DOC#2020-0317

Agenda Item 11D

City of Muscatine

AGENDA ITEM SUMMARY

DATE:9-17-20

City Council

STAFF

Andrew Fangman, Assistant Community Development Director

SUBJECT:

Resolution Approving Final Plat of the Arbor Commons Subdivsion

EXECUTIVE SUMMARY:

With completion of construction of all improvements and infrastructure required for this subdivision, NSPW has now submitted a final plat for approval. Approval of a final plat would allow this subdivision to be recorded at County Recorder's Office, and is the action by which the City of Muscatine accepts the public infrastructure, such as streets and sewers constructed by the developer, which serve this subdivision. Approval of a final plat is based on finding that the submitted final plat and the constructed infrastructure and improvements are in accordance with the approved preliminary plat and relevant sections of City Code.

STAFF RECOMMENDATION

Approval, the submitted final plat and the constructed infrastructure and improvements are in accordance with the approved preliminary plat and relevant sections of City Code.

BACKGROUND/DISCUSSION

NSPW, LLC has submitted a final plat for Arbor Commons, a 62-lot subdivision that would be comprised of 48 standalone single-family homes, 4 duplexes and 2 triplexes. Two additional 2 additional outlots would be dedicated to the City of Muscatine and would accommodate a sewage lift station and a multi-use trail. A preliminary plat for this subdivision was approved by the Muscatine City Council on January 17, 2019

CITY FINANCIAL IMPACT

ATTACHMENTS

1. Memo
2. Resolution Approving Final Plat
3. Final Plat
4. Maintenance Bond
5. Development Plan (enlarged view)
6. Development Plan (full view)
7. Preliminary Plat (enlarged view)
8. Preliminary Plat (full view)
9. Construction Plans

MUSCATINE

City Hall, 215 Sycamore St.
Muscatine, IA 52761-3840
(563) 262-4141
Fax (563) 262-4142

COMMUNITY DEVELOPMENT

Planning,
Zoning,
Building Safety,
Construction Inspection Services,
Public Health,
Housing Inspections,
Code Enforcement

To: Mayor and City Council Members

Cc: Carol Webb, City Administrator
Jodi Royal-Godwin, Community Development Director

From: Andrew Fangman, Assistant Community Development Director

Date: September 17, 2020

INTRODUCTION: NSPW, LLC has submitted a final plat for Arbor Commons, a 62-lot subdivision that would be comprised of 48 standalone single-family homes, 4 duplexes and 2 triplexes. Two additional 2 additional outlots would be dedicated to the City of Muscatine and would accommodate a sewage lift station and a multi-use trail. A preliminary plat for this subdivision was approved by the Muscatine City Council on January 17, 2019.



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BACKGROUND:

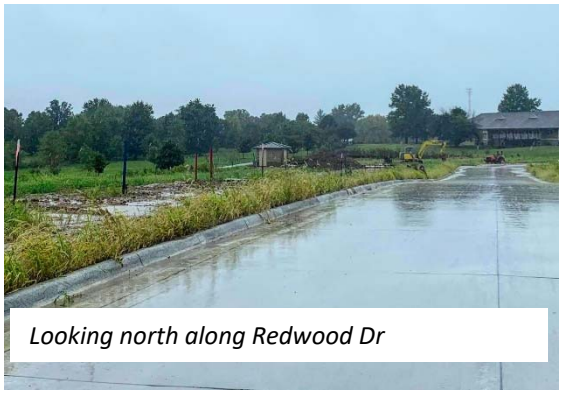
This property is located in the S-3 zoning district, which allows for any use permitted in any residential zoning district or in the M-1 Light Industrial Zoning District, subject to approval by the Planning and Zoning Commission of a development plan that details the specific layout and uses of the subject property. Attached is the development plan for this subdivision which was approved by City Council, upon recommendation from the Planning and Zoning Commission on January 17, 2019.

Based on the approved preliminary plat and development plan, the developer prepared a construction plan which is attached. This plan was fully reviewed and approved, by the City Engineer and all other relevant City staff, as meeting all City requirements and the approved preliminary plat and development plan. The improvements and infrastructure have now been constructed in accordance with these plans, with City staff performing the required construction inspections of all infrastructure intended to be dedicated as public infrastructure. It should be noted that as per long standing city policy, sidewalks will be completed in accordance with what is on the approved construction plans at the time each lot is developed.

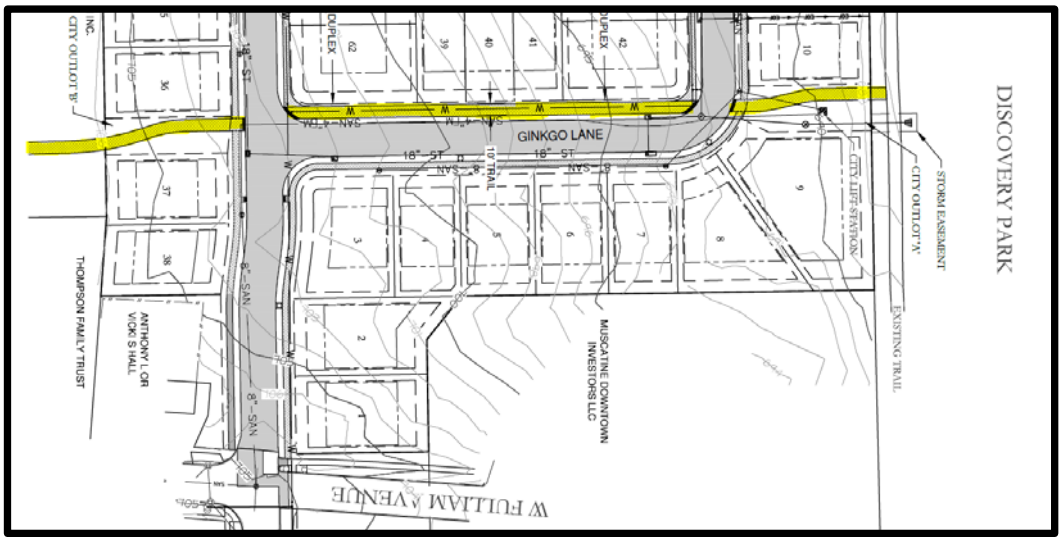


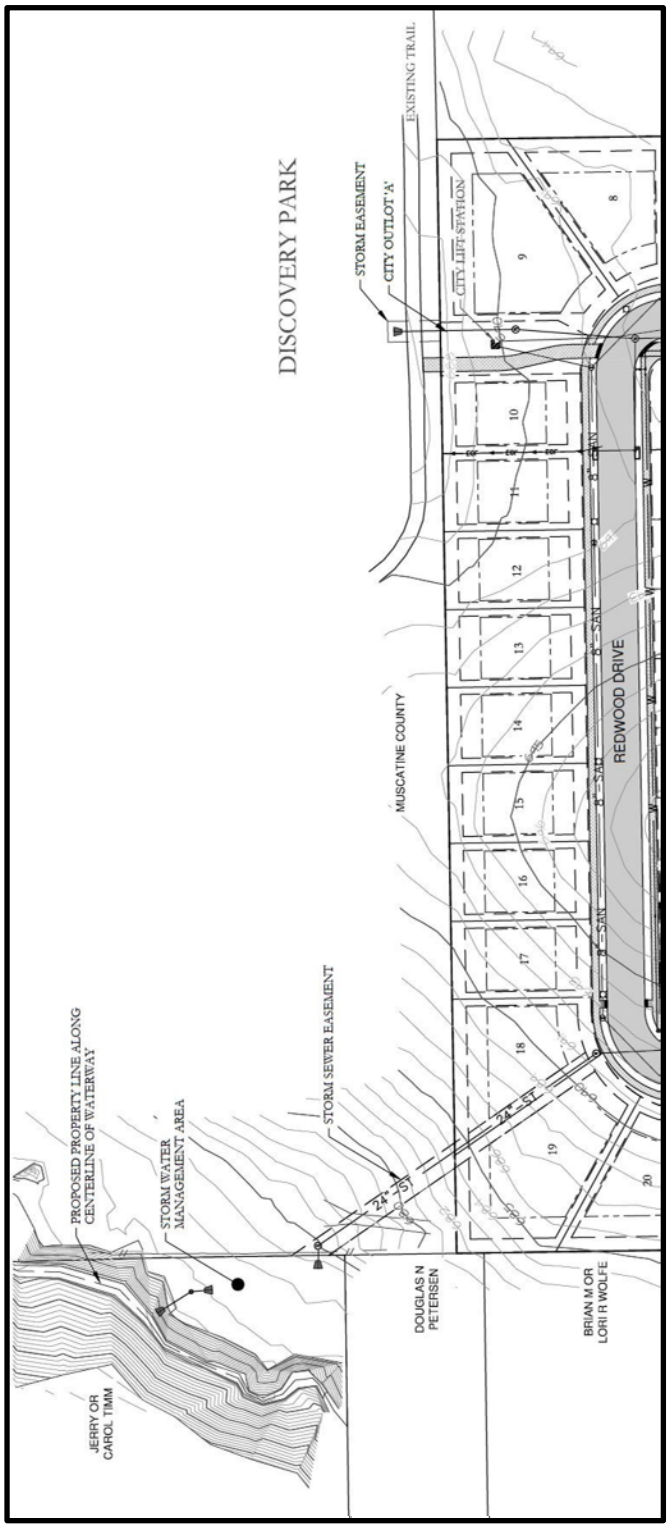
View of new Lift Station and Westside Trail at the Intersection Redwood Dr and Gingko Ln

The City of Muscatine and the developer reached an agreement allowing for the Westside Trail to be routed through the proposed subdivision. The Westside Trail is a 1.26-mile multiuse trail connecting to the existing trail network in Kent-Stein Park and Discovery Park. The Westside Trail was constructed by the City of Muscatine, with the funding coming through a mix of federal, state, and local funding sources. Currently this trail exists on a permanent easement. With approval of this final plat, the trail will be contained within the public right of way for Gingko Lane, and within Outlot A and Outlot B, which are being dedicated to the City. Outlot A also contains the sanitary sewage lift station that is being dedicated to the City.



Looking north along Redwood Dr





Proposed Locations of Stormwater Outfalls

Stormwater from the Arbor Commons Subdivision will be collected via curb and gutter and then will be conveyed through storm sewers to outfalls located to the west of the subdivision. The map to the left shows the location of the stormwater outfalls.

The northernmost stormwater outfall is located within Discovery Park, just west of where the Westside Trail joins with the existing trail in Discovery Park. This outfall will discharge into an existing wetland area. The developer has reached an agreement with the Muscatine County Conservation Board for an easement to allow for the construction of this stormwater infrastructure and to allow for the discharge of stormwater into this wetland on County property. The use of a wetland for stormwater management has been proven to be an effective method to improve water quality as the complex hydrologic, biological, physical, and chemical interactions that take place within a wetland result in a natural reduction and cleansing of influent pollutants.

The southernmost stormwater outfall is located in a 11,423 square foot stormwater management area located approximately 100' west of the southwest corner of the proposed subdivision. From this stormwater management area, stormwater will flow northwest into an unnamed stream and ultimately into the Muscatine Slough.

The developer of the Arbor Commons Subdivision acquired this 11,423 square foot outlot from a private landowner. Once the stormwater infrastructure has been constructed and accepted by the City as public infrastructure, this outlot will be conveyed to the Muscatine County Conservation Board, who will then make this area part of the adjoining Discovery Park.

Prior to the transfer of this parcel to the County, the developer will grant the City an easement to operate and maintain stormwater infrastructure in this area, and for the discharge of stormwater. The developer has also obtained from the Muscatine County Conservation Board the easement necessary for the 24" storm sewer line that will drain the southern portion of the proposed subdivision, to travel across a small portion of Discovery Park.

RECOMMENDATION/RATIONALE:
Staff recommends approval of the final plat based on the finding that the submitted final plat and the constructed infrastructure and improvements are in accordance with the approved preliminary plat and relevant sections of City Code. The City Engineer s has inspected all infrastructure that is to be dedicated to the public, and has issued a written recommendation that it be accepted as public infrastructure. As required by City Code a two-year maintenance bond in an amount satisfactory to the City Engineer has been provided. This maintenance bond functions as a warranty on the infrastructure being accepted as public infrastructure.

Additionally, the proposed subdivision also helps achieve the following specific goals of the Comprehensive Plan.

- **Goal LU.3: Infill**

Increase new development (housing and commercial) on vacant lots in portions of the City already served by public infrastructure.

- **Goal H.1: Housing Quality**

A high-quality living environment in all neighborhoods, the preservation of stable residential neighborhoods, and where necessary, improvement of the condition of existing housing stock in Muscatine.

- **Goal H.7: Affordability**

Increase housing affordability without sacrificing long-term quality of life

The need for improved housing stock has been identified as one of the most pressing problems the community must address for Muscatine to be able to thrive. As a step towards addressing this issue, in 2017 the City of Muscatine commissioned RDG Inc to conduct a Housing Market and Demand Study. This study evaluated and identified strategies to address housing issues throughout the city; and through community engagement, identified the market gaps and desires of residents and stakeholders. The study summarizs these opportunities and identifies potential strategies. One of the key findings of the study is the following: *"A limited lot supply presents the most significant challenge to overcome. The construction of new homes meets an immediate need for households who can afford homes above $200,000. Additionally, new construction indirectly alleviates other housing challenges by opening existing housing and rental units at more affordable prices."*

The Arbor Commons Subdivision is a direct and impactful step towards addressing this issue. It has now been more than a decade since a new single-family home subdivision has been constructed in the City of Muscatine, resulting in a shortage of suitable lots for the construction of a significant number of single-family homes which is barrier towards achieving a more vibrant and healthy community.

BACKUP INFORMATION:

1. Resolution Approving Final Plat
2. Final Plat
3. Maintenance Bond
4. Development Plan (enlarged view)
5. Development Plan (full view)
6. Preliminary Plat (enlarged view)
7. Preliminary Plat (full view)
8. Construction Plans

Prepared by Andrew Fangman , 215 Sycamore Street, Muscatine, IA 52761 (563) 262-4141

RESOLUTION NO. _____

A RESOLUTION APPROVING THE PRELIMINARY PLAT OF ARBOR COMMONS SUBDIVSION

WHEREAS, there has been filed with the Planning and Zoning Commission of the City of Muscatine, Iowa, and there is now submitted to the City Council of said City, a final plat, containing real estate in the City of Muscatine, described on Exhibit A, which is incorporated by reference; and

WHEREAS, said final plat has been approved by the Planning and Zoning Commission of the City of Muscatine, Iowa; and

WHEREAS, the Final Plat fully conforms with ordinances of the City applicable thereto; and

WHEREAS, the platting of the subdivision is in harmony with the Comprehensive Plan now withing in effect withing the City.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MUSCATINE, IOWA, THAT:

1. The Final Plat of the Arbor Commons Subdivision is approved.
2. The dedication to public use of the streets and easements designated on the Final Plat is accepted.
3. That the City of Muscatine does herby accepted ownership of Outlot A and Outlot B
4. The Mayor and City Clerk are Authorized and directed to the adoption of this Resolution in order the Final Plat may be recorded in the Muscatine County Recorder's office.

PASSED, APPROVED, AND ADOPTED this **17th Day of September, 2020**.

BY THE CITY COUNCIL OF THE CITY OF MUSCATINE, IOWA

Attest:

_____
Diana L. Broderson, Mayor

_____
Carol Webb, City Clerk

Exhibit A

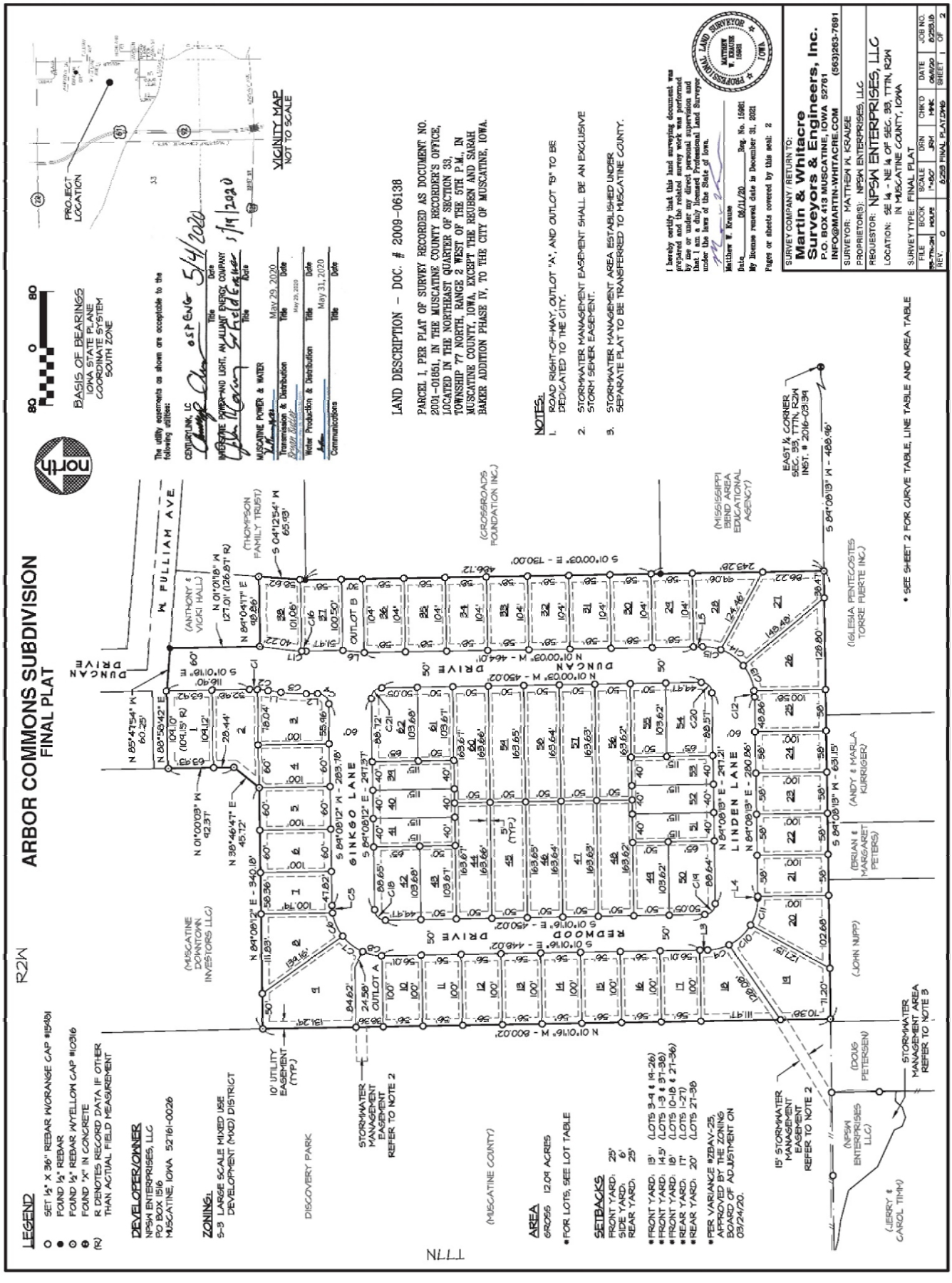

ARBOR COMMONS SUBDIVISION
FINAL PLAT
LEGEND
SET ½" X 36" REBAR W/ORANGE CAP #15481
FOUND ½" REBAR
FOUND ½" REBAR W/YELLOW CAP #10316
FOUND "X" IN CONCRETE
R DENOTES RECORD DATA IF OTHER THAN ACTUAL FIELD MEASUREMENT
DEVELOPER/OWNER
NPSW ENTERPRISES, LLC
PO BOX 1516
MUSCATINE, IOWA 52761-0026
ZONING:
S-3 LARGE SCALE MIXED USE DEVELOPMENT (MXD) DISTRICT
AREA
6R056 12.09 ACRES
• FOR LOTS, SEE LOT TABLE
SETBACKS
FRONT YARD: 25'
SIDE YARD, 6'
REAR YARD, 25'
• FRONT YARD: 13' (LOTS 3-4 & 14-26)
• FRONT YARD: 14.5' (LOTS 1-3 & 27-36)
• FRONT YARD: 18' (LOTS 10-18 & 27-36)
• REAR YARD, 17' (LOTS 1-27)
• REAR YARD, 20' (LOTS 27-36)
• PER VARIANCE #ZBAV-25, APPROVED BY THE ZONING BOARD OF ADJUSTMENT ON 03/24/20.
BASIS OF BEARINGS
IOWA STATE PLANE COORDINATE SYSTEM
SOUTH ZONE
The utility easements as shown are acceptable to the following utilities:
CENTURYLINK, LC
Title Date
MIDAMERICAN ENERGY COMPANY
Title Date
MUSCATINE POWER & WATER
Transmission & Distribution Title Date May 29, 2020
Water Production & Distribution Title Date May 31, 2020
Communications Title Date
VICINITY MAP
NOT TO SCALE
PROJECT LOCATION
LAND DESCRIPTION – DOC. # 2009-06138
PARCEL 1, PER PLAT OF SURVEY RECORDED AS DOCUMENT NO. 2001-01851, IN THE MUSCATINE COUNTY RECORDER'S OFFICE, LOCATED IN THE NORTHEAST QUARTER OF SECTION 33, TOWNSHIP 77 NORTH, RANGE 2 WEST OF THE 5TH P.M., IN MUSCATINE COUNTY, IOWA, EXCEPT THE REUBEN AND SARAH BAKER ADDITION PHASE IV, TO THE CITY OF MUSCATINE, IOWA.
NOTES:
1. ROAD RIGHT-OF-WAY, OUTLOT "A", AND OUTLOT "B" TO BE DEDICATED TO THE CITY.
2. STORMWATER MANAGEMENT EASEMENT SHALL BE AN EXCLUSIVE STORM SEWER EASEMENT.
3. STORMWATER MANAGEMENT AREA ESTABLISHED UNDER SEPARATE PLAT TO BE TRANSFERRED TO MUSCATINE COUNTY.
I hereby certify that this land surveying document was prepared and the related survey work was performed by me or under my direct personal supervision and that I am a duly licensed Professional Land Surveyor under the laws of the State of Iowa.
Matthew W. Krause
Date 06/11/20 Reg. No. 15981
My license renewal date is December 31, 2021
Pages or sheets covered by this seal: 2
PROFESSIONAL LAND SURVEYOR MATTHEW W. KRAUSE 15981 IOWA
SURVEY COMPANY / RETURN TO:
Martin & Whitacre Surveyors & Engineers, Inc.
P.O. BOX 413 MUSCATINE, IOWA 52761
INFO@MARTIN-WHITACRE.COM (563)263-7691
SURVEYOR: MATTHEW W. KRAUSE
PROPRIETOR(S): NPSW ENTERPRISES, LLC
REQUESTOR: NPSW ENTERPRISES, LLC
LOCATION: SE ¼ - NE ¼ OF SEC. 33, T77N, R2W IN MUSCATINE COUNTY, IOWA
SURVEY TYPE: FINAL PLAT
FILE 23-77N-2W | BOOK MXD/R | SCALE 1"=50' | DRN JSM | CHK'D MWK | DATE 06/11/20 | JOB NO. 6259.16
REV. 0 | 6259 FINAL PLAT2WG | SHEET 1 OF 2
• SEE SHEET 2 FOR CURVE TABLE, LINE TABLE AND AREA TABLE
W FULLIAM AVE
DUNCAN DRIVE
GINKGO LANE
REDWOOD DRIVE
LINDEN LANE
OUTLOT A
OUTLOT B
(MUSCATINE DOWNTOWN INVESTORS LLC)
(ANTHONY & VICKI HALL)
(THOMPSON FAMILY TRUST)
(CROSSROADS FOUNDATION INC.)
(MISSISSIPPI BEND AREA EDUCATIONAL AGENCY)
(IGLESIA PENTECOSTES TORRE FUERTE INC.)
(BRIAN & MARGARET PETERS)
(ANDY & MARLA KURRIGER)
(JOHN NUPP)
(DOUG PETERSEN)
(NPSW ENTERPRISES LLC)
(JERRY & CAROL TIMM)
(MUSCATINE COUNTY)
DISCOVERY PARK
10' UTILITY EASEMENT (TYP.)
STORMWATER MANAGEMENT EASEMENT REFER TO NOTE 2
15' STORMWATER MANAGEMENT EASEMENT REFER TO NOTE 3
STORMWATER MANAGEMENT AREA REFER TO NOTE 3
EAST ¼ CORNER SEC. 33, T77N, R2W INST. # 2016-03134
S 84°08'13" W - 486.46'
N 01°00'03" W - 464.01'
N 01°00'03" W - 430.02'
S 01°00'03" E - 130.00'
S 01°01'16" E - 448.02'
N 01°01'16" W - 800.02'
N 84°08'12" E - 340.18'
S 84°08'12" E - 247.37'
N 84°08'13" E - 280.86'
S 84°08'13" W - 631.15'
TTTN

Exhibit A

AREA TABLE		
LOT #	ACRES	SQ. FT.
1	0.16	346
2	0.17	385
3	0.17	343
4	0.14	320
5	0.14	320
6	0.14	320
7	0.13	318
8	0.18	388
9	0.28	466
10	0.13	312
11	0.13	312
12	0.13	312
13	0.13	312
14	0.13	312
15	0.13	312
16	0.13	312
17	0.13	312
18	0.18	382
19	0.26	434
20	0.17	372
21	0.13	316
22	0.13	316
23	0.13	316
24	0.13	316
25	0.13	317
26	0.21	417
27	0.23	431
28	0.17	367
29	0.14	324
30	0.14	324
31	0.14	324
32	0.14	324

AREA TABLE		
LOT #	ACRES	SQ. FT.
33	0.14	324
34	0.14	324
35	0.14	324
36	0.14	324
37	0.13	318
38	0.13	317
39	0.11	310
40	0.11	310
41	0.11	310
42	0.15	331
43	0.12	307
44	0.19	427
45	0.19	427
46	0.19	427
47	0.19	427
48	0.19	427
49	0.12	307
50	0.15	331
51	0.11	310
52	0.11	310
53	0.11	310
54	0.15	331
55	0.12	307
56	0.19	427
57	0.19	427
58	0.19	427
59	0.19	427
60	0.19	427
61	0.12	307
62	0.15	331
OUTLOT A	0.09	275
OUTLOT B	0.07	265

CURVE TABLE					
CURVE #	DELTA	RADIUS	ARC	BEARING	CHORD
C1	3°42'01"	170.00	10.98'	S 00°49'42" W	10.98'
C2	5°12'45"	170.00	15.47'	S 05°17'05" W	15.46'
C3	8°53'30"	230.00	35.69'	S 03°26'42" W	35.66'
C4	90°03'02"	15.00	23.58'	S 44°06'41" W	21.22'
C5	8°25'12"	72.00	10.58'	S 84°52'44" W	10.57'
C6	28°39'02"	72.00	36.00'	S 66°20'42" W	35.63'
C7	28°40'04"	72.00	36.02'	S 37°41'10" W	35.65'
C8	22°07'03"	72.00	27.79'	S 12°17'36" W	27.62'
C9	24°49'31"	72.00	31.20'	S 13°26'01" E	30.95'
C10	33°26'41"	72.00	42.03'	S 42°34'07" E	41.43'
C11	31°34'19"	72.00	39.67'	S 75°04'37" E	39.17'
C12	7°17'50"	72.00	9.17'	N 85°29'19" E	9.16'
C13	31°02'07"	72.00	39.00'	N 66°19'21" E	38.52'
C14	31°02'08"	72.00	39.00'	N 35°17'14" E	38.53'
C15	20°46'14"	72.00	26.10'	N 09°23'03" E	25.96'
C16	2°02'28"	170.00	6.06'	N 00°01'11" E	6.06'
C17	6°18'33"	170.00	18.72'	N 04°11'42" E	18.71'
C18	90°09'28"	15.00	23.60'	S 44°03'28" W	21.24'
C19	89°50'31"	15.00	23.52'	S 45°56'31" E	21.18'
C20	90°08'16"	15.00	23.60'	N 44°04'05" E	21.24'
C21	89°51'45"	15.00	23.53'	N 45°55'55" W	21.19'

LINE TABLE		
LINE #	BEARING	DISTANCE
L1	S 07°53'28" W	18.34'
L2	S 01°00'03" E	15.44'
L3	S 01°01'16" E	10.83'
L4	N 89°08'13" E	2.35'
L5	N 01°00'03" W	12.84'
L6	N 05°34'13" E	30.20'

SURVEY COMPANY / RETURN TO:
Martin & Whitacre
Surveyors & Engineers, Inc.
P.O. BOX 413 MUSCATINE, IOWA 52761
INFO@MARTIN-WHITACRE.COM (563)263-7691

SURVEYOR: MATTHEW W. KRAUSE
PROPRIETOR(S): NPSW ENTERPRISES, LLC
REQUESTOR: NPSW ENTERPRISES, LLC
LOCATION: SE ¼ - NE ¼ OF SEC. 33, T77N, R2W IN MUSCATINE COUNTY, IOWA
SURVEY TYPE: FINAL PLAT

FILE	BOOK	SCALE	DRN	CHK'D	DATE	JOB NO.
33-T77N-2W	MOLPE	N.T.S.	JRM	MWK	06/11/20	8258.18
REV. 0		8258 FINAL PLAT.DWG			SHEET 2	OF 2

IMT INSURANCE

MAINTENANCE BOND

Bond No. 97858

KNOW ALL MEN BY THESE PRESENTS, That we, **Hagerty Earthworks, L.L.C.** as Principal, and **IMT Insurance Company,** a Corporation organized under the laws of the State of Iowa, with principal offices at West Des Moines, Iowa, as Surety, are held and firmly bound unto **City of Muscatine**

(hereinafter called the Obligee), in the penal sum of **Four Hundred Thousand and 00/100** ($ **400,000.00**) Dollars, for the payment of which, well and truly to be made, we do hereby bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, The said Principal has heretofore entered into a contract with the obligee above named for **Arbor Commons Public Infrastructure**

WHEREAS, said contract provides that the Principal shall furnish a bond which shall remain in force for a period of **Two** year(s) from the date of completion of the Project as established by the Engineer or Architect and which shall be conditioned to guarantee against all defects in workmanship and materials which shall become apparent during said period.

NOW, THEREFORE, THE CONDITION OF THE OBLIGATION IS SUCH THAT, if the Principal shall indemnify the Obligee for all loss that the obligee may sustain by reason of any defective materials or workmanship which shall become apparent during the period of **Two** year(s) from the date of completion of the Project as established by the Engineer or Architect, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that in the event of any default on the part of the said Principal, written statement of the particular facts showing such default and the date thereof shall be delivered to the Surety by certified mail at its home office, 4445 Corporate Drive, West Des Moines, Iowa 50266, promptly and in any event within thirty (30) days after the obligee or his representative shall learn of such default.

Signed, sealed and dated this **3rd** day of **September**, **2020**.

Hagerty Earthworks, L.L.C.
Principal

By _____

IMT Insurance Company

By _____
Connie Smith, Attorney-in-Fact

Countersigned

By N/A
Resident Agent

SY 03 08 (01/07)

IMT INSURANCE

POWER OF ATTORNEY

No. 97858

Notice: The warning found elsewhere in this Power of Attorney affects the validity thereof. Please review carefully.

Know All Persons By These Presents, that IMT Insurance Company a corporation duly organized under the laws of the State of Iowa, and having its principal office in the City of West Des Moines, County of Polk, State of Iowa, hath made, constituted and appointed, and does by these presents make, constitute and appoint

Michael J. Douglas, Chris Steinagel, Christopher M. Kemp, Robert Downey, Kory Mortel, Connie S. Smith, and Eliot Motu

of Hudson and State of Wisconsin its true and lawful Attorney-in-Fact, with full power and authority hereby conferred in its name, place and stead, to sign, execute, acknowledge and deliver in its behalf as surety any and all bonds, undertakings, recognizances or other written obligations in the nature thereof, subject to the limitation that any such instrument shall not exceed the amount of:

******************Unlimited Amount******************

and to bind **IMT Insurance Company** thereby as fully and to the same extent as if such bond or undertaking was signed by the duly authorized officers of **IMT Insurance Company**, and all such acts of said Attorney-in-Fact, pursuant to the authority herein given, are hereby ratified and confirmed.

This Power-of-Attorney is made and executed pursuant to and by authority of the following By-Laws adopted by the Board of Directors of **IMT Insurance Company** on December 18, 1998.

ARTICLE VIII, SECTION 4. - The President or any Vice President or Secretary shall have the authority to appoint Attorneys In Fact and to authorize them to execute on behalf of the Company, and attach thereto the Corporate Seal, bonds, undertakings, recognizances, contracts of indemnity or other obligatory writings, excluding insurance policies and endorsements.

ARTICLE VIII, SECTION 5. - The signature of any authorized officer and the Corporate Seal may be affixed by facsimile to any Power of Attorney authorizing the execution and delivery of any of the instruments described in Article VIII, Section 4 of the By-Laws. Such facsimile signature and seal shall have the same force and effect as though manually affixed.

In Witness Whereof, IMT Insurance Company has caused these presents to be signed by its President and its corporate seal to be hereto affixed, this 2nd day of December, 2019.

IMT Insurance Company

Sean Kennedy

Sean Kennedy, President

WARNING: THIS POWER IS INVALID IF NOT PRINTED WITH RED BORDER AND RED LOGO.

STATE OF IOWA
COUNTY OF POLK } ss:

On this 2nd day of December, 2019, before me appeared Richard Keith, to me personally known, who being by me duly sworn did say that he is President of the IMT Insurance Company, the corporation described in the foregoing instrument, and that the Seal affixed to the said instrument is the Corporate Seal of the said Corporation and that the said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors.

In Testimony Whereof, I have hereunto set my hand and affixed my Official Seal at the City of West Des Moines, Iowa, the day and year first above written.

NOTARIAL SEAL IOWA
SETH CARY
COMMISSION NO. 783929
MY COMMISSION EXPIRES
5/20/2020

Seth Cary

Notary Public, Polk County, Iowa

CERTIFICATE

I, Dalene Holland, Secretary of the IMT Insurance Company do hereby certify that the above and foregoing is a true and correct copy of the POWER-OF-ATTORNEY, executed by said the IMT Insurance Company, which is still in force and effect.

In Witness Whereof, I have hereunto set my hand and affixed the Seal of the Company on 3 day of Sept, 2020.

Dalene M. Holland

Dalene Holland, Secretary

SY 06 06 (01/07)

ARBOR COMMONS SUBDIVISION
FINAL PLAT

R2W

T77N

LEGEND

- O SET ½" X 36" REBAR W/ORANGE CAP #15481
- ● FOUND ½" REBAR
- ⊙ FOUND ½" REBAR W/YELLOW CAP #10316
- ⊕ FOUND "X" IN CONCRETE
- (R) R DENOTES RECORD DATA IF OTHER THAN ACTUAL FIELD MEASUREMENT

DEVELOPER/OWNER
NPSW ENTERPRISES, LLC
PO BOX 1516
MUSCATINE, IOWA 52761-0026

ZONING:
S-3 LARGE SCALE MIXED USE DEVELOPMENT (MXD) DISTRICT

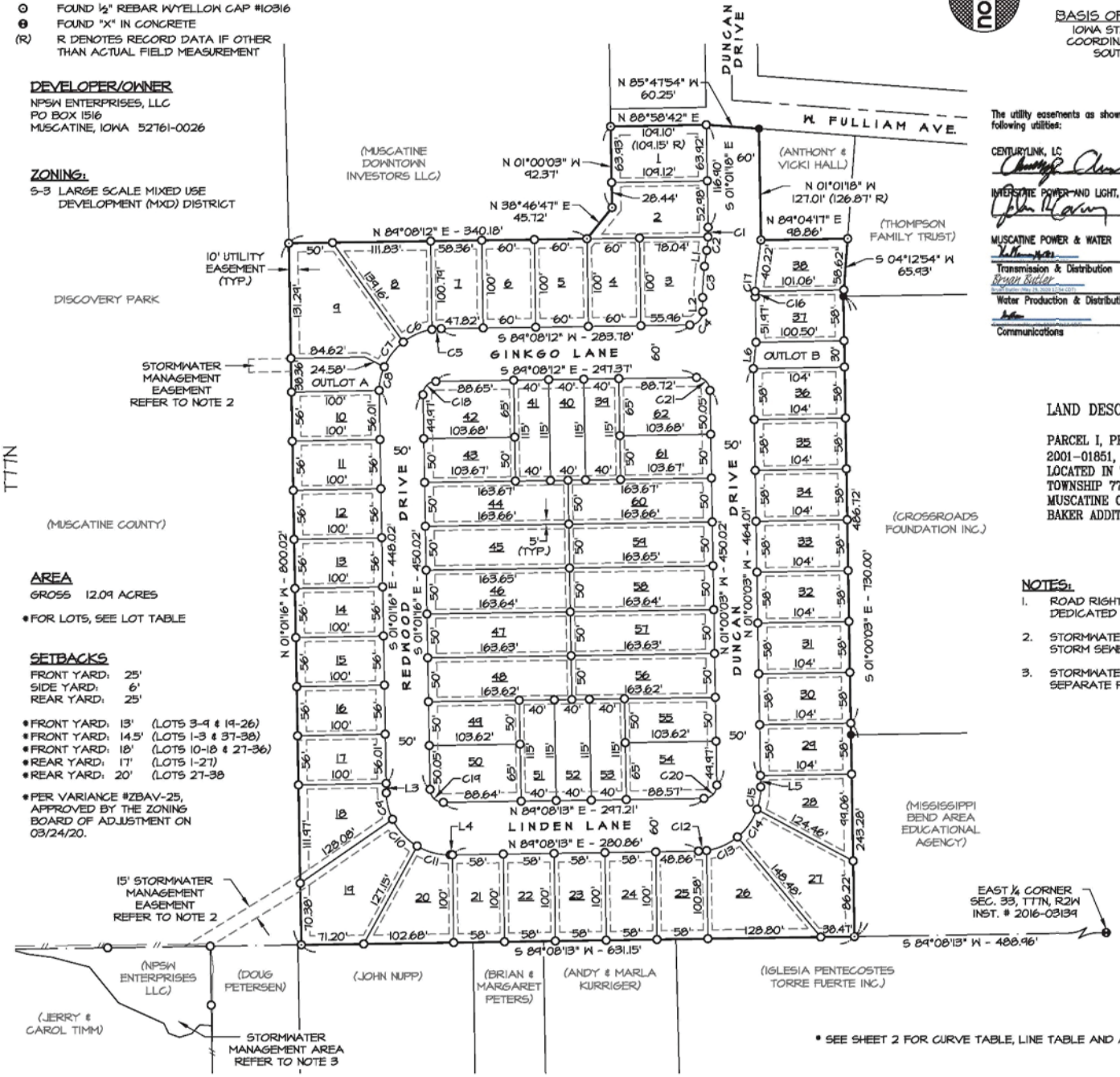
AREA
GROSS 12.09 ACRES

* FOR LOTS, SEE LOT TABLE

SETBACKS
FRONT YARD: 25'
SIDE YARD: 6'
REAR YARD: 25'

* FRONT YARD: 13' (LOTS 3-9 & 19-26)
* FRONT YARD: 14.5' (LOTS 1-3 & 37-38)
* FRONT YARD: 18' (LOTS 10-18 & 27-36)
* REAR YARD: 17' (LOTS 1-27)
* REAR YARD: 20' (LOTS 27-38

* PER VARIANCE #ZBAV-25, APPROVED BY THE ZONING BOARD OF ADJUSTMENT ON 03/24/20.



* SEE SHEET 2 FOR CURVE TABLE, LINE TABLE AND AREA TABLE

north

80 0 80

BASIS OF BEARINGS
IOWA STATE PLANE COORDINATE SYSTEM SOUTH ZONE



VICINITY MAP
NOT TO SCALE

The utility easements as shown are acceptable to the following utilities:

CENTURYLINK, LC — OSP ENG — Title — 5/4/2020 — Date

INTERSTATE POWER AND LIGHT, AN ALLIANT ENERGY COMPANY — Sr Field Engineer — Title — 5/19/2020 — Date

MUSCATINE POWER & WATER

Transmission & Distribution	Title	May 29, 2020 Date
Water Production & Distribution	Title	May 29, 2020 Date
Communications	Title	May 31, 2020 Date

LAND DESCRIPTION – DOC. # 2009-06138

PARCEL I, PER PLAT OF SURVEY RECORDED AS DOCUMENT NO. 2001-01851, IN THE MUSCATINE COUNTY RECORDER'S OFFICE, LOCATED IN THE NORTHEAST QUARTER OF SECTION 33, TOWNSHIP 77 NORTH, RANGE 2 WEST OF THE 5TH P.M., IN MUSCATINE COUNTY, IOWA, EXCEPT THE REUBEN AND SARAH BAKER ADDITION PHASE IV, TO THE CITY OF MUSCATINE, IOWA.

NOTES:

1. ROAD RIGHT-OF-WAY, OUTLOT "A", AND OUTLOT "B" TO BE DEDICATED TO THE CITY.
2. STORMWATER MANAGEMENT EASEMENT SHALL BE AN EXCLUSIVE STORM SEWER EASEMENT.
3. STORMWATER MANAGEMENT AREA ESTABLISHED UNDER SEPARATE PLAT TO BE TRANSFERRED TO MUSCATINE COUNTY.

I hereby certify that this land surveying document was prepared and the related survey work was performed by me or under my direct personal supervision and that I am a duly licensed Professional Land Surveyor under the laws of the State of Iowa.

