGES OF REMOVAL, AND A 30 LB. MAXIMUM HAMMER APPLIED AT A 45° ANGLE IS REQUIRED FOR ALL OTHER CONCRETE REMOVAL.
- THE CONTRACTOR SHALL EXERCISE CARE TO PREVENT DAMAGE TO THE EXISTING STRUCTURE OUTSIDE THE LIMITS OF MODIFICATION. ANY AREAS OF DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE PERFORMED AT THE EXPENSE OF THE CONTRACTOR, AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL EXERCISE CARE DURING REMOVALS TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING STEEL TO BE INCORPORATED INTO THE NEW WORK. AREAS OF DAMAGED REINFORCEMENT SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

OPUS
THE OPUS GROUP
1650 NW 118TH STREET, SUITE 250
CLIVE, IOWA 50325

hgm ASSOCIATES INC
640 FIFTH AVENUE COUNCIL BLUFFS, IA
PHONE 712-323-0550

project OPUS – RIVER ROAD PUMP STATION
client THE OPUS GROUP
sheet **REINFORCING DETAILS**

project no. 112020
sheet **S14**

EXHIBIT C

FORM OF OFFER OF DEDICATION

OFFER OF DEDICATION

OPUS DEVELOPMENT COMPANY, L.L.C., a Delaware limited liability company ("Opus"), is the owner of that certain property along River Road in Council Bluffs, Iowa legally described as follows:

> LOT 1 IN RIVER ROAD SUBDIVISION, AN OFFICIAL PLAT IN THE CITY OF COUNCIL BLUFFS, POTTAWATTAMIE COUNTY, IOWA

(the "Property").

Opus has caused to be constructed a storm sewer to service the Property (the "Storm Sewer") within the existing storm water easement areas as established and defined in the Permanent Easement for Storm Water Drainage, Storm Sewer and Sanitary Sewer Right-of-Way dated September 20, 2001, recorded October 11, 2001, in Book 102, Page 26672 in the official records of Pottawattamie County, Iowa, and in the Permanent Easement for Storm Water Drainage, Storm Sewer and Sanitary Sewer Right-of-Way dated October 16, 2001, recorded October 22, 2001, in Book 102, Page 28674 (the "Permanent Pipeline Easement").

Opus hereby offers to dedicate to the City of Council Bluffs (the "City") the Storm Sewer lying within the Permanent Pipeline Easement.

As consideration for the dedication of the Storm Sewer, Opus requests that the City accept responsibility for the Storm Sewer running from the Property through the Permanent Pipeline Easement.

Signed this _____ day of _____, 2022.

OPUS DEVELOPMENT COMPANY, L.L.C.,
a Delaware limited liability company

By: _____
Name: _____
Its: _____

STATE OF MINNESOTA)
)ss.
COUNTY OF HENNEPIN)

The foregoing instrument was acknowledged before me this ___ day of _____, 2022, by _____, the _____ of Opus Development Company, L.L.C., a Delaware limited liability company.

_____
Notary Public