

PROJECT INFORMATION

APPLICANT

FAITH BAPTIST BIBLE COLLEGE & THEOLOGICAL SEMINARY  
CURT FINCHAM  
1900 NW FOURTH STREET  
ANKENY, IA 50023  
PHONE: (515) 964-0601

PROPERTY OWNER

FAITH BAPTIST BIBLE COLLEGE & THEOLOGICAL SEMINARY  
CURT FINCHAM  
1900 NW FOURTH STREET  
ANKENY, IA 50023  
PHONE: (515) 964-0601

ENGINEER

DGR ENGINEERING  
CONTACT: KEVIN PUHL, P.E.  
6115 WHISPERING CREEK DRIVE  
SIOUX CITY, IA 51106  
OFFICE PHONE: (712) 266-1554  
MOBILE PHONE: (712) 540-6847

PROPERTY ADDRESS

320 NW COLLEGE AVENUE  
ANKENY, IA 50023

DATE OF PREPARATION

April 8, 2022

UTILITY SERVICES

- WATER - CITY OF ANKENY,  
SHAWN BUCKNER, 515-963-3524, sbuckner@ankenyiowa.gov
- SANITARY - CITY OF ANKENY,  
ROGER MCFARLAND, 515-965-6483, rmcfarland@ankenyiowa.gov
- ELECTRIC & GAS - MIDAMERICAN ENERGY  
MICKELL IMERMAN, 515-242-4289, MICKELL.IMERMAN@MIDAMERICAN.COM
- COMMUNICATIONS - CENTURYLINK (LUMEN)  
SADIE HULL, 918-547-0147, SADIE.HULL@LUMEN.COM
- COMMUNICATIONS - MEDIACOM COMMUNICATIONS  
PAUL MAY, 515-246-2252, PMAY@MEDIACOMCC.COM

PROPOSED BUILDING USES

STORAGE UNIT (112'X40') FOR COLLEGE & STUDENT USE

TWO EXISTING MULTI-FAMILY BUILDINGS TO REMAIN  
(8 UNITS PER BUILDING)

GROSS FLOOR AREA

STORAGE UNIT - 4610 SQUARE FEET

PARKING

- 19 EXISTING SPACES (7 TO BE REMOVED)
- 20 REQUIRED SPACES (1 PER UNIT PLUS 1 ADDITIONAL FOR EVERY 4 UNITS)
- 16 TOTAL PROPOSED SPACES (12 EXISTING, 4 PROPOSED)
- THE REMAINING 4 SPACES TO BE PROVIDED ON ADJACENT COLLEGE OWNED EXCESS PARKING ON CAMPUS AND ACCESSIBLE TO THIS PROPERTY BY SIDEWALK.