Matthew W. Krause
Date 06/11/20 Reg. No. 15981
My license renewal date is December 31, 2021

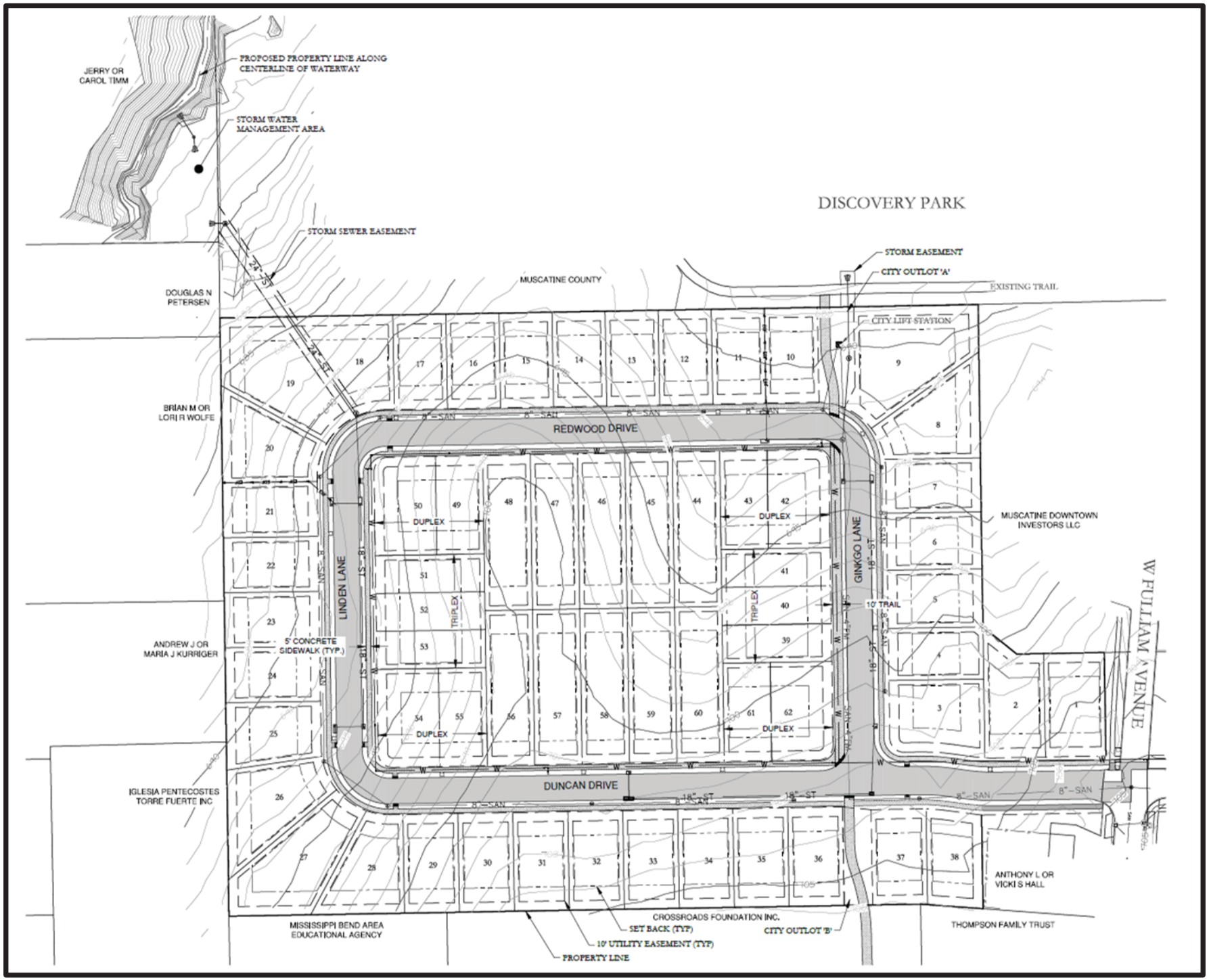
Pages or sheets covered by this seal: 2

PROFESSIONAL LAND SURVEYOR — MATTHEW W. KRAUSE 15981 — IOWA

SURVEY COMPANY / RETURN TO:
Martin & Whitacre Surveyors & Engineers, Inc.
P.O. BOX 413 MUSCATINE, IOWA 52761
INFO@MARTIN-WHITACRE.COM (563)263-7691

SURVEYOR: MATTHEW W. KRAUSE
PROPRIETOR(S): NPSW ENTERPRISES, LLC
REQUESTOR: NPSW ENTERPRISES, LLC
LOCATION: SE ¼ - NE ¼ OF SEC. 33, T77N, R2W IN MUSCATINE COUNTY, IOWA
SURVEY TYPE: FINAL PLAT

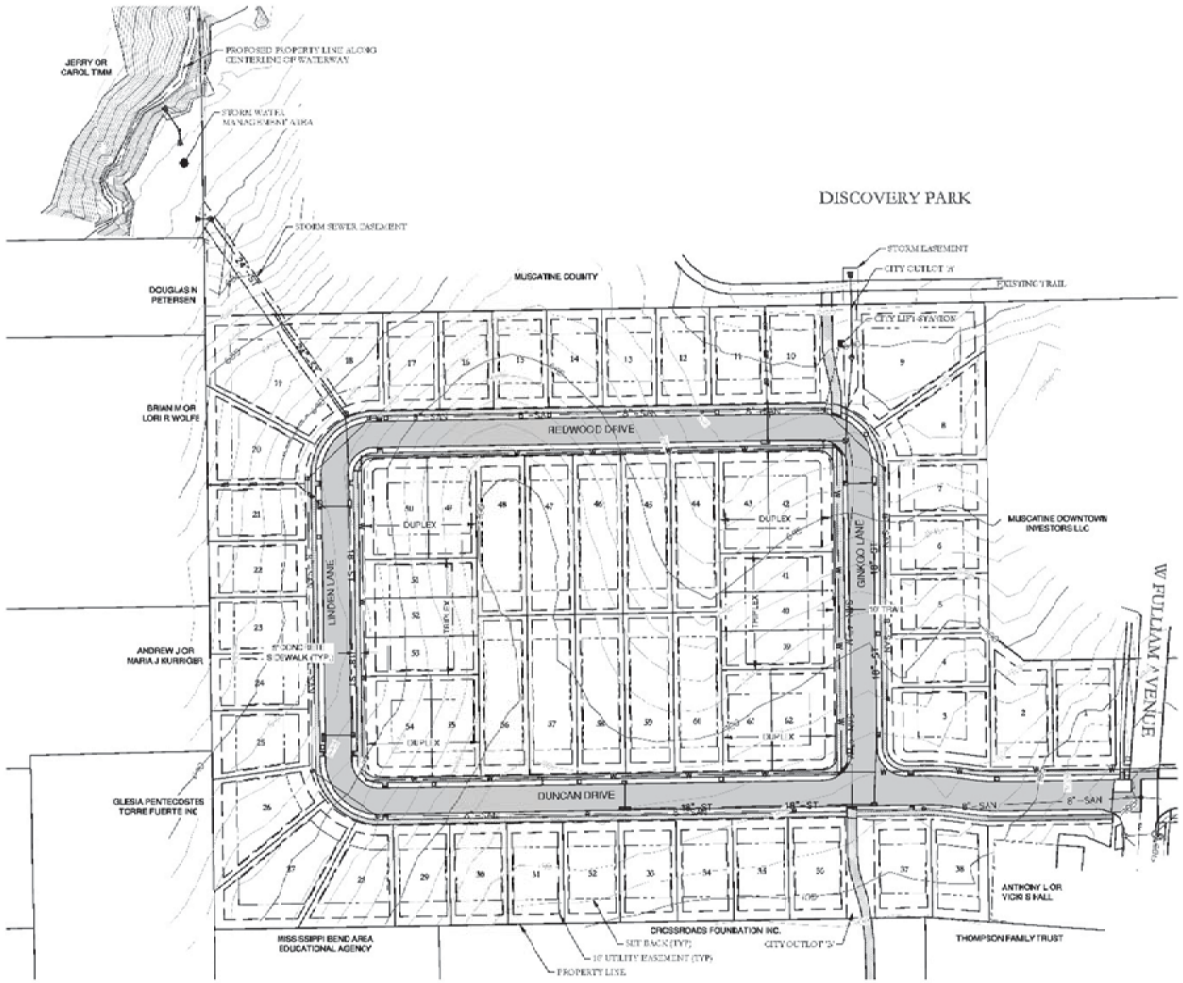
FILE	BOOK	SCALE	DRN	CHK'D	DATE	JOB NO.
33-77N-2W	MOUFB	1"=80'	JRM	MWK	06/11/20	8253.18
REV. 0		8253 FINAL PLAT.DWG			SHEET 1	OF 2


DISCOVERY PARK
JERRY OR CAROL TIMM
PROPOSED PROPERTY LINE ALONG CENTERLINE OF WATERWAY
STORM WATER MANAGEMENT AREA
STORM SEWER EASEMENT
24" ST
DOUGLAS N PETERSEN
MUSCATINE COUNTY
STORM EASEMENT
CITY OUTLOT 'A'
EXISTING TRAIL
CITY LIFT STATION
BRIAN M OR LORI R WOLFE
REDWOOD DRIVE
LINDEN LANE
GINKGO LANE
DUPLEX
TRIPLEX
10' TRAIL
MUSCATINE DOWNTOWN INVESTORS LLC
W FULLIAM AVENUE
ANDREW J OR MARIA J KURRIGER
5' CONCRETE SIDEWALK (TYP.)
DUNCAN DRIVE
IGLESIA PENTECOSTES TORRE FUERTE INC
MISSISSIPPI BEND AREA EDUCATIONAL AGENCY
CROSSROADS FOUNDATION INC.
SET BACK (TYP)
10' UTILITY EASEMENT (TYP)
PROPERTY LINE
CITY OUTLOT 'B'
THOMPSON FAMILY TRUST
ANTHONY L OR VICKI S HALL

PROPOSED DEVELOPMENT PLAN

ARBOR COMMONS SUBDIVISION

MUSCATINE, IOWA



SITE PLAN INFORMATION:

DEVELOPER INFORMATION:	NPSW ENTERPRISE, LLC	
PARCEL:	0833200042	
LOT INFORMATION:	ARBOR COMMONS SUBDIVISION	
	12.1 ACRES	
ZONING:	S-3 (MIXED USE DEVELOPMENT)	
SETBACK REQUIREMENTS:	FRONT YARD:	25 FT
	SIDE YARD:	6 FT
	REAR YARD:	25 FT
FLOOD ELEVATION:	(SITE NOT IN FLOOD PLAIN)	

EXPECTED DEVELOPMENT:

SINGLE FAMILY HOMES AND ROW HOUSES. 62 LOTS

UTILITIES:

ELECTRIC:	MPW
WATER:	MPW
SEWER:	CITY OF MUSCATINE
STORM:	CITY OF MUSCATINE
GAS:	ALLIANT
COMMUNICATIONS:	MPW AND CENTURY LINK
FIRE SERVICE:	PUBLIC FIRE HYDRANTS AT 400' SPACING
LIGHTING:	STREET LIGHT POLE FIXTURES, 20' TALL

GENERAL NOTES:

CONTRACTORS SHALL FIELD LOCATE UTILITIES VIA THE IOWA ONE CALL SYSTEM PRIOR TO CONSTRUCTION ACTIVITIES

PROJECT LOCATION



PROPERTY INFORMATION

SELLER: BRIAN SR OR LORI WOLFE
1390 SHAWNEE BEND RD
SUNRISE BEACH, MO 65079-5244

BUYER: NPSW, LLC

LEGAL DESCRIPTION

EX RUETHEN & SARAH BAKER ADD. PHASE IV PARCEL 1
NE NE & SE NE 20-77-2W.

PARCEL #0833200042

GENERAL NOTES

1. THE CURRENT ZONING: S-3 MIXED USE DEVELOPMENT (MXD)

#	DATE	DESCRIPTION	BY

DESIGNED BY: JMS
DRAWN BY: JMS
PROJECT ENGR: RHS

Martin & Whitacre Surveyors & Engineers, Inc.
P.O. BOX 413 MUSCATINE, IOWA
VOICE (563) 263-7691 EMAIL info@martin-whitacre.com

ARBOR COMMONS SUBDIVISION
NPSW ENTERPRISE, LLC
MUSCATINE, IOWA

DEVELOPMENT PLAN

PROJ NO:	8253.18
CONST PROJ:	600
SCALE:	AS NOTED
DATE:	12/27/2018
DRAWING NO:	A.03
SHEET NO:	3 OF 39

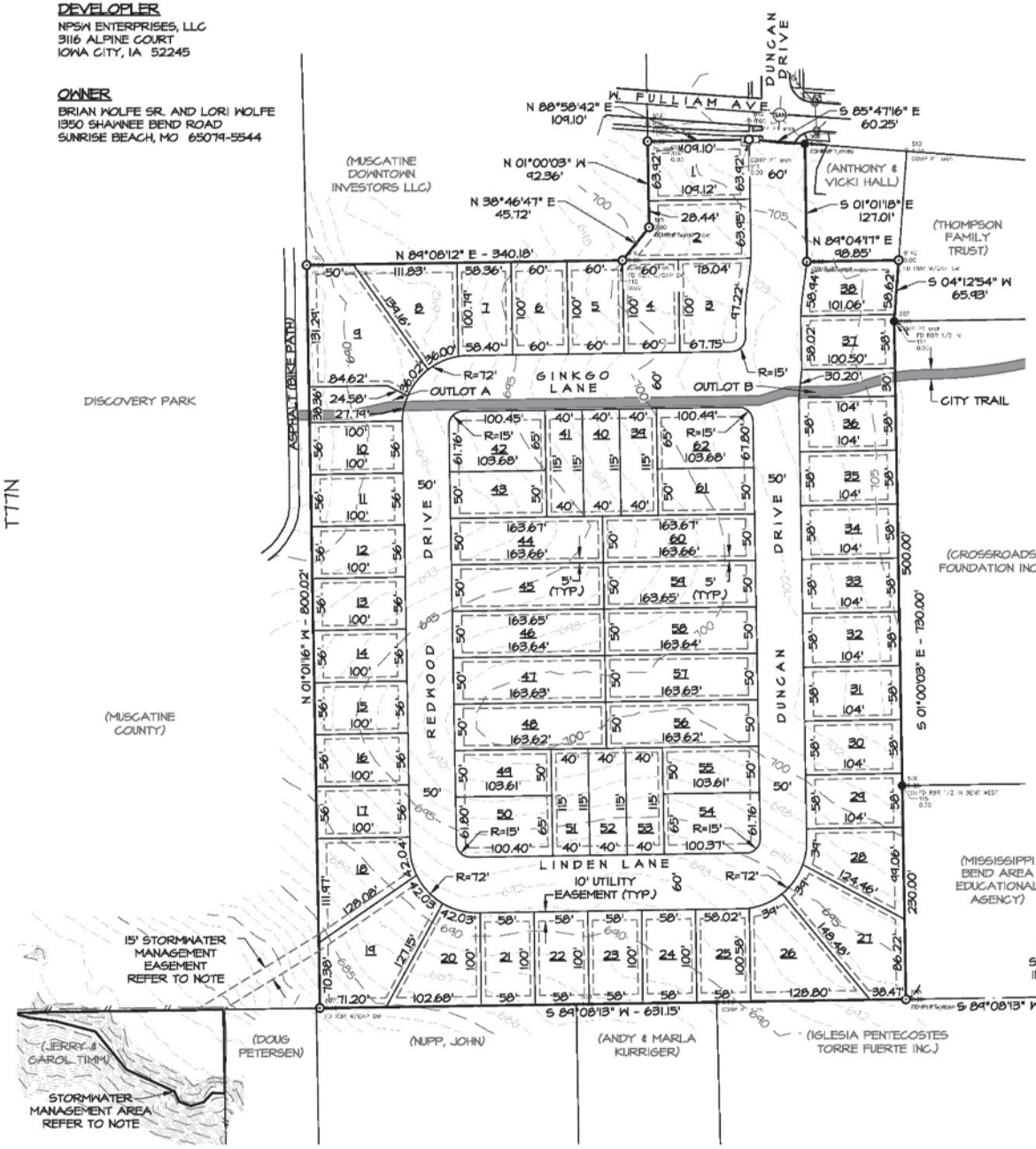
ARBOR COMMONS SUBDIVISION
PRELIMINARY PLAT

R2W

T77N

DEVELOPLER
NPSW ENTERPRISES, LLC
3116 ALPINE COURT
IOWA CITY, IA 52245

OWNER
BRIAN WOLFE SR. AND LORI WOLFE
1350 SHAWNEE BEND ROAD
SUNRISE BEACH, MO 65079-5544





VICINITY MAP
NOT TO SCALE

north

80 0 80

BASIS OF BEARINGS
IOWA STATE PLANE
COORDINATE SYSTEM
SOUTH ZONE

LAND DESCRIPTION – DOC. # 2009-06138

PARCEL I, PER PLAT OF SURVEY RECORDED AS DOCUMENT NO. 2001-01851, IN THE MUSCATINE COUNTY RECORDER'S OFFICE, LOCATED IN THE NORTHEAST QUARTER OF SECTION 33, TOWNSHIP 77 NORTH, RANGE 2 WEST OF THE 5TH P.M., IN MUSCATINE COUNTY, IOWA, EXCEPT THE REUBEN AND SARAH BAKER ADDITION PHASE IV, TO THE CITY OF MUSCATINE, IOWA.

NOTES:

1. ROAD RIGHT-OF-WAY, OUTLOT "A", AND OUTLOT "B" TO BE DEDICATED TO THE CITY.
2. STORMWATER MANAGEMENT EASEMENT SHALL BE AN EXCLUSIVE STORM SEWER EASEMENT.
3. STORMWATER MANAGEMENT AREA TO BE ESTABLISHED UNDER SEPARATE SUBDIVISION PLAT AND TRANSFERRED TO MUSCATINE COUNTY.

I hereby certify that this land surveying document was prepared and the related survey work was performed by me or under my direct personal supervision and that I am a duly licensed Professional Land Surveyor under the laws of the State of Iowa.

Matthew W. Krause
Date _____ Reg. No. 15981
My license renewal date is December 31, 2019

Pages or sheets covered by this seal: 1

PROFESSIONAL LAND SURVEYOR
MATTHEW W. KRAUSE
15981
IOWA

SURVEY COMPANY / RETURN TO:
Martin & Whitacre Surveyors & Engineers, Inc.
P.O. BOX 413 MUSCATINE, IOWA 52761
INFO@MARTIN-WHITACRE.COM (563)263-7691
SURVEYOR: MATTHEW W. KRAUSE

PROPRIETOR(S): BRIAN WOLFE SR. AND LORI WOLFE
REQUESTOR: NPSW ENTERPRISES, LLC
LOCATION: SE ¼ - NE ¼ OF SEC. 33, T77N, R2W IN MUSCATINE COUNTY, IOWA
SURVEY TYPE: PRELIMINARY PLAT

FILE	BOOK	SCALE	DRN	CHK'D	DATE	JOB NO.
33-77N-2W	MOLFE	1"=80'	JRM	MWK	1/8/19	8258.18
REV. 0		8258 PROPERTY.DWG			SHEET 1 OF 1	

ARBOR COMMONS SUBDIVISION

NPSW ENTERPRISE, LLC

MUSCATINE, IOWA

DEVELOPER

NPSW ENTERPRISE, LLC	MIKE NOLAN, AIA	563-506 4965

PROJECT ENGINEER

MARTIN & WHITACRE SURVEYORS & ENGINEERS, INC. RICKY TEED, P.E.		563-263-7691

CITY OF MUSCATINE CONTACTS

CITY ENGINEER	JIM EDGMOND	563-263-8933

MUSCATINE POWER & WATER:

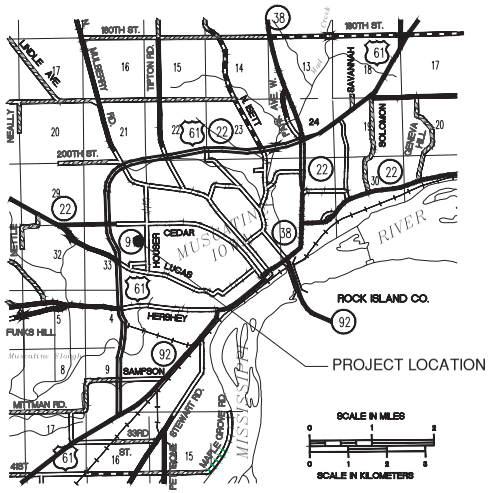
WATER:	BRYAN BUTLER	563-262-3360
ELECTRIC	STEVE SHOPPA	563-262-3324
COMMUNICATIONS	TOM LEWIS	563-262-3206

ALLIANT ENERGY

GAS	JOHN CARNEY	563-288-3322

CENTURY LINK

COMMUNICATIONS		563-355-1893



VICINITY MAP
NO SCALE

PROJECT DESCRIPTION: SINGLE FAMILY HOME SUBDIVISION
LOCATION: DUNCAN DRIVE AND WEST FULLIAM AVENUE



PROJECT LOCATION

SUDAS

THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT IOWA STATEWIDE URBAN DESIGN STANDARDS AND SPECIFICATIONS, CITY BIDDING DOCUMENTS AND PROJECT SPECIAL CONDITIONS

THIS PROJECT SHALL OPERATE UNDER NPDES GENERAL PERMIT NO. 2 FOR "STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FOR CONSTRUCTION ACTIVITIES". THE DEVELOPER HAS FILED A PERMIT, ALL CONTRACTORS SHALL SIGN AND ADHERE TO PROJECT SWPPP

CONTRACTORS SHALL CALL IOWA ONE CALL 1-800-292-8989 PRIOR TO START OF WORK. EXISTING UTILITIES SHOWN ARE DERIVED FROM SURVEY & MAPPING DATA. FIELD LOCATE AND VERIFY ALL UTILITIES SHOWN. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES AND REPAIR DAMAGES.

CONTRACTORS SHALL PROVIDE TEMPORARY FENCING TO PREVENT ENTRANCE BY PEDESTRIANS AND VEHICLES. ALL WORK SHALL MEET CITY AND HNI SAFETY PROTOCOLS

LICENSED PROFESSIONAL ENGINEER
RICHARD H. TEED
23299
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

RICHARD H. TEED, P.E. IA. REG. NO 23299 DATE

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2019

Pages or sheets covered by this seal:
A.01 THROUGH W.05

SHEET INDEX

REV #	SHEET NO.	SHEET TITLE
0	A.01	COVER PAGE
0	A.02	LEGEND
0	A.03	DEVELOPMENT PLAN
0	B.01	TYPICAL CROSS SECTIONS
0	B.02	DETAILS
0	B.03	DETAILS
0	B.04	DETAILS
0	C.01	QUANTITIES & ESTIMATE REFERENCE NOTES
0	C.02	ESTIMATE REFERENCE NOTES
0	C.03	EROSION CONTROL
0	D.00	PAVING KEY PLAN
0	D.01	PLAN & PROFILE
0	D.02	PLAN & PROFILE
0	D.03	PLAN & PROFILE
0	D.04	PLAN & PROFILE
0	G.01	ALIGNMENTS & BENCHMARKS
0	H.01	RIGHT-OF-WAY
0	L.01	PAVEMENT PLAN
0	M.01	SEWER KEY PLAN
0	M.02	SEWER PLAN & PROFILE
0	M.03	SEWER PLAN & PROFILE
0	M.04	SEWER PLAN & PROFILE
0	M.05	SEWER PLAN & PROFILE
0	M.06	SEWER PLAN & PROFILE
0	M.07	SEWER PLAN & PROFILE
0	M.08	SEWER CROSS RUNS
0	M.09	SEWER FORCE MAIN PLAN & PROFILE
1	M.10	SANITARY SEWER LIFT STATION
0	M.11	UTILITY KEY PLAN
0	M.12	UTILITY PLAN & PROFILE
0	M.13	UTILITY PLAN & PROFILE
0	M.14	UTILITY PLAN & PROFILE
0	M.15	UTILITY PLAN & PROFILE
0	T.01	GRADING PLAN
0	T.02	GRADING CROSS SECTION
0	W.01	CROSS SECTIONS
0	W.02	CROSS SECTIONS
0	W.03	CROSS SECTIONS
0	W.04	CROSS SECTIONS
0	W.05	CROSS SECTIONS

ARBOR COMMONS SUBDIVISION
NPSW ENTERPRISE, LLC
MUSCATINE, IOWA
8253.18

Martin & Whitacre
Surveyors & Engineers, Inc.
P.O. BOX 413
MUSCATINE, IOWA
VOICE (563) 263-7691
EMAIL info@martin-whitacre.com

REVISIONS:
1
2
3
4

DATE: 2/27/2019
JOB NO: 8253.18
SHEETS: 40
SHEET: A.01

EXISTING TOPOGRAPHIC/UTILITIES

- EXISTING PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING SETBACK LINE
- EXISTING FENCE LINE
- EXISTING TELEPHONE LINE
- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING OVERHEAD ELECTRIC
- EXISTING UNDERGROUND GAS LINE
- EXISTING WATER MAIN OR SERVICE
- EXISTING STORM SEWER/CULVERT
- EXISTING SANITARY SEWER
- EXISTING TELEPHONE RISER
- EXISTING CABLE TV RISER
- EXISTING ELECTRIC METER
- EXISTING ELECTRIC TRANSFORMER
- EXISTING ELECTRICAL MANHOLE
- EXISTING POWER POLE
- EXISTING LIGHT POLE
- EXISTING GAS METER
- EXISTING WATER VALVE
- EXISTING CURB BOX
- EXISTING FIRE HYDRANT
- EXISTING STORM SEWER INTAKE
- EXISTING STORM SEWER MANHOLE
- EXISTING SANITARY MANHOLE
- SIGN

CONTOUR LINES

- EXISTING MAJOR CONTOUR LINE
- EXISTING MINOR CONTOUR LINE
- PROPOSED MAJOR CONTOUR LINE
- PROPOSED MINOR CONTOUR LINE

COMMON ABBREVIATIONS

PCC	PORTLAND CONCRETE CEMENT
HMA	HOT MIX ASPHALT
DIP	DUCTILE IRON PIPE
RCP	REINFORCED CONCRETE PIPE
PVC	POLY VINYL CHLORIDE PIPE
CMP	CORRUGATED METAL PIPE
PE	POLYETHYLENE PIPE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
IDOT	IOWA DEPARTMENT OF TRANSPORTATION
SUDAS	STATEWIDE URBAN DESIGN AND SPECIFICATIONS
LUST	LEAKING UNDERGROUND STORAGE TANK
MPW	MUSCATINE POWER & WATER

PROPOSED TOPOGRAPHIC/UTILITIES

- PROPOSED FENCE LINE
- PROPOSED TELEPHONE LINE
- PROPOSED FIBER OPTIC LINE
- PROPOSED ELECTRIC
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED UNDERGROUND GAS LINE
- PROPOSED WATER MAIN
- PROPOSED WATER SERVICE
- PROPOSED STORM SEWER/CULVERT
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY SERVICE
- PROPOSED TELEPHONE RISER
- PROPOSED CABLE TV RISER
- PROPOSED COMMUNICATION STORAGE VAULT
- PROPOSED COMMUNICATION HANDHOLE
- PROPOSED COMMUNICATION FLOWER POT
- PROPOSED ELECTRIC METER
- PROPOSED ELECTRIC TRANSFORMER
- PROPOSED ELECTRIC HANDHOLE
- PROPOSED ELECTRICAL MANHOLE
- PROPOSED POWER POLE
- PROPOSED LIGHT POLE
- PROPOSED GAS METER
- PROPOSED WATER VALVE
- PROPOSED CURB BOX
- PROPOSED FIRE HYDRANT
- PROPOSED SW-501 STORM INTAKE
- PROPOSED SW-505 DOUBLE STORM INTAKE
- PROPOSED SW-507 STORM INTAKE
- PROPOSED SW-509 STORM INTAKE
- PROPOSED FLARED END
- PROPOSED STORM SEWER MANHOLE
- PROPOSED SANITARY MANHOLE
- SIGN

HATCHES

- PROPOSED PCC PAVEMENT HATCH
- PROPOSED HMA PAVEMENT HATCH
- PROPOSED SIDEWALK HATCH - DEVELOPER
- PROPOSED SIDEWALK HATCH - OTHERS
- PROPOSED DETECTABLE WARNING

LANDSCAPING

- PROPOSED DECIDUOUS TREE
- PROPOSED SHRUB

GENERAL CONSTRUCTION NOTES

- THE INTENT OF THE PLANS AND SPECIFICATIONS IS TO PROVIDE CONSTRUCTION DOCUMENTS FOR A GENERAL CONTRACTOR UNDER CONTRACT WITH NPSW ENTERPRISE, LLC.
- ALL WORK SHALL FOLLOW CURRENT POSTED IOWA STATEWIDE URBAN DESIGN AND SPECIFICATIONS (SUDAS) FOR MATERIALS AND EXECUTION UNLESS SPECIFICALLY STATED IN THE PLANS..
- CONSTRUCTION STAKING WILL BE PROVIDED BY A LICENSED LAND SURVEYOR AT THE OWNER'S EXPENSE.
- COORDINATION BETWEEN SEVERAL ENTITIES DURING CONSTRUCTION OF THIS PROJECT ARE SPECIFIED IN THE ESTIMATE REFERENCE NOTES AS:
  - **DEVELOPER** - NPSW ENTERPRISE, LLC.
  - **ENGINEER** - MARTIN & WHITACRE SURVEYORS & ENGINEERS, INC.
  - **CITY** - CITY OF MUSCATINE
  - **MPW** - MUSCATINE POWER AND WATER
  - **CONTRACTOR** - REFERS TO THE CONTRACTOR HIRED BY THE DEVELOPER FOR THE SPECIFIED PAY ITEM.
  - **HOMEOWNER** - REFERS TO AN INDIVIDUAL THAT IS UNDER CONTRACT WITH THE DEVELOPER TO CONSTRUCT A DWELLING ON A PARCEL.

F:\CIVIL\3D PROJECTS\8253 HORIZON ARCHITECTURE - WOLFE SUBDIVISION\3 PLAN SHEETS\8253-A SHEETS.DWG PLOTTED: 3/1/2019

#	DATE	DESCRIPTION	BY

DESIGNED BY: JMS
DRAWN BY: JMS
PROJECT ENGR: RHT

Martin & Whitacre Surveyors & Engineers, Inc.
P.O. BOX 413 MUSCATINE, IOWA
VOICE (563) 263-7691 EMAIL info@martin-whitacre.com

ARBOR COMMONS SUBDIVISION
NPSW ENTERPRISE, LLC
MUSCATINE, IOWA

LEGEND

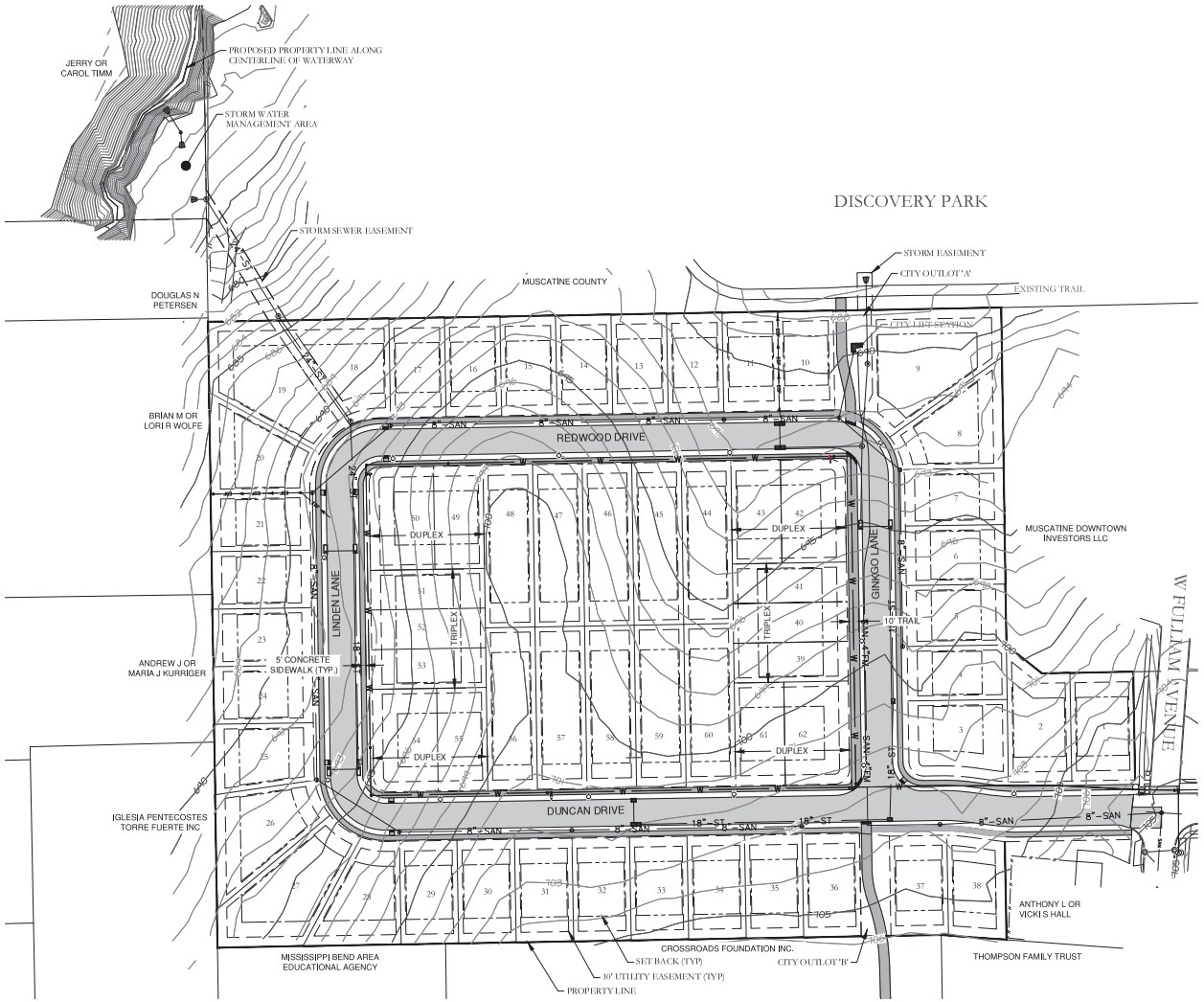
PROJ NO: 8253.18
CONST PROJ: 000
SCALE: AS NOTED
DATE: 2/27/2019

DRAWING NO: A.02
SHEET NO: 2 OF 40

PROPOSED DEVELOPMENT PLAN

ARBOR COMMONS SUBDIVISION

MUSCATINE, IOWA



SITE PLAN INFORMATION:

DEVELOPER INFORMATION:	NPSW ENTERPRISE, LLC	
PARCEL:	0833200042	
LOT INFORMATION:	ARBOR COMMONS SUBDIVISION 12.1 ACRES	
ZONING:	S-3 (MIXED USE DEVELOPMENT)	
SETBACK REQUIREMENTS:	FRONT YARD:	25 FT
	SIDE YARD:	6 FT
	REAR YARD:	25 FT
FLOOD ELEVATION:	(SITE NOT IN FLOOD PLAIN)	

EXPECTED DEVELOPMENT:

SINGLE FAMILY HOMES AND ROW HOUSES. 62 LOTS

UTILITIES:

ELECTRIC:	MPW
WATER:	MPW
SEWER:	CITY OF MUSCATINE
STORM:	CITY OF MUSCATINE
GAS:	ALLIANT
COMMUNICATIONS:	MPW AND CENTURY LINK
FIRE SERVICE:	PUBLIC FIRE HYDRANTS AT 400' SPACING
LIGHTING:	STREET LIGHT POLE FIXTURES, 20' TALL

GENERAL NOTES:

CONTRACTORS SHALL FIELD LOCATE UTILITIES VIA THE IOWA ONE CALL SYSTEM PRIOR TO CONSTRUCTION ACTIVITIES

PROJECT LOCATION



PROPERTY INFORMATION

SELLER: BRIAN SR OR LORI WOLFE
1350 SHAWNEE BEND RD
SUNRISE BEACH, MO 65079-5544

BUYER: NPSW, LLC

LEGAL DESCRIPTION

EX RUEBEN & SARAH BAKER ADD. PHASE IV PARCEL I
NE NE & SE NE 2001-01851, 33-77-2W.

