AGENDA

City of University Heights, Iowa
Special Meeting of City Council
Tuesday, August 18, 2015
St. Andrew Presbyterian Church
Fellowship Hall
7:00-9:00pm
Meeting called by Mayor Louise From

Time		Topic	Owner
7:00pm	Call to Order Special meeting-	Roll Call	Louise From
		Consideration of Resolution No. 16-64 accepting Shamrock Construction's Leamer Court repair work and authorizing final payment and releasing retaining for that work	Josiah Bilskemper
	Public Input	Public Comments	Public
	Development Proposal - Lot 115, University Heights 1st Addition (Carlson Property)	-Presentation of Proposed Development	Reed Carlson, Glen Meisner, Scott Pottorff
		-Staff Reports -City Attorney -City Engineer -City Building Official	Steve Ballard Josiah Bilskemper Terry Goerdt
		-Consideration of Ordinance Resolution No. 15-65 approving a Sensitive Areas Site Plan, Development Plan, and Grading plan for Lot 115, University Heights 1st Addition, pursuant to Ordinance No. 128	
		-Consideration of Resolution No. 15-66 approving a Request to Develop Protected Slopes for Lot 115, University Heights 1st Addition, pursuant to Ordinance No. 128	
		-Consideration of Resolution No. 16-67 authorizing the Mayor to sign and the Clerk to attest a revised Storm Sewer Agreement and Easement over, upon, and across Lot 115, University Heights 1st Addition	
9:00pm	Adjournment		Louise From

The next regular City Council meeting is Tuesday, Sept. 8, 2015- Location to be announced.

August '15 – City Attorney's Report
Lot 115, University Heights 1st Addition

1. Introduction

- Reed and Sandy Carlson have submitted a building permit application and site plan concerning their property known as Lot 115, University Heights 1st Addition. This property generally sits south (and below) 62 Highland Drive.

- The building permit application and site plan present many items for the City's Building Official, Terry Goerdt, to review and consider – things like building height, setbacks, and many similar items. The Council does not have a particular role in addressing these items. If people disagree with the Building Official's determinations, they may appeal those determinations to the City's Board of Adjustment, which is authorized to consider and decide such issues.

- The proposed development does present two items for the City Council to decide:

    1. Whether a Storm Sewer Easement should be relocated; and

    2. Whether the plans comply with the Sensitive Areas Ordinance, No. 128.

2. Storm Sewer Relocation

- A storm sewer easement presently exists over, across, and upon Lot 115. A copy of the recorded Easement Agreement and Easement Plat are attached.
    - The Easement Agreement sets forth the terms of the easement.
    - The Easement Plat shows the precise location of the easement.

- The storm sewer was relocated in the mid-1980s at the request of the owners of Lot 115 at the time.
    - The City agreed to the relocation so long as the property owners paid for the relocation and paid for the ongoing maintenance of the storm sewer.
    - Construction and location of the easement was done subject to the direction and approval of the City Engineer.
    - The Easement Agreement provides that the owners of Lot 115 are responsible for maintenance of the storm sewer line.

- Under the Easement Agreement, the owners of Lot 115 have the right to construct buildings or other structures over the location of the easement so long as 1) such construction does not interfere with the storm sewer and 2) the property owners remain responsible for costs of repair or replacement of the sewer line underneath anything that is built.

- The current development proposal relocates the storm sewer easement and line. The specifics of the relocation are shown in the site plan and related documents submitted by the property owners.

- The question for the Council is whether relocation of the storm sewer easement and line is reasonable under the circumstances. The property owners will provide information about this question, and I expect that the City Engineer will, too.

- As the Council considers the proposed relocation of the storm sewer easement and line, the Council should be mindful that the property owners have the right under the present Easement Agreement to build right on top of the easement line. Thus, the Council should consider whether the proposed relocation is better than the current situation because 1) it improves drainage and runoff of storm water and 2) it avoids construction of buildings on top of the sewer line.

- The property owners and/or their representatives will present information regarding the storm sewer issues, and the City Engineer will provide comment, as well.

- In summary, the Council is not required to approve relocation of the storm sewer easement area and line for the property owners to move forward with their development proposal. The property owners have the right under the existing Easement Agreement to build. But the Council should consider whether the proposed relocation benefits Lot 115, neighboring property owners, and the City generally by improving drainage and runoff of storm water.

3. Sensitive Areas Considerations

- The proposed development implicates provisions of the City's Sensitive Areas Ordinance, No. 128. You may link to that ordinance here: http://www.university-heights.org/ord/ord128.pdf.

- The purpose of the ordinance "is to protect sensitive areas within the City of University Heights by regulating the development of such sensitive areas." Ordinance No. 128(1).

- The ordinance identifies three classes of "Sensitive Areas" based upon how steep they are:

    1. Steep Slopes;
    2. Critical Slopes; and
    3. Protected Slopes.

- The proposed development contains all three types of slopes.
    - As a result, <u>for the Steep and Critical Slopes</u>, the Council must consider and determine whether the Sensitive Areas Site Plan and Development and Grading Plan that have been submitted are consistent with the purpose of the ordinance and should be approved.
    - For <u>the Protected Slopes</u>, the Council must consider and determine the following for development to be permitted:
        - Whether the Protected Slopes in question have previously been altered by human activity;
        - Whether a geologist or professional engineer can demonstrate to the Council's satisfaction that the proposed development will not undermine the stability of the slopes in question; and
        - Whether the proposed development is consistent with the intent of the ordinance ("to protect sensitive areas within the City of University Heights by regulating the development of such sensitive areas").

- The property owners and/or their representatives will present information to the Council regarding these items.

- The City Engineer's report will provide further detail concerning the requirements of the ordinance in light of the site plan that has been submitted.

4. <u>Conclusion and Process Moving Forward</u>

- If the Council approves the storm sewer and sensitive slopes issues, then the building permit application will move forward for review by the City Building Official, Terry Goerdt.

- If the Council does not approve the storm sewer and sensitive slopes issues, then the proposed development will not proceed.

- A letter from neighbors to the property owners is attached, as is a "good neighbor" letter from the property owners.

- The City Engineer and the City Building Official will be present for the August 18 Council meeting.

Leff/SEB/UH/UH Atty Reports/UHAttyRept August '15 legal report – Lot 115

C08639

Doc ID: 021337310008 Type: GEN
Recorded: 12/15/2008 at 03:05:12 PM
Fee Amt: $42.00 Page 1 of 8
Johnson County Iowa
Kim Painter County Recorder
BK4372 PG491-498

STORM SEWER AGREEMENT
AND EASEMENT
JOHNSON COUNTY, IOWA

Preparer Information:

Steven E. Ballard
222 S. Linn Street
P.O.Box 2447
Iowa City, Iowa 52244-2447
Telephone: (319)338-7551

Taxpayer Information:

Frederic R. Carlson
1202 Pleasant Avenue
Decorah, Iowa 52101-7579

Return Document To:

Steven E. Ballard
222 S. Linn Street
P.O.Box 2447
Iowa City, IA 52244-2447

Grantor:

Frederic Reed Carlson
Sandra M. Carlson

Grantee:

City of University Heights, Iowa

Legal Description:

See attached.

STORM SEWER AGREEMENT
AND EASEMENT

This agreement is entered into this 10TH day of NOVEMBER, 2008, by and between Frederic Reed Carlson and Sandra M. Carlson, husband and wife, hereinafter referred to as OWNERS, and the City of University Heights, Iowa, hereinafter referred to as CITY, to-wit:

WHEREAS, the OWNERS are the titleholders of the following described real estate (hereafter "THE PROPERTY"):

> Lot 115, University Heights, Johnson County, Iowa, according to the plat thereof recorded in Book 2, Page 72, Plat Records of Johnson County, Iowa. Excepting therefrom that portion described as Auditor's Parcel 2001034 on Plat of Survey recorded in Book 43, Page 8, Plat Records of Johnson County, Iowa.

WHEREAS, in or about 1985, the OWNERS' predecessors in title made certain improvements to the property that required the relocation of the CITY storm sewer line running southerly from the east end of Highland Drive as it then existed and the construction of a new storm sewer line running east-west to replace the open ditch drainage of surface water that then existed, and

WHEREAS, the CITY approved the storm sewer relocation and construction of the new storm sewer line, and

WHEREAS, the OWNERS' predecessors in title did, in fact, relocate the storm sewer and construct the new storm sewer line.

NOW, THEREFORE, IN CONSIDERATION OF THE MUTUAL COVENANTS CONTAINED HEREIN, IT IS UNDERSTOOD AND AGREED AS FOLLOWS:

1. The OWNERS' predecessors-in-title, with the CITY'S approval, previously relocated the CITY storm sewer line as it existed in or about 1985 running southerly from the south end of Highland Drive to a new location.

2. All construction of the relocated storm sewer line was at the expense of the OWNERS' predecessors-in-title and was done in accordance with the direction and approval of the CITY engineer.

3. Upon completion of the relocation of the storm sewer line, the line was maintained by the OWNERS' predecessors-in-title at their cost. This line shall hereafter be maintained by the OWNERS at the OWNERS' cost.

4. The CITY consented to the construction by the OWNERS' predecessors-in-title of a new storm sewer line running easterly and westerly through said property to replace the open ditch drainage that was located thereon.

5. The size, location, and manner of construction of this storm sewer line by the OWNERS' predecessors-in-title was subject to the direction and approval of said CITY engineer.

6. The newly constructed east-west storm sewer line has been maintained by the OWNERS' predecessors-in-title at their expense. Hereafter, the costs of maintaining the east-west sewer line, including costs of repair or replacement, shall be the obligation of OWNERS.

7. The relocated sewer line (running north-south and described in numbered Paragraphs 1 - 3 of this Storm Sewer Agreement and Easement) and the newly constructed sewer line (running east-west and described in numbered Paragraphs 4 - 6 of this Storm Sewer Agreement and Easement), are located within the following-described area:

> A storm sewer and drainage easement on a part of Lot 115, University Heights First Addition to University Heights, Johnson County, Iowa (Final Plat recorded in Plat Book 2, Page 72 at the Johnson County Recorder's Office), said easement being centered on the centerline described as follows:
>
> Commencing as a point of reference at the Southeast corner of said Lot 115;
>
> thence North 0°00' East 43.7 feet along the East line of said Lot 115 (assumed bearing for this description only) to the point of beginning of the herein described centerline;
>
> thence South 80°32' West 6.7 feet;
>
> thence North 75°14' West 167.1 feet to a point 12.5 feet in perpendicular distance East of the West line of said Lot 115, said point being designated as reference point A;

thence North 0°24' East 75.6 feet along a line parallel with and 12.5 feet in perpendicular distance East of said West line to a point of intersection with the Southerly right of way line of Highland Drive and the end of the centerline herein described.

Said storm sewer and drainage easement is 20 feet wide between the point of beginning and reference point A and 25 feet wide from said reference point A and the end of the herein described centerline. The sidelines of said easement are to the shortened or lengthened in order to meet at the angle points and to begin at the East line of said Lot 115 and terminate at the Southerly right-of-way line of said Highland Drive.

A document entitled "Easement Exhibit" setting forth this description and showing the location of both sewer lines is attached hereto under mark of Exhibit "A" and by this reference made a part hereof as though set out fully.

8. The OWNERS herewith grant and convey to the City, an easement over that portion of their property described in Paragraph 7 and Exhibit "A" hereof, including rights of ingress and egress to conduct inspections of the storm sewer lines and systems. In the event the OWNERS fail to properly maintain, repair or replace either of the above storm sewer systems, then the CITY of University Heights shall have the right to come upon the OWNERS' property at such times and in such manner over the easement ways to provide such maintenance or to repair or replace said lines, all of such expense including engineering fees, legal fees and material and labor costs shall be the obligation of the OWNERS.

9. The OWNERS reserve the right to use the above described real estate for any lawful purpose provided that such use does not interfere with the functioning of the storm sewer line. The OWNERS specifically reserve the right to place fill over the east-west sewer line and to erect and construct building or other structures over said easement way, provided, however, that such construction shall not structurally interfere with the storm sewer line and further provided that the OWNERS will remain totally responsible for any costs of repair or replacement of the sewer line located under any portion of any structure.

10. This agreement shall constitute a covenant running with the land and shall be binding upon all successors, assigns and legal representatives of all parties hereto.

IN WITNESS WHEREOF the undersigned have hereunto affixed their signatures.