PROPERTY INFORMATION

EXISTING PARCELS

320 NW COLLEGE AVENUE  
ANKENY, IA 50023

EXISTING LEGAL DESCRIPTION

LTS 35 & 36 FRONTIER VILLAGE PLAT 5

PROPOSED LEGAL DESCRIPTION

NOT APPLICABLE

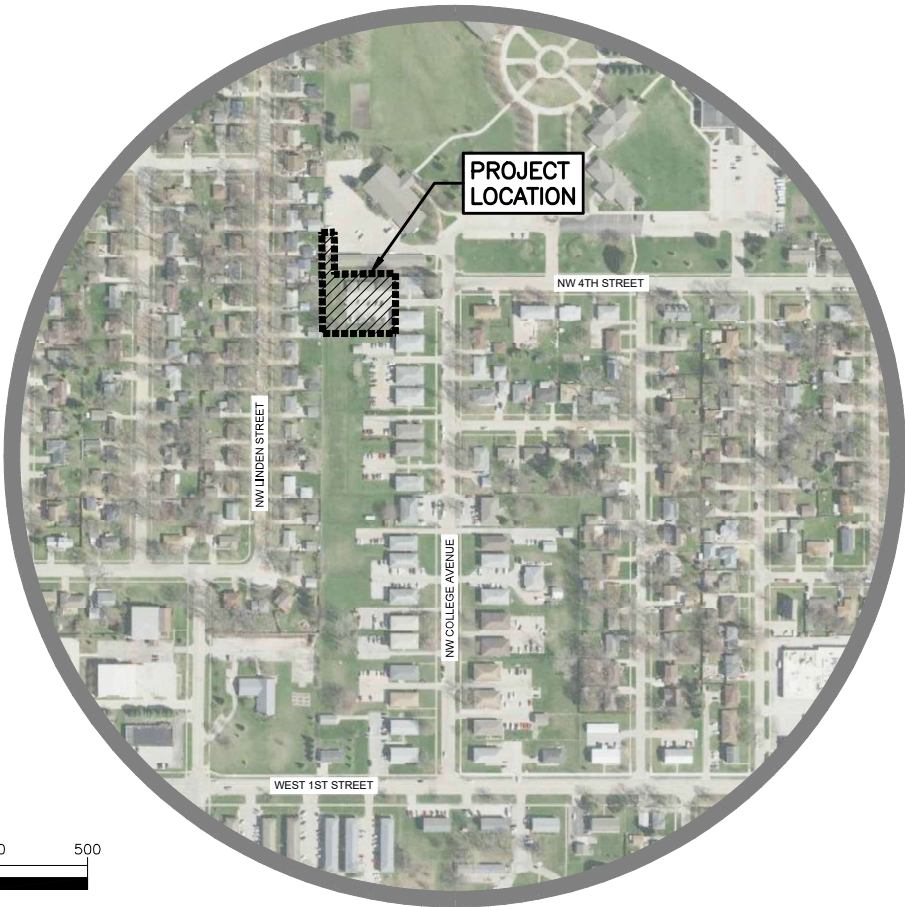
ZONING

R-3 (MULTIPLE FAMILY RESIDENCE DISTRICT)

ERU CALCULATIONS

- 22,027 SF - EXISTING IMPERVIOUS AREA
- (7,308) SF - IMPERVIOUS AREA REMOVED
- 13,171 SF - IMPERVIOUS AREA ADDED
- 27,890 SF - TOTAL IMPERVIOUS AREA
- 27890 / 4000 = 7 ERUS

FAITH BAPTIST BIBLE COLLEGE  
STORAGE UNIT BUILDING  
320 NW COLLEGE AVENUE  
ANKENY, IOWA  
2022



VICINITY MAP



STATE MAP

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
C.01	TITLE SHEET
C.02	REMOVAL PLAN
C.03	GRADING PLAN
C.04	UTILITY PLAN
C.05	PAVING & DIMENSION PLAN
C.06	EROSION CONTROL PLAN
	LANDSCAPING PLAN
C.07	SIDEWALK DETOUR PLAN

GENERAL NOTES:

- ALL UTILITIES ARE APPROXIMATE. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION WITH OWNER OF UTILITIES.

BENCHMARKS:

- CENTER OF SANITARY MANHOLE LOCATED 15' NORTH AND 92' EAST OF NORTHEAST CORNER OF NORTH APARTMENT BUILDING. RIM ELEV. = 964.814
- CP MAG NAIL IN CONCRETE LOCATED 17' NORTH AND 113' WEST OF NORTHWEST CORNER OF SOUTH APARTMENT BUILDING. ELEV. = 964.346

**PLANNING SET**  
FOR REVIEW ONLY

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa

By KEVIN M. PUHL, P.E. (date) 4/8/2022

License No. 24137

My license renewal date is December 31, 2022

Pages or sheets covered by this seal: \_\_\_\_\_

FAITH BAPTIST BIBLE COLLEGE  
STORAGE UNIT BUILDING  
ANKENY, IOWA

TITLE SHEET

Project Manager: KMP  
Designer: KMP  
Project Number: 272024  
Phone: (712) 266-1554