PARCEL #0833200042

GENERAL NOTES

1. THE CURRENT ZONING: S-3 MIXED USE DEVELOPMENT(MXD)

#	DATE	DESCRIPTION	BY

DESIGNED BY: JMS
DRAWN BY: JMS
PROJECT ENGR: RHT

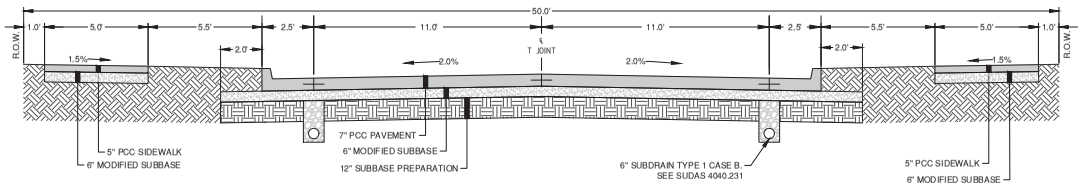
Martin & Whitacre Surveyors & Engineers, Inc.
P.O. BOX 413 MUSCATINE, IOWA
VOICE (563) 263-7691 EMAIL info@martin-whitacre.com

ARBOR COMMONS SUBDIVISION
NPSW ENTERPRISE, LLC
MUSCATINE, IOWA

DEVELOPMENT PLAN

PROJ NO:	8253.18
CONST PROJ:	000
SCALE:	AS NOTED
DATE:	2/27/2019
DRAWING NO:	A.03
SHEET NO:	3 OF 40

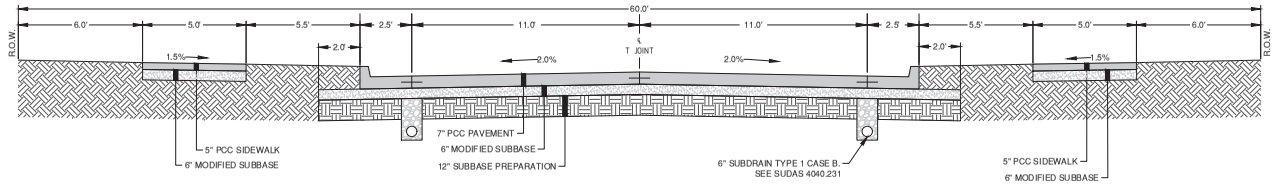
F:\CIVIL\3D PROJECTS\8253 HORIZON ARCHITECTURE - WOLFE SUBDIVISION\3 PLAN SHEETS\8253-A SHEETS.DWG PLOTTED: 3/1/2019



ROAD SECTION - 50' ROW

NOT TO SCALE

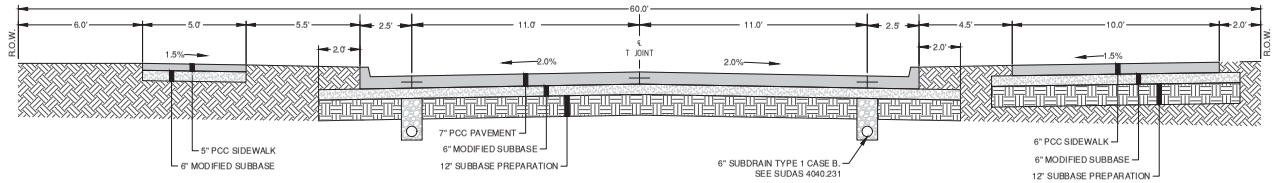
STA 13+92.11 - STA 18+81.17
STA 30+00.00 - STA 34+56.02



ROAD SECTION - 60' ROW

NOT TO SCALE

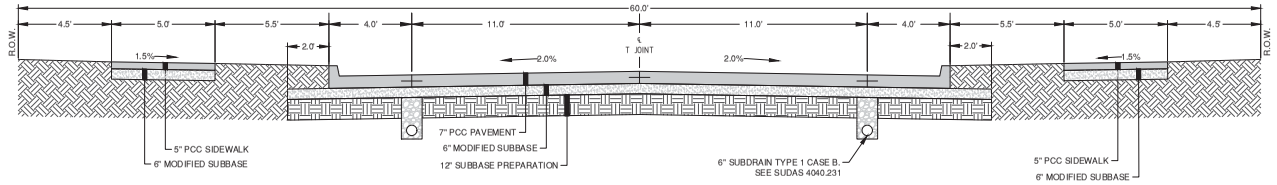
STA 10+00.00 - STA 13+92.11



ROAD SECTION - 60' ROW WITH 10' TRAIL

NOT TO SCALE

STA 34+56.02 - STA 38+57.38



ROAD SECTION - 60' ROW WITH 30' PAVEMENT WIDTH

NOT TO SCALE

STA 18+81.17 - STA 21+76.21

#	DATE	DESCRIPTION	BY

DESIGNED BY: JMS
DRAWN BY: JMS
PROJECT ENGR: RHT

Martin & Whitacre
Surveyors & Engineers, Inc.
P.O. BOX 413 MUSCATINE, IOWA
VOICE (563) 263-7691 EMAIL info@martin-whitacre.com

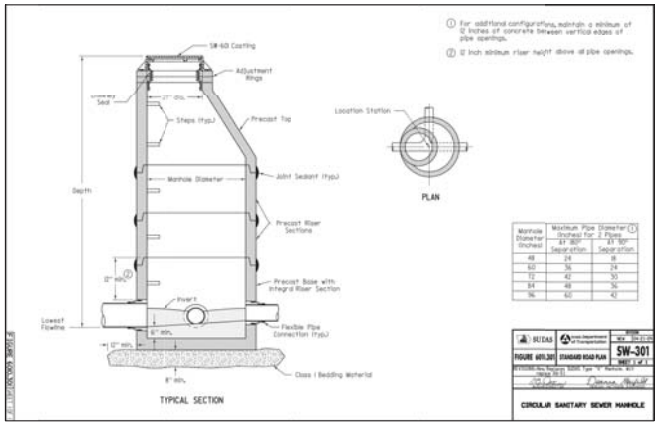
ARBOR COMMONS SUBDIVISION
NPSW ENTERPRISE, LLC
MUSCATINE, IOWA

TYPICAL CROSS SECTIONS

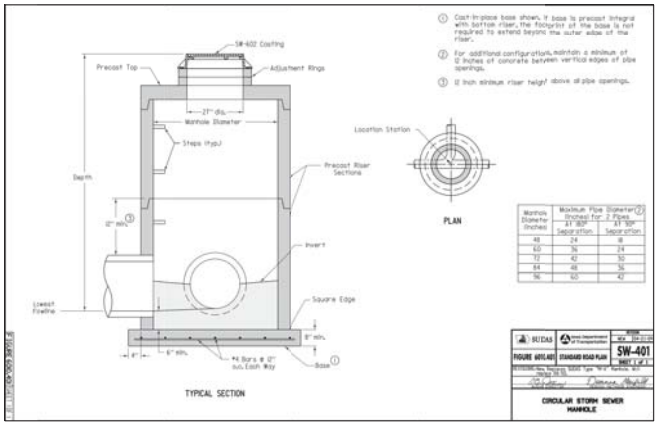
PROJ NO: 8253.18
CONST PROJ: 000
SCALE: AS NOTED
DATE: 2/27/2019

DRAWING NO: B.01
SHEET NO: 4 OF 40

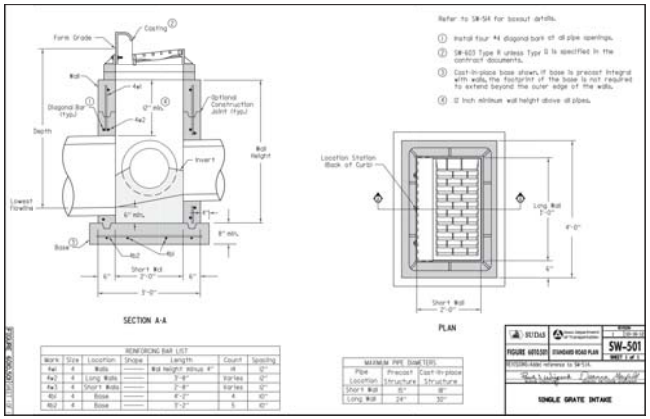
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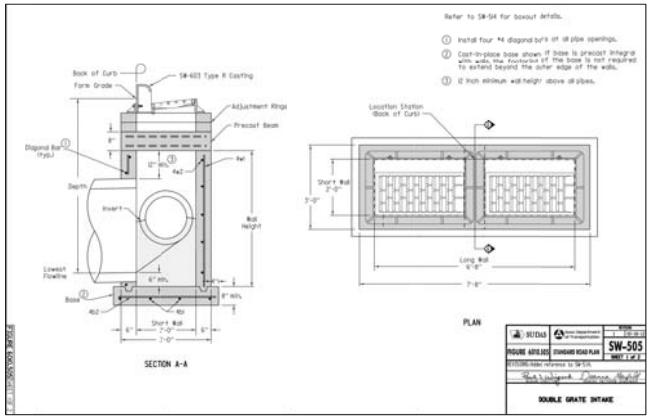
1 B.02 CIRCULAR SANITARY SEWER MANHOLE
NOT TO SCALE



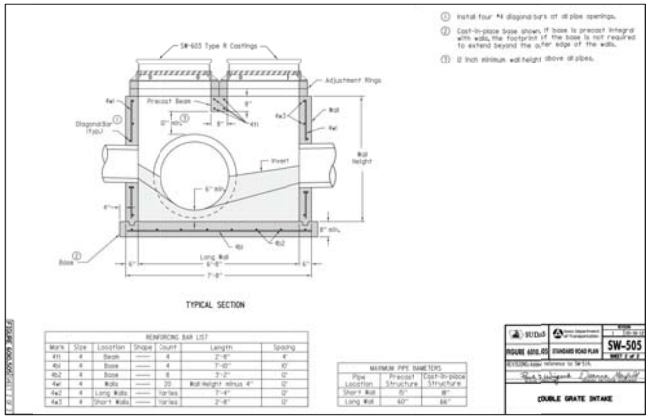
2 B.02 CIRCULAR STORM SEWER MANHOLE
NOT TO SCALE



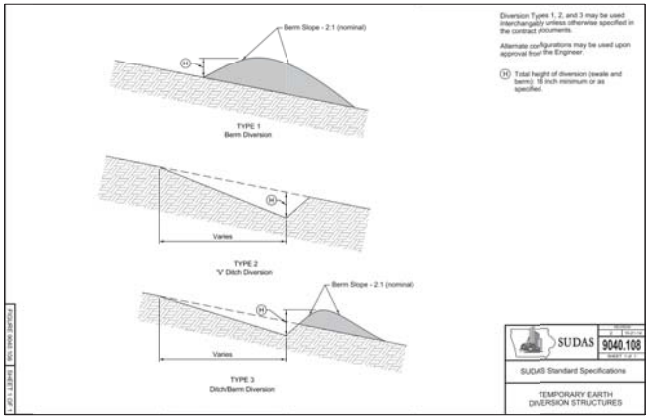
3 B.02 SINGLE GRATE INTAKE
NOT TO SCALE



4 B.02 DOUBLE GRATE INTAKE 1
NOT TO SCALE



5 B.02 DOUBLE GRATE INTAKE 2
NOT TO SCALE



6 B.02 EARTH DIVERSION STRUCTURE
NOT TO SCALE

#	DATE	DESCRIPTION	BY

DESIGNED BY: JMS
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PROJECT ENGR: RHT

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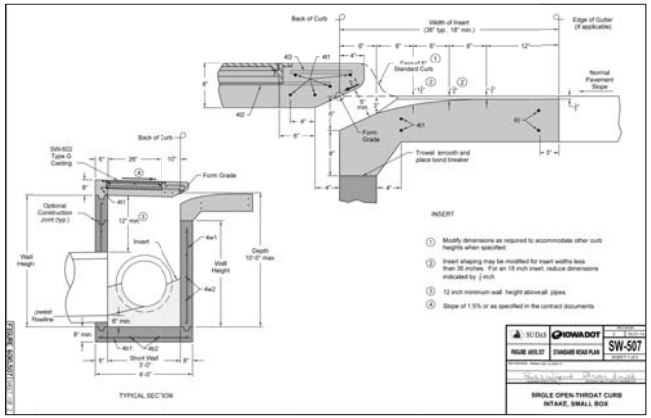
ARBOR COMMONS SUBDIVISION
NPSW ENTERPRISE, LLC
MUSCATINE, IOWA

DETAILS

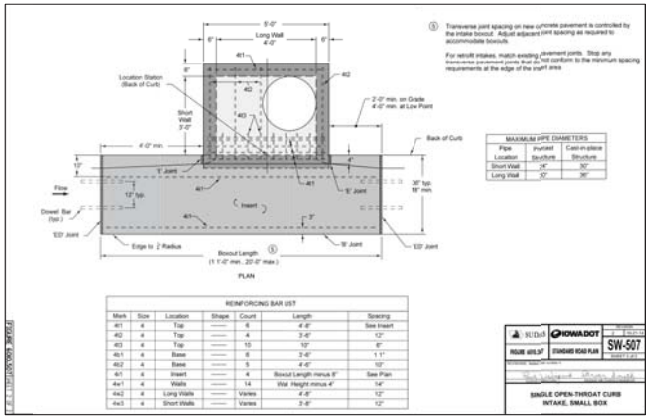
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CONST PROJ:	000
SCALE:	AS NOTED
DATE:	2/27/2019

DRAWING NO: B.02
SHEET NO: 5 OF 40

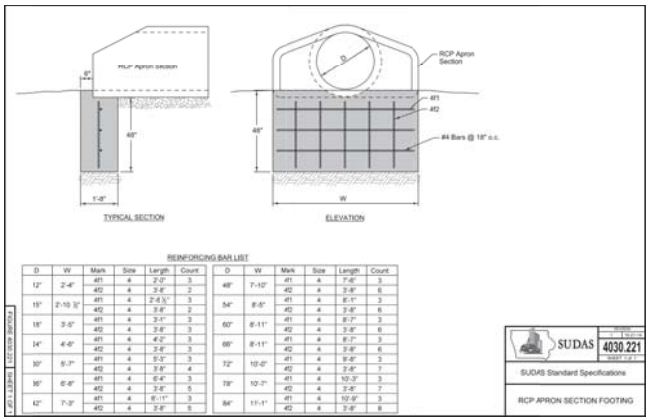
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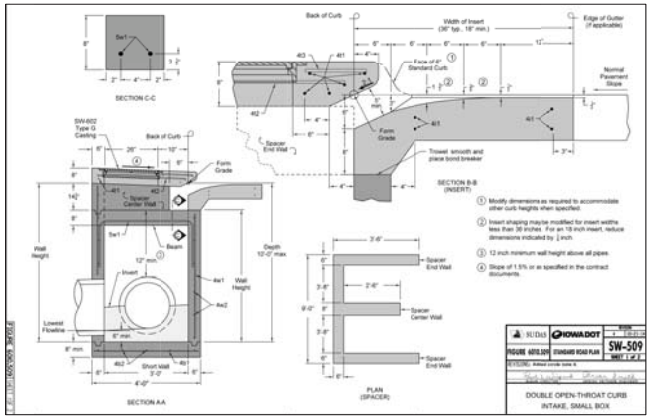
1 B.03 SINGLE OPEN-THROAT CURB INTAKE 1
NOT TO SCALE



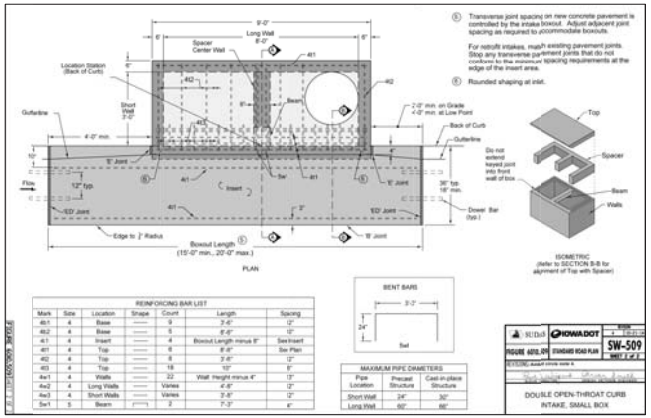
2 B.03 SINGLE OPEN-THROAT CURB INTAKE 2
NOT TO SCALE



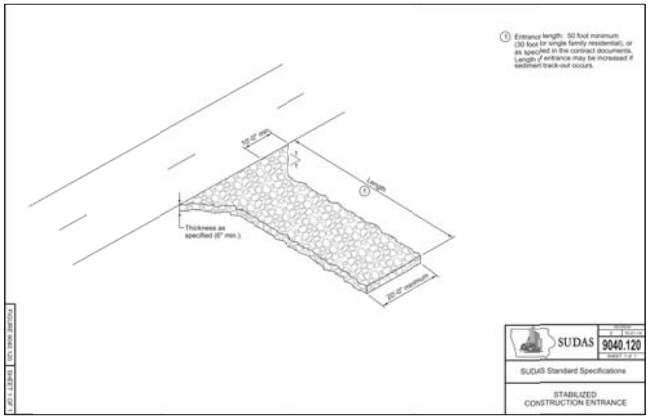
3 B.03 PIPE APRON FOOTING
NOT TO SCALE



4 B.03 DOUBLE OPEN-THROAT CURB INTAKE 1
NOT TO SCALE



5 B.03 DOUBLE OPEN-THROAT CURB INTAKE 2
NOT TO SCALE



6 B.03 TEMPORARY CONSTRUCTION ENTRANCE
NOT TO SCALE

#	DATE	DESCRIPTION	BY

DESIGNED BY: JMS
DRAWN BY: JMS
PROJECT ENGR: RHT

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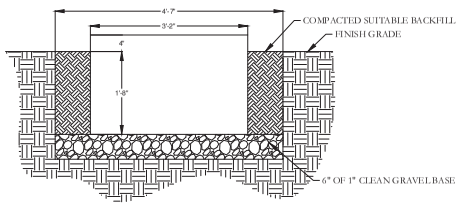
ARBOR COMMONS SUBDIVISION
NPSW ENTERPRISE, LLC
MUSCATINE, IOWA

DETAILS

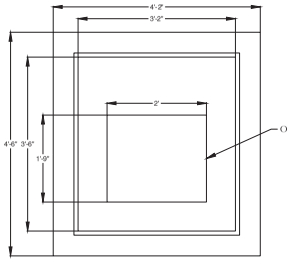
PROJ NO:	8253.18
CONST PROJ:	000
SCALE:	AS NOTED
DATE:	2/27/2019

DRAWING NO: B.03
SHEET NO: 6 OF 40

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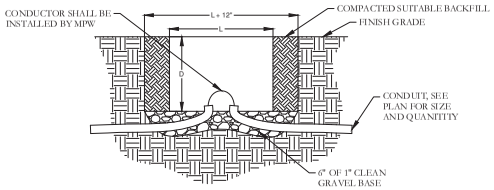
SECTION VIEW



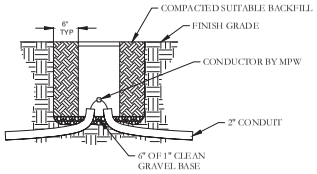
PLAN VIEW

NOTE:
1. SINGLE PHASE TRANSFORMER PADS SHALL BE PROGLASS, INC, STOCK NO. TX 423824-T1
2. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF TRANSFORMER PAD.
3. CONTRACTOR RESPONSIBLE FOR PRIMARY AND SECONDARY SWEEPS INTO TRANSFORMER PAD.
4. MPW TO SET TRANSFORMER AND INSTALL ALL PRIMARY AND SECONDARY ELECTRIC

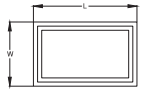
1 B.04 SINGLE PHASE FIBERGLASS TRANSFORMER PAD
NOT TO SCALE



SECTION VIEW



10" HANDHOLE

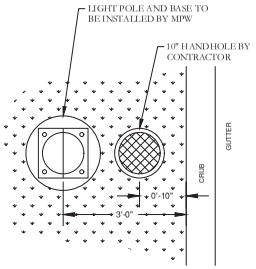


PLAN VIEW

HANDHOLE SCHEDULE

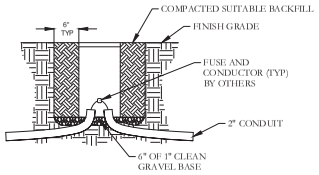
NO.	TYPE	W	L	D	PART NO. COVER	PART NO. BOX
1.	13" x 24"	15-1/2"	25"	18"	PG1324HA0017	PG1324BA18
2.	17" x 30"	19-1/4"	19-1/4"	24"	PG1730HA0021	PG1730BA24
3.	30" x 48"	32-1/8"	49-5/8"	36"	PG3048HA0021	PG3024BA24
4.	10"Ø					PE10HDX

2 B.04 HANDHOLE BOX
NOT TO SCALE



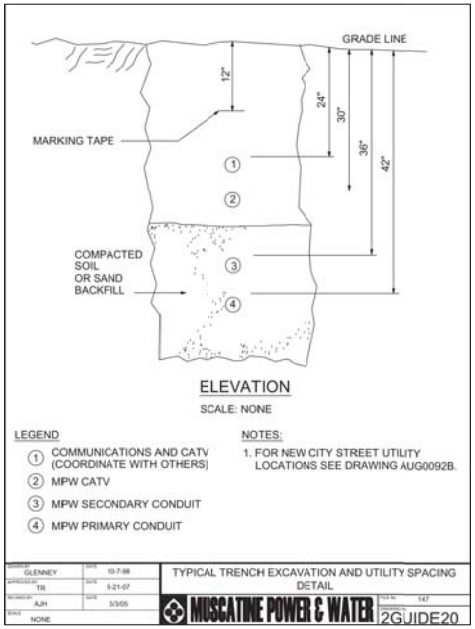
PLAN VIEW

NOTE:
1. CONTRACTOR TO INSTALL 10" DIAMETER HANDHOLE AND CONDUIT TO HANDHOLE.
2. MPW TO INSTALL LIGHT POLE, FOUNDATION, CONDUIT FROM HANDHOLE TO LIGHTPOLE AND ELECTRIC LIGHT FEED FROM HANDHOLE TO LIGHT POLE.



10" HANDHOLE

3 B.04 LIGHT FOUNDATION - CONCRETE
NOT TO SCALE



ELEVATION
SCALE: NONE

LEGEND
1. COMMUNICATIONS AND CATV (COORDINATE WITH OTHERS)
2. MPW CATV
3. MPW SECONDARY CONDUIT
4. MPW PRIMARY CONDUIT

NOTES:
1. FOR NEW CITY STREET UTILITY LOCATIONS SEE DRAWING AUG0092B.

DESIGNED	GLENNEY	10-7-98	TYPICAL TRENCH EXCAVATION AND UTILITY SPACING DETAIL
APPROVED	TR	1-21-07	
REVISED	AJH	5/3/05	MUSCATINE POWER & WATER 2GUIDE20
SCALE	NONE		

4 B.04 MPW TRENCH DETAIL
NOT TO SCALE

GENERAL CONSTRUCTION NOTES
CONDUIT DELIVERY, STORAGE, AND HANDLING TO COMPLY WITH SUDAS DIVISION 1 - GENERAL PROVISIONS AND COVENANTS.

CONDUIT MATERIAL SPECIFICATIONS:
1. FURNISH WATER PROOF FITTINGS OF IDENTICAL OR COMPATIBLE MATERIAL TO THE CONDUIT. USE STANDARD FACTORY ELBOWS, COUPLINGS, AND OTHER FITTINGS.
2. USE A MANUFACTURED CONDUIT SEALING COMPOUND THAT IS READILY WORKABLE MATERIAL AT TEMPERATURES AS LOW AS 30° F AND WILL NOT MELT OR RUN AT TEMPERATURES AS HIGH AS 300° F.
3. PLASTIC CONDUIT AND FITTINGS
   3.1. PVC
      3.1.1. PVC SCHEDULE 40 PLASTIC CONDUIT AND FITTINGS COMPLYING WITH NEMA TC-2 (PIPE), NEMA TC-3 (FITTINGS), AND UL651 FOR SCHEDULE 40 HEAVY WALL TYPE.
      3.1.2. SOLVENT WELDED, SOCKET TYPE FITTINGS, EXCEPT WHERE OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.
      3.1.3. PROVIDE BELL END FITTINGS OR BUSHINGS.
   3.2. HDPE
      3.2.1. COMPLY WITH ASTM F 2160 (CONDUIT) AND STM D 3350 (HDPE MATERIAL).
      3.2.2. USE BLACK COLORED CONDUIT WITH STRIPE FOR ALL ELECTRICAL CONDUIT OR CONDUIT FOR INTERSECTIONS AND ORANGE COLORED CONDUIT FOR COMMUNICATION.
      3.2.3. CONTINUOUS REAL OR STRAIGHT PIECES TO MINIMIZE SPLICING.
      3.2.4. FOR DISSIMILAR CONDUIT CONNECTIONS, PROVIDE AN ADHESIVE COMPATIBLE WITH BOTH MATERIALS.

CONDUIT INSTALLATION SPECIFICATIONS:
1. PLACE CONDUIT TO A MINIMUM DEPTH INDICATED ON THE MPW TRENCH DETAIL.
2. CHANGE DIRECTION AT HANDHOLES OR BY BENDING, SUCH THAT THE CONDUIT WILL NOT BE DAMAGED OR ITS INTERNAL DIAMETER CHANGES. ENSURE BENDS ARE UNIFORM IN CURVATURE AND THE INSIDE RADIUS OF CURVATURE OF ANY BEND IS NO LESS THAN SIX TIMES THE INTERNAL DIAMETER OF THE CONDUIT.
3. ON THE EXPOSED ENDS OF CONDUIT - PLACE BELL-END FITTINGS ON PVC OR HDPE CONDUIT AND BUSHINGS ON STEEL CONDUIT PRIOR TO INSTALLING CABLE. EXTEND ALL CONDUITS A MINIMUM OF 2-INCHES AND A MAXIMUM OF 14-INCHES ABOVE THE FINISHED SURFACE OF ANY FOUNDATION, FOOTING, OR STRUCTURAL BASE.
4. PACK CONDUIT ENDS WITH A CONDUIT SEALING COMPOUND.
5. WHEN PLACING CONDUIT UNDER PAVEMENTS,USE THE TRENCHLESS INSTALLATION METHODS DESCRIBED IN SECTION 3020 OF SUDAS.
6. ALL OTHER CONDUIT SHALL BE INSTALLED ON THE BOTTOM OF THE TRENCH, STACKING CONDUIT SHALL NOT BE PERMITTED.

#	DATE	DESCRIPTION	BY

DESIGNED BY: JMS
DRAWN BY: JMS
PROJECT ENGR: RHT

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ARBOR COMMONS SUBDIVISION
NPSW ENTERPRISE, LLC
MUSCATINE, IOWA

DETAILS

PROJ NO: 8253.18
CONST PROJ: 000
SCALE: AS NOTED
DATE: 2/27/2019
DRAWING NO: B.04
SHEET NO: 7 OF 40

F:\CIVIL\3D PROJECTS\8253 HORIZON ARCHITECTURE - WOLFE\SUBDIVISION\3 PLAN SHEETS\8253 B SHEETS.DWG PLOTTED: 3/1/2019

ESTIMATED PROJECT QUANTITIES

ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QNTY
1	1070-206-A-0	TRAFFIC CONTROL	LS	1	
2	2010-108-C-0	CLEARING AND GRUBBING	LS	1	
3	2010-108-D-0	REPLACEMENT OF UNSUITABLE BACKFILL MATERIAL	TONS	3,295	
4	2010-108-E-0	EXCAVATION, CLASS 10, SUBDIVISION	CY	7,030	
5	2010-108-E-0	EXCAVATION, CLASS 13, DETENTION BASIN	CY	529	
6	2010-108-G-0	SUBGRADE PREPARATION	SY	7,118	
7	2010-108-G-X	SUBGRADE STABALIZATION, 12 INCH	CY	100	
8	2010-108-H-0	SUBGRADE TREATMENT, GEOTEXTILE	SY	300	
9	2010-108-I-2	SUBBASE, MODIFIED SUBBASE, 6 INCH	SY	7,118	
10	3010-108-F-0	TRENCH COMPACTION TESTING	LS	1	
11	4010-108-A-1	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, 8 INCH	LF	1,863	
12	4010-108-C-1	SANITARY SEWER FORCE MAIN, TRENCHED, 4 INCH	EA	550	
13	4010-108-E-0	SANITARY SEWER STUB, PVC, 4 INCH	EA	62	
14	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 12 INCH	LF	14	
15	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 15 INCH	LF	27	
16	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 18 INCH	LF	918	
17	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 24 INCH	LF	697	
18	4030-108-B-0	PIPE APRON, RCP, 12 INCH	EA	1	
19	4030-108-B-0	PIPE APRON, RCP, 24 INCH	EA	3	
20	4030-108-C-0	FOOTING FOR CONCRETE PIPE APRON, 24 INCH	EA	3	
21	4030-108-D-0	PIPE APRON GUARD, 12 INCH	EA	1	
22	4030-108-D-0	PIPE APRON GUARD, 24 INCH	EA	3	
23	5010-108-A-1	WATER MAIN, TRENCHED, PVC, C900, 6 INCH	LF	1,648	
24	5010-108-A-1	WATER MAIN, TRENCHED, PVC, C900, 8 INCH	LF	322	
25	5010-108-C-1	FITTINGS, MJ TEE, 6 INCH x 6 INCH	EA	1	
26	5010-108-C-1	FITTINGS, MJ 90 BEND, 6 INCH	EA	3	
27	5010-108-C-1	FITTINGS, MJ REDUCER, 8 INCH x 6 INCH	EA	2	
28	5010-108-D-0	WATER SERVICE STUB, 1 INCH	EA	62	
29	5020-108-A-0	VALVE, MJ GATE VALVE, 6 INCH	EA	7	
30	5020-108-C-0	HYDRANT, ASSEMBLY	EA	3	
31	6010-108-A-0	MANHOLE TYPE SW-301, 48 INCH	EA	11	
32	6010-108-A-0	MANHOLE TYPE SW 401, 60 INCH	EA	5	
33	6010-108-B-0	INTAKE TYPE SW-501	EA	2	
34	6010-108-B-0	INTAKE TYPE SW-505	EA	3	
35	6010-108-B-0	INTAKE TYPE SW-507	EA	1	
36	6010-108-B-0	INTAKE TYPE SW-509	EA	6	
37	6010-108-B-0	INTAKE TYPE SW-512, 30" AREA INTAKE W/ TYPE 5 CASTING	EA	1	
38	6010-108-G-0	CONNECT TO EXISTING MANHOLE	EA	1	
39	7010-108-A-0	PAVEMENT, PCC, 7 INCH	SY	6,190	
40	7030-108-E-0	CONCRETE WALK, PCC, 5 INCH	SY	103	
41	7030-108-G-0	DETECTABLE WARNING	SF	102	
42	7040-108-A-0	FULL DEPTH PATCH, PCC, 7 INCH	SY	99	
43	9010-108-B-0	SEEDING, FERTILIZING & HYDROMULCHING	AC	3.7	
44	9040-108-A-2	SWPPP MANAGEMENT	LS	1	
45	9040-108-H-0	TEMPORARY EARTH DIVERSION STRUCTURE	LF	623	
46	9040-108-J-0	RIP RAP, CLASS 'D' REVETMENT STONE	TON	184	
47	9040-108-N-1	SILT FENCE OR SILT FENCE DITCH CHECK	LF	1,281	
48	9040-108-O-1	STABILIZED CONSTRUCTION ENTRANCE	SY	122	
49	9040-108-T-1	INLET PROTECTION DEVICE, SURFACE-APPLIED INTAKE PROTECTION	EA	13	
50	11020-108-A-0	MOBILIZATION - GRADING	LS	1	
51	11020-108-A-0	MOBILIZATION - UTILITIES	LS	1	
52	11020-108-A-0	MOBILIZATION - PAVING	LS	1	
53	11050-108-A-0	CONCRETE WASHOUT	LS	1	
54	12,000-XXX-X-1	ELECTRICAL CONDUIT, OPEN CUT, HDPE/PVC, 2 INCH PRIMARY	LF	2,358	
55	12,000-XXX-X-2	ELECTRICAL CONDUIT, OPEN CUT, HDPE/PVC, 3 INCH SECONDARY	LF	1,172	
56	12,000-XXX-X-3	ELECTRICAL CONDUIT, OPEN CUT, HDPE/PVC, 2 INCH LIGHT	LF	535	
57	12,000-XXX-X-4	ELECTRICAL CONDUIT, OPEN CUT, HDPE/PVC, 2 INCH SERVICES	LF	1,298	
58	12,000-XXX-X-5	3 x 3 TRANSFORMER PAD	EA	9	
59	12,000-XXX-X-6	HANDHOLE, ELECTRICAL, 13 INCH x 24 INCH	EA	14	
60	12,000-XXX-X-7	HANDHOLE, ELECTRICAL, LIGHT POLE ASSEMBLY	EA	12	
61	12,000-XXX-X-8	COMMUNICATION CONDUIT, OPEN CUT, HDPE, 2 INCH	LF	2,768	
62	12,000-XXX-X-9	COMMUNICATION CONDUIT, OPEN CUT, HDPE, 1 INCH	LF	934	
63	12,000-XXX-X-10	HANDHOLE, COMMUNICATIONS, 17 INCH x 30 INCH	EA	23	
64	12,000-XXX-X-11	HANDHOLE, COMMUNICATIONS, 30 INCH x 48 INCH	EA	2	
65	12,000-XXX-X-12	HANDHOLE, COMMUNICATIONS, 10 INCH DIAMETER	EA	17	
66	12,000-XXX-X-13	LIFT STATION	LS	1	

Item No.	Item Code	Description
1	1070-206-A-0	TRAFFIC CONTROL A. CONTRACTOR SHALL BE RESPONISBLE FOR ACCESS TO DUNCAN DRIVE. CONTRACTOR SHALL DEVELOP A TRAFFIC CONTROL PLAN AND SUBMIT TO CITY FOR REVIEW.
2	2010-108-C-0	CLEARING AND GRUBBING A. THIS ITEM INCLUDES THE REMOVAL OF FENCES, TREES, STUMPS, BUSHES AND ROOTS WITHIN THE EASEMENTS AND CONTRUCTION LIMITS FOR PROPER INSTALLATION OF PROPOSED ITEMS. REMOVAL SHALL BE TO A DEPTH OF 12" BELOW FINISHED GRADE. THIS IS AN APPROXIMATE 12 ACRE SITE.
3	2010-108-D-0	REPLACEMENT OF UNSUITABLE BACKFILL MATERIAL A. THIS ITEM SHALL BE USED TO BACKFILL PIPE AND CONDUIT TRENCHES WHERE THE PIPE OR CONDUIT IS BENEATH THE ROADWAY PAVEMENT. PIPE OR CONDUIT TRENCHES NOT WITHIN ROADWAY PAVEMENT MAY HAVE NATIVE SOIL BACKFILL AND SHALL BE INCIDENTAL TO PIPE. CONTRACTOR RESPONSIBLE FOR DISPOSAL OF NON-SUITABLE MATERIAL TO AN APPROVED LOCATION. B. REPLACEMENT MATERIAL SHALL BE MANSAND OR GRANULAR MATERIAL AS APPROVED BY THE ENGINEER IN CONSULTATION WITH THE CITY. C. REPLACEMENT MATERIAL QUANTITY IS CALCULATED AT A WIDTH OF PIPE DIAMETER PLUS 2 FOOT WITH VERTICAL TRENCH WALL TO WITHIN 2 FOOT OF THE BOTTOM OF THE ROCK AND THEN FLARE OUT AT A 1:1 SLOPE TO THE BOTTOM OF THE ROCK. REPLACEMENT MATERIAL SHALL BE MEASURED FROM TOP OF PIPE BEDDING TO BOTTOM OF SUBBASE MATERIAL.
4	2010-108-E-0	EXCAVATION, CLASS 10, SUBDIVISION A. THIS ITEM SHALL INCLUDE THE REMOVAL OF EXISTING SOIL, HAULING AND PLACEMENT OF THE MATERIAL WITHIN THE GRADING LIMITS, HAULING AND PLACEMENT OF EXCESS SOIL (WASTE), AND HAULING AND PLACEMENT OF BORROW MATERIAL IN ACCORDANCE WITH THE SPECIFICATIONS AND THESE PLANS. THE CONTRACTOR SHALL DISPOSE OF EXCESS MATERIAL WITHIN PROJECT LIMITS. ITEM DOES NOT INCLUDE ANY UTILTY TRENCH EXCAVATION. B. THE FINISHED GRADE SHALL BE OF UNIFORM CROSS-SECTION AND APPROVED BY THE CITY PRIOR TO PLACEMENT OF THE MODIFIED SUBBASE. CONTRACTOR SHALL NOTIFY ENGINEER WITH EXCAVATION PLAN PRIOR TO CONSTRUCTION, OTHERWISE PLAN QUANTITY WILL BE USED FOR PAYMENT. SUBGRADE: CUT= 5,066 CY, FILL + 20% = 1,964 CY
5	2010-108-E-0	EXCAVATION, CLASS 13, DETENTION BASIN A. THIS ITEM SHALL INCLUDE THE REMOVAL OF EXISTING SOIL, HAULING AND PLACEMENT OF THE MATERIAL WITHIN THE GRADING LIMITS, HAULING AND PLACEMENT OF EXCESS SOIL (WASTE), AND HAULING AND PLACEMENT OF BORROW MATERIAL IN ACCORDANCE WITH THE SPECIFICATIONS AND THESE PLANS. THE CONTRACTOR SHALL DISPOSE OF EXCESS MATERIAL WITHIN PROJECT LIMITS. ITEM DOES NOT INCLUDE ANY UTILTY TRENCH EXCAVATION. B. THE FINISHED GRADE SHALL BE OF UNIFORM CROSS-SECTION AND APPROVED BY THE CITY PRIOR TO PLACEMENT OF THE MODIFIED SUBBASE. CONTRACTOR SHALL NOTIFY ENGINEER WITH EXCAVATION PLAN PRIOR TO CONSTRUCTION, OTHERWISE PLAN QUANTITY WILL BE USED FOR PAYMENT. SUBGRADE: CUT= 355 CY, FILL + 20% = 174 CY; NET 181 CY CUT
6	2010-108-G-0	SUBGRADE PREPARATION A. INCLUDES SUBGRADE PREPARATION FOR ALL ROADWAY TO A DEPTH OF 12 INCHES. QUANTITY IS BASED ON THE AREA OF 12 INCH SUBGRADE PREPARATION EXTENDING 2 FOOT BEYOND THE PAVEMENT EDGE. SUBGRADE SHALL BE PROOF ROLLED TO SATISFACTION OF CITY IN CONSULTATION WITH THE DEVELOPER. THE TOP LIFT SHALL BE LEVELED AND SMOOTHED WITH A STEEL DRUM ROLLER AND PROOF ROLLED PRIOR TO STARTING SUBBASE PREPARATION. B. IN INSTANCES OF CONFLICT WITH UTILITIES, THE DEPTH MAY BE REDUCED AS DIRECTED BY THE CITY. PREPARATION UNDER ENTRANCES, DRIVES AND SIDEWALKS SHALL BE INCIDENTAL TO THOSE ITEMS.
7	2010-108-G-X	SUBGRADE STABALIZATION, 12 INCH A. THIS ITEM SHALL BE USED AT THE DISCRETION OF THE ENGINEER/OWNER IN CONSULTATION WITH THE CITY. CONTRACTORS SHALL OBTAIN APPROVAL OF ENGINEER/OWNER PRIOR TO UTILIZING THIS ITEM. THIS ITEM INVOLVES THE OVEREXCAVATION OF UNSUITABLE SOIL WITHIN THE ROADWAY OR PARKING AREA. THE CONTRACTOR SHALL OVEREXCAVATE ONE FOOT MATERIAL, COMPACT BOTTOM OF OVEREXCAVATION, PLACE GEOTEXTILE FABRIC ON BOTTOM OF OVEREXCAVATION (NOT PART OF THIS BID ITEM) AND REPLACE UNSUITABLE MATERIAL WITH MODIFIED SUBBASE. B. THIS ITEM SHALL INCLUDE EXCAVATION OF UNSUITABLE MATERIAL, HAULING OF UNSUITABLE MATERIAL TO AN APPROVED SITE, COMPACTION OF OVEREXCAVATED AREA, PLACEMENT OF ONE FOOT OF MODIFIED SUBBASE AND COMPACTION OF MODIFIED SUBBASE.
8	2010-108-H-0	SUBGRADE TREATMENT, GEOTEXTILE A. THIS PAY ITEM SHALL BE THE GEOTEXTILE FABRIC USED IN THE SUBGRADE STABILIZATION. THIS ITEM SHALL BE NON-WOVEN PERMEABLE FABRIC MEETING THE REQUIREMENT OF ASTM D-4439. FABRIC SHALL MEET THE REQUIREMENTS OF IOWA DOT 4196 SUBGRADE STABILIZATION MATERIAL.
9	2010-108-I-2	SUBBASE, MODIFIED SUBBASE, 6 INCH A. MODIFIED SUBBASE TO BE INSTALLED WHERE NOTED IN THE TYPICAL SECTIONS, INCLUDING THE AREAS UNDER PCC ROADWAY AND EXTEND 2 FOOT BEYOND THE BACK OF CURB.
10	3010-108-F-0	TRENCH COMPACTION TESTING A. TRENCH COMPACTION TESTING IS REQUIRED FOR ALL TRENCHES WHERE PIPE OR CONDUIT IS WITHIN ROADWAY PAVEMENT.
11	4010-108-A-1	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, 8 INCH A. REFER TO M.02 THRU M.06 SHEETS FOR LOCATION. MATERIAL SHALL COPMLY WITH SUDAS SECTION 4010.2.10.E, TRUSS TYPE PIPE. B. CONTRACTOR SHALL MANDREL TEST AND TELEVISE ALL SANITARY SEWERS AND TURN OVER DATA TO DEVELOPER AND CITY UPON COMPLETION OF THE TESTING AND INSPECTION BEFORE SUBGRADE PREPARATION. DATA SUBMITTAL TO BE APPROVED BY ENGINEER IN CONSULTATION WITH THE CITY. ANY VISIBLE LEAKS SHALL BE REPAIRED REGARDLESS OF SEVERITY. CONTRACTOR SHALL RE-VIDEO ANY REQUIRED REPAIRS AND PROVIDE VIDEO TO THE DEVELOPER AT NO ADDITIONAL COST. C. PIPE EMBEDMENT DETAIL, TYPE F-3, MODIFIED TO REQUIRE ONLY 6 INCH ABOVE THE TOP OF THE PIPE. FURNISHING AND PLACING BEDDING MATERIALS AS REQUIRED SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. CONTRACTOR SHALL INSTALL SERVICE STUB RISERS FOR SEWERS GREATER THAN 12 FEET DEEP AND SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. D. CONTRACTOR SHALL PLUG SEWER AT THE END OF EACH WORKING DAY. DAMAGES RESULTING FROM THE CONTRACTOR'S INABILITY TO KEEP GROUND AND STORM WATER OUT OF THE SANITARY SYSTEM SHALL BE CHARGED TO THE CONTRACTOR.
12	4010-108-C-1	SANITARY SEWER FORCE MAIN, TRENCHED, 4 INCH A. REFER TO M.09 SHEET FOR LOCATION. MATERIAL SHALL COMPLY WITH SUDAS SECTION 4010.2.02 OR APPROVED HDPE MATERIAL. FORCE MAIN SHALL BE INSTALLED WITH TRACER WIRE WITH ACCESS BOXES AT EACH END. TRACER WIRE SHALL BE TESTED FOR CONTINUITY BEFORE CITY TAKES CONTROL OF FORCE MAIN. B. CONTRACTOR SHALL PRESSURE TEST THE FORCE MAIN IN ACCORDANCE TO SUDAS SECTION 5030. NO DISINFECTION IS REQUIRED. C. CONTRACTOR SHALL MANDREL TEST AND TELEVISE ALL SANITARY SEWERS AND TURN OVER DATA TO DEVELOPER UPON COMPLETION OF THE TESTING AND INSPECTION BEFORE SUBGRADE PREPARATION. DATA SUBMITTAL TO BE APPROVED BY ENGINEER. ANY VISIBLE LEAKS SHALL BE REPAIRED REGARDLESS OF SEVERITY. CONTRACTOR SHALL RE-VIDEO ANY REQUIRED REPAIRS AND PROVIDE VIDEO TO THE DEVELOPER AT NO ADDITIONAL COST. D. PIPE EMBEDMENT DETAIL, TYPE F-3, MODIFIED TO REQUIRE ONLY 6 INCH ABOVE THE TOP OF THE PIPE. FURNISHING AND PLACING BEDDING MATERIALS AS REQUIRED SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. E. CONTRACTOR SHALL PLUG SEWER AT THE END OF EACH WORKING DAY. DAMAGES RESULTING FROM THE CONTRACTOR'S INABILITY TO KEEP GROUND AND STORM WATER OUT OF THE SANITARY SYSTEM SHALL BE CHARGED TO THE CONTRACTOR.
13	4010-108-E-0	SANITARY SEWER STUB, PVC, 4 INCH A. REFER TO M.02 THRU M.06 SHEETS FOR LOCATION. SANITARY SERVICE PIPE SHALL BE EXTENDED FROM THE SANITARY MAIN TO 10 FOOT INSIDE THE RIGHT OF WAY LINE. PIPE MATERIAL SHALL BE SDR 23.5 POLYVINYL CHLORIDE PIPE (PVC). FURNISHING AND PLACEMENT OF ELBOWS AND TEES, BEDDING, AND GRANULAR BACKFILL MATERIAL SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. ALL SERVICES SHALL BE WATER TIGHT AND CONNECTED TO THE SEWER MAIN WITH A PRE-FORMED WYE. USE OF SADDLE WYES WILL NOT BE ALLOWED. ALL VISIBLE LEAKS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL PROVIDE AS-CONSTRUCTED LOCATIONS OF ALL SERVICES. B. CONTRACTOR SHALL RECORD LOCATION AND DEPTH AND PROVIDE ACCOMODATIONS FOR CITY TO RECORD LOCATION AND DEPTH FOR EACH SANTIARY SEWER SERVICE STUB AT EACH PROPERTY LINE.
14	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 12 INCH A. REFER TO M.07 FOR LOCATION. MATERIAL SHALL COMPLY WITH SUDAS SECTION 4020.201.A OR APPROVED EQUAL. CONTRACTOR SHALL MANDREL TEST AND TELEVISE ALL STORM SEWERS AND TURN OVER DATA TO DEVELOPER UPON COMPLETION OF THE TESTING AND INSPECTION AND PRIOR TO SUBGRADE PREPARATION. DATA SUBMITTAL TO BE APPROVED BY ENGINEER AND REVIEWED BY CITY. B. BEDDING CLASS SHALL BE R-2 FOR ALL PIPES. TYPE OF PIPE ALLOWED SHALL BE RCP, CLASS III. ANY LOCATION WHERE THE STORM SEWER IS LOCATED WITHIN 18 INCHES VERTICALLY OR OVER A WATERMAIN THE STORM SEWER SHALL BE GASKETED WITH THE JOINTS LOCATED AS FAR FROM THE WATER MAIN AS POSSIBLE. COAT GASKET AND JOINT WITH SOAP-BASED LUBRICANT IMMEDIATELY PRIOR TO CLOSING THE JOINT.
15	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 15 INCH A. REFER TO M.08 FOR LOCATION. MATERIAL SHALL COMPLY WITH SUDAS SECTION 4020.201.A OR APPROVED EQUAL. CONTRACTOR SHALL MANDREL TEST AND TELEVISE ALL STORM SEWERS AND TURN OVER DATA TO DEVELOPER UPON COMPLETION OF THE TESTING AND INSPECTION AND PRIOR TO SUBGRADE PREPARATION. DATA SUBMITTAL TO BE APPROVED BY ENGINEER. B. BEDDING CLASS SHALL BE R-2 FOR ALL PIPES. TYPE OF PIPE ALLOWED SHALL BE RCP, CLASS III. ANY LOCATION WHERE THE STORM SEWER IS LOCATED WITHIN 18 INCHES VERTICALLY OR OVER A WATERMAIN THE STORM SEWER SHALL BE GASKETED WITH THE JOINTS LOCATED AS FAR FROM THE WATER MAIN AS POSSIBLE. COAT GASKET AND JOINT WITH SOAP-BASED LUBRICANT IMMEDIATELY PRIOR TO CLOSING THE JOINT.