Frederic Reed Carlson

Sandra M. Carlson

- OWNERS -

CITY OF UNIVERSITY HEIGHTS

By: Louise From

Louise From, Mayor

ATTEST BY:

Christine M. Anderson

Christine M. Anderson

STATE OF IOWA)
) SS:
COUNTY OF WINNESHIEK

This instrument was acknowledged before me on the 10TH day of NOVEMBER, 2008, by Frederic Reed Carlson and Sandra M. Carlson.

Bradford A. Carlson
Notary Public, State of Iowa

Bradford A. Carlson
NOTARIAL SEAL ~ IOWA
Commission Number 740482
My Commission Expires
2nd Day of May 2009

STATE OF IOWA)
) SS:
COUNTY OF JOHNSON)

This instrument was acknowledged before me on the 9th day of December, 2008, by Louise From and Christine M. Anderson as Mayor and City Clerk, respectively, of the City of University Heights; the seal affixed thereto is the seal of said municipal corporation by authority of its City Council; the said Louise From and Christine M. Anderson, as such officers, acknowledged the execution of said instrument to be the voluntary act and deed of said municipal corporation, by it and by them voluntarily executed.

STEVEN E. BALLARD
COMMISSION NO. 161385
MY COMMISSION EXPIRES
12-12-08

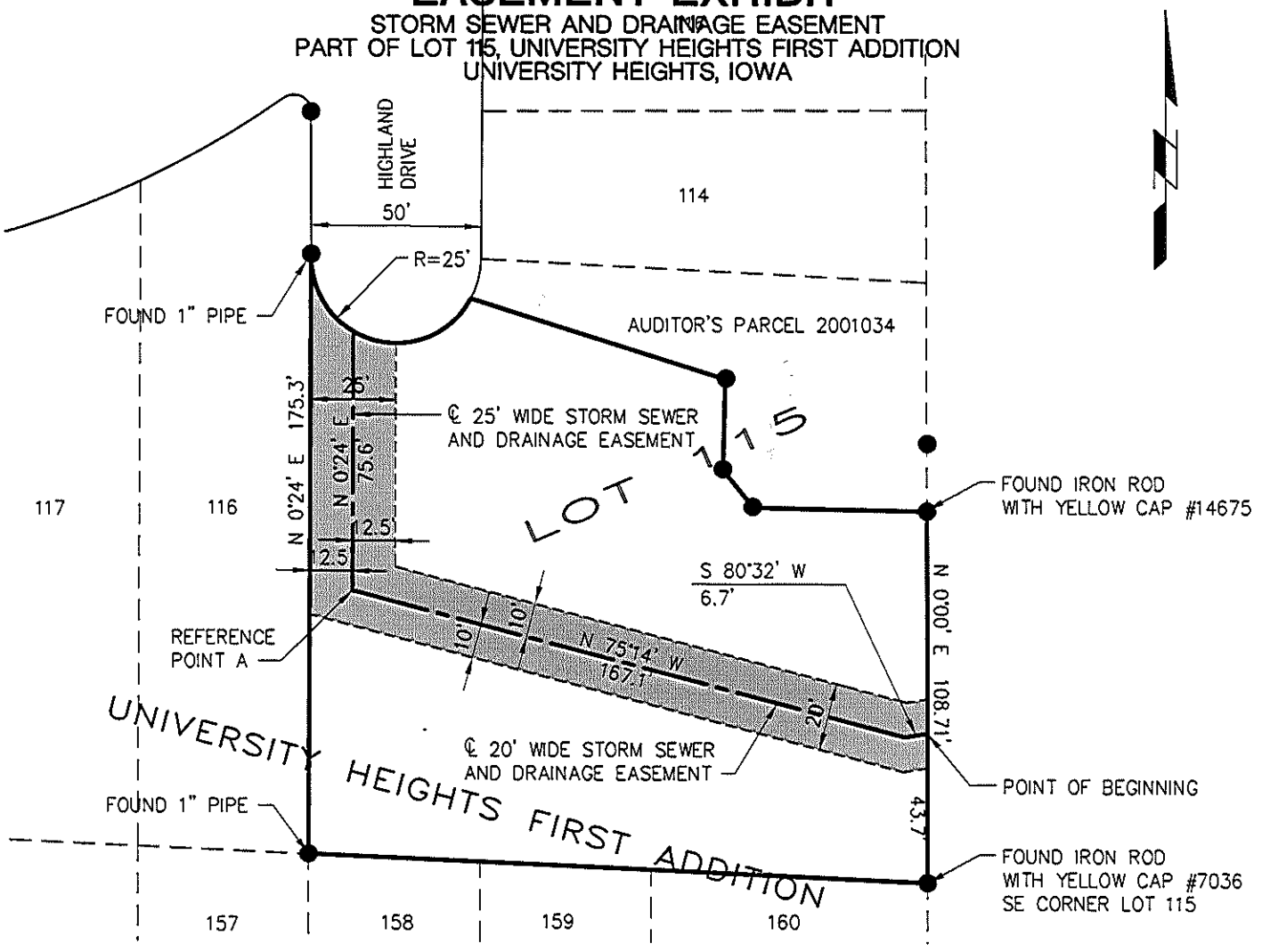
Notary Public, State of Iowa

jan/seb/university heights/Lot 115/storm sewer agreement carlson 10-1-08:dml

PREPARED BY: SHIVE-HATTERY, INC. 2834 NORTHGATE DRIVE IOWA CITY, IOWA 52245 (319) 354-3040

EASEMENT EXHIBIT

STORM SEWER AND DRAINAGE EASEMENT
PART OF LOT 115, UNIVERSITY HEIGHTS FIRST ADDITION
UNIVERSITY HEIGHTS, IOWA



DESCRIPTION

A storm sewer and drainage easement on a part of Lot 115, University Heights First Addition to University Heights, Johnso County, Iowa (Final Plat recorded in Plat Book 2, Page 72 at the Johnson County Recorder's Office), said easement being centered on the centerline described as follows:

Commencing as a point of reference at the Southeast corner of said Lot 115;

thence North 0°00' East 43.7 feet along the East line of said Lot 115 (assumed bearing for this description only) to the point of beginning of the herein described centerline;

thence South 80°32' West 6.7 feet;

thence North 75°14' West 167.1 feet to a point 12.5 feet in perpendicular distance East of the West line of said Lot 115, said point being designated as reference point A;

thence North 0°24' East 75.6 feet along a line parallel with and 12.5 feet in perpendicular distance East of said West line to a point of intersection with the Southerly right of way line of Highland Drive and the end of the centerline herein descibed.

Said storm sewer and drainage easement is 20 feet wide between the point of beginning and reference point A and 25 feet wide from said reference point A and the end of the herein described centerline. The sidelines of said easement are to be shortened or lenthened in order to meet at the angle points and to begin at the East line of said Lot 115 and terminate at the Southerly right-of-way line of said Highland Drive.

ONLY THESE COPIES OF THIS DOCUMENT SIGNED AND DATED IN CONTRASTING INK COLOR ARE TO BE CONSIDERED CERTIFIED OFFICIAL COPIES PER IOWA ADMINISTRATION CODE 193C-6.1(5)

LICENSED LAND SURVEYOR Jonathon Bailey

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 LAND SURVEYOR UNDER THE LAWS OF THE STATE OF IOWA.

SIGNATURE:

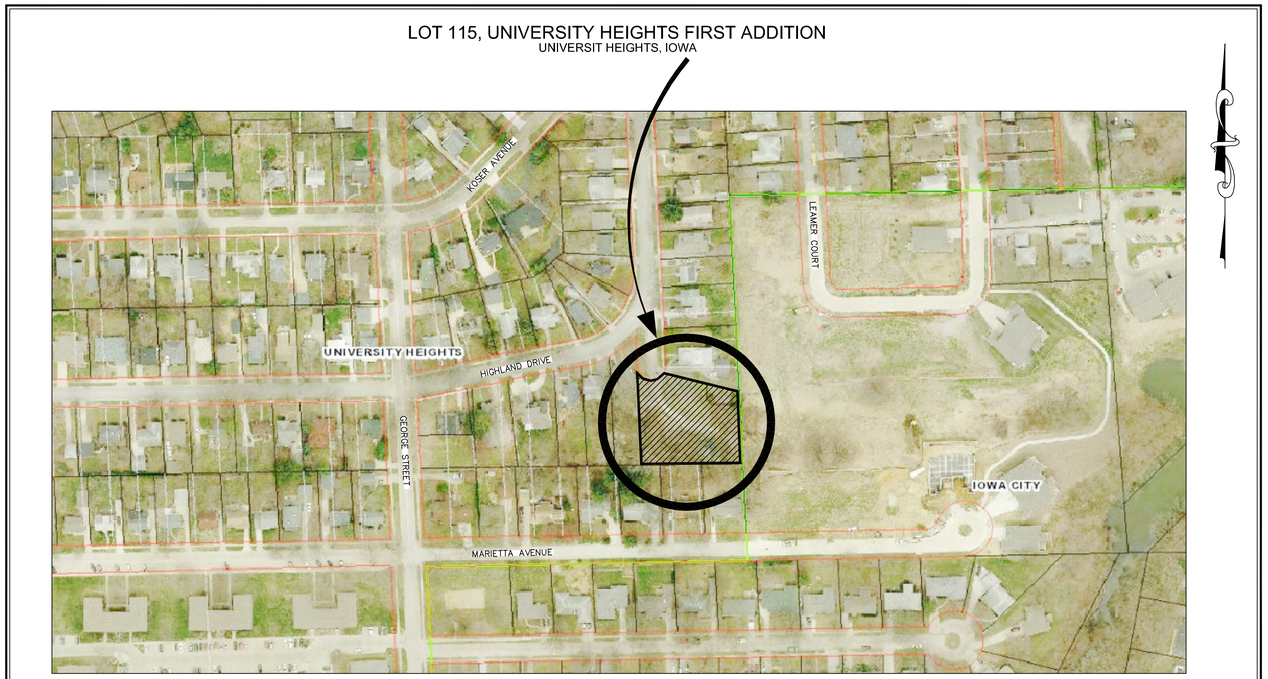
NAME: Jonathon Bailey

SURVEY REQUESTED BY:
THE CITY OF UNIVERSITY HEIGHTS

PROPERTY OWNERS:
FREDERIC R. CARLSON
SANDRA C. CARLSON

\Lot 115 Storm Sewer Investigation\dwg\EP-B1-01.DWG | DATE: 10/07/2008 | Time: 15:14 |

SITE PLAN
LOT 115, UNIVERSITY HEIGHTS FIRST ADDITION
UNIVERSITY HEIGHTS, IOWA



LOCATION MAP
NOT TO SCALE

Index

UTILITIES

THE CONTRACTOR SHALL NOTIFY IOWA ONE CALL NO LESS THAN 48 HRS. IN ADVANCE OF ANY DIGGING OR EXCAVATION.

IOWA ONE CALL
CALL - BEFORE - YOU - DIG
800/292-8989

WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK.

STANDARD LEGEND AND NOTES

- PROPERTY &/or BOUNDARY LINES
- CONGRESSIONAL SECTION LINES
- RIGHT-OF-WAY LINES
- EXISTING RIGHT-OF-WAY LINES
- CENTER LINES
- EXISTING CENTER LINES
- LOT LINES, INTERNAL
- LOT LINES, PLATTED OR BY DEED
- PROPOSED EASEMENT LINES
- EXISTING EASEMENT LINES
- BENCHMARK
- (R) RECORDED DIMENSIONS
- 22-1 CURVE SEGMENT NUMBER

-EXIST-	-PROP-	
		POWER POLE
		POWER POLE W/DROP
		POWER POLE W/TRANS
		POWER POLE W/LIGHT
		GUY POLE
		LIGHT POLE
		SANITARY MANHOLE
		FIRE HYDRANT
		WATER VALVE
		DRAINAGE MANHOLE
		CURB INLET
x x		FENCE LINE
		EXISTING SANITARY SEWER
		PROPOSED SANITARY SEWER
		EXISTING STORM SEWER
		PROPOSED STORM SEWER
W		WATER LINES
E		ELECTRICAL LINES
T		TELEPHONE LINES
G		GAS LINES

- CONTOUR LINES (1' INTERVAL)
- PROPOSED GROUND
- EXISTING GROUND
- EXISTING TREE LINE
- EXISTING DECIDUOUS TREE & SHRUB
- EXISTING EVERGREEN TREES & SHRUBS

THE ACTUAL SIZE AND LOCATION OF ALL PROPOSED FACILITIES SHALL BE VERIFIED WITH CONSTRUCTION DOCUMENTS, WHICH ARE TO BE PREPARED AND SUBMITTED SUBSEQUENT TO THE APPROVAL OF THIS DOCUMENT.