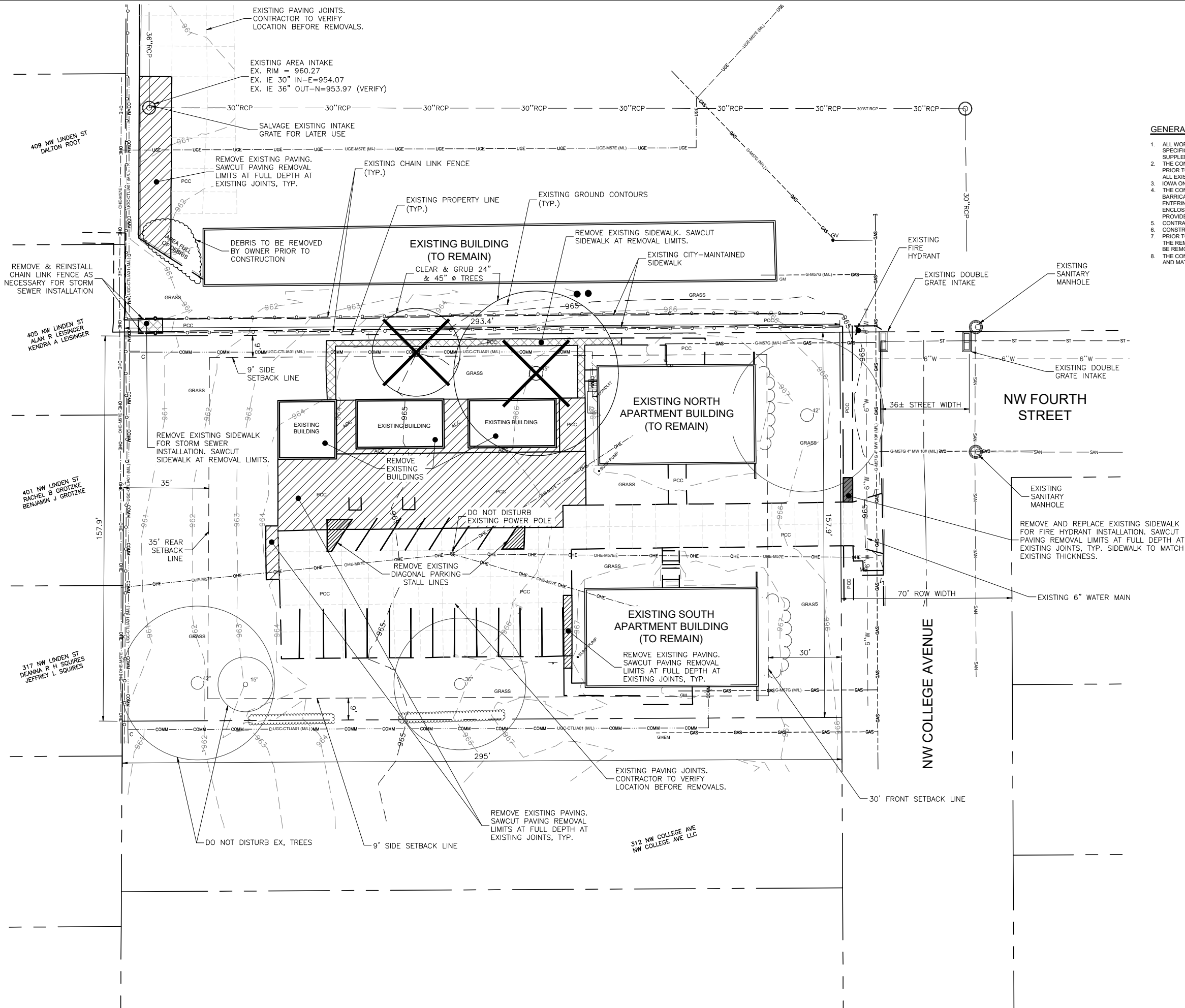


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**GENERAL/REMOVAL NOTES:**

1. ALL WORK TO BE PERFORMED ACCORDING TO THE 2022 SUDAS STANDARD SPECIFICATIONS (AVAILABLE AT WWW.IOWASUDAS.ORG) AND THE 2017 CITY OF ANKENY SUPPLEMENTAL SPECIFICATIONS TO SUDAS.
2. THE CONTRACTOR SHALL NOTIFY THE OWNER AND ALL UTILITIES COMPANIES 72 HOURS PRIOR TO BEGINNING REMOVAL. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES BEFORE REMOVAL.
3. IOWA ONE CALL 1-800-292-8989.
4. THE CONTRACTOR WILL BE RESPONSIBLE FOR ERECTING AND MAINTAINING ADEQUATE BARRICADES AT ALL TIME TO PREVENT PEDESTRIAN AND VEHICLE TRAFFIC FROM ENTERING WORK AREAS AND OPEN TRENCHES. ALL OPEN TRENCHES SHALL BE ENCLOSED WITH ORANGE SAFETY FENCE. CONSTRUCTION SITE FENCING TO BE PROVIDED BY THE GENERAL CONTRACTOR.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NECESSARY DEWATERING.
6. CONSTRUCTION STAKING TO BE PROVIDED BY CONTRACTOR.
7. PRIOR TO REMOVAL ALL PAVEMENT SHALL BE SAW CUT FULL DEPTH AT THE LIMITS OF THE REMOVAL. ALL PAVEMENT DAMAGED OUTSIDE OF THE LIMITS OF REMOVAL SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR, AT THEIR COST.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY DISPOSING OF ALL ITEMS AND MATERIAL TO BE REMOVED UNLESS OTHERWISE NOTED ON THE PLANS.

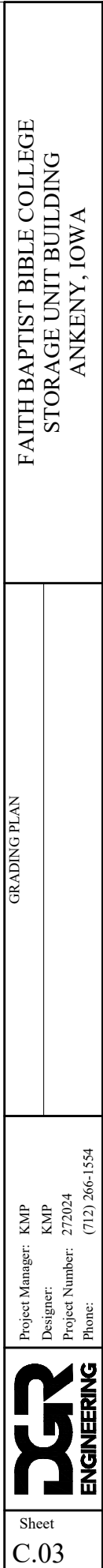
FAITH BAPTIST BIBLE COLLEGE  
STORAGE UNIT BUILDING  
ANKENY, IOWA

REMOVAL PLAN

Project Manager: KMP  
Designer: KMP  
Project Number: 272024  
Phone: (712) 266-1554

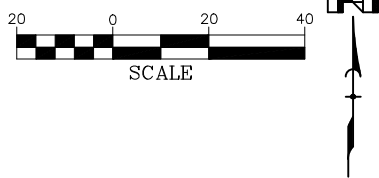


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TECHNICAL REVIEW NOTE:  
ALL PROPOSED STORM SEWER  
STRUCTURES AND PIPE TO BE PRIVATE.