#	DATE	DESCRIPTION	BY

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DRAWN BY: JMS
PROJECT ENGR: RHT

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QUANTITIES & ESTIMATE REFERENCE NOTES

PROJ NO: 8253.18
CONST PROJ: 000
SCALE: AS NOTED
DATE: 2/27/2019

DRAWING NO: C.01
SHEET NO: 8 OF 40

F:\CIVIL\3D PROJECTS\8253 HORIZON ARCHITECTURE - WOLFE SUBDIVISION\3 PLAN SHEETS\8253-C SHEETS.DWG PLOTTED: 3/1/2019

41	7030-108-G-0	DETECTABLE WARNING A. REFER TO L.01 SHEET FOR LOCATION. DETECTABLE WARNING SYSTEMS SHALL BE NEENAH DETECTABLE WARNING PLATES, MODEL 4984-36B OR APPROVED EQUAL. CONTRACTOR SHALL VERIFY TYPE WITH CITY PRIOR TO ORDERING MATERIALS.
42	7040-108-A-0	FULL DEPTH PATCH, PCC, 7 INCH A. REFER TO L.01, M.04 AND M.14 SHEETS FOR LOCATIONS. THIS ITEM SHALL INCLUDE LABOR, MATERIAL AND EQUIPMENT NECESSARY TO REMOVE PAVEMENT AND CONSTRUCT A FULL DEPTH PATCH AFTER COMPACTION OF THE UTILITY TRENCH. FULL DEPTH PATCH SHALL COMPLY WITH CITY OF MUSCATINE'S CITY GUIDELINES FOR REPAIRS IN STREETS AND DETAIL FOR STREET PATCHES AND TRENCH REPAIR B. CONTRACTOR TO MAINTAIN ACCESS TO ALL DRIVES DURING PAVEMENT REMOVAL AND REPLACEMENT.
43	9010-108-B-0	SEEDING, FERTILIZING & HYDROMULCHING A. SEED, FERTILIZE, AND MULCH ALL AREAS AS WHERE INDICATED ON PLANS. SEEDING SHALL BE TYPE 1. B. THIS ITEM INCLUDES REMOVAL OF ROCK AND OTHER DEBRIS, REPAIRING RILLS AND WASHES, SEEDBED PREPARATION, FURNISHING AND PLACEMENT OF SEED, FURNISHING, PLACEMENT, AND INCORPORATING FERTILIZER AND MULCH, FURNISHING WATER AND OTHER CARE, AND ANY RESEEDING NECESSARY UNTIL FINAL ACCEPTANCE. THE CONTRACTOR IS RESPONSIBLE FOR MOWING AND MAINTAINING SEEDED AREAS UNTIL THE PROJECT IS ACCEPTED BY THE OWNER. SEEDING OF AREAS DISTURBED OUTSIDE OF THE CONSTRUCTION LIMITS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
44	9040-108-A-2	SWPPP MANAGEMENT A. INSPECTIONS WILL MEET THE REQUIREMENTS AS SET FORTH IN THE NPDES GENERAL PERMIT NO. 2 AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE COPIES OF THE SWPPP PLAN AND ALL INSPECTION REPORTS TO THE ENGINEER AND SHALL BE RESPONSIBLE FOR ALL INSPECTIONS UNTIL THE NOTICE OF DISCONTINUATION. WEEKLY INSPECTIONS SHALL BE REQUIRED AND ALL REPORTS COPIED TO THE ENGINEER AND CITY. CITY SHALL AGREE TO NOTICE OF DISCONTINUATION UPON COMPLETION OF THE PROJECT. B. NPDES GENERAL PERMIT NO. 2 WILL BE COMPLETED BY OWNER (COPY TO CITY).
45	9040-108-H-0	TEMPORARY EARTH DIVERSION STRUCTURE A. REFER TO C.03 SHEET FOR LOCATION. THIS ITEM INCLUDES INSTALLATION, MAINTENANCE, AND REMOVAL OF EARTH DIVERSION STRUCTURE.
46	9040-108-J-0	RIP RAP, CLASS 'D' REVETMENT STONE A. REFER TO M.06 AND M.07 SHEETS FOR LOCATION. THIS ITEM INCLUDES ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED TO PLACE THE RIP RAP IN THE DETENTION BASIN.
47	9040-108-N-1	SILT FENCE OR SILT FENCE DITCH CHECK A. REFER TO C.03 SHEET FOR LOCATION. ITEM INCLUDES INSTALLATION, MAINTENANCE AND REMOVAL OF SILT FENCE.
48	9040-108-O-1	STABILIZED CONSTRUCTION ENTRANCE A. REFER TO C.03 SHEET FOR LOCATION. ITEM INCLUDES THE INSTALLTION OF THE ROCK AND SUBGRADE STABILIZATION FABRIC.
49	9040-108-T-1	INLET PROTECTION DEVICE, SURFACE-APPLIED INTAKE PROTECTION A. REFER TO C.03 SHEET FOR LOCATION. ALL DEVICES SHALL BE SURFACE APPLIED INTAKE PROTECTION AS DESCRIBED IN SECTION SUDAS 9040-2 18-B. ADDITIONAL QUANTITY, IF REQUIRED, SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT. REMOVAL OF INLET PROTECTION DEVICE SHALL BE CONSIDERED INCIDENTAL.
50	11020-108-A-0	MOBILIZATION - GRADING A. THIS ITEM IS FOR ALL PREPATORY WORK AND COSTS INCURRED BEFORE BEGINNING THE WORK ON THE PROJECT AND DURING THE PROJECT. THIS ITEM SHALL ALSO INCLUDE THE COSTS FOR ANY STAGED CONSTRUCTION AND EQUIPMENT SET UP TO COMPLETE THE WORK. NO CHANGE IN CONTRACT PRICE WILL BE MADE FOR ANY COMBINATION OF ADD/ALTERNATES ADDED TO THE CONTRACT. THIS ITEM TO BE PAID PER SUDAS 11.020, 1.08A.
51	11020-108-A-0	MOBILIZATION - UTILITIES A. THIS ITEM IS FOR ALL PREPATORY WORK AND COSTS INCURRED BEFORE BEGINNING THE WORK ON THE PROJECT AND DURING THE PROJECT. THIS ITEM SHALL ALSO INCLUDE THE COSTS FOR ANY STAGED CONSTRUCTION AND EQUIPMENT SET UP TO COMPLETE THE WORK. NO CHANGE IN CONTRACT PRICE WILL BE MADE FOR ANY COMBINATION OF ADD/ALTERNATES ADDED TO THE CONTRACT. THIS ITEM TO BE PAID PER SUDAS 11.020, 1.08A.
52	11020-108-A-0	MOBILIZATION - PAVING A. THIS ITEM IS FOR ALL PREPATORY WORK AND COSTS INCURRED BEFORE BEGINNING THE WORK ON THE PROJECT AND DURING THE PROJECT. THIS ITEM SHALL ALSO INCLUDE THE COSTS FOR ANY STAGED CONSTRUCTION AND EQUIPMENT SET UP TO COMPLETE THE WORK. NO CHANGE IN CONTRACT PRICE WILL BE MADE FOR ANY COMBINATION OF ADD/ALTERNATES ADDED TO THE CONTRACT. THIS ITEM TO BE PAID PER SUDAS 11.020, 1.08A.
53	11050-108-A-0	CONCRETE WASHOUT A. THIS PAY ITEM INCLUDES FURNISHING AND THE PERIODIC CLEAN OUT AND MAINTENANCE OF THE WASHOUT AREA AS DIRECTED BY THE ENGINEER.
54	12.000-XXX-X-1	ELECTRICAL CONDUIT, OPEN CUT, HDPE/PVC, 2 INCH PRIMARY A. REFER TO M.11 THRU M.14 SHEETS FOR LOCATIONS. REFER TO SHEET B.04 FOR DETAILS. THIS ITEM INCLUDES MATERIAL AND INSTALLATION OF ALL ELECTRICAL CONDUIT MATERIALS INCLUDING SWEEPS INTO ELECTRICAL INFRASTRUCTURE. THIS ITEM INCLUDES TRENCHING, BACKFILL, COMPACTION, INSTALLATION OF CONDUIT WITH PULL STRING. THE MATERIAL SHALL BE 2-INCH HDPE, SDR 13.5 BLACK WITH A RED STRIPE OR SCHEDULE 40 PVC. METHOD OF MEASUREMENT IS FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
55	12.000-XXX-X-2	ELECTRICAL CONDUIT, OPEN CUT, HDPE/PVC, 3 INCH SECONDARY A. REFER TO M.11 THRU M.14 SHEETS FOR LOCATION. REFER TO SHEET B.04 FOR DETAILS. THIS ITEM INCLUDES MATERIAL AND INSTALLATION OF ALL ELECTRICAL CONDUIT MATERIALS INCLUDING SWEEPS INTO ELECTRICAL INFRASTRUCTURE. THIS ITEM INCLUDES TRENCHING, BACKFILL, COMPACTION, INSTALLATION OF CONDUIT WITH PULL STRING. THE MATERIAL SHALL BE 2-INCH HDPE, SDR 13.5 BLACK WITH A RED STRIPE OR SCHEDULE 40 PVC. METHOD OF MEASUREMENT IS FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
56	12.000-XXX-X-3	ELECTRICAL CONDUIT, OPEN CUT, HDPE/PVC, 2 INCH LIGHT A. REFER TO M.11 THRU M.14 SHEETS FOR LOCATION. REFER TO SHEET B.04 FOR DETAILS. THIS ITEM INCLUDES MATERIAL AND INSTALLATION OF ALL ELECTRICAL CONDUIT MATERIALS INCLUDING SWEEPS INTO ELECTRICAL INFRASTRUCTURE. THIS ITEM INCLUDES TRENCHING, BACKFILL, COMPACTION, INSTALLATION OF CONDUIT WITH PULL STRING. THE MATERIAL SHALL BE 2-INCH HDPE, SDR 13.5 BLACK WITH A RED STRIPE OR SCHEDULE 40 PVC. METHOD OF MEASUREMENT IS FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
57	12.000-XXX-X-4	ELECTRICAL CONDUIT, OPEN CUT, HDPE/PVC, 2 INCH SERVICES A. REFER TO M.12 THRU M.15 SHEETS FOR LOCATION. REFER TO SHEET B.04 FOR DETAILS. THIS ITEM INCLUDES MATERIAL AND INSTALLATION OF ELECTRICAL CONDUIT MATERIALS INCLUDING SWEEPS INTO ELECTRICAL INFRASTRUCTURE AND EXTENDING ELECTRICAL SERVICE STUB OUTS 5' BEYOND EACH PROPERTY LINE.
58	12.000-XXX-X-5	3 x 3 TRANSFORMER PAD A. REFER TO M.12 THRU M.15 SHEETS FOR LOCATIONS. REFER TO SHEET B.04 FOR DETAILS. THIS ITEM INCLUDES EXCAVATION, GRANULAR BASE, COMPACTION, FURNISH AND INSTALL FIBERGLASS PAD, AND BACKFILL.
59	12.000-XXX-X-6	HANDHOLE, ELECTRICAL, 13 INCH x 24 INCH A. REFER TO M.12 THRU M.15 SHEETS FOR LOCATIONS. REFER TO SHEET B.04 FOR DETAILS. THIS ITEM INCLUDES EXCAVATION, GRANULAR BASE, COMPACTION, FURNISH AND INSTALL HAND HOLE BOX AND LID, AND BACKFILL.
60	12.000-XXX-X-7	HANDHOLE, ELECTRICAL, LIGHT POLE ASSEMBLY A. REFER TO M.12 THRU M.15 SHEETS FOR LOCATIONS. REFER TO SHEET B.04 FOR DETAILS. THIS ITEM INCLUDES THE CONSTRUCTION OF A CONCRETE LIGHT POLE BASE, INSTALLATION OF A 10 INCH DIAMETER HANDHOLE, LIGHT POLE, AND LIGHT FIXUTRE.
61	12.000-XXX-X-8	COMMUNICATION CONDUIT, OPEN CUT, HDPE, 2 INCH A. REFER TO M.12 THRU M.15 SHEETS FOR LOCATION. REFER TO SHEET B.04 FOR DETAILS. THIS ITEM INCLUDES INSTALLATION OF ALL COMMUNICATION CONDUIT MATERIALS INCLUDING SWEEPS INTO COMMUNICATION INFRASTRUCTURE. THIS ITEM INCLUDES TRENCHING, BACKFILL, COMPACTION, INSTALLATION OF CONDUIT WITH PULL STRING. THE MATERIAL SHALL BE 2 INCH HDPE, SDR 15.5, TERRA COTA AND ORANGE. BOTH ENDS OF CONDUIT SHALL BE SEALED MEASUREMENT IS FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE. B. MPW SHALL PROVIDE ALL MATERIAL AT NO COST TO THE CONTRACTOR. CONDUIT CAN BE INSTALLED IN SAME TRENCH AS ELECTRICAL TRENCH.
62	12.000-XXX-X-9	COMMUNICATION CONDUIT, OPEN CUT, HDPE, 1 INCH A. REFER TO M.12 THRU M.15 SHEETS FOR LOCATIONS. THIS ITEM INCLUDES INSTALLATION OF ALL COMMUNICATION CONDUIT MATERIALS INCLUDING SWEEPS INTO COMMUNICATION INFRASTRUCTURE. THIS ITEM INCLUDES TRENCHING, BACKFILL, COMPACTION, INSTALLATION OF CONDUIT WITH PULL STRING. THE MATERIAL SHALL BE 1 INCH HDPE, SDR 15.5, TERRA COTA AND ORANGE. BOTH ENDS OF CONDUIT SHALL BE SEALED MEASUREMENT IS FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE. B. MPW SHALL PROVIDE ALL MATERIAL AT NO COST TO THE CONTRACTOR. CONDUIT CAN BE INSTALLED IN SAME TRENCH AS ELECTRICAL TRENCH.
63	12.000-XXX-X-10	HANDHOLE, COMMUNICATIONS, 17 INCH x 30 INCH A. REFER TO M.12 THRU M.15 SHEETS FOR LOCATIONS. REFER TO SHEET B.04 FOR DETAILS. THIS ITEM INCLUDES EXCAVATION, GRANULAR BASE, COMPACTION, INSTALL HANDHOLE BOX AND LID, AND BACKFILL. MPW SHALL PROVIDE THE BOX AND LID FOR INSTALLATION AT NO COST TO THE CONTRACTOR.
64	12.000-XXX-X-11	HANDHOLE, COMMUNICATIONS, 30 INCH x 48 INCH A. REFER TO M.12 THRU M.15 SHEETS FOR LOCATIONS. REFER TO SHEET B.04 FOR DETAILS. THIS ITEM INCLUDES EXCAVATION, GRANULAR BASE, COMPACTION, INSTALL HANDHOLE BOX AND LID, AND BACKFILL. MPW SHALL PROVIDE THE BOX AND LID FOR INSTALLATION AT NO COST TO THE CONTRACTOR.
65	12.000-XXX-X-12	HANDHOLE, COMMUNICATIONS, 10 INCH DIAMETER A. REFER TO M.12 THRU M.15 SHEETS FOR LOCATIONS. REFER TO SHEET B.04 FOR DETAILS. THIS ITEM INCLUDES EXCAVATION, GRANULAR BASE, COMPACTION, INSTALL HANDHOLE BOX AND LID, AND BACKFILL. MPW SHALL PROVIDE THE BOX AND LID FOR INSTALLATION AT NO COST TO THE CONTRACTOR.
66	12.000-XXX-X-13	LIFT STATION A. REFER TO M.09 SHEET FOR LOCATION AND SHEET M.10 FOR DETAILS AND SPECIFICATIONS. THIS PRODUCT SHALL BE APPROVED BY THE CITY. LIFT STATION SHALL BE ABOVE GROUND EXCEPT FOR PUMP SUCTION AND WET WELL. ELECTRICAL AND SCADA CONTROLS SHALL BE PROTECTED BY THE WEATHER ALLOWING CITY PERSONEL WORK ON COMPONENTS FROM UNDER A SHELTER. B. SKID MOUNTED PUMPS AND CONTROLS SHALL BE GORMAN RUPP, SMITH & LOVELESS OR APPROVED EQUAL. DESIGN CRITERIA FOR LIFT STATION SHALL BE, 4-INCH DISCHARGE, 100 GPM MINIMUM FLOW, AND 25.8 FEET TOTAL DYNAMIC HEAD. FINAL PRODUCT SHALL BE APPROVED BY ENGINEER IN CONSULTATION WITH THE CITY.

#	DATE	DESCRIPTION	BY

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PROJECT ENGR: RHT

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ESTIMATE REFERENCE NOTES

PROJ NO: 8253.18
CONST PROJ: 000
SCALE: AS NOTED
DATE: 2/27/2019

DRAWING NO: C.02
SHEET NO: 9 OF 40

F:\CIVIL\3D PROJECTS\8253 HORIZON ARCHITECTURE - WOLFE SUBDIVISION\3 PLAN SHEETS\8253-C SHEETS.DWG PLOTTED: 3/1/2019

1. SITE EVALUATION AND DESIGN DEVELOPMENT

- NOTE: INFORMATION CONTAINED HEREIN APPLIES TO ALL CONTRACTORS AND OTHER PARTIES PERFORMING WORK ON THIS PROJECT.
- SITE INFORMATION FOR THIS PROPERTY HAS BEEN COLLECTED USING SURVEYING EQUIPMENT, ONLINE AND SOIL CONSERVATION SERVICE REFERENCE MATERIAL, AND A VISUAL INSPECTION OF THE SITE.
  - THE SITE IS CURRENTLY AGRICULTURAL LAND.
  - NO DATA IS AVAILABLE TO DETERMINE EXISTING RUNOFF WATER QUALITY.
  - THE EXISTING SITE DRAINS VIA SURFACE RUNOFF.
  - THE SITE IS WELL DRAINED.
- THIS PROJECT WILL INCLUDE:
  - REMOVAL OF TOPSOIL, GRADING, AND PAVING.
  - UTILITY INSTALLATION.
- CONSTRUCTION ACTIVITIES WILL COMMENCE IN SPRING 2019 AND FINISH IN 2019.
- CONSTRUCTION PLANS HAVE BEEN DEVELOPED AND ARE AVAILABLE AT THE JOB TRAILER.
- TOTAL SITE AREA IS APPROXIMATELY **12.1** ACRES.
- THE DISTURBED AREA WILL INCLUDE APPROXIMATELY 2 ACRES DURING THE CONSTRUCTION OF THE UTILITIES AND NEW ROADWAY.
- EXISTING AVERAGE RUNOFF COEFFICIENT IS 0.60 FOR AGRICULTURAL LAND.
- THE POST DEVELOPMENT AVERAGE COEFFICIENT IS 0.95 IN BUILDING/PAVING AREAS AND 0.35 IN GRASSED AREAS..

2. CONTROLS

- CONSTRUCTION SEQUENCE:
  - INSTALL FILTER SOCK AROUND THE PERIMETER PRIOR TO START OF WORK
  - INSTALLATION OF UTILITIES
  - STRIP ALL TOP SOIL ALONG ROADWAY ALIGNMENT
  - PAVING OPERATIONS
  - CLEANUP
- STABILIZATION PRACTICES:
  - AREAS NOT SUBJECT TO CONSTRUCTION ACTIVITY FOR 14 DAYS OR MORE SHALL HAVE STABILIZING MEASURES WITHIN 0 DAYS AFTER CONSTRUCTION HAS CEASED.
  - TEMPORARY SEEDING SHALL BE APPLIED TO AREAS REQUIRING STABILIZATION. SEEDING SHALL BE IMPROVED BY USE OF ROLLED EROSION CONTROL PRODUCTS AND TURF REINFORCEMENT MATS.
  - AFTER UTILITY INSTALLATION OPERATIONS, PERMANENT SEEDING SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS.
  - AS AREAS REACH THEIR COMPLETION, ADDITIONAL SILT FENCES, SILT BASINS, INTERCEPTING DITCHES, SOD FLUMES, LETDOWNS, AND EARTH DIKES SHALL BE INSTALLED AS SPECIFIED IN THE PLANS AND/OR AS REQUIRED BY THE PROJECT ENGINEER. INSTALLATION AND MAINTENANCE OF DEVICES SHALL BE IN ACCORDANCE WITH IOWA SUDAS SECTION 9.
- STRUCTURAL PRACTICES:
  - INSTALL ROCK DITCH CHECKS AND SILT FENCING WHERE SHOWN ON THE PLANS.
  - MAINTAIN A CONSTRUCTION ENTRANCE THROUGHOUT THE PROJECT LIFE.
  - A CONCRETE TRUCK WASHING LOCATION SHALL BE CONSTRUCTED AND MAINTAINED, CONCRETE WASHOUT LOCATIONS SHALL BE COMPLETELY REMOVED AND RE-SEEDED. LOCATION TO BE FIELD LOCATED BY GENERAL CONTRACTOR.
  - ADDITIONAL STRUCTURAL PRACTICES SHALL BE IMPLEMENTED AS NEEDED THROUGHOUT THE PROJECT LIFE.
- STORMWATER MANAGEMENT:
  - EXISTING AND PROPOSED STORMWATER MANAGEMENT FEATURES SHALL BE PROTECTED FROM SEDIMENTATION AND CLEANED UPON COMPLETION OF PROJECT.
- OTHER CONTROLS:
  - CONTRACTORS SHALL DISPOSE OF RUBBLE, REMOVED UTILITY EQUIPMENT, CONSTRUCTION MATERIALS, ETC. IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS
  - HAZARDOUS MATERIALS SHALL BE STORED IN ACCORDANCE WITH APPLICABLE LAWS.
  - AREAS NOT INCLUDED IN THIS SWPPP SHALL NOT BE DISTURBED.
  - ACCESS TO SITE SHALL BE LIMITED TO CLEARLY DESIGNATED AREAS AND STABILIZED CONSTRUCTION ENTRANCES SHALL BE CONSTRUCTED WHERE NECESSARY TO PREVENT SEDIMENTS FROM LEAVING THE SITE.
  - WASTE DISPOSAL FROM THE CONSTRUCTION SITE SHALL INCLUDE DISPOSAL OF RUBBLE (IF ANY IS FOUND) AND PROPER DISPOSAL OF CONSTRUCTION WASTE.
  - SANITARY WASTES GENERATED ON SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH STATE OR LOCAL REQUIREMENTS.
  - DUST CONTROL SHALL BE IMPLEMENTED ON THE SITE BY APPLICATION OF WATER. THE SITE OWNER IS TO ENSURE THAT TRUCKS ENTERING AND EXITING THE SITE ARE NOT TRACKING DEBRIS ONTO EXISTING ROADWAYS. THE CONTRACTOR SHALL IMMEDIATELY REMOVE ANY DEBRIS THAT IS TRACKED ONTO ADJACENT ROADWAYS.
  - NON-STORMWATER DISCHARGES SHALL BE PROHIBITED FROM LEAVING THE SITE. THE CONTRACTOR IS TO MAKE SURE THAT EQUIPMENT LEAKS, SPILLS AND ANY OTHER POLLUTANTS ARE KEPT FROM LEAVING THE SITE AND THAT THEY ARE CONTAINED AND PREVENTED FROM CONTAMINATING THE SITE FURTHER.
  - ADDITIONAL CONTROLS MAY BE ADDED AS NECESSARY TO COMPLY WITH THE NPDES PERMIT. AMENDMENTS SHOULD BE ATTACHED TO THIS DOCUMENT.
  - CONTROLS THAT ARE IDENTIFIED SHALL EACH BE INSTALLED ACCORDING TO THE MOST CURRENT VERSION OF THE IOWA STATEWIDE URBAN DESIGN AND SPECIFICATIONS (SUDAS).
  - ALL EXISTING PAVEMENTS SHALL BE KEPT FREE OF CONSTRUCTION DEBRIS OR MUD, SWEEPING MAY BE REQUIRED ON A REGULAR BASIS.
- STATE AND LOCAL REQUIREMENTS:
  - AN NPDES GENERAL PERMIT NO. 2 HAS BEEN FILED WITH THE STATE OF IOWA.
  - ALL CONTRACTORS ARE REQUIRED TO SIGN AND FOLLOW THE REQUIREMENTS OF THIS PLAN.

3. MAINTENANCE

- ONGOING MAINTENANCE:
  - SEDIMENT CONTROL DEVICES SHALL BE CLEANED AND SEDIMENTS REMOVED AFTER 50% OF UTILITY HAS BEEN REACHED.
  - TEARS OR BREACHES IN EROSION CONTROL MEASURES SHALL BE REPAIRED AS NEEDED.
  - NON-WORK AREAS AND CITY STREETS SHALL BE KEPT FREE OF MUD AND DEBRIS.
- END OF PROJECT MAINTENANCE:
  - AT THE END OF CONSTRUCTION ALL PERMANENT SEDIMENT AND EROSION CONTROL DEVICES SHALL BE CLEANED.
  - TEMPORARY CONTROL DEVICES SUCH AS SILT FENCES OR FILTER SOCK SHALL BE REMOVED AND DISPOSED OF PROPERLY.
  - ALL PAVEMENTS SHALL BE SWEPT.

4. INSPECTIONS

- INSPECTIONS ARE REQUIRED ONCE EVERY 7 CALENDAR DAYS
- INSPECTIONS SHALL INCLUDE THE FOLLOWING:
  - INSPECT DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS FOR EVIDENCE OF POLLUTANTS LEAVING THE SITE AND/OR ENTERING THE DRAINAGE SYSTEM.
  - INSPECT EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE SWPPP TO ENSURE THEY ARE FUNCTIONING CORRECTLY.
  - INSPECT DISCHARGE LOCATIONS TO ASCERTAIN IF THE CURRENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO THE RECEIVING WATERS.
  - INSPECT LOCATIONS WHERE VEHICLES ENTER/EXIT THE CONSTRUCTION SITE FOR SIGNS OF SEDIMENT TRACKING.
  - PREPARE AN INSPECTION REPORT THAT LISTS THE DATE, THE NAME OF THE INSPECTOR, AND THE INSPECTOR'S QUALIFICATIONS. THE REPORT MUST SUMMARIZE THE INSPECTION AND NOTE ANY MAINTENANCE OF THE CONTROLS OR CHANGES TO THE SWPPP THAT ARE REQUIRED.
  - IMPLEMENT REQUIRED MAINTENANCE OR CHANGES TO THE SWPPP IDENTIFIED DURING THE INSPECTION WITHIN 7 CALENDAR DAYS FOLLOWING THE INSPECTION.

5. NON-STORMWATER DISCHARGES

- VARIOUS NON-STORMWATER RELATED FLOWS ARE ALLOWED TO BE DISCHARGED INTO THE STORMWATER SYSTEM, PROVIDED THAT THEY ARE NOT CONTAMINATED BY DETERGENTS OR SPILLS/LEAKS OF TOXIC/HAZARDOUS MATERIALS. ALLOWABLE NON-STORMWATER DISCHARGES INCLUDE FLOWS FROM FIRE HYDRANT AND POTABLE WATERLINE FLUSHING, VEHICLE WASHING, EXTERNAL BUILDING WASH DOWN, PAVEMENT WASH WATER, AIR CONDITIONING CONDENSATE, SPRINGS, AND FOOTING DRAINS. WHEN THERE IS A POSSIBILITY FOR THESE TYPES OF DISCHARGES ON THE SITE, THEY MUST BE IDENTIFIED IN THE SWPPP AND INCLUDE A DESCRIPTION OF THE MEASURES THAT WILL BE IMPLEMENTED TO PREVENT THESE FLOWS FROM BECOMING CONTAMINATED BY HAZARDOUS MATERIALS OR SEDIMENT.

6. ADDITIONAL NOTES

- ANY HAZARDOUS CONDITIONS THAT OCCUR ON THE SITE SHOULD BE RECORDED. THE SITE ENGINEER SHALL BE CONTACTED IMMEDIATELY TO DETERMINE THE BEST COURSE OF MITIGATION FOR THESE ISSUES. THE POLLUTION PREVENTION PLAN WILL THEN BE UPDATED ACCORDINGLY.
- THE POLLUTION PREVENTION PLAN MUST BE LOCATED ON SITE AND AVAILABLE UPON DEMAND DURING WORKING HOURS.
- RETENTION OF THESE RECORDS, INCLUDING THIS PLAN, REPORTS REQUIRED BY THE PERMIT, AND DATA USED TO COMPLETE THE NOTICE OF INTENT SHALL BE RETAINED FOR 3 YEARS AFTER THE COMPLETION OF FINAL SITE STABILIZATION.
- THIS PLAN AND ASSOCIATED RECORDS MUST BE MADE AVAILABLE TO THE IOWA DEPARTMENT OF NATURAL RESOURCES UPON REQUEST.
- UPDATES TO THE PLAN WILL BE MADE WHENEVER CHANGES OCCUR.

7. CERTIFICATION AND NOTIFICATION

- CERTIFICATION STATEMENT:

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE AS PART OF THIS CERTIFICATION. FURTHER, BY MY SIGNATURE, I UNDERSTAND THAT I AM BECOMING A CO-PERMITTEE, ALONG WITH THE OWNER(S) AND OTHER CONTRACTORS AND SUBCONTRACTORS SIGNING SUCH CERTIFICATIONS, TO THE IOWA DEPARTMENT OF NATURAL RESOURCES NPDES GENERAL PERMIT NO. 2 FOR "STORMWATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY FOR CONSTRUCTION ACTIVITIES" AT THE IDENTIFIED SITE. AS A CO-PERMITTEE, I UNDERSTAND THAT I, AND MY COMPANY, ARE LEGALLY REQUIRED UNDER THE CLEAN WATER ACT AND THE CODE OF IOWA, TO ENSURE COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE STORMWATER POLLUTION PREVENTION PLAN DEVELOPED UNDER THIS NPDES PERMIT AND THE TERMS AND CONDITIONS OF THIS NPDES PERMIT.

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

THIS CERTIFICATION MUST INCLUDE THE NAME AND TITLE OF THE PERSON PROVIDING THE SIGNATURE; THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE CONTRACTING FIRM; THE ADDRESS (OR OTHER IDENTIFYING DESCRIPTION) OF THE SITE; AND THE DATE THE CERTIFICATION IS MADE.

SEE ATTACHED SIGNATURE PAGE THIS SHEET.

8. FINAL STABILIZATION AND NOTICE OF DISCONTINUATION

- FINAL STABILIZATION IS DEFINED IN THE GENERAL PERMIT AS MEANING THAT ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED, AND THAT A UNIFORM PERENNIAL VEGETATIVE COVER FOR UNPAVED AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN ESTABLISHED OR EQUIVALENT PERMANENT STABILIZATION MEASURES (SUCH AS THE USE OF RIP RAP, GABIONS, OR GEOTEXTILES) HAVE BEEN EMPLOYED.
- A STORMWATER DISCHARGE THAT IS COVERED UNDER THE GENERAL PERMIT IS REQUIRED TO NOTIFY THE IOWA DNR THAT THE DISCHARGE HAS BEEN DISCONTINUED AND THAT THE DISCHARGE IS NO LONGER SUBJECT TO THE NPDES PERMITTING REQUIREMENTS. FOR CONSTRUCTION ACTIVITIES, THIS MEANS THAT THE FINAL STABILIZATION HAS BEEN REACHED. THIS NOTIFICATION IS MADE BY PROVIDING THE IDNR WITH A NOTICE OF DISCONTINUATION. WITHIN 30 DAYS AFTER FINAL STABILIZATION HAS BEEN REACHED THE OWNER OR GENERAL CONTRACTOR MUST SUBMIT THE NOTICE OF DISCONTINUATION TO THE IDNR. INFORMATION TO BE INCLUDED ON THE NOTICE OF DISCONTINUATION INCLUDES THE FOLLOWING:

  THE NAME OF THE OWNER OR OPERATOR TO WHICH THE COVERAGE UNDER THE GENERAL PERMIT WAS ISSUED.

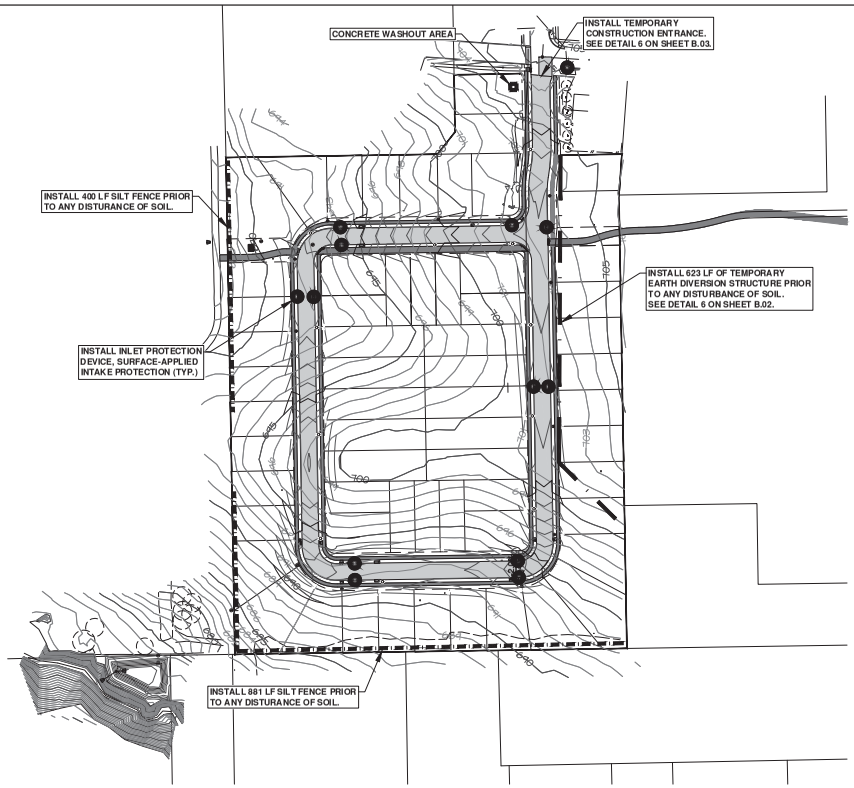
  THE GENERAL PERMIT NUMBER AND THE PERMIT AUTHORIZATION NUMBER.

  THE DATE THE CONSTRUCTION SITE REACHED FINAL STABILIZATION.

  A SIGNED CERTIFICATION.

NOTICE OF DISCONTINUATION SHOULD BE MAILED TO THE FOLLOWING ADDRESS AFTER THE CITY SIGNES OFF ON GRADING AND STABILIZATION:

STORM WATER COORDINATOR
IOWA DEPARTMENT OF NATURAL RESOURCES
502 E. 9TH STREET
DES MOINES, IOWA 50319-0034



SITE OWNER/ADDRESS:

NPSW ENTERPRISES, LLC
3116 ALPINE CT.
IOWA CITY, IOWA 52245

NOTICE OF INTENT HAS BEEN SUBMITTED FOR THIS PROJECT.