LICENSED PROFESSIONAL ENGINEER
SCOTT B. POTTORFF 16932
IOWA
SEAL

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

_____ 20____
SCOTT B. POTTORFF P.E. Iowa Lic. No. 16932
My license renewal date is December 31, 20____.
Pages or sheets covered by this seal:

DRAFT

PROJAC

MMS
CIVIL ENGINEERS
LAND PLANNERS
LAND SURVEYORS
LANDSCAPE ARCHITECTS
ENVIRONMENTAL SPECIALISTS
1917 S. GILBERT ST.
IOWA CITY, IOWA 52240
(319) 351-8282
www.mmsconsultants.net

Date	Revision
08-11-15	PER CITY COMMENTS PVA/LLS

COVER SHEET

LOT 115, UNIVERSITY HEIGHTS FIRST ADDITION
UNIVERSITY HEIGHTS
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date:	6/8/15
Designed by: SBP	Field Book No: 1008
Drawn by: SBP	Scale: 1"=10'
Checked by: SBP	Sheet No: 1
Project No: IOWA CITY 9187-001	of: 8

EXISTING CRITICAL SLOPE – 7,328 SF
EXISTING CRITICAL SLOPE DISTURBED – 5,331 SF

EXISTING PROTECTED SLOPE – 1,246 SF
EXISTING PROTECTED SLOPE DISTURBED – 514 SF

EXISTING STEEP SLOPE – 1,476 SF
EXISTING STEEP SLOPE DISTURBED – 1,279 SF

PROJAC

CIVIL ENGINEERS
LAND PLANNERS
LAND SURVEYORS
LANDSCAPE ARCHITECTS
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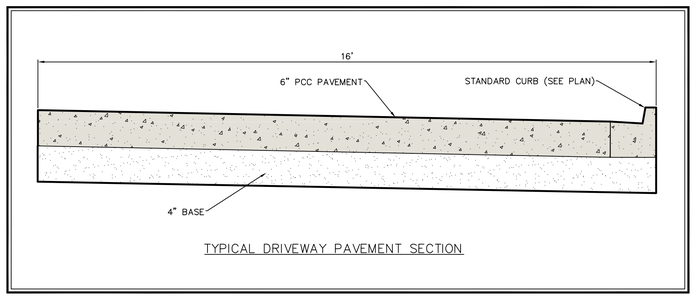
Date	Revision
08-11-15	PER CITY COMMENTS PVA/LLS

EXISTING SENSITIVE AREAS AND DEMOLITION PLAN

LOT 115, UNIVERSITY HEIGHTS FIRST ADDITION
UNIVERSITY HEIGHTS
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

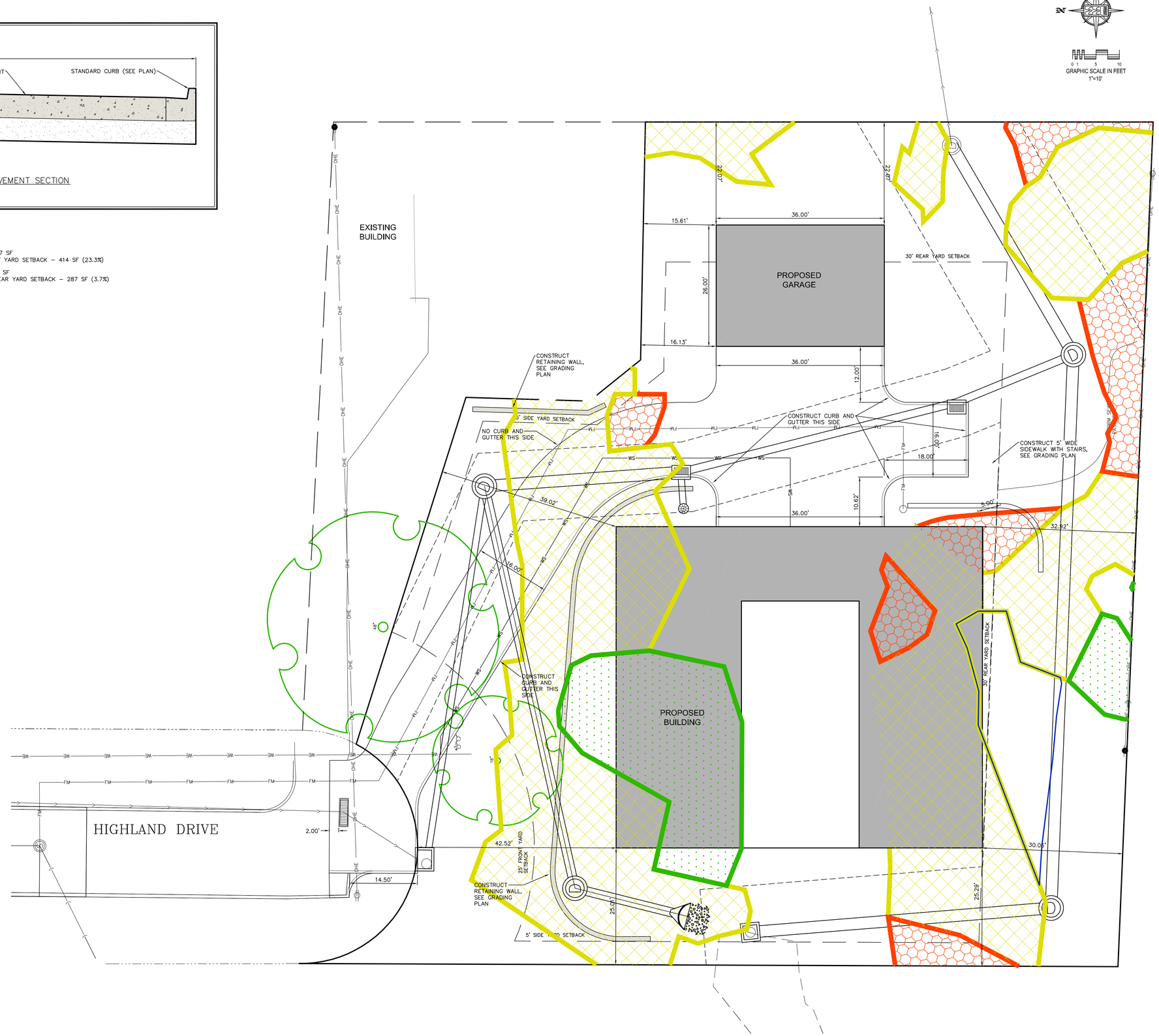
Date:	6/8/15
Designed by: SBP	Field Book No: 1008
Drawn by: SBP	Scale: 1"=10'
Checked by: SBP	Sheet No: 2
Project No: IOWA CITY 9187-001	of: 8



TYPICAL DRIVEWAY PAVEMENT SECTION

TOTAL AREA OF FRONT YARD SETBACK – 1,777 SF
TOTAL PROPOSED PAVING AREA WITRHIN FRONT YARD SETBACK – 414 SF (23.3%)

TOTAL AREA OF REAR YARD SETBACK – 7,781 SF
TOTAL AREA OF PROPOSED BUILDING WITHIN REAR YARD SETBACK – 287 SF (3.7%)



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Date	Revision
08-11-15	PER CITY COMMENTS PVA/LLS

LAYOUT AND DIMENSION PLAN

LOT 115, UNIVERSITY HEIGHTS FIRST ADDITION
UNIVERSITY HEIGHTS
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date:	6/8/15
Designed by: SBP	Field Book No.: 1008
Drawn by: SBP	Scale: 1"=10'
Checked by: SBP	Sheet No.: 3
Project No.: IOWA CITY 9187-001	of: 8

STABILIZATION SEEDING

STABILIZATION SEEDING SHALL BE IN ACCORDANCE WITH I.D.O.T. STANDARD SPECIFICATION SECTION 2601.03 STABILIZING CROP SEEDING AND FERTILIZING.

SEED MIXTURES SHALL BE ONE OF THE FOLLOWING:

SPRING– MARCH 1 TO MAY 20

OAT	2 BUSHEL PER ACRE
GRAIN RYE	25 LBS. PER ACRE
RED CLOVER	5 LBS. PER ACRE
TIMOTHY	5 LBS. PER ACRE

SUMMER – MAY 21 TO JULY 20

OAT	3 BUSHEL PER ACRE
GRAIN RYE	35 LBS PER ACRE
RED CLOVER	5 LBS PER ACRE
TIMOTHY	5 LBS PER ACRE

FALL – JULY 21 TO SEPTEMBER 30

OAT	2 BUSHEL PER ACRE
GRAIN RYE	35 LBS PER ACRE
RED CLOVER	5 LBS PER ACRE
TIMOTHY	5 LBS PER ACRE

FERTILIZER SHALL BE APPLIED AT A RATE OF 450 LBS PER ACRE USING CHEMICALLY COMBINED COMMERCIAL 13–13–13 FERTILIZER.

GRADING AND EROSION CONTROL NOTES

TOTAL SITE AREA: 4.59 ACRES
TOTAL AREA TO BE DISTURBED: 1.87 ACRES

EROSION CONTROL MEASURES SHOWN SHALL BE USED DURING FILL ACTIVITIES. EROSION CONTROL MEASURES SHALL BE REEVALUATED AND MODIFIED, IF NECESSARY, AT THE TIME OF SITE DEVELOPMENT.

ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES THAT COULD BE USED ON SITE, IF NEEDED, CAN BE FOUND IN APPENDIX D OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) BINDER PREPARED FOR THE SITE. IF ADDITIONAL MEASURES ARE USED, INDICATE THE TYPE AND LOCATION OF SAID MEASURE ON THIS PLAN.

CONTRACTOR SHALL INSTALL A ROCK ENTRANCE AND PERFORM REGULAR CLEANING OF VEHICLES THAT LEAVE THE SITE.

FOLLOWING INSTALLATION OF PERIMETER SILT FENCE AND TEMPORARY CONSTRUCTION ENTRANCE THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR TO SCHEDULE A SITE INSPECTION PRIOR TO ANY SOIL DISTURBING ACTIVITIES.

THE CONTRACTOR SHALL FOLLOW THE NPDES PERMIT, SWPPP, AND THE CITY CSR REGULATIONS.

THE EROSION CONTROL CONTRACTOR SHALL INSTALL FILTER SOCKS OR OTHER APPROVED FORM OF INLET PROTECTION AT EACH STREET INTAKE ADJACENT TO THE SITE.

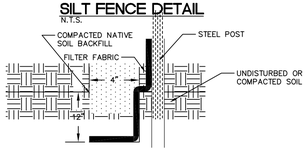
EROSION CONTROL LEGEND

- SILT FENCE/FILTER SOCK
- PERIMETER SILT FENCE
- SA — TEMPORARY SOIL STOCKPILE AREA
- TEMPORARY ROCK CONSTRUCTION ENTRANCE/EXIT
- TEMPORARY PARKING AND STORAGE
- CW — CONCRETE TRUCK/EQUIPMENT WASHOUT
- PR — PORTABLE RESTROOM
- DL — DOCUMENT LOCATION (PERMITS, SWPPP, INSPECTION FORMS, ETC.)
- FILTER SOCK INLET PROTECTION
- FILTER SOCK BEHIND CURB AT CURB RAMP
- DIRECTION OF OVERLAND FLOW
- D — DUMPSTER FOR CONSTRUCTION WASTE
- RIP RAP OUTLET PROTECTION
- 01 — OTHER MEASURE: _____
- 02 — OTHER MEASURE: _____
- 03 — OTHER MEASURE: _____

THE ABOVE LISTED ITEMS ARE SHOWN IN THEIR RECOMMENDED LOCATIONS. IF A CONTROL MEASURE IS ADDED OR MOVED TO A MORE SUITABLE LOCATION, INDICATE THE REVISION ON THIS SHEET. THE BLANKS LEFT FOR OTHER MEASURES SHOULD BE USED IF AN ITEM NOT SHOWN ABOVE IS IMPLEMENTED ON SITE. ADDITIONAL PRACTICES FOR EROSION PREVENTION AND SEDIMENT CONTROL CAN BE FOUND IN APPENDIX D OF THE SWPPP.

SILT FENCE DETAIL

N.T.S.