UTILITY NOTES

ALL WORK TO BE PERFORMED ACCORDING TO THE 2022 SUDAS STANDARD SPECIFICATIONS (AVAILABLE AT WWW.IOWASUDAS.ORG) AND THE 2017 CITY OF ANKENY SUPPLEMENT TO SUDAS.

WHERE CONNECTION ELEVATIONS TO EXISTING OR PROPOSED UTILITIES ARE NOTED AS VERIFY, THE CONTRACTOR SHALL EXPOSE THE UTILITY AND HAVE THE SURVEYOR DETERMINE THE ELEVATION OF THE UTILITY PRIOR TO BEGINNING WORK SUCH THAT ADJUSTMENT TO GRADES CAN BE MADE WHEN NEEDED. PROPOSED UTILITY INSTALLATION SHALL BE STARTED AT THE DOWNSTREAM CONNECTION LOCATION.

PIPE BEDDING

STORM SEWER SHALL BE BEDDED USING CLASS I GRANULAR MATERIAL. NO SAND BEDDING ALLOWED.

WATER MAIN SHALL BE BEDDED WITH MANUFACTURED SAND MATERIAL WITH BELL SHAPING PER FIGURE 3010.104. PROVIDE 5.5' MINIMUM COVER OVER PIPE.

TRENCH FOUNDATION ROCK SHALL BE USED IN AREAS WHERE THE BOTTOM OF TRENCH IS UNSTABLE AND/OR SOFT. TO STABILIZE THE BASE OF TRENCH BELOW PIPE BEDDING. ALL COSTS ASSOCIATED WITH USING TRENCH FOUNDATION ROCK FOR DEWATERING SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

STORM SEWER

PIPE:

STORM SEWER PIPE SHALL BE CLASS III RCP, DUAL-WALL HDPE OR POLYPROPYLENE (HPP) PIPE AT THE CONTRACTOR'S OPTION.

ALL RCP STORM SEWER SHALL BE INSTALLED WITH JOINTS COMPLYING WITH THE 2017 CITY OF ANKENY SUDAS SUPPLEMENT. HDPE AND HPP PIPE SHALL HAVE WATER TIGHT JOINTS. PROVIDE 10' MIN HORIZONTAL SEPARATION OF PARALLEL STORM SEWER AND WATER MAIN. PROVIDE 18" MIN CLEARANCE AT STORM SEWER AND WATER MAIN CROSSOVER. WHEN STORM SEWER CROSSES OVER OR LESS THAN 18" BELOW A WATER MAIN, CONSTRUCT STORM SEWER OF RCP WITH RUBBER PROFILE GASKET JOINTS.

RCP STORM SEWER DOES NOT REQUIRE PIPE BEDDING UNLESS SOFT TRENCH SUBGRADE SOILS ARE ENCOUNTERED IN WHICH CASE THE PIPE SHALL BE BEDDED WITH GRANULAR MATERIAL WITH A CLASS R-1 BEDDING PER FIGURE 3010.102. HDPE PIPE SHALL BE BEDDED WITH A F-3 PIPE BEDDING PER FIGURE 3010.103. HPP PIPE SHALL BE BEDDED WITH A F-2 PIPE BEDDING PER FIGURE 3010.103. ADDITIONAL PIPE BEDDING SHALL BE PROVIDED AS NECESSARY TO PROVIDE ADEQUATE PIPE SUPPORT. CRUSHED CONCRETE SHALL NOT BE USED FOR CLASS I PIPE BEDDING.

EACH TYPE AND SIZE OF PIPE INSTALLED IN A TRENCH WILL BE MEASURED IN LINEAR FEET ALONG THE CENTERLINE OF THE PIPE FROM INSIDE WALL OF INTAKE OR MANHOLE TO INSIDE WALL OF INTAKE OR MANHOLE. WHERE THE END OF THE PIPE DISCHARGES TO A DITCH OR WATERWAY WITH AN APRON, MEASUREMENT LENGTH SHOWN ON THE PLANS INCLUDES THE LENGTH OF THE APRON. LENGTHS OF ELBOWS AND TEES WILL BE INCLUDED IN THE LENGTH OF PIPE MEASURED.

STRUCTURES:

ALL STORM SEWER INTAKES AND MANHOLES SHALL BE CONSTRUCTED ACCORDING TO THE CORRESPONDING SUDAS STANDARD DETAIL.