PROJECT MANAGER:_____ DATE:_____

CONTRACTOR:_____ DATE:_____

CONTRACTOR:_____ DATE:_____

CONTRACTOR:_____ DATE:_____

CONTRACTOR:_____ DATE:_____

CONTRACTOR:_____ DATE:_____

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CONTRACTOR:_____ DATE:_____

N

100 0 100

#	DATE	DESCRIPTION	BY

DESIGNED BY: JMS
DRAWN BY: JMS
PROJECT ENGR: RHT

Martin & Whitacre Surveyors & Engineers, Inc.
P.O. BOX 413 MUSCATINE, IOWA
VOICE (563) 263-7691 EMAIL info@martin-whitacre.com

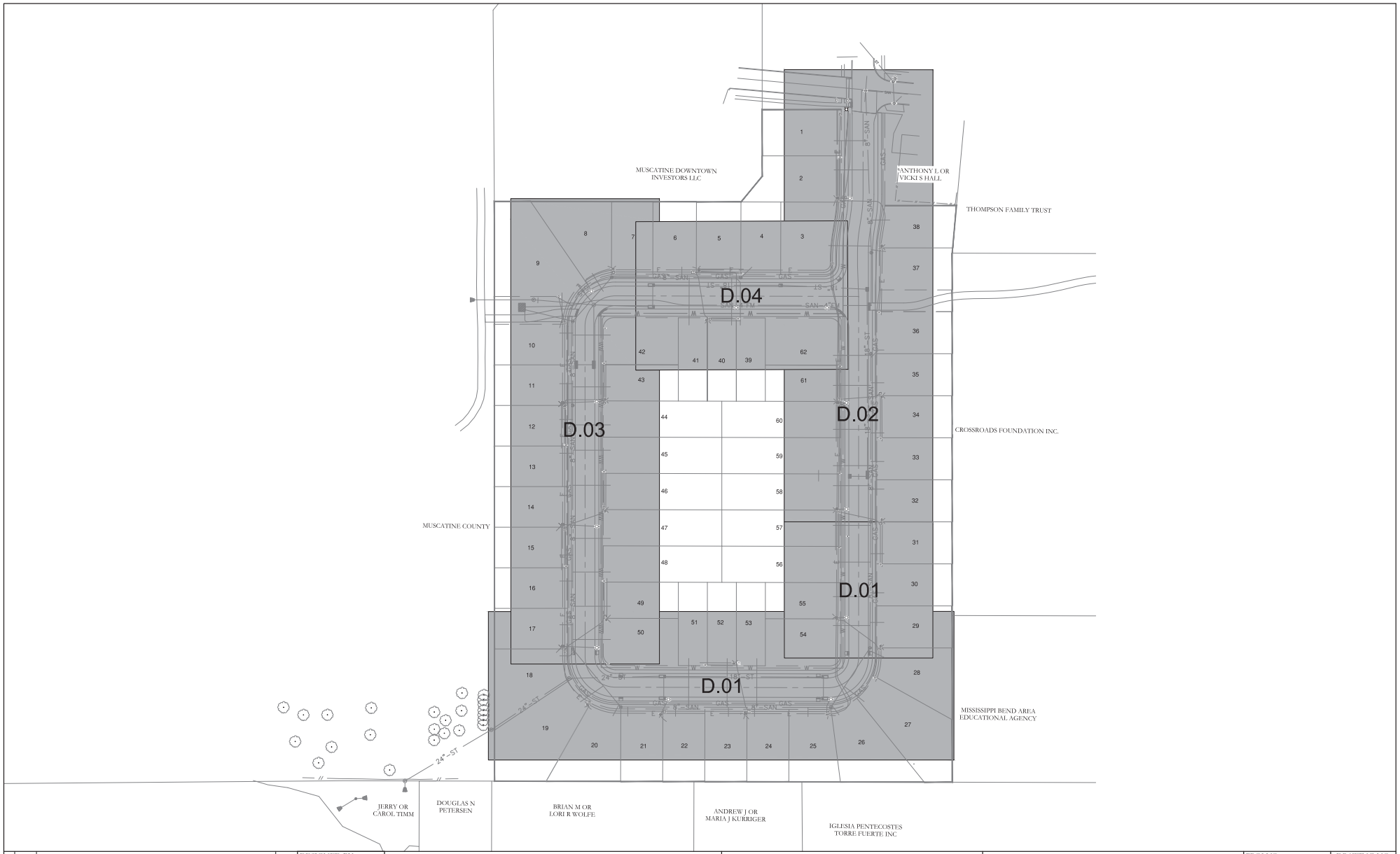
ARBOR COMMONS SUBDIVISION
NPSW ENTERPRISE, LLC
MUSCATINE, IOWA

EROSION CONTROL

PROJ NO:	8253.18
CONST PROJ:	000
SCALE:	AS NOTED
DATE:	2/27/2019

DRAWING NO: C.03
SHEET NO: 10 OF 40

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#	DATE	DESCRIPTION	BY

DESIGNED BY: JMS
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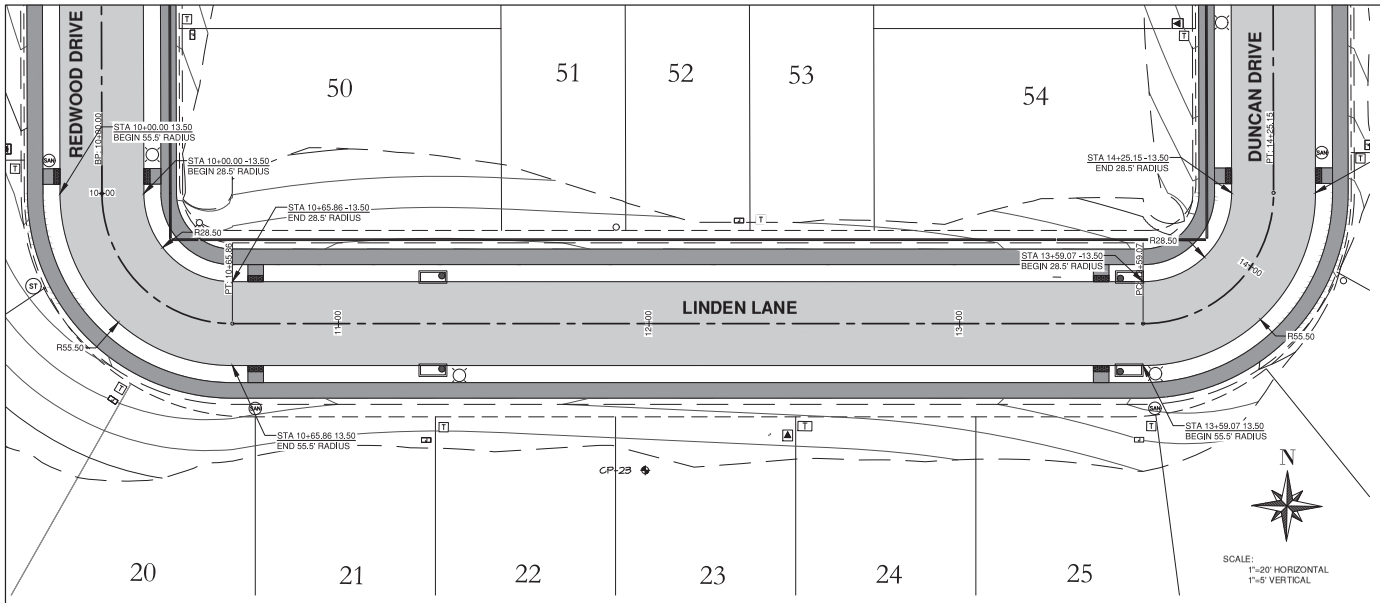
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MUSCATINE, IOWA

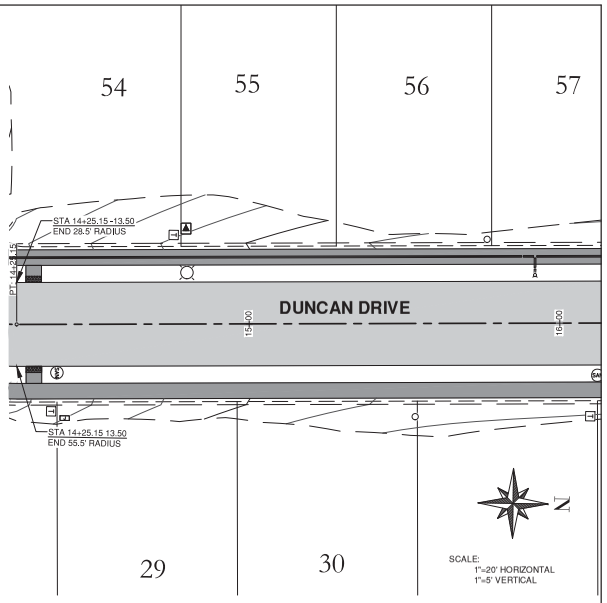
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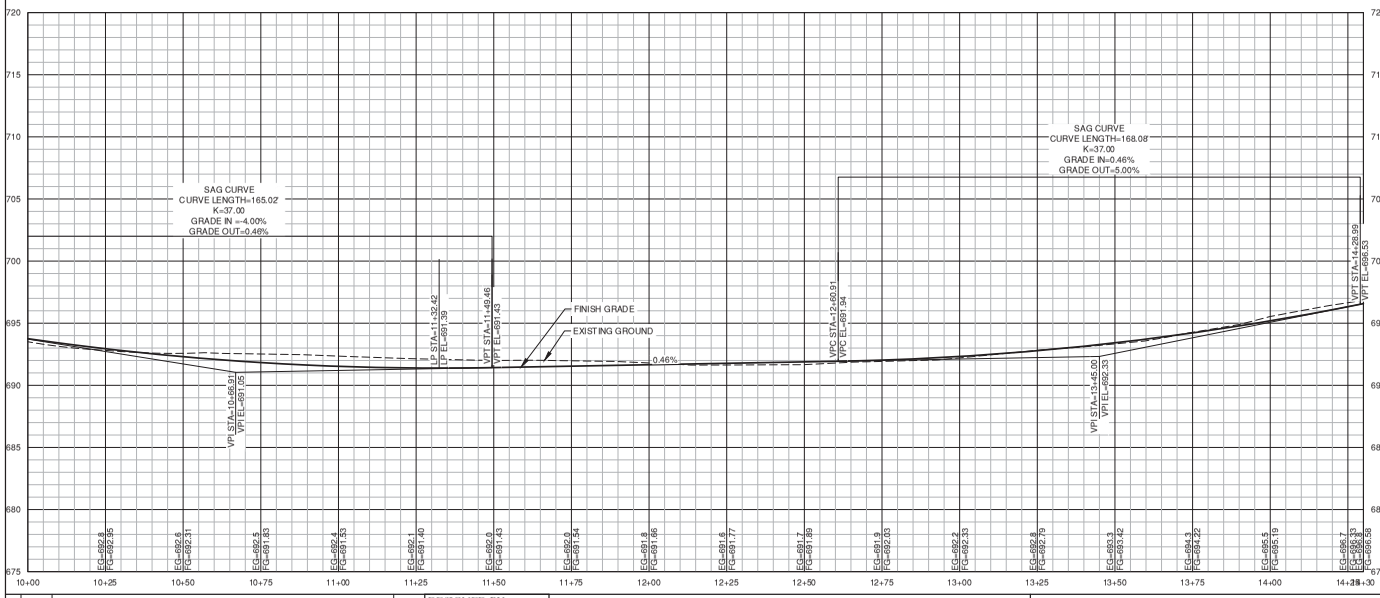
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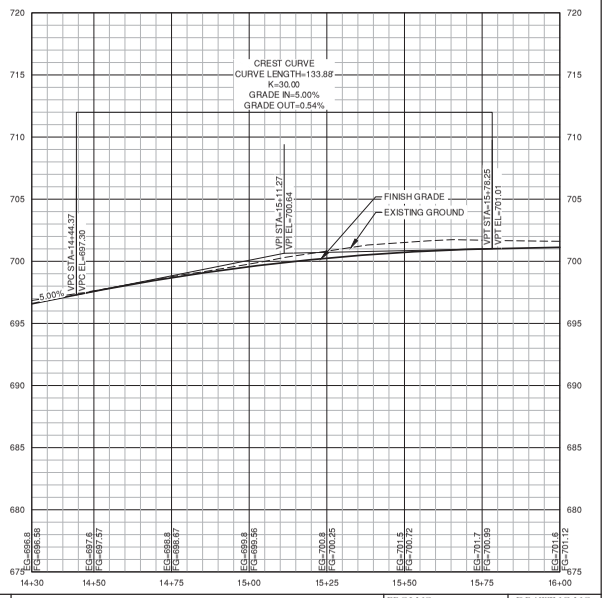
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SHEET NO: 11 OF 40

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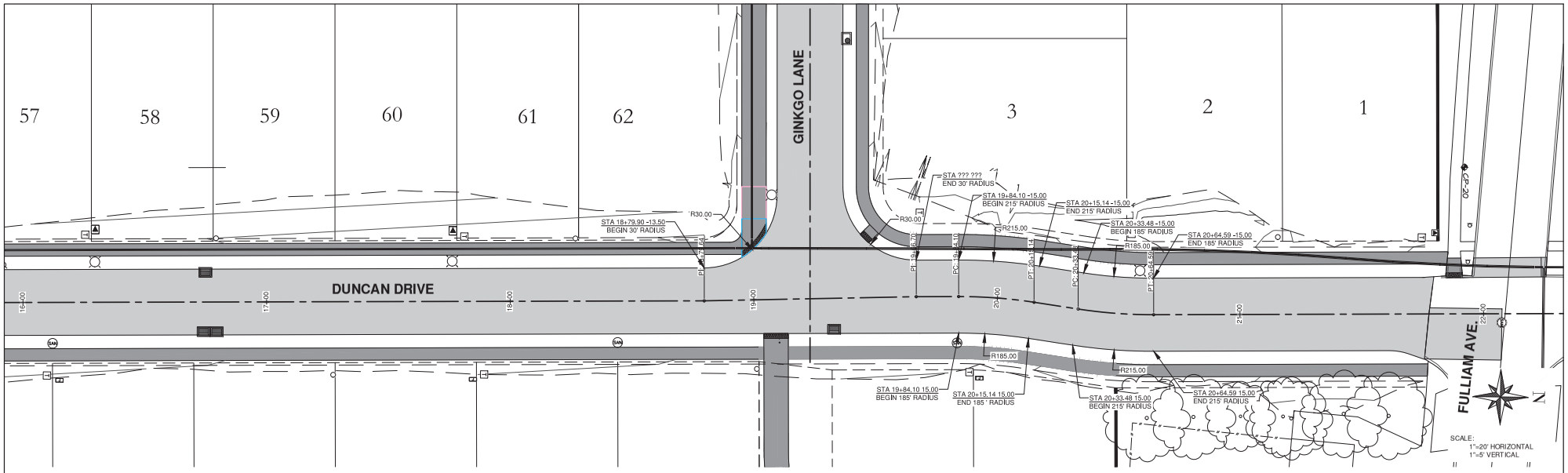
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P.O. BOX 413 MUSCATINE, IOWA
VOICE (563) 263-7691 EMAIL info@martin-whitacre.com

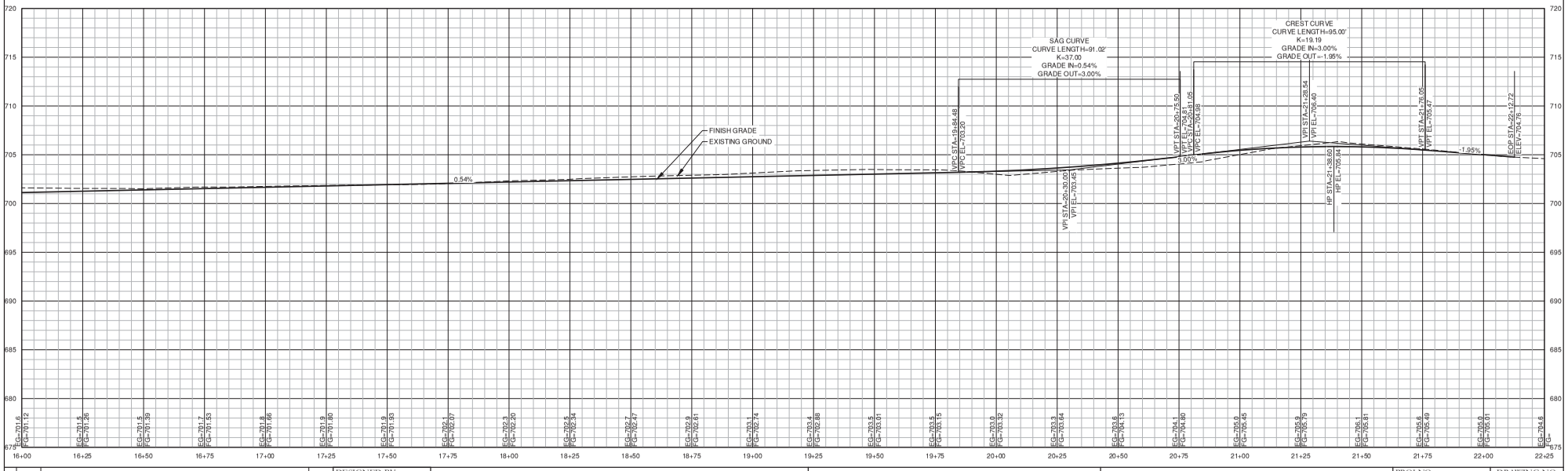
ARBOR COMMONS SUBDIVISION
NPSW ENTERPRISE, LLC
MUSCATINE, IOWA

PLAN & PROFILE

PROJ NO:	8253.18
CONST PROJ:	000
SCALE:	AS NOTED
DATE:	2/27/2019
DRAWING NO:	D.01
SHEET NO:	12 OF 40

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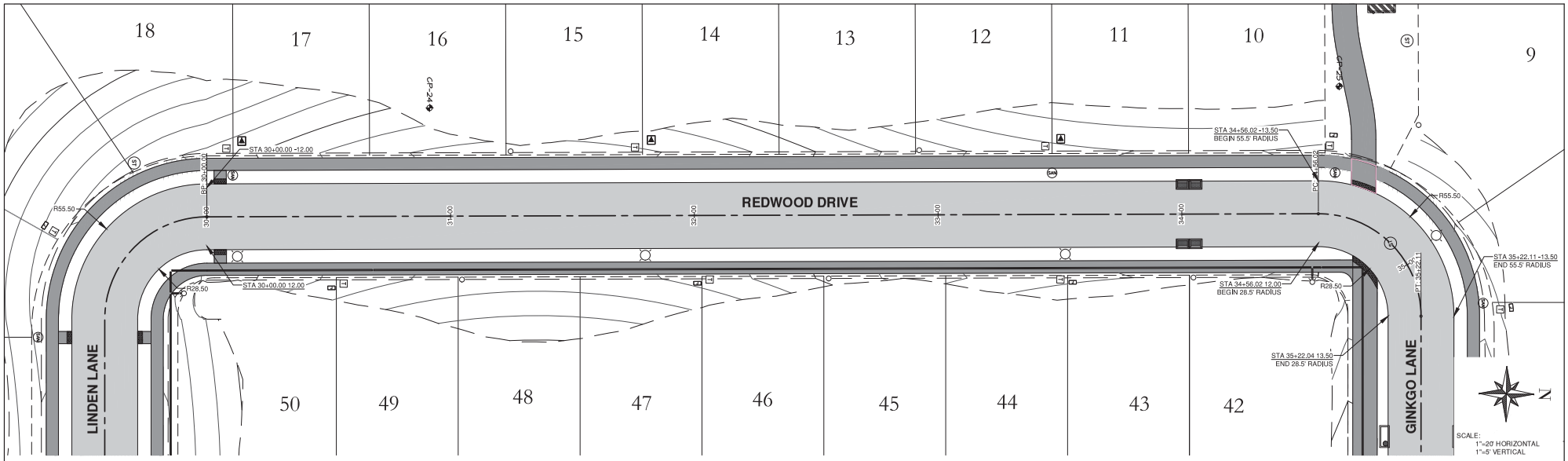
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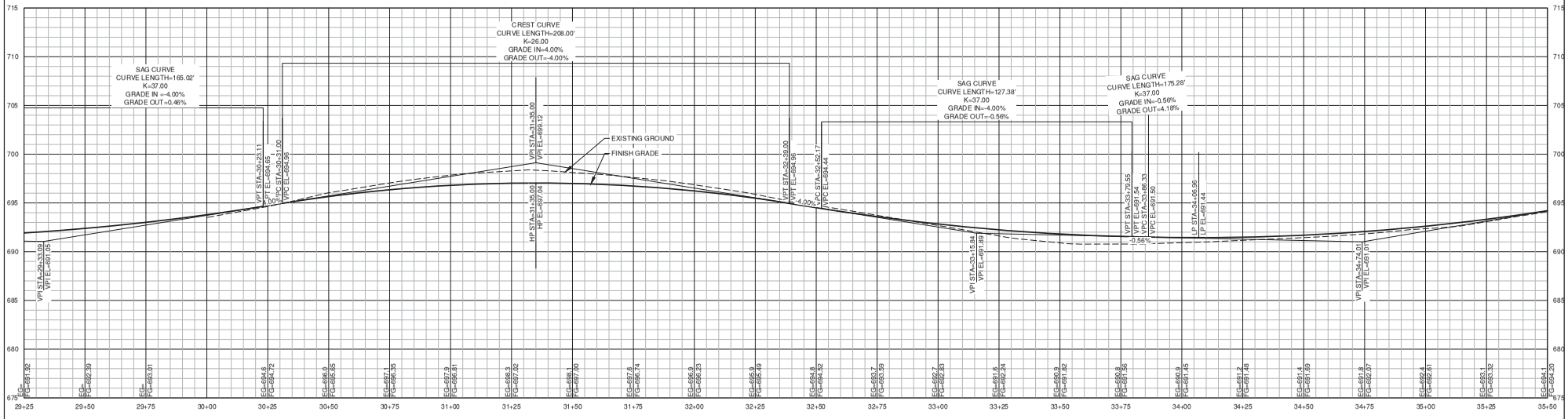
ARBOR COMMONS SUBDIVISION
NPSW ENTERPRISE, LLC
MUSCATINE, IOWA

PLAN & PROFILE

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CONST PROJ:	000
SCALE:	AS NOTED
DATE:	2/27/2019
DRAWING NO:	D.02
SHEET NO:	13 OF 40

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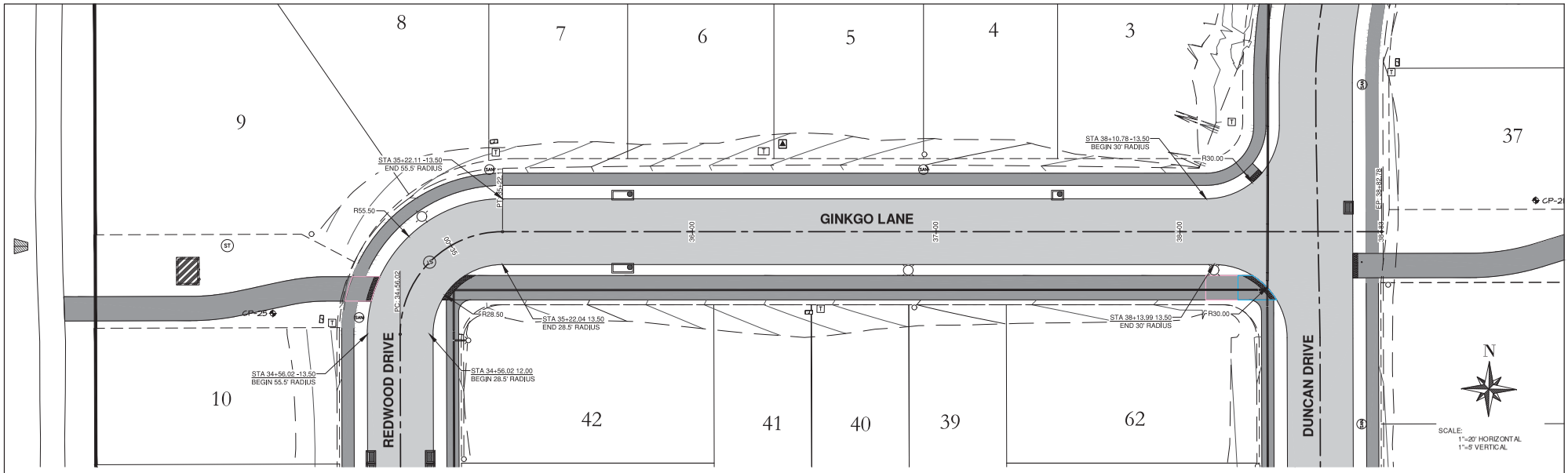
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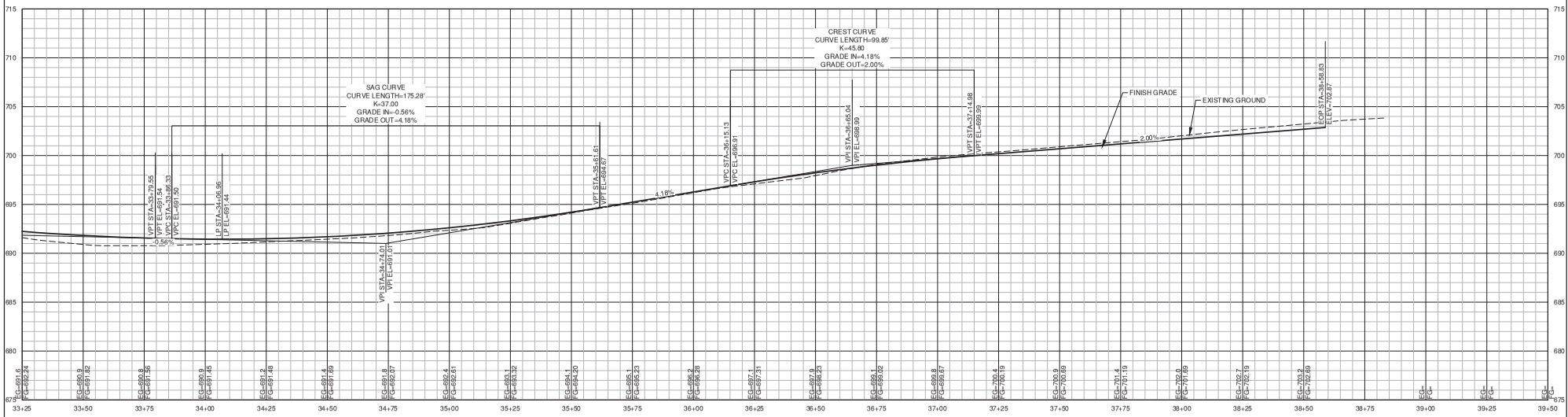
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MUSCATINE, IOWA

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CONST PROJ: 000
SCALE: AS NOTED
DATE: 2/27/2019
DRAWING NO: D.03
SHEET NO: 14 OF 40

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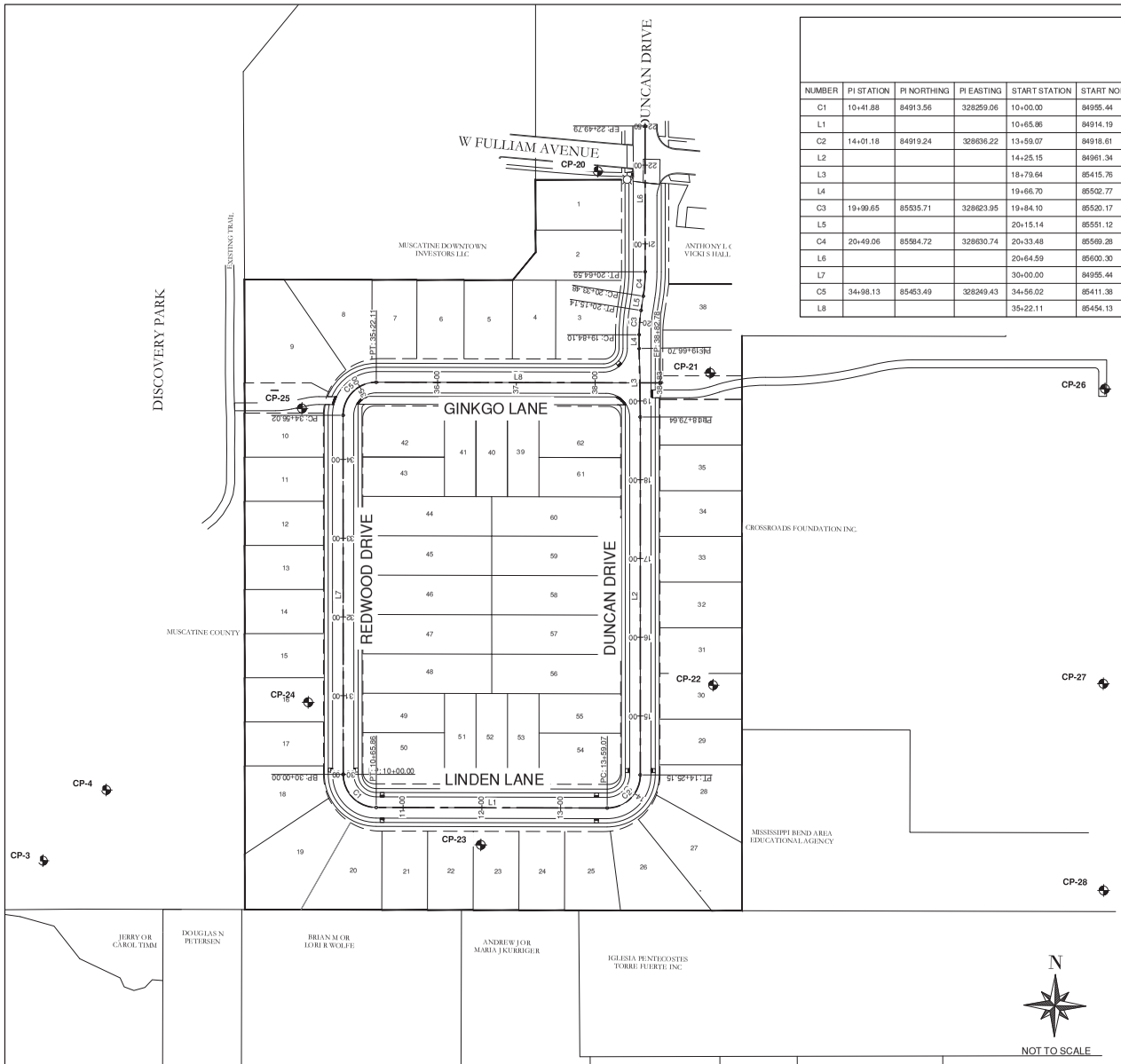
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SCALE:	AS NOTED
DATE:	2/27/2019
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SW ROAD
NE ROAD

NUMBER	PI STATION	PI NORTHING	PI EASTING	START STATION	START NORTHING	START EASTING	LENGTH	END STATION	END NORTHING	END EASTING	LINE/CHORD DIRECTION	RADIUS	Δ	T	E	D
C1	10+41.88	84913.56	328259.06	10+00.00	84955.44	328258.31	65.858	10+65.86	84914.19	328300.94	S45° 56' 31.38"E	42.00	089° 50' 31"	41.88	17.32	000° 00' 00"
L1				10+65.86	84914.19	328300.94	293.22'	13+59.07	84918.61	328594.12	N89° 08' 13.23"E					
C2	14+01.18	84919.24	328636.22	13+59.07	84918.61	328594.12	66.074	14+25.15	84961.34	328635.48	N44° 04' 05.23"E	42.00	090° 08' 16"	42.10	17.47	000° 00' 00"
L2				14+25.15	84961.34	328635.48	454.49'	18+79.64	85415.76	328627.54	N01° 00' 02.77"W					
L3				18+79.64	85415.76	328627.54	87.06'	19+66.70	85502.77	328624.52	N01° 59' 16.68"W					
L4				19+66.70	85502.77	328624.52	17.40'	19+84.10	85520.17	328624.22	N01° 00' 02.77"W					
C3	19+99.65	85535.71	328623.95	19+84.10	85520.17	328624.22	31.038	20+15.14	85551.12	328626.08	N03° 26' 42.46"E	200.00	008° 53' 30"	15.55	0.60	028° 57' 18"
L5				20+15.14	85551.12	328626.08	18.34'	20+33.48	85569.28	328628.60	N07° 53' 27.70"E					
C4	20+49.06	85584.72	328630.74	20+33.48	85569.28	328628.60	31.111	20+64.59	85600.30	328630.46	N03° 26' 04.79"E	200.00	008° 54' 46"	15.59	0.61	028° 57' 18"
L6				20+64.59	85600.30	328630.46	185.20'	22+49.79	85785.48	328627.16	N01° 01' 18.12"W					
L7				30+00.00	84955.44	328258.31	456.02'	34+56.02	85411.38	328250.18	N01° 01' 15.98"W					
C5	34+98.13	85453.49	328249.43	34+56.02	85411.38	328250.18	66.089	35+22.11	85454.13	328291.54	N44° 03' 28.12"E	42.00	090° 09' 28"	42.12	17.48	000° 00' 00"
L8				35+22.11	85454.13	328291.54	360.67'	38+82.78	85459.56	328652.18	N89° 08' 12.23"E					

CONTROL POINTS

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
3	84839.20	327879.01	671.97	SET 1/2" X 36" REBAR W/YELLOW CAP
4	84930.44	327957.74	680.96	SET 1/2" X 36" REBAR W/YELLOW CAP
20	85726.95	328568.02	706.39	SET 1/2" X 36" REBAR W/YELLOW CAP
21	85473.36	328715.18	705.05	SET 1/2" X 36" REBAR W/YELLOW CAP
22	85076.90	328725.84	703.12	SET 1/2" X 36" REBAR W/YELLOW CAP
23	84868.98	328434.54	690.41	SET 1/2" X 36" REBAR W/YELLOW CAP
24	85046.14	328212.30	695.79	SET 1/2" X 36" REBAR W/YELLOW CAP
25	85419.18	328197.82	690.31	SET 1/2" X 36" REBAR W/YELLOW CAP
26	85461.87	329216.75	714.80	SET MAGNETIC NAIL IN SIDEWALK
27	85087.38	329221.20	713.14	SET 1/2" X 36" REBAR W/YELLOW CAP
28	84824.86	329226.17	704.86	SET 1/2" X 36" REBAR W/YELLOW CAP

#	DATE	DESCRIPTION	BY

DESIGNED BY: JMS
DRAWN BY: JMS
PROJECT ENGR: RHT

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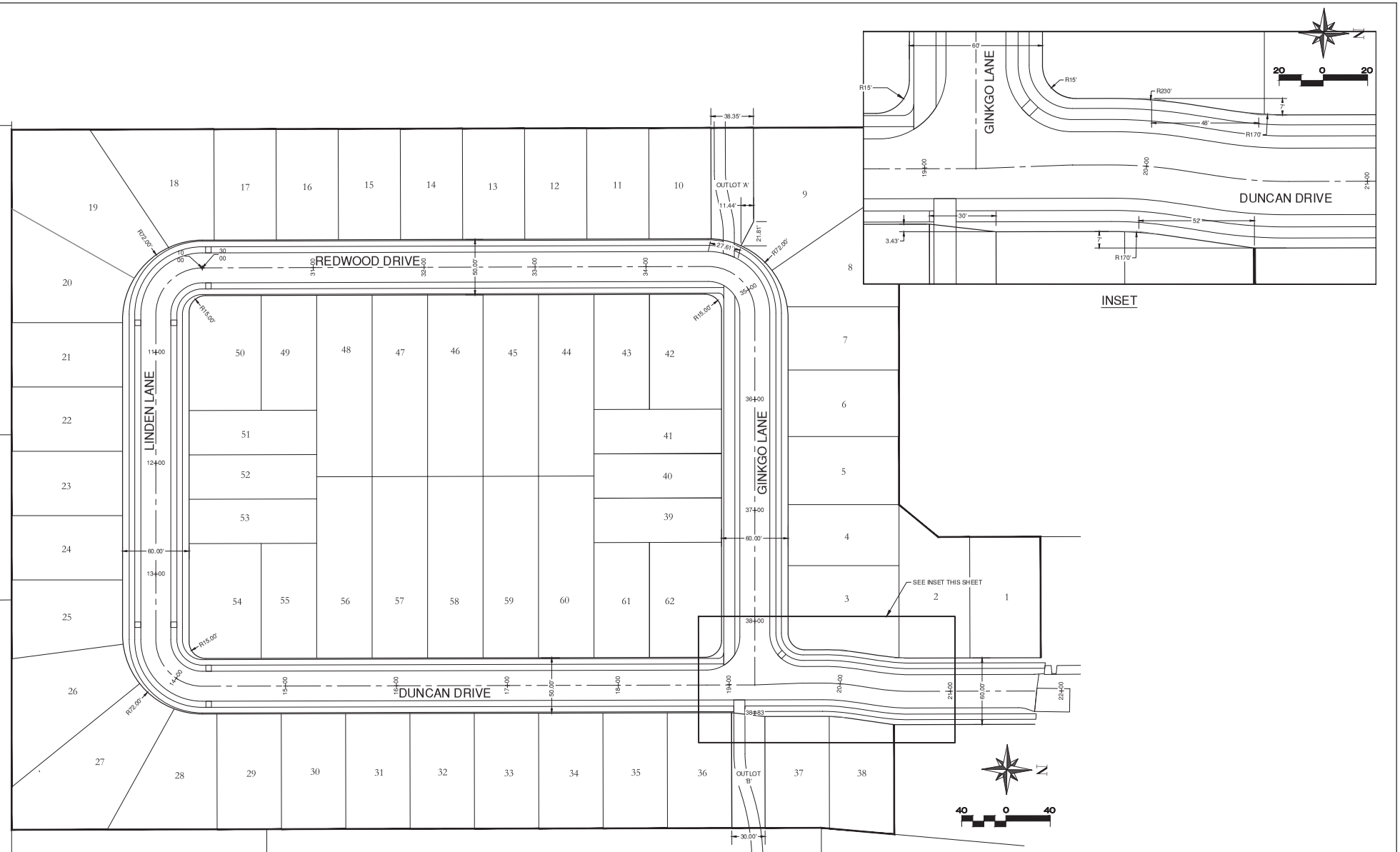
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ALIGNMENTS & BENCHMARKS

PROJ NO: 8253.18
CONST PROJ: 000
SCALE: AS NOTED
DATE: 2/27/2019

DRAWING NO: G.01
SHEET NO: 16 OF 40

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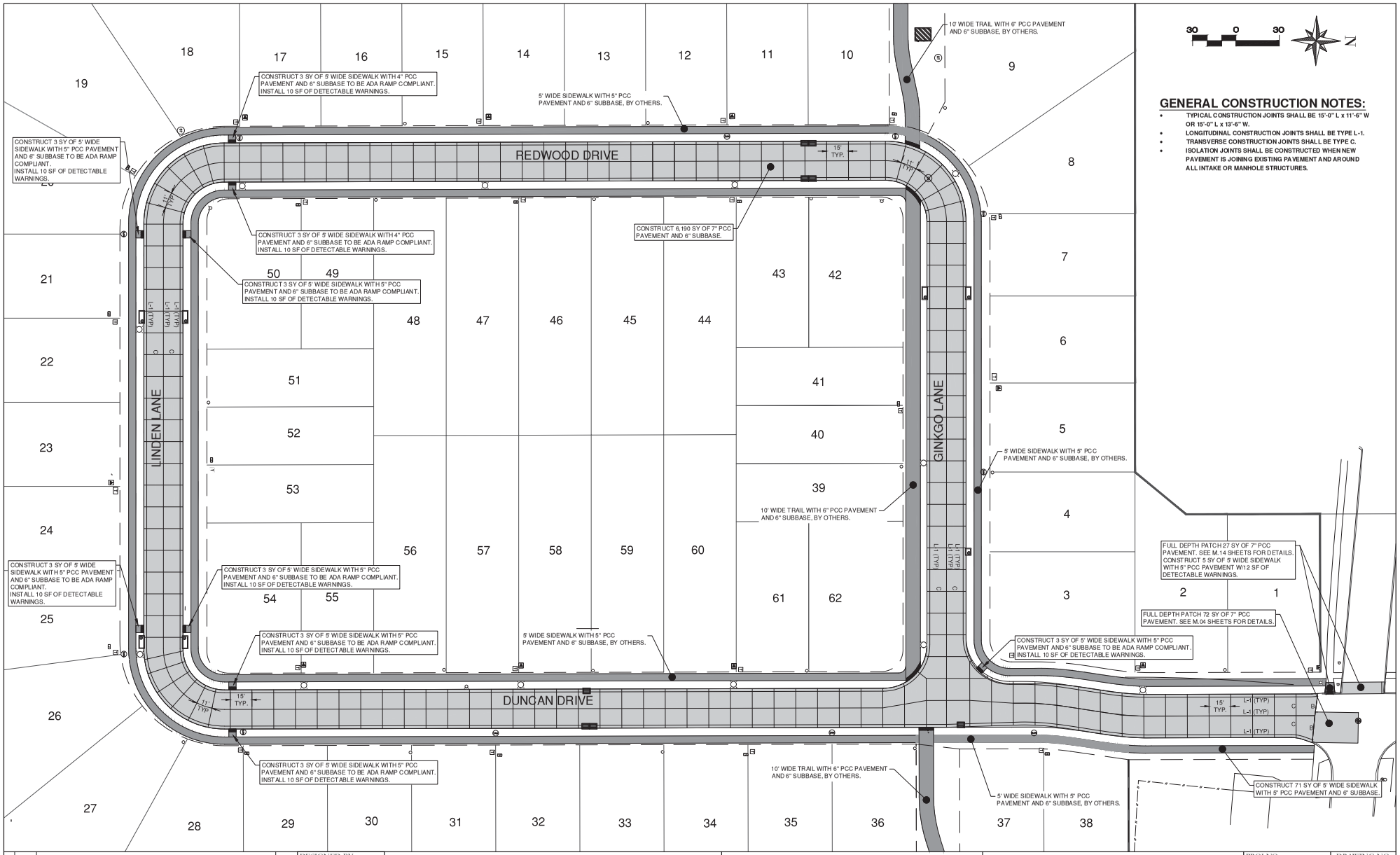
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RIGHT-OF-WAY

PROJ NO: 8253.18
CONST PROJ: 000
SCALE: AS NOTED
DATE: 2/27/2019

DRAWING NO: H.01
SHEET NO: 17 OF 40

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GENERAL CONSTRUCTION NOTES:

- TYPICAL CONSTRUCTION JOINTS SHALL BE 15'-0" L x 11'-6" W OR 15'-0" L x 13'-6" W.
- LONGITUDINAL CONSTRUCTION JOINTS SHALL BE TYPE L-1.
- TRANSVERSE CONSTRUCTION JOINTS SHALL BE TYPE C.
- ISOLATION JOINTS SHALL BE CONSTRUCTED WHEN NEW PAVEMENT IS JOINING EXISTING PAVEMENT AND AROUND ALL INTAKE OR MANHOLE STRUCTURES.

