Planning and Zoning Commission

September 6, 2016
Agenda
Grimes City Hall
5:30 P.M.

AGENDA

A GENERAL AGENDA ITEMS

1. Call to Order
2. Roll Call: Bill Bohan, Kelsey Clark, Steve Valline, Mike Chambers, Scott Almeida
   Council Liaison Jill Altringer
3. Approval of the Agenda
4. Approval of previous minutes

B. PUBLIC AGENDA ITEMS

1. Heritage at Grimes Plat 7 Final Plat
2. Heritage at Grimes Plat 4 Final Plat
3. 1150 SW Brookside Circle Site Plan
4. James Street Villas Preliminary Plat & Site Plan
5. Brookside Commercial Preliminary Plat 1
6. Mercy Clinic Site Plan
7. Specialized Wholesale & Technology Site Plan

C. PUBLIC FORUM

D. ZONING ADMINISTRATOR REPORT

1. Next Meeting October 4, 2016
2. Old Business
3. New Business

E. ADJOURNMENT

101 NE Harvey Street, Grimes, Iowa 50111 515.986.3036 Fax 515.986.3846

This meeting of the Grimes Planning and Zoning Commission was called to order on Tuesday August 2, 2016 at 5:30 P.M. at Grimes City Hall.

Roll Call: Present: Scott Almeida, Steve Valline, Bill Bohan, Mike Chambers, Kelsey Clark, City Engineer John Gade, and Building Administrator Scott Clyce. Absent: Liaison Jill Altringer

I. GENERAL AGENDA ITEMS

I. APPROVAL OF THE AGENDA
Motion by Almeida, Second by Valline to approve the agenda.
Roll call: Ayes-All; Nays-0 Motion passes: 5-0

II. APPROVAL OF THE MINUTES
Motion by Valline, Second by Chambers to approve the minutes from the July 5, 2016 meeting.

II. PUBLIC AGENDA ITEMS

3430 SE Destination Site Plan

Dan DeCamp, Abaci Consulting, Inc. 101 NE Circle Drive, addressed the Board on behalf of the owner and developer, Ajdin Nadarevic. De Camp stated that the site currently has been used for vehicle storage and the owner would like to build a 10,000 flex building with 30 parking spaces. DeCamp said that they would continue to use the current entry point, extending it, removing the current gravel and replacing with asphalt. He said the building access door would be on the east face and docking bays would be on the west and wall packs would be used for the lighting. DeCamp stated that most of the site drains into the north Walnut Creek drainage way. Storm water detention will be provided using Storm Tech underground detention chambers that will outlet to the existing storm drains along Destination Drive. Ajdin Nadarevic, Director of Business Development for Midwest Masonry addressed the Board to explain the various building materials they will be using for this building. Nadarevic stated the building materials would consist of two-tone concrete masonry block and burnished or split face block to add visual interest to the building. He said the entire building would be insulated and sprinkled. City Engineer Gade stated that the plans have been submitted to the Fire Department for review but had not received their final approval as yet. He said there are plans to install two hydrants, but there might be another added. Gade said they had made comments in their letter for the owners to make sure the Walnut Creek drainage way is maintained to ensure proper water flow.
Motion by Chambers, Second by Clark to approve the 3430 SE Destination Drive Site Plan per the Fox Engineering site plan dated July 27, 2016.
Roll call: Ayes-All, Nays-0 Motion passes: 5– 0

III. PUBLIC FORUM- None

IV. ZONING ADMINISTRATOR REPORT

Building Administrator Clyce stated that there were 19 single family houses in July, 16 townhomes and 3 commercial permits approved. Clyce stated that Total Family Eye Care and the Many Hands Thrift Store had had their final inspections.

1. Old Business- None

2. New Business- Next meeting September 6, 2016.

V. ADJOURNMENT

Meeting is adjourned at 5:52 pm

_____

FOX engineering

Aspen Business Park | 414 South 17th Street, Suite 107 | Ames, Iowa 50010

August 19, 2016

Bishop Engineering
Att: David Bentz
3501 104th Street
Des Moines, IA 50322

Heritage at Grimes – Final Plat 7
FOX Ref No: 8630-04D.235

FOX Engineering with assistance from David Schneider, PLS, has completed the first review of Heritage Final Plat 7 with date stamp of August 9, 2016. Please address the following comments:

1. The city of Grimes and Developer recognize that Heritage at Grimes Plat 2 is necessary to access this development.

2. There is concern that the future infrastructure for Plat 5 is not yet in place and will create a dead-end private drive that will be an issue for emergency vehicles. The Developer must acknowledge that approval of this final plat requires that emergency vehicle access and/or turnarounds will be required until Plat 5 infrastructure is installed.

3. Please note that Outlot 'X' will NOT be dedicated to the city of Grimes but shall be a private driveway to be maintained by the developer. Please eliminate General Note 1.

4. Please provide the platting notes that were included on the preliminary plat.

5. Please list/show the underlying zoning and setback requirements.

6. If you have not done so, please submit a check for Final Plat Fees to the City of Grimes as per Chapter 166.13.

7. Please address all of Dave Schneider's comments. Note that Mr. Schneider has yet to comment on this plat.

8. 166.09.09, the following shall also be attached to and accompany the Final Plat (some of which have already been submitted for review):
   a. A certificate by the owner that the subdivision is with their free consent and is in accordance with the desire of the owner. This certificate must be signed and acknowledged by the owner and spouse before some officer authorized to that the acknowledgement of deeds.
   b. A statement from the mortgage holders or lien holders that the plat is prepared with their free consent and in accordance with their desire, signed and acknowledged before an officer authorized to take the acknowledgment of deeds.
   c. An opinion by an attorney-at-law who has examined the abstract of title of the land being platted. The opinion shall state the names of the proprietors and holders of mortgages, liens or other encumbrances on the land being platted and shall note the encumbrances, along with any bonds securing the encumbrances.
   d. A resolution and certificate for approval by the Council and signatures of the Mayor and Clerk.
   e. A certificate of the County Treasurer that the land is free from certified taxes and certified special assessments and that the certified special assessments are secured by bond in compliance with Chapter 354 of the Code of Iowa.

f. Please send FOX (John Gade – jgade@foxeng.com) and the City Attorney (Erik Fisk - Fisk@whitfieldlaw.com) a copy of all the proposed easement descriptions. Please DO NOT send original documents. A pdf of the documents via e-mail is the preferred method. Note that the provided easement documents do not contain the exhibit that is referenced in the document that states the legal description of the easement.

9. The Developer has provided parkland dedication per the approved PUD.

10. Please provide a 4-year maintenance bond for all the pavement and utilities that will be dedicated to the city. The City Engineer shall review the cost estimates for all improvements to verify the bond amount. Note that the City will not accept the final plat until all improvements (this includes temporary and permanent seeding/stabilization) have been installed unless a performance bond or letter of credit is submitted to the City of Grimes (all Punchlist Items shall be addressed). Prior to the City releasing the resolution, all public improvements shall be completed and accepted by the City.
    a. The temporary & permanent seeding will not be completed (stabilized), thus a performance bond or letter of credit will be necessary.
    b. All City invoices shall be paid prior to release of the final plat.

11. Please DO NOT send original copies of the plats to the City of Grimes. The City does NOT require originals to be stamped. The approval of the plat is the signed resolution by City Council. Note that the signed resolution will not be given to the Developer until all items have been addressed.

12. Once the Final Plat has been accepted by P&Z and Council, the City requires the following:
    a. Signed PDF
    b. 1 Mylar - Signed
    c. Resolution - The City holds the resolution until all legals, comments, and subdivision punchlist have been addressed.
    d. Filing - The Developer files the plat once the City releases the resolution.

13. Please submit record drawings of the Construction Plans. These drawings shall be completed within 30 days of the acceptance of the Final Plat. These drawings shall include all public improvements. A digital copy of the Final Plat and Record Drawings is also required.

FINAL PLAT SCHEDULE:

PLANNING & ZONING: September 6, 2016 at 5:30 at the Grimes City Hall

COUNCIL MEETING: September 13, 2016 at 5:30 at the Grimes City Hall

If you have any questions or concerns, please contact John Gade or myself at (515) 233-0000. The City reserves the right to modify or add to these comments.

FOX ENGINEERING ASSOCIATES, INC.

Mitch Holtz, P.E.

Mitch Holtz, P.E.

Copy to: Kelley Brown, City of Grimes
Erik Fisk, City Attorney

HERITAGE AT GRIMES PLAT 7

FINAL PLAT

OWNER / PREPARED FOR:
BEAVERBROOKE NORTH DEVELOPMENT COMPANY NO. 1, LLC
4545 MERLE HAY RD.
DES MOINES, IOWA 50310

EXISTING ZONING:
PUD - PLANNED UNIT DEVELOPMENT

BENCHMARK:
CHISELED SQUARE IN NORTHWEST END OF REINFORCED CONCRETE BOX CULVERT FOR LITTLE CREEK AT JAMES STREET, ELEV.=906.50 (USGS DATUM)

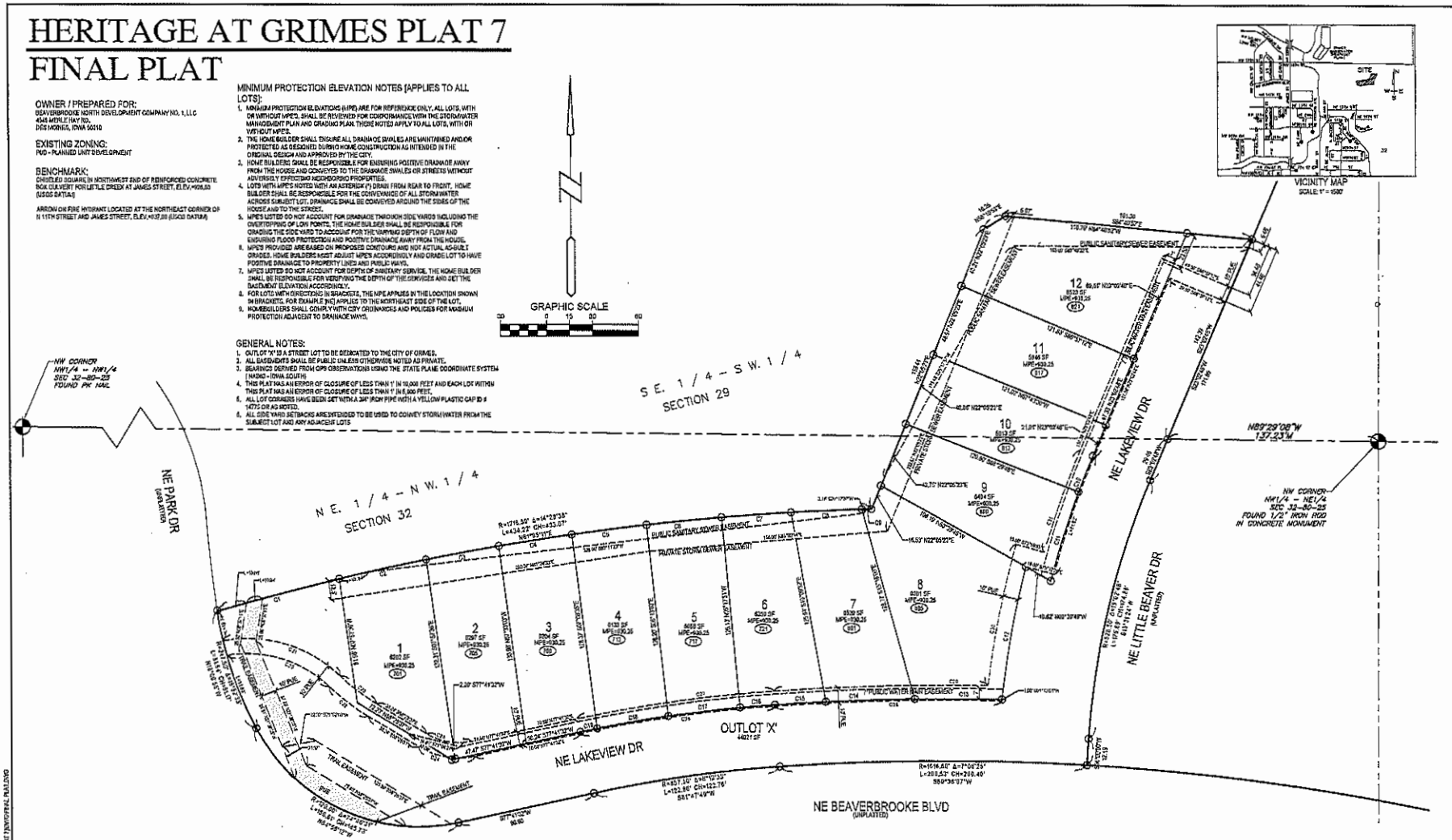
ARROW ON FIRE HYDRANT LOCATED AT THE NORTHEAST CORNER OF N 11TH STREET AND JAMES STREET, ELEV.=937.08 (USGS DATUM)

MINIMUM PROTECTION ELEVATION NOTES (APPLIES TO ALL LOTS):

1. MINIMUM PROTECTION ELEVATIONS (MPE) ARE FOR REFERENCE ONLY. ALL LOTS, WITH OR WITHOUT MPE'S, SHALL BE REVIEWED FOR COMPLIANCE WITH THE STORMWATER MANAGEMENT PLAN AND GRADING PLAN. THESE NOTES APPLY TO ALL LOTS, WITH OR WITHOUT MPE'S.
2. THE HOME BUILDER SHALL ENSURE ALL DRAINAGE SWALES ARE MAINTAINED AND/OR PROTECTED AS DESIGNED DURING HOME CONSTRUCTION AS INTENDED IN THE ORIGINAL DESIGN AND APPROVED BY THE CITY.
3. HOME BUILDERS SHALL BE RESPONSIBLE FOR ENSURING POSITIVE DRAINAGE AWAY FROM THE HOUSE AND CONVEYED TO THE DRAINAGE SWALES OR STREETS WITHOUT ADVERSELY EFFECTING NEIGHBORING PROPERTIES.
4. LOTS WITH MPE'S NOTED WITH AN ASTERISK (*) DRAIN FROM REAR TO FRONT. HOME BUILDER SHALL BE RESPONSIBLE FOR THE CONVEYANCE OF ALL STORMWATER ACROSS SUBJECT LOT. DRAINAGE SHALL BE CONVEYED AROUND THE SIDES OF THE HOUSE AND TO THE STREET.
5. MPE'S LISTED DO NOT ACCOUNT FOR DRAINAGE THROUGH SIDE YARDS INCLUDING THE OVERTOPPING OF LOW POINTS. THE HOME BUILDER SHALL BE RESPONSIBLE FOR GRADING THE SIDE YARD TO ACCOUNT FOR THE VARYING DEPTH OF FLOW AND ENSURING FLOOD PROTECTION AND POSITIVE DRAINAGE AWAY FROM THE HOUSE.
6. MPE'S PROVIDED ARE BASED ON PROPOSED CONTOURS AND NOT ACTUAL AS-BUILT GRADES. HOME BUILDERS MUST ADJUST MPE'S ACCORDINGLY AND GRADE LOT TO HAVE POSITIVE DRAINAGE TO PROPERTY LINES AND PUBLIC WAYS.
7. MPE'S LISTED DO NOT ACCOUNT FOR DEPTH OF SANITARY SERVICE. THE HOME BUILDER SHALL BE RESPONSIBLE FOR VERIFYING THE DEPTH OF THE SERVICES AND SET THE BASEMENT ELEVATION ACCORDINGLY.
8. FOR LOTS WITH DIRECTIONS IN BRACKETS, THE MPE APPLIES IN THE LOCATION SHOWN IN BRACKETS. FOR EXAMPLE (NE) APPLIES TO THE NORTHEAST SIDE OF THE LOT.
9. HOMEBUILDERS SHALL COMPLY WITH CITY ORDINANCES AND POLICIES FOR MAXIMUM PROTECTION ADJACENT TO DRAINAGE WAYS.

GENERAL NOTES:

1. OUTLOT 'X' IS A STREET LOT TO BE DEDICATED TO THE CITY OF GRIMES.
2. ALL EASEMENTS SHALL BE PUBLIC UNLESS OTHERWISE NOTED AS PRIVATE.
3. BEARINGS DERIVED FROM GPS OBSERVATIONS USING THE STATE PLANE COORDINATE SYSTEM (NAD83 - IOWA SOUTH)
4. THIS PLAT HAS AN ERROR OF CLOSURE OF LESS THAN 1' IN 10,000 FEET AND EACH LOT WITHIN THIS PLAT HAS AN ERROR OF CLOSURE OF LESS THAN 1' IN 5,000 FEET.
5. ALL LOT CORNERS HAVE BEEN SET WITH A 3/8" IRON PIPE WITH A YELLOW PLASTIC CAP ID # 14775 OR AS NOTED.
6. ALL SIDE YARD SETBACKS ARE INTENDED TO BE USED TO CONVEY STORMWATER FROM THE SUBJECT LOT AND ANY ADJACENT LOTS



CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
C1	92.60	1710.50	92.58	S75°13'35"W	3°46'21"
C2	58.10	1710.50	58.10	S77°34'20"W	1°56'23"
C3	48.33	1710.50	48.33	S79°21'00"W	1°36'46"
C4	48.20	1710.50	48.20	S80°57'29"W	1°36'31"
C5	48.25	1710.50	48.25	S82°35'14"W	1°36'33"
C6	48.25	1710.50	48.25	S84°12'46"W	1°36'33"
C7	45.52	1710.50	45.52	S85°48'32"W	1°31'04"
C8	46.46	1710.50	46.46	S87°20'29"W	1°32'48"
C9	6.30	1710.50	6.30	S88°13'12"W	0°12'37"
C10	25.43	500.00	25.43	S21°42'59"W	2°53'38"
C11	61.21	500.00	61.19	S17°24'14"W	6°59'50"

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
C12	88.58	597.00	88.42	S10°26'25"W	8°30'18"
C13	58.86	1033.50	58.85	N85°47'20"W	3°02'40"
C14	61.08	1033.50	58.09	S88°08'32"W	3°00'18"
C15	33.28	1033.50	33.28	S86°30'02"W	1°11'48"
C16	22.52	808.50	22.52	S85°10'18"W	1°37'42"
C17	47.25	808.50	47.24	S82°56'01"W	3°00'48"
C18	47.08	808.50	47.07	S79°55'11"W	3°00'54"
C19	11.29	808.50	11.28	S78°02'06"W	0°43'12"
C20	72.08	77.00	70.01	N72°03'34"W	54°04'53"
C21	85.85	97.00	79.77	N73°12'15"W	64°34'14"
C22	30.40	140.00	30.33	S62°11'53"E	12°27'20"

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
C23	30.22	139.00	30.16	S52°11'53"E	12°27'09"
C24	39.20	50.00	37.36	S80°32'03"E	43°52'50"
C25	39.83	50.00	39.00	S38°32'03"E	43°52'50"
C26	129.58	597.50	129.48	N81°47'49"E	8°12'33"
C27	130.02	597.50	129.81	N81°47'49"E	8°12'33"
C28	149.13	1592.50	149.07	N86°32'50"E	5°16'46"
C29	130.85	1592.50	130.80	N88°34'10"E	5°00'50"
C30	94.46	597.00	94.35	N11°26'02"E	9°03'52"
C31	71.67	578.00	71.62	N15°31'05"E	7°02'43"

PROPERTY DESCRIPTION:
AN IRREGULAR SHAPED PORTION OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER SECTION 32, AND SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 29 TOWNSHIP 80 NORTH, RANGE 25 WEST OF THE 5th P.M., GRIMES, POLK COUNTY, IOWA, ALL LYING WITHIN PARCEL K AS SHOWN ON THE PLAT OF SURVEY RECORDED IN BOOK 11660 AT PAGE 844 SAID IRREGULAR SHAPED PORTION OF LAND IS MORE PARTICULARLY DESCRIBED AS:

COMMENCING AT THE NORTHWEST CORNER OF THE NORTHWEST QUARTER OF THE NORTHEAST CORNER OF SAID SECTION 32; THENCE N89°29'08"W ALONG THE NORTH LINE OF SECTION 32 A DISTANCE OF 137.23 FEET TO THE POINT OF BEGINNING; THENCE S22°02'40"W A DISTANCE OF 30.45 FEET; THENCE SOUTHWESTERLY ALONG A 520.50 FOOT RADIUS CURVE CONCAVE SOUTHEASTERLY, A DISTANCE OF 175.60 FEET, SAID CURVE HAVING A CHORD BEARING OF S13°31'24"W AND A CHORD LENGTH OF 174.80 FEET; THENCE S04°01'09"W A DISTANCE OF 12.19 FEET; THENCE WESTERLY ALONG A 1616.65 FOOT RADIUS CURVE CONCAVE SOUTHEASTERLY, A DISTANCE OF 201.53 FEET WITH A CHORD BEARING OF S89°38'07"W AND A CHORD LENGTH OF 200.40 FEET; THENCE SOUTHWESTERLY ALONG A 852.50 FOOT RADIUS CURVE CONCAVE SOUTHEASTERLY, A DISTANCE OF 122.86 FEET, SAID CURVE HAVING A CHORD BEARING OF S81°47'49"W AND A CHORD LENGTH OF 122.76 FEET; THENCE S77°41'32"W A DISTANCE OF 90.00 FEET; THENCE NORTHWESTERLY ALONG A 120 FOOT RADIUS CURVE CONCAVE NORTHEASTERLY, A DISTANCE OF 156.61 FEET, SAID CURVE HAVING A CHORD BEARING OF N44°58'12"W AND A CHORD LENGTH OF 145.73 FEET; THENCE NORTHWESTERLY ALONG A 347.50 FOOT RADIUS CURVE CONCAVE NORTHEASTERLY, A DISTANCE OF 81.54 FEET, SAID CURVE HAVING A CHORD BEARING OF N16°00'55"W AND A CHORD LENGTH OF 81.17 FEET; THENCE NORTHEASTERLY ALONG A 1710.50 FOOT RADIUS CURVE CONCAVE SOUTHEASTERLY, A DISTANCE OF 434.22 FEET, SAID CURVE HAVING A CHORD BEARING OF N31°05'11"E AND A CHORD LENGTH OF 433.07 FEET; THENCE N22°02'40"E A DISTANCE OF 108.41 FEET; THENCE N38°11'05"E A DISTANCE OF 16.25 FEET; THENCE S87°49'03"E A DISTANCE OF 101.30 FEET; THENCE S22°02'40"W A DISTANCE OF 124.39 TO THE POINT OF BEGINNING.

SAID TRACT OF LAND BEING SUBJECT TO AND TOGETHER WITH ANY AND ALL EASEMENTS OF RECORD.
SAID TRACT OF LAND CONTAINS 2.26 ACRES.

LEGEND:

- PROPERTY CORNER - FOUND AS NOTED
- PROPERTY CORNER - PLACED, 3/8" IRON PIPE WITH YELLOW PLASTIC CAP ID #14775
- SECTION CORNER - FOUND AS NOTED
- CUT "X" IN PAVEMENT
- ADDRESS
- PLAT CORNER - FOUND AS NOTED

ABBREVIATIONS:

AC	ACRES
PUE	PUBLIC UTILITY EASEMENT
TYP	TYPICAL
N	NORTH
S	SOUTH
E	EAST
W	WEST
YPC	YELLOW PLASTIC CAP
MPE	MIN PROTECTION ELEVATION
SF	SQUARE FOOTAGE

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LARRY D. HYLEN, P.L.S. No. 14775 — IOWA

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.

SIGNED: PRELIMINARY DATE: PRELIMINARY
LARRY D. HYLEN, L.S. 14775
LICENSE RENEWAL DATE: DEC. 31, 2015
PAGES OR SHEETS COVERED BY THIS SEAL: SHEET 1

Bishop Engineering
"Planning Your Successful Development"
3501 104th Street
Des Moines, Iowa 50322-3835
Phone: (515)276-5047 Fax: (515)276-6017
Civil Engineering & Land Surveying Established 1959

HERITAGE AT GRIMES PLAT 7
GRIMES, IA

FINAL PLAT

FILE/SENCE NUMBER: 120101-4
DRAWN BY: JNR
CHECKED BY: JEJ
REVISION DATE:

PROJECT NUMBER: 120101-12
SHEET NUMBER: 1 OF 1

Schneider Land Surveying & Planning, Inc.

P.O. Box 128
Farley, Iowa 52046
Phone: 563-744-3631
Fax: 563-744-3629
Email: daves@yousq.net

August 29, 2016

Fox Engineering, Inc.
Attn: Mitch Holtz
Suite 107
414 South 17th Street
Ames, Iowa 50010

RE: Heritage at Grimes Plat 7, City of Grimes, Polk County, Iowa (Fox Proj. No. 8630-04D.235)

Dear Mr. Holtz,

I have reviewed the final plat of Heritage at Grimes Plat 7, City of Grimes, Polk County, Iowa. The following comments will need to be addressed and/or illustrated on the final plat to comply with the Administrative Code of Iowa and the City of Grimes Subdivision Regulations.

1. Include the City, County and State in the title of the subdivision.

   HERITAGE AT GRIMES PLAT 7, CITY OF GRIMES, POLK COUNTY, IOWA

2. Label the point of beginning on the plat.

3. **See Markups on attached Property Description.**

4. It would be simpler and less confusing to commence at the North Quarter corner of Section 32, T80N, R25W on the plat and in the description.

5. Increase the size and make the subdivision boundary dimensions bolder.

6. Dimension the north line of the Northwest Quarter of Section 32 on the plat.

7. Lighten or eliminate the future street right of way line east of the southeast corner of the subdivision.

8. If NE Park Drive, NE Little Beaver Drive and NE Beaverbrooke Boulevard do not exist, don't show them on the plat.

9. Dimension the northerly most line of Outlot 'X' at the north end of NE Lakeview Drive.

10. State the drawing scale on the plat.

11. The easements could use details at the south lines of Lots 1 and 2 and the north lines of Lots 7 and 8.

12. Check slight rounding error along the west line of Lots 8 through 12 in relation to the subdivision boundary.

13. I do not understand the copyright note on the plat. The whole purpose of the plat is to be recorded and used by others. The recorded document will be copied by attorneys, other surveyors, abstract companies, contractors, home builders, realtors, homeowners, mortgage lenders and on and on.

14. I would not place benchmark data on a subdivision plat. What is USGS Datum? Do you mean MSL1912, NGVD1929, NAVD1988, NAVD1988(2003), NAVD1988(2009) or NAVD1988(2012)? Is this a city datum?

15. Were the minimum protection levels and corresponding note established by the surveyor or an engineer? This information, if established by an engineer, may be more appropriately prepared on a separate document signed by an engineer and recorded with the plat or included in the covenants filed with the plat.

16. Nit picky item. Is the site illustrated in the proper location on the vicinity map or is it to far southeast?

17. Sign and date the final plat.

If you have any questions, or would like to discuss my comments, please contact me at the address or phone numbers listed above.

Sincerely,

David P. Schneider PLS, PLA

Description for Heritage at Grimes Plat 7

PROPERTY DESCRIPTION:

AN IRREGULAR SHAPED PORTION OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER (OF) SECTION 32, AND (THE) SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 29(,) TOWNSHIP 80 NORTH, RANGE 25 WEST OF THE 5th P.M., GRIMES, POLK COUNTY, IOWA; ALL LYING WITHIN PARCEL K AS SHOWN ON THE PLAT OF SURVEY RECORDED IN BOOK 11866 AT PAGE 944(,) SAID IRREGULAR SHAPED PORTION OF LAND IS MORE PARTICULARLY DESCRIBED AS:

COMMENCING AT THE NORTHWEST CORNER OF THE NORTHWEST QUARTER OF THE NORTHEAST CORNER (QUARTER) or (THE NORTH QUARTER CORNER) OF SAID SECTION 32(;) THENCE NW (N) 89°29'08"W ALONG THE NORTH LINE OF (THE NORTHWEST QUARTER OF SAID) SECTION 32(,) A DISTANCE OF 137.23 FEET TO THE POINT OF BEGINNING.(;) THENCE S23°02'48"W A DISTANCE OF 29.46 FEET; THENCE SOUTHWESTERLY ALONG A 528.50 FOOT RADIUS CURVE CONCAVE SOUTHEASTERLY, A DISTANCE OF 175.69 FEET, SAID CURVE HAVING A CHORD BEARING OF S13°31'24"W AND A CHORD LENGTH OF 174.88 FEET; THENCE S04°00'00"W A DISTANCE OF 17.19 FEET; THENCE WESTERLY ALONG A 1616.66 FOOT RADIUS CURVE CONCAVE SOUTHEASTERLY(SOUTHERLY?), A DISTANCE OF 200.53 FEET WITH A CHORD BEARING OF S89°36'07"W AND A CHORD LENGTH OF 200.40 FEET; THENCE SOUTHWESTERLY ALONG A 857.50 FOOT RADIUS CURVE CONCAVE SOUTHEASTERLY, A DISTANCE OF 122.86 FEET, SAID CURVE HAVING A CHORD BEARING OF S81°47'49"W AND A CHORD LENGTH OF 122.76 FEET; THENCE S77°41'32'W A DISTANCE OF 90.60 FEET; THENCE NORTHWESTERLY ALONG A 120(.00) FOOT RADIUS CURVE CONCAVE NORTHEASTERLY, A DISTANCE OF 156.61 FEET, SAID CURVE HAVING A CHORD BEARING OF N64°55'12"W AND A CHORD LENGTH OF 145.73 FEET; THENCE NORTHWESTERLY ALONG A 247.50 FOOT RADIUS CURVE CONCAVE NORTHEASTERLY, A DISTANCE OF 81.54 FEET, SAID CURVE HAVING A CHORD BEARING OF N18°00'55"W AND A CHORD LENGTH OF 81.17 FEET; THENCE NORTHEASTERLY ALONG A 1718.50 FOOT RADIUS CURVE CONCAVE SOUTHEASTERLY, A DISTANCE OF 434.22 FEET, SAID CURVE HAVING A CHORD BEARING OF N81°05'11"E AND A CHORD LENGTH OF 433.07 FEET; THENCE N22°05'23"E A DISTANCE OF 198.41 FEET; THENCE N58°10'53"E A DISTANCE OF 16.25 FEET; THENCE S84°40'52"E A DISTANCE OF 161.30 FEET; THENCE S23°02'48"W A DISTANCE OF 124.39(should be 142.39 FEET?) TO THE POINT OF BEGINNING.

SAID TRACT OF LAND BEING SUBJECT TO AND TOGETHER WITH ANY AND ALL EASEMENTS OF RECORD.

SAID TRACT OF LAND CONTAINS 2.86 ACRES.