REINFORCING STEEL IN ALL CAST IN PLACE STRUCTURES SHALL BE EPOXY COATED.

SUBDRAIN CLEANOUT CASTING SHALL BE PER THE CLEANOUT DETAIL ON THIS SHEET.

CASTINGS FOR THE SW-501 INTAKES SHALL BE TYPE-R VANE STYLE GRATE PER SUDAS FIGURE 6010.603.

WATER MAIN

PIPE:

WATER MAIN AND WATER SERVICE LINES 6" OR LARGER SHALL BE AWWA C900 CLASS 200 DR18 PVC WITH GRAY IRON PIPE EQUIVALENT OUTSIDE DIAMETER. WATER MAIN SHALL BE INSTALLED WITH A 5.5' DEPTH OF BURY TO TOP OF PIPE.

FIRE HYDRANT ASSEMBLIES AND APPURTENANCES SHALL COMPLY WITH THE CITY OF ANKENY SUDAS SUPPLEMENT.

PROVIDE 10' MIN HORIZONTAL SEPARATION OF PARALLEL STORM AND SANITARY SEWER AND WATER MAIN. PROVIDE 18" MIN CLEARANCE AT SEWER PIPE AND WATER MAIN CROSSOVER.

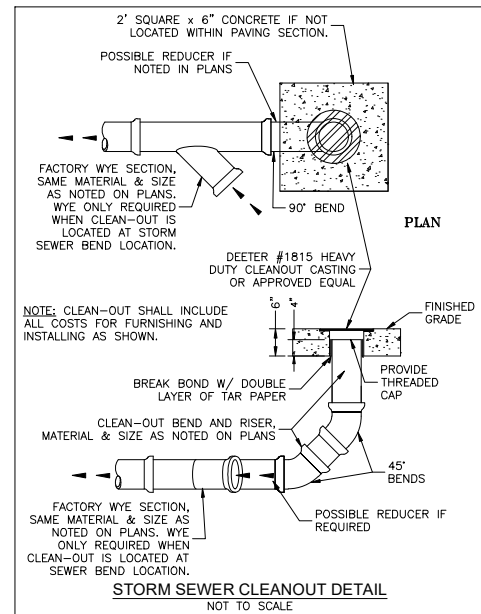
TRACER WIRE SHALL BE SUPPLIED WITH ALL WATER LINE ACCORDING TO CITY REQUIREMENTS. ALL DIP WATER MAIN AND FIXTURES SHALL BE ENCASED IN POLYETHYLENE PER SECTION 5010.3.05.

CONTRACTOR SHALL CONTACT THE CITY WATER DEPARTMENT TO COORDINATE ALL WATER MAIN CONNECTIONS AND SHUTDOWNS.

TRENCH BACKFILL

THE EXISTING SITE MATERIAL IS SUITABLE FOR TRENCH BACKFILL; HOWEVER, THE MATERIAL MAY NEED TO BE MOISTURE CONDITIONED AND DRIED PRIOR TO BEING USED AS STRUCTURAL FILL. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH MOISTURE CONDITIONING, AND/OR REMOVING, DISPOSING AND REPLACING OF TRENCH SOILS. A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHOULD DETERMINE THE DEPTH OF REMOVAL AT THE TIME OF CONSTRUCTION IF THE EXISTING MATERIAL IS UNABLE TO BE MOISTURE CONDITIONED OR DRIED.

TRENCH BACKFILL MATERIALS SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT OF ASTM D698 WITH A MOISTURE CONTENT OF -2 TO +3% OF OPTIMUM FOR COHESIVE SOILS AND A MINIMUM OF 98% OF ASTM D698 WITH A MOISTURE CONTENT OF -3 TO +3% OF OPTIMUM FOR COHESIONLESS SOILS.