INSTALLATION

1. POSTS SHALL BE 1.33 POUNDS PER LINEAL FOOT STEEL WITH A MINIMUM LENGTH OF 5 FEET. STEEL POSTS SHALL HAVE PROJECTIONS FOR FASTENING WIRE TO THEM.
2. SILT FENCE FABRIC SHALL CONFORM TO I.D.O.T. STANDARD SPECIFICATION SECTION 4196.01.A. SILT FENCING SHALL BE A MINIMUM OF 24" AND A MAXIMUM OF 36" HIGH WHEN COMPLETE.
3. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE FENCE TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, THE FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6" OVERLAP, AND SECURELY SEALED.
4. POSTS SHALL BE SPACED A MAXIMUM OF 8 FEET APART AND DRIVEN SECURELY INTO THE GROUND ALONG THE FENCE ALIGNMENT. POSTS SHALL BE DRIVEN INTO THE GROUND A MINIMUM OF 28".
5. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4" WIDE BY 12" DEEP ALONG THE UPSLOPE SIDE OF THE POSTS.
6. FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE POSTS SUCH THAT THE FABRIC EXTENDS INTO THE TRENCH AS SHOWN ABOVE. THE FABRIC SHALL BE FASTENED A MINIMUM OF THREE PLACES ON EACH POST.
7. THE TRENCH SHALL BE BACK FILLED WITH EXCAVATED MATERIAL AND THOROUGHLY COMPACTED.

MAINTENANCE

1. SILT FENCES SHALL BE INSPECTED WEEKLY AND AFTER EACH RAIN– FALL EVENT OF 0.5 INCHES OR MORE. DURING PERIODS OF PROLONGED RAIN INSPECTIONS SHALL BE AT LEAST DAILY. ANY REPAIRS NEEDED TO MAINTAIN THE SILT FENCE'S EFFECTIVENESS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO STABILIZING THE UPSLOPE AREAS THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN THE DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE FENCE. SILTS REMOVED SHALL BE PLACED IN A PROTECTED PLACE THAT WILL PREVENT THEIR ESCAPE FROM THE CONSTRUCTION SITE.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER NEEDED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
5. SILT FENCE SHALL REMAIN IN PLACE UNTIL IT IS NO LONGER NEEDED AS DIRECTED BY THE POLLUTION PREVENTION PLAN. GENERALLY SILT FENCES SHALL REMAIN UNTIL THE UPSLOPE AREAS ARE STABILIZED WITH AN ESTABLISHED GRASS COVER AS A MINIMUM.

EXISTING CRITICAL SLOPE

EXISTING PROTECTED SLOPE

EXISTING SLOPE PROTECTED BUFFER

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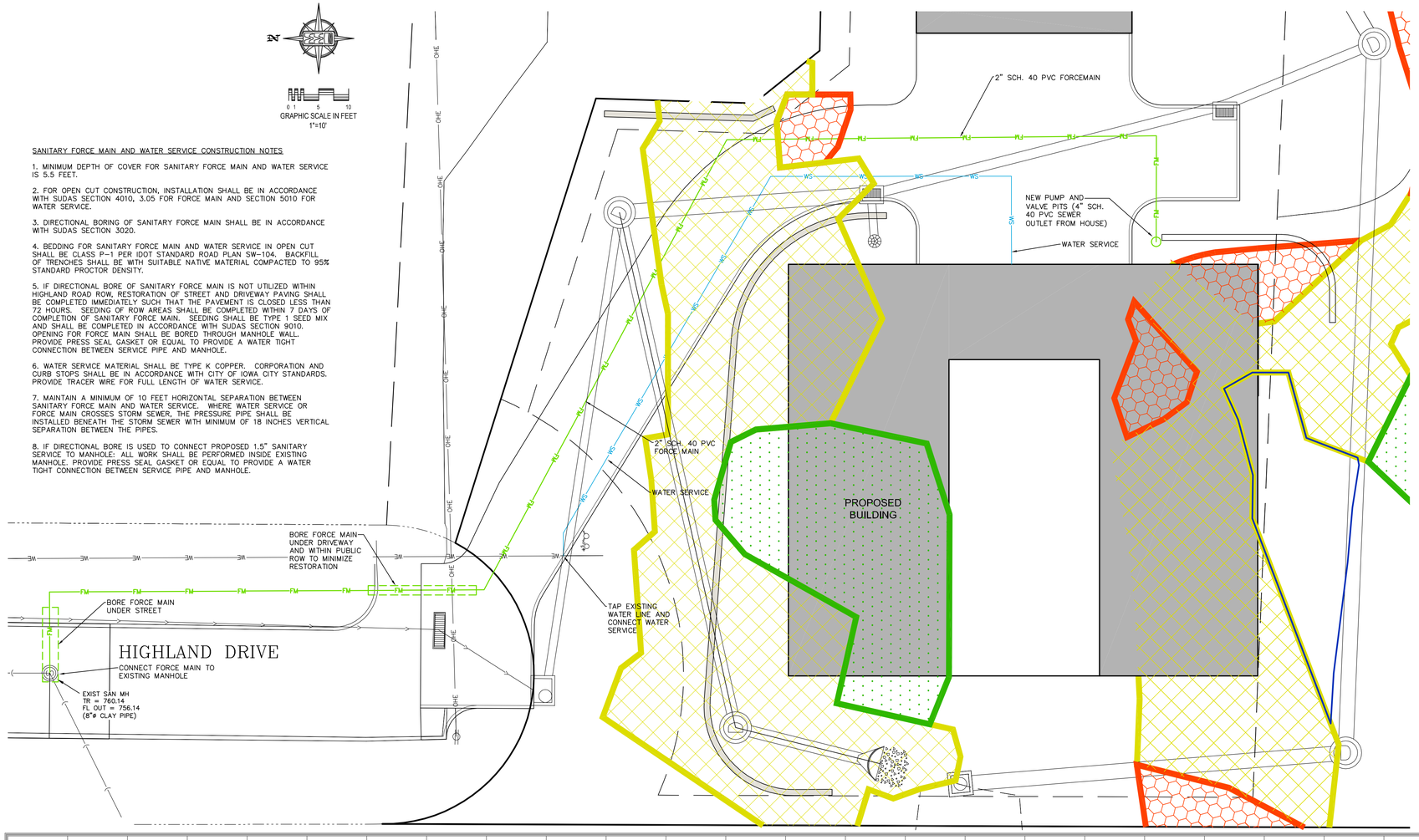
Date	Revision
08-11-15	PER CITY COMMENTS PVA/LLS

PROPOSED SENSITIVE AREAS PLAN AND GRADING & EROSION CONTROL PLAN

LOT 115, UNIVERSITY HEIGHTS FIRST ADDITION
UNIVERSITY HEIGHTS
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date: 6/8/15	
Designed by: SBP	Field Book No: 1008
Drawn by: SBP	Scale: 1"=10'
Checked by: SBP	Sheet No: 4
Project No: IOWA CITY 9187-001	of: 8



SANITARY FORCE MAIN AND WATER SERVICE CONSTRUCTION NOTES

1. MINIMUM DEPTH OF COVER FOR SANITARY FORCE MAIN AND WATER SERVICE IS 5.5 FEET.

2. FOR OPEN CUT CONSTRUCTION, INSTALLATION SHALL BE IN ACCORDANCE WITH SUDAS SECTION 4010, 3.05 FOR FORCE MAIN AND SECTION 5010 FOR WATER SERVICE.

3. DIRECTIONAL BORING OF SANITARY FORCE MAIN SHALL BE IN ACCORDANCE WITH SUDAS SECTION 3020.

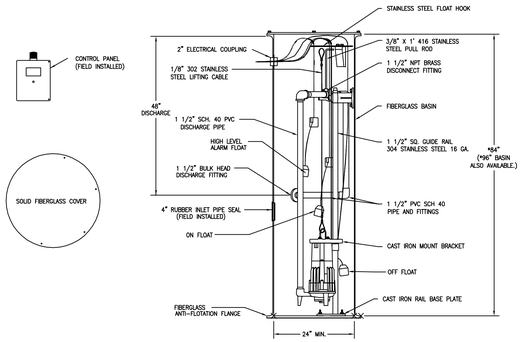
4. BEDDING FOR SANITARY FORCE MAIN AND WATER SERVICE IN OPEN CUT SHALL BE CLASS P-1 PER IDOT STANDARD ROAD PLAN SW-104. BACKFILL OF TRENCHES SHALL BE WITH SUITABLE NATIVE MATERIAL COMPACTED TO 95% STANDARD PROCTOR DENSITY.

5. IF DIRECTIONAL BORE OF SANITARY FORCE MAIN IS NOT UTILIZED WITHIN HIGHLAND ROAD ROW, RESTORATION OF STREET AND DRIVEWAY PAVING SHALL BE COMPLETED IMMEDIATELY SUCH THAT THE PAVEMENT IS CLOSED LESS THAN 72 HOURS. SEEDING OF ROW AREAS SHALL BE COMPLETED WITHIN 7 DAYS OF COMPLETION OF SANITARY FORCE MAIN. SEEDING SHALL BE TYPE 1 SEED MIX AND SHALL BE COMPLETED IN ACCORDANCE WITH SUDAS SECTION 9010. OPENING FOR FORCE MAIN SHALL BE BORED THROUGH MANHOLE WALL. PROVIDE PRESS SEAL GASKET OR EQUAL TO PROVIDE A WATER TIGHT CONNECTION BETWEEN SERVICE PIPE AND MANHOLE.

6. WATER SERVICE MATERIAL SHALL BE TYPE K COPPER. CORPORATION AND CURB STOPS SHALL BE IN ACCORDANCE WITH CITY OF IOWA CITY STANDARDS. PROVIDE TRACER WIRE FOR FULL LENGTH OF WATER SERVICE.

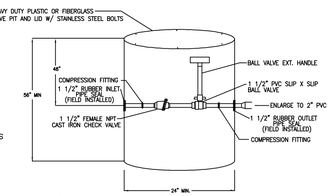
7. MAINTAIN A MINIMUM OF 10 FEET HORIZONTAL SEPARATION BETWEEN SANITARY FORCE MAIN AND WATER SERVICE. WHERE WATER SERVICE OR FORCE MAIN CROSSES STORM SEWER, THE PRESSURE PIPE SHALL BE INSTALLED BENEATH THE STORM SEWER WITH MINIMUM OF 18 INCHES VERTICAL SEPARATION BETWEEN THE PIPES.

8. IF DIRECTIONAL BORE IS USED TO CONNECT PROPOSED 1.5" SANITARY SERVICE TO MANHOLE: ALL WORK SHALL BE PERFORMED INSIDE EXISTING MANHOLE. PROVIDE PRESS SEAL GASKET OR EQUAL TO PROVIDE A WATER TIGHT CONNECTION BETWEEN SERVICE PIPE AND MANHOLE.



GRINDER PUMP AND PIT DETAIL

Pump Calculations and Specification	Pump
No. of Pump	1
Discharge Rate (gpm)	45
Pump Discharge Pipes	1.5",
Static Lift (ft)	22
Min. pump motor (hp)	2
Power supply	1Ph, 230 volts
Pump Head (tdh)	37.9



CHECK VALVE ACCESS PIT DETAIL

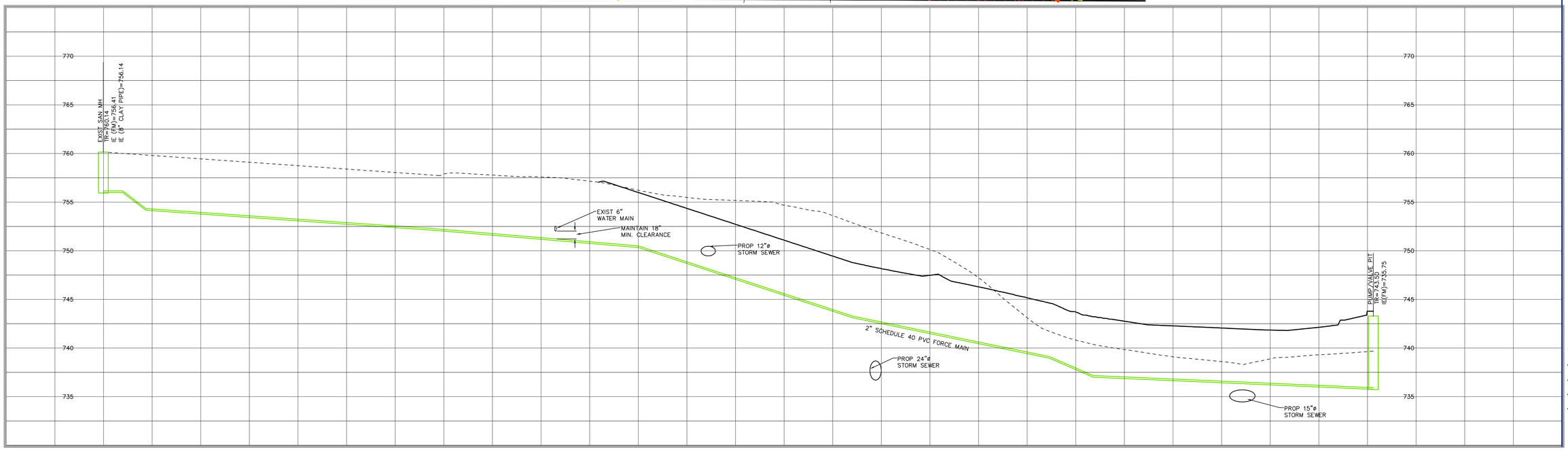
ADDITIONAL NOTES

1. CONTRACTOR SHALL USE THE ZOELLER COLD CLIMATE 820 GRINDER PUMP SYSTEM OR EQUIVALENT.
2. THE PUMP PIT SHALL BE ACCESSIBLE AND LOCATED SUCH THAT ALL DRAINAGE FLOWS INTO THE PIT BY GRAVITY.
3. PROVIDE MINIMUM 2" VENT IN ACCORDANCE TO THE INTERNATIONAL PLUMBING CODE, CURRENT EDITION
4. THE VALVES SHALL BE ACCESSIBLY LOCATED OUTSIDE THE SUMP BELOW GRADE IN AN ASSESS PIT WITH A REMOVABLE ACCESS COVER.
5. CONTRACTOR SHALL COORDINATE SCHEDULES WITH ROGER OVERTON OF IOWA CITY WASTEWATER DEPARTMENT 631-1144 FOR CONNECTING TO EXISTING MANHOLE

Electrician shall provide and connect an automatic telephone dialer similar to Sensaphone model FGD0800 or equal to communicate failure of sewage pumping system.