FOX engineering

Aspen Business Park | 414 South 17th Street, Suite 107 | Ames, Iowa 50010

August 19, 2016

Bishop Engineering
Att: David Bentz
3501 104th Street
Des Moines, IA 50322

Heritage at Grimes – Final Plat 4
FOX Ref No: 8630-04D.234

FOX Engineering with assistance from David Schneider, PLS, has completed the first review of Heritage Final Plat 4 with date stamp of August 9, 2016. Please address the following comments:

1. Discussion is necessary about proposed street naming. The streets on the approved preliminary plat matched the city grid (NE Jacob Ct and NE Harvey Ct). The proposed street names (NE Aspen Ct and NE Poplar Ct) are not consistent with said preliminary plat or the city grid. FOX recommends that the street names match that of the preliminary plat which matches the city grid.

2. If you have not done so, please submit a check for Final Plat Fees to the City of Grimes as per Chapter 166.13.

3. Please address all of Dave Schneider's comments. Note that Mr. Schneider has yet to comment on this plat.

4. 166.09.09, the following shall also be attached to and accompany the Final Plat (some of which have already been submitted for review):
   a. A certificate by the owner that the subdivision is with their free consent and is in accordance with the desire of the owner. This certificate must be signed and acknowledged by the owner and spouse before some officer authorized to that the acknowledgement of deeds.
   b. A statement from the mortgage holders or lien holders that the plat is prepared with their free consent and in accordance with their desire, signed and acknowledged before an officer authorized to take the acknowledgment of deeds.
   c. An opinion by an attorney-at-law who has examined the abstract of title of the land being platted. The opinion shall state the names of the proprietors and holders of mortgages, liens or other encumbrances on the land being platted and shall note the encumbrances, along with any bonds securing the encumbrances.
   d. A resolution and certificate for approval by the Council and signatures of the Mayor and Clerk.
   e. A certificate of the County Treasurer that the land is free from certified taxes and certified special assessments and that the certified special assessments are secured by bond in compliance with Chapter 354 of the Code of Iowa.
   f. Please send FOX (John Gade – jgade@foxeng.com) and the City Attorney (Erik Fisk - Fisk@whitfieldlaw.com) a copy of all the proposed easement descriptions. Please DO NOT send original documents. A pdf of the documents via e-mail is the preferred method. Note that the provided easement documents do not contain the exhibit that is referenced in the document that states the legal description of the easement.

5. The Developer has provided parkland dedication per the approved PUD.

6. Please provide a 4-year maintenance bond for all the pavement and utilities that will be dedicated to the city. The City Engineer shall review the cost estimates for all improvements to verify the bond amount. Note that the City will not accept the final plat until all improvements (this includes temporary and permanent seeding/stabilization) have been installed unless a performance bond or letter of credit is submitted to the City of Grimes (all Punchlist Items shall be addressed). Prior to the City releasing the resolution, all public improvements shall be completed and accepted by the City.
   a. The temporary & permanent seeding will not be completed (stabilized), thus a performance bond or letter of credit will be necessary.
   b. All City invoices shall be paid prior to release of the final plat.

7. Please DO NOT send original copies of the plats to the City of Grimes. The City does NOT require originals to be stamped. The approval of the plat is the signed resolution by City Council. Note that the signed resolution will not be given to the Developer until all items have been addressed.

8. Once the Final Plat has been accepted by P&Z and Council, the City requires the following:
   a. Signed PDF
   b. 1 Mylar - Signed
   c. Resolution - The City holds the resolution until all legals, comments, and subdivision punchlist have been addressed.
   d. Filing - The Developer files the plat once the City releases the resolution.

9. Please submit record drawings of the Construction Plans. These drawings shall be completed within 30 days of the acceptance of the Final Plat. These drawings shall include all public improvements. A digital copy of the Final Plat and Record Drawings is also required.

FINAL PLAT SCHEDULE:

PLANNING & ZONING: September 6, 2016 at 5:30 at the Grimes City Hall

COUNCIL MEETING: September 13, 2016 at 5:30 at the Grimes City Hall

If you have any questions or concerns, please contact John Gade or myself at (515) 233-0000. The City reserves the right to modify or add to these comments.

FOX ENGINEERING ASSOCIATES, INC.

Mitch Holtz, P.E.

Mitch Holtz, P.E.

Copy to: Kelley Brown, City of Grimes
Erik Fisk, City Attorney

HERITAGE AT GRIMES PLAT 4
FINAL PLAT

OWNER:
BEAVERBROOKE DEVELOPMENT COMPANY
1950 SE 37TH ST
GRIMES, IOWA 50111

SURVEYOR:
BISHOP ENGINEERING
ATTN: LARRY HYLER
3501 104TH ST
URBANDALE, IA 50322
PH: (515) 270-1467

ZONING:
PUD: PLANNED UNIT DEVELOPMENT
UNDERLYING ZONING:
SINGLE FAMILY TYPE 1 (PER PLANNED UNIT DEVELOPMENT)
BUILDING SETBACKS PER PUD:

FRONT YARD = 30 FEET*
SIDE YARD = 7 FEET ONE SIDE, 14 FEET* COMBINED TOTAL
REAR YARD = 25 FEET*

*ALL SETBACKS ARE MEASURED TO STREET RIGHT OF WAY EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE

BENCHMARK:
CITY BENCHMARK COLLADE: BURY BOLT ON FIRE HYDRANT LOCATED ON THE EAST SIDE OF NORTH JAMES ST BY THE NW CORNER OF LOT ASGREG10 1995.
ELEVATION = 934.41 (USGS DATUM)

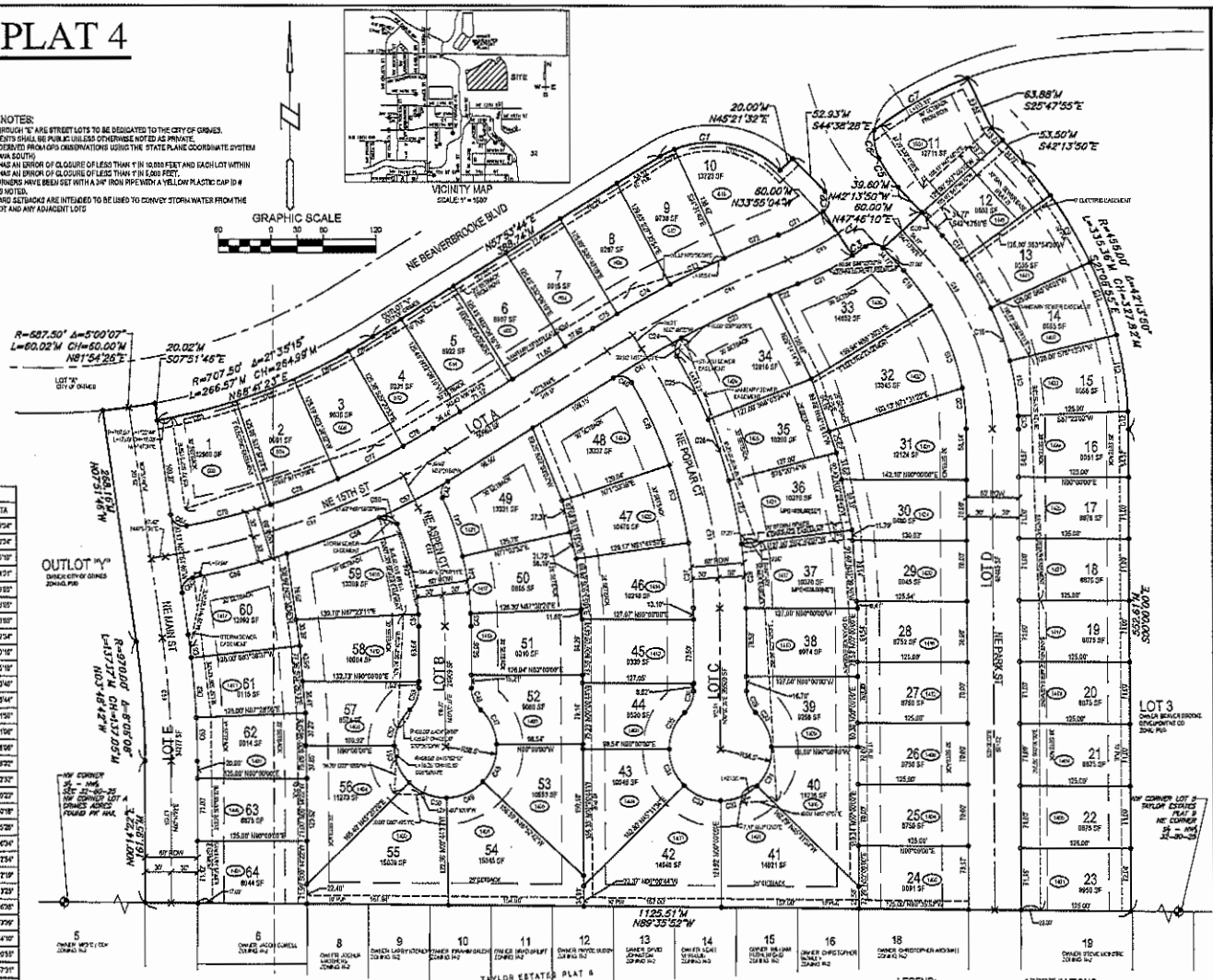
CITY BENCHMARK GEA-001: ARROWHEAD ON FIRE HYDRANT LOCATED AT THE NE CORNER OF THE NE 13TH ST & N JAMES ST INTERSECTION.
ELEVATION = 930.85 (USGS DATUM)

GENERAL NOTES:
1. LOTS "A" THROUGH "E" ARE STREET LOTS TO BE DEDICATED TO THE CITY OF GRIMES.
2. ALL EASEMENTS SHALL BE PUBLIC UNLESS OTHERWISE NOTED AS PRIVATE.
3. BEARINGS DERIVED FROM GPS OBSERVATIONS USING THE STATE PLANE COORDINATE SYSTEM (NAD83 - IOWA SOUTH)
4. THIS PLAT HAS AN ERROR OF CLOSURE OF LESS THAN 1' IN 10,000 FEET AND EACH LOT WITHIN THIS PLAT HAS AN ERROR OF CLOSURE OF LESS THAN 1' IN 5,000 FEET.
5. ALL LOT CORNERS HAVE BEEN SET WITH A 3/4" IRON PIPE WITH A YELLOW PLASTIC CAP ID # 14775 OR AS NOTED.
6. ALL SIDE YARD SETBACKS ARE INTENDED TO BE USED TO CONVEY STORM WATER FROM THE SUBJECT LOT AND ANY ADJACENT LOTS

MINIMUM PROTECTION ELEVATION NOTES (APPLIES TO ALL LOTS):
1. MINIMUM PROTECTION ELEVATIONS (MPE) ARE FOR REFERENCE ONLY. ALL LOTS, WITH OR WITHOUT MPE'S, SHALL BE REVIEWED FOR CONFORMANCE WITH THE STORMWATER MANAGEMENT PLAN AND GRADING PLAN. THESE NOTES APPLY TO ALL LOTS, WITH OR WITHOUT MPE'S.
2. THE HOME BUILDER SHALL ENSURE ALL DRAINAGE SWALES ARE MAINTAINED AND/OR PROTECTED AS DESIGNED DURING HOME CONSTRUCTION AS INTENDED IN THE ORIGINAL DESIGN AND APPROVED BY THE CITY.
3. HOME BUILDERS SHALL BE RESPONSIBLE FOR ENSURING POSITIVE DRAINAGE AWAY FROM THE HOUSE AND CONVEYED TO THE DRAINAGE SWALES OR STREETS WITHOUT ADVERSELY EFFECTING NEIGHBORING PROPERTIES.
4. LOTS WITH MPE'S NOTED WITH AN ASTERISK (*) BEGIN FROM REAR YARD FIRST. HOME BUILDER SHALL BE RESPONSIBLE FOR THE CONVEYANCE OF ALL STORM WATER ACROSS SUBJECT LOT, DRAINAGE SHALL BE CONVEYED AROUND THE SIDES OF THE HOUSE AND TO THE STREET.
5. MPE'S LISTED DO NOT ACCOUNT FOR DRAINAGE THROUGH SIDE YARDS (INCLUDING THE OVERTOPPING OF LOW POINTS). THE HOME BUILDER SHALL BE RESPONSIBLE FOR GRADING THE SIDE YARD TO ACCOUNT FOR THE VARYING DEPTH OF FLOW AND ENSURING FLOOD PROTECTION AND POSITIVE DRAINAGE AWAY FROM THE HOUSE.
6. MPE'S PROVIDED ARE BASED ON PROPOSED CONTOURS AND NOT ACTUAL AS-BUILT GRADES. HOME BUILDERS MUST ADJUST MPE'S ACCORDINGLY AND GRADE LOT TO HAVE POSITIVE DRAINAGE TO PROPERTY LINES AND PUBLIC WAYS.
7. MPE'S LISTED DO NOT ACCOUNT FOR DEPTH OF SANITARY SERVICE. THE HOME BUILDER SHALL BE RESPONSIBLE FOR VERIFYING THE DEPTH OF THE SERVICES AND SET THE BASEMENT ELEVATION ACCORDINGLY.
8. FOR LOTS WITH DIRECTIONS IN BRACKETS, THE MPE APPLIES IN THE LOCATION SHOWN IN BRACKETS. FOR EXAMPLE [NE] APPLIES TO THE NORTHEAST SIDE OF THE LOT.
9. HOMEBUILDERS SHALL COMPLY WITH CITY ORDINANCES AND POLICIES FOR MINIMUM PROTECTION ADJACENT TO DRAINAGE WAYS.

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
C1	140.72	110.00	131.05	S88°22'22"E	77°27'48"
C2	28.37	15.00	23.93	N25°42'14"E	108°43'24"
C3	17.66	230.00	17.66	N54°32'57"E	2°52'57"
C4	22.19	15.00	20.22	S84°36'28"E	84°45'16"
C5	49.02	133.00	39.87	N38°26'25"W	17°10'24"
C6	33.48	60.00	33.05	N59°04'36"W	31°58'23"
C7	122.44	413.76	122.00	N69°24'30"E	16°57'28"
C8	40.73	455.00	40.73	N39°09'46"W	5°08'23"
C9	86.01	455.00	85.87	N33°20'44"W	11°05'36"
C10	86.01	455.00	85.87	N22°21'14"W	11°05'36"
C11	86.01	455.00	85.87	N11°15'42"W	11°05'36"
C12	20.70	455.00	20.77	N01°52'25"W	2°36'56"
C13	15.87	350.00	15.87	N01°52'25"W	2°36'56"
C14	64.37	350.00	64.17	N08°11'42"W	11°06'36"
C15	64.37	350.00	64.17	N19°21'14"W	11°06'36"
C16	64.37	350.00	64.17	N30°30'46"W	11°06'36"
C17	35.39	350.00	35.34	N39°09'46"W	6°00'21"
C18	56.20	270.00	56.09	N36°53'39"W	11°55'22"
C19	101.02	270.00	100.44	N22°51'17"W	21°25'29"
C20	47.00	270.00	47.00	N05°03'39"W	10°00'00"
C21	71.12	330.00	70.96	N02°15'23"E	12°20'55"
C22	34.86	1235.00	34.86	S87°37'19"W	1°37'02"
C23	111.00	1235.00	110.85	S84°13'54"W	5°11'32"
C24	23.00	15.00	21.51	S15°40'18"W	91°50'50"
C25	91.35	590.00	91.28	N25°57'41"W	8°52'10"
C26	73.70	590.00	73.65	N16°11'51"W	7°10'50"
C27	74.21	590.00	74.16	N10°10'48"W	7°12'53"
C28	74.21	590.00	74.16	N03°03'55"W	7°12'53"
C29	37.26	34.50	35.61	S32°02'28"E	61°52'17"
C30	43.66	58.50	42.65	N24°42'23"W	42°45'40"
C31	46.14	58.50	45.21	N24°44'22"E	45°10'58"
C32	46.14	58.50	44.95	S67°24'12"E	45°11'24"
C33	46.14	58.50	44.95	S22°24'12"E	45°11'24"
C34	46.14	58.50	44.95	S22°12'33"E	45°11'24"
C35	46.66	58.50	45.44	S22°14'43"W	45°42'49"
C36	37.75	34.50	37.31	N22°02'28"E	46°52'10"
C37	75.33	570.00	75.28	N04°00'00"W	8°18'01"
C38	93.02	570.00	91.98	N12°22'11"W	9°00'23"
C39	100.00	570.00	99.87	N24°09'54"W	11°27'15"
C40	30.00	15.00	20.87	N73°08'37"W	88°10'00"
C41	61.59	1235.00	61.58	S09°11'36"W	2°51'21"
C42	21.01	15.00	19.94	S17°23'32"W	83°19'31"
C43	71.23	360.00	71.11	N38°36'12"W	11°20'09"

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
C44	60.56	300.00	60.45	N35°22'21"W	11°33'54"
C45	14.72	360.00	14.72	N41°15'13"W	2°20'34"
C46	27.76	34.50	27.01	S23°02'58"E	46°05'10"
C47	43.89	34.50	42.05	N24°32'02"W	72°04'37"
C48	47.10	59.50	45.84	N20°02'16"E	45°20'02"
C49	47.10	59.50	45.84	N65°17'21"E	45°20'02"
C50	47.10	59.50	45.84	S07°46'56"E	45°20'02"
C51	46.07	59.50	45.44	S21°45'15"E	45°42'34"
C52	46.03	59.50	44.76	S23°35'40"W	44°50'18"
C53	27.75	34.50	27.01	N23°02'58"E	46°05'10"
C54	13.68	300.00	13.68	N01°43'34"W	2°30'46"
C55	107.05	300.00	106.49	N12°50'11"W	20°26'46"
C56	24.14	15.00	21.62	N59°09'32"W	92°11'50"
C57	86.01	805.00	85.76	N03°53'54"E	5°41'06"
C58	114.06	805.00	113.96	N09°23'32"E	7°16'06"
C59	111.57	805.00	111.49	N15°30'30"E	7°56'32"
C60	27.00	1020.00	27.00	N07°43'34"W	1°30'22"
C61	49.00	1020.00	49.00	N04°20'13"W	2°45'28"
C62	49.57	1020.00	49.56	N01°07'21"W	2°46'28"
C63	24.42	15.00	21.91	S54°20'54"E	93°16'34"
C64	93.21	707.50	93.14	N73°42'33"E	7°32'54"
C65	70.45	707.50	70.42	N80°04'53"E	5°42'19"
C66	70.00	707.50	70.65	N80°22'50"E	5°43'23"
C67	33.24	707.50	33.23	N86°12'52"E	2°36'08"
C68	19.30	110.00	19.33	S62°45'23"W	9°33'59"
C69	133.36	110.00	125.97	N76°33'33"W	67°34'10"
C70	58.10	270.00	58.08	N82°15'32"E	12°20'53"
C71	59.87	1295.00	59.86	S89°57'50"W	2°57'31"
C72	59.40	1295.00	59.39	S85°55'25"W	2°37'34"
C73	59.40	1295.00	59.39	S83°15'51"W	2°37'34"
C74	32.45	1295.00	32.45	S80°30'08"W	1°26'08"
C75	40.17	325.00	40.17	N59°16'25"E	7°04'24"
C76	93.15	325.00	92.83	N82°30'18"E	5°42'21"
C77	99.35	325.00	99.00	N70°27'03"E	5°49'01"
C78	93.86	325.00	93.53	N59°12'02"E	5°41'16"
C79	141.41	1000.00	141.29	N60°48'42"W	8°06'09"
C80	346.69	855.00	344.39	N69°22'32"E	23°13'46"
C81	141.01	339.00	139.94	N12°14'39"W	24°20'50"
C82	314.02	550.00	310.53	N16°24'11"W	32°42'22"
C83	232.00	1205.00	232.27	N03°09'49"E	10°32'01"
C84	64.09	300.00	64.50	N02°15'23"E	12°20'55"
C85	221.12	200.00	215.15	S21°55'55"E	42°13'58"



PROPERTY DESCRIPTION:
AN IRREGULAR SHAPED PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER AND IN THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 30, TOWNSHIP 80 NORTH, RANGE 25 WEST OF THE 5th P.M., GRIMES, POLK COUNTY, IOWA, ALL LYING WITHIN PARCEL K AS SHOWN ON THE PLAT OF SURVEY RECORDED IN BOOK 1956 AT PAGE 844 SAID IRREGULAR SHAPED PORTION OF LAND IS MORE PARTICULARLY DESCRIBED AS:

BEGINNING AT THE NORTHEAST CORNER OF LOT 5 TAYLOR ESTATES PLAT No. 6, AN OFFICIAL PLAT; THENCE N89°14'22"E, A DISTANCE OF 141.05 FEET; THENCE NORTHWESTERLY ALONG A 270.00 FOOT RADIUS CURVE CONCAVE SOUTHWESTERLY, A DISTANCE OF 137.17 FEET, SAID CURVE HAVING A CHORD BEARING OF N69°48'40"W AND A CHORD LENGTH OF 137.05 FEET; THENCE N55°19'48"W, A DISTANCE OF 208.16 FEET; THENCE NORTHEASTERLY ALONG A 805.00 FOOT RADIUS CURVE CONCAVE NORTHWESTERLY, A DISTANCE OF 46.03 FEET, SAID CURVE HAVING A CHORD BEARING OF N81°54'00" E AND A CHORD LENGTH OF 46.03 FEET; THENCE S57°51'55"E, A DISTANCE OF 20.02 FEET; THENCE NORTHEASTERLY ALONG A 707.50 FOOT RADIUS CURVE CONCAVE NORTHWESTERLY, A DISTANCE OF 266.57 FEET, SAID CURVE HAVING A CHORD BEARING OF N68°41'23"E AND A CHORD LENGTH OF 265.00 FEET; THENCE N57°51'46"E, A DISTANCE OF 388.74 FEET; THENCE SOUTHEASTERLY ALONG A 110.00 FOOT RADIUS CURVE CONCAVE SOUTHWESTERLY, A DISTANCE OF 140.72 FEET, SAID CURVE HAVING A CHORD BEARING OF S82°22'22"E AND A CHORD LENGTH OF 131.05 FEET; THENCE N45°21'32"E, A DISTANCE OF 20.00 FEET; THENCE S44°38'28"E, A DISTANCE OF 52.93 FEET; THENCE SOUTHWESTERLY ALONG A 15.00 FOOT RADIUS CURVE CONCAVE NORTHWESTERLY, A DISTANCE OF 28.37 FEET, SAID CURVE HAVING A CHORD BEARING OF S05°42'14"W AND A CHORD LENGTH OF 23.93 FEET; THENCE S33°55'04"E A DISTANCE OF 60.00 FEET; THENCE NORTHEASTERLY ALONG A 230.00 FOOT RADIUS CURVE CONCAVE NORTHWESTERLY, A DISTANCE OF 17.66 FEET, SAID CURVE HAVING A CHORD BEARING OF N54°32'57"E AND A CHORD LENGTH OF 17.66 FEET; THENCE SOUTHEASTERLY ALONG A 15.00 FOOT RADIUS CURVE CONCAVE SOUTHWESTERLY, A DISTANCE OF 22.19 FEET, SAID CURVE HAVING A CHORD BEARING OF S84°36'28" E AND A CHORD LENGTH OF 20.22 FEET; THENCE N47°46'10"E, A DISTANCE OF 60.00 FEET; THENCE N42°13'50"W, A DISTANCE OF 39.60 FEET; THENCE NORTHWESTERLY ALONG A 130.50 FOOT RADIUS CURVE CONCAVE NORTHEASTERLY, A DISTANCE OF 49.02 FEET, SAID CURVE HAVING A CHORD BEARING OF N38°26'25"W AND A CHORD LENGTH OF 30.87 FEET; THENCE NORTHEASTERLY ALONG A 60.00 FOOT RADIUS CURVE CONCAVE NORTHEASTERLY, A DISTANCE OF 33.48 FEET, SAID CURVE HAVING A CHORD BEARING OF N59°04'36"W AND A CHORD LENGTH OF 33.05 FEET; THENCE NORTHEASTERLY ALONG A 413.76 FOOT RADIUS CURVE CONCAVE SOUTHEASTERLY, A DISTANCE OF 122.44 FEET, SAID CURVE HAVING A CHORD BEARING OF N69°24'30"E AND A CHORD LENGTH OF 121.99 FEET; THENCE S59°47'33"E, A DISTANCE OF 53.50 FEET; THENCE SOUTHEASTERLY ALONG A 455.00 RADIUS CURVE CONCAVE SOUTHWESTERLY, A DISTANCE OF 315.38 FEET, SAID CURVE HAVING A CHORD BEARING OF S21°05'55"E AND A CHORD DISTANCE OF 327.82 FEET; THENCE S00°00'00"W, A DISTANCE OF 552.61 FEET TO THE NORTH LINE OF SAID TAYLOR ESTATES PLAT No. 6; THENCE N89°35'52"W ALONG THE NORTH LINE OF SAID TAYLOR ESTATES PLAT No. 6, A DISTANCE OF 1125.51 FEET TO THE POINT OF BEGINNING.

SAID TRACT OF LAND BEING SUBJECT TO AND TOGETHER WITH ANY AND ALL EASEMENTS OF RECORD.
SAID TRACT OF LAND CONTAINING 10.75 ACRES.

LEGEND:
- PROPERTY CORNER - FOUND AS NOTED
- PROPERTY CORNER - PLACED 3/4" IRON PIPE WITH YELLOW PLASTIC CAP ID #14775
- SECTION CORNER - FOUND AS NOTED
- CUT "X" IN PAVEMENT
- ADDRESS
- PLAT CORNER - FOUND AS NOTED

ABBREVIATIONS:

AC	ACRES
PUE	PUBLIC UTILITY EASEMENT
TYP	TYPICAL
N	NORTH
S	SOUTH
E	EAST
W	WEST
YPC	YELLOW PLASTIC CAP
MPE	MIN PROTECTION ELEVATION
SF	SQUARE FOOTAGE

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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.

LARRY D. HYLER, P.L.S. No. 14775

SIGNED: PRELIMINARY DATE: PRELIMINARY
LARRY D. HYLER, L.S. 14775
LICENSE RENEWAL DATE: DEC. 31, 2016
PAGES OR SHEETS COVERED BY THIS SEAL: SHEET 1

Bishop Engineering
"Planning Your Successful Development"
3501 104th Street
Des Moines, Iowa 50322-3325
Phone: (515) 270-1467 Fax: (515) 276-0237
Civil Engineering & Land Surveying
Established 1959

HERITAGE AT GRIMES PLAT 4
GRIMES, IA

FINAL PLAT

REFERENCE NUMBER: 120101-4
DRAWN BY: JWR
CHECKED BY: JLJ
REVISION DATE:

PROJECT NUMBER: 120101-9
SHEET NUMBER: 1 OF 1

9/9/2016 2:20:22 PM
W:\AUTOCAD PROJECTS 2012\120101-9 (PLAT 4)\SURVEY\FINAL PLAT.DWG

Schneider Land Surveying & Planning, Inc.

P.O. Box 128
Farley, Iowa 52046
Phone: 563-744-3631
Fax: 563-744-3629
Email: daves@yousq.net

August 29, 2016

Fox Engineering, Inc.
Attn: Mitch Holtz
Suite 107
414 South 17th Street
Ames, Iowa 50010

RE: Heritage at Grimes Plat 4, City of Grimes, Polk County, Iowa (Fox Proj. No. 8630-04D.234)

Dear Mr. Holtz,

I have reviewed the final plat of Heritage at Grimes Plat 4, City of Grimes, Polk County, Iowa. The following comments will need to be addressed and/or illustrated on the final plat to comply with the Administrative Code of Iowa and the City of Grimes Subdivision Regulations.

1. Include the City, County and State in the title of the subdivision.

HERITAGE AT GRIMES PLAT 4, CITY OF GRIMES, POLK COUNTY, IOWA

2. Label and describe the point of beginning on the plat.

3. In the property description, describe the point of beginning as the Northeast corner of Lot 5, Taylor Estates Plat No.8, City of Grimes, Polk County, Iowa. Loose the statement "An official Plat". How is the original plat of Taylor Estates Plat No. 8 recorded? Plat No. 8 or Plat 8. The plat illustrates one way and the property description shows the other. Always perpetuate the original subdivision name as printed on the recorded document.

4. Check the chord bearing and distance of the curve along the subdivision boundary north of Lots 1 through 4 in relation to the property description. They don't quite match.

5. Correct the chord bearing of Curve C2 to match the property description.

6. Dimension the subdivision boundary at the east side of Lot A.

7. Change the due North bearing on the east side of the subdivision to match the property description.

8. Dimension to the northeast and northwest corners of the South Half of the Northwest Quarter of Section 32, T80N, R25W and describe the monuments.

9. State the drawing scale on the plat.

10. Confusion – There are lots, outlots and street lots labeled around the east, west and north perimeter of this subdivision that do not exist. Do not refer to them on this plat unless the adjacent subdivision plats are recorded first.

11. Some of the storm sewer easements could use details for clarity.

12. It is difficult to determine where some of the easement dimensions start and stop. Could use leader lines or small dots at the ends of the lines.

13. Label the quarter–quarter section line plotted through the middle of the subdivision.

14. Check overlapping dimension on the west side of Lot 27.

15. Check slight rounding error between Lots 30, 31 and 36.

16. Add monument on the north side of Lot 49 at the PT of the curve and dimension the curve along the north line of said Lot 49.

17. Add dimension to the west line of Lot 60.

18. Dimension the south line of Lot 64.

19. Dimension the south line of Lot E.

20. Dimension the south line of Lot E.

21. Check Curve C41 data. Does not make sense.

22. Add monument at the PC of the curve along the south side of Lot A where it meets Lot C and dimension the north side of Lot C.

23. Dimension to the centerlines of Lot B and Lot C along the centerline of Lot A.

24. Dimension to the centerline of Lot A along the centerline of Lot E.

25. I do not understand the copyright note on the plat. The whole purpose of the plat is to be recorded and used by others. The recorded document will be copied by attorneys, other surveyors, abstract companies, contractors, home builders, realtors, homeowners, mortgage lenders and on and on.

26. I would not place benchmark data on a subdivision plat. I had a fire hydrant, used as a benchmark, hit by a car while working in Ames, Iowa. The city maintenance crew fixed the hydrant using the same fixture but added a 12" longer barrel under the hydrant.

27. What is USGS Datum? Do you mean MSL1912, NGVD1929, NAVD1988, NAVD1988(2003), NAVD1988(2009) or NAVD1988(2012)? Is this a city datum?

28. Were the minimum protection levels and corresponding note established by the surveyor or an engineer? This information, if established by an engineer, may be more appropriately prepared on a separate document signed by an engineer and recorded with the plat or included in the covenants filed with the plat.