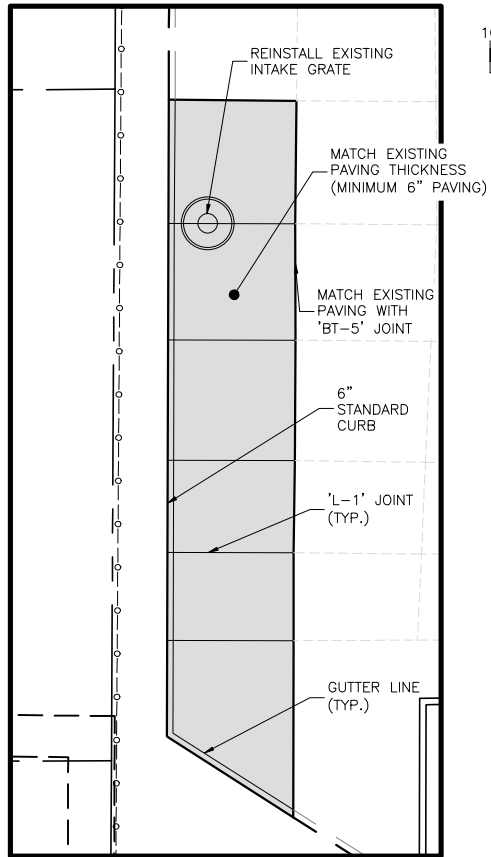
UTILITY PLAN

FAITH BAPTIST BIBLE COLLEGE  
STORAGE UNIT BUILDING  
ANKENY, IOWA

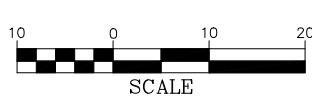
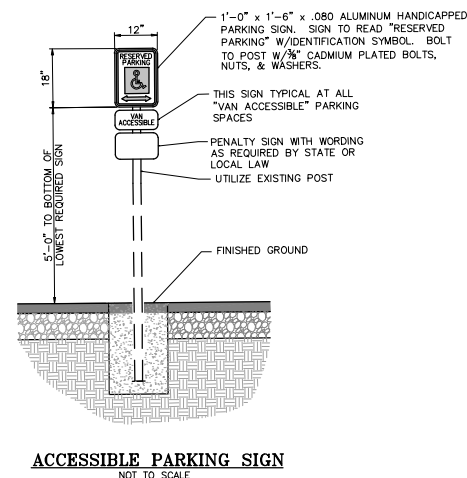
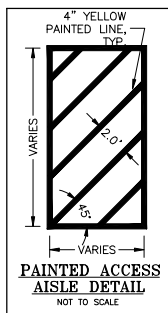
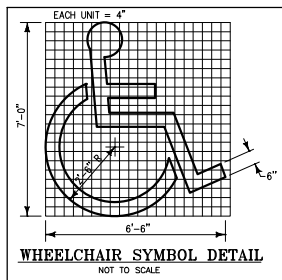
Project Manager: KMP  
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PAVING PLAN  
PAVING REPLACEMENT



PAVING NOTES

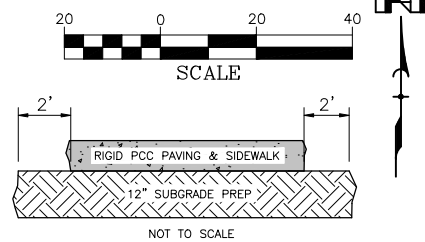
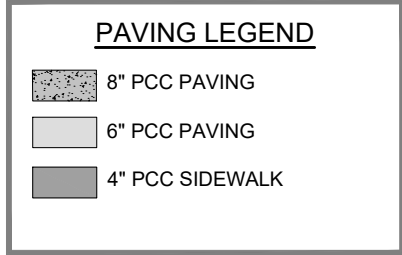
ALL WORK TO BE PERFORMED ACCORDING TO THE 2022 SUDAS STANDARD SPECIFICATIONS (AVAILABLE AT WWW.IOWASUDAS.ORG) AND THE 2017 CITY OF ANKENY SUPPLEMENTAL SPECIFICATIONS TO SUDAS.

IMMEDIATELY PRIOR TO PLACING PAVING OR SIDEWALK, THE SUBGRADE SHALL BE TESTED FOR MOISTURE AND DENSITY. THE TOP 12" OF SUBGRADE SHALL BE COMPACTED TO AT LEAST 95% OF ASTM D698 FOR COHESIVE SOILS. IF SUBGRADE DENSITY DOES NOT MEET REQUIREMENTS, THE SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF 12" AND RECOMPACTED TO AT LEAST 95% OF ASTM D698 WITHIN A RANGE OF -2 TO +3 PERCENT OF THE MATERIAL'S OPTIMUM MOISTURE CONTENT (AS DETERMINED BY STANDARD PROCTOR ASTM D698). SUBGRADE COMPACTION SHOULD EXTEND 2 FEET BEYOND THE EDGE OF THE PAVEMENT IN ALL DIRECTIONS.