The 800 has a built-in ability to monitor for power failures and to listen to the sound of a smoke detector. There are also four external inputs that can be connected to a variety of sensors to monitor temperature, water on the floor, humidity, and much more. One of the four external inputs already comes with a temperature sensor for monitoring temperature where the 800 is installed.

When an alarm is detected, the Sensaphone 800 can notify up to four people by making voice phone calls. It will continue to make phone calls until someone responds to the call. The voice messages can be custom recorded, so you get to describe each alarm message that it speaks in your own voice. The phone interface includes a line seize feature so that extension phones are automatically disconnected when it needs to make an alarm phone call. Also includes nonvolatile memory and a 24-hour battery backup with user installed batteries.



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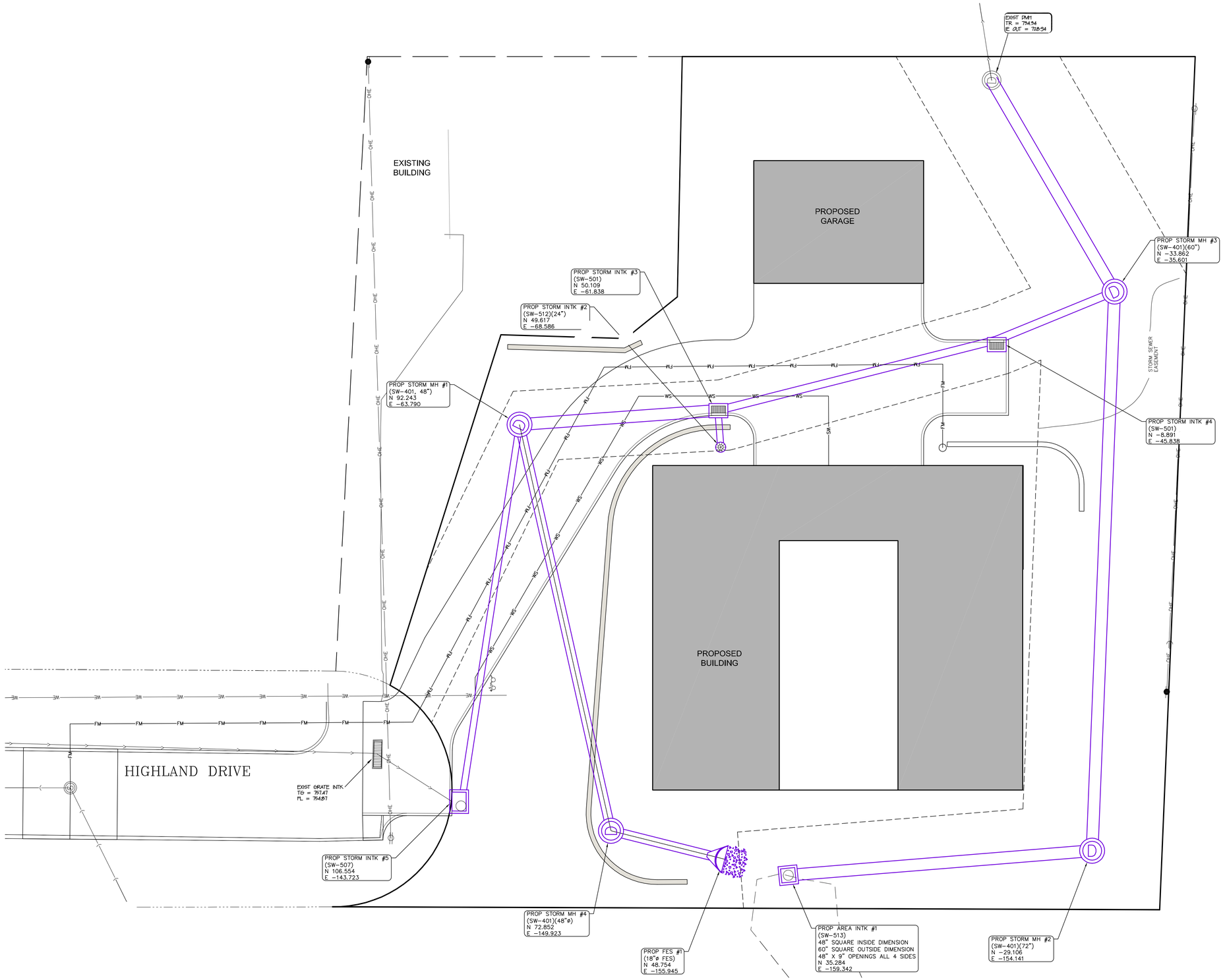
08-11-15	PER CITY COMMENTS PVA/LS

FORCE MAIN PLAN AND PROFILE AND WATER SERVICE PLAN

LOT 115, UNIVERSITY HEIGHTS FIRST ADDITION
UNIVERSITY HEIGHTS
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date:	6/8/15
Designed by: SBP	Field Book No.: 1008
Drawn by: SBP	Scale: 1"=10'
Checked by: SBP	Sheet No.: 5
Project No.: IOWA CITY 9187-001	of: 8



N

0 5 10
GRAPHIC SCALE IN FEET
1"=10'

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08-11-15	PER CITY COMMENTS PVA/LLS

STORM SEWER PLAN

LOT 115, UNIVERSITY HEIGHTS FIRST ADDITION
UNIVERSITY HEIGHTS
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date:	6/8/15
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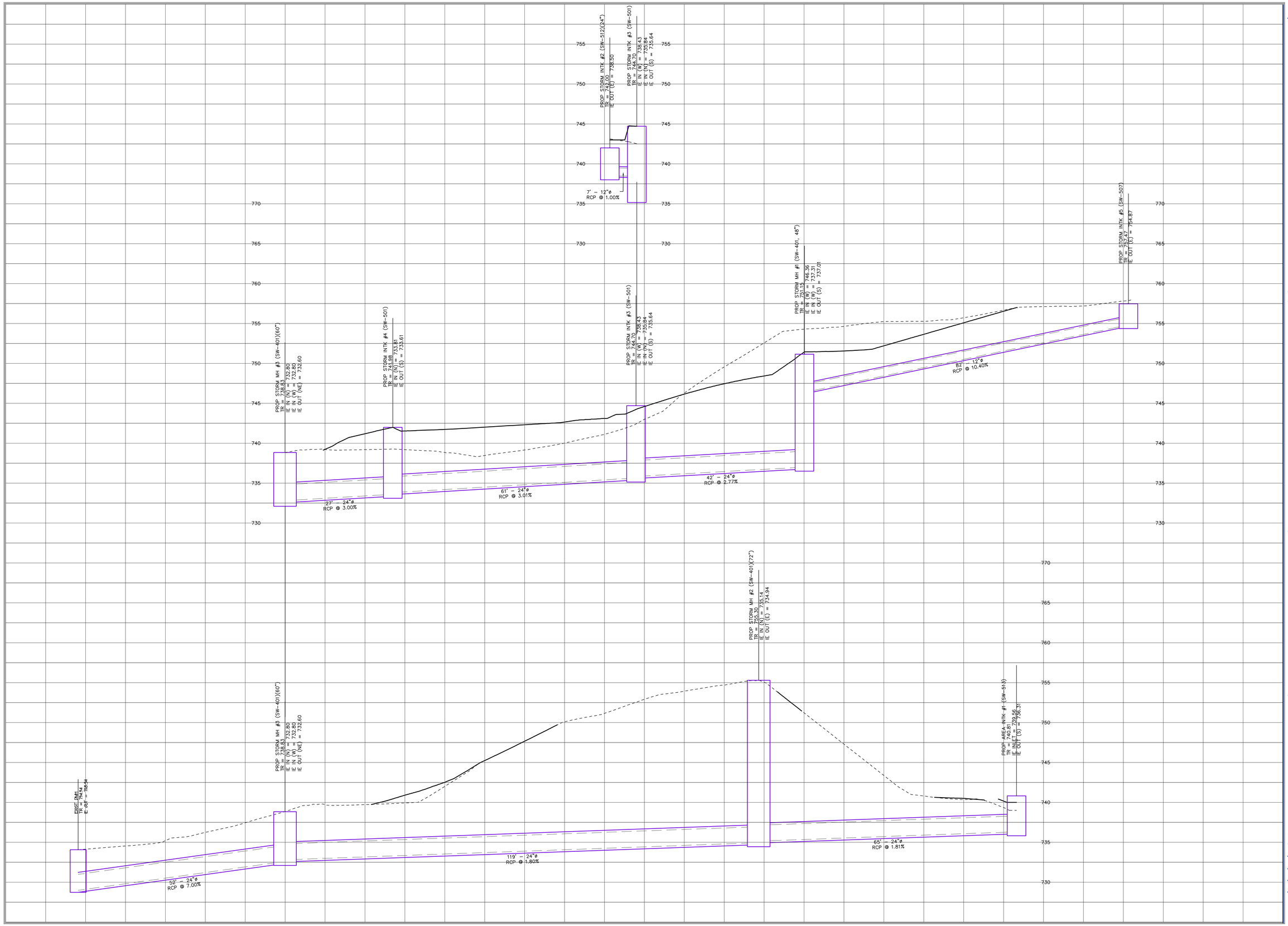
Checked by: SBP	Sheet No: 6
Project No: IOWA CITY 9187-001	of: 8



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Date	Revision
08-11-15	PER CITY COMMENTS PVA/LLS

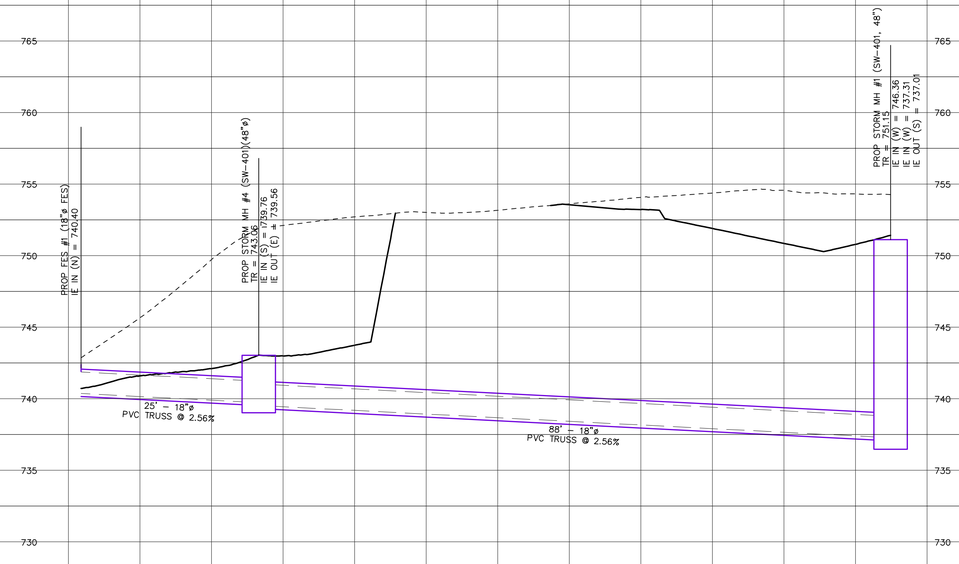
STORM SEWER PROFILES

LOT 115, UNIVERSITY HEIGHTS FIRST ADDITION

UNIVERSITY HEIGHTS
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date:	6/8/15
Designed by: SBP	Field Book No: 1008
Drawn by: SBP	Scale: 1"=10'
Checked by: SBP	Sheet No: 7
Project No: IOWA CITY 9187-001	of: 8



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STORM SEWER PROFILES

LOT 115, UNIVERSITY HEIGHTS FIRST ADDITION
UNIVERSITY HEIGHTS
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date:	6/8/15
Designed by: SBP	Field Book No.: 1008
Drawn by: SBP	Scale: 1"=10'
Checked by: SBP	Sheet No.: 8
Project No.: IOWA CITY 9187-001	of: 8

May 2, 2015

Frederick Reed Carlson
1202 Pleasant Avenue
Decorah, IA 52101

Dear Mr. Carlson:

You have indicated in the past that your intent is to be a good neighbor and to strengthen neighborhood bonds. The first step in this process is to rescind your site plan and submit a plan for a residence that blends into the architecture and culture of the neighborhood.