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DESIGNED BY: JMS
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PROJECT ENGR: RHT

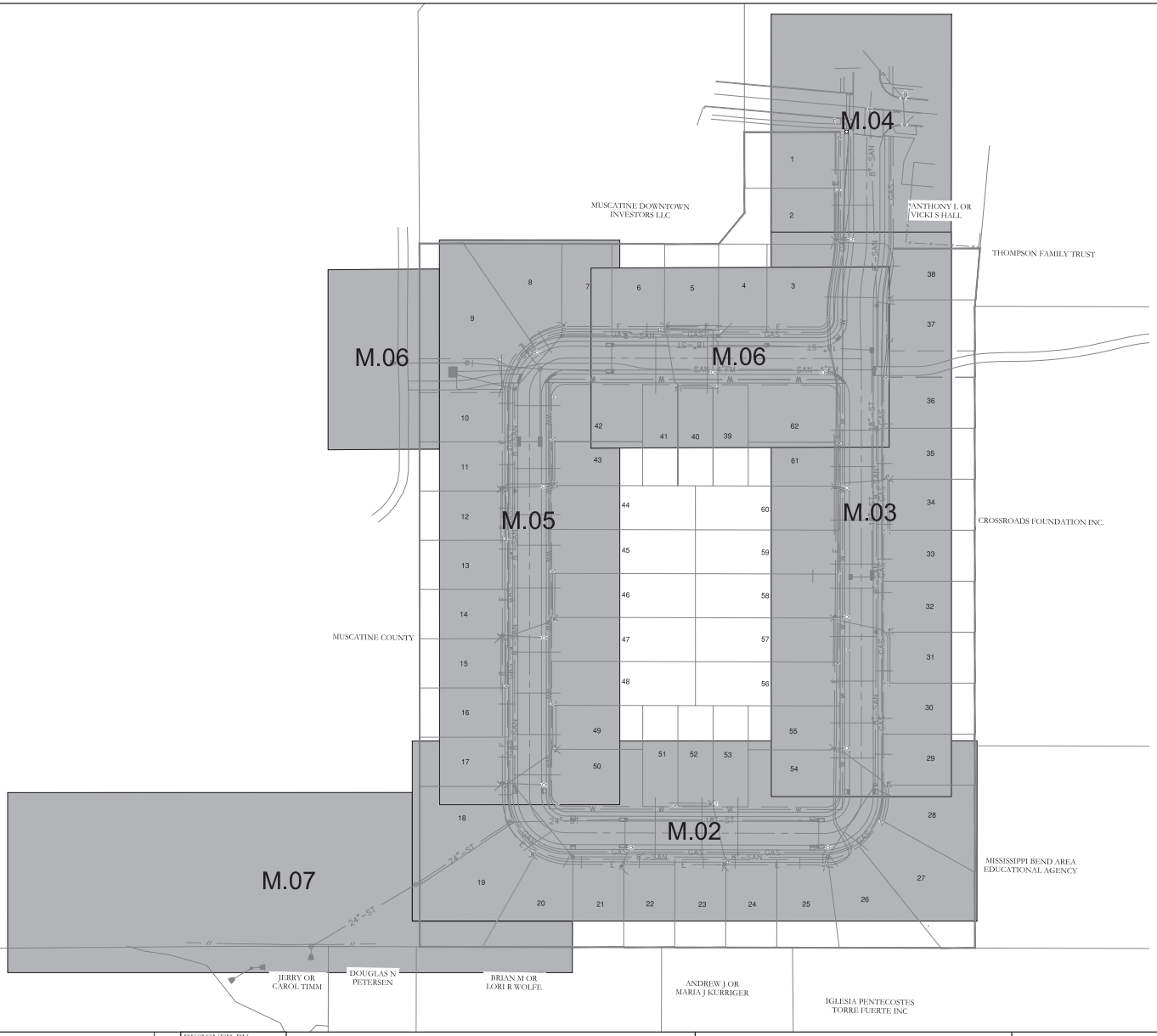
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PAVEMENT PLAN

PROJ NO:	8253.18
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SCALE:	AS NOTED
DATE:	2/27/2019
DRAWING NO:	L.01
SHEET NO:	18 OF 40

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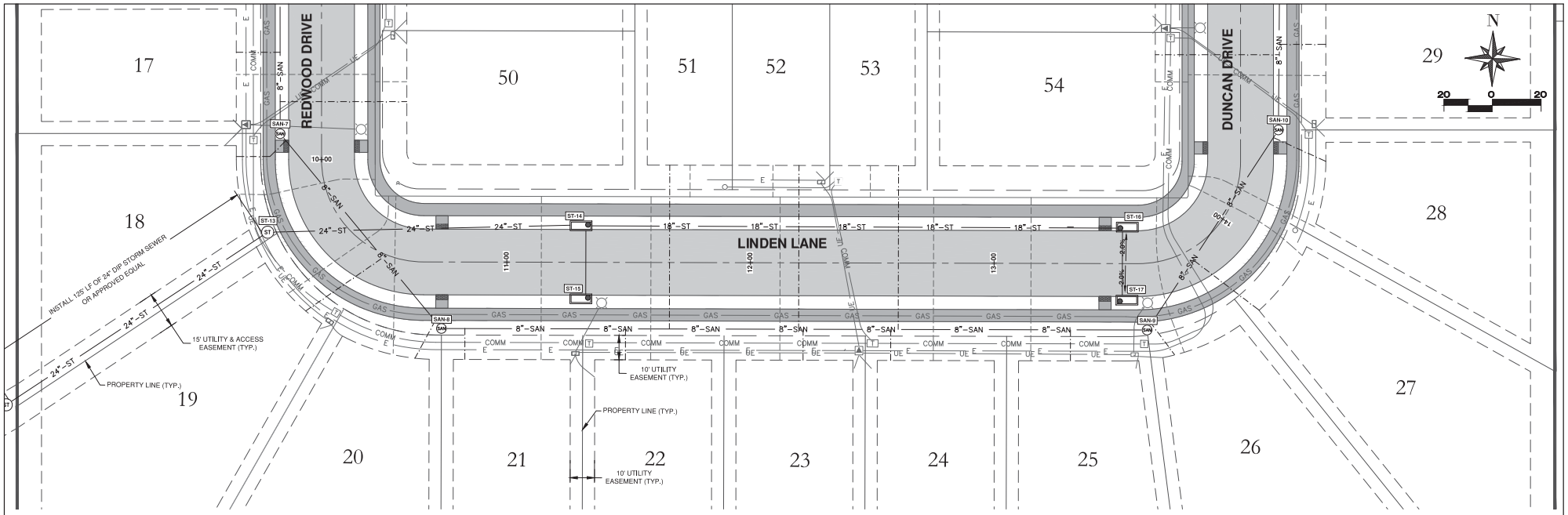
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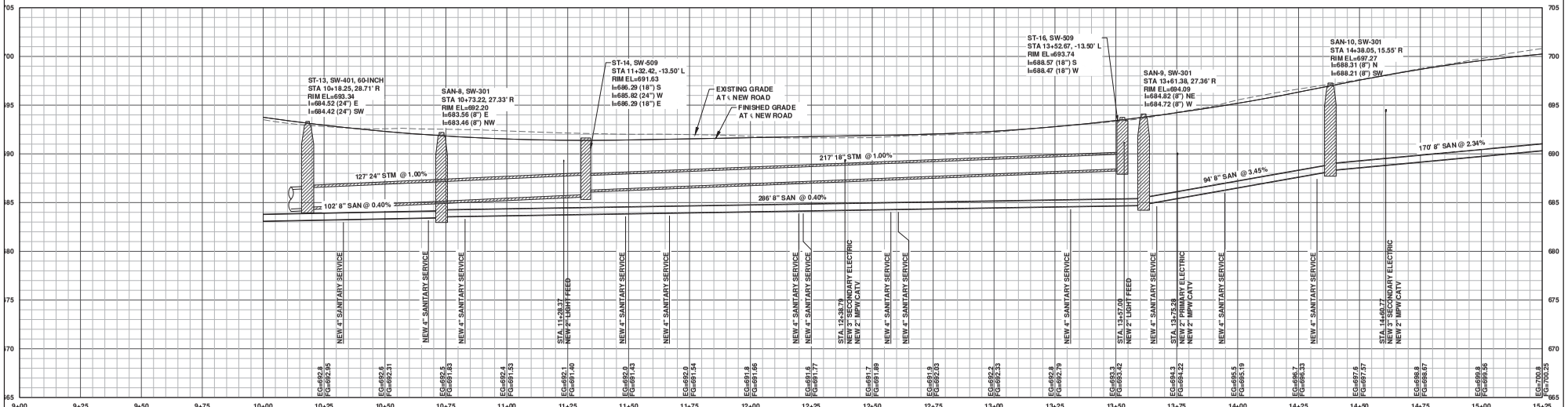
SEWER KEY PLAN

PROJ NO: 8253.18
CONST PROJ: 000
SCALE: AS NOTED
DATE: 2/27/2019

DRAWING NO: M.01
SHEET NO: 19 OF 40

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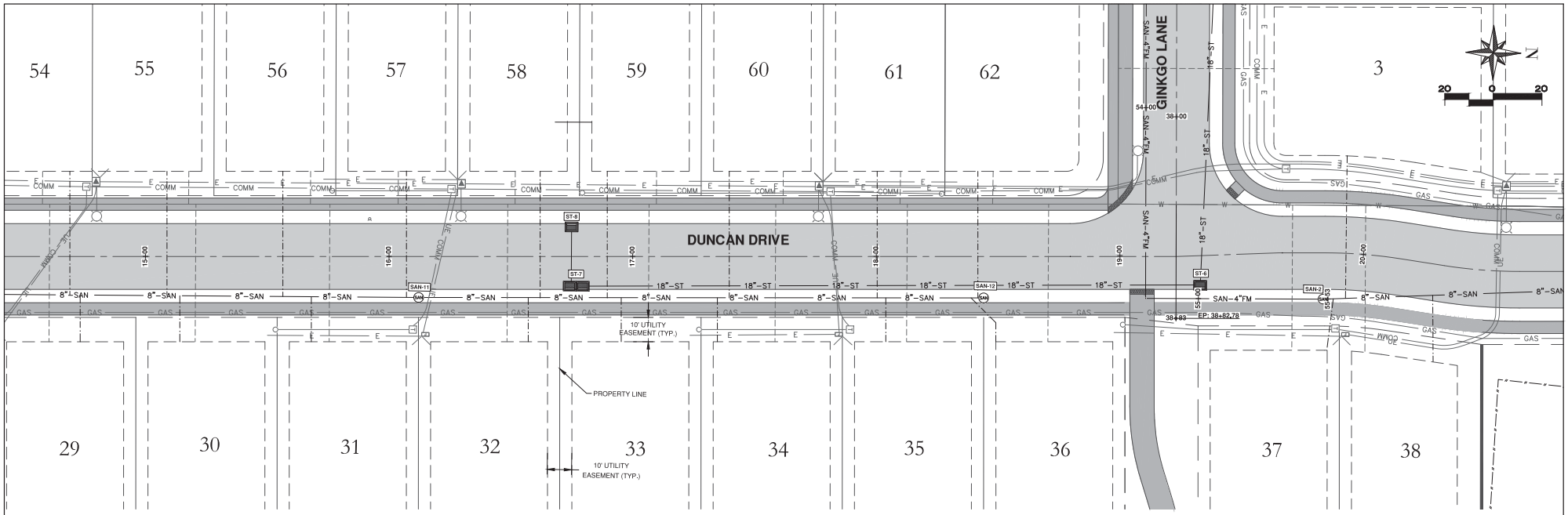
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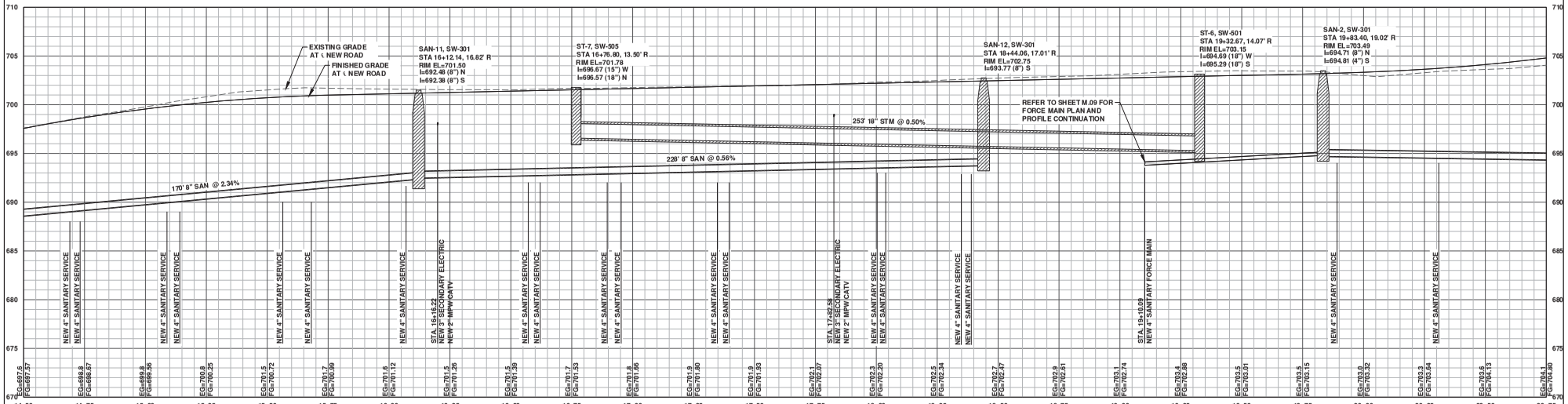
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SEWER PLAN & PROFILE

PROJ NO: 8253.18
CONST PROJ: 000
SCALE: AS NOTED
DATE: 2/27/2019
DRAWING NO: M.02
SHEET NO: 20 OF 40

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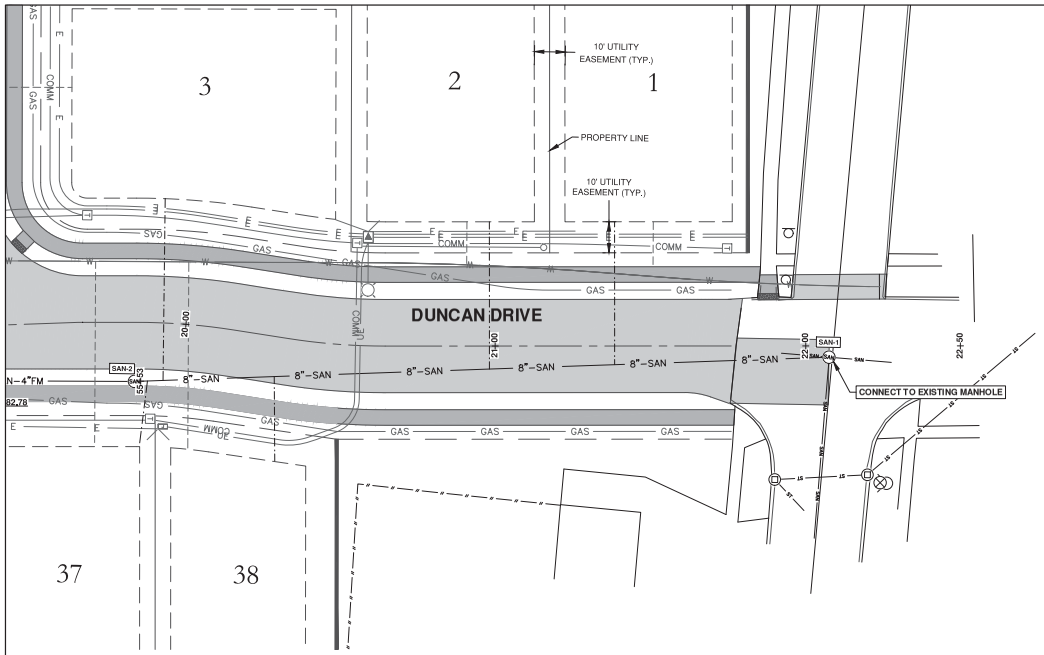
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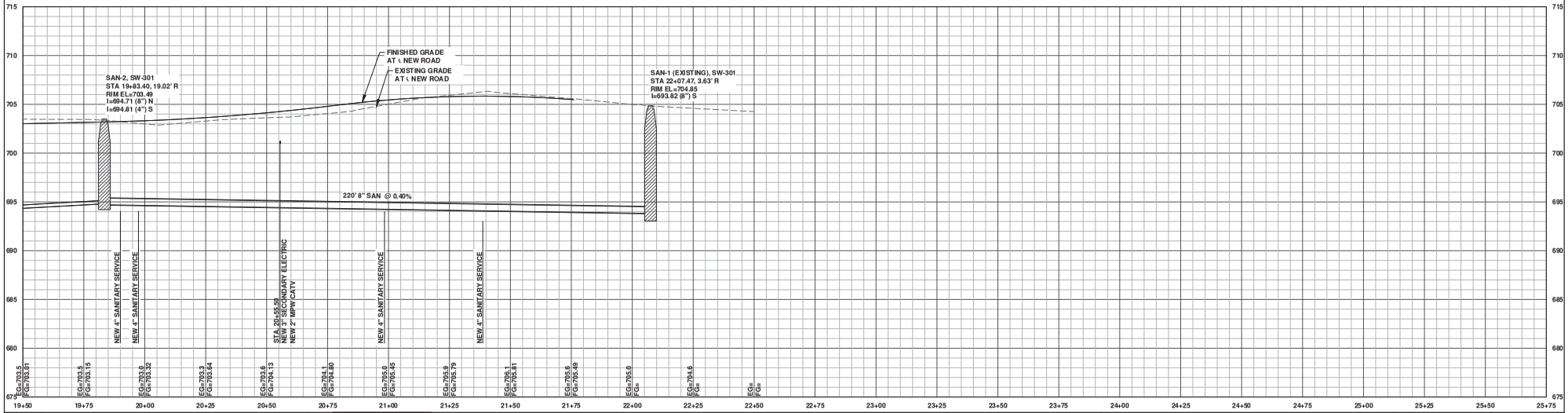
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PROJ NO:	8253.18
CONST PROJ:	000
SCALE:	AS NOTED
DATE:	2/27/2019
DRAWING NO:	M.03
SHEET NO:	21 OF 40

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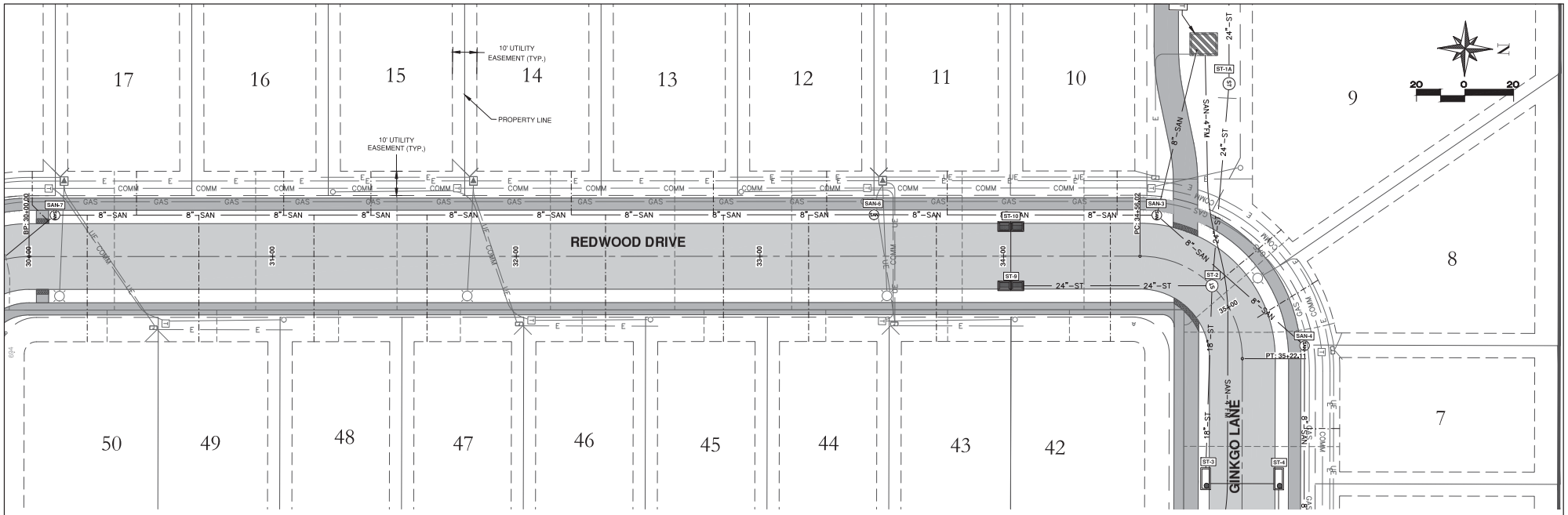
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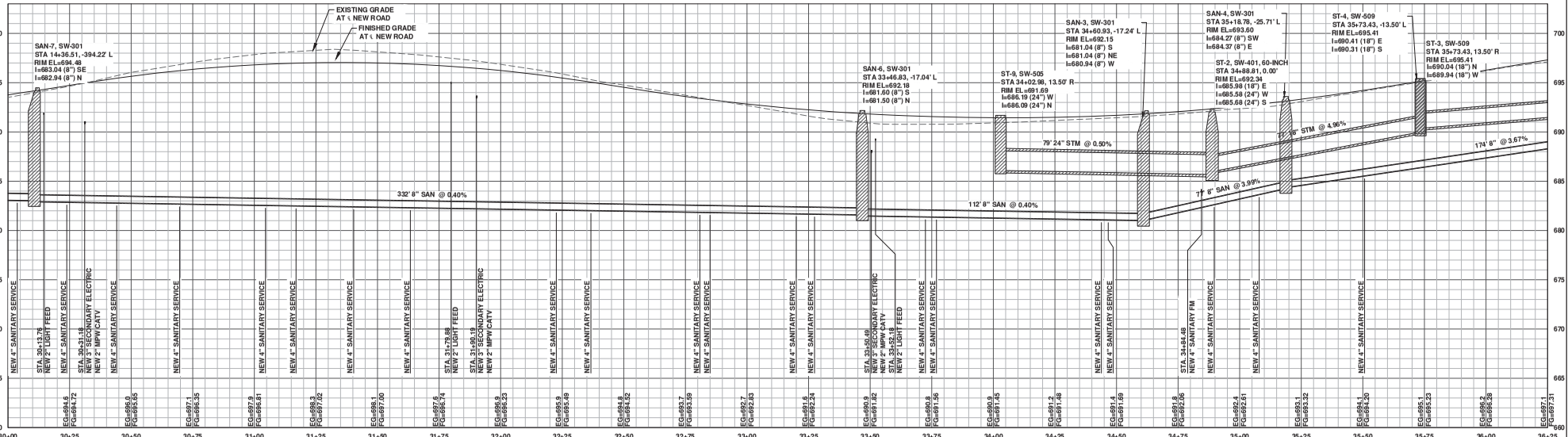
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PROJ NO: 8253.18
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SCALE: AS NOTED
DATE: 2/27/2019
DRAWING NO: M.04
SHEET NO: 22 OF 40

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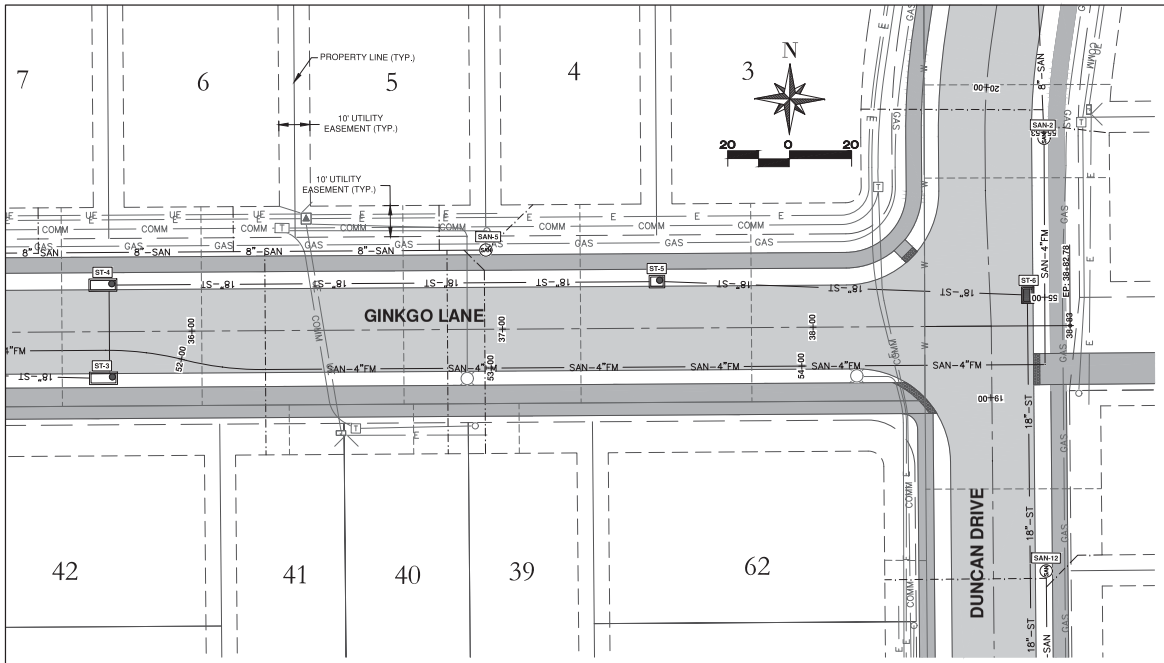
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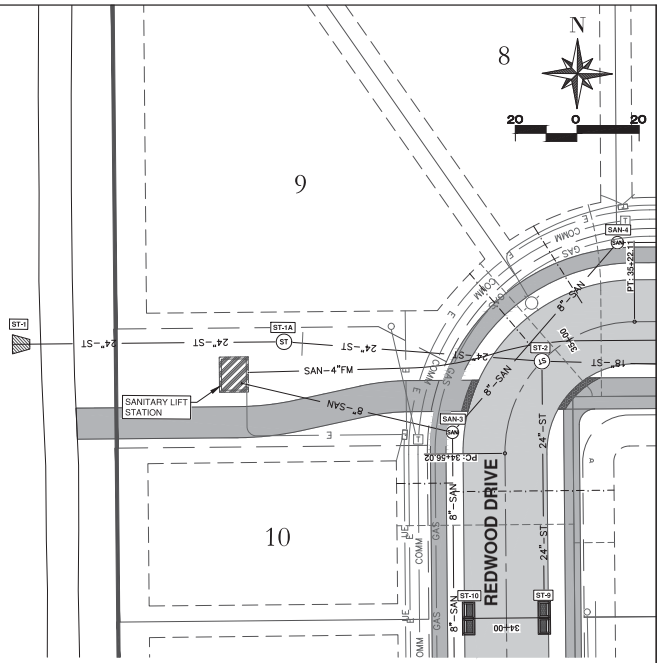
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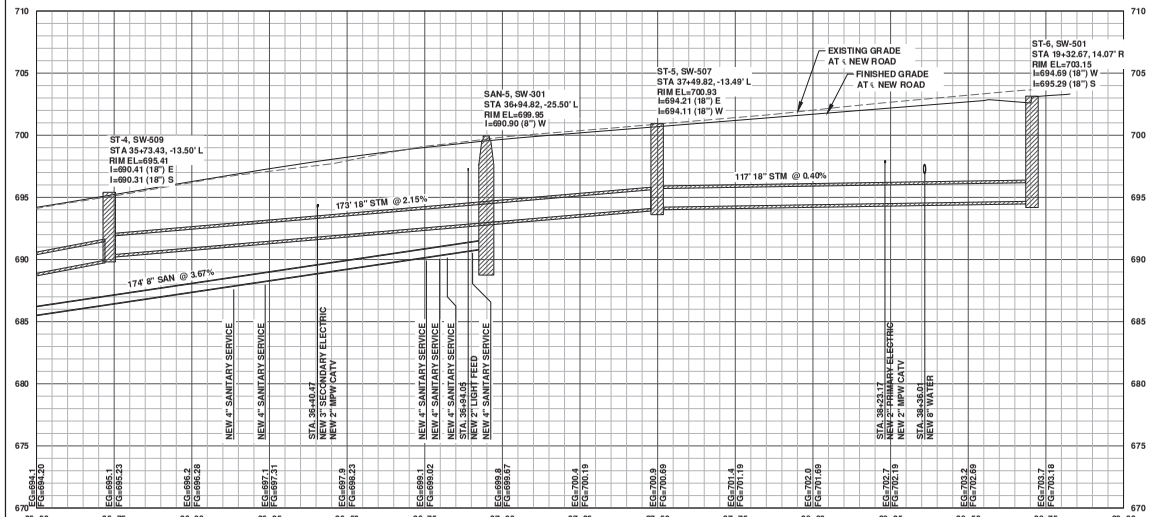
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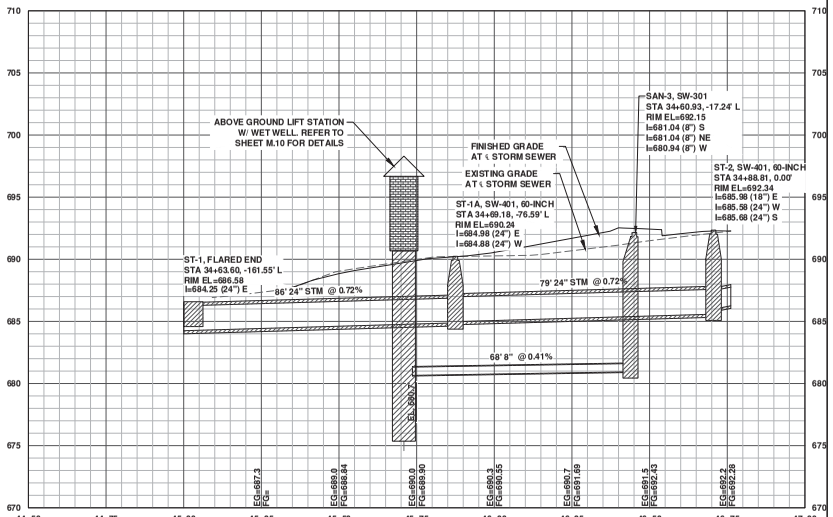
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CONST PROJ: 000
SCALE: AS NOTED
DATE: 2/27/2019
DRAWING NO: M.05
SHEET NO: 23 OF 40

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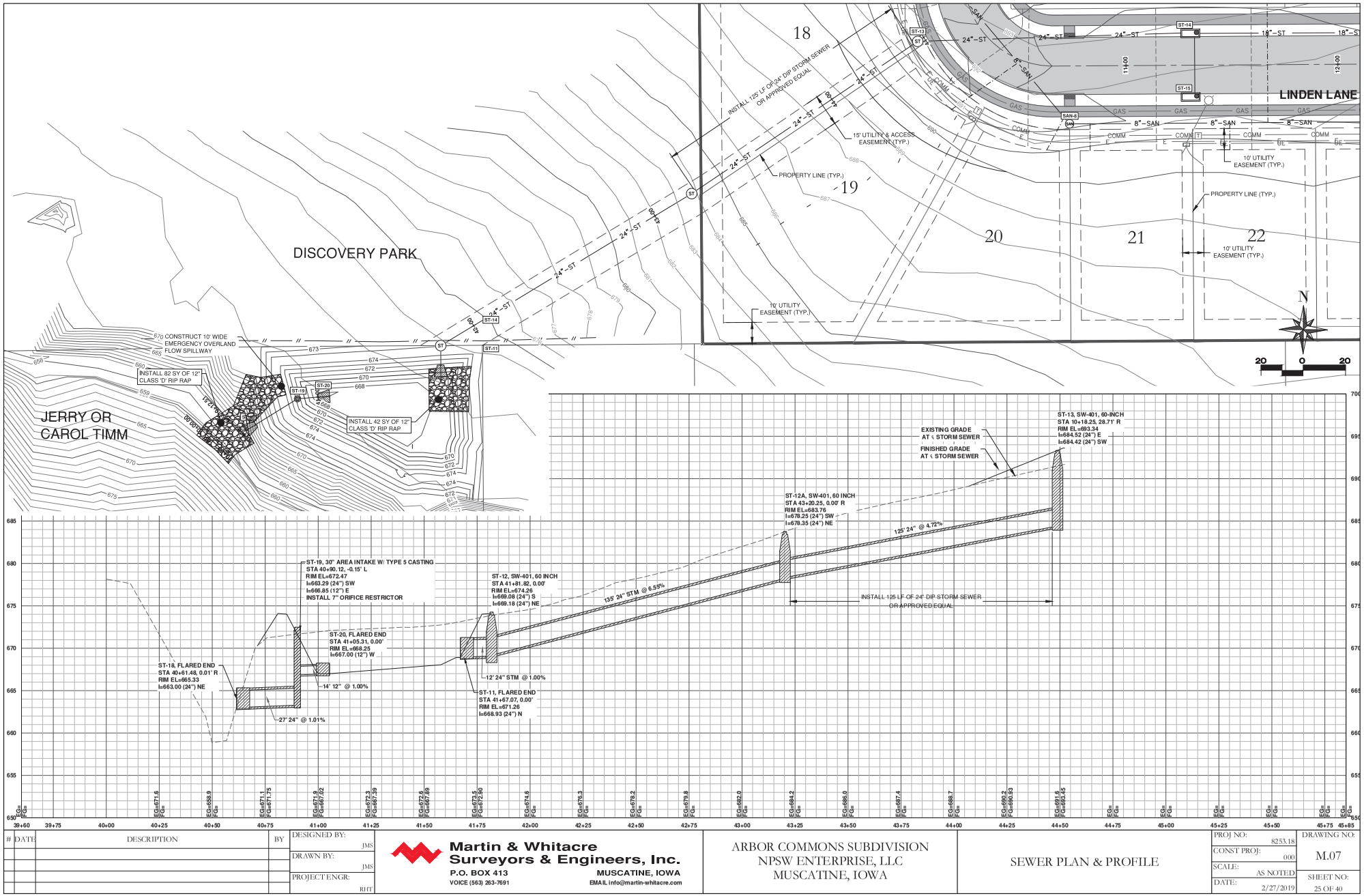
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PROJ NO:	8253.18
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SCALE:	AS NOTED
DATE:	2/27/2019
DRAWING NO:	M.06
SHEET NO:	24 OF 40

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DESIGNED BY: JMS
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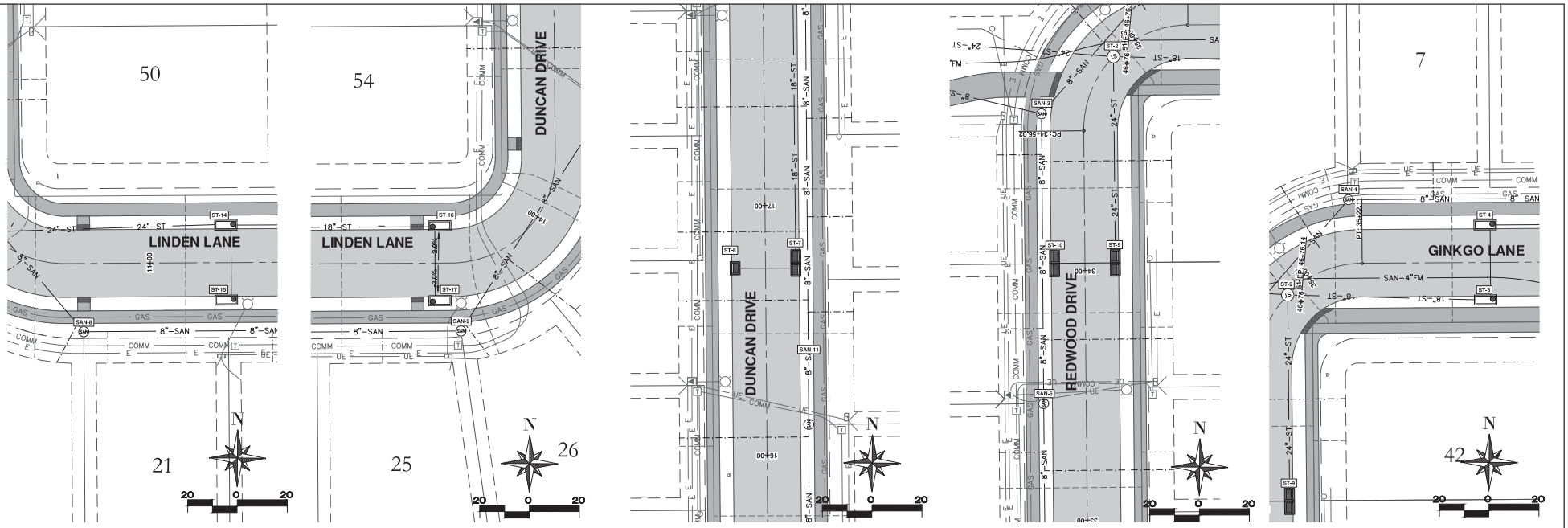
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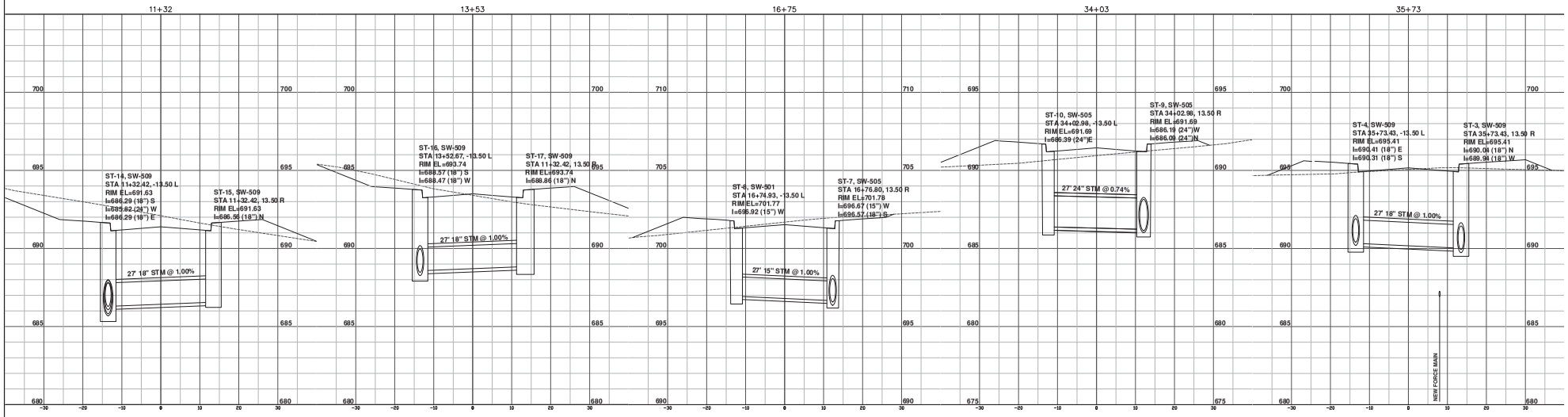
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SCALE:	AS NOTED
DATE:	2/27/2019
DRAWING NO:	M.07
SHEET NO:	25 OF 40

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#	DATE	DESCRIPTION	BY

DESIGNED BY: JMS
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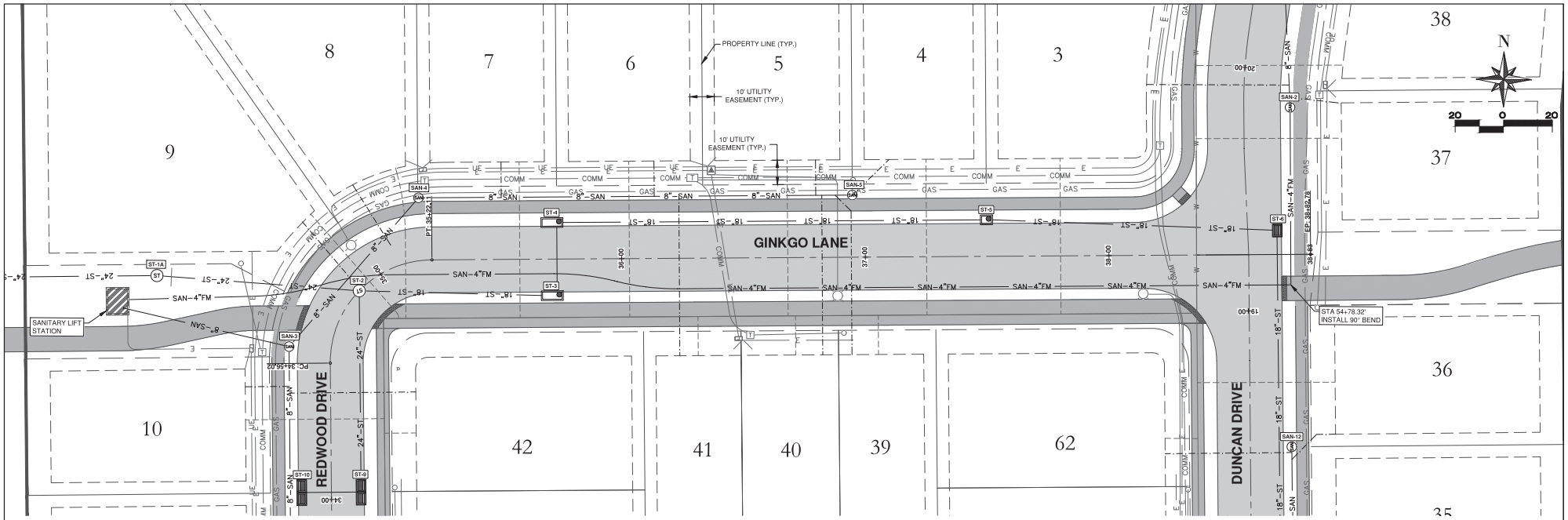
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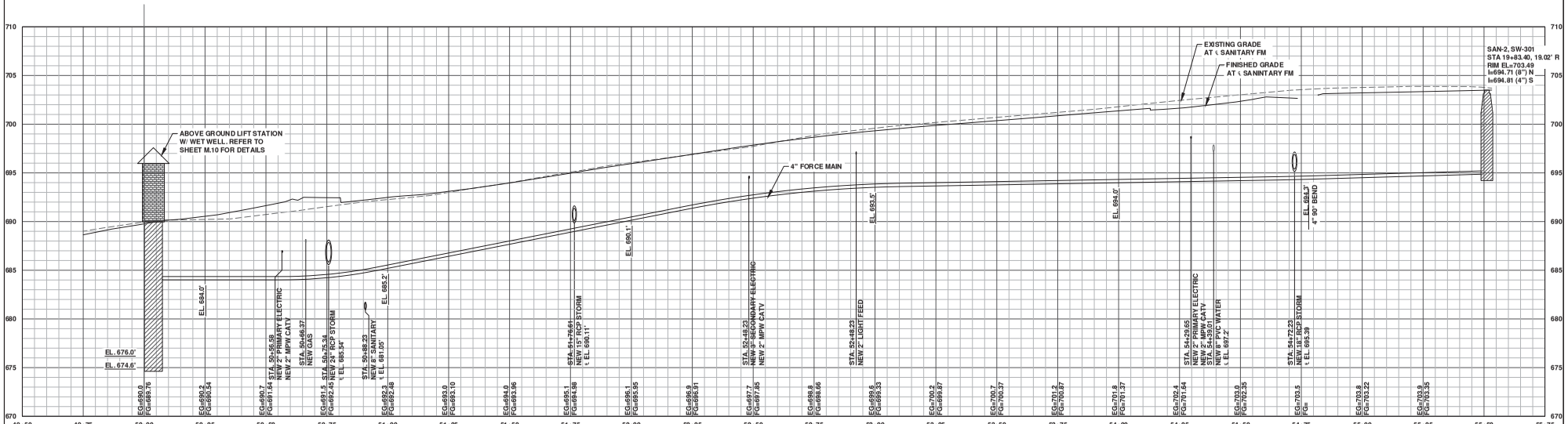
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SEWER CROSS RUNS

PROJ NO: 8253.18
CONST PROJ: 000
SCALE: AS NOTED
DATE: 2/27/2019
DRAWING NO: M.08
SHEET NO: 26 OF 40

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#	DATE	DESCRIPTION	BY

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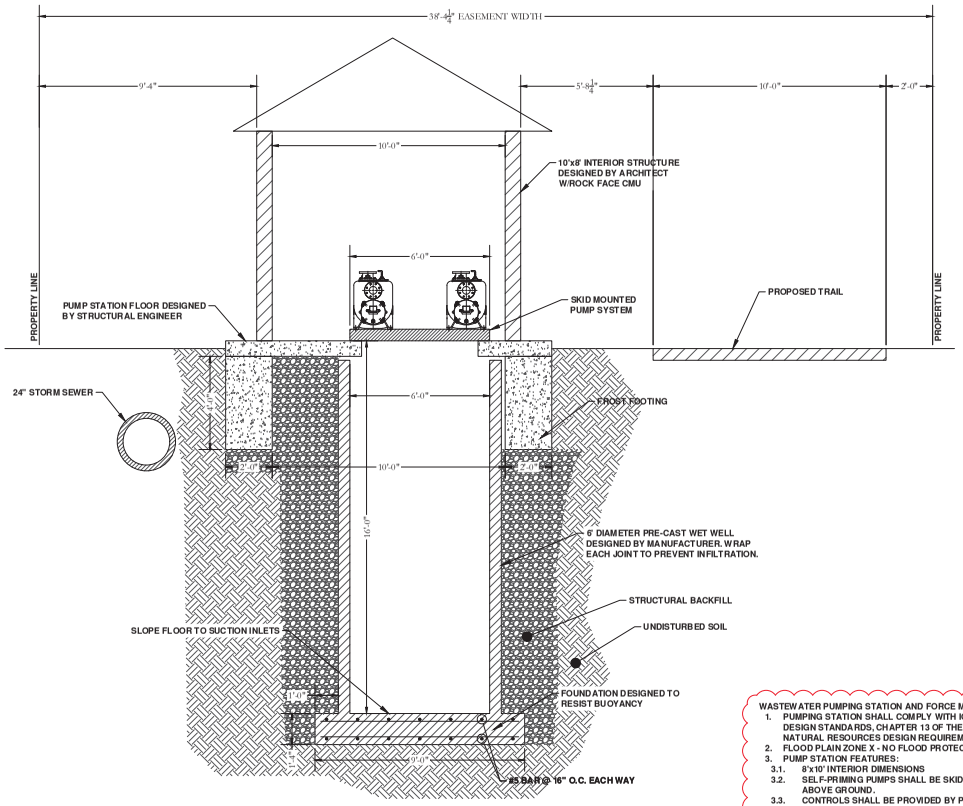
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NPSW ENTERPRISE, LLC
MUSCATINE, IOWA