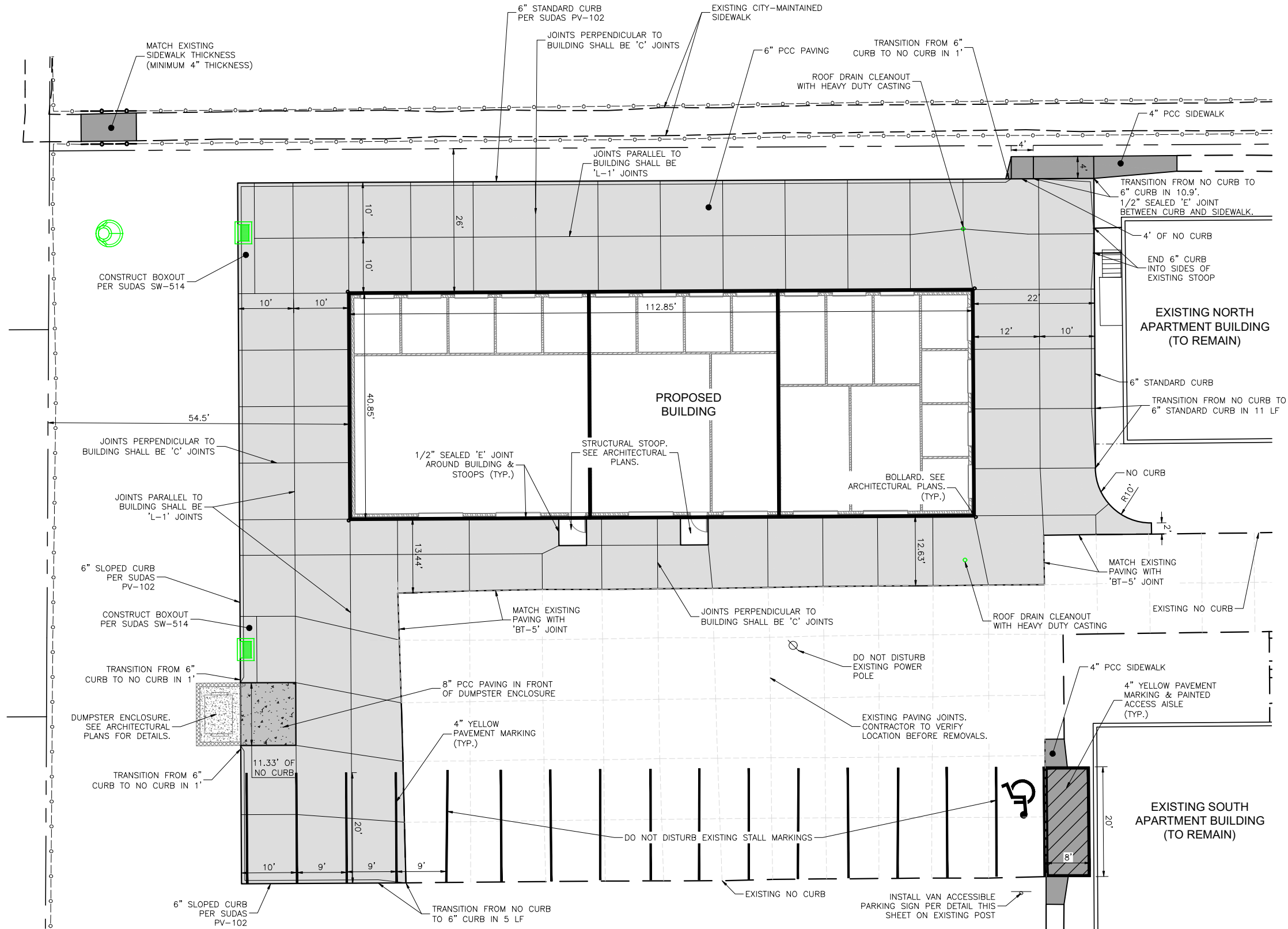
ALL PCC PAVING SHALL BE AN IDOT C-4 MIX. COARSE AGGREGATE FOR CONCRETE SHALL BE CRUSHED STONE PARTICLES WITH CLASS 3 DURABILITY COMPLYING WITH IOWA DOT SECTION 4115 AND MATERIALS I.M. 409. SOURCE APPROVALS FOR AGGREGATES. RIVER ROCK WILL NOT BE ACCEPTABLE FOR USE AS COARSE AGGREGATE. PAVING SHALL BE CURED AS STATED IN SUDAS WITH LIQUID CURING COMPOUND ACCORDING TO SUDAS SECTION 7010, 2.01, AND IN A MANNER SPECIFIED IN IOWA SUDAS SECTION 7010, 3.02, J.

ALL JOINTS SHALL BE PER FIGURE 7010.101. LONGITUDINAL CONTRACTION JOINTS SHALL BE 'L-1' JOINTS. TRANSVERSE JOINTS SHALL BE 'C' OR 'DW' JOINTS. LONGITUDINAL CONSTRUCTION JOINTS SHALL BE 'BT-1', 'BT-5' OR 'KT-1'. ALL LONGITUDINAL AND TRANSVERSE JOINTS SHALL BE SAWED AND SEALED PER DETAIL 'A'. EXPANSION JOINTS SHALL BE SEALED PER DETAIL 'F'. JOINT SEALANT SHALL COMPLY WITH SECTION 7010, 2.01, K.