29. Sign and date the final plat.

If you have any questions, or would like to discuss my comments, please contact me at the address or phone numbers listed above.

Sincerely,

David P. Schneider PLS, PLA

FOX engineering

Aspen Business Park | 414 South 17th Street, Suite 107 | Ames, Iowa 50010

September 1, 2016

Att: Keven Crawford
Cooper Crawford & Associates LLC
475 S 50th Street, Suite 800
West Des Moines, IA 50265

1150 SW Brookside Circle – Site Plan
FOX Ref No: 8630-04F.280

FOX Engineering has completed the third review for the 1150 SW Brookside Circle Site Plan dated August 30, 2016. Please address the following comments:

1. No signage is being proposed.
2. The original landscaping plan had 10 dogwoods shrubs along the north curb line. Discussion is necessary with P&Z if these shrubs can be removed due to the proposed 3-ft berm.

Stormwater Management Plan

3. FOX has reviewed the submitted storm water report and have no comments. This lot is allowed to discharge without stormwater detention since the regional detention facility was sized for the runoff from this lot.

Stormwater Pollution Prevention Plan

4. A SWPPP is not requires since they are disturbing less than 1 acre.

Post –Construction Stormwater Maintenance Agreement

5. A Post Construction Agreement is not required.

SITE PLAN SCHEDULE:

PLANNING & ZONING: September 6, 2016 at 5:30 at the Grimes City Hall

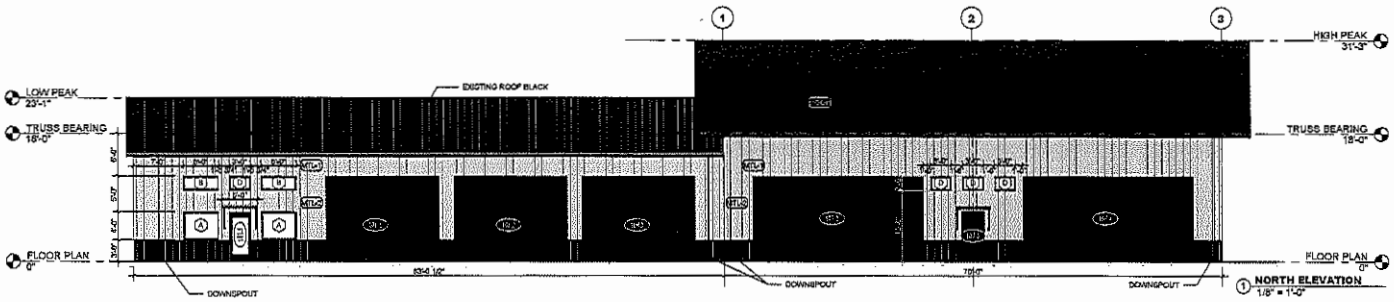
COUNCIL MEETING: September 13, 2016 at 5:30 at the Grimes City Hall

If you have any questions or concerns, please contact John Gade or myself at (515) 233-0000.

FOX ENGINEERING ASSOCIATES, INC.

Mitch Holtz, P.E.

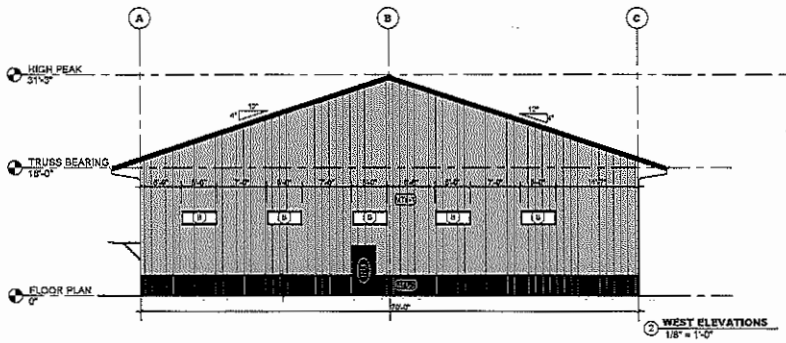
Copy to: Kelley Brown, City of Grimes
Scott Clyce, City of Grimes



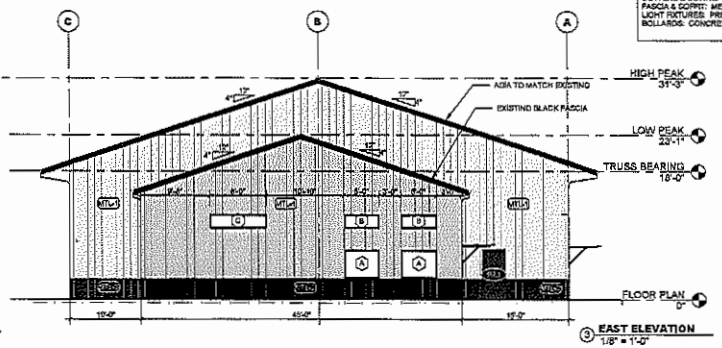
1 NORTH ELEVATION
1/8" = 1'-0"

EXTERIOR MATERIAL LEGEND	
MAT. LABEL	MATERIAL DISCRIPTION MATERIAL INFORMATION
MTL-1	METAL PANEL: VERTICALLY W/ EXPOSED FASTENERS; COLOR: LIGHT GRAY OR DIM.
MTL-2	METAL PANEL: VERTICALLY W/ EXPOSED FASTENERS; COLOR: BLACK OR DIM.
ROOF	METAL PANEL: STANDING SEAM EXPOSED FASTENERS; COLOR: BLACK

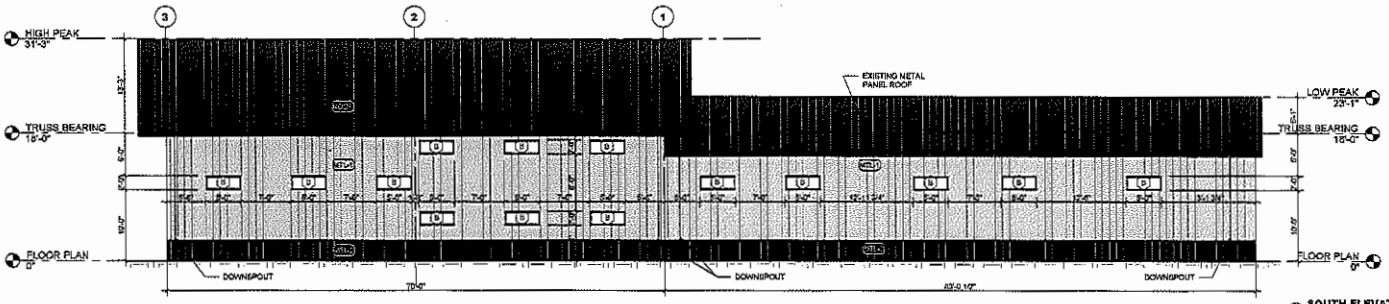
H. METAL MAN DOORS & FRAMES: PAINTED TO BLACK.
OVERHEAD PANEL DOORS: METAL PRE-FINISHED WHITE PAINTED BLACK.
GUTTERS & DOWNSPOUTS: METAL PREFINISHED BLACK.
FASCIA & SOFFIT: METAL PREFINISHED BLACK.
LIGHT FIXTURES: PRE-FINISHED BLACK HOUSINGS.
BOLLARDS: CONCRETE FILLED STEEL BOLLARDS PAINTED SAFETY YELLOW.



2 WEST ELEVATIONS
1/8" = 1'-0"



3 EAST ELEVATION
1/8" = 1'-0"



4 SOUTH ELEVATIONS
1/8" = 1'-0"

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DRAKE HOMES SHOP

1150 SW BROOKSIDE CIR.

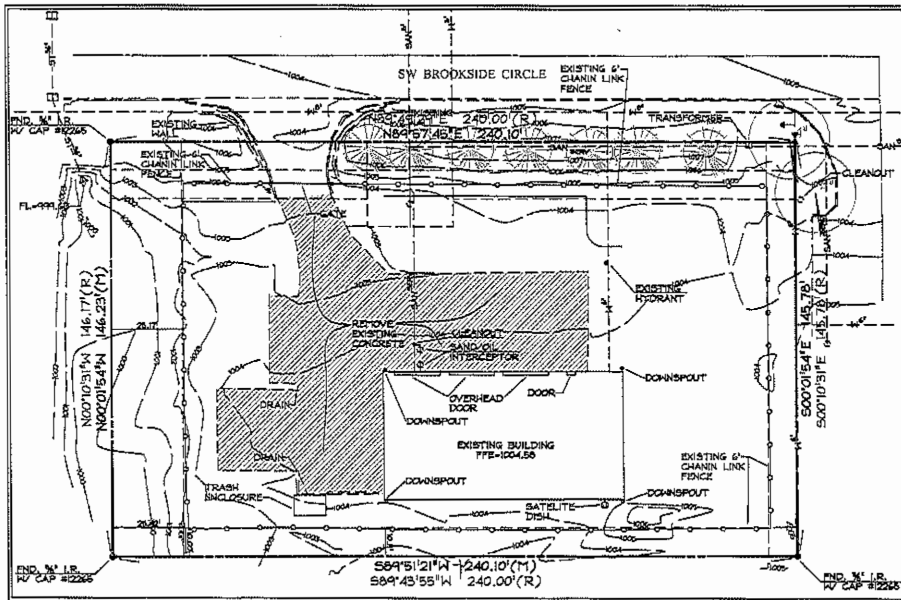
GRIMES, IA

AUGUST 31, 2016

1/8" = 1'-0" @ 24"x36" Sheet
12"x18" SHEET (HALF SIZE)
- SCALE IS ONE-HALF OF WHAT IS NOTED
OTHER SHEET SIZES NOT TO SCALE

JOB NO.: 15043

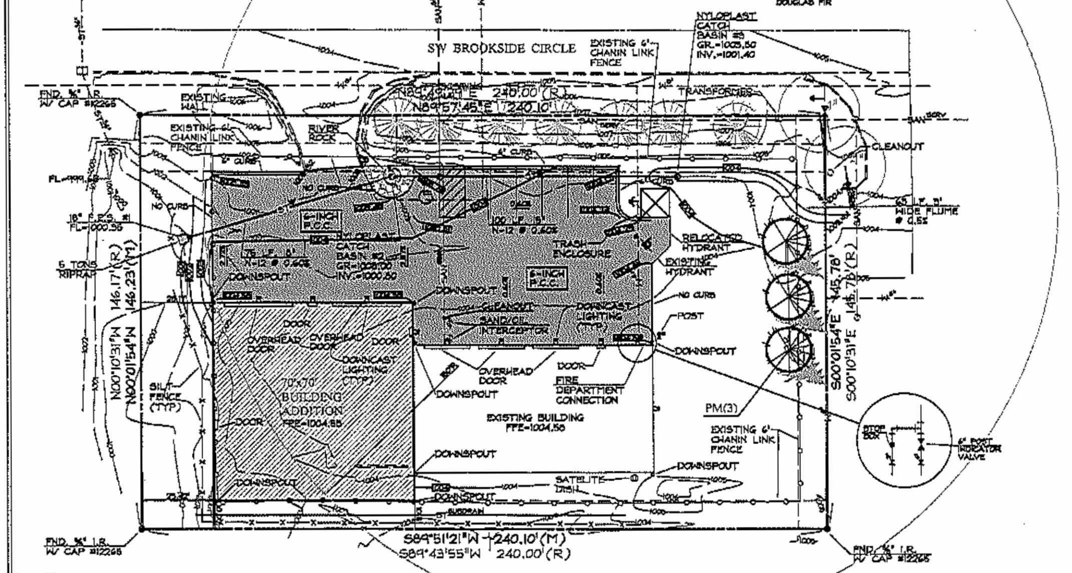
simonson
simonson & associates architects LLC
1217 ingersoll avenue suite 117 des moines ia 50309
ph: 515 449 5646 www.simonsonassoc.com



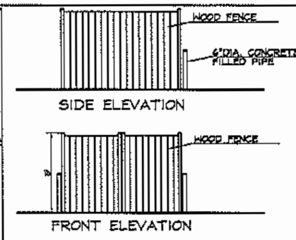
REMOVAL PLAN

PLANTING SCHEDULE

COUNT	KEY	Botanical name/COMMON NAME	SIZE	CONDITION	REMARKS
3	PM	Pseudotsuga menziesii DOUGLAS FIR	6'-8' Ht.	T5/B&B	SEE PLAN

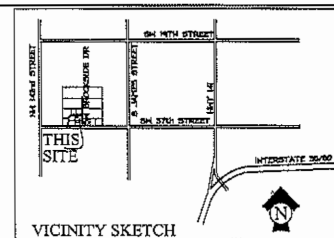


PROPOSED PLAN



TRASH ENCLOSURE

NO SCALE



VICINITY SKETCH

SCALE: 1"=2500'

EROSION & POLLUTION CONTROL NOTES

1. THE SUBCONTRACTOR RESPONSIBLE FOR EROSION AND POLLUTION CONTROL SHALL CARRY OUT THE MEASURES DETAILED ON THIS PLAN.
2. CONTROLS MUST BE IN GOOD OPERATING CONDITION UNTIL THE CONSTRUCTION ACTIVITY IS COMPLETE AND FINAL STABILIZATION HAS BEEN REACHED.
3. THE SUBCONTRACTOR SHALL INSPECT THE SITE AT MINIMUM ONCE EVERY 7 DAYS AND WITHIN 24 HOURS OF THE END OF A 1/2 INCH OR GREATER RAINFALL. ALL DISTURBED AREAS OF THE SITE, AREAS OF MATERIAL STORAGE, LOCATIONS WHERE VEHICLES ENTER/EXIT THE SITE. ALL OF THE EROSION AND SEDIMENT CONTROLS THAT ARE IDENTIFIED AS PART OF THIS PLAN AND ACCESSIBLE DISCHARGE LOCATIONS MUST BE INSPECTED.
4. THE SUBCONTRACTOR IS TO TAKE NECESSARY ACTIONS TO CORRECT DEFICIENCIES FOUND DURING INSPECTIONS AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN 7 DAYS AFTER THE INSPECTION IN WHICH THE DEFICIENCY WAS FOUND.
5. THE SUBCONTRACTOR SHALL KEEP LOG AND PREPARE WEEKLY REPORTS DETAILING THE INSPECTIONS AND MEASURES TAKEN TO CORRECT ANY AND ALL DEFICIENCIES FOUND IN THE EROSION AND POLLUTION CONTROL MEASURES. THE REPORTS SHALL CONFORM TO THE STANDARDS SET BY THE IOWA DEPARTMENT OF NATURAL RESOURCES. COPIES OF THESE REPORTS SHALL BE FORWARDED TO THE DEVELOPER AND TO COOPER CRAWFORD & ASSOCIATES, L.L.C.
6. AFTER INITIAL GRADING PRIOR TO UTILITY CONSTRUCTION - ALL DISTURBED AREAS OUTSIDE OF THE PROPOSED R.O.W.'S ARE TO HAVE TEMPORARY SEEDING AND MULCHING. CONTRACTOR AND SUBS ARE TO TRY TO MINIMIZE DISTURBANCE TO THESE SEEDED AREAS THROUGH THE USE OF SPECIFIC ACCESS ROUTES WITHIN THE SITE.
7. DURING CONSTRUCTION, IF IT BECOMES EVIDENT THAT A DISTURBED AREA WILL NOT BE DISTURBED FOR 21 DAYS, IT SHALL BE SEEDED BY DAY.
8. PERMANENT SEEDING TO BE DONE IMMEDIATELY AFTER FINAL GRADING.
9. ANY FAILED AREAS OF SEEDING/MULCHING SHALL BE REAPPLIED.
10. ANY SOIL OR SPILL WASHED, TRACKED OR DROPPED ONTO ADJOINING RIGHT-OF-WAYS AND PROPERTY WILL BE CLEANED UP BY THE OWNER/CONTRACTOR WITHIN 24 HOURS.
11. SILT FENCING TO BE INSPECTED ONCE A WEEK AND AFTER EACH RAINSTORM, LOOK FOR UNDERCUTTING AND FAILURES IN FABRIC. REPLACE/REPAIR AS NECESSARY.
12. ADDITIONAL SILT FENCING (TO THAT SHOWN ON THIS PLAN) MAY BE REQUIRED BY THE CITY OF GRIMES IN AREAS WHERE EROSION IS EVIDENT.
13. SILT FENCING TO BE CLEANED UP WHEN THEY HAVE LOST 50% OF THEIR CAPACITY.
14. ALL INTAKES SHALL HAVE SILT FENCING PRIOR TO PAVING AND INLET FILTERS AFTER PAVING. THESE FILTERS REMAIN IN PLACE UNTIL THE SITE HAS A PERMANENT PERENNIAL GROUND COVER.
15. ALL INTAKES SHALL BE COVERED DURING CONSTRUCTION TO PREVENT SEDIMENTATION DEPOSITS WITHIN THE STORM SEWER.
16. IN THE EVENT THAT SEEDING/MULCHING DOES NOT OCCUR PRIOR TO WINTER, ALL DISTURBED AREAS WILL BE MULCHED.
17. NO BORROW/SPOILS SITES ARE ANTICIPATED.

GRADING NOTES

1. ALL DIMENSIONS ARE TO BACK OF CURB, OUTSIDE OF BUILDING WALL, AND TO PROPERTY LINES.
2. THE LOCATIONS AND DIMENSIONS SHOWN ON THE PLANS FOR EXISTING FACILITIES ARE IN ACCORDANCE WITH AVAILABLE INFORMATION WITHOUT UNCOVERING AND MEASURING. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THIS INFORMATION OR THAT ALL EXISTING UNDERGROUND FACILITIES ARE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL PUBLIC AND/OR PRIVATE UTILITIES SERVING THE AREA TO DETERMINE THE PRESENT EXTENT AND EXACT LOCATION OF THEIR FACILITIES BEFORE BEGINNING WORK.
3. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES OR STRUCTURES AT THE SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNERS OF UTILITIES OR STRUCTURES CONCERNED BEFORE STARTING WORK. THE CONTRACTOR SHALL NOTIFY THE PROPER UTILITY IMMEDIATELY UPON BREAKING OR DAMAGE TO ANY UTILITY LINE OR APPURTENANCE, OR THE INTERRUPTION OF THEIR SERVICE. HE SHALL NOTIFY THE PROPER UTILITY INVOLVED. IF EXISTING UTILITY LINES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.
4. STRIP TOPSOIL FROM ALL AREAS WHICH ARE TO BE FILLED OR CUT.
5. STOCKPILE SUFFICIENT TOPSOIL TO RESPREAD A MINIMUM OF 4-INCHES ON UNPAVED AREAS.
6. ALL AREAS TO RECIEVE FILL TO BE BENCHED.
7. PREPARE BOTTOM OF BENCH FOR FILL BY DISCING TO A DEPTH OF 6-INCHES.
8. ALL SITE GRADING FILL SHALL BE COMPACTED TO A DENSITY THAT IS NOT LESS THAN 95% STANDARD PROCTOR.
9. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL NOT DEVIATE FROM OPTIMUM BY MORE THAN 2%.
10. MAINTAIN ALL CUT AND FILL AREAS FOR SURFACE DRAINAGE AT ALL TIMES.
11. FINAL GRADES WITHIN PAVED AREAS SHALL BE WITHIN 0.1' OF PLAN GRADE, ALL OTHER AREAS TO BE WITHIN 0.2' OF PLAN GRADE.
12. A MINIMUM OF ONE FOOT OF COMPACTED COHESIVE SUBGRADE SHALL BE PROVIDED BENEATH ALL PAVEMENTS.
13. EXISTING TREES WILL BE SAVED TO THE EXTENT POSSIBLE TO ACCOMMODATE GRADING, UTILITY AND STREET CONSTRUCTION.
14. NO DRAINAGE SHALL FLOW OVER ANY SIDEWALKS.
15. PAVEMENT SHALL BE 6-INCH P.C.C.
16. 6-INCH CURB WHERE INDICATED.

UTILITY NOTES

GENERAL NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT VERSION OF THE URBAN STANDARDS SPECIFICATIONS FOR PUBLIC IMPROVEMENTS ON THE DATE OF APPROVAL AND THE CITY OF GRIMES SUPPLEMENTAL SPECIFICATIONS.
2. A PRECONSTRUCTION MEETING IS REQUIRED PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THIS MEETING. CONTACT BRANDT WILLIAMSON WITH FOX ENGINEERING (515.233.0000).
3. ALL PERMITS (IDNR, IDOT, ARMY CORP., ETC.) SHALL BE OBTAINED PRIOR TO THE START OF CONSTRUCTION.
4. THE DEVELOPER AND/OR CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE THE CITY OF GRIMES WITH RECORD DRAWINGS OF ALL IMPROVEMENTS AS PER CITY STANDARD PROCEDURES.
5. A KNOX BOX IS REQUIRED BY THE FIRE DEPARTMENT AND SHALL BE OBTAINED AT CITY HALL.
6. ALL SITE LIGHTING SHALL NOT SPILL ONTO ADJACENT PROPERTIES OR RIGHT-OF-WAYS.
7. THE PROPOSED AND EXISTING BUILDINGS WILL BE SPRINKLED.
8. WATER & SEWER SERVICE TO THE PROPOSED ADDITION WILL COME FROM THE EXISTING BUILDING.
9. SIGNAGE IS APPROVED THROUGH A SEPARATE PERMITTING PROCESS.
10. ALL EXTERIOR LIGHTING SHALL BE WALL MOUNT DOWNCAST TYPE.

WATER MAIN NOTES:

1. ALL FIRE HYDRANTS SHALL BE AMERICAN FLOW CONTROL-WATEROUS PACER WB-67-250, MUELLER SUPER CENTURION 250 (3-WAY A-423), OR CLOW MEDALLION F-2545. ALL HYDRANTS SHALL HAVE THE FOLLOWING: 6" MJ SHOE, 2-1/2" HOSE NOZZLE, 4-1/2" STEAMER NOZZLE, NST THREADS, PENTAGON OPERATING NUT, CHAIN ON CAP, OPEN LEFT, 5-1/2' BURY, AND FACTORY PAINTED RED. THE MINIMUM HYDRANT LEAD SHALL BE 2-FEET.
2. ALL HYDRANTS WILL IMMEDIATELY BE COVERED WITH A BLACK PLASTIC BAG (OR EQUIVALENT) ONCE THE HYDRANT IS INSTALLED. THE CITY OF GRIMES WILL NOTIFY THE CONTRACTOR WHEN THE BAGS CAN BE REMOVED.
3. A TRACER WIRE RECEPTACLE SHALL BE INSTALLED AT EACH HYDRANT (FLUSH MOUNT VALVCO OR APPROVED EQUAL).
4. ALL VALVES SHALL BE RESILIENT WEDGE GATE VALVES.
5. WATER SERVICE SHALL BE 1-INCH MINIMUM TYPE K COPPER.
6. PROPOSED WATER MAIN SHALL BE PRESSURE TESTED AND CHLORINATED. THE FILLING OF THE WATER MAIN SHALL BE DONE BY THE CITY OF GRIMES. THE BACTERIA AND BLOWOFF OF CHLORINE SHALL BE DONE BY THE CITY OF GRIMES. IF THE TEST DOES NOT PASS, THE CONTRACTOR WILL BE REQUIRED TO PAY FOR ALL THE WATER USED TO REPEAT THE TEST.

STORM SEWER NOTES:

1. ALL STORM SEWER IN THE ROW SHALL BE RCP, UNLESS OTHERWISE APPROVED BY THE CITY.
2. ALL FLARED END SECTIONS SHALL HAVE FOOTINGS AND APRON GRATES. THE LAST 3 PIPE SECTIONS AND THE FLARED END SECTION ON ALL CULVERTS SHALL BE TIED. ALL STORM SEWER JOINTS SHALL BE WRAPPED WITH ENGINEERING FABRIC.
3. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY FIELD TILE DAMAGED DURING CONSTRUCTION. THE TILE SHOULD BE DIRECTED TO PUBLIC STORM SEWER IF POSSIBLE. THE CONTRACTOR SHALL RECORD THE ELEVATION AND LOCATION OF ALL TILES.
4. ALL SUMP SERVICE LINES SHALL HAVE TRACER WIRE.

IOWA ONE-CALL

SITE PLAN 1150 SW BROOKSIDE CIRCLE

OWNER/APPLICANT

PRO STOCK SHOP, LLC
TODD DRAKE
1715 NW 120th STREET
CLIVE, IOWA 50325

ZONING

M-2 LIGHT INDUSTRIAL DISTRICT

LAND USE

EXISTING: WAREHOUSE
PROPOSED: WAREHOUSE

SETBACKS

FRONT - 25'
REAR - 10'
SIDE - NONE (EXCEPT WHEN ADJACENT TO ANY 'R' DISTRICT OF STREET R.O.W., THEN 25')

SITE AREAS

EX. BUILDING	3,771 S.F.	11%
PROP. BUILDING	4,900 S.F.	14%
PAVEMENT	8,640 S.F.	25%
OPEN SPACE	17,745 S.F.	50%
TOTAL	35,056 S.F.	100%

OPEN SPACE

REQUIRED: 10% OF THE GROSS LAND AREA = 3,506 S.F.
PROPOSED: 17,745 S.F. (50%)

LEGAL DESCRIPTION

LOTS 13 AND 14 IN GRIMES INDUSTRIAL PARK PLAT 1, AN OFFICIAL PLAT, NOW INCLUDED IN AND FORMING A PART OF THE CITY OF GRIMES, POLK COUNTY, IOWA.

SUBJECT TO EASEMENTS, RESTRICTIONS AND COVENANT'S OF RECORD.

PARKING REQUIREMENTS

REQUIRED: (1) SPACE FOR EACH (2) EMPLOYEES, BUT IN NO CASE LESS THAN (1) SPACE FOR EACH (2,000) SQUARE FEET OF GROSS FLOOR AREA AND (1) HANDICAP STALL.

PROPOSED: 7 SPACES (INCLUDING 1 HANDICAP SPACE)

CONSTRUCTION SCHEDULE

ERECT BUILDING	FALL 2016
PAVING	FALL 2016
GRADING/LANDSCAPING	FALL 2016
FINAL INSPECTION	FALL 2016

LEGEND

EXISTING/PROPOSED
- PLAT BOUNDARY
- W — WATER MAIN & SIZE
- SAN — SANITARY SEWER & SIZE
- ST — STORM SEWER & SIZE
- UGE — UNDERGROUND ELECTRIC CABLE
- UGT — UNDERGROUND TELEPHONE CABLE
- CTV — UNDERGROUND CABLE TV
- G — GAS MAIN & SIZE
- MANHOLE
- INTAKE
- HYDRANT
- POWER POLE/LIGHT POLE
- UTILITY BOX/TELEPHONE RISER
- EXISTING CONTOURS
- PROPOSED CONTOURS
- SILT FENCE OR APPROVED FILTRATION SOCK
- TREES

CERTIFICATION

LICENSED PROFESSIONAL ENGINEER KEVEN J. CRAWFORD 13156 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.

KEVEN J. CRAWFORD, P.E. IOWA LICENSE NO. 13156
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2016
PAGES OR SHEETS COVERED BY THIS SEAL:
Sheets 1-1

COOPER CRAWFORD
& ASSOCIATES, L.L.C.
CIVIL ENGINEERS
475 S. 50th STREET, SUITE 800, WEST DES MOINES, IOWA 50265
PHONE: (515) 224-1344 FAX: (515) 224-1345

DATE: 8-11-2016
REVISIONS: 8-22-2016
8-30-2016

SCALE: 1"=20' (0 10 20)

APPROVED: — INITIALED: — AS-BUILT: —

JOB NUMBER CC 1820

SITE PLAN
1150 SW BROOKSIDE CIRCLE

SHEET 1 OF 1

FOX engineering

Aspen Business Park | 414 South 17th Street, Suite 107 | Ames, Iowa 50010

September 1, 2016

Att: Vic Piagentini
Associated Engineering Company of Iowa
2917 Martin Luther King Jr Pkwy
Des Moines, IA 50310

James Street Villas – Preliminary Plat/Site Plan
FOX Ref No: 8630-16F.210

FOX Engineering has completed the second review for the James Street Villas – Preliminary Plat/Site Plan, dated September 1, 2016. Please address the following comments:

General Comments:

1. The fire chief has yet to comment on this site plan. His comments will be forthcoming.
2. Public Improvement Plans (Construction Plans) will be required for the sanitary sewer, storm sewer, and water main. We will also require additional information in regard to the private driveway (cross section, plan & profile, spot elevations). These plans shall be submitted prior to any construction.

Cover Sheet – Sheet 1

3. Please state the amount of Green Space Provided.

Grading & Dimension Plan – Sheet 2

4. Please show the existing 100-yr Floodplain. Please show the proposed 100-yr Floodplain (FEMA Preliminary Maps).
5. A portion of the property is in the 100-yr Floodplain and will require a CLOMR and a LOMR-F (after fill). Please complete a City of Grimes Floodplain Permit (attached).
6. FOX recommends that the proposed basements adjacent, but outside of the Floodplain be required to be water proofed.
7. The proposed MPE "Minimum Protection Elevations" are 1-ft about the FEMA 100-yr Floodplain. Staff has a policy to require all MPE's be 2-ft above the 100-yr Floodplain. Please revise accordingly.
8. A Joint Application (Army Corp & IDNR Floodplains) Permit will be required since work is being completed in the Floodplain.
9. Please provide a sanitary sewer cleanout at the end of the 8-inch sanitary sewer along N. James Street. FOX may desire an alternate alignment for the sanitary sewer (we will provide a plan for consideration).
10. Please show the location of the existing 12-inch water main along the east side of N. James Street. State that the proposed 8-inch water will be directionally bored under N. James Street for this connection.
11. The Water Valve (V-1) can be eliminate since there will be a 12-inch x 8-inch tapping valve and sleeve at the connection to existing (east side of N. James Street).
12. Please provide an 8-inch water valve at the midpoint of the water main extension.
13. Please label N. James Street. Please provide a street name for the private drive. FOX recommends NW 22nd Court.
14. Please extend the 10-ft trail to the south property line. Please label the trail width (10-ft is required). Please label the existing trail width. It appears a Trail Easement may be required.
15. Please provide a standard street cross section. Please state that the street will be private and how it will be maintained.
16. Please provide a dimension for the ingress/egress easement.
17. Please provide a "LOT" or "OUTLOT" designation for the pond area. Please state on the pond will be seeding and maintained.

18. There appears to be field fence along the south line of this property. Will it be removed as part of this plat? Typically, the City desires that farm fences along newly platted subdivisions are removed.
19. Please label the location of the common mail box area.