SEWER FORCE MAIN

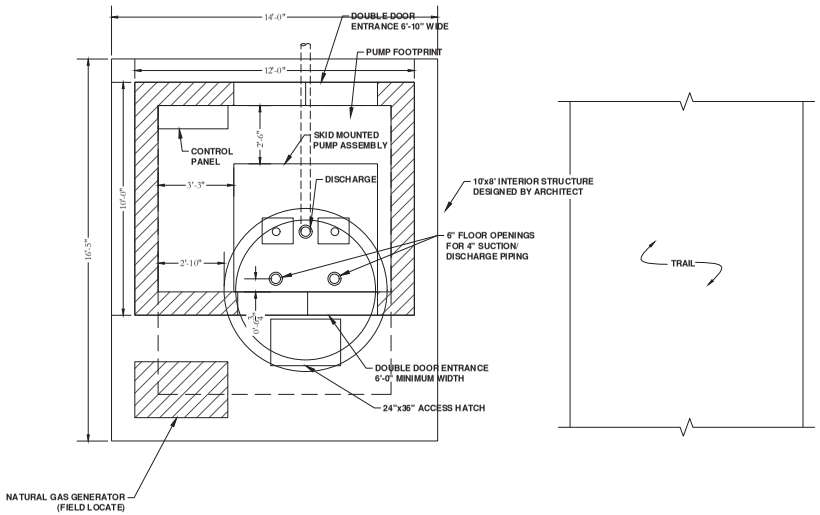
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SHEET NO:	27 OF 40

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LIFT STATION - SECTION VIEW

SCALE: 1" = 3/8"



LIFT STATION PLAN VIEW

SCALE: 1" = 3/8"

WASTEWATER PUMPING STATION AND FORCE MAIN SPECIFICATIONS:

1. PUMPING STATION SHALL COMPLY WITH IOWA WASTEWATER FACILITIES DESIGN STANDARDS, CHAPTER 13 OF THE IOWA DEPARTMENT OF NATURAL RESOURCES DESIGN REQUIREMENTS.
2. FLOOD PLAIN ZONE X - NO FLOOD PROTECTION REQUIRED
3. PUMP STATION FEATURES:
   - 3.1. 8'x10' INTERIOR DIMENSIONS
   - 3.2. SELF-PRIMING PUMPS SHALL BE SKID MOUNTED AND INSTALLED ABOVE GROUND.
   - 3.3. CONTROLS SHALL BE PROVIDED BY PUMP MANUFCTURER
     - 3.3.1. STARTUP SHALL INCLUDE ADJUSTMENT OF SET POINTS, PLACEMENT OF FLOATS AND OTHER CONTROL FEATURES.
   - 3.4. VENTS TO BE ROUTED THROUGH WALL NEAR CEILING OR THROUGH THE ROOF.
     - 3.4.1. WET WELL VENT
     - 3.4.2. GENERATOR VENT
     - 3.4.3. EXHAUST VENT
   - 3.5. TRASH BASKET SHALL BE INSTALLED AT ALL INLETS IN THE WET WELL WITH HOIST TO RAISE AND LOWER BASKET FOR MAINTENANCE.
4. ELECTRICAL SYSTEM AND COMPONENTS SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE REQUIREMENTS FOR CLASS 1 GROUP D, DIVISION 1 LOCATIONS.
5. PUMP STATION SHALL OPERATE ON SINGLE PHASE ELECTRICITY. ELECTRICAL LOAD INCLUDES:
   - 5.1. TWO 5HP (MAX) MOTORS
   - 5.2. OVERHEAD LIGHT
   - 5.3. EXTERIOR LIGHT ABOVE DOORS
   - 5.4. WET WELL FAN
     - 5.4.1. AIR SHALL BE FORCED INTO THE WET WELL
     - 5.4.2. CONTINUOUS AIR CHANGE RATE SHALL BE 90 CFM
   - 5.5. EXHAUST FAN
     - 5.5.1. MANUFACTURER SHALL BE GREENHECK OR APPROVED EQUAL
     - 5.5.2. CEILING MOUNTED OR WALL MOUNTED
     - 5.5.3. AIR CHANGE RATE SHALL BE 120 CFM
   - 5.6. TWO GFCI OUTLETS, ONE INSIDE AND ONE OUTSIDE
6. SKID MOUNTED PUMP ASSEMBLIES
   - 6.1. MANUFACTURER SHALL BE QUALITY FLOW IOWA
     - 6.1.1. PUMPS SHALL BE "BARMESA", MODEL SH4-U
     - 6.1.2. PUMPS SHALL BE SELF PRIMING PUMPS
     - 6.1.3. DESIGN CRITERIA IS 100 GPM AT 25.8 TDH
     - 6.1.4. SIZE OF SOLIDS TO PASS SHALL BE 3"
   - 6.2. ELAPSED TIME METERS SHALL BE INSTALLED ON ALL PUMPS
   - 6.3. STANDARD 6'x6' SKID MOUNTED PUMP STATION EQUIPPED WITH TWO PUMPS.
     - 6.3.1. NO ENCLOSURE IS REQUIRED BY MANUFACTURER
   - 6.4. SHUTOFF VALVE SHALL BE LOCATED ON EACH SUCTION LINE.
   - 6.5. SHUTOFF VALVE AND CHECK VALVE SHALL BE LOCATED ON DISCHARGE LINE OF EACH PUMP.
     - 6.5.1. CHECK VALVE SHALL BE LOCATED BETWEEN SHUTOFF VALVE AND PUMP.
   - 6.6. PUMP DRAIN KIT
   - 6.7. TRANSIENT VOLTAGE SURGE SUPPRESSOR
   - 6.8. AUTOMATIC AIR-RELIEASE VALVES
   - 6.9. BALL VALVES FOR MANUAL ISOLATION OF AIR-RELEASE VALVES
   - 6.10. DISCHARGE FAILURE PROTECTION SYSTEM
   - 6.11. CERTIFIED PERFORMANCE TEST
7. PUMP SUCTION LINES SHALL BE CONSTRUCTED OF 4-INCH NON-CORROSIVE PIPING WITH THE INLET 6-INCHES ABOVE THE FINISHED FLOOR.
8. ALARM SYSTEM
   - 8.1. ALARM SHALL BE ACTIVATED IN CASES OF POWER FAILURE, PUMP FAILURE, HIHG WATER LEVEL OR ANY CAUSE OF PUMPING STATION MALFUNCTION.
     - 8.1.1. ALARMS SHALL BE TRANSMITTED TO THE WASTE WATER TREATMENT FACILITY
     - 8.1.2. ALARMS SHALL BE ABLE TO OPERATE IN THE EVENT OF A POWER OUTAGE
     - 8.1.3. SET HIGH LEVEL ALARM AT 1.5' ABOVE LEAD PUMP ON LEVEL.
9. EMERGENCY OPERATION
   - 9.1. AN EMERGENCY MEANS OF OPERATION SHALL BE PROVIDED IN THE EVENT OF A POWER OUTAGE
   - 9.2. MANUFACTURER OF STAND-BY GENERATOR SHALL BE KOHLER
     - 9.2.1. GENERATOR SHALL BE FUELED BY NATURAL GAS
     - 9.2.2. GENERATOR MODEL NO. 25CCL
     - 9.2.3. SET RATING SHALL BE 469.3 ALTENATOR, 120/240 VOLTAGE, SINGLE PHASE, 60 Hz, 25/25 kW/kVA, 105 AMPS
   - 9.3. STANDBY FACILITY SHALL BE CAPABLE OF BEING PLACED IN OPERATION AT THE SITE WITHIN 30 MINUTES OF THE ONSET OF THE EMERGENCY CONDITION.
   - 9.4. GENERATORS SHALL BE ABLE TO PROVIDE POWER FOR THE LIGHTING, VENTILATING SYSTEM AND ONE PUMP.
10. FORCE MAIN
    - 10.1. ALL FORCE MAIN SHALL BE TESTED AT A MINIMUM PRESSURE OF AT LEAST 15 PSI FOR AT LEAST 30 MINUTES AT THE LOW POINT IN THE LINE.
    - 10.2. ALLOWABLE LEAKAGE IS 0.06 GALLONS PER HOUR

#	DATE	DESCRIPTION	BY
2	5/7/19	PUMP MANUFACTURER AND GENRATOR UPDATED	
1	3/27/19	IDNR REVISIONS	

DESIGNED BY: JMS
DRAWN BY: JMS
PROJECT ENGR: RHT

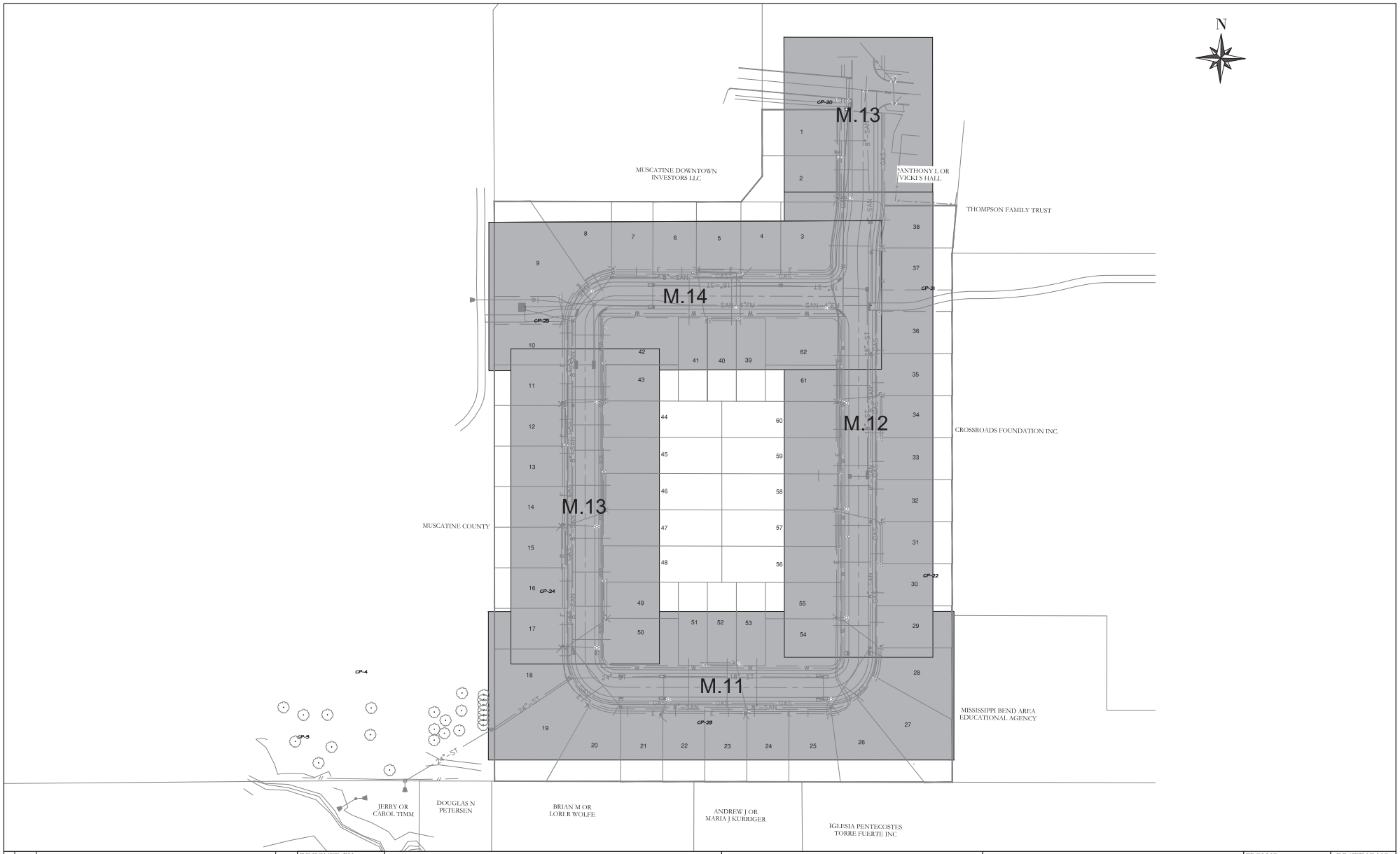
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VOICE (563) 263-7691 EMAIL info@martin-whitacre.com

ARBOR COMMONS SUBDIVISION
NPSW ENTERPRISE, LLC
MUSCATINE, IOWA

SANITARY SEWER LIFT STATION

PROJ NO: 8253.18
CONST PROJ: 000
SCALE: AS NOTED
DATE: 2/27/2019
DRAWING NO: M.10
SHEET NO: 28 OF 40

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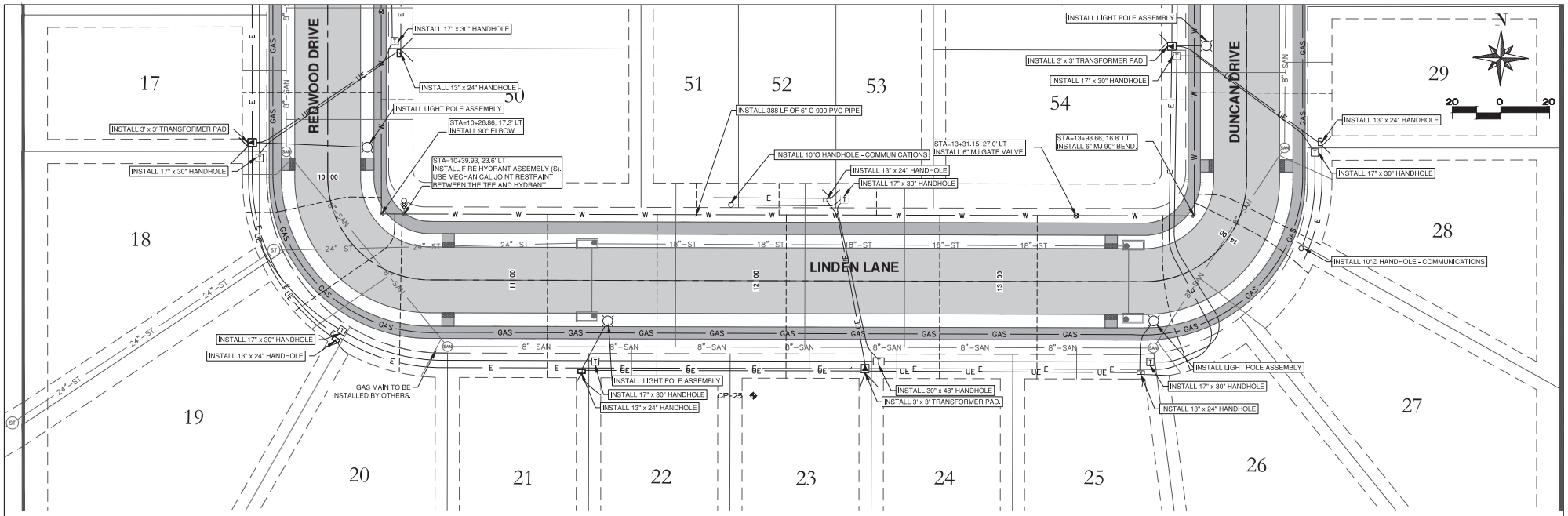
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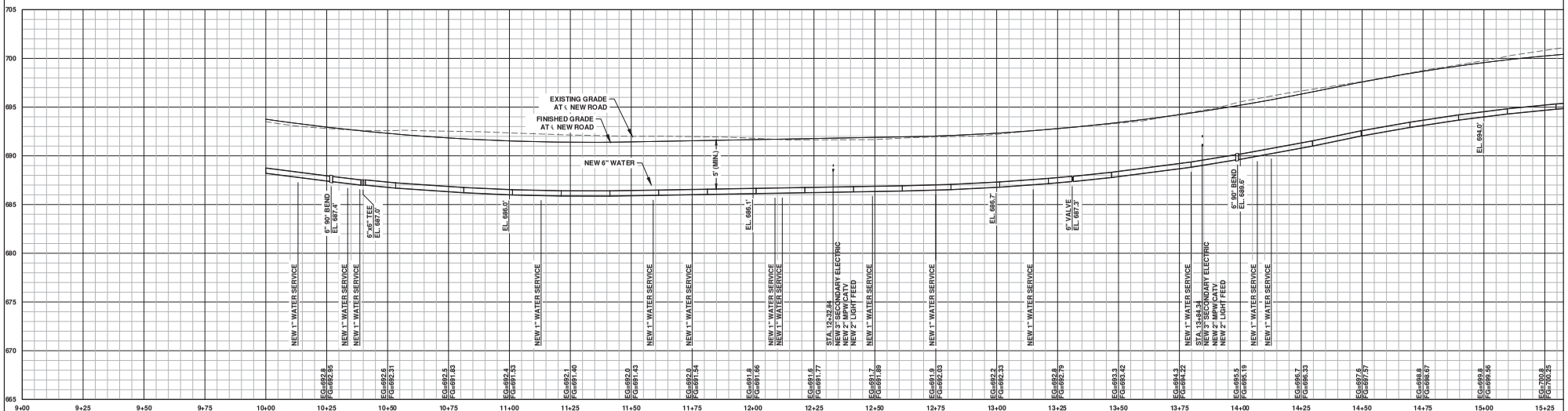
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PROJ NO: 8253.18
CONST PROJ: 000
SCALE: AS NOTED
DATE: 2/27/2019

DRAWING NO: M.11
SHEET NO: 29 OF 40

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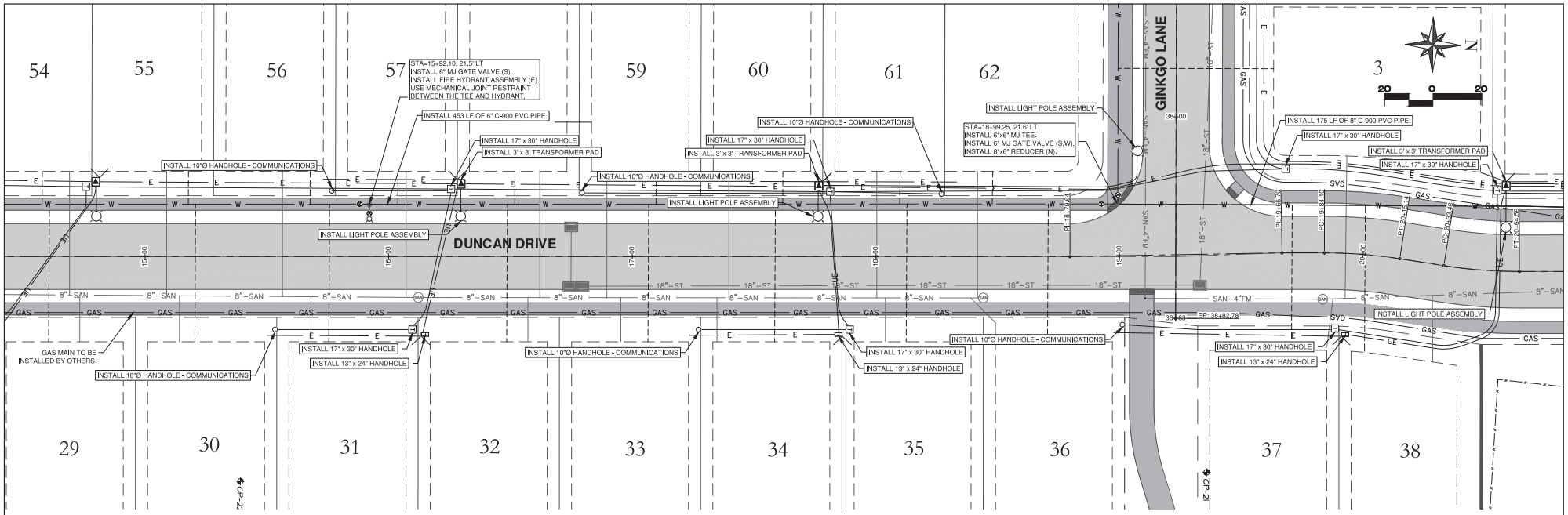
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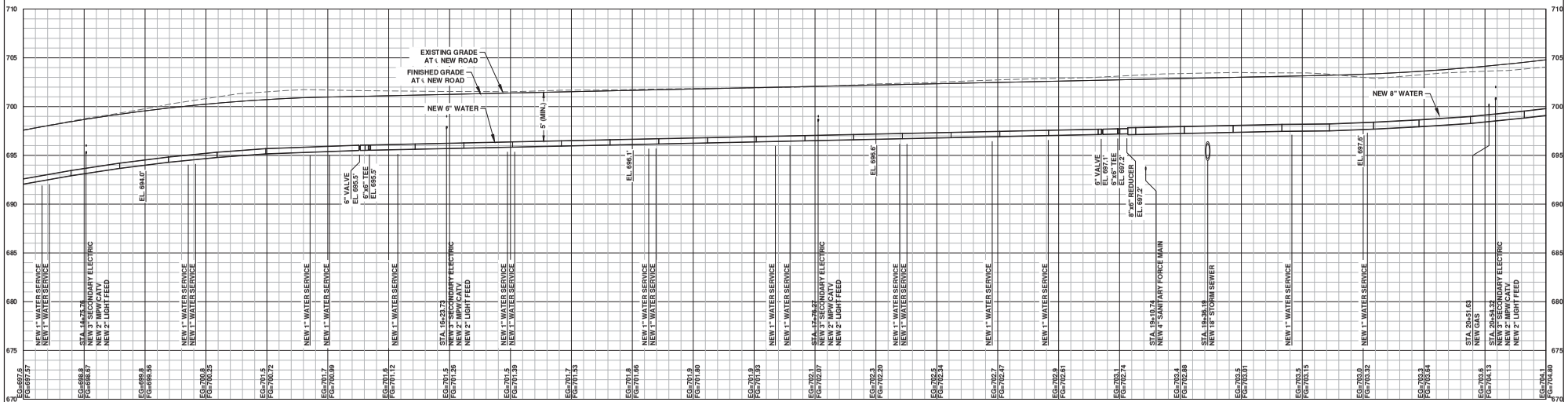
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UTILITY PLAN & PROFILE

PROJ NO: 8253.18
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SCALE: AS NOTED
DATE: 2/27/2019
DRAWING NO: M.12
SHEET NO: 30 OF 40

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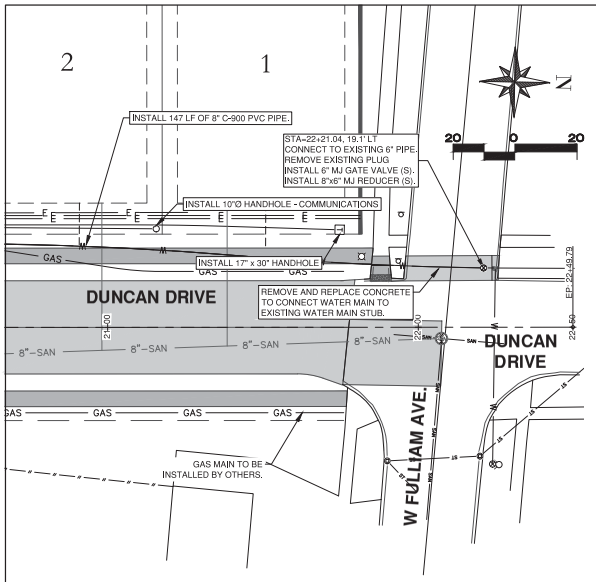
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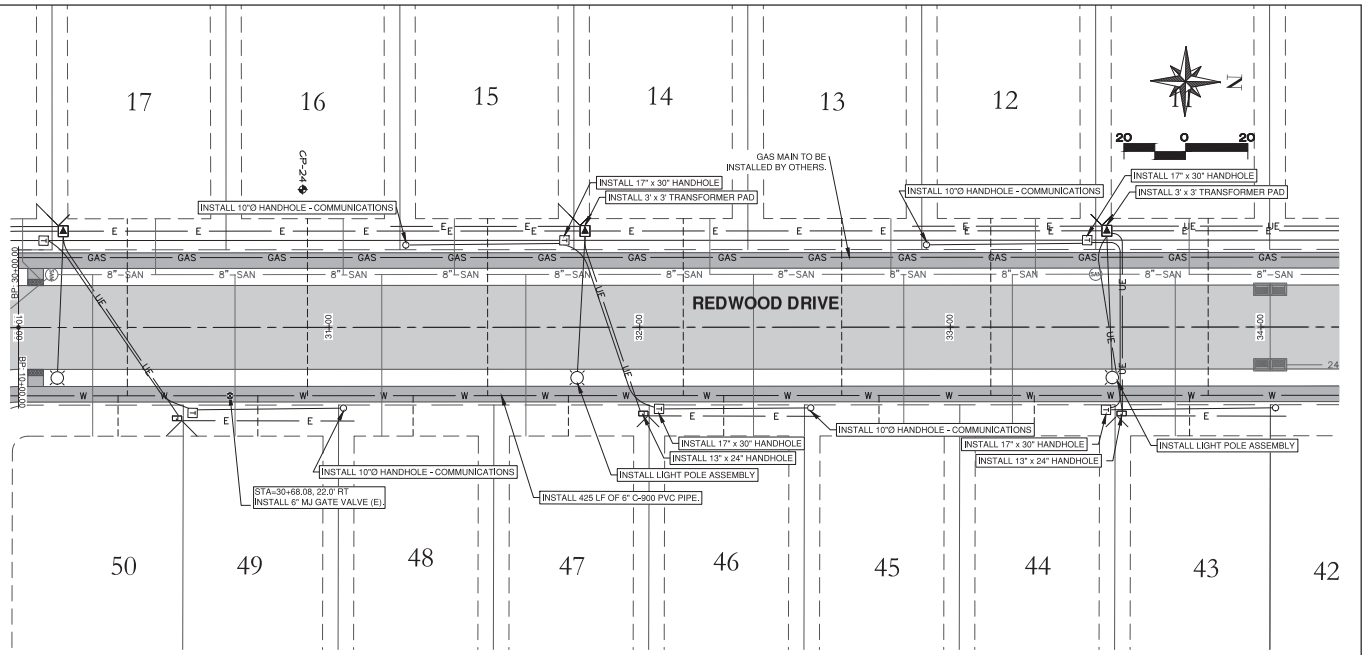
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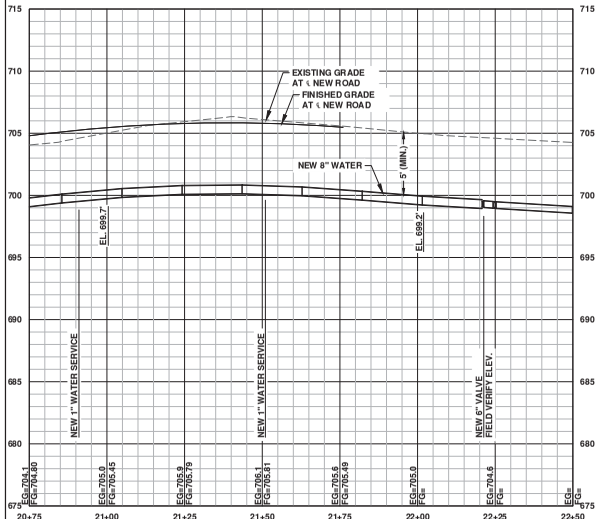
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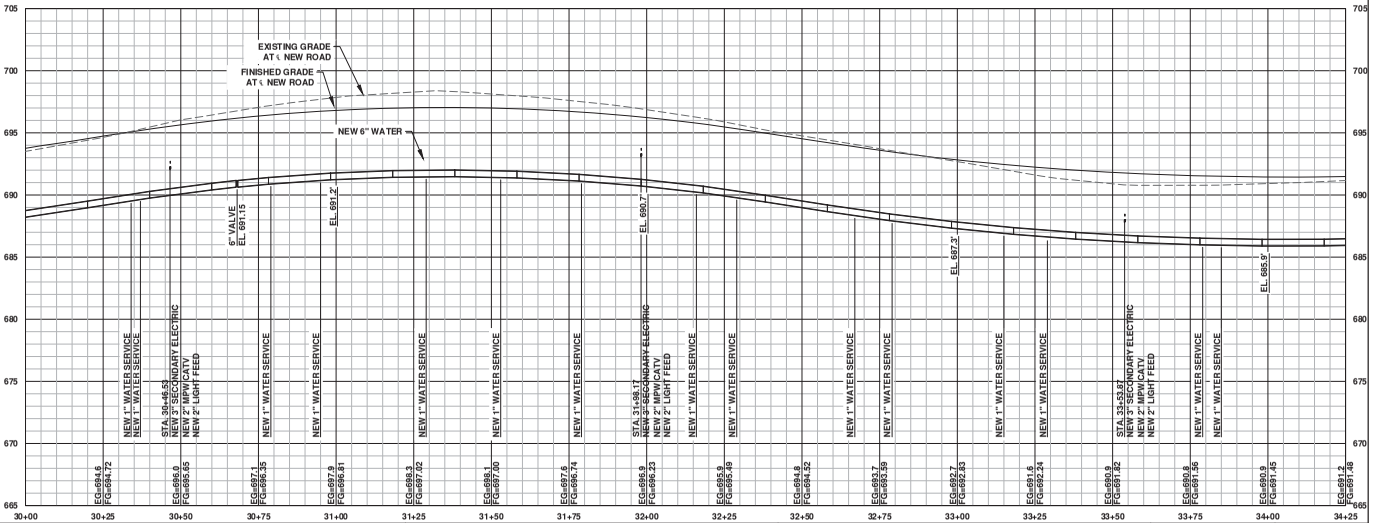
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SHEET NO: 31 OF 40

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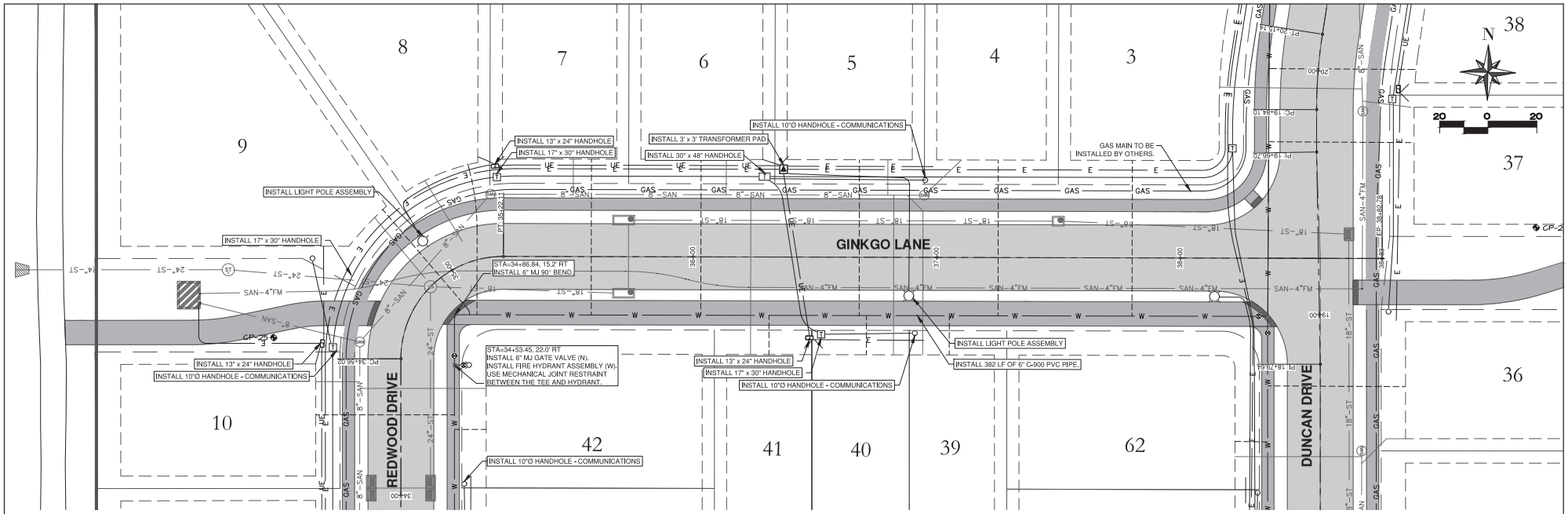
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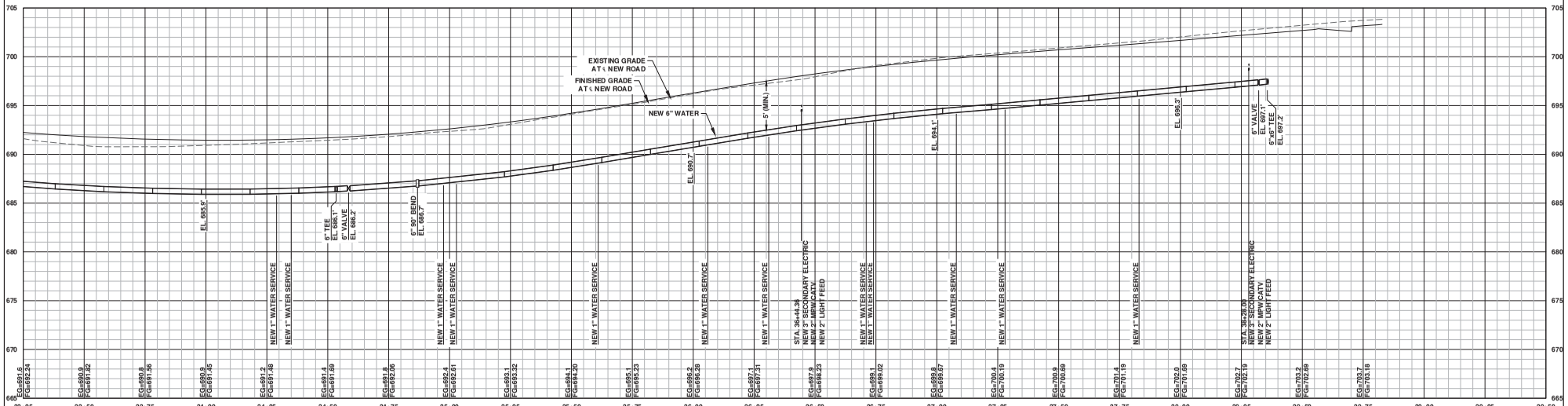
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UTILITY PLAN & PROFILE

PROJ NO: 8253.18
CONST PROJ: 000
SCALE: AS NOTED
DATE: 2/27/2019
DRAWING NO: M.14
SHEET NO: 32 OF 40

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PROJ NO:	8253.18
CONST PROJ:	000
SCALE:	AS NOTED
DATE:	2/27/2019
DRAWING NO:	M.15
SHEET NO:	33 OF 40

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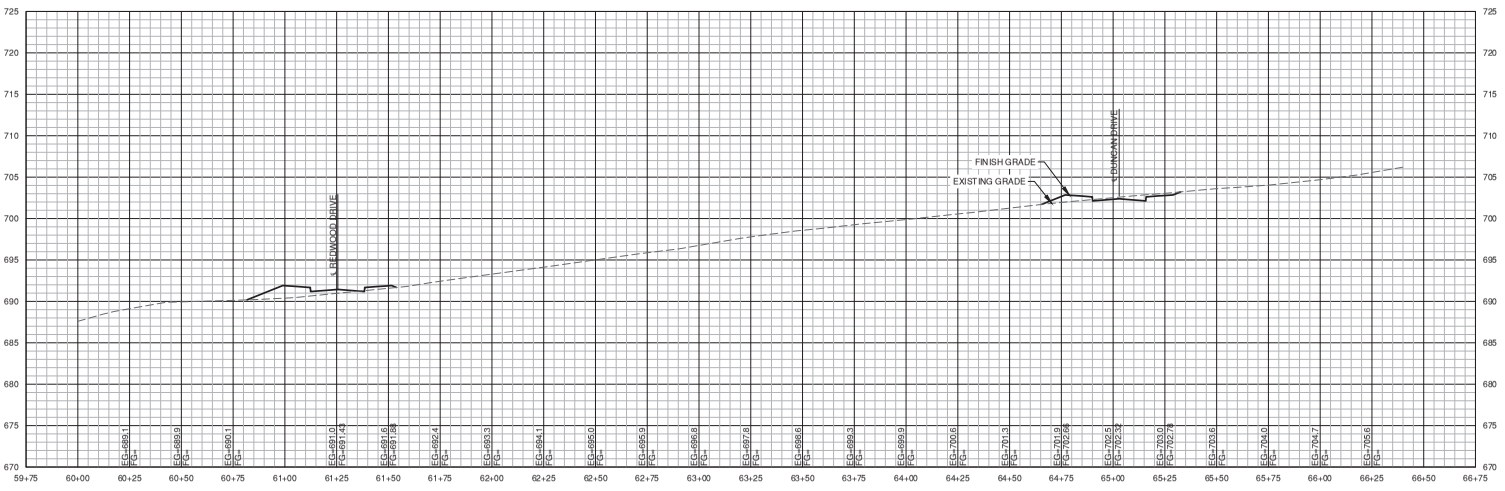
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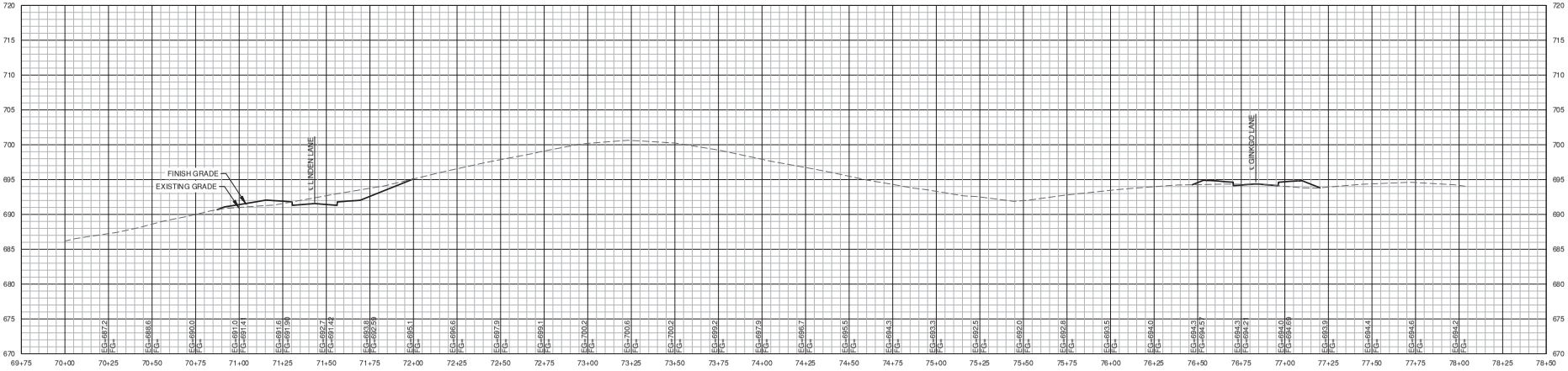
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PROJ NO: 8253.18
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DRAWING NO: T.01
SHEET NO: 34 OF 40

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1 T.02 CROSS SECTION A
SCALE: 1" = 20' HORIZONTAL
1" = 5' VERTICAL



2 T.02 CROSS SECTION B
SCALE: 1" = 20' HORIZONTAL
1" = 5' VERTICAL

#	DATE	DESCRIPTION	BY

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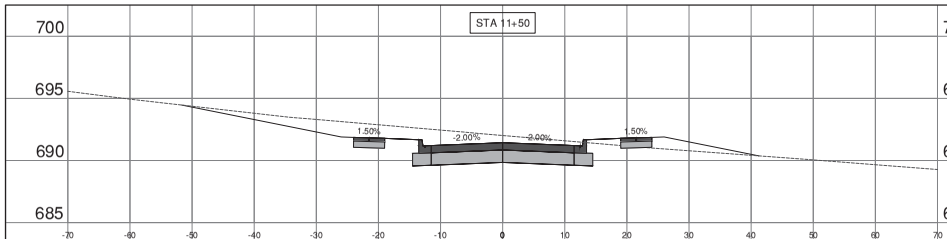
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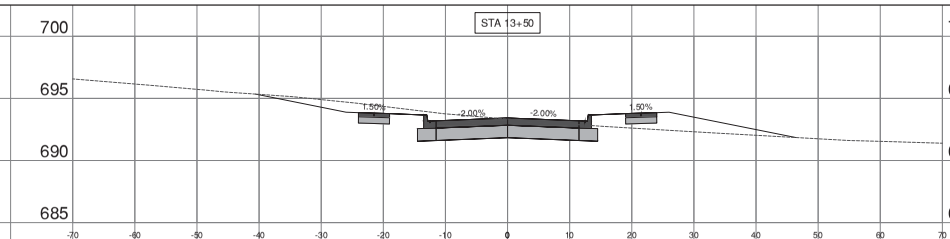
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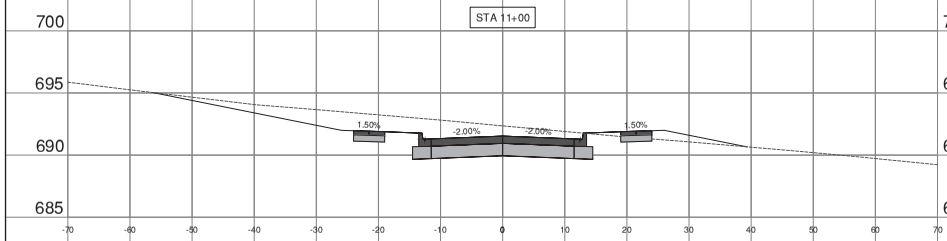
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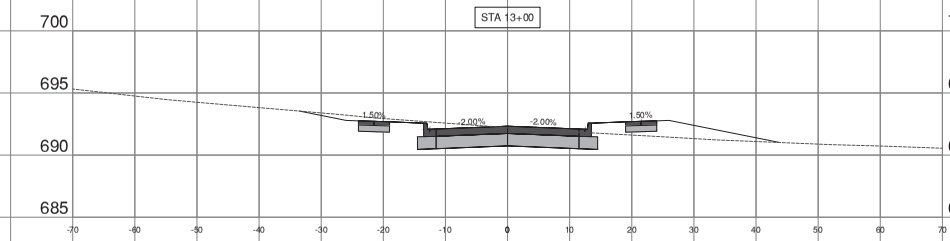
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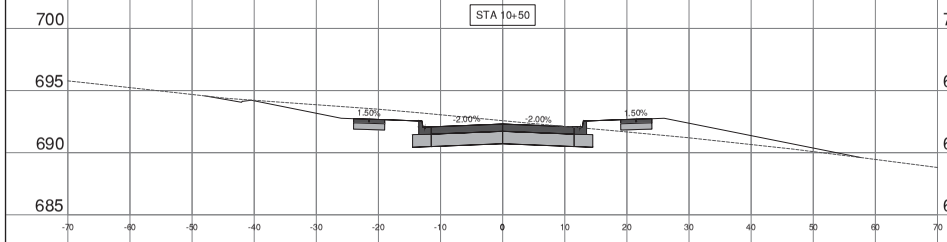
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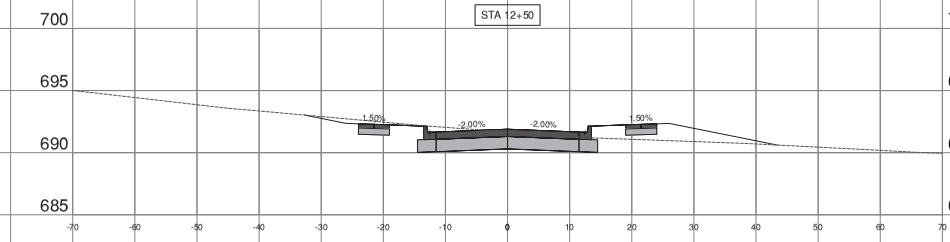