Lot 115 was created as a split from the lot that encompassed the dwelling immediately north and east some years ago and hence it remained zoned R1 because the lot from which it was divided was R1. However this lot is comprised of steep and sensitive slopes, normal flora and habitat providing natural drainage. Today areas such as this are set aside by cities and are protected as greenspace to preserve the environment, promote natural wildlife habitat and enhance the communities therein.

This lot is not conducive to construction, but if you persist in building a residence, it would seem reasonable that you would desire to keep within the ambiance of the surrounding community. The site plan you submitted, however, is not such a dwelling-- but rather a very large mini-Kinnick stadium party venue which simply does not fit within the charm and integrity of our "small town" neighborhood.

Sincerely,

Your Neighbors

Enclosure

cc: Steve Ballard, U Hts City Attorney

U Hts City Council, c/o Mayor Louise From

Eleanor Dilkes, City Attorney, Iowa City

Sue Dulek, Attorney, Iowa City

NAME	ADDRESS
	62 Highland Dr.
	62 Highland Dr
	22 Marietta Ave
Dan Bohnenkamp	22 Marietta Ave
John + Patti Watkins	20 Marietta Ave
	100 & Tower Ct
Dorothy Maher	60 marietta
Ellen Buchanan	52 Marietta
	52 Marietta
	76 Marietta
	76 Marietta Ave.
	92 Marietta Ave
P. Jenett	623 Grandview Ct
Steven Schooley	124 Marietta Ave
Kristine L Schooley	124 Marietta Ave
Daryl Cameron	217 Mahaska Drive
Laura Cameron	217 Mahaska Dr.
	135 Highland DR.
	121 Highland Dr.

NAME	ADDRESS
Aron Wardenburg	117 Highland Drive
Angela Wardenburg	117 Highland DRIVE
Caroline Mast	111 Highland Drive
[illegible]	103 Highland Dr.
[illegible]	103 HIGHLAND DR.
Jennis Plate	50 Highland Dr.
Nancy Plate Harold Plate	50 Highland Drive 50 HIGHLAND DR.
Micaela Lang	116 Golfview Ave.
Samuel Zager	116 Golfview Ave.
Usha Balakrishnan	85 Leamer Court
[illegible]	44 HIGHLAND DRIVE
[illegible]	32 Highland Dr
Rick Stenapp	38 Highland
[illegible]	28 Highland Dr.
Melanie Lauerman	24 Highland Dr

NAME	ADDRESS
Louis A. Bender	1108 Tower Ct.
Donald E. Boerner	1108 Tower Court
David Eisker	134 Marietta Ave
Eliza Easker	134 Marietta Ave
Ramji Balakrishnan	85 Learner Ct, Iowa City
[illegible]	24 HIGHLAND DR, IOWA CITY
Mary Ellen Lewis	87 Learner Ct Iowa City IA
John Klein	163 Learner Ct Iowa City
Virginia Klein	163 Learner Iowa City
Jo Lynne Meskimen	91 Olive Court, Ia. City
Dennis Baker	91 Olive Ct Ia City
[illegible]	100 Highland Dr. Iowa City
Larry Fritz	114 Highland
Ruth [illegible]	124 Highland Dr. Iowa City, IA
Kim Eckey	33 Highland Dr.
Erik Westlund	140 Highland Dr.
Brandan Wiederhold	138 Highland Dr.
Natalie Ramsey	138 Highland Dr.
Margaret Nelson	1 Oakcrest Ct
Theodore C. Nelson	1 OAKCREST CT

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Environmental Specialists
Landscape Architects
Land Planners
Land Surveyors
Civil Engineers

July 22, 2015

Project # 9187-001

Re: Lot 115 University Heights Addition

Dear Resident;

MMS Consultants Inc., on behalf of F. Reed and Sandy Carlson, will be holding a Good Neighbor Meeting in regards to Lot 115 University Heights Addition. We have submitted a Site Plan Application to the City of University Heights requesting to allow for construction of a single family residence.

The intention of this letter is to invite you to a Good Neighbor Meeting being held at MMS Consultants, Inc. on Wednesday, July 29th from 5:30 p.m. to 6:30 p.m. The address for the meeting is 1917 S. Gilbert Street, Iowa City, IA 52240. Any questions you may have regarding this development can be addressed and/or answered at this meeting. If you are unable to attend or have questions you would like addressed prior to the meeting please feel free to contact me.

Sincerely,

Scott Pottorff
(319)351-8282
s.pottorff@mmsconsultants.net

SHIVEHATTERY
ARCHITECTURE + ENGINEERING

MEMORANDUM

TO:	University Heights, Mayor, Council, and Staff
FROM:	Josiah Bilskemper, P.E.
DATE:	August 17, 2015
RE:	City Engineer's Report – August Special Meeting
	Lot 115 Highland Drive

(1) Lot 115 – Storm Sewer

a. We received a set of site plan drawings on August 11, 2015 showing proposed development on Lot 115. Several available hard copies of these drawings were provided at the August 11 city council meeting. Copies of the drawings in PDF format were e-mailed the following day to council and staff, as well as several adjacent property owners. The August 11 submission also included storm sewer calculations related to the proposed relocation of the storm sewer pipes across the lot.

b. There is an existing storm sewer agreement and easement across a portion of this lot (described and attached to the City Attorney report). The concrete pipes within the easements take storm water from a set of intakes on Highland Drive, and also collect water that flows through the back yards of the Highland Drive properties to the west. This piping system is directly connected to the piping system that continues east through the Lytham Development. There is a storm sewer manhole at the east edge of Lot 115, which is where the University Heights storm sewer system ends, and the Iowa City storm sewer system begins.

c. The existing storm sewer agreement provides:

   i. That the City has rights of ingress and egress to conduct inspections of the storm sewer lines and systems;

   ii. That costs of maintaining, repairing and/or replacing the lines is the obligation of the property owner;

   iii. In the event the property owner fails to properly maintain, repair or replace these storm sewer systems, the City has the right to complete such maintenance, repair or replacement work, with expenses incurred to remain the obligation of the property owner;

   iv. That the property owner reserves the right to use the lot for any lawful purpose provided that such use does not interfere with the functioning of the storm sewer line. This includes the right to place fill over the sewer line and to erect or construct building or other structures over the easement, provided that such construction does not structurally interfere with the storm sewer line, and further provided that the property owner remain totally responsible for any costs of repair or replacement of the sewer line located under any portion of any structure.

Shive-Hattery, Inc. | 2834 Northgate Drive | Iowa City, IA 52245 | 319.354.3040 | fax 319.354.6921 | shive-hattery.com

d. We have reviewed the storm sewer calculations submitted from MMS (attached). Their drainage report makes the following findings:

   i. The proposed project will not create problems for the downstream Lytham Development because that system was originally designed with an assumption that all upstream residential lots were fully developed. In other words, the Lytham drainage calculations were based on a scenario where Lot 115 already included a house, driveway, garage, etc.

   ii. The storm sewer pipe proposed to carry water from the west around the south side of the proposed building is of a big enough size (24" diameter) and steep enough slope that the quantity of water from the 100-year storm event can flow through the pipe at a depth of only 2/3 of the pipe size. In other words, the pipe itself has capacity above the 100-year storm event flow.

   iii. The storm intake proposed at the west edge of the lot (the physical structure that the water flowing over the ground drain would drain into) has enough capacity to let in the flow from the 100-year storm event without causing ponding to occur beyond the Lot 115 property line.

   iv. There is a back-up pipe system (private) proposed to run around the north side of the proposed building. This provides a secondary level of protection for any water that the primary intake can't handle.

   v. If both pipes were inoperable, the grading around the north side of the proposed building peaks at elevation 742.50, meaning water would flow overland through this swale on the north side of the building and out into the driveway on the east side.

e. Based on these findings provided by MMS, the proposed storm sewer system has the capacity to handle drainage without adversely impacting adjacent properties to the east and west.

(2) Lot 115 – Sensitive Areas

a. The layout of Lot 115 is such that the elevation of the lot sits below the end of Highland Drive. The middle of the lot, running east-west is the lowest point, and the grade rises up on the north and south side. There are slopes within this lot that meet the criteria set forth in Ordinance #128 to be designated as steep, critical and protected slopes. These areas are delineated on the submitted site plan drawings.

b. Because the proposed site plan indicates development activity on areas designated as steep, critical and protected slopes, the site plans submitted include a Sensitive Areas Development Plan (existing conditions), Site Plan and Grading Plan (proposed conditions). These drawings are attached.

c. The Development Plan (Sheet 2) shows existing conditions, and identifies the steep, critical and protected slope areas.

   i. The quantities of each type of slope impacted need to be reviewed and updated. MMS may be providing revised drawings tomorrow in advance of the meeting.

d. The Site Plan and Grading Plan (Sheet 4) show the proposed layout and grading contours.

    i. Based on the current site plans submitted, anticipate that all of the slope areas would be impacted by construction except the southeast corner of the lot.

    ii. The grading plan for the proposed driveway at the north end of the lot cuts the grade several feet near the large tree along the property line at 62 Highland Drive. The site plans note the tree is to be protected, but grading in this fashion would expose and require cutting through roots on the south side of the tree. This needs to be addressed before a grading plan can be approved. MMS may be providing revised drawings tomorrow in advance of the meeting.

    iii. The depth of the proposed storm manholes and storm sewer pipes around the outside of the lot create two concerns that need to be addressed:

        1. The pipes and structures are deep enough that the required easement widths (easement width correlates to sewer depth) extend beyond the Lot 115 property lines at several locations. If the easement widths are to remain within Lot 115, either the sewer depth or location would have to change.

        2. The excavation width needed to install pipes and structures at this depth would extend beyond the north and south property line. This relates to the easement widths because there needs to be enough room for future repair or replacement work without requiring encroachment on adjacent property.

        3. MMS may be providing revised drawings tomorrow in advance of the meeting.

e. Due to proposed development activity on “protected slopes” (>40% slope) within the lot, Section 3.C of the Ordinance #128 requires four conditions be met:

f. The protected slopes have been “previously altered by human activity…”

    i. This will need to be addressed by the Owner and/or design team.

g. “…a geologist or professional engineer can demonstrate to the University Heights City Council’s satisfaction that development activity will not undermine the stability of the slope…”

    i. This will need to be addressed by the Owner and/or design team. We recommend the city require the Owner submit a letter from the structural engineer who is signing and certifying the retaining wall designs that the wall construction will not undermine the stability of the slopes. This could be a condition for issuance of a certificate of occupancy.

h. “…the City further determines the development activities are consistent with the intent of the Sensitive Areas Ordinance.”

i. The purpose of the ordinance, as noted in Section 1 of Ordinance #128 “is to protect sensitive areas within the City of University Heights by regulating the development of such sensitive areas.”

ii. As noted previously in this report, there are issues with anticipated excavation limits for construction of the storm sewer components extending beyond the property line, and a grading issue near a tree on the north side of the lot.

iii. Based on the drawings, several retaining walls are proposed to stabilize grades above the walls. It also appears the south side of the proposed building and the south and west side of the proposed garage act somewhat as a retaining wall feature.

iv. It is unclear at this point how the lot is proposed to be restored after construction (seeding, matting, sodding, landscaping, trees, etc.).

i. The University Heights City Council approves a submitted Development Plan, Grading Plan, and Sensitive Areas Site Plan.

i. These are the drawings discussed above.

j. The council needs to determine if they are in agreement with the site plan concepts shown (buildings, driveway, retaining walls, etc.) and how they impact existing protected slope areas.

k. At this point, we do not recommend these items be approved until the issues identified above can be satisfactorily addressed.