Landscape Plan

20. Please provide a detailed landscape plan for the development. Please include landscaping around the detention pond. Please consider foundation plantings.

Stormwater Management Plan

21. FOX has yet to review the stormwater management plan.

Stormwater Pollution Prevention Plan

22. Please submit a City of Grimes Grading/Certification for Development form (attached). This is required prior to start of construction.
23. A SWPPP will be required during construction drawing review.

Lighting Plan

24. Please provide a lighting plan for the site. At a minimum wall packs will be required on the townhome units from dust to dawn.

Parkland Dedication

25. Please state how the Development plans to satisfy the Parkland Dedication Requirements.

SITE PLAN & PRELIMINARY PLAT SCHEDULE:

PLANNING & ZONING:	September 6, 2016 at 5:30 at the Grimes City Hall
COUNCIL MEETING:	September 13, 2016 at 5:30 at the Grimes City Hall

If you have any questions or concerns, please contact John Gade or Mitch Holtz at (515) 233-0000.

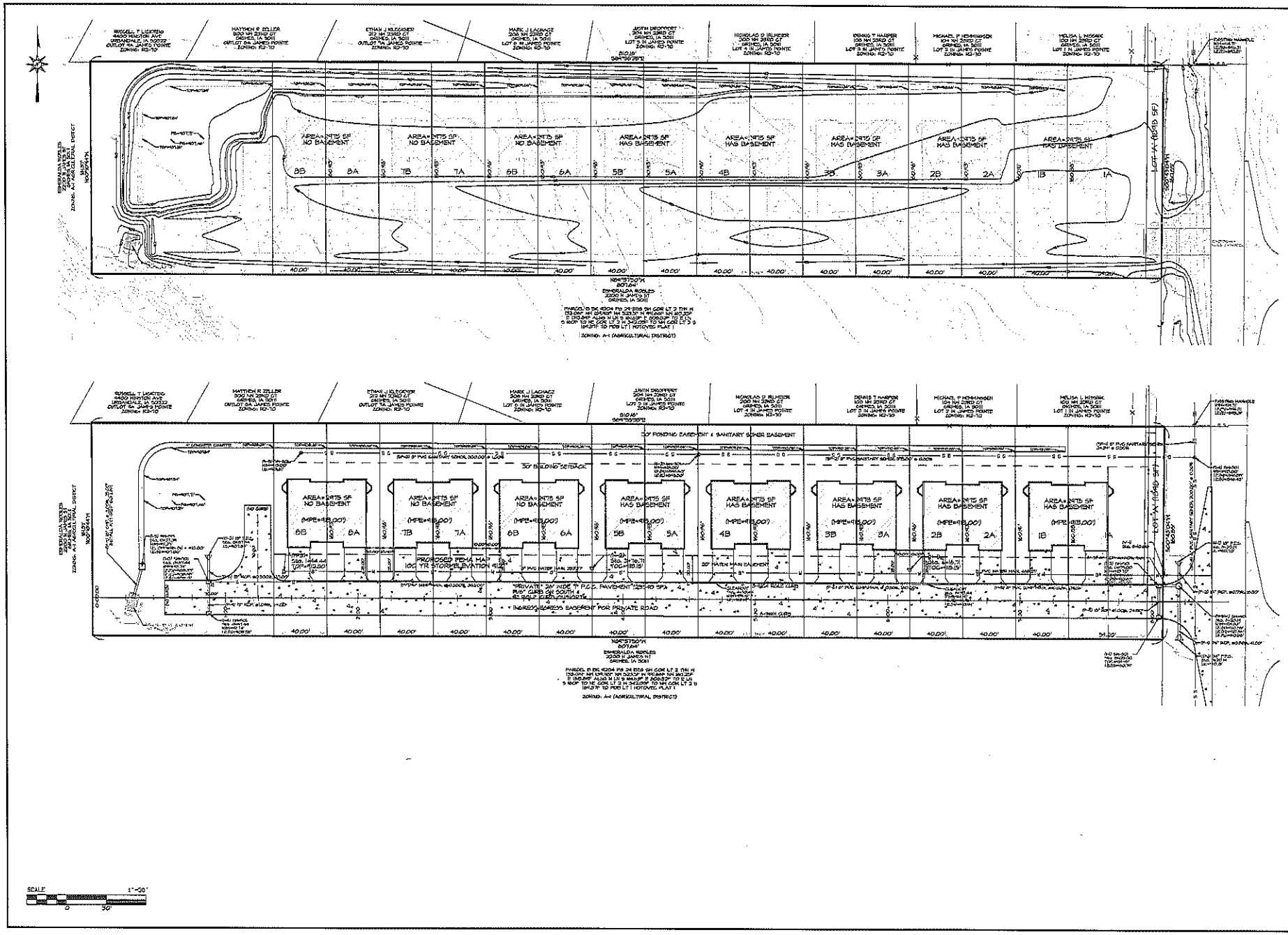
FOX ENGINEERING ASSOCIATES, INC.

John Gade, P.E.

John Gade, P.E.

Copy to: Kelley Brown, City of Grimes
Scott Clyce, City of Grimes

Attachments: Grading Certification
Floodplain Permit



ASSOCIATED ENGINEERING COMPANY OF IOWA

James Street Villas

GRADING PLAN & DIMENSIONING PLAN

DATE APPROVED

DATE PRINTED
TUE Sep 1, 2015

DEC 9, 2008

SHEET 2 OF 2

DISTRICT/PARCEL

911/00505-744-101

LEGAL DESCRIPTION

PARCEL A BK 9204 PG 29 BEG 929.57F N OF SE COR LT 2 THN W 808.52F N 161.63F TO N LN E 808.52F TO NE COR S 161.63F TO POB LT 1 HOTOVEC PLAT 1

DEVELOPER

KIRK A HESSE
1351 NW 72ND AVE
ANKENY, IA 50023
PHONE: (515) 205-7777

ZONING

R-2 (SINGLE AND TWO FAMILY DISTRICT)

SETBACK REQUIREMENTS

FRONT YARD	30 FEET
FROM EDGE OF PAVEMENT	25 FEET
REAR YARD	25 FEET
SIDE YARD	
1-1/2 STORIES	7/14
2-3 STORIES	10/20

GREEN SPACE REQUIRED 40%

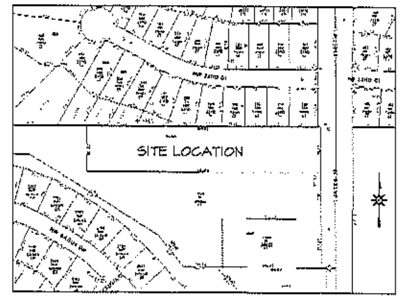
DRAWING INDEX

1. COVER SHEET
2. GRADING PLAN
2. DIMENSIONING PLAN

PRELIMINARY PLAT/SITE PLAN

James Street Villas

VICINITY SKETCH



STANDARD NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT O.S.H.A. CODES AND STANDARDS. NOTHING INDICATED ON THESE PLANS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE APPROPRIATE SAFETY REGULATIONS.
2. ALL CONSTRUCTION PROCEDURES AND MATERIALS TO MEET OR EXCEED MINIMUM REQUIREMENTS AS PER SUDAS.
3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY AND ALL REQUIRED PERMITS FOR PERFORMING THE WORK.
4. THE URBAN DESIGN STANDARDS FOR PUBLIC IMPROVEMENTS SHALL APPLY TO GRADING, EROSION CONTROL AND ASSOCIATED WORK FOR THE PROJECT.
5. THE OWNER/DEVELOPER IS RESPONSIBLE FOR MEETING ALL STATE OF IOWA DEPARTMENT OF NATURAL RESOURCES, APPLICABLE CITY, URBAN DESIGN STANDARDS FOR PUBLIC IMPROVEMENTS, OR ANY OTHER CODES, REGULATIONS, OR RESTRICTIONS SET FORTH BY ANY AND ALL GOVERNING AGENCIES.
6. NOTIFY OWNER, ENGINEER, AND CITY AT LEAST 48 HOURS PRIOR TO BEGINNING WORK.
7. ALL PROPOSED CONTOURS AND SPOT ELEVATION SHOWN ARE FINISHED GRADES AND/OR TOP OF PAVING SLAB, UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR SHALL FURNISH AND PLACE ALL NECESSARY SIGNS AND BARRICADES DURING CONSTRUCTION IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
9. POST DEVELOPMENT RUNOFF SHALL NOT ADVERSELY AFFECT DOWNSTREAM DRAINAGE FACILITIES OR PROPERTY OWNERS.
10. ANY DAMAGE DONE TO THE EXISTING FENCES, YARDS OR OTHER STRUCTURES OUTSIDE THE CONSTRUCTION LIMITS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
11. GRADING
    A. OWNER/DEVELOPER IS RESPONSIBLE FOR ALL COMPACTION, DENSITY OR ANY OTHER TEST.
    B. ALL DEBRIS SPILLED ON THE STREETS OR ADJACENT PROPERTY SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
    C. ALL PROPOSED CONTOURS AND SPOT ELEVATION SHOWN ARE FINISHED GRADES AND/OR TOP OF PAVING SLAB, UNLESS OTHERWISE NOTED.
12. EROSION CONTROL
    A. IF MORE THAN ONE ACRE OF SOIL IS DISTURBED COMPLY WITH THE STORM WATER POLLUTION PREVENTION PLAN.
    B. EXCEPT AS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED ON ALL DISTURBED AREAS NO LATER THAN THE 14TH DAY AFTER NO CONSTRUCTION ACTIVITY HAS HAS TAKEN PLACE AND ON AREAS WHERE CONSTRUCTION ACTIVITY WILL NOT OCCUR FOR A PERIOD OF ANOTHER 21 DAYS.
    C. THE EROSION CONTROL MEASURES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH SIGNIFICANT STORM, TO LOCATE DAMAGE AND CONDUCT MAINTENANCE OPERATIONS.
    D. THE CONTRACTOR SHALL PLACE SILT FENCE AROUND ALL STORM SEWER INLET LOCATIONS, STEEP SLOPES OR AS DIRECTED BY THE CITY.

SANITARY SEWER NOTES

1. All Sanitary sewer services are to be 4-inch and be located at the center of lots (see Urban Standard Specifications for Public Improvements, Division 10, Figure 10000.4). Sanitary sewer services are to be extended to 10-feet inside property line. The contractor shall mark all sanitary sewer services and manholes with metal TEE posts. The top 1-foot of the posts marking services is to be painted green and tape brought up to the surface. Paint posts marking manholes green from top to grade.
2. Sanitary manholes are to be furnished with steps.
3. Sanitary Manhole castings may be adjusted to grade with use of either bituminous joint compound or non-shrink cement grout.
4. Sanitary Manholes are to have a minimum of two (2)-adjusting rings (2-inch thickness each, minimum); total adjustment stack height is to be 12-inches maximum. In some cases total stack height may exceed 12-inches, with 16-inches as an absolute maximum.
5. Video inspection of all new sanitary sewers is required. Each line section is to be its own video and be in Nincan v. 8 or newer, MPEG or WMV formats. If format is other than Nincan v. 8 or newer, demonstrate prior to performing video-inspection, that files can be converted and merged into Nincan v. 8 or newer and that format is acceptable to the City of Adel. Additionally, video-inspection is to meet all of the requirements specified in SUDAS, Division 4, Section 4000.
6. Sanitary manhole castings shall be Type A unless otherwise noted.
7. Chimney seals are required for all sanitary sewer manholes.
8. Sanitary manhole castings and adjusting rings are to be bolted to top of manhole using four (4) stainless steel or hot dipped galvanized -inch threaded rods. For manholes that do not have threaded inserts cast in them, Drill in non-corrosive, threaded expansion type anchors.

WATER MAIN NOTES

1. All water main shall have a minimum cover of 5-1/2-feet over top of pipe. All valves and curb boxes are to be marked with metal TEE posts. Top 1-foot of posts marking services is to be painted blue. Posts marking valves are to be painted blue from top to grade.
2. Services shall be 1-inch copper and be installed as per Section 10, Figure 10000.4 of the Urban Standard Specifications for Public Improvements. Water services are to terminate at curb boxes that are to be located six (6)-feet inside the R.O.W.
3. Contractor shall verify that the Hydrants and curb boxes will not be located in proposed sidewalks.
4. All PVC water mains shall be traced. Tracer wire is to be brought up outside of valve boxes and fed inside through slot cut in valve box just below top. Tracer wire at fire hydrants is to be terminated at post-mounted boxes.
5. All fire hydrants are to be furnished with a factory coat of red paint.
6. All fire hydrants are to be furnished with one pumper nozzle outlet with a 5-inch Storz-type, quick-connect coupling and cap. The caps for the 5-inch Storz couplings shall have external wrenching lugs and a chain attached to the fire hydrant shall retain the cap. The 5-inch Storz nozzles are to be factory installed and integral with the hydrant. Storz-type nozzles and caps shall comply with the dimensional requirements of NFPA 1963 Standard for Fire Hose Connections, specifically chapter 4, non-threaded connections.
7. Use joint deflection in lieu of adding fittings, when possible, when making grade & alignment changes.

STORM SEWER NOTES

1. The contractor shall mark all storm sewer service ends and manholes with metal TEE posts. For services, bring tracer wire to surface. The top 1-foot of the posts marking services is to be painted purple. Paint posts marking storm manholes purple from top to grade.
2. All storm sewer services are to be 2-inch and have a minimum depth of 4-feet. Storm sewer services are to be extended to 10-feet inside property line.
3. Storm Manholes are to be furnished without steps.
4. Storm Manholes are to have a minimum of two (2)-adjusting rings (2-inch thickness each, minimum); total adjustment stack height is to be 12-inches maximum. In some cases total stack height may exceed 12-inches, with 16-inches as an absolute maximum.
5. Storm Manhole castings are not to be bolted to the manhole.
6. Storm Manhole castings may be adjusted to grade with use of either bituminous joint compound or non-shrink cement grout.
7. All PVC storm sewer is to be installed with tracer wire. Tracer wire is to be brought up and terminated above grade at service ends and at connections to storm intakes and manholes.
8. All RCP storm sewer, which has PVC services connected to it, shall be installed with tracer wire. Tracer wire is to be terminated at connections to storm intakes and manholes.
9. All flared end sections are to be furnished with footings and apron guards.
10. Castings for storm drains should have the following imprinted in them: "DO NOT DUMP- DRAINS DIRECTLY TO STREAM" or similar wording.

GENERAL NOTES

a. For Public Utility Easements, electric, cable, telephone, and other similar utilities must be placed in the rear yard. Only the gas main may be placed in the front yard.
b. All utility companies must submit a plan to the City requesting approval of the placement of utilities. Approval is required even if placement is not in the city right-of-way.
c. Video inspection of all new sanitary sewers is required as outlined in the Urban Standard Specifications, Division 4, Section 4040, Part 3.
d. All work performed must conform to the current version of the Urban Design Standards for Public Improvements and the Urban Standard Specifications.
e. Place silt fencing at all lower areas of disturbed ground and double silt fencing at all intakes.
f. The Project Engineer is responsible for layout of utility easements. Staking shall be done with lath and ribbon. Stakes shall be no further than 50' apart.
g. The engineer/developer is responsible for submitting a Pollution Prevention Plan as part of the grading plan. In addition, the City will not issue any construction permits or allow any ground disturbance until the Iowa Department of Natural Resources has issued a storm water discharge permit for the project and a copy is received by the City.
h. If a NPDES permit is required by the Iowa Department of Natural Resources, a COSESCO permit is also required by the City. The permit must be completed and approved prior to any ground disturbance.
i. Coordinate the location of cluster boxes with the Post Office and City. Submit copy of preliminary plat to the Post Office for review and then submit plan to the City for approval. Cluster boxes shall be accessible from the sidewalk, not the street curb.
j. All cluster-style mailboxes required to serve the plat shall be installed before the final plat is approved by the City Council. In the case where the final plat is approved with a performance bond, that bond shall cover the mailboxes and the installation shall occur prior to any occupancy permit being issued for a home in the plat. Mailboxes shall be installed prior to any occupancy permit being issued for any other building requiring cluster style mailboxes.
k. The style, size, and manufacturer of the mailbox shall be approved by the United States Postal Service. The United States Postal Service shall provide specifications for the installation of the required concrete pad. upon completion of work.
l. The owner/developer is responsible for all cost related to inspections, testing, review fees, attorney fees, DNR fees, & all cost related to the construction of the development.
m. Install NO PARKING signs on both sides of private driveway.

PCC PAVING NOTES

1. PCC paving is to be performed in accordance with the provisions of SUDAS, Division 7, Section 7010 with the following additions:
2. After September 30th, use a mixture of white pigmented curing compound and linseed oil for curing PCC Pavement.
3. Provide full depth saw cut where new pavement matches existing pavement, if needed. The City of Adel will determine the need and location of the saw cut. A minimum of one panel of existing pavement may need to be removed and replaced at no cost to the City of Adel.
4. Sections of curb & gutter and pavement panels that are damaged during construction will be removed and replaced in their entirety. No partial panels or sections will be allowed.
5. All longitudinal and transverse joints in new pavement are to be sawed to a depth of T/3 , -inch.
6. Contractor is responsible for constructing curb drops in correct locations for pedestrian ramps for sidewalks and trails. Pedestrian ramps and sidewalks are to be constructed to meet all ADA (Americans with Disabilities Act) regulations or they will be replaced at contractor's expense.
7. All pavement median sections that are to receive plantings (turf, trees, etc.) will be over excavated after paving is complete to a depth of 3 feet below top of curb at a distance of 2 feet in from the back of curb and filled to within 6 inches of the top of curb with clean fill dirt. The top 6 inches from back of curb to back of curb shall be clean, black top soil.

REVISIONS

PROJECT MANAGER: Victor Pagenta

AEC ASSOCIATED ENGINEERING COMPANY OF IOWA
2317 Martin Luther King Jr. Pkwy Des Moines, IA 50310
Phone: (515) 255-3156 Fax: (515) 255-3157

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.

SIGNED: ________ DATE: ________
GREGORY L. WOOD P.L.S. 13328

SIGNED: ________ DATE: ________
NICHOLAUS COFFELT P.E. 18073

James Street Villas

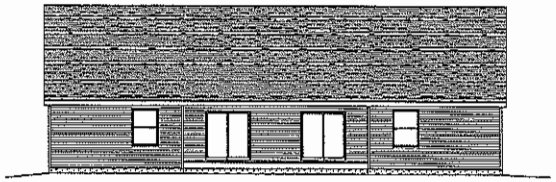
TITLE SHEET/COVER SHEET

DATE PRINTED Thu Sep 1, 2016

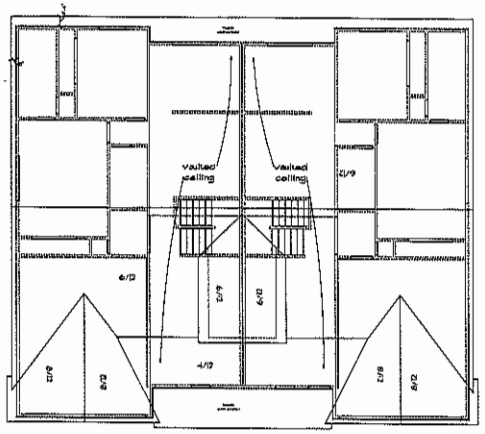
AEC # 206592

SHEET 1 OF 2

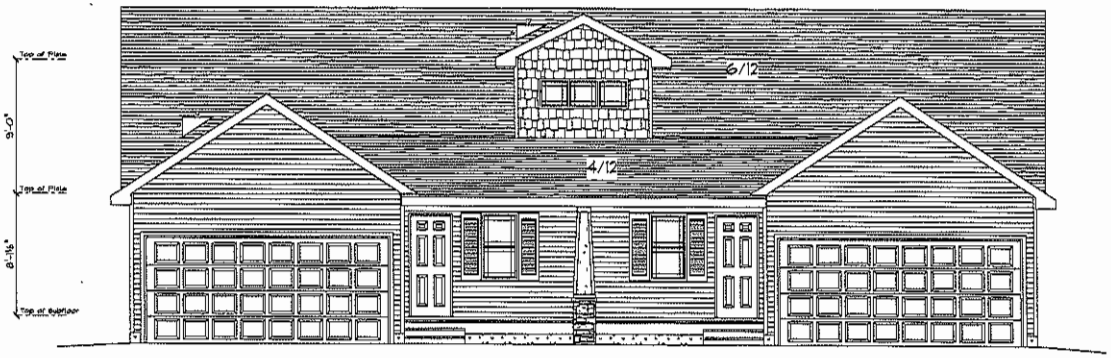
LEFT ELEVATION



REAR ELEVATION



BIRD'S EYE PLAN



FRONT ELEVATION

SCALE	1/4" = 1'
DESIGN BY	TYP
APPROVED	
DATE	10-9-2015
REVISED	
PLAN #	115106
SHEET	1 of 3

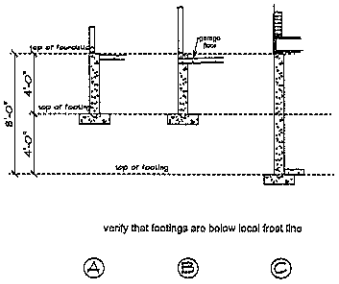
YP DESIGN & DRAFTING, LLC
ASSUMES NO RESPONSIBILITY FOR ALTERATIONS MADE TO THESE PLANS BY OTHERS WITHOUT THE SPECIFIC WRITTEN CONSENT OF YP DESIGN & DRAFTING, LLC. THESE PLANS ARE DESIGNED AS STANDALONE PLANS, NO ENGINEERING HAS BEEN DONE TO ADAPT THEM TO ANY SPECIFIC SITE OR APPLICABLE BUILDING CODES. PLANS DEPICT STANDARD CONSTRUCTION METHODS.

YP Design & Drafting, LLC
515-249-1134

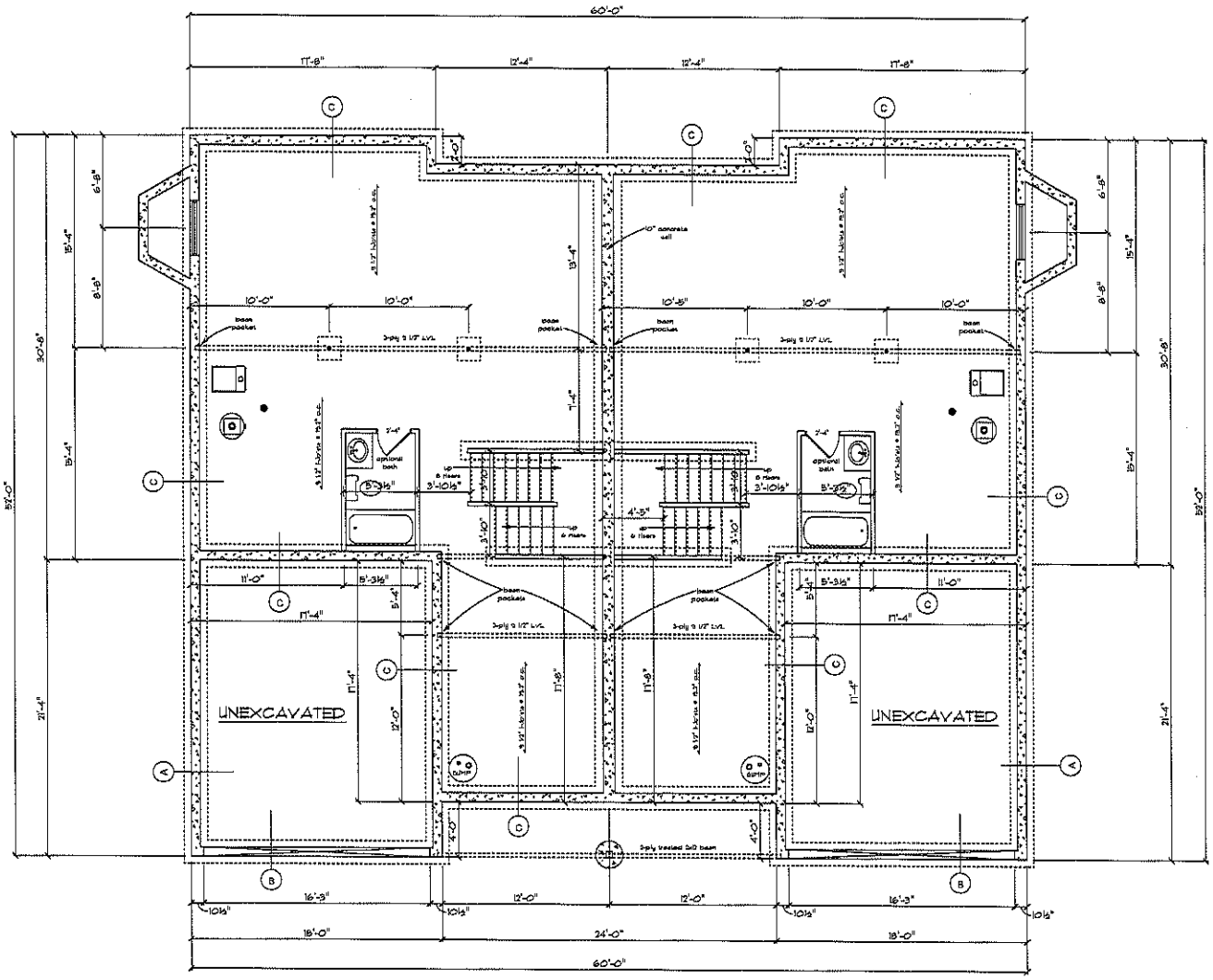
Advantage Homes
Twin Homes

General Notes

- -Verify local frost depth requirements
- -All footings designed for 2000 PSF soil bearing capacity
- -8" poured concrete foundation walls w/ 16"x8" concrete footings w/ (2) #4 rerods continuous
- -2-2x12 headers over all exterior openings unless noted otherwise
- -truss manufacturer to size members and set spacing of all floor and roof trusses (max spacing 24" o.c.)
- -bedroom windows and basement egress windows to meet or exceed egress requirements
- -verify all rough opening sizes
- -place smoke detectors as required by local building codes
- -follow manufacturer's instructions for installation of all components



FOUNDATION SECTIONS



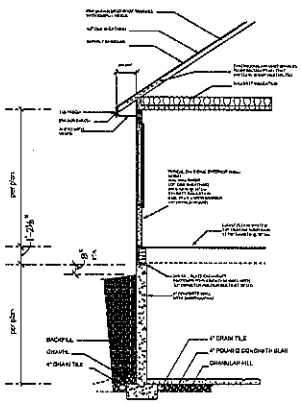
FOUNDATION PLAN

SCALE	1/4" = 1'	DATE	10-8-2015	PLAN #	185/86
DRAWN BY	TYP	REVISED		SHEET	2 of 3
APPROVED					

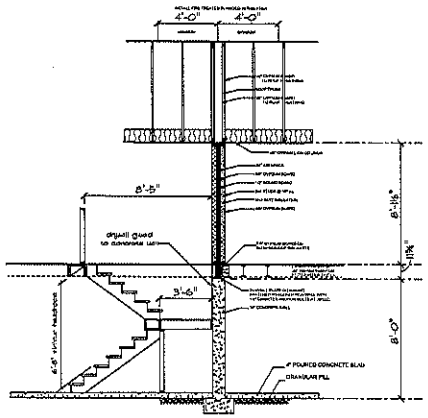
VP DESIGN & DRAFTING, LLC
DISCLAIMER: VP DESIGN & DRAFTING, LLC HAS NO RESPONSIBILITY FOR STRUCTURAL DESIGN, ENGINEERING, SITE PLANNING, ZONING, ARCHITECTURAL DESIGN, ELECTRICAL, PLUMBING, HEATING, AIR CONDITIONING, ETC. THESE PLANS ARE EXPERIMENTAL PRELIMINARY & ARE FOR SCREENING PURPOSES ONLY. PLANS MUST BE REVIEWED BY LICENSED ARCHITECT OR ENGINEER FOR COMPLIANCE WITH APPLICABLE BUILDING CODES, PLANNING & ZONING REGULATIONS, & OTHER LAWS & REGULATIONS.