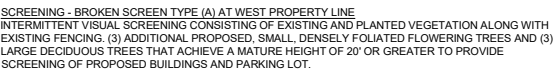
ALL SITE PAVING AND SIDEWALK SHALL BE CURED WITH LIQUID CURING COMPOUND ACCORDING TO SUDAS SECTION 7010, 2.01, AND IN A MANNER SPECIFIED IN IOWA SUDAS SECTION 7010, 3.02, J.



PAVING SECTION DETAIL









- ①

SIDEWALK  
CLOSED

24"x18"

DETOUR

24"x18"
- ②

SIDEWALK  
DETOUR

24"x18"

←
- ③

SIDEWALK  
DETOUR

24"x18"

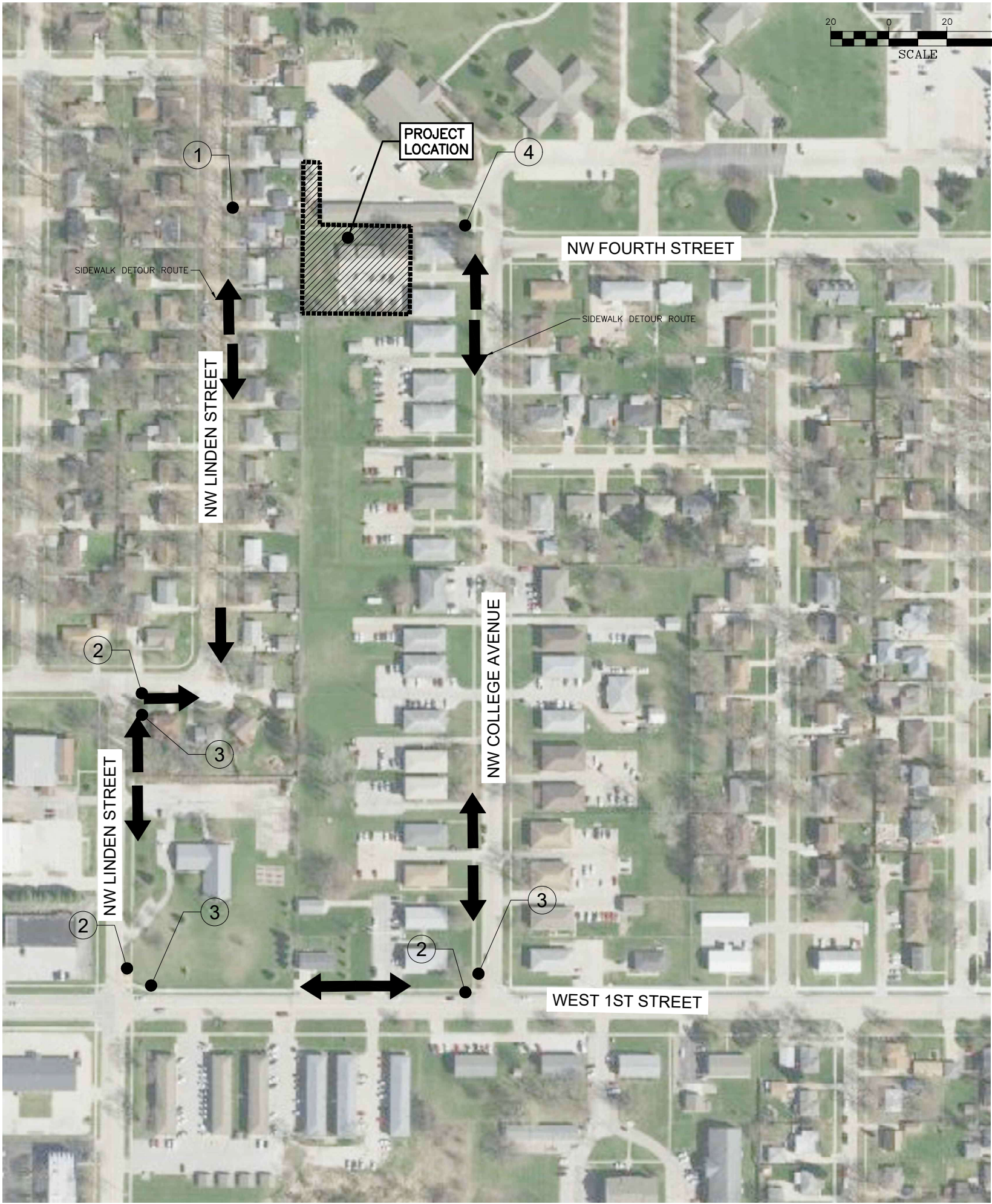
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- ④

SIDEWALK  
CLOSED

24"x18"

DETOUR

24"x18"



FAITH BAPTIST BIBLE COLLEGE  
STORAGE UNIT BUILDING  
ANKENY, IOWA

SIDEWALK DETOUR PLAN

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