(3) Leamer Court Pavement Repair

a. The contractor (Shamrock Construction) has completed all of their work associated with the Leamer Court pavement repair project. We recommend the council accept the work as complete and release final retainage to the contractor.

Please feel free to contact me if you have any questions about these or any other items.

JDB

MMS Consultants, Inc.
Experts In Planning and Development Since 1975

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mms@mmsconsultants.net

LOT 115, UNIVERSITY HEIGHTS FIRST ADDITION
UNIVERSITY HEIGHTS, IOWA
DRAINAGE CONSIDERATIONS
August 11, 2015
Prepared by Paul Anderson

Responses follow to your concerns about drainage provisions as addressed in your 06/23/15 email to Scott Pottorff.

1. Let's look at the impact this proposed building improvement has on the downstream drainage system in the Lytham Condominiums.

In the storm water detention calculations for Lytham Condominiums the offsite drainage tributary to the project used SCS methods CN of 75 based on the number of lots per acre in the upstream drainage area. A CN of 75 corresponds to an average lot size of ¼ acre. The value used is based on the number of lots and therefore makes allowance for infill construction on vacant lots in the offsite drainage area. The addition of a building on lot 115 therefore does not impact the CN value used in the storm water management computations for the Lytham Condominiums.
The dry bottom detention basin as designed will continued to adequately provide required detention for Lytham while conveying offsite runoff from lot 115 and the remainder of the offsite tributary areas in conformance with applicable drainage requirements. Yes, the input parameters used in the Lytham Condominiums storm water computations continue to be valid, as they anticipated addition of buildings on vacant lots in the offsite drainage area.

2. The Rational Method "C" values used in our calculations are taken from the SUDAS Design Standards Table 2B-4.01. The table is attached.

A re-computation of the pre and post development hydrology follows.
The drainage area tributary to Lytham Condominium's west property line is 12.09 acres per the drainage calculations for Lytham. Of that area, 5.42 acres drains across lot 115 currently in a storm sewer or as surface flow if needed. Development of this lot includes conveying this offsite runoff and some of the onsite runoff using a piped system around the proposed building.

Runoff coefficient for lot 115 pre and post development
Pre development runoff coefficient is 0.50 as established the Lytham Condominium calculations for the entire offsite drainage area.

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Post development C is computed as follows:

Pavement and Roof – impervious	area	runoff coefficient "C" 5 yr.	10 yr.	100 yr.	weighted C x A 5 yr.	10 yr.	100yr.
Pavement and Roof – impervious	0.23 AC	0.95	0.95	0.98	0.2185	0.2185	0.2254
Grass – pervious	0.35 AC	0.25	0.30	0.50	0.0875	0.1050	0.1750
Total Lot	0.58 AC				0.3060	0.3235	0.4004
Weighted C for lot 115		0.53	0.56	0.69			

The runoff coefficient for the upstream offsite drainage area will be adjusted for storm return period proportionally the same as the coefficients prescribed by SUDAS.

Offsite "C"		
5 year	0.50	as used in the Lytham report
10 year	0.53	proportional increase equivalent to lot 115
100year	0.65	proportional increase equivalent to lot 115

3. Runoff routed through proposed storm sewer south of building

Using the Rational Method the flow rate through the storm sewer is computed. The offsite drainage area is 5.42 acres and the portion of lot 115 tributary to this storm sewer is 0.21 acres. Analysis is provided for the 5, 10 and 100 year events as SUDAS provides C values for these storms.

Tc =17 minutes

	Drainage area and "C" Offsite	Onsite	Rainfall Intensity I	Runoff Q
5 year	5.42 ac x 0.50	0.21 ac x 0.53	4.0 In/Hr.	11.29 CFS
10 year	5.42 ac x 0.53	0.21 ac x 0.56	4.8 In/Hr.	14.35 CFS
100 year	5.42 ac x 0.65	0.21 ac x 0.69	6.2 In/Hr.	22.74 CFS

The proposed storm sewer south of the building is intended to convey runoff for storms with a 100 year return frequency and larger. The storm sewer is constructed of 24" diameter RCP pipe installed at 1.80% slope. Using Table B-3 – Uniform Flow in circular

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sections flowing partially full as found in "Design of Small Dams", published by the U S Bureau of Reclamation, the depth of flow in the pipe segments can be determined.

	Q CFS	dimensionless Number Qn/D^8/3 s^.5	d/D	d, depth of flow FT	n=0.013
5 year	11.29	0.172	0.425	0.85	
10 year	14.35	0.219	0.485	0.97	
100 year	22.74	0.347	0.645	1.29	

The capacity of the intake west of the building also is a critical component of the capacity of this storm sewer. The goal is to prevent ponding on the upstream property. An area drain per IDOT Detail SW-513 is proposed to provide adequate capacity to convey the runoff. This structure is analyzed as orifices at two locations. The pipe out let from the structure and the four openings in the structure walls being those orifices. The cross sectional area of the four openings into the structure will be reduced by 25% to allow for potential clogging.

Capacity of orifice at 24" RCP outlet from structure.
Chart #1 of the Hydraulic Charts for the Selection of Highway Culverts is used to compute the ponding depth at the structure outlet.

	Q CFS	HW/D	depth of ponding FT	elevation of ponding FT	elevation of swale at property line
5 year	11.29	0.93	1.86	738.17	
10 year	14.35	1.12	2.24	738.55	
100 year	22.74	1.71	3.42	739.73	

Capacity of 4 openings in the sides of the outlet structure.
There is a 4' long by 9" high opening in each side of the structure. These opening have vertical bars at 8" on center to form a trash rack at each opening. The area of the openings is reduced by 25% to allow for clogging. The openings act as orifices.

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Capacity per opening Q= C*A*(2g*h)^0.5 C=0.60
h measured to centroid of the flow section

Head FT	Effective Area FT^2	Capacity CFS	Capacity of 4 openings CFS	
0.25	.75	1.28	5.11	
0.50	1.75	4.21	16.85	5 and 10 year storms conveyed below this level
0.75	2.25	6.63	26.54	100 year storm conveyed below this level

Ponding caused by capacity limitations of the four openings in the area intake limit ponding to below elevation 740.31. The lowest elevation measured in the drainage swale on the adjacent property to the west is 740.32. Therefore ponding will be contained within lot 115.

An additional storm sewer is proposed around the north side of the building to serve as an emergency relief in lieu of an overland route. This 18" diameter RCP storm sewer at 2.56% slope has an additional capacity of 16.8 CFS. Together with the primary storm sewer to the south significant conveyance capacity is provided in excess of the computed 100 year storm runoff.

Table 2B-4.01: Runoff Coefficients for the Rational Method

Cover Type and Hydrologic Condition		Runoff Coefficients for Hydrologic Soil Group											
		A			*B*			*C*			*D*		
Recurrence Interval		*5*	*10*	*100*	*5*	*10*	*100*	*5*	*10*	*100*	*5*	*10*	*100*
Open Space (lawns, parks, golf courses, cemeteries, etc.)													
Poor condition (grass cover < 50%)		.25	.30	.50	.45	.55	.65	.65	.70	.80	.70	.75	.85
Fair condition (grass cover 50% to 75%)		.10	.10	.15	.25	.30	.50	.45	.55	.65	.60	.65	.75
Good condition (grass cover >75%)		.05	.05	.10	.15	.20	.35	.35	.40	.55	.50	.55	.65
Impervious Areas													
Parking lots, roofs, driveways, etc. (excluding ROW)		.95	.95	.98	.95	.95	.98	.95	.95	.98	.95	.95	.98
Streets and roads:													
Paved; curbs & storm sewers (excluding ROW)		.95	.95	.98	.95	.95	.98	.95	.95	.98	.95	.95	.98
Paved; open ditches (including ROW)		---	---	---	.70	.75	.85	.80	.85	.90	.80	.85	.90
Gravel (including ROW)		---	---	---	.60	.65	.75	.70	.75	.85	.75	.80	.85
Dirt (including ROW)		---	---	---	.55	.60	.70	.65	.70	.80	.70	.75	.85
Urban Districts (excluding ROW)													
Commercial and business (85% impervious)		---	---	---	---	---	---	.85	.85	.90	.90	.90	.95
Industrial (72% impervious)		---	---	---	---	---	---	.80	.80	.85	.80	.85	.90
Residential Districts by Average Lot Size (excluding ROW)[1]													
1/8 acre (36% impervious)		---	---	---	---	---	---	.55	.60	.70	.65	.70	.75
1/4 acre (36% impervious)		---	---	---	---	---	---	.55	.60	.70	.65	.70	.75
1/3 acre (33% impervious)		---	---	---	---	---	---	.55	.60	.70	.65	.70	.75
1/2 acre (20% impervious)		---	---	---	---	---	---	.45	.50	.65	.60	.65	.70
1 acre (11% impervious)		---	---	---	---	---	---	.40	.45	.60	.55	.60	.65
2 acres (11% impervious)		---	---	---	---	---	---	.40	.45	.60	.55	.60	.65
Newly Graded Areas (pervious areas only, no vegetation)													
Agricultural and Undeveloped													
Meadow - protected from grazing (pre-settlement)		.10	.10	.25	.10	.15	.30	.30	.35	.55	.45	.50	.65
Straight Row Crops													
Straight Row (SR)	*Poor Condition*	.33	.39	.55	.52	.58	.71	.70	.74	.84	.78	.81	.89
	Good Condition	.24	.30	.46	.45	.51	.66	.62	.67	.78	.73	.76	.86
SR + Crop Residue (CR)	*Poor Condition*	.31	.37	.54	.50	.56	.70	.67	.72	.82	.75	.79	.87
	Good Condition	.19	.25	.41	.38	.45	.61	.55	.60	.73	.62	.67	.78
Contoured (C)	*Poor Condition*	.29	.35	.52	.47	.53	.70	.60	.65	.77	.70	.74	.84
	Good Condition	.21	.26	.43	.38	.45	.61	.55	.60	.73	.65	.69	.80
C+CR	*Poor Condition*	.27	.33	.50	.45	.51	.66	.57	.63	.75	.67	.72	.82
	Good Condition	.19	.25	.41	.36	.43	.59	.52	.58	.71	.62	.67	.78
Contoured & Terraced (C&T)	*Poor Condition*	.22	.28	.45	.36	.43	.59	.50	.56	.70	.55	.60	.73
	Good Condition	.16	.22	.38	.31	.37	.54	.45	.51	.66	.52	.58	.71
C&T + CR	*Poor Condition*	.13	.19	.35	.31	.37	.54	.45	.51	.66	.52	.58	.71
	Good Condition	.10	.16	.32	.27	.33	.50	.43	.49	.65	.50	.56	.70

[1] The average percent impervious area shown was used to develop composite coefficients.

Note: Rational coefficients were derived from SCS CN method

b. Composite Runoff Analysis: Care should be taken not to average runoff coefficients for large segments that have multiple land uses of a wide variety (i.e., business to agriculture). However, within similar land uses, it is often desirable to develop a composite runoff coefficient based on the percentage of different types of surface in the drainage area. The composite procedure can be applied to an entire drainage area, or to typical sample blocks as a guide to selection of reasonable values of the coefficient for an entire area.

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

DESIGN OF SMALL DAMS

A Water Resources Technical Publication

Second Edition
1973

TABLE B–3.—*Uniform flow in circular sections flowing partly full*

d = Depth of flow.
D = Diameter of pipe.
A = Area of flow.
r = Hydraulic radius.
Q = Discharge in second-feet by Manning's formula.
n = Manning's coefficient.
s = Slope of the channel bottom and of the water surface.