VP Design & Drafting, LLC
515-249-1134

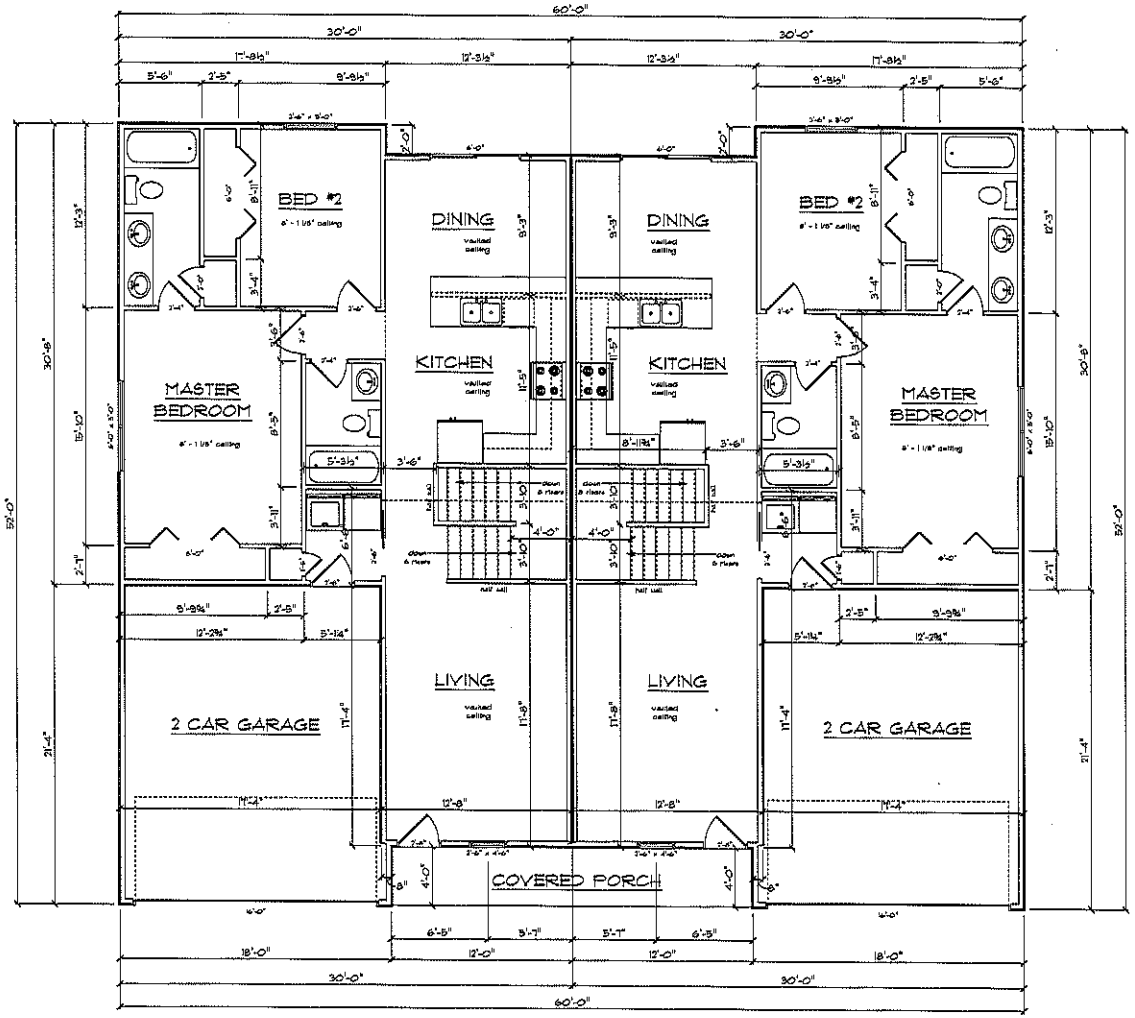
Advantage Homes
Twin Homes



Wall Section



Common Wall Section



MAIN FLOOR PLAN

1115 SF
each side

Note: see separate engineering for garage wall bracing

PLAN #	DATE	SCALE	REVISION	REVISED
115198	10-6-2015	1/4" = 1'		
S-101				
3 of 3				

YP DESIGN & DRAFTING, LLC
YP Design & Drafting, LLC
515-249-1134

Advantage Homes
Twin Homes

FOX engineering

Aspen Business Park | 414 South 17th Street, Suite 107 | Ames, Iowa 50010

August 31, 2016

Att: Erin Griffin, PLS
Snyder & Associates, Inc.
2727 SW Snyder Blvd
Ankeny, IA 50023

Brookside Commercial Preliminary Plat 1
FOX Ref No: 8630-16G.211

FOX Engineering and City Staff have completed the first review for the Brookside Commercial Preliminary Plat dated August 23, 2106. Please address the following comments:

1. Please "fade" the proposed Mercy Clinic Site Plan improvements. The bold items can be the public sanitary sewer and water main improvements.
2. Please label if the easements will be public or private. Please show the storm sewer or surface water flowage easement to the detention pond. It is assumed that the Sanitary Sewer and Water Main will be public and the remainder of easements will be private.
3. Please note that a Storm Water Post Construction Easement will be necessary for the shared detention pond. This will be submitted with the Final Plat. Discussion is necessary in regard to the ownership and maintenance of this BMP since it benefits Lot 1 and Outlot X.
4. Please provide lot dimensions around Lot 1.
5. Please show the existing private driveway in the adjacent Kennybrook Townhome development along the south east property line. Please state that a future roadway connection is required at this point on Outlot X.
6. Please label the east property line 25-ft setback as "REAR SETBACK" versus "FRONT".
7. Please label the south property line 25-ft setback as "SIDEYARD SETBACK" versus "FRONT".
8. Please show a 10-ft trail along SW Brookside Drive (entire east property line) of both Lot 1 and Outlot X. Please label the width and location of the existing trail connection to the south.
9. Please label the existing trail along the north property line (HWY 44).
10. Please show and label the FEMA Floodway and FEMA Floodplain. Please reference the Preliminary FEMA Maps. FOX recommends to show both the Effective and Proposed FEMA lines.
11. Please clearly label and show the existing stream along the east property line.
12. The Code requires Developments along stream channels make adequate provisions for straightening, widening or otherwise improving the drainage channel. Please provide a surface water flowage easement over this stream. Please show the adjacent (off-property) SWFE. Discussion is necessary about stabilization of this stream, access for maintenance, removal of trees, etc. that is required to plat this parcel.

PRELIMINARY PLAT SUBMITTAL SCHEDULE:

PLANNING & ZONING: September 6, 2016 at 5:30 at the Grimes City Hall

COUNCIL MEETING: September 13, 2016 at 5:30 at the Grimes City Hall

If you have any questions or concerns, please contact John Gade or Mitch Holtz at (515) 233-0000.

FOX ENGINEERING ASSOCIATES, INC.

John Gade, P.E.

John Gade, P.E.

Copy to: Kelley Brown, City of Grimes
Scott Clyce, City of Grimes

FOX engineering

Aspen Business Park | 414 South 17th Street, Suite 107 | Ames, Iowa 50010

September 1, 2016

Att: Keven Crawford
Cooper Crawford & Associates LLC
475 S 50th Street, Suite 800
West Des Moines, IA 50265

1150 SW Brookside Circle – Site Plan
FOX Ref No: 8630-04F.280

FOX Engineering has completed the third review for the 1150 SW Brookside Circle Site Plan dated August 30, 2016. Please address the following comments:

1. No signage is being proposed.
2. The original landscaping plan had 10 dogwoods shrubs along the north curb line. Discussion is necessary with P&Z if these shrubs can be removed due to the proposed 3-ft berm.

Stormwater Management Plan

3. FOX has reviewed the submitted storm water report and have no comments. This lot is allowed to discharge without stormwater detention since the regional detention facility was sized for the runoff from this lot.

Stormwater Pollution Prevention Plan

4. A SWPPP is not requires since they are disturbing less than 1 acre.

Post –Construction Stormwater Maintenance Agreement

5. A Post Construction Agreement is not required.

SITE PLAN SCHEDULE:

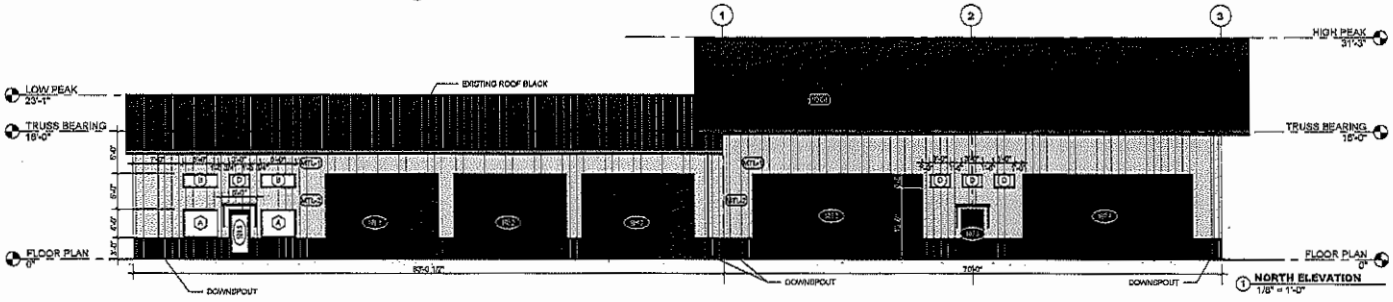
PLANNING & ZONING:	September 6, 2016 at 5:30 at the Grimes City Hall
COUNCIL MEETING:	September 13, 2016 at 5:30 at the Grimes City Hall

If you have any questions or concerns, please contact John Gade or myself at (515) 233-0000.

FOX ENGINEERING ASSOCIATES, INC.

Mitch Holtz, P.E.

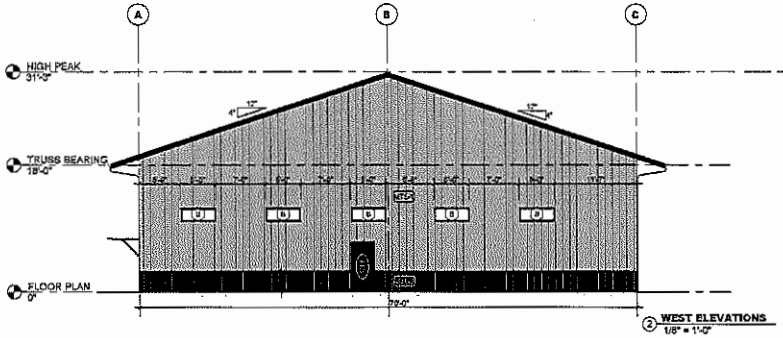
Copy to: Kelley Brown, City of Grimes
Scott Clyce, City of Grimes



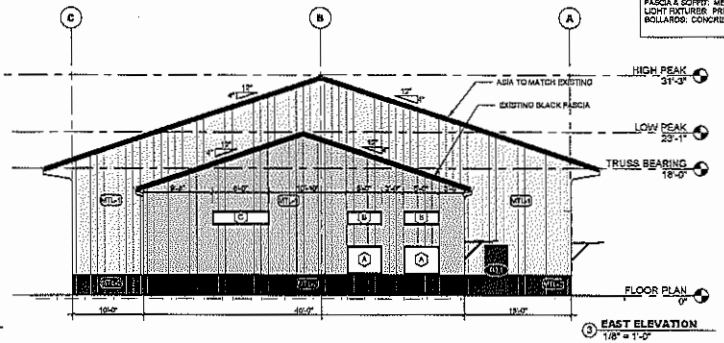
1 NORTH ELEVATION
1/8" = 1'-0"

EXTERIOR MATERIAL LEGEND	
MAT. LABEL	MATERIAL DISCRIPTION MATERIAL INFORMATION
MTL-1	METAL PANEL: VERTICALLY W/ EXPOSED FASTENERS; COLOR: LIGHT GRAY OR SIM.
MTL-2	METAL PANEL: VERTICALLY W/ EXPOSED FASTENERS; COLOR: BLACK OR SIM.
ROOF	METAL PANEL: STANDING SEAM EXPOSED FASTENERS; COLOR: BLACK

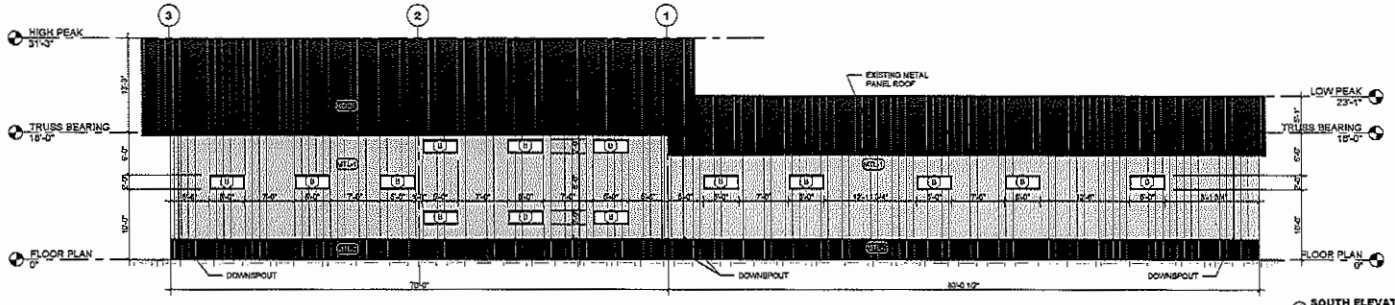
HL METAL MAN DOORS & FRAMES: PAINTED TO BLACK.
OVERHEAD PANEL DOORS: METAL PRE-FINISHED WHITE PAINTED BLACK.
GUTTERS & DOWNSPOUTS: METAL PREFINISHED BLACK.
FASCIA & SOFFIT: METAL PREFINISHED BLACK.
LIGHT FIXTURES: PRE-FINISHED BLACK HOUSINGS.
BOLLARDS: CONCRETE FILLED STEEL BOLLARDS PAINTED SAFETY YELLOW.



2 WEST ELEVATIONS
1/8" = 1'-0"



3 EAST ELEVATION
1/8" = 1'-0"



4 SOUTH ELEVATIONS
1/8" = 1'-0"

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DRAKE HOMES SHOP

1150 SW BROOKSIDE CIR.

GRIMES, IA

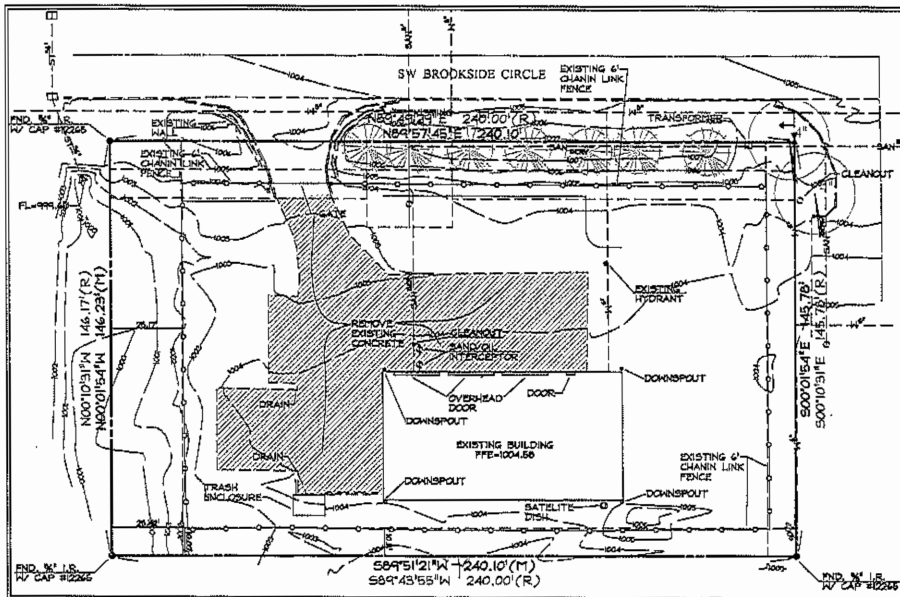
AUGUST 31, 2016

1/8" = 1'-0" @ 24"x36" Sheet
12"x18" SHEET (HALF SIZE)
- SCALE IS ONE-HALF OF WHAT IS NOTED
OTHER SHEET SIZES NOT TO SCALE

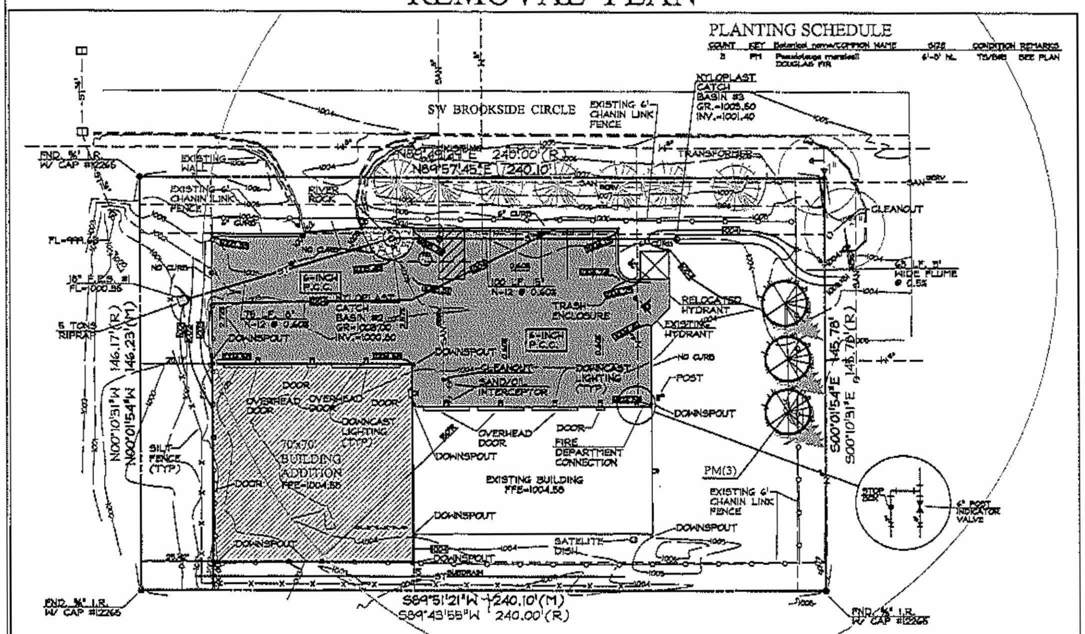
JOB NO.: 15043

simonson

simonson & associates architects llc
1217 ingersoll avenue suite 117 des moines ia 50309
ph: 515 449 5626 www.simonsonassoc.com



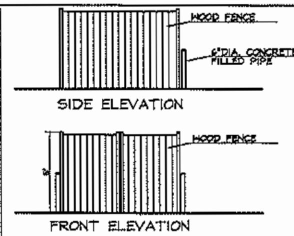
REMOVAL PLAN



PLANTING SCHEDULE

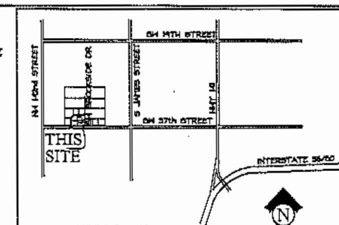
COUNT	KEY	Botanical name/COMMON NAME	SIZE	CONDITION	REMARKS
3	PM	Pseudotsuga menziesii DOUGLAS FIR	6'-8' ht.	TB/BB	SEE PLAN

PROPOSED PLAN



TRASH ENCLOSURE

NO SCALE



VICINITY SKETCH

SCALE: 1"=2500'

EROSION & POLLUTION CONTROL NOTES

1. THE SUBCONTRACTOR RESPONSIBLE FOR EROSION AND POLLUTION CONTROL SHALL CARRY OUT THE MEASURES DETAILED ON THIS PLAN.
2. CONTROLS MUST BE IN GOOD OPERATING CONDITION UNTIL THE CONSTRUCTION ACTIVITY IS COMPLETE AND FINAL STABILIZATION HAS BEEN REACHED.
3. THE SUBCONTRACTOR SHALL INSPECT THE SITE AT MINIMUM ONCE EVERY 7 DAYS AND WITHIN 24 HOURS OF THE END OF A 1/2 INCH OR GREATER RAINFALL. ALL DISTURBED AREAS OF THE SITE, AREAS OF MATERIAL STORAGE, LOCATIONS WHERE VEHICLES ENTER/EXIT THE SITE. ALL OF THE EROSION AND SEDIMENT CONTROLS THAT ARE IDENTIFIED AS PART OF THIS PLAN AND ACCESSIBLE DISCHARGE LOCATIONS MUST BE INSPECTED.
4. THE SUBCONTRACTOR IS TO TAKE NECESSARY ACTIONS TO CORRECT DEFICIENCIES FOUND DURING INSPECTIONS AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN 7 DAYS AFTER THE INSPECTION IN WHICH THE DEFICIENCY WAS FOUND.
5. THE SUBCONTRACTOR SHALL KEEP LOG AND PREPARE WEEKLY REPORTS DETAILING THE INSPECTIONS AND MEASURES TAKEN TO CORRECT ANY AND ALL DEFICIENCIES FOUND IN THE EROSION AND POLLUTION CONTROL MEASURES. THE REPORTS SHALL CONFORM TO THE STANDARDS SET BY THE IOWA DEPARTMENT OF NATURAL RESOURCES. COPIES OF THESE REPORTS SHALL BE FORWARDED TO THE DEVELOPER AND TO COOPER CRAWFORD & ASSOCIATES, L.L.C.
6. AFTER INITIAL GRADING PRIOR TO UTILITY CONSTRUCTION – ALL DISTURBED AREAS OUTSIDE OF THE PROPOSED R.O.W.'S ARE TO HAVE TEMPORARY SEEDING AND MULCHING. CONTRACTOR AND SUBS ARE TO TRY TO MINIMIZE DISTURBANCE TO THESE SEEDED AREAS THROUGH THE USE OF SPECIFIC ACCESS ROUTES WITHIN THE SITE.
7. DURING CONSTRUCTION, IF IT BECOMES EVIDENT THAT A DISTURBED AREA WILL NOT BE DISTURBED FOR 21 DAYS, IT SHALL BE SEEDED BY DAY.
8. PERMANENT SEEDING TO BE DONE IMMEDIATELY AFTER FINAL GRADING.
9. ANY FAILED AREAS OF SEEDING/MULCHING SHALL BE REAPPLIED.
10. ANY SOIL OR SPILL WASHED, TRACKED OR DROPPED ONTO ADJOINING RIGHT-OF-WAYS AND PROPERTY WILL BE CLEANED UP BY THE OWNER/CONTRACTOR WITHIN 24 HOURS.
11. SILT FENCING TO BE INSPECTED ONCE A WEEK AND AFTER EACH RAINSTORM, LOOK FOR UNDERCUTTING AND FAILURES IN FABRIC. REPLACE/REPAIR AS NECESSARY.
12. ADDITIONAL SILT FENCING (TO THAT SHOWN ON THIS PLAN) MAY BE REQUIRED BY THE CITY OF GRIMES IN AREAS WHERE EROSION IS EVIDENT.
13. SILT FENCING TO BE CLEANED UP WHEN THEY HAVE LOST 50% OF THEIR CAPACITY.
14. ALL INTAKES SHALL HAVE SILT FENCING PRIOR TO PAVING AND INLET FILTERS AFTER PAVING. THESE FILTERS REMAIN IN PLACE UNTIL THE SITE HAS A PERMANENT PERENNIAL GROUND COVER.
15. ALL INTAKES SHALL BE COVERED DURING CONSTRUCTION TO PREVENT SEDIMENTATION DEPOSITS WITHIN THE STORM SEWER.
16. IN THE EVENT THAT SEEDING/MULCHING DOES NOT OCCUR PRIOR TO WINTER, ALL DISTURBED AREAS WILL BE MULCHED.
17. NO BORROW/SPOILS SITES ARE ANTICIPATED.

GRADING NOTES

1. ALL DIMENSIONS ARE TO BACK OF CURB, OUTSIDE OF BUILDING WALL, AND TO PROPERTY LINES.
2. THE LOCATIONS AND DIMENSIONS SHOWN ON THE PLANS FOR EXISTING FACILITIES ARE IN ACCORDANCE WITH AVAILABLE INFORMATION WITHOUT UNCOVERING AND MEASURING. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THIS INFORMATION OR THAT ALL EXISTING UNDERGROUND FACILITIES ARE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL PUBLIC AND/OR PRIVATE UTILITIES SERVING THE AREA TO DETERMINE THE PRESENT EXTENT AND EXACT LOCATION OF THEIR FACILITIES BEFORE BEGINNING WORK.
3. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES OR STRUCTURES AT THE SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNERS OF UTILITIES OR STRUCTURES CONCERNED BEFORE STARTING WORK. THE CONTRACTOR SHALL NOTIFY THE PROPER UTILITY IMMEDIATELY UPON BREAKING OR DAMAGE TO ANY UTILITY LINE OR APPURTENANCE, OR THE INTERRUPTION OF THEIR SERVICE. HE SHALL NOTIFY THE PROPER UTILITY INVOLVED. IF EXISTING UTILITY LINES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.
4. STRIP TOPSOIL FROM ALL AREAS WHICH ARE TO BE FILLED OR CUT.
5. STOCKPILE SUFFICIENT TOPSOIL TO RESPREAD A MINIMUM OF 4-INCHES ON UNPAVED AREAS.
6. ALL AREAS TO RECIEVE FILL TO BE BENCHED.
7. PREPARE BOTTOM OF BENCH FOR FILL BY DISCING TO A DEPTH OF 6-INCHES.
8. ALL SITE GRADING FILL SHALL BE COMPACTED TO A DENSITY THAT IS NOT LESS THAN 95% STANDARD PROCTOR.
9. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL NOT DEVIATE FROM OPTIMUM BY MORE THAN 2%.
10. MAINTAIN ALL CUT AND FILL AREAS FOR SURFACE DRAINAGE AT ALL TIMES.
11. FINAL GRADES WITHIN PAVED AREAS SHALL BE WITHIN 0.1' OF PLAN GRADE, ALL OTHER AREAS TO BE WITHIN 0.2' OF PLAN GRADE.
12. A MINIMUM OF ONE FOOT OF COMPACTED COHESIVE SUBGRADE SHALL BE PROVIDED BENEATH ALL PAVEMENTS.
13. EXISTING TREES WILL BE SAVED TO THE EXTENT POSSIBLE TO ACCOMMODATE GRADING, UTILITY AND STREET CONSTRUCTION.
14. NO DRAINAGE SHALL FLOW OVER ANY SIDEWALKS.
15. PAVEMENT SHALL BE 6-INCH P.C.C.
16. 6-INCH CURB WHERE INDICATED.

UTILITY NOTES

GENERAL NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT VERSION OF THE URBAN STANDARDS SPECIFICATIONS FOR PUBLIC IMPROVEMENTS ON THE DATE OF APPROVAL AND THE CITY OF GRIMES SUPPLEMENTAL SPECIFICATIONS.
2. A PRECONSTRUCTION MEETING IS REQUIRED PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THIS MEETING. CONTACT BRANDT WILLIAMSON WITH FOX ENGINEERING (515.233.0000).
3. ALL PERMITS (IDNR, IDOT, ARMY CORP., ETC.) SHALL BE OBTAINED PRIOR TO THE START OF CONSTRUCTION.
4. THE DEVELOPER AND/OR CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE THE CITY OF GRIMES WITH RECORD DRAWINGS OF ALL IMPROVEMENTS AS PER CITY STANDARD PROCEDURES.
5. A KNOX BOX IS REQUIRED BY THE FIRE DEPARTMENT AND SHALL BE OBTAINED AT CITY HALL.
6. ALL SITE LIGHTING SHALL NOT SPILL ONTO ADJACENT PROPERTIES OR RIGHT-OF-WAYS.
7. THE PROPOSED AND EXISTING BUILDINGS WILL BE SPRINKLED.
8. WATER & SEWER SERVICE TO THE PROPOSED ADDITION WILL COME FROM THE EXISTING BUILDING.
9. SIGNAGE IS APPROVED THROUGH A SEPARATE PERMITTING PROCESS.
10. ALL EXTERIOR LIGHTING SHALL BE WALL MOUNT DOWNCAST TYPE.

WATER MAIN NOTES:

1. ALL FIRE HYDRANTS SHALL BE AMERICAN FLOW CONTROL-WATEROUS PACER WB-67-250, MUELLER SUPER CENTURION 250 (3-WAY A-423), OR CLOW MEDALLION F-2545. ALL HYDRANTS SHALL HAVE THE FOLLOWING: 6" MJ SHOE, 2-1/2" HOSE NOZZLE, 4-1/2" STEAMER NOZZLE, NST THREADS, PENTAGON OPERATING NUT, CHAIN ON CAP, OPEN LEFT, 6-1/2' BURY, AND FACTORY PAINTED RED. THE MINIMUM HYDRANT LEAD SHALL BE 2-FEET.
2. ALL HYDRANTS WILL IMMEDIATELY BE COVERED WITH A BLACK PLASTIC BAG (OR EQUIVALENT) ONCE THE HYDRANT IS INSTALLED. THE CITY OF GRIMES WILL NOTIFY THE CONTRACTOR WHEN THE BAGS CAN BE REMOVED.
3. A TRACER WIRE RECEPTACLE SHALL BE INSTALLED AT EACH HYDRANT (FLUSH MOUNT VALVCO OR APPROVED EQUAL).
4. ALL VALVES SHALL BE RESILIENT WEDGE GATE VALVES.
5. WATER SERVICE SHALL BE 1-INCH MINIMUM TYPE K COPPER.
6. PROPOSED WATER MAIN SHALL BE PRESSURE TESTED AND CHLORINATED. THE FILLING OF THE WATER MAIN SHALL BE DONE BY THE CITY OF GRIMES. THE BACTERIA AND BLOWOFF OF CHLORINE SHALL BE DONE BY THE CITY OF GRIMES. IF THE TEST DOES NOT PASS, THE CONTRACTOR WILL BE REQUIRED TO PAY FOR ALL THE WATER USED TO REPEAT THE TEST.

STORM SEWER NOTES:

1. ALL STORM SEWER IN THE ROW SHALL BE RCP, UNLESS OTHERWISE APPROVED BY THE CITY.
2. ALL FLARED END SECTIONS SHALL HAVE FOOTINGS AND APRON GRATES. THE LAST 3 PIPE SECTIONS AND THE FLARED END SECTION ON ALL CULVERTS SHALL BE TIED. ALL STORM SEWER JOINTS SHALL BE WRAPPED WITH ENGINEERING FABRIC.
3. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY FIELD TILE DAMAGED DURING CONSTRUCTION. THE TILE SHOULD BE DIRECTED TO PUBLIC STORM SEWER IF POSSIBLE. THE CONTRACTOR SHALL RECORD THE ELEVATION AND LOCATION OF ALL TILES.
4. ALL SUMP SERVICE LINES SHALL HAVE TRACER WIRE.

IOWA ONE-CALL

SITE PLAN
1150 SW BROOKSIDE CIRCLE

OWNER/APPLICANT
PRO STOCK SHOP, LLC
TODD DRAKE
1718 NW 120th STREET
CLIVE, IOWA 50325

ZONING
M-2 LIGHT INDUSTRIAL DISTRICT

LAND USE
EXISTING: WAREHOUSE
PROPOSED: WAREHOUSE

SETBACKS
FRONT – 25'
REAR – 10'
SIDE – NONE (EXCEPT WHEN ADJACENT TO ANY 'R' DISTRICT OF STREET R.O.W., THEN 25')

SITE AREAS

EX. BUILDING	3,771 S.F.	11%
PROP. BUILDING	4,900 S.F.	14%
PAVEMENT	8,640 S.F.	25%
OPEN SPACE	17,745 S.F.	50%
TOTAL	35,056 S.F.	100%

OPEN SPACE
REQUIRED: 10% OF THE GROSS LAND AREA = 3,506 S.F.
PROPOSED: 17,745 S.F. (50%)

LEGAL DESCRIPTION
LOTS 13 AND 14 IN GRIMES INDUSTRIAL PARK PLAT 1, AN OFFICIAL PLAT, NOW INCLUDED IN AND FORMING A PART OF THE CITY OF GRIMES, POLK COUNTY, IOWA.

SUBJECT TO EASEMENTS, RESTRICTIONS AND COVENANTS OF RECORD.

PARKING REQUIREMENTS
REQUIRED: (1) SPACE FOR EACH (2) EMPLOYEES, BUT IN NO CASE LESS THAN (1) SPACE FOR EACH (2,000) SQUARE FEET OF GROSS FLOOR AREA AND (1) HANDICAP STALL.

PROPOSED: 7 SPACES (INCLUDING 1 HANDICAP SPACE)

CONSTRUCTION SCHEDULE

ERECT BUILDING	FALL 2016
PAVING	FALL 2016
GRADING/LANDSCAPING	FALL 2016
FINAL INSPECTION	FALL 2016

LEGEND
EXISTING/PROPOSED
- PLAT BOUNDARY
- W — WATER MAIN & SIZE
- SAN — SANITARY SEWER & SIZE
- ST — STORM SEWER & SIZE
- UGE — UNDERGROUND ELECTRIC CABLE
- UGT — UNDERGROUND TELEPHONE CABLE
- CTV — UNDERGROUND CABLE TV
- G — GAS MAIN & SIZE
- MANHOLE
- INTAKE
- HYDRANT
- POWER POLE/LIGHT POLE
- UTILITY BOX/TELEPHONE RISER
- EXISTING CONTOURS
- PROPOSED CONTOURS
- SILT FENCE OR APPROVED FILTRATION SOCK
- TREES

CERTIFICATION

LICENSED PROFESSIONAL ENGINEER KEVEN J. CRAWFORD 13156 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.

KEVEN J. CRAWFORD, P.E. IOWA LICENSE NO. 13156
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2016
PAGES OR SHEETS COVERED BY THIS SEAL:
Sheets [1]

COOPER CRAWFORD
& ASSOCIATES, L.L.C.
CIVIL ENGINEERS
475 S. 50th STREET, SUITE 800, WEST DES MOINES, IOWA 50265
PHONE: (515) 224-1344 FAX: (515) 224-1345

DATE: 8-11-2016
REVISIONS: 8-22-2016
8-30-2016

SCALE: 1"=20'

APPROVED: — INITIALED: — AS-BUILT: —

JOB NUMBER CC 1820

SITE PLAN
1150 SW BROOKSIDE CIRCLE

SHEET 1 OF 1

FOX engineering

Aspen Business Park | 414 South 17th Street, Suite 107 | Ames, Iowa 50010

August 31, 2016

Att: Seth Sunderman, P.E.
Snyder & Associates, Inc.
2727 SW Snyder Blvd
Ankeny, IA 50023

Mercy Clinics – Site Plan
FOX Ref No: 8630-16G.240

FOX Engineering and City Staff have completed the first review for the Mercy Clinics Site Plan dated August 23, 2106. Please address the following comments:

General Comments:

1. The proposed Mercy Clinic Site Plan is subject to the Preliminary/Final Platting approval of "Brookside Commercial Plat 1". The Site Plan will need to be revised once the following is determined:
   a. Please provide the legal description of the property assuming the final plat is approved.
   b. Please provide the site address once the final plat is approved. City will assign this address during the final plat phase.
2. Easements:
   a. The City will need a sanitary sewer & water main easement for public improvements. The Developer shall submit the legal description, easement form, and the City will approve.
   b. Please provide a private Stormwater Flowage, Storm Sewer, Ingress/Egress, and Detention Pond Easements. These easements will be filed by the Developer with Polk County. Or these easements can be filed with the final plat document.
3. The fire chief has yet to comment on this site plan. His comments will be forthcoming.

Sheet 2 – Project Information

4. State the required open space.
5. Please provide two City Elevation Benchmarks. Please contact Dave Freese (515.233.0000) to obtain this information.

Sheet 3 – Dimension & Utility Plan

6. The Details reference Sheet 4 versus Sheet 3. Please revise.
7. Please increase the trail width to 10-ft to meet the City of Grimes Standard.
8. Note 1B & 1C do not match the legend at the bottom left corner on this sheet.
9. Please check Note 1C noted around the building. It appears this note should be Note 1B.
10. Note 6 shall reference Sheet 4 & 5.
11. Please provide a note reference for 13C & 13D.
12. Note 14 shows cutting the driveway into the public street (SW Brookside Drive). Grimes code requires curb grinding. Private driveways shall not be attached to the public street.
13. Please show the location of the existing 8-inch water valve on SW Brookside.
14. Please show the sprinkler control room and fire department connection on the site plan.
15. Please add a fire hydrant within 100-ft of the fire department connection.
16. Please show the domestic water service (size) along with curb stop.
17. Please eliminate the 6-inch valve (Note 5F) since there is a 6-inch tapping valve and sleeve at the connection to the existing 12-inch water main. Two valves right next to each other is not required.
18. Please extend the sanitary sewer stub south of the private drive 10-ft beyond the water main.
19. Please provide sanitary sewer plan and profiles for the public improvements.

20. Please provide IDNR water and sanitary permits for all public improvements.
21. Please provide a parking area for bicycles, including a bike rack.
22. Please clarify if the trash enclosure bollards will be installed as per the Detail.
23. The code requires a sidewalk from the front door to the City ROW to encourage pedestrian access. Please provide this sidewalk extension to the HWY 44 sidewalk.

Sheet 4 – Site Grading, Storm Sewer, & Erosion Control Plan:

24. The trail spot elevations (south of the entrance driveway along Brookside) does not match the contours.
25. Please provide erosion control at the end of the drainage flume near the trash enclosure.
26. The Details along the bottom of the page show the wrong reference.
27. Please label the typical slopes on the Grading Plan.

Sheet 5 - Site Grading, Storm Sewer, & Erosion Control Plan:

28. Please show the private storm sewer easement.
29. Please provide typical slopes on the Grading Plan.
30. Please provide additional details, erosion control measures at the 18-inch storm sewer outfall into the drainage channel. Please show the opposite stream contours. Bank protection on both sides will be required. Please state the normal water pool elevation.
31. Please consider adding more slope at the bottom of the detention pond to help prevent ponding/weed growth.
32. Please provide a detailed seeding plan for the detention pond. Please state how the detention pond will be maintained (mowed, silt storage).
33. Please clarify the tree removal limits. The adjacent property owners will be very concerned about the number of trees removed on this development. The Developer will be required to notify the City 5-days prior to any tree removals. The City may elect to inform the adjacent property owners.

Planting Plan:

34. Please show the location of all mechanical units, gas meters, etc. These items shall be effectively screened with landscaping.
35. Please provide a landscape plan around the detention pond. It is unclear how visible this development will be to the east once the trees are removed.
36. Please provide trees every 40-ft or grouped together along the buffer strip north of the parking lot. Trees are not required north of the building along HWY 44. In addition, the code requires this area to be 8-ft wide. Please confirm that the landscape area will be mulched to a minimum width of 8-ft wide.
37. Please consider providing a detailed landscaping plan with shrubs or tall grass in the parking lot islands. The code desires parking lot areas to be harmonious and atheistically pleasing.
38. The area to the east of the parking lot could develop as residential. Discussion is necessary if the proposed landscaping buffer along this area is sufficient per the code requirements.

Colored Rendering: & Elevations:

39. Please attach elevation drawings to the site plan submittal.
40. Please provide additional dimensions (height to top of soffit, top of roof, etc.)
41. Please state the type and color of proposed building materials.
42. Please state the percent of proposed building materials on each side.
43. Please show the location of all mechanical units and screening from ROW.
44. It is highly recommended that you bring building materials to P&Z for discussion.

Stormwater Management Plan

45. The SWMP was submitted. Comments will be submitted at a later date.

Stormwater Pollution Prevention Plan

46. The SWPPP was submitted. Comments will be submitted at a later date.

Post –Construction Stormwater Maintenance Agreement

47. A Stormwater Post Construction Easement is not required for Lot 1 Site Plan. We will need a Post-Construction Stormwater Maintenance Agreement for the Detention Pond for the entire development "Brookside Commercial Plat 1".

Lighting Plan

48. Please provide a photometric luminaire plan (point by point).
49. Up-lighting of the building and landscaping is encouraged.

SITE PLAN SUBMITTAL SCHEDULE:

PLANNING & ZONING:	September 6, 2016 at 5:30 at the Grimes City Hall
COUNCIL MEETING:	September 13, 2016 at 5:30 at the Grimes City Hall

If you have any questions or concerns, please contact John Gade or Mitch Holtz at (515) 233-0000.

FOX ENGINEERING ASSOCIATES, INC.

John Gade, P.E.

John Gade, P.E.

Copy to: Kelley Brown, City of Grimes
Scott Clyce, City of Grimes

NPDES GENERAL PERMIT No. 2

STORM WATER POLLUTION PREVENTION PLAN
FOR
MERCY CLINIC-GRIMES

City of Grimes, Polk County, Iowa
Project No. 116.0514

NPDES Permit Discharge Authorization Number: _____

August 16, 2016

Prepared by:

SNYDER & ASSOCIATES, INC.
2727 SW Snyder Blvd
Ankeny, Iowa 50023
(515) 964-2020

IMPORTANT NOTICE

This Storm Water Pollution Prevention Plan (SWPPP) shall be retained on the construction site from the date the construction activities begin to the date of final stabilization. In addition, all contractors shall be supplied with a copy of the SWPPP and shall certify their role as co-permittee by signing the appropriate form in Part 5. It shall be the duty of the OWNER to see that these requirements are met and that the SWPPP is maintained up to date.

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APPENDIX G	GRADING & EROSION CONTROL PLAN

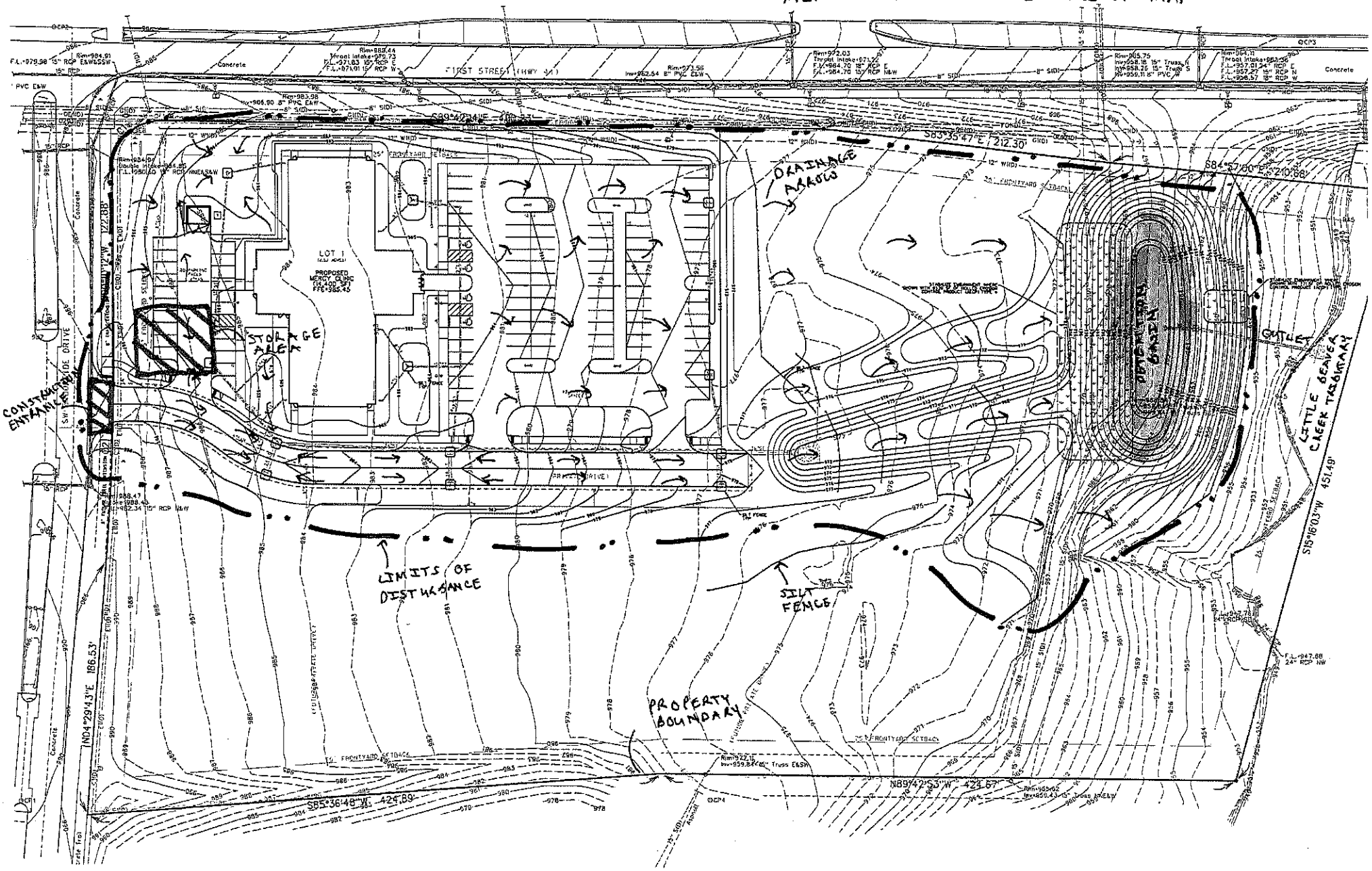
PART 1

SITE DESCRIPTION / SITE MAP

SITE INFORMATION:

Project Name	**MERCY CLINIC-GRIMES**
Project Location (address, latitude/longitude or Section-Township-Range)	Intersection of SW Brookside Dr & First Street(Hwy 44) City of Grimes, Polk County, Iowa
Owner Name	KR&C Properties
Representative / Title	Kim Rueter, Representative
Owner Address/Phone	1688 U Avenue Grand Junction IA 50107 (515) 370-0245
Site Area	9.76 acres
Disturbed Area	6.00 acres
Final Runoff Coefficient	0.85
Soil type / characteristics	Silty clay loam with moderate susceptibility to sheet & rill erosion. (per NRCS Soil Survey of Polk Co., Iowa &/or soils report)
Receiving Waters	Runoff discharged to unnamed tributary of Little Beaver Creek
Description (purpose and types of soil disturbing activities)	Project consists of a new building associated drives, parking and utilities. Soil disturbing activities include grading, detention basin excavation, utility installation, paving, and building foundation.
Expected Sequence of Major Construction Activities (subject to change; any deviations shall be noted on this plan)	1. Install stabilized construction entrance, staging area controls & perimeter silt barrier 2. Clear and grub for detention/sediment basin installation 3. Construct initial detention/sediment basin 4. Clear and grub for earthwork operations 5. Continue grading operations beginning with topsoil stockpiling (interior silt barrier installation) 6. Stabilize denuded areas and stockpiles within 14 days of last construction activity in that area 7. Install utilities & storm sewer 8. Install curb & gutter, paving 9. Backfill / finish grading 10. Temporary seeding / stabilization 11. Building construction 12. Permanent seeding/stabilization 13. Final completion, removal of temporary erosion control measures

MERCY CLINIC - GRIMES SWPPP MAP



PART 2

CONTROLS

A. Erosion and Sediment Controls

Measures to be used for controlling erosion and sediment throughout the construction project. Includes stabilization measures for limiting soil erosion from disturbed areas and structural controls to divert runoff and remove sediment. Contractor/subcontractor is responsible for the implementation and management of control measures specific to this site. As work progresses, field investigation may indicate additional erosion control measures may be required as determined by the contractor, owner, engineer, city or other governmentally regulated agencies.

1. Stabilization
    a. Preserve existing vegetation in areas not disturbed during construction
    b. The total area of soil disturbed by construction operations at any time shall be held to a minimum.
    c. Soil Compaction – compaction of soils in areas to be seeded or sodded will be kept to a minimum to increase infiltration of storm water runoff into the groundwater, reducing the amount of runoff.
    d. Temporary Stabilization - areas where construction activity is not planned to occur for at least 21 days will be stabilized within 14 days of ceasing construction activities in that area by one or more of the following temporary erosion control measures.
        - Topsoil stockpiles and disturbed portions of the site will be stabilized with temporary seed and mulch.
        - Areas of the site to be paved will be temporarily stabilized with geotextile and stone sub-base until pavement can be installed.
        - Frequent watering during construction in dry weather shall minimize wind erosion from exposed soil.
    e. Permanent Stabilization - areas where construction activity has permanently ended will be stabilized within 14 days of ceasing construction activities in that area by one or more of the following permanent erosion control measures.
        - Sodding or permanent seeding/mulch and mulch in all unpaved areas where final grading is complete.
        - Permanently seed drainage swales and install erosion control matting where required immediately upon reaching final grades to decrease erosion and facilitate sediment deposition in surface runoff.
    f. Vegetative buffer strips
        - Vegetation strip will be planted along the downstream boundary of the site to increase infiltration and sediment deposition by reducing runoff velocity.
    g. Protection of Trees and Natural Vegetation
        - Undisturbed areas will utilize existing vegetation as a natural buffer zone to increase infiltration and sediment deposition by reducing runoff velocity.
    h. Dust control
        - Mulch or surface watering will be utilized to control wind erosion of susceptible soils during and/or immediately after mass site grading

operations.

i. Channel Stabilization
   - Riprap and engineering fabric placed in channel to prevent erosion.
   - Erosion control mat in conjunction with seeding placed in channel to prevent erosion.
   - Concrete drainage flume installed in channel flow line to prevent erosion in minor storms.

j. Outlet Stabilization
   - Rock / riprap and engineering fabric installed at storm sewer outlets to prevent erosion.
   - Non-rock stabilization installed at storm sewer outlets to prevent erosion.
   - Concrete drainage flume installed at storm sewer outlets to prevent erosion.

k. Geotextiles
   - Erosion control matting placed over seeded areas on bare slopes where rill or gully erosion is evident or likely in order to establish vegetation growth and prevent erosion.

l. Chemical stabilization

m. Soil retaining measures

n. Stream bank stabilization

2. Structural Controls
   a. At all areas where runoff can move offsite, silt fence or approved equal will be installed along the perimeter of the project downstream of soil disturbing activities and storm water discharge points prior to site clearing and grading operations as required and/or shown on the plans.
   b. Temporary sediment basins are provided at the rate of 3,600 cubic feet of storage per acre for disturbed areas over 10 acres. If not attainable, a combination of silt fences, multiple sediment traps, or equivalent sediment controls are required for all side slopes and downslope boundaries of the disturbed area.
   c. Silt fence, sediment traps or equivalent measures for all side slopes and downslope boundaries of the disturbed area provided for disturbed areas of 10 acres or less.
   d. Silt barrier enclosures will be installed around all area intakes and flared end section inlets to protect storm sewers from sediment immediately after construction of inlet.
   e. All storm water street intakes will be protected from silt with filter socks or equivalent sediment protection measures after paving.
   f. Silt fence, temporary silt basins, earthen dikes and ditch checks will be installed along concentrated drainageways to control flow velocity and encourage sediment deposition.
   g. Storm water detention/retention facilities will retain flows and act as temporary sediment basin with the installation of a temporary outlet riser.
      - Installed prior to commencing upstream grading operations and storm sewer installation.
   h. Curb & gutter will divert storm water once installed.

i. Drainage swales
   - Permanently seeded immediately upon reaching final grade to facilitate sediment deposition in surface runoff.
   - Convey runoff to sediment basins/acceptable outlet.
   - Used in conjunction with sediment traps, ditch checks, or other control measures to trap sediment.

j. Earthen dike will be constructed along the downslope boundaries of undeveloped rough graded areas to divert sheet flow runoff to silt trap/storm sewer outlet.

k. Surface roughening – temporarily roughen the surface of graded slopes perpendicular to the slope as an end of day practice and in conjunction with other stabilization measures. Reduces runoff velocity, traps sediment, increases infiltration and aids in establishment of vegetative cover.

l. Subsurface drains

m. Brush barrier

n. Pipe slope drains

o. Level spreaders

p. Reinforced soil retaining systems

q. Gabions

r. Check dams

s. Gradient Terraces

t. Additional erosion control measures may be required on embankments, stockpiles and other areas to ensure runoff control.

B. Other Controls

Measures for controlling other sources of potential pollution that may exist on the construction site. During the course of construction, it is possible that situations may arise where unknown materials will be encountered. When such situations occur, they will be handled according to all applicable federal, state, and local regulations in effect at the time.

1. Waste materials
   a. Disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive laws, rules or regulations shall apply.

2. Hazardous waste
   a. Hazardous waste materials will be disposed of in accordance with applicable local, State, and/or Federal regulations.
   b. Equipment refueling and maintenance operations will be carried out in such a manner so as to prevent any spills and contamination to the soil and groundwater.
   c. Potentially hazardous materials will be used with great care to prevent spillage in any volume.

3. Sanitary waste

   A portable restroom facility may be located onsite at the contractor's discretion. Wastes will be collected and disposed of in complete compliance with local, state and federal regulations. This facility will be located in an area where contact with the storm water discharge is minimal.

4. Vehicle tracking
   a. Stabilized construction entrances and/or vehicle washing racks will be installed at all site access points to reduce vehicle tracking of sediment offsite.
   b. Paved streets adjacent to the site will be inspected daily and cleaned as necessary to remove any excess mud, dirt or rock tracked from the site.
   c. Dump trucks hauling material from the site will be properly covered with a tarpaulin.
   d. Dust control measures will be utilized as necessary.

5. Non-storm water discharges
   a. Expected sources of non-storm water discharges from the site during construction may include:
      - Potable water sources including water line flushings, irrigation drainage and fire fighting activities.
      - Pavement/building wash waters where no spills or leaks of toxic or hazardous materials have occurred and excluding detergents.
      - Uncontaminated groundwater from de-watering excavation.
      - Natural springs, wetland, water sources.
      - Foundation or footing drains where flows have not been exposed to solvents.
   b. Non-storm water discharges will be directed to the sediment basin or other appropriate control measure prior to discharging off-site.

C. Storm Water Management

Post-construction storm water drainage will be facilitated by curb and gutter, storm sewer, intake structures, and established drainage swales for the developed areas. Runoff will be directed to onsite storm water management controls and/or the City of Grimes public storm sewer/drainage ditch.

Measures implemented to control pollution of storm water after construction is complete include the following:

1. Retention Pond – permanent pool providing sediment control and detention. Designed to release storm water at a 5-year/24 hour storm pre-development peak rate.

2. Detention Pond – dry bottom basin providing detention of peak storm water runoff. Designed to release storm water at a 5-year/24 hour storm pre-development peak rate.

3. Open channels

a. Vegetated Swales and natural depressions will reduce storm water runoff by increasing infiltration and increase sedimentation by reducing runoff velocity.
b. Riprap placed as channel lining in high-flow drainage ditches to prevent erosion and increase sedimentation by reducing runoff velocity.
c. Permanent erosion control or turf reinforcement mats will be placed in drainage swales to prevent erosion.
d. Concrete drainage flumes installed at channel flowlines to reduce erosion of channel in small storm events.

4. Undeveloped areas will be graded at the slopes indicated and have permanent seeding and/or landscaping designed to reduce runoff velocities and increase infiltration.

5. Approximately 3.76 acres of the site will remain undisturbed and in its original vegetative state, limiting the amount of exposed soil and providing a continuous vegetation buffer zone that will reduce runoff velocities and increase infiltration.

6. Outlets of all storm sewer systems and culverts will be stabilized with riprap aprons underlain by engineering fabric or non-rock outlet protection measures to dissipate flow velocities and prevent erosion.

7. Infiltration Measures
   a. Infiltration trenches, basins, dry wells

CONTROL MEASURE MASTER INDEX

Use this index to track the status of all erosion & sediment control BMP's on your site as they relate to the current construction phase. Note the corresponding number of the BMP on the erosion control plan (ie: B3) and record installition and removal dates in the table. BMP's will not necessarily be removed during the same phase as their installation. Site conditions should dictate installation and removal.

NUMBER	CONTROL	DATE INSTALLED	DATE REMOVED
PHASE A - GRADING			
A1			
A2			
A3			
A4			
A5			
A6			
A7			
A8			
A9			
A10			
A11			
A12			
A13			
A14			
A15			
A16			
A17			
A18			
A19			
PHASE B - UNDERGROUND UTILITIES			
B1			
B2			
B3			
B4			
B5			
B6			
B7			
B8			
B9			
B10			
B11			
B12			
B13			
B14			
B15			
B16			
B17			
B18			

CONTROL MEASURE MASTER INDEX

Use this index to track the status of all erosion & sediment control BMP's on your site as they relate to the current construction phase. Note the corresponding number of the BMP on the erosion control plan (ie: B3) and record installition and removal dates in the table. BMP's will not necessarily be removed during the same phase as their installation. Site conditions should dictate installation and removal.

NUMBER	CONTROL	DATE INSTALLED	DATE REMOVED
PHASE C - PAVING / FINE GRADING			
C1			
C2			
C3			
C4			
C5			
C6			
C7			
C8			
C9			
C10			
C11			
C12			
C13			
C14			
C15			
C16			
PHASE D - LOT CONSTRUCTION			
D1			
D2			
D3			
D4			
D5			
D6			
D7			
D8			
D9			
D10			
PHASE E - FINAL STABILIZATION			
E1			
E2			
E3			
E4			
E5			
E6			
E7			
E8			
E9			
E10			

PART 3

CONSTRUCTION / IMPLEMENTATION

A. State and Local Requirements

1. The storm water pollution prevention plan reflects the State of Iowa requirements for storm water management and erosion and sediment control, as established in 161A.64 Code of Iowa, State of Iowa Statutory Requirements Pertaining to Erosion Control Plans.

2. Prior to initiating a land disturbing activity, a person engaged in land disturbing activity shall file a signed affidavit with the soil and water conservation district that the project will not exceed the soil loss limits.

3. The soil erosion and sedimentation control ordinance of the City of Grimes requires that:
   - A grading permit is obtained from the city prior to starting grading operations.
   - The grading permit is posted at the project site.
   - A "Certificate of Completion" is returned to the City Engineer prior to the expiration of the grading permit or any subsequent extensions of the expiration date.

4. All work shall be done in accordance with Division 9 of the latest edition of the Statewide Urban Standard Specifications (SUDAS) or the latest edition of the Grimes Standard Specifications for Street Improvements.

5. Code Compliance: The contractor shall comply with the soil erosion control requirements of the Iowa Code, the Iowa DNR NPDES permit and all local ordinances.

B. Timing of Controls/Measures

1. Install down-slope and side-slope perimeter silt fence prior to commencing land-disturbing activity.
2. Install construction entrance and vehicle tracking controls.
3. Construct temporary sediment basins or detention basin as sediment basin and route all runoff from disturbed areas to the basin and/or erosion control measures at storm water discharge points – sediment traps/basins, riprap channel lining, erosion control mat.
4. Do not disturb an area until necessary for construction to proceed.
5. Install interior silt fences, earthen dikes, sediment traps, etc. as grading progresses.
6. Cover or stabilize disturbed areas and stockpiles as soon as possible and no later than 14 days after ceasing construction for more than 21 days or permanently.
7. Place swale control measures (erosion control mats, silt traps, ditch checks, seed & mulch) in drainageways as soon as final grades are achieved and before storm sewer is installed where possible.
8. Construct outlet stabilization measures at storm outlets and place silt barriers at storm sewer inlets immediately after storm sewer is installed.
9. As areas reach their final grade, provide additional silt fence, sediment traps, earthen dikes, ditch checks or filter sock as necessary.
10. Complete permanent stabilization seeding/mulch or sod stabilization as soon as

possible after work is complete in an area.

11. Remove temporary sediment controls and accumulated sediment once entire site is stabilized. Re-seed/mulch any areas disturbed during removal.

PROJECTED CONSTRUCTION SCHEDULE / CONSTRUCTION PROGRESS:

PHASE A – GRADING	Anticipated Start-End	**August 2016-September 2016**

Initial control measure installation (sediment basin, construction entrance, perimeter silt fence)			
Operator Responsible			
Anticipated Start Date	August 2016	Anticipated End Date	September 2016
Actual Start Date		Actual End Date	

Initial Grading Operations (clearing/grubbing, topsoil stripping/stockpiling/stabilization)			
Operator Responsible			
Anticipated Start Date	August 2016	Anticipated End Date	September 2016
Actual Start Date		Actual End Date	

Major Grading Operations (mass grading, sediment/detention basins, pond, interior silt barrier, temporary stabilization)			
Operator Responsible			
Anticipated Start Date	August 2016	Anticipated End Date	September 2016
Actual Start Date		Actual End Date	

PHASE B – UNDERGROUND UTILITIES	Anticipated Start-End	**October 2016-December 2016**

Sewer / Water installation (sanitary sewer, water main)			
Operator Responsible			
Anticipated Start Date	October 2016	Anticipated End Date	December 2016
Actual Start Date		Actual End Date	

Storm System (storm sewer/structures, culverts, outlet structures)			
Operator Responsible			
Anticipated Start Date	October 2016	Anticipated End Date	December 2016
Actual Start Date		Actual End Date	

PHASE C – PAVING / FINE GRADING	Anticipated Start-End	**January 2017-March 2017**

Paving (subgrade prep, curb & gutter, street, sidewalk, drive, parking lot paving)			
Operator Responsible			
Anticipated Start Date	January 2017	Anticipated End Date	March 2017
Actual Start Date		Actual End Date	

Franchise Utilities (electric, gas, telephone, cable, _____, _____)			
Operator Responsible	Attach additional sheets listing utility companies working on the site		
Anticipated Start Date	January 2017	Anticipated End Date	March 2017
Actual Start Date		Actual End Date	

Finish Grading (backfill, finish grading, temporary seed stabilization)			
Operator Responsible			
Anticipated Start Date	January 2017	Anticipated End Date	March 2017
Actual Start Date		Actual End Date	

PHASE D – BUILDING CONSTRUCTION	Anticipated Start-End	**January 2017-June 2017**

Building Construction (basement excavation, building construction, driveway paving, sod stabilization)			
Operator Responsible	Attach additional sheets listing any individual lot ownership transfers		
Anticipated Start Date	January 2017	Anticipated End Date	June 2017
Actual Start Date		Actual End Date	

PHASE E – FINAL STABILIZATION	Anticipated Start-End	**July 2017-August 2017**

Permanent Stabilization (final seeding / sod stabilization, temporary erosion control measure removal)			
Operator Responsible			
Anticipated Start Date	July 2017	Anticipated End Date	August 2017
Actual Start Date		Actual End Date	

C. Inspection & Maintenance

1. All documents related to the storm water discharge permit shall be kept on site at all times and must be presented to the Iowa DNR or EPA upon request. Including but not limited to the Storm Water Pollution Prevention Plan, Notice of Intent, Proof of Publication, and project inspection diary.

2. The contractor will be responsible for selecting a "qualified" inspector to conduct the inspections. "Qualified" is defined as a person knowledgeable in the principles and practices of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity.

3. The project area and control devices will be inspected by personnel assigned by the contractor a minimum of every seven calendar days. The findings and any actions taken as a result of this inspection shall be recorded in the project diary with a copy submitted weekly to the owner or owner's representative during the project.
    a. Inspect silt fence for depth of sediment, tears, fabric securely attached to posts and posts firmly in the ground.
    b. Inspect sediment basins for depth of sediment.
    c. Inspect diversion dikes for any breaches.
    d. Inspect seeding for bare spots, washouts and healthy growth.
    e. Inspect site for any other conditions or deficiencies which may allow or contribute to polluted runoff discharging offsite.

4. This pollution prevention plan shall be revised as construction progresses to reflect current ownership, responsibilities, operations and findings.
    a. The plan will be revised due to any deficiencies in the plan or changes in conditions noted during an inspection and the contractor will implement any and all revisions as soon as practical but no later than 3 business days after the inspection.
    b. Maintain record of major construction operations start and ending dates and operators responsible for the various phases.
    c. The plan will be modified within 14 calendar days of a hazardous condition, describing the release, the date of release and the circumstances leading to the release. Steps to prevent the reoccurrence of such releases will be identified in a plan revision and implemented.

5. Maintain all temporary and permanent erosion control measures in good working order by cleaning, repairing, replacement and sediment removal throughout the permit period. Any necessary repairs will be initiated within 24 hours of report.
    a. Built up sediment will be removed from silt barrier or the silt barrier replaced when it has reached 1/2 the height of the barrier.
    b. Built up sediment will be removed from sediment basins when it reaches 25% of the design capacity or at the end of the project.
    c. Accumulation of earth, silt or debris on adjoining properties or streets will be minimized. Remove any accumulation of earth, silt or debris immediately and

take remedial actions for prevention.

d. Minor spills of potentially hazardous materials will be cleaned up by removing and disposing of contaminate soils properly. Major spills shall be reported in accordance with 455B.386 Code of Iowa with clean up procedures dependant on the severity of the spill.

6. Hazardous substance spill prevention and response
   a. The contractor is responsible for training all personnel in the proper handling and cleanup of spilled materials. No spilled hazardous materials or wastes will be allowed to come into contact with storm water discharges. If contact does occur, the storm water discharge will be contained on site until appropriate measures in compliance with all Federal, State, and local regulations are followed to dispose of the hazardous substance.
   b. In addition to Good Housekeeping and material management practices, the following practices shall be done to minimize the potential for hazardous material spills and to reduce the risk of the spill coming in contact with storm water.
      - Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be trained regarding these procedures and the location of the information and cleanup supplies.
      - Materials and equipment necessary for spill control, containment and cleanup will be provided onsite in a material storage area. Equipment and materials will include but not be limited to brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers.
   c. In the event of a spill, the following procedures will be followed:
      - All spills will be cleaned up immediately following discovery.
      - The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with the hazardous substance.
      - Spill of toxic or hazardous material will be reported to the appropriate state or local governmental agency and to the project manager and engineer, regardless of the size of the spill.
   d. In the event the construction site has a release of a hazardous substance or oil in an amount which exceeds a reportable quantity (RQ) as defined at 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 then the permittee shall:
      - Person in charge of the site at the time of the spill shall call the EPA National Response Center to report the spill (800-424-8802, or 202-426-2675).
      - Modify the Pollution Prevention Plan accordingly within 14 days of the spill including the items mentioned below.
      - Within 14 days of the release, submit a written description of the release including: a description of the release, type of material, estimated amount of spill, date of release, explanation of why the spill happened, and a description of the steps taken to prevent and control future releases.

D. Materials Management

Site sources of pollution generated as a result of this work related to silts and sediment which may be transported as a result of a storm event. However, this SWPPP provides conveyance for other (non-project related) operations. These other operations have storm water runoff, the regulation of which is beyond the control of this SWPPP.

1. Materials or substances expected to be present onsite during construction:
    a. Concrete
    b. Detergents
    c. Paints
    d. Tar
    e. Soil stabilization additives
    f. Fertilizers
    g. Petroleum based additives
    h. Cleaning solvents
    i. Wood
    j. Solids and construction wastes
    k. Pesticides

2. Material Management Practices – the following is a list of practices that will be used onsite to minimize the risk of spills or other accidental exposure of materials and substances to storm water runoff.
    a. Good Housekeeping
        - An effort will be made to store onsite only enough products required to complete the job.
        - All materials stored onsite will be kept in a neat, orderly manner and in their appropriate containers. If possible, products shall be kept under a roof or other enclosure.
        - Materials will be kept in their original containers with the original manufacturer's label.
        - Substances will not be mixed with one another unless recommended by the manufacturer.
        - Whenever possible, all of a product will be used up before disposing of the container.
        - Manufacturer's recommendations for proper use and disposal will be followed.
        - The job site superintendent will be responsible for daily inspections to ensure proper use and disposal of materials.
    b. Hazardous Products
        - Products will be kept in their original containers with the original manufacturer's label.
        - The original labels and material safety data will be kept for each of the materials as they contain important product information.
        - Disposal of any excess product will be done in a manner that follows all manufacturers', federal, local and state recommended methods for proper disposal.

3. Product Specific Practices – the following is a list of potential sources of pollution and specific practices to reduce pollutant discharges from materials or sources expected to be present during construction.
    a. Petroleum Storage Tanks
        - All onsite vehicles shall be inspected and monitored for leaks and receive preventative maintenance to reduce the chance of leakage.
        - Steps will be taken by the contractor to eliminate contaminants from storage tanks form entering ground soil. Any petroleum storage tanks kept onsite will be located with an impervious surface between the tank and the ground.
    b. Fertilizers – shall be applied in minimal amounts as recommended by the manufacturer. It shall be worked into the soil as to minimize the contact with storm water discharge.
    c. Paints, paint solvents and cleaning solvents – Excess paints and solvents shall not be discharged into the storm sewer system. The contractor shall refer to the manufacturer's instructions and federal regulations on the proper disposal techniques.
    d. Concrete wastes
        - Concrete trucks will be allowed to washout or discharge excess concrete only in specifically designated areas which have been prepared to minimize contact between the concrete and storm water discharge from the site.
        - The hardened product from the concrete washout areas will be disposed of as other non-hazardous waste materials or may be broken up and used on the site for other appropriate uses.
    e. Solid and construction wastes – All trash and construction debris shall be deposited into a dumpster that will be emptied as necessary. No construction waste materials will be buried on site. The dumpsters must be put in a location where the contact with storm water discharge is minimized.

PART 4

FINAL STABILIZATION / DISCONTINUATION

A. Final Stabilization / Discontinuation

1. The storm water discharge from a construction activity is no longer considered to be a discharge subject to the storm water permit requirements when final stabilization has been reached and temporary erosion and sediment controls have been or will be removed. A permittee must submit a Notice of Discontinuation (NOD) to inform the IDNR that storm water discharge from the site will no longer need to be covered by the general permit.

2. "Final Stabilization" – the point at which all soil disturbing activities are complete, and a uniform perennial vegetative cover with a density of 70% of the cover for unpaved areas and areas not covered by permanent structures has been established or equivalent permanent stabilization measures have been employed.

3. Notice of Discontinuation should be mailed to the following address:

   Storm Water Coordinator
   Iowa Department of Natural Resources
   502 E. 9th Street
   Des Moines, Iowa 50319-0034

4. All plans, inspection reports and other related documents must be retained for a period of three years after project completion. The contractor shall retain a record copy and provide the original documents to the owner upon issuance of the NOD.

NOTICE OF DISCONTINUATION

OF A STORM WATER DISCHARGE
COVERED UNDER IOWA NPDES GENERAL PERMIT NO. 2
FOR CONSTRUCTION ACTIVITIES

Name of the owner or facility to which the storm water discharge general permit coverage was issued.

_____

County: _____

List the complete permit authorization number for the discharge. This number is provided on the bottom of the authorization sheet.

IA- _____ — _____

List the date the construction site reached final stabilization as defined on the back of this form.

_____

The following certification must be signed in accordance with the signatory requirements of the general permit (see back side).

I certify under penalty of law that disturbed soils at the identified facility have been finally stabilized and temporary erosion and sediment control measures have been removed or will be removed at an appropriate time. I understand that by submitting this Notice of Discontinuation, I am no longer authorized to discharge storm water associated with industrial activity for construction activities by Iowa Department of Natural Resources NPDES General Permit No. 2 and that discharging pollutants from storm water associated with industrial activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by an NPDES permit.

I further 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 known violations.

_____	_____
Name (print)	Title
_____	_____
Signature	Date

Return to:

Storm Water Coordinator
Department of Natural Resources
502 E. 9th Street
Des Moines, IA 50319-0034

Final Stabilization means that all soil disturbing activities at the site have been completed and that a uniform perennial vegetative cover for the area has been established or equivalent stabilization measures have been employed. All building must be completed before the project is considered finally stabilized.

SIGNATORY REQUIREMENTS All Notices of Intent, storm water pollution prevention plans, reports, certifications or information either submitted to the Department or the operator of a large or medium municipal separate storm sewer system, or that this permit requires be maintained by the permittee, shall be signed in accordance with rule 567--64.3(8) of the Iowa Administrative Code as follows:

64.3(8) *Identity of signatories of operation permit applications.* The person who signs the application for an operation permit shall be:

a. *Corporations.* In the case of corporations, a principal executive officer of at least the level of vice-president.

b. *Partnerships.* In the case of a partnership, a general partner.

c. *Sole proprietorships.* In the case of a sole proprietorship, the proprietor.

d. *Public facilities.* In the case of a municipal, state, or other public facility, by either the principal executive officer, or the ranking elected official.

e. *Storm water discharge associated with construction activity.* In the case of a storm water discharge associated with industrial activity from construction as identified in 40 CFR 122.26(b)(14)(*x*), either the owner of the site or the general contractor.

PART 5

CERTIFICATION

A. Storm Water Pollution Prevention Plan Certification

1. This project is subject to section 402(b) of the Clean Water Act and IAC 455 B.174 Subrule 567-64.4 (projects disturbing one or more total acres) and requires inclusion in the National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 or individual NPDES Permit for storm water discharge associated with industrial activity for construction activities. The Contractor shall perform all pollution prevention measures as identified in the plans and specifications. A copy of the Storm Water Pollution Prevention Plan (SWPPP) must be kept at the construction site from the time construction begins until the site has reached final stabilization.

2. The owner and prime contractor must sign the NPDES Certification Statement. The prime contractor must identify which contracting entity will be responsible for each portion of the pollution prevention plan and maintain the site in compliance with the SWPPP, Pollution Prevention Plan drawings and NPDES Permit. The certification must be signed in accordance with the signatory requirements found in the general permit; i.e., principal executive officer, vice president, general partner, proprietor, elector official, and will be incorporated into the pollution prevention plan.

3. All subcontractors, including short-term contractors and subcontractors, prior to approval, must sign the NPDES Certification Statement before conducting any work at the site. The certification must be signed in accordance with the signatory requirements found in the general permit; i.e., principal executive officer, vice president, general partner, proprietor, elector official, and will be incorporated into the pollution prevention plan.

4. Upon signing the certification, the contractor or subcontractor becomes a co-permittee with the owner and other co-permittee contractors. In signing the plan, the authorized representative certifies that the information is true and assumes liability for the plan and its implementation. Note that Section 309 of the Clean Water Act provides for significant penalties where information is false or the permittee violates, either knowingly or negligently, the permit requirements.

5. A copy of the NPDES Certification Statement of the Owner, Prime Contractor and all Subcontractors shall be filed in and become a part of the project SWPPP.

NPDES CERTIFICATION STATEMENT
(Owner certification)

Project	**MERCY CLINIC-GRIMES**
Project Location (address, lat./long., Sec.-T-R)	Intersection of SW Brookside Dr & First Street(Hwy 44) City of Grimes, Polk County, Iowa

I certify under penalty of law that this document and all attachments were prepared under my direction of 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.

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 "Storm Water 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 storm water pollution prevention plan developed under this NPDES permit and the terms of this NPDES permit.

Owner	KR&C Properties		
Address	1688 U Avenue Grand Junction IA 50107	Phone	(515) 370-0245
Representative	Kim Rueter	Title	Representative
Signature		Date	

NPDES CERTIFICATION STATEMENT

(for contractors with authority to modify SWPPP)

Project	**MERCY CLINIC-GRIMES**
Project Location (address, lat./long., Sec.-T-R)	Intersection of SW Brookside Dr & First Street(Hwy 44) City of Grimes, Polk County, Iowa

I certify under penalty of law that this document and all attachments were prepared under my direction of 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.

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 "Storm Water 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 storm water pollution prevention plan developed under this NPDES permit and the terms of this NPDES permit.

Contractor / Sub-contractor	
Responsible for	
Address	Phone
Representative	Title
Signature	Date

NPDES CERTIFICATION STATEMENT

(for contractors with NO authority to modify SWPPP)

Project	**MERCY CLINIC-GRIMES**
Project Location (address, lat./long., Sec.-T-R)	Intersection of SW Brookside Dr & First Street(Hwy 44) City of Grimes, Polk County, Iowa

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 "Storm Water 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 storm water pollution prevention plan developed under this NPDES permit and the terms of this NPDES permit.

Contractor / Sub-contractor	
Responsible for	
Address	Phone
Representative	Title
Signature	Date

APPENDIX A

NPDES GENERAL PERMIT No. 2

IOWA DEPARTMENT OF NATURAL RESOURCES

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

GENERAL PERMIT NO. 2

EFFECTIVE DATES
OCTOBER 1, 2012 THROUGH OCTOBER 1, 2017

FOR

STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES

502 EAST 9th STREET DES MOINES, IOWA 50319
515-725-8417 FAX 515-725-8202 www.iowadnr.gov/water/stormwater/index.html

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PART I. COVERAGE UNDER THIS PERMIT

A. PERMIT AREA This permit covers all areas of the State of Iowa.

B. ELIGIBILITY

1. A. Except for discharges identified under Parts I.B.2. and I.B.3., this permit may authorize the discharge of storm water associated with industrial activity from construction sites, (those sites or common plans of development or sale that will result in the disturbance of one or more acres total land area), (hereafter referred to as storm water discharge associated with industrial activity for construction activities) occurring after the effective date of this permit (including discharges occurring after the effective date of this permit where the construction activity was initiated before the effective date of this permit), including storm water discharge associated with industrial activity from areas that are dedicated to producing earthen materials, such as soils, sand and gravel, for use at a single construction site.

B. This permit may authorize storm water discharge from a construction site that is mixed with storm water discharge associated with industrial activity from sources other than construction activities provided that the storm water discharge from the industrial (non-construction) source is in compliance with the terms of a NPDES general permit, other than this general permit, or individual permit authorizing such discharge. In addition, the storm water other than from construction, shall be in compliance with Part IV.D.6. of this permit.

2. LIMITATIONS ON COVERAGE The following storm water discharges associated with industrial activity for construction activities are **not** authorized by this permit:

A. storm water discharges that are mixed with sources of non-storm water other than discharges identified in Part III.A.2. of this permit;

B. storm water discharges associated with industrial activity for construction activities which are covered by an existing individual NPDES permit or which are issued a permit in accordance with Part I.C. of this permit.

Storm water discharges authorized by an existing individual NPDES permit will be eligible to apply for coverage under this general permit as the existing individual permit expires; and

C. storm water discharges associated with industrial activity for construction activities that the Iowa Department of Natural Resources has determined to be or may reasonably be expected to be contributing to a violation of a water quality standard.

D. new or expanded "storm water discharge associated with industrial activity" that discharges to Outstanding Iowa Waters or to Outstanding National Resource Waters.

3. EXCLUSIONS The following "storm water discharges associated with industrial activity" from construction activities do not require a NPDES permit:

discharges from agricultural and silvicultural activities including storm water runoff from orchards, cultivated crops, pastures, range lands, and forest lands, but not discharges from concentrated animal feeding operations as defined in 40 CFR 122.23, concentrated aquatic production facilities as defined in 40 CFR 122.24, discharges to aquaculture projects as defined in 40 CFR 122.25, and discharges from silvicultural point sources as defined in 40 CFR 122.27.

C. REQUIRING AN INDIVIDUAL PERMIT

1. The Department may require any person authorized by this permit to apply for and obtain an individual NPDES permit. The Department may require any owner or operator authorized to discharge under this permit to apply for an individual NPDES permit only if the owner or operator has been notified in writing that a permit application is required. This notice shall include a brief

statement of the reasons for this decision, an application form, a statement setting a deadline for the owner or operator to file the application, and a statement that on the effective date of the individual NPDES permit, coverage under this general permit shall automatically terminate. If an owner or operator fails to submit an individual NPDES permit application required by the Department under this paragraph, coverage of this general permit automatically is terminated at the end of the day specified for submittal of the individual NPDES application.

2. Any person authorized to discharge under this permit may apply for an individual NPDES permit. In such cases, the discharger shall submit the following in accordance with the requirements of subrule (567)--64.3(4) in the Iowa Administrative Code:

A. an individual application, using DNR Form 1 and EPA Form 2F, and,

B. all applicable fees identified in rule (567)--64.16 in the Iowa Administrative Code.

3. When an individual NPDES permit is issued to a discharger covered under this general permit, the applicability of this general permit to the individual NPDES permittee is automatically terminated on the effective date of the individual NPDES permit.

When an individual NPDES permit is denied to a discharger otherwise subject to this permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the date of such denial, unless otherwise specified by the Department.

D. AUTHORIZATION

A discharger must submit a Notice of Intent (NOI) in accordance with the requirements of Part II of this permit in order for storm water discharge associated with industrial activity for construction activities pursuant to Part I.B. of this permit to be authorized to discharge under this general permit.

PART II. NOTICE OF INTENT (NOI) REQUIREMENTS

A. DEADLINES FOR FILING A NOTICE OF INTENT

For storm water discharge associated with industrial activity for construction activities where construction begins after October 1, 1992, construction activities shall not commence until an authorization has been issued for the project by the Department.

B. FAILURE TO NOTIFY Dischargers who fail to notify the Department of their intent to be covered, and discharge pollutants to water of the United States within Iowa, without an NPDES permit, are in violation of the Clean Water Act and the Code of Iowa.

C. CONTENTS OF THE NOTICE OF INTENT A complete Notice of Intent shall include the items described in Parts II.C.1., II.C.2., and II.C.3. of this permit.

1. A completed Notice of Intent (NOI) form, DNR Form 542-1415, signed in accordance with Part VI.G. of this permit. The information on the form shall include the following:

A. Name, address, and location of the construction site for which this notification is submitted. The location should be provided as the 1/4 section, township, range, and the county in which the storm water discharge is located.

B. The owner's name, address, telephone number, and status (federal, state, private, public or other entity).

C. The name, address and telephone number of any operator (contractor) that has been identified as having a role in the storm water pollution prevention plan for the site required under Part IV.D.7. of this permit. Contractors (operators) identified after the submittal of the completed Notice of Intent shall be identified in the pollution prevention plan.

D. The type of discharge (new or existing as related to October 1, 1992); whether or not the discharge is to a municipal separate storm sewer system; the date the discharge is to commence; the permit status of the discharge; and, the name of the receiving waters.

E. An indication if any existing quantitative data is available describing the concentration of pollutants in storm water discharges and a summary of available existing data. (Existing data should not be included as part of the NOI, it should retained as part of the Pollution Prevention Plan).

F. A brief description of the project; an estimated timetable for major activities; and, an estimate of the number of acres of the site on which soil will be disturbed.

G. A certification that compliance with **G.(1).** through **G.(4).** are met:

G.(1). the pollution prevention plan has been developed before this Notice of Intent is submitted to the Department;

G.(2). the pollution prevention plan will be implemented on October 1, 1992 for any existing storm water discharge associated with industrial activity for construction activities. For a storm water discharge associated with industrial activity for construction activities that commence after October 1, 1992, the pollution prevention plan shall be implemented with the start of construction activities;

G.(3). this Notice of Intent will be included and incorporated into the pollution prevention plan and will be updated as required; and,

G.(4). the storm water pollution prevention plan provides compliance with section 467A.64 of the Code of Iowa and local sediment and erosion plans and are consistent with the requirements of Part IV of this general permit.

2. APPLICABLE FEES The applicable fees specified in Iowa Administrative Code 567 -- 64.16(455B).

3. PUBLIC NOTIFICATION A demonstration that the public notice specified in Iowa Administrative Code 567--64.6(1)"c"(2) was published at least one day, in one newspaper with the largest circulation in the area in which the facility is located or the activity will occur.

D. WHERE TO SUBMIT Facilities which discharge storm water associated with industrial activity for construction activities must submit items described in Parts II.C.1., 2., and 3. of this permit to the Department at the following address:

Storm Water Coordinator
Iowa Department of Natural Resources
502 E. 9th St.
Des Moines, IA 50319-0034

E. RENOTIFICATION Prior to the expiration of an authorization issued under this general permit, the permittee is required to resubmit a Notice of Intent (no additional public notice is required) with the Department for coverage under the new general permit. If a new general permit has not been reissued prior to the expiration of the current permit, the provisions and coverage of the current permit are extended until replaced by the adoption of a new general permit.

F. TRANSFER OF COVERAGE UNDER THIS PERMIT For storm water discharge associated with industrial activity for construction activities where the ownership changes, the Department must be notified of the title transfer within 30 days. Both the previous owner(s) and the new owner(s) are responsible for notifying the Department of the transfer and the new owner's name and contact information. This requirement shall be satisfied upon the Department's receipt of the notification of this information by either the previous owner(s) or the new owner(s). If a storm water discharge associated with industrial activity for construction activities is covered by this general permit, the new owner(s) shall be subject to all terms and

conditions of this general permit. A copy of the notice of transfer that was sent to the Department shall be included in the pollution prevention plan. For construction activity which is part of a larger common plan of development such as a housing or commercial development project, if a permittee transfers ownership of all or any part of property subject to this permit, both the permittee and transferee shall be responsible for compliance with the provisions of this permit for that portion of the project which has been transferred including when the transferred property is less than one acre in area. If the new owner(s) agree in writing to be solely responsible for compliance with the provisions of this permit for the property which has been transferred, then the existing permittee(s) shall be relieved of responsibility for compliance with this permit for the transferred property, from and after the date the Department receives written notice of transfer of responsibility. A copy of the notice of transfer of responsibility shall be included in the pollution prevention plan.

G. NOTICE OF DISCONTINUATION

1. Within 30 days after final stabilization at a construction site (as defined in Part VIII of this permit), the operator or owner of the facility shall submit a Notice of Discontinuation to the Department.

2. The Notice of Discontinuation shall include the following information:

A. the name of the owner/operator to which the permit was issued;

B. the general permit number and permit authorization number;

C. the date the construction site reached final stabilization; and,

D. the following certification signed in accordance with Part VI.G. of this permit:

"I certify under penalty of law that disturbed soils at the identified facility have been finally stabilized and temporary erosion and sediment control measures have been removed or will be removed at an appropriate time. I understand that by submitting this Notice of Discontinuation, that I am no longer authorized to discharge storm water associated with industrial activity for construction activities by Iowa Department of Natural Resources General NPDES Permit No. 2. and that discharging pollutants from storm water associated with industrial activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit."

PART III. SPECIAL CONDITIONS, MANAGEMENT PRACTICES, AND OTHER NON-NUMERIC LIMITATIONS

A. PROHIBITION ON NON-STORM WATER DISCHARGES

1. All discharges authorized by this permit shall be composed entirely of storm water except for non-storm discharges listed in Part III.A.2.

2. Discharges from fire fighting activities; fire hydrant flushings; waters used to wash vehicles in accordance with Part IV.D.2.c.(2).; potable water sources including waterline flushings; irrigation drainage; routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; springs; uncontaminated groundwater; and foundation or footing drains where flows are not contaminated with process materials such as solvents; may be authorized by this permit provided the non-storm water component of the discharge is in compliance with Part IV.D.5. of this permit.

B. RELEASES IN EXCESS OF REPORTABLE QUANTITIES Any owner or operator identified in the pollution prevention plan is subject to the spill notification requirements as specified in 455B.386 of the Iowa Code. Iowa law requires that as soon as possible but not more than six hours after the onset of a "hazardous condition" the Department and local

sheriff's office or the office of the sheriff of the affected county be notified.

The storm water pollution prevention plan described in Part IV of this permit must be modified within 5 calendar days of knowledge of the release to provide a description of the release and the circumstances leading to the release and to identify and provide for the implementation of steps to prevent the reoccurrence of such releases and to respond to such releases.

PART IV. STORM WATER POLLUTION PREVENTION PLANS

A storm water pollution prevention plan shall be developed for each construction site covered by this permit. Storm water pollution prevention plans shall be prepared in accordance with good engineering practices. The plan shall identify potential sources of pollution which may reasonably be expected to affect the quality of the storm water discharge from the construction activities. In addition, the plan shall describe and ensure the implementation of practices which will be used to reduce the pollutants in storm water discharge associated with industrial activity for construction activities at the construction site and to assure compliance with the terms and conditions of this permit. Facilities must implement the provisions of the storm water pollution prevention plan required under this part as a condition of this permit.

A. DEADLINES FOR POLLUTION PREVENTION PLAN PREPARATION AND COMPLIANCE

1. POLLUTION PREVENTION PLAN PREPARATION DEADLINE The pollution prevention plan shall be completed prior to the submittal of an NOI to the Department to be covered under this permit and shall be updated as appropriate.

2. POLLUTION PREVENTION PLAN COMPLIANCE DEADLINE The pollution prevention plan shall provide for compliance with the terms and schedule of the plan prior to the initiation of construction activities.

B. SIGNATURE AND PLAN REVIEW

1. The plan shall be signed in accordance with Part VI.G., and be retained at the construction site from the date construction activities begin to the date of final stabilization.

2. The permittee shall make plans available to the Department upon request, or in the case of a storm water discharge associated with industrial activity for construction activities which discharge through a municipal separate storm sewer system with an NPDES permit, to the municipal operator of the system.

3. The Department may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this Part. After such notification from the Department, the permittee shall make changes to the plan and shall submit to the Department a written certification that the requested changes have been made. Unless otherwise provided by the Department, the permittee shall have 3 business days after such notification to make the necessary changes.

4. All storm water pollution prevention plans received by the Department from the permittee are considered reports that shall be available to the public under Section 308(b) of the CWA and Chapter 22 of the Code of Iowa. However, the permittee may claim any portion of a storm water pollution plan as confidential in accordance with Chapter 22 of the Code of Iowa and Iowa Administrative Code (561)--2.5.

C. KEEPING PLANS CURRENT

The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not been addressed in the plan or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified in Part IV.D.2. of this permit, or in otherwise achieving the general objectives of controlling pollutants in storm water discharge associated with industrial activity for construction

activities. In addition, the pollution prevention plan shall be updated to: expeditiously change the site map to include changes at the site, include contractors identified after the submittal of the Notice of Intent as Co-permittees, described in Part IV.D.7. of this permit; identify any change in ownership or transference of the permit and permit responsibilities; or, if required, by the occurrence of a hazardous condition (as defined in Part VIII of this permit). Amendments to the plan may be reviewed by the Department of Natural Resources in the same manner as Part IV.B.2.

D. CONTENTS OF THE POLLUTION PREVENTION PLAN. The storm water pollution prevention plan shall include the following items:

1. SITE DESCRIPTION Each plan shall provide a description of the following:

A. a description of the nature of the construction activity;

B. estimates of the total area of the site and the area of the site that is expected to be disturbed by excavation, grading, or other activities;

C. an estimate of the runoff coefficient of the site after construction activities are completed and existing data describing the soil or the quality of any discharge from the site;

D. a site map indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of soil disturbance, the location of structural and nonstructural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands), and locations where storm water is discharged to a surface water; and

E. the name of the receiving water(s) and the ultimate receiving water(s).

2. CONTROLS Each plan shall include a description of controls that will be implemented at the construction site. The plan will clearly describe the intended sequence of major activities and for each activity, the appropriate control measures and the timing during the construction process that the measures will be implemented. (For example, perimeter controls for one portion of the site will be installed after the clearing and grubbing necessary for installation of the measure, but before the clearing and grubbing for the remaining portions of the site. Perimeter controls will be actively maintained until final stabilization of those portions of the site upward of the perimeter control. Temporary perimeter controls will be removed after final stabilization). The description of controls shall address the following minimum components:

A. EROSION AND SEDIMENT CONTROLS

A.(1). STABILIZATION PRACTICES A description of temporary and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans should ensure that existing vegetation is preserved where attainable and that disturbed areas are stabilized. Stabilization practices may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as precluded by snow cover, stabilization measures shall be initiated on all disturbed areas as soon as practical but in no case where construction activity will not occur for a period of 21 or more calendar days later than the 14th day after no construction activity has occurred on such area. Where the initiation of stabilization measures by the 14th day after no construction activity occurs is precluded by snow cover, then stabilization measures shall be initiated as soon as practicable thereafter.

A.(2). STRUCTURAL PRACTICES A description of structural practices to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff from exposed areas of the site. Such practices may include silt fences, earth dikes, brush barriers, drainage swales, sediment

traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. Structural practices should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA.

A.(2).(*a*). For common drainage locations that serve an area with more than 10 disturbed acres at one time, a temporary or permanent sediment basin providing 3,600 cubic feet of storage per acre drained shall be provided where attainable until final stabilization of the site has been achieved. The 3,600 cubic feet of storage area per acre drained does not apply to flows from offsite areas and flows from onsite areas that are either undisturbed or have undergone final stabilization where such flows are diverted around the sediment basin. For drainage locations which serve more than 10 disturbed acres at one time and where a temporary sediment basin providing 3,600 cubic feet of storage per acre drained is not attainable, sediment traps, silt fences, or equivalent sediment controls are required for all sideslope and downslope boundaries of the construction area.

A.(2).(*b*). For drainage locations serving 10 or fewer acres, sediment traps, silt fences or equivalent sediment controls are required for all sideslope and downslope boundaries of the construction area or a sediment basin providing for 3,600 cubic feet of storage per acre drained.

A.(2).(c). Unless infeasible, the following measures shall be implemented at all sites: utilize outlet structures that withdraw water from the surface when discharging from basins, provide and maintain natural buffers around surface waters and direct storm water to vegetated areas to both increase sediment removal and maximize storm water infiltration.

The permittee(s) shall minimize soil compaction and, unless infeasible, preserve topsoil. "Infeasible" shall mean not technologically possible, or not economically practicable and achievable in light of the best industry practices. "Unless infeasible, preserve topsoil" shall mean that, unless infeasible, topsoil from any areas of the site where the surface of the ground for the permitted construction activities is disturbed shall remain within the area covered by the applicable General Permit No. 2 authorization. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted. Preserving topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed. The permittee(s) shall control storm water volume and velocity to minimize soil erosion in order to minimize pollutant discharges and shall control storm water discharges, including both peak flowrates and total storm water volume, to minimize channel and stream bank erosion and scour in the immediate vicinity of discharge points. An affidavit signed by the permittee(s) may be submitted to demonstrate compliance.

For construction activity which is part of a larger common plan of development, such as a housing or commercial development project, in which a new owner agrees in writing to be solely responsible for compliance with the provisions of this permit for the property which has been transferred or in which the new owner has obtained authorization under this permit for a lot or lots (as specified in subrule 567-64.6(6) of the Iowa Administrative Code), the topsoil preservation requirements described above must be met no later than at the time the lot or lots have reached final stabilization as described in this permit.

The topsoil preservation requirement described above shall be implemented for projects that have not received an authorization under this permit prior to October 1, 2012. The topsoil preservation requirements are not required to be implemented for projects that have been authorized prior to October 1, 2012. In residential and commercial developments, a plat is considered a project. For other large areas that have been authorized for multiple

construction sites, including those to be started at a future date, such as those located at industrial facilities, military installations and universities, a new construction project not yet surveyed and platted out is considered a project. This stipulation is intended to be interpreted as requiring the topsoil preservation requirements on development plats and construction activities on other extended areas that may have several construction projects permitted under the same authorization to be implemented on those projects not yet surveyed and platted out prior to October 1, 2012 even if other plats and construction activities in the same development or other extended area were authorized prior to October 1, 2012.

B. STORM WATER MANAGEMENT A description of measures that will be installed during construction to control pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the CWA. This permit only addresses the installation of storm water management measures, and not the ultimate operation and maintenance of such structures after the construction activities have been completed and the site has undergone final stabilization. Permittees are only responsible for the installation and maintenance of storm water management measures prior to final stabilization of the site, and are not responsible for maintenance after storm water discharges associated with industrial activity have been eliminated from the site.

B.(1). Such practices may include: storm water detention structures (including wet ponds); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; and infiltration of runoff onsite; and sequential systems (which combine several practices). A goal of 80 percent removal of total suspended solids from those flows which exceed predevelopment levels should be used in designing and installing storm water management controls (where practicable). Where this goal is not met, the permittee shall provide justification for rejecting each practice based on site conditions.

B.(2). Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions present prior to the initiation of construction activities).

C. OTHER CONTROLS

C.(1). WASTE DISPOSAL All wastes composed of building materials must be removed from the site for disposal in permitted disposal facilities. No building material wastes or unused building materials shall be buried, dumped, or discharged at the site.

C.(2). Off-site vehicle tracking of sediments shall be minimized.

C.(3). The plan shall ensure and demonstrate compliance with applicable State or local waste disposal, sanitary sewer or septic system regulations.

D. APPROVED STATE OR LOCAL PLANS Facilities which discharge storm water associated with industrial activity for construction activities must include in their storm water pollution prevention plan procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by State or local officials. Applicable requirements specified in sediment and erosion plans, site permits or storm water management plans approved by State or local officials that are applicable to protecting surface water resources are, upon submittal of an NOI to be authorized to discharge under this permit, incorporated by reference and are enforceable under this permit even if they are not specifically included in a storm water pollution prevention plan required under this permit.

Operators of facilities seeking alternative permit requirements shall submit an individual permit application in accordance with Part I.C.2. of this permit along with a description of why requirements in approved State or local plans should not be applicable as a condition of an NPDES permit.

3. MAINTENANCE A description of procedures to maintain in good and effective operating conditions vegetation, erosion and sediment control measures and other protective measures identified in the site plan.

4. INSPECTIONS Qualified personnel (provided by the discharger) shall inspect disturbed areas of the construction site that have not been stabilized with a perennial, vegetative cover of sufficient density to preclude erosion at least once every seven calendar days. Unless erosion is evident or other conditions warrant them, regular inspections are not required on areas that have been stabilized with a perennial, vegetative cover of sufficient density to preclude erosion.

A. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

B. Based on the results of the inspection, the description of potential pollutant sources identified in the plan in accordance with paragraph IV.D.1. of this permit and pollution prevention measures identified in the plan in accordance with paragraph IV.D.2. of this permit shall be revised as appropriate as soon as practicable after such inspection. Such modifications shall provide for implementation of any changes to the plan within 7 calendar days following the inspection.

C. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph IV.D.4.B. of the permit shall be made and retained as part of the storm water pollution prevention plan for at least three years after final stabilization has been achieved and a Notice of Discontinuation has been submitted to the Department. The report shall be signed in accordance with Part VI.G. of this permit.

5. NON-STORM WATER DISCHARGES Except for flows from fire fighting activities, sources of non-storm water listed in Part III.A.2. of this permit that are combined with storm water discharges associated with industrial activity from construction activities must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

6. ADDITIONAL REQUIREMENTS FOR STORM WATER DISCHARGE FROM INDUSTRIAL ACTIVITIES OTHER THAN CONSTRUCTION, INCLUDING DEDICATED ASPHALT PLANTS, AND DEDICATED CEMENT PLANTS This permit may only authorize a storm water discharge associated with industrial activity from a construction site that is mixed with a storm water discharge from an industrial source other than construction, where:

A. the industrial source other than construction is located on the same site as the construction activity;

B. storm water discharges associated with industrial activity from the areas of the site where construction activities are occurring are in compliance with the terms of this permit; and,

C. storm water discharges associated with industrial activity from the areas of the site

where industrial activity other than construction are occurring (including storm water discharges from dedicated asphalt plants and dedicated cement plants) are in compliance with the terms and conditions, including applicable NOI or application requirements, of a different NPDES general permit or individual permit authorizing such discharges.

7. CONTRACTORS

A. The storm water pollution prevention plan must clearly identify for each measure in the plan, the contractor(s) and/or subcontractor(s) that will implement the measure. All contractors and subcontractors identified in the plan must sign a copy of the certification statement in Part IV.D.7.B. of this permit in accordance with Part VI.G. of this permit. Upon signing the certification, the contractor or sub-contractor is a co-permittee with the owner and other co-permittee contractors. All certifications must be included in the storm water pollution prevention plan.

B. CERTIFICATION STATEMENT All contractors and subcontractors identified in a storm water pollution prevention plan in accordance with Part IV.D.7.A. of this permit shall sign a copy of the following certification statement before conducting any professional service at the site identified in the storm water pollution prevention plan:

"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 "Storm Water 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 storm water pollution prevention plan developed under this NPDES permit and the terms of this NPDES permit."

The 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.

PART V. RETENTION OF RECORDS

A. The permittee shall retain copies of storm water pollution prevention plans and all reports required by this permit, and records of all data used to complete the Notice of Intent to be covered by this permit, for a period of at least three years from the date that the site is finally stabilized and a Notice of Discontinuation has been submitted to the Department.

B. If there is a construction trailer, shed or other covered structure located on the property the permittee shall retain a copy of the storm water pollution prevention plan required by this permit at the construction site from the date of project initiation to the date of final stabilization. If there is no construction trailer, shed or other covered structure located on the property, the permittee shall retain a copy of the plan at a readily available alternative site approved by the Department and provide it for inspection upon request. If the plan is maintained at an off-site location such as a corporate office, it shall be provided for inspection no later than three hours after being requested.

C. ADDRESSES All written correspondence to the Department should be sent to the following address:

Storm Water Coordinator
Iowa Department of Natural Resources
502 E. 9th St.
Des Moines, IA 50319-0034

PART VI. STANDARD PERMIT CONDITIONS

A. DUTY TO COMPLY

1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Code of Iowa and the Clean Water Act and is grounds for enforcement action; for termination of coverage under this general permit; or, for denial of a request for coverage under a reissued general permit.

2. TOXIC POLLUTANTS The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act (CWA) for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

B. CONTINUATION OF THE EXPIRED GENERAL PERMIT This permit expires on October 1, 2017. An expired general permit continues in force until replaced by adoption of a new general permit.

C. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. DUTY TO MITIGATE The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. DUTY TO PROVIDE INFORMATION The permittee shall furnish to the Department, within three hours, any information which the Department may request to determine compliance with this permit. The permittee shall also furnish to the Department upon request copies of records required to be kept by this permit.

F. OTHER INFORMATION When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report to the Department, he or she shall promptly submit such facts or information.

G. SIGNATORY REQUIREMENTS All Notices of Intent, storm water pollution prevention plans, reports, certifications or information either submitted to the Department or the operator of a municipal separate storm sewer system, or that this permit requires be maintained by the permittee, shall be signed in accordance with rule 567--64.3(8) of the Iowa Administrative Code as follows:

64.3(8) *Identity of signatories of operation permit applications.* The person who signs the application for an operation permit shall be:

a. *Corporations.* In the case of corporations, a principal executive officer of at least the level of vice-president.

b. *Partnerships.* In the case off a partnership, a general partner.

c. *Sole proprietorships.* In the case of a sole proprietorship, the proprietor.

d. *Public facilities.* In the case of a municipal, state, or other public facility, by either the principal executive officer, or the ranking elected official.

e. *Storm water discharge associated with industrial activity from construction activity.* In the case of a storm water discharge associated with industrial activity from construction as identified in 40 CFR 122.26(b)(14)(*x*), either the owner of the site or the general contractor.

The person who signs NPDES reports shall be the same, except that in the case of a corporation or a public body, monitoring reports required under the terms of the permit may be submitted by the person who is responsible for the overall operation of the facility from which the discharge originated.

H. CERTIFICATION Any person signing documents under paragraph VI.G. shall make the following certification:

"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."

I. OIL AND HAZARDOUS SUBSTANCE LIABILITY Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under section 311 of the Clean Water Act.

J. PROPERTY RIGHTS The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

K. SEVERABILITY The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

L. TRANSFERS This permit is not transferable to any person except after notice to the Department. The Department may require the discharger to apply for and obtain an individual NPDES permit as stated in Part I.C.

M. PROPER OPERATION AND MAINTENANCE The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions or this permit.

N. INSPECTION AND ENTRY The permittee shall allow the Department or an authorized representative of EPA, the State, or, in the case of a facility which discharges through a municipal separate storm sewer, an authorized representative of the municipal operator or the separate storm sewer receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and,

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

O. PERMIT ACTIONS Coverage under this permit may be terminated for cause. The filing of a request by the permittee for a permit discontinuance, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

P. ENVIRONMENTAL LAWS No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

PART VII. REOPENER CLAUSE

If there is evidence indicating potential or realized impacts or water quality due to any storm water discharge associated with industrial activity for construction activities covered by this permit, the owner or operator of such discharge may be required to obtain individual permit in accordance with Part I.C of this permit.

PART VIII. DEFINITIONS

"*Best Management Practices*" ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

"*Construction site*" means a site or common plan of development or sale on which construction activity, including clearing, grading and excavating, results in soil disturbance. A construction site is considered one site if all areas of the site are contiguous with one another and one entity owns all areas of the site.

"*CWA*" or "*Clean Water Act*" means the Federal Water Pollution Control Act.

"*Dedicated portable asphalt plant*" means a portable asphalt plant that is located on or contiguous to a construction site and that provides asphalt only to the construction site that the plant is located on or adjacent to.

"*Dedicated portable concrete plant*" means a portable concrete plant that is located on or contiguous to a construction site and that provides concrete only to the construction site that the plant is located on or adjacent to.

"*Dedicated sand or gravel operation*" means an operation that produces sand and/or gravel for a single construction project.

"*Department*" means the Iowa Department of Natural Resources.

"*Final Stabilization*" means that all soil disturbing activities at the site have been completed, and that a uniform perennial vegetative cover with a density of 70% for the area has been established or equivalent stabilization measures have been employed or which has been returned to agricultural production.

"*Hazardous condition*" means any situation involving the actual, imminent, or probable spillage, leakage, or release of a hazardous substance on to the land, into a water of the state, or into the atmosphere, which creates an immediate or potential danger to the public health or safety or to the environment. 455B.381(2) 1991, Code of Iowa

"*Hazardous substance*" means any substance or mixture of substances that presents a danger to the public health or safety and includes, but is not limited to, a substance that is toxic, corrosive, or flammable, or that is an irritant or that, in confinement, generates pressure through decomposition, heat, or other means. The following are examples of substances which, in sufficient quantity may be hazardous: acids; alkalis; explosives; fertilizers; heavy metals such as chromium, arsenic, mercury, lead and cadmium; industrial chemicals; paint thinners; paints; pesticides; petroleum products; poisons, radioactive materials; sludges; and organic solvents. "Hazardous substances" may include any hazardous waste identified or listed by the administrator of the United State Environmental Protection Agency under the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976, or any toxic pollutant listed under section 307 of the federal Water Pollution Control Act as amended to January 1, 1977, or any hazardous substance designated under section 311 of the federal Water Pollution Control Act as amended to January 1, 1977, or any hazardous material designated by the secretary of transportation under the Hazardous Materials Transportation Act (49 CFR 172.101). 455B.381(1), 1991 Code of Iowa

"*Municipality*" means a city, town, borough, county, parish, district, association, or other public body created by or under State law.

"*NOI*" means Notice of Intent to be covered by this permit (see Part II of this permit.)

"*Outstanding Iowa Waters*" means those waters which constitute an outstanding state resource such as waters of exceptional recreational or ecological significance. These waters are identified in Appendix B of the Iowa Antidegradation Implementation Procedure manual.

"*Outstanding National Resource Waters*" means those waters which constitute an outstanding national resource such as waters of national and state parks and wildlife refuges and also waters of exceptional recreational or ecological significance. These waters are identified in Appendix B of the Iowa Antidegradation Implementation Procedure manual.

"*Permittee*" means the owner of the facility or site.

"*Qualified personnel*" means those individuals capable enough and knowledgeable enough to perform the required functions adequately well to ensure compliance with the relevant permit conditions and requirements of the Iowa Administrative Code.

"*Runoff coefficient*" means the fraction of total rainfall that will appear at the conveyance as runoff.

"*Storm Water*" means storm water runoff, snow melt runoff, and surface runoff and drainage.

"*Storm water discharge associated with industrial activity*" means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 CFR part 122. For the categories of industries identified in paragraphs (i) through (x) of this definition, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR part 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.

For the categories of industries identified in paragraph (xi) of this definition, the term includes only storm water discharges from all the areas (except access roads and rail lines) that are listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water. For the purposes of this paragraph, material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product, or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are Federally, State, or municipally owned or operated that meet the description of the facilities listed in these paragraphs (i)-(xi) of the definition) include those facilities designated under 40 CFR 122.26(a)(1)(v). The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this definition;

(*i*) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR Subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category (*xi*) of this definition);

(*ii*) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285), 29, 311, 32 (except 323), 33, 3441, 373;

(*iii*). Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area

under 40 CFR 434.11(1) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; (inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator; inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, nor sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim);

(*iv*) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of RCRA;

(*v*) Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under Subtitle D of RCRA;

(*vi*) facilities involved in the recycling of materials, including metal scrap yards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;

(*vii*) Steam electric power generating facilities, including coal handling sites;

(*viii*) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-4225), 43, 44, 45 and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under paragraphs (*i*)-(*vii*) or (*ix*)-(*xi*) of this definition are associated with industrial activity;

(*ix*) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with 40 CFR 503;

(*x*) Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than one acre of total land area which are not part of a larger common plan of development or sale;

(*xi*) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-4225, (and which are not otherwise included within categories (*ii*)-(*x*));

"***Storm water discharge associated with industrial activity for construction activities***" means activities that fall under subparagraph (x) in the definition of storm water discharge associated with industrial activity.

"***Topsoil***" means the fertile, uppermost part of the soil containing significant organic matter largely devoid of debris and rocks and often disturbed in cultivation.

"***Uncontaminated groundwater***" means water that is potable for humans, meets the narrative water quality standards in subrule 567-61.3(2) of the Iowa Administrative Code, contains no more than half the listed concentration of any pollutants in subrule 567-61.3(3) of the IAC, has a pH of 6.5-9.0 and is located in soil or rock strata.

APPENDIX B

PUBLIC NOTICE / NOTICE OF INTENT

ENGINEERS & PLANNERS
SNYDER & ASSOCIATES
ANKENY, IA (515) 964-2020 | ATLANTIC, IA (712) 243-6505 | CEDAR RAPIDS, IA (319) 362-9394 | COUNCIL BLUFFS, IA (712) 322-3202 | MARYVILLE, MO (660) 582-8888 | ST. JOSEPH, MO (816) 364-5222

FACSIMILE / ELECTRONIC TRANSMITTAL

Date: August 15, 2016

To: Des Moines Register – Andrea Houghton e-mail: legals@dmreg.com

e-mail:

From: Seth Sunderman

Subject: Public Notice of Storm Water Discharge – Mercy Clinic

This transmission contains 2 pages, including the cover sheet. If you do not receive the total number of pages, please contact this office.

This document is transmitted as checked below:

- ☐ For Approval
- ☐ For Your Use
- ☐ As Requested
- ☐ For Review & Comment
- ☐ Signature & Return
- ☒ FOR PUBLICATION

Original to follow in mail: ☐ *Yes* ☒ *No*

Comments:

PLEASE PUBLISH IN NEXT ISSUE

PLEASE SEND BILL AND AN AFFIDAVIT OF PUBLICATION TO:

Snyder & Associates, Inc.
Attn: Seth Sunderman
2727 SW Snyder Blvd.
PO Box 1159
Ankeny, IA 50023
Ph. (515) 964-2020

The information transmitted in this facsimile message is intended to be confidential and for the use of only the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any retention, dissemination, distribution or copy of this telecopy is strictly prohibited. If you have received this facsimile in error, please notify us immediately by telephone and return the original message to us at the address above via the mail service (we will reimburse postage). Thank you.

Instructions - To complete the public notice, fill in the blanks with the required information or select the appropriate response and send to the newspapers.
The public notice must be published at least one day **at your own expense** in two newspapers.

PUBLIC NOTICE OF STORM WATER DISCHARGE

Two Rivers Real Estate, LLC plans to submit a Notice of Intent to the Iowa Department of Natural Resources to be covered under NPDES General Permit No. 2 "Storm Water Discharge Associated with Industrial Activity for Construction Activities".

The storm water discharge will be from a new commercial development located in the NW 1/4 of Section 6, Township 79N, Range 25W, Polk County.

Storm water will be discharged from 1 point source(s) and will be discharged to Private storm sewer to an unnamed tributary of Little Beaver Creek.

Comments may be submitted to the Storm Water Discharge Coordinator, IOWA DEPARTMENT OF NATURAL RESOURCES, Environmental Protection Division, 900 E. Grand Avenue, Des Moines, IA 50319-0034. The public may review the Notice of Intent from 8 a.m. to 4:30 p.m., Monday through Friday, at the above address after it has been received by the department.

APPENDIX C

CHECKLISTS

EPA BASELINE CONSTRUCTION GENERAL PERMIT REQUIREMENTS PRE-CONSTRUCTION CHECKLIST

Storm Water Pollution Prevention Plans

1. A site description, including:
   - ☐ The nature of the activity?
   - ☐ Intended sequence of major construction activities
   - ☐ The total area of the site
   - ☐ The area of the site that is expected to undergo excavation
   - ☐ The runoff coefficient of the site after construction is complete
   - ☐ Existing soil or storm water data
   - ☐ A site map with:
     - ☐ Drainage patterns
     - ☐ Approximate slopes after major grading
     - ☐ Area of soil disturbance
     - ☐ Outline of areas which won't be disturbed
     - ☐ Location of major structural and non-structural controls
     - ☐ Areas where stabilization practices are expected to occur
     - ☐ Surface waters
     - ☐ Storm water discharge locations
   - ☐ The name of the receiving water(s)
2. A description of controls:
   - 2.1 Erosion and sediment controls, including:
     - ☐ Stabilization practices for all areas disturbed by construction
     - ☐ Structural practices for all drainage/discharge locations
   - 2.2 Storm water management controls, including:
     - ☐ Measures used to control pollutants occurring in storm water discharges after construction activities are complete.
     - ☐ Velocity dissipation devices to provide nonerosive flow conditions from the discharge point along the length of any outfall channel.
   - 2.3 Other controls including:
     - ☐ Waste disposal practices which prevent discharge of solid materials to waters of the U.S.?
     - ☐ Measures to minimize offsite tracking of sediments by construction vehicles
     - ☐ Measures to ensure compliance with State or local waste disposal, sanitary sewer, or septic system regulations
   - 2.4 ☐ Description of the timing during the construction when measures will be implemented.
3. ☐ Are State or local requirements incorporated into the plans?
4. ☐ Are maintenance procedures for control measures identified in the plan?
5. ☐ Identification of allowable non-storm water discharges and pollution prevention measures.
6. ☐ Contractor certification.
7. ☐ Plan certification.

EPA BASELINE CONSTRUCTION GENERAL PERMIT CHECKLIST

Storm Water Pollution Prevention Plan
Construction/Implementation Checklist

1. Maintain Records of Construction Activities, including:
   - ☐ Dates when major grading activities occur
   - ☐ Dates when construction activities temporarily cease on a portion of the site
   - ☐ Dates when construction activities permanently cease on a portion of the site
   - ☐ Dates when stabilization measures are initiated on the site
2. Prepare Inspection reports summarizing:
   - ☐ Name of inspector
   - ☐ Qualifications of inspector
   - ☐ Measures/areas inspected
   - ☐ Observed conditions
   - ☐ Changes necessary to the SWPPP
3. Report Releases of Reportable Quantities of Oil or Hazardous Materials (if they occur):
   - ☐ Notify National Response Center 800/424-8802 immediately
   - ☐ Notify permitting authority in writing within 14 days
   - ☐ Modify the pollution prevention plan to include:
     - the date of release
     - circumstances leading to the release
     - steps taken to prevent reoccurrence of the release
4. Modify Pollution Prevention Plan as necessary to:
   - ☐ Comply with minimum permit requirements when notified by EPA that the plan does not comply
   - ☐ Address a change in design, construction operation or maintenance which has an effect on the potential for discharge of pollutants
   - ☐ Prevent reoccurrence of reportable quantity releases of a hazardous material or oil

EPA BASELINE CONSTRUCTION GENERAL PERMIT CHECKLIST

Storm Water Pollution Prevention Plan
Final Stabilization/Termination Checklist

1. ☐ All soil disturbing activities are complete
2. ☐ Temporary erosion and sediment control measures have been removed or will be removed at an appropriate time
3. ☐ All areas of the construction site not otherwise covered by a permanent pavement or structure have been stabilized with a uniform perennial vegetative cover with a density of 70% or equivalent measures have been employed

POLLUTION PREVENTION PLAN FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES
EROSION AND SEDIMENT CONTROL SELECTION CHECKLIST

INSTRUCTIONS: THIS CHECKLIST LISTS THE MINIMUM SEDIMENT EROSION CONTROL REQUIREMENTS UNDER THE USEPA GENERAL PERMIT. CHECK [✓] EACH ITEM AND FILL IN THE BLANKS BELOW TO EVALUATE COMPLIANCE FOR EACH DRAINAGE AREA AND LOCATION. NOTE: THIS CHECKLIST WAS PREPARED FOR THE USEPA GENERAL PERMIT. REQUIREMENTS FOR STATE GENERAL PERMITS MAY VARY.

Stabilization Practices

☐ Stabilization will be initiated on all disturbed areas where construction activity will not occur for a period of more than 21 calendar days by the 14th day after construction activity has permanently or temporarily ceased.

Stabilization measures to be used include:

☐ Temporary Seeding	☐ Sod Stabilization
☐ Permanent Seeding	☐ Geotextiles
☐ Mulching	☐ Other _____

Structural Practices

☐ Flows from upstream areas will be diverted from exposed soils. Measures to be used include:

☐ Earth Dike	☐ Pipe Slope Drain
☐ Drainage Swale	☐ Other
☐ Interceptor Dike and Swale	

Drainage locations serving less than 10 disturbed acres	Drainage locations serving 10 or more disturbed acres
☐ Sediment controls will be installed	☐ A Sediment Basin will be installed
Sediment controls include:	☐ A Sediment Basin is not attainable on the site; therefore, the following sediment controls will be installed:
☐ Sediment Basin	Sediment Trap
☐ Sediment Trap	Silt Fence or equivalent controls along the sideslope and downslope boundaries
☐ Silt Fence or equivalent controls along all sideslope and downslope boundaries	

Sediment Basin Runoff Storage Calculation

_____ acres area draining to the sediment basin

X

3,600 cubic feet of storage/acre

=

_____ cubic feet of storage required for the basin.

APPENDIX D

SOILS REPORT

INSERT SOILS REPORT IF APPLICABLE

APPENDIX E

INSPECTION REPORTS

EROSION AND SEDIMENT CONTROL MONITORING REPORT

Project: Mercy Clinic-Grimes _____ Date of Inspection: _____

Prime Contractor: _____ Permit No: _____

Inspector: _____ Project No: _____

Reason for Inspection: ☐ Weekly ☐ Rainfall Event (_____ in.) ☐ Other _____

EROSION AND SEDIMENT CONTROL MONITORING

Area Inspected: _____

_____

Inspection of Best Management Practices:

BMP	Control Practice Effective			Maintenance/ Modification Required			BMP	Control Practice Effective			Maintenance/ Modification Required		
	Y	N	N/A	Y	N	N/A		Y	N	N/A	Y	N	N/A
Silt Fencing	☐	☐	☐	☐	☐	☐	Stockpile Stabilization	☐	☐	☐	☐	☐	☐
Ditch Checks	☐	☐	☐	☐	☐	☐	Mulching	☐	☐	☐	☐	☐	☐
Rip Rap	☐	☐	☐	☐	☐	☐	Erosion Matting	☐	☐	☐	☐	☐	☐
Inlet Protection	☐	☐	☐	☐	☐	☐	Temporary Seeding	☐	☐	☐	☐	☐	☐
Drainage Swales	☐	☐	☐	☐	☐	☐	Permanent Seeding	☐	☐	☐	☐	☐	☐
Construction Site Exits	☐	☐	☐	☐	☐	☐	Sodding	☐	☐	☐	☐	☐	☐
Project Schedule	☐	☐	☐	☐	☐	☐	Staging Area	☐	☐	☐	☐	☐	☐
Grading Practices	☐	☐	☐	☐	☐	☐	Other _____	☐	☐	☐	☐	☐	☐
Good Housekeeping	☐	☐	☐	☐	☐	☐	Other _____	☐	☐	☐	☐	☐	☐

OBSERVATION COMMENTS / RECOMMENDATIONS

Note: Any 'Control Practice Effective' box checked 'N' or 'Maintenance/Modification Required' box checked 'Y' must have comments, recommended improvements, and date implemented. Any modifications must be sketched, described, dated, and initialed on the drawing included with the Pollution Prevention Plan.

ITEM	COMMENTS / RECOMMENDED IMPROVEMENTS	DATE IMPLEMENTED

☐ See reverse side for sketches or additional comments/recommendations

CERTIFICATION

Copy to: ☐ Onsite Pollution Prevention Plan ☐ Owner ☐ Project Engineer ☐ Project Observer

"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"

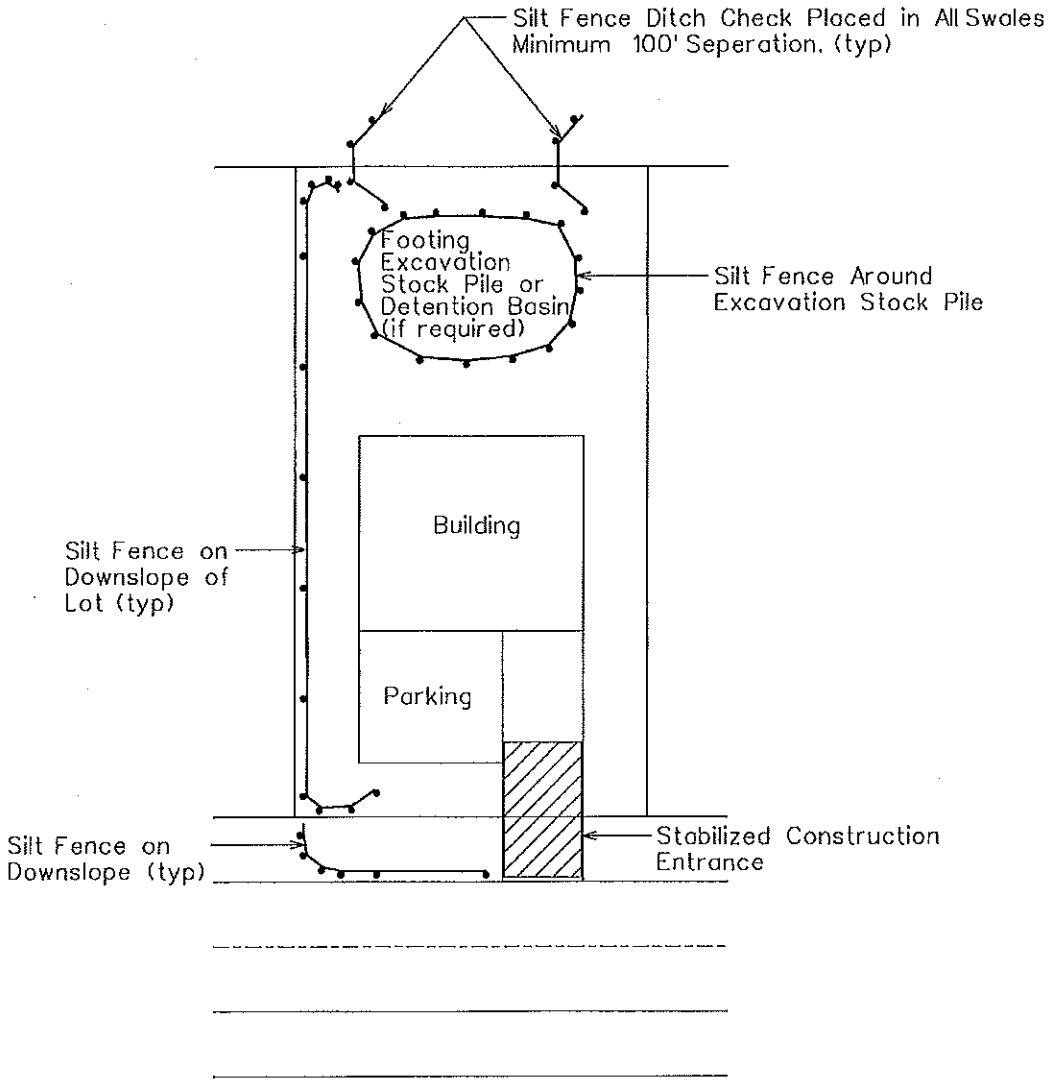
_____

Signature of Monitor

APPENDIX F

TYPICAL LOT SEDIMENT/EROSION CONTROL PLAN

TYPICAL LOT SEDIMENT/EROSION CONTROL PLAN



NOTES

1. POTENTIALLY HAZARDOUS MATERIALS SHALL BE STORED WITHIN AN ENCLOSED OR CONTROLLED STRUCTURE.
2. NOTE TEMPORARY SANITARY FACILITIES ON PLAN IF INDIVIDUALLY PROVIDED.
3. LAYOUT IS TYPICAL AND SHALL BE MODIFIED FOR SITE SPECIFIC CONDITIONS.
4. KEEP ROADWAYS FREE OF SILT AND OTHER DEBRIS.
5. PERMANENT STABILIZATION BY SEEDING AND MULCHING AND/ OR SOD OF FINAL DISTURBANCE.