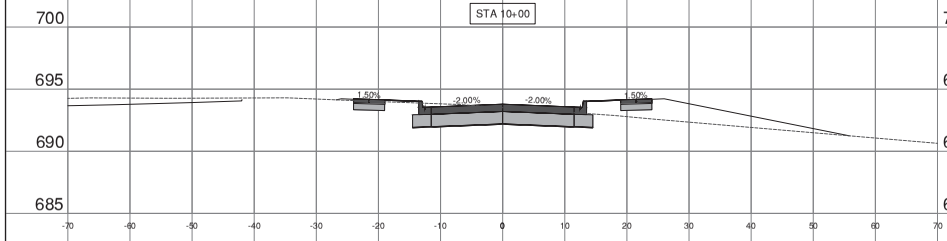


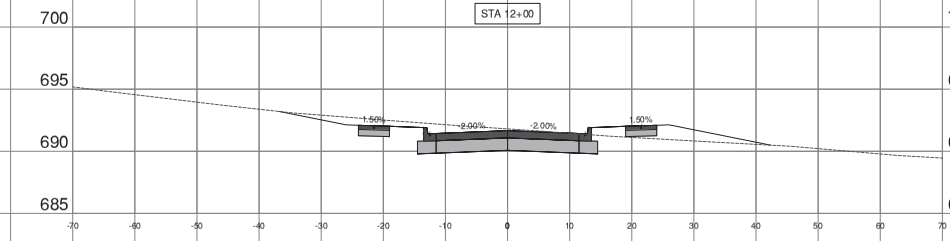












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PROJECT ENGR: RHT

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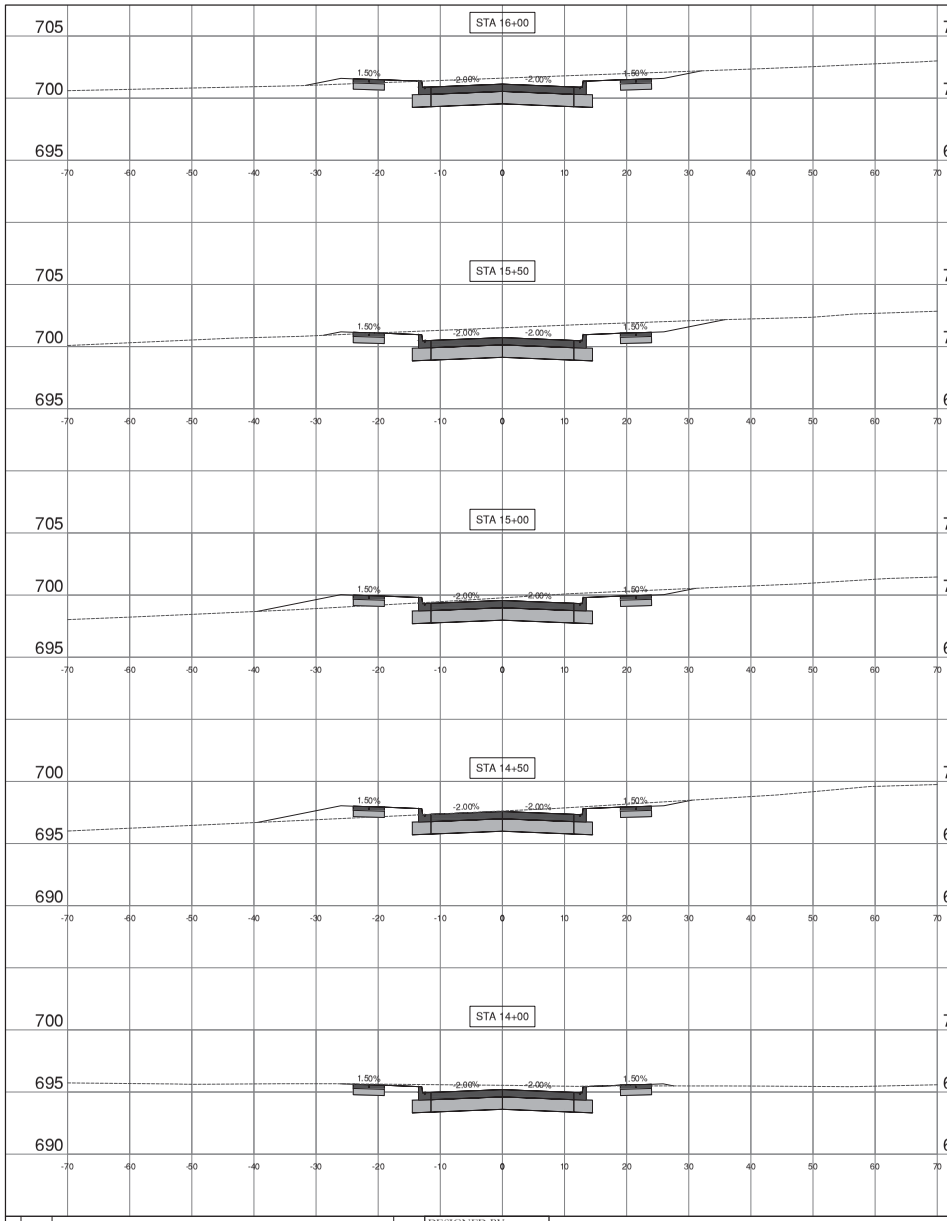
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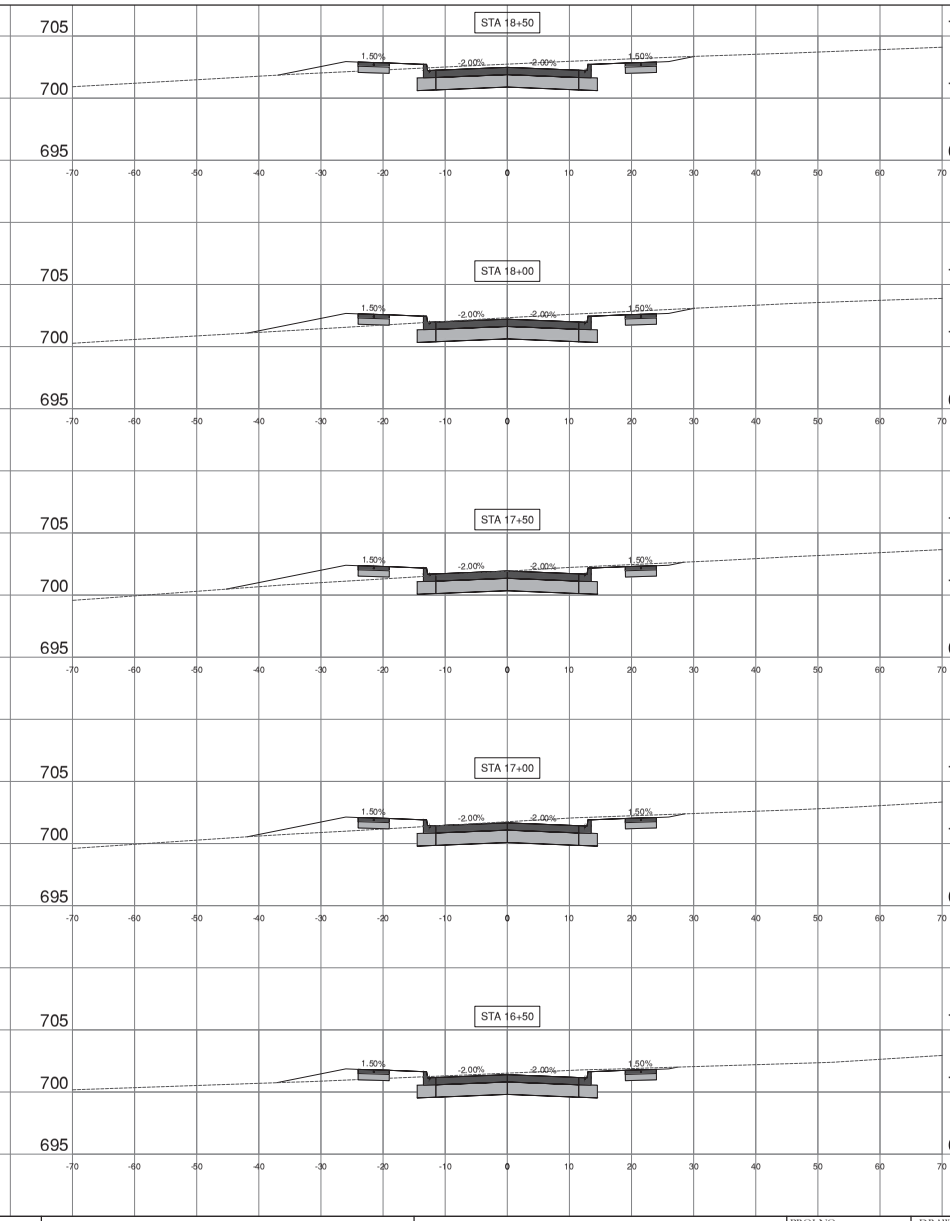
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SCALE:	AS NOTED
DATE:	3/1/2019

DRAWING NO: W.01
SHEET NO: 36 OF 40

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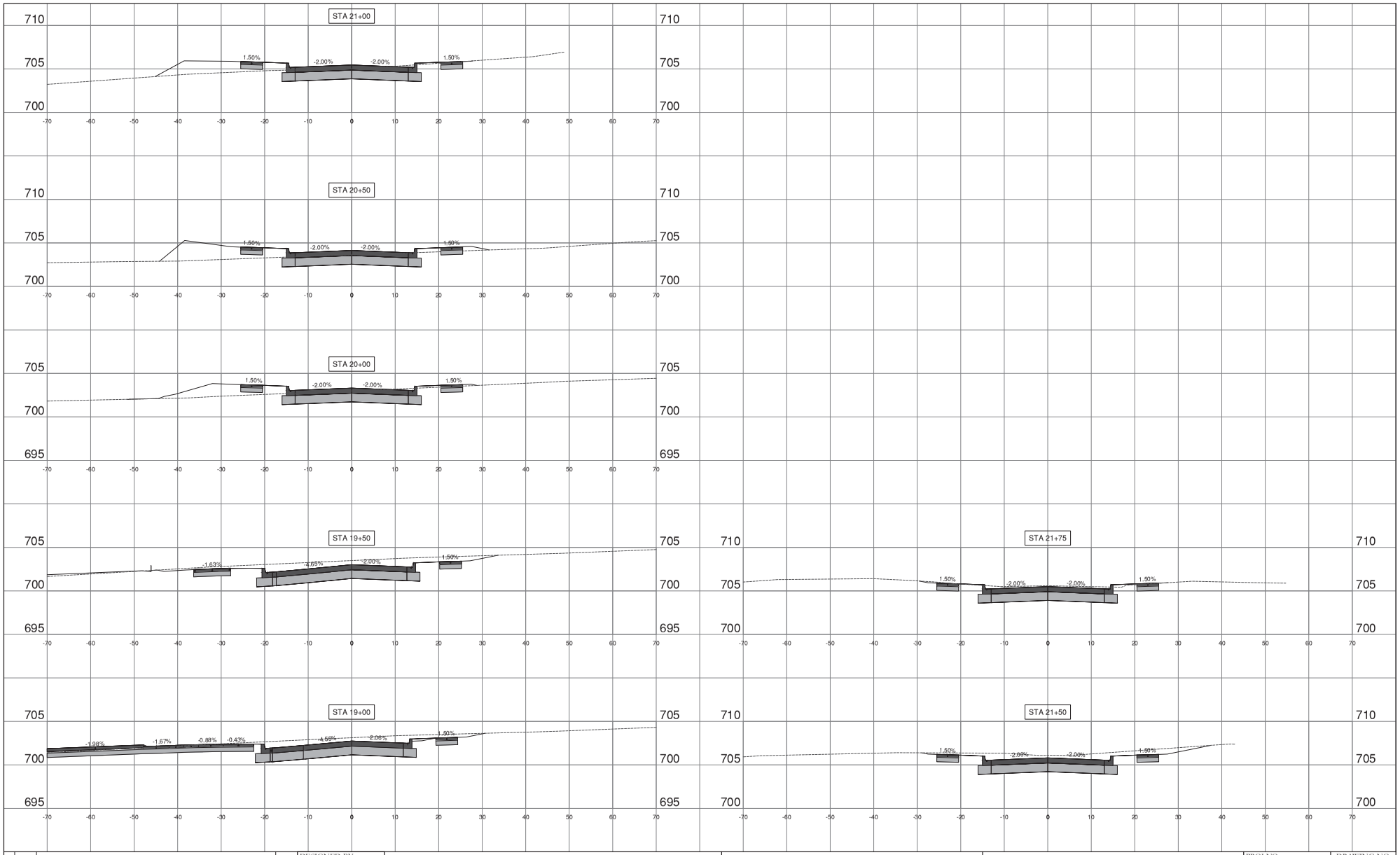
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CROSS SECTIONS

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SCALE: AS NOTED
DATE: 2/27/2019

DRAWING NO: W.02
SHEET NO: 37 OF 40

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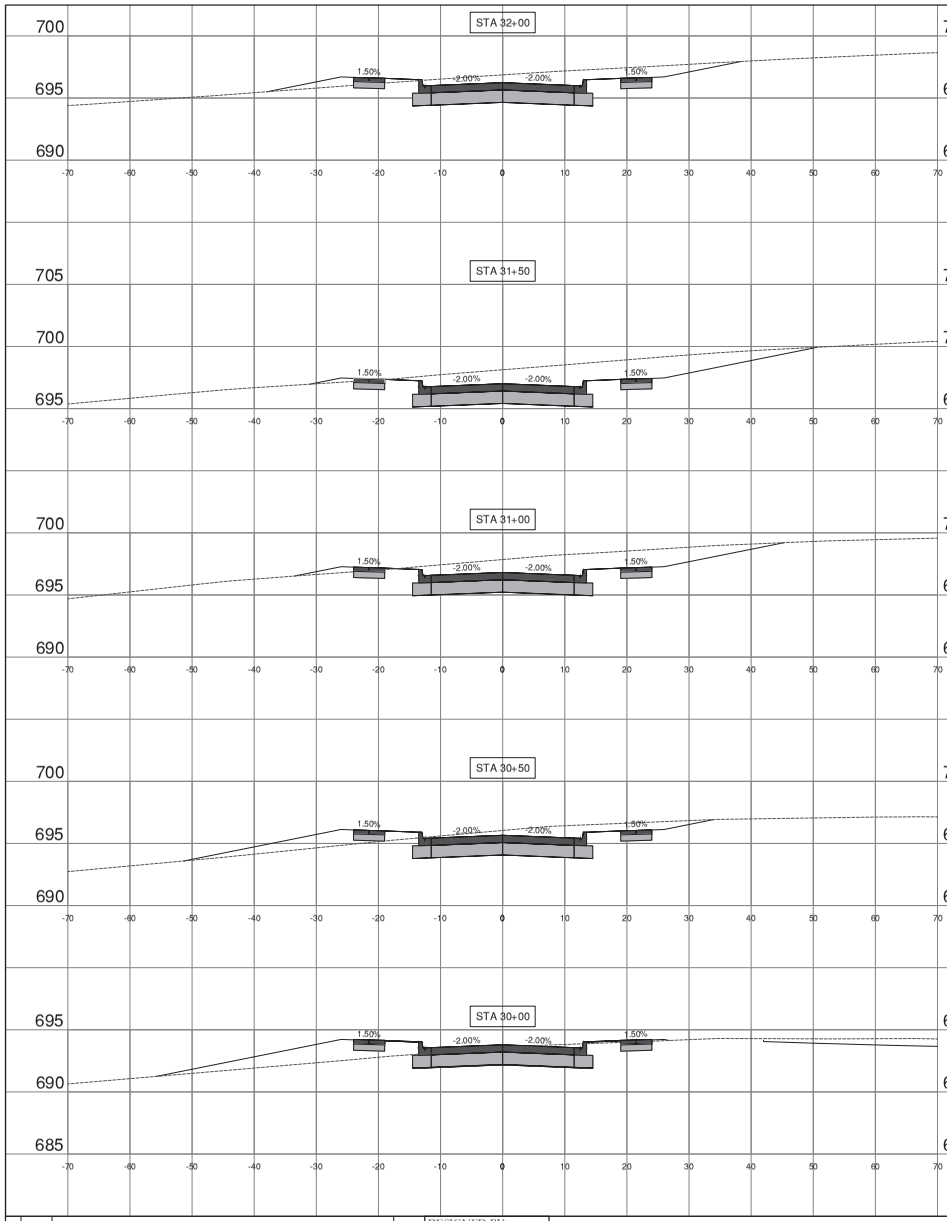
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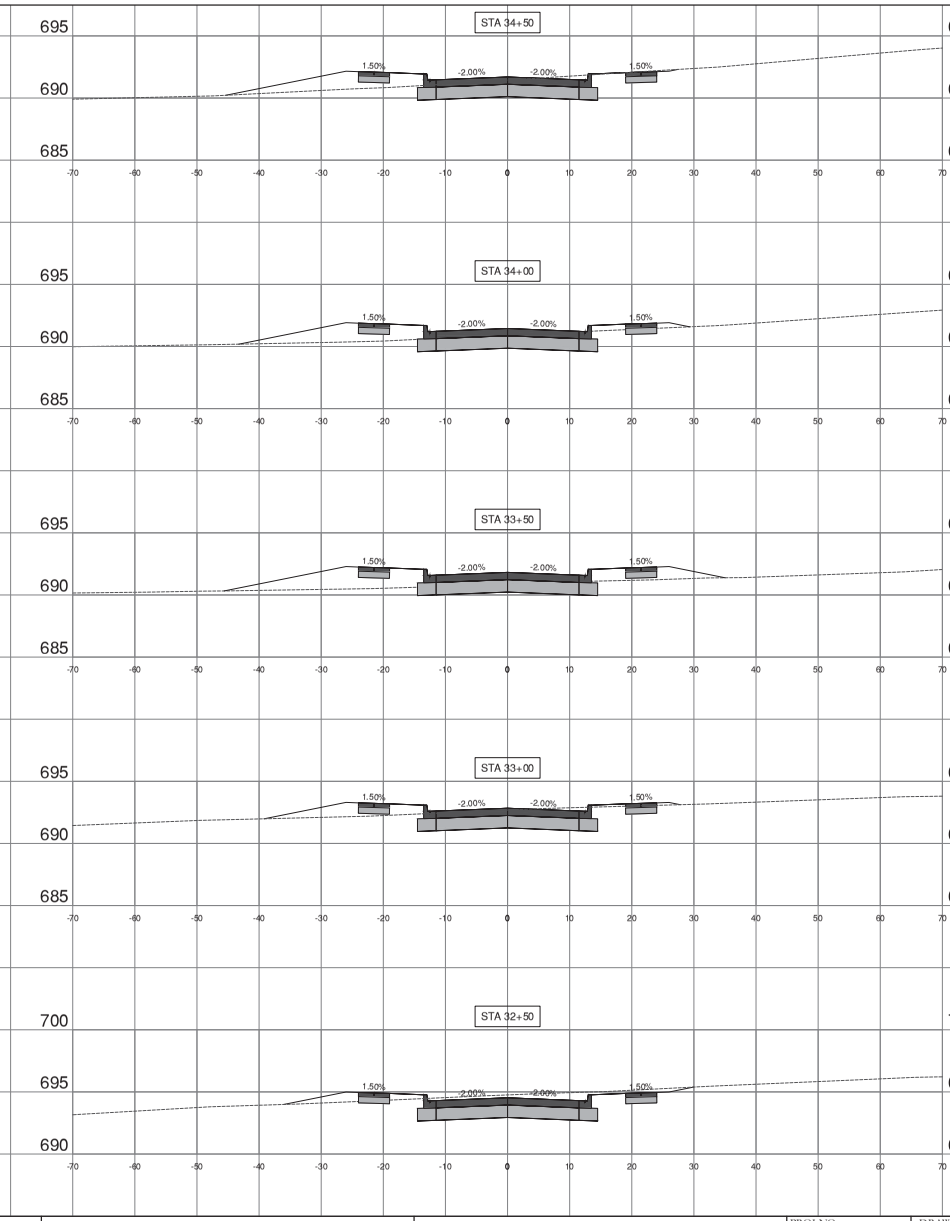
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DATE: 2/27/2019

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SHEET NO: 38 OF 40

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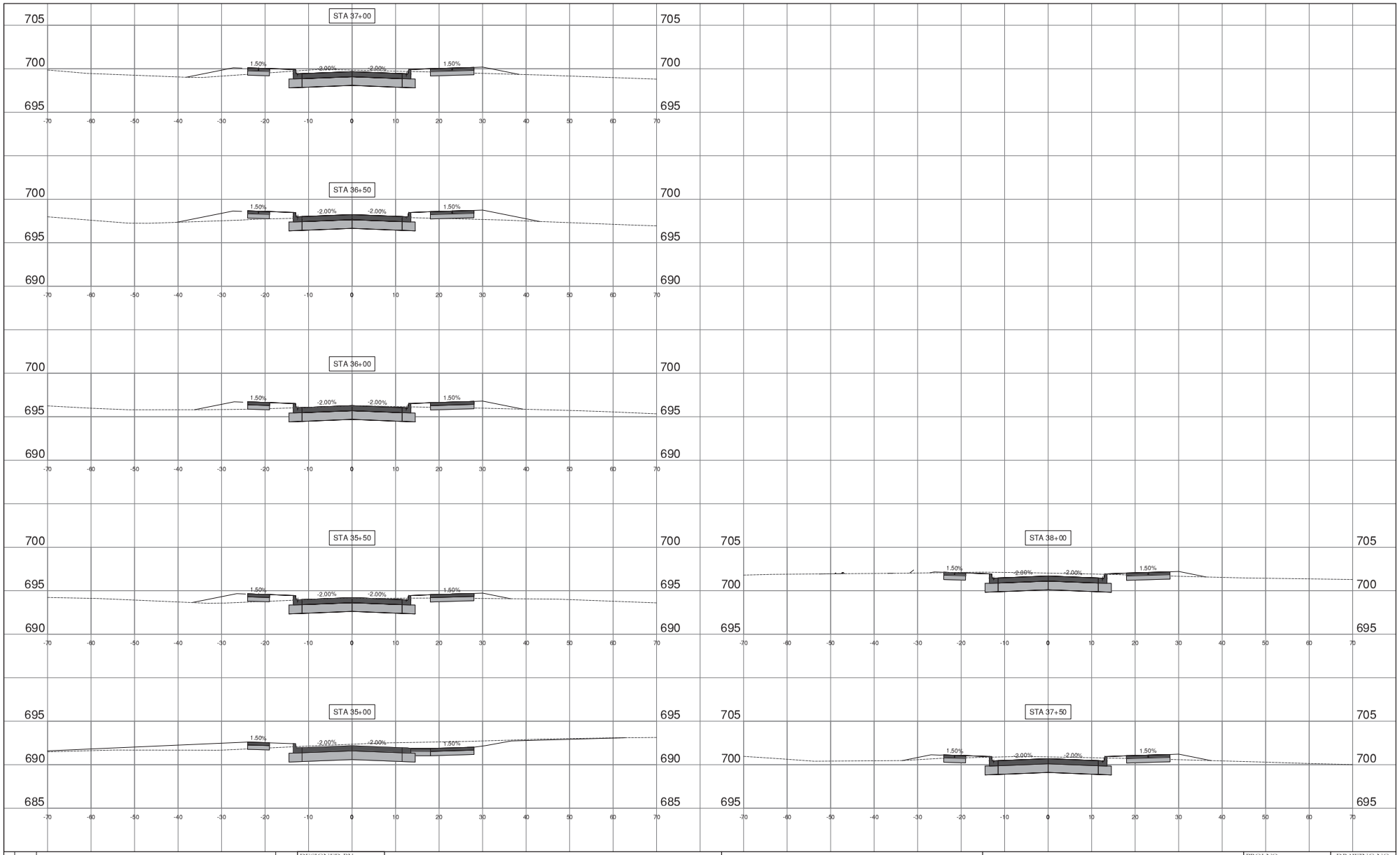
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MUSCATINE, IOWA

CROSS SECTIONS

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SCALE:	AS NOTED
DATE:	2/27/2019

DRAWING NO: W.04
SHEET NO: 39 OF 40

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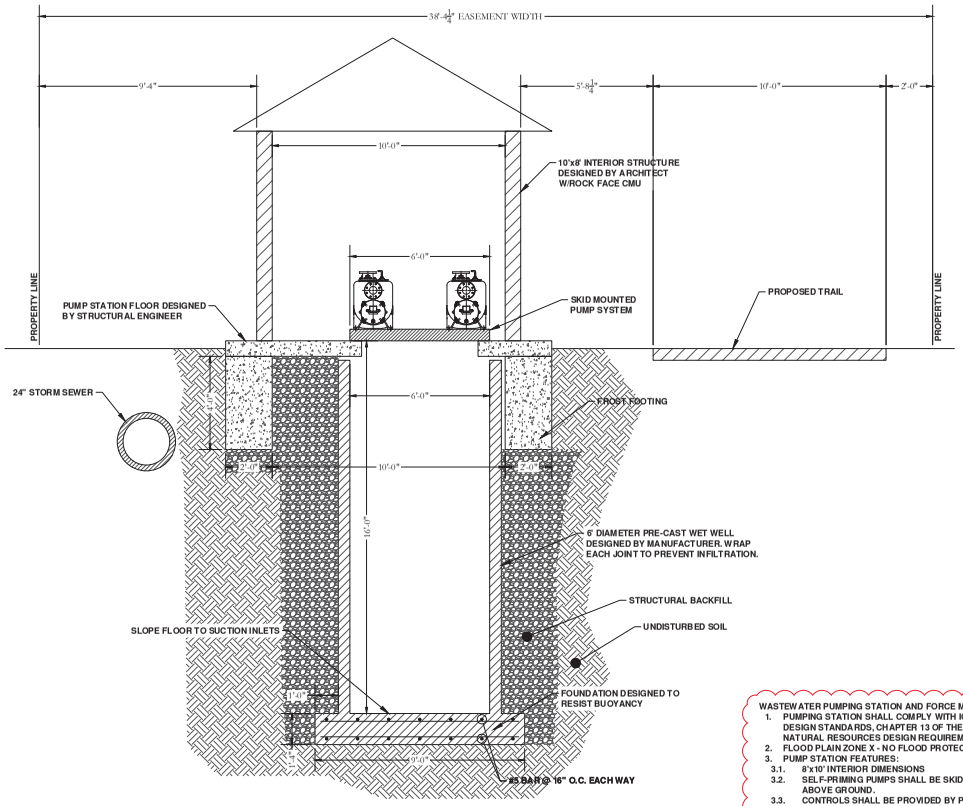
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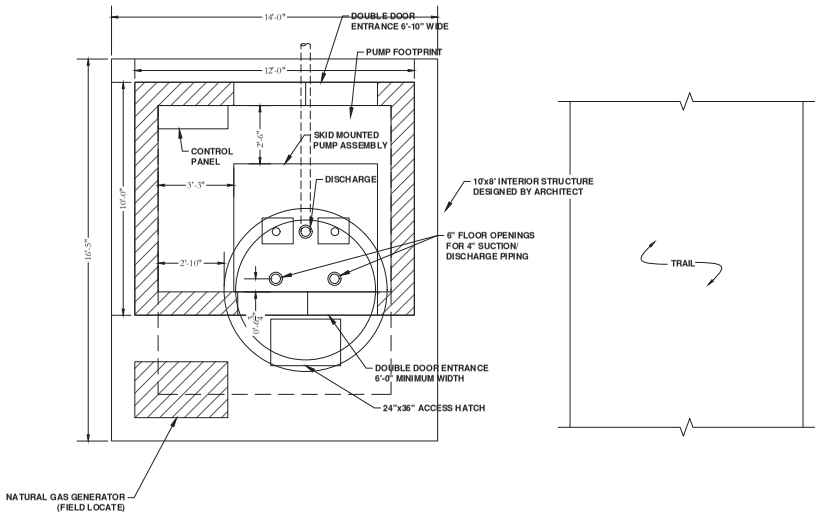
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EXHIBIT B



LIFT STATION - SECTION VIEW

SCALE: 1" = 3/8"



LIFT STATION PLAN VIEW

SCALE: 1" = 3/8"

WASTEWATER PUMPING STATION AND FORCE MAIN SPECIFICATIONS:

1. PUMPING STATION SHALL COMPLY WITH IOWA WASTEWATER FACILITIES DESIGN STANDARDS, CHAPTER 13 OF THE IOWA DEPARTMENT OF NATURAL RESOURCES DESIGN REQUIREMENTS.
2. FLOOD PLAIN ZONE X - NO FLOOD PROTECTION REQUIRED
3. PUMP STATION FEATURES:
   - 3.1. 8'x10' INTERIOR DIMENSIONS
   - 3.2. SELF-PRIMING PUMPS SHALL BE SKID MOUNTED AND INSTALLED ABOVE GROUND.
   - 3.3. CONTROLS SHALL BE PROVIDED BY PUMP MANUFCTURER
     - 3.3.1. STARTUP SHALL INCLUDE ADJUSTMENT OF SET POINTS, PLACEMENT OF FLOATS AND OTHER CONTROL FEATURES.
   - 3.4. VENTS TO BE ROUTED THROUGH WALL NEAR CEILING OR THROUGH THE ROOF.
     - 3.4.1. WET WELL VENT
     - 3.4.2. GENERATOR VENT
     - 3.4.3. EXHAUST VENT
   - 3.5. TRASH BASKET SHALL BE INSTALLED AT ALL INLETS IN THE WET WELL WITH HOIST TO RAISE AND LOWER BASKET FOR MAINTENANCE.
4. ELECTRICAL SYSTEM AND COMPONENTS SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE REQUIREMENTS FOR CLASS 1 GROUP D, DIVISION 1 LOCATIONS.
5. PUMP STATION SHALL OPERATE ON SINGLE PHASE ELECTRICITY. ELECTRICAL LOAD INCLUDES:
   - 5.1. TWO 5HP (MAX) MOTORS
   - 5.2. OVERHEAD LIGHT
   - 5.3. EXTERIOR LIGHT ABOVE DOORS
   - 5.4. WET WELL FAN
     - 5.4.1. AIR SHALL BE FORCED INTO THE WET WELL
     - 5.4.2. CONTINUOUS AIR CHANGE RATE SHALL BE 90 CFM
   - 5.5. EXHAUST FAN
     - 5.5.1. MANUFACTURER SHALL BE GREENHECK OR APPROVED EQUAL
     - 5.5.2. CEILING MOUNTED OR WALL MOUNTED
     - 5.5.3. AIR CHANGE RATE SHALL BE 120 CFM
   - 5.6. TWO GFCI OUTLETS, ONE INSIDE AND ONE OUTSIDE
6. SKID MOUNTED PUMP ASSEMBLIES
   - 6.1. MANUFACTURER SHALL BE QUALITY FLOW IOWA
     - 6.1.1. PUMPS SHALL BE "BARMESA", MODEL SH4-U
     - 6.1.2. PUMPS SHALL BE SELF PRIMING PUMPS
     - 6.1.3. DESIGN CRITERIA IS 100 GPM AT 25.8 TDH
     - 6.1.4. SIZE OF SOLIDS TO PASS SHALL BE 3"
   - 6.2. ELAPSED TIME METERS SHALL BE INSTALLED ON ALL PUMPS
   - 6.3. STANDARD 6'x6' SKID MOUNTED PUMP STATION EQUIPPED WITH TWO PUMPS.
     - 6.3.1. NO ENCLOSURE IS REQUIRED BY MANUFACTURER
   - 6.4. SHUTOFF VALVE SHALL BE LOCATED ON EACH SUCTION LINE.
   - 6.5. SHUTOFF VALVE AND CHECK VALVE SHALL BE LOCATED ON DISCHARGE LINE OF EACH PUMP.
     - 6.5.1. CHECK VALVE SHALL BE LOCATED BETWEEN SHUTOFF VALVE AND PUMP.
   - 6.6. PUMP DRAIN KIT
   - 6.7. TRANSIENT VOLTAGE SURGE SUPPRESSOR
   - 6.8. AUTOMATIC AIR-RELIEASE VALVES
   - 6.9. BALL VALVES FOR MANUAL ISOLATION OF AIR-RELEASE VALVES
   - 6.10. DISCHARGE FAILURE PROTECTION SYSTEM
   - 6.11. CERTIFIED PERFORMANCE TEST
7. PUMP SUCTION LINES SHALL BE CONSTRUCTED OF 4-INCH NON-CORROSIVE PIPING WITH THE INLET 6-INCHES ABOVE THE FINISHED FLOOR.
8. ALARM SYSTEM
   - 8.1. ALARM SHALL BE ACTIVATED IN CASES OF POWER FAILURE, PUMP FAILURE, HIHG WATER LEVEL OR ANY CAUSE OF PUMPING STATION MALFUNCTION.
     - 8.1.1. ALARMS SHALL BE TRANSMITTED TO THE WASTE WATER TREATMENT FACILITY
     - 8.1.2. ALARMS SHALL BE ABLE TO OPERATE IN THE EVENT OF A POWER OUTAGE
     - 8.1.3. SET HIGH LEVEL ALARM AT 1.5' ABOVE LEAD PUMP ON LEVEL.
9. EMERGENCY OPERATION
   - 9.1. AN EMERGENCY MEANS OF OPERATION SHALL BE PROVIDED IN THE EVENT OF A POWER OUTAGE
   - 9.2. MANUFACTURER OF STAND-BY GENERATOR SHALL BE KOHLER
     - 9.2.1. GENERATOR SHALL BE FUELED BY NATURAL GAS
     - 9.2.2. GENERATOR MODEL NO. 25CCL
     - 9.2.3. SET RATING SHALL BE 469.3 ALTENATOR, 120/240 VOLTAGE, SINGLE PHASE, 60 Hz, 25/25 kW/kVA, 105 AMPS
   - 9.3. STANDBY FACILITY SHALL BE CAPABLE OF BEING PLACED IN OPERATION AT THE SITE WITHIN 30 MINUTES OF THE ONSET OF THE EMERGENCY CONDITION.
   - 9.4. GENERATORS SHALL BE ABLE TO PROVIDE POWER FOR THE LIGHTING, VENTILATING SYSTEM AND ONE PUMP.
10. FORCE MAIN
    - 10.1. ALL FORCE MAIN SHALL BE TESTED AT A MINIMUM PRESSURE OF AT LEAST 15 PSI FOR AT LEAST 30 MINUTES AT THE LOW POINT IN THE LINE.
    - 10.2. ALLOWABLE LEAKAGE IS 0.06 GALLONS PER HOUR

#	DATE	DESCRIPTION	BY
2	5/7/19	PUMP MANUFACTURER AND GENRATOR UPDATED	
1	5/27/19	IDNR REVISIONS	

DESIGNED BY: JMS
DRAWN BY: JMS
PROJECT ENGR: RHT

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ARBOR COMMONS SUBDIVISION
NPSW ENTERPRISE, LLC
MUSCATINE, IOWA

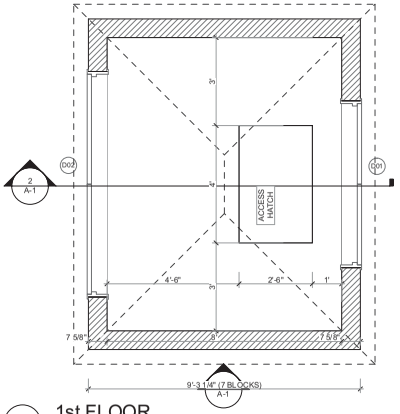
SANITARY SEWER LIFT STATION

PROJ NO: 8253.18
CONST PROJ: 000
SCALE: AS NOTED
DATE: 2/27/2019
DRAWING NO: M.10
SHEET NO: 28 OF 40

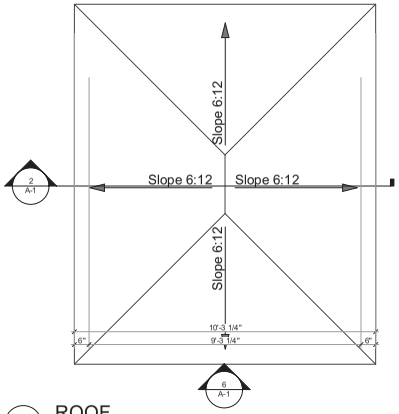
F:\CIVIL\3D PROJECTS\8253 HORIZON ARCHITECTURE - WOLFE SUBDIVISION\3 PLAN SHEETS\8253 M SHEETS-M.10.DWG PLOTTED: 5/7/2019

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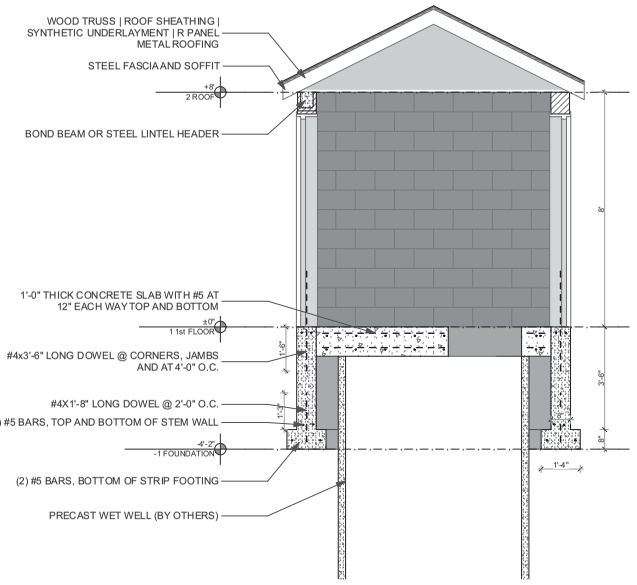
EXHIBIT B



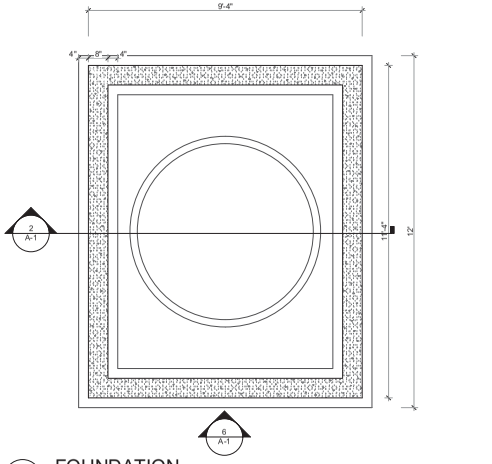
4 1st FLOOR
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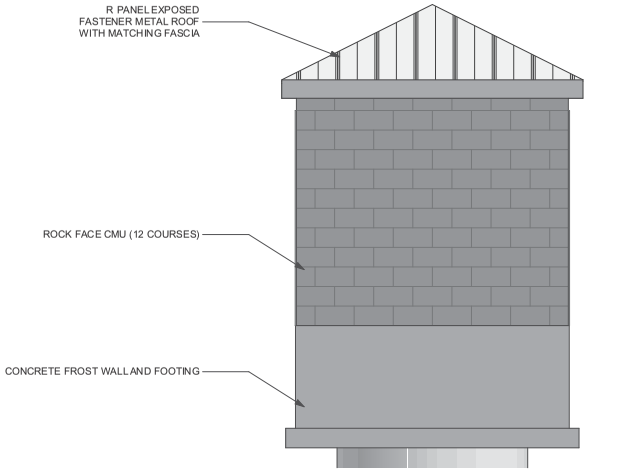
5 ROOF
SCALE: 1/2" = 1'-0"



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



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



6 SOUTH ELEVATION
SCALE: 1/2" = 1'-0"

SCHEMATIC DESIGN - NOT FOR CONSTRUCTION

horizon. original. architecture.

ARBOR COMMONS LIFT STATION ENCLOSURE

PARCEL 0833200042
MUSCATINE, IA 52761

MARK	DATE	DESCRIPTION

PROJECT NO: #Pln
DATE: 1/31/2019
DRAWN BY: MSN
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SHEET TITLE
LIFT STATION PLANS

A-1

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