$\frac{d}{D}$	$\frac{A}{D^2}$	$\frac{r}{D}$	$\frac{Qn}{D^{8/3}s^{1/2}}$	$\frac{Qn}{d^{8/3}s^{1/2}}$	$\frac{d}{D}$	$\frac{A}{D^2}$	$\frac{r}{D}$	$\frac{Qn}{D^{8/3}s^{1/2}}$	$\frac{Qn}{d^{8/3}s^{1/2}}$
1	2	3	4	5	1	2	3	4	5
0.01	0.0013	0.0066	0.00007	15.04	0.51	0.4027	0.2531	0.239	1.442
.02	.0037	.0132	.00031	10.57	.52	.4127	.2562	.247	1.415
.03	.0069	.0197	.00074	8.56	.53	.4227	.2592	.255	1.388
.04	.0105	.0262	.00138	7.38	.54	.4327	.2621	.263	1.362
.05	.0147	0325	.00222	6.55	.55	.4426	.2649	.271	1.336
.06	.0192	.0389	.00328	5.95	.56	.4526	.2676	.279	1.311
.07	.0242	.0451	.00455	5.47	.57	.4625	.2703	.287	1.286
.08	.0294	.0513	.00604	5.09	.58	.4724	.2728	.295	1.262
.09	.0350	.0575	.00775	4.76	.59	.4822	.2753	.303	1.238
.10	.0409	.0635	.00967	4.49	.60	.4920	.2776	.311	1.215
.11	.0470	.0695	.01181	4.25	.61	.5018	.2799	.319	1.192
.12	.0534	.0755	.01417	4.04	.62	.5115	.2821	.327	1.170
.13	.0600	.0813	.01674	3.86	.63	.5212	.2842	.335	1.148
.14	.0668	.0871	.01952	3.69	.64	.5308	.2862	.343	1.126
.15	.0739	.0929	.0225	3.54	.65	.5404	.2882	.350	1.105
.16	.0811	.0985	.0257	3.41	.66	.5499	.2900	.358	1.084
.17	.0885	.1042	.0291	3.28	.67	.5594	.2917	.366	1.064
.18	.0961	.1097	.0327	3.17	.68	.5687	.2933	.373	1.044
.19	.1039	.1152	.0365	3.06	.69	.5780	.2948	.380	1.024
.20	.1118	.1206	.0406	2.96	.70	.5872	.2962	.388	1.004
.21	.1199	.1259	.0448	2.87	.71	.5964	.2975	.395	0.985
.22	.1281	.1312	.0492	2.79	.72	.6054	.2987	.402	.965
.23	.1365	.1364	.0537	2.71	.73	.6143	.2998	.409	.947
.24	.1449	.1416	.0585	2.63	.74	.6231	.3008	.416	.928
.25	.1535	.1466	.0634	2.56	.75	.6319	.3017	.422	.910
.26	.1623	.1516	.0686	2.49	.76	.6405	.3024	.429	.891
.27	.1711	.1566	.0739	2.42	.77	.6489	.3031	435	.873
.28	.1800	.1614	.0793	2.36	.78	.6573	.3036	.441	.856
.29	.1890	.1662	.0849	2.30	.79	.6655	.3039	.447	.838
.30	.1982	.1709	.0907	2.25	.80	.6736	.3042	.453	.821
.31	.2074	.1756	.0966	2.20	.81	.6815	.3043	.458	.804
.32	.2167	.1802	.1027	2.14	.82	.6893	.3043	.463	.787
.33	.2260	.1847	.1089	2.09	.83	.6969	.3041	.468	.770
.34	.2355	.1891	.1153	2.05	.84	.7043	.3038	.473	.753
.35	.2450	.1935	.1218	2.00	.85	.7116	.3033	.477	.736
.36	.2546	.1978	.1284	1.958	.86	.7186	.3026	.481	.720
.37	.2642	.2020	.1351	1.915	.87	.7254	.3018	.485	.703
.38	.2739	.2062	.1420	1.875	.88	.7320	.3007	.488	.687
.39	.2836	.2102	.1490	1.835	.89	.7384	.2995	.491	.670
.40	.2934	.2142	.1561	1.797	.90	.7445	.2980	.494	.654
.41	.3032	.2182	.1633	1.760	.91	.7504	.2963	.496	.637
.42	.3130	.2220	.1705	1.724	.92	.7560	.2944	.497	.621
.43	.3229	.2258	.1779	1.689	.93	.7612	.2921	.498	.604
.44	.3328	.2295	.1854	1.655	.94	.7662	.2895	.498	.588
.45	.3428	.2331	.1929	1.622	.95	.7707	.2865	.498	.571
.46	.3527	.2366	.201	1.590	.96	.7749	.2829	.496	.553
.47	.3627	.2401	.208	1.559	.97	.7785	.2787	.494	.535
.48	.3727	.2435	.216	1.530	.98	.7817	.2735	.489	.517
.49	.3827	.2468	.224	1.500	.909	.7841	.2666	.483	.496
.50	.3927	.2500	.232	1.471	1.00	.7854	.2500	.463	.463

EXISTING CRITICAL SLOPE – 7,328 SF
EXISTING CRITICAL SLOPE DISTURBED – 5,331 SF

EXISTING PROTECTED SLOPE – 1,246 SF
EXISTING PROTECTED SLOPE DISTURBED – 514 SF

EXISTING STEEP SLOPE – 1,476 SF
EXISTING STEEP SLOPE DISTURBED – 1,279 SF

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Date	Revision
08-11-15	PER CITY COMMENTS PVA/LLS

EXISTING SENSITIVE AREAS AND DEMOLITION PLAN

LOT 115, UNIVERSITY HEIGHTS FIRST ADDITION
UNIVERSITY HEIGHTS
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date:	6/8/15
Designed by: SBP	Field Book No: 1008
Drawn by: SBP	Scale: 1"=10'
Checked by: SBP	Sheet No: 2
Project No: IOWA CITY 9187-001	of: 8

STABILIZATION SEEDING

STABILIZATION SEEDING SHALL BE IN ACCORDANCE WITH I.D.O.T. STANDARD SPECIFICATION SECTION 2601.03 STABILIZING CROP SEEDING AND FERTILIZING.

SEED MIXTURES SHALL BE ONE OF THE FOLLOWING:

SPRING– MARCH 1 TO MAY 20

OAT	2 BUSHEL PER ACRE
GRAIN RYE	25 LBS. PER ACRE
RED CLOVER	5 LBS. PER ACRE
TIMOTHY	5 LBS. PER ACRE

SUMMER – MAY 21 TO JULY 20

OAT	3 BUSHEL PER ACRE
GRAIN RYE	35 LBS PER ACRE
RED CLOVER	5 LBS PER ACRE
TIMOTHY	5 LBS PER ACRE

FALL – JULY 21 TO SEPTEMBER 30

OAT	2 BUSHEL PER ACRE
GRAIN RYE	35 LBS PER ACRE
RED CLOVER	5 LBS PER ACRE
TIMOTHY	5 LBS PER ACRE

FERTILIZER SHALL BE APPLIED AT A RATE OF 450 LBS PER ACRE USING CHEMICALLY COMBINED COMMERCIAL 13–13–13 FERTILIZER.

GRADING AND EROSION CONTROL NOTES

TOTAL SITE AREA: 4.59 ACRES
TOTAL AREA TO BE DISTURBED: 1.87 ACRES

EROSION CONTROL MEASURES SHOWN SHALL BE USED DURING FILL ACTIVITIES. EROSION CONTROL MEASURES SHALL BE REEVALUATED AND MODIFIED, IF NECESSARY, AT THE TIME OF SITE DEVELOPMENT.

ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES THAT COULD BE USED ON SITE, IF NEEDED, CAN BE FOUND IN APPENDIX D OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) BINDER PREPARED FOR THE SITE. IF ADDITIONAL MEASURES ARE USED, INDICATE THE TYPE AND LOCATION OF SAID MEASURE ON THIS PLAN.

CONTRACTOR SHALL INSTALL A ROCK ENTRANCE AND PERFORM REGULAR CLEANING OF VEHICLES THAT LEAVE THE SITE.

FOLLOWING INSTALLATION OF PERIMETER SILT FENCE AND TEMPORARY CONSTRUCTION ENTRANCE THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR TO SCHEDULE A SITE INSPECTION PRIOR TO ANY SOIL DISTURBING ACTIVITIES.

THE CONTRACTOR SHALL FOLLOW THE NPDES PERMIT, SWPPP, AND THE CITY CSR REGULATIONS.

THE EROSION CONTROL CONTRACTOR SHALL INSTALL FILTER SOCKS OR OTHER APPROVED FORM OF INLET PROTECTION AT EACH STREET INTAKE ADJACENT TO THE SITE.

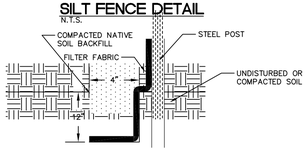
EROSION CONTROL LEGEND

- SILT FENCE/FILTER SOCK
- PERIMETER SILT FENCE
- SA — TEMPORARY SOIL STOCKPILE AREA
- TEMPORARY ROCK CONSTRUCTION ENTRANCE/EXIT
- TEMPORARY PARKING AND STORAGE
- CW — CONCRETE TRUCK/EQUIPMENT WASHOUT
- PR — PORTABLE RESTROOM
- DL — DOCUMENT LOCATION (PERMITS, SWPPP, INSPECTION FORMS, ETC.)
- FILTER SOCK INLET PROTECTION
- FILTER SOCK BEHIND CURB AT CURB RAMP
- DIRECTION OF OVERLAND FLOW
- D — DUMPSTER FOR CONSTRUCTION WASTE
- RIP RAP OUTLET PROTECTION
- 01 — OTHER MEASURE: _____
- 02 — OTHER MEASURE: _____
- 03 — OTHER MEASURE: _____

THE ABOVE LISTED ITEMS ARE SHOWN IN THEIR RECOMMENDED LOCATIONS. IF A CONTROL MEASURE IS ADDED OR MOVED TO A MORE SUITABLE LOCATION, INDICATE THE REVISION ON THIS SHEET. THE BLANKS LEFT FOR OTHER MEASURES SHOULD BE USED IF AN ITEM NOT SHOWN ABOVE IS IMPLEMENTED ON SITE. ADDITIONAL PRACTICES FOR EROSION PREVENTION AND SEDIMENT CONTROL CAN BE FOUND IN APPENDIX D OF THE SWPPP.

SILT FENCE DETAIL

N.T.S.



INSTALLATION

1. POSTS SHALL BE 1.33 POUNDS PER LINEAL FOOT STEEL WITH A MINIMUM LENGTH OF 5 FEET. STEEL POSTS SHALL HAVE PROJECTIONS FOR FASTENING WIRE TO THEM.
2. SILT FENCE FABRIC SHALL CONFORM TO I.D.O.T. STANDARD SPECIFICATION SECTION 4196.01.A. SILT FENCING SHALL BE A MINIMUM OF 24" AND A MAXIMUM OF 36" HIGH WHEN COMPLETE.
3. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE FENCE TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, THE FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6" OVERLAP, AND SECURELY SEALED.
4. POSTS SHALL BE SPACED A MAXIMUM OF 8 FEET APART AND DRIVEN SECURELY INTO THE GROUND ALONG THE FENCE ALIGNMENT. POSTS SHALL BE DRIVEN INTO THE GROUND A MINIMUM OF 28".
5. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4" WIDE BY 12" DEEP ALONG THE UPSLOPE SIDE OF THE POSTS.
6. FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE POSTS SUCH THAT THE FABRIC EXTENDS INTO THE TRENCH AS SHOWN ABOVE. THE FABRIC SHALL BE FASTENED A MINIMUM OF THREE PLACES ON EACH POST.
7. THE TRENCH SHALL BE BACK FILLED WITH EXCAVATED MATERIAL AND THOROUGHLY COMPACTED.

MAINTENANCE

1. SILT FENCES SHALL BE INSPECTED WEEKLY AND AFTER EACH RAIN– FALL EVENT OF 0.5 INCHES OR MORE. DURING PERIODS OF PROLONGED RAIN INSPECTIONS SHALL BE AT LEAST DAILY. ANY REPAIRS NEEDED TO MAINTAIN THE SILT FENCE'S EFFECTIVENESS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO STABILIZING THE UPSLOPE AREAS THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN THE DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE FENCE. SILTS REMOVED SHALL BE PLACED IN A PROTECTED PLACE THAT WILL PREVENT THEIR ESCAPE FROM THE CONSTRUCTION SITE.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER NEEDED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
5. SILT FENCE SHALL REMAIN IN PLACE UNTIL IT IS NO LONGER NEEDED AS DIRECTED BY THE POLLUTION PREVENTION PLAN. GENERALLY SILT FENCES SHALL REMAIN UNTIL THE UPSLOPE AREAS ARE STABILIZED WITH AN ESTABLISHED GRASS COVER AS A MINIMUM.

EXISTING CRITICAL SLOPE

EXISTING PROTECTED SLOPE

EXISTING SLOPE PROTECTED BUFFER

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Date	Revision
08-11-15	PER CITY COMMENTS PVA/LLS

PROPOSED SENSITIVE AREAS PLAN AND GRADING & EROSION CONTROL PLAN

LOT 115, UNIVERSITY HEIGHTS FIRST ADDITION
UNIVERSITY HEIGHTS
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date: 6/8/15	
Designed by: SBP	Field Book No: 1008
Drawn by: SBP	Scale: 1"=10'
Checked by: SBP	Sheet No: 4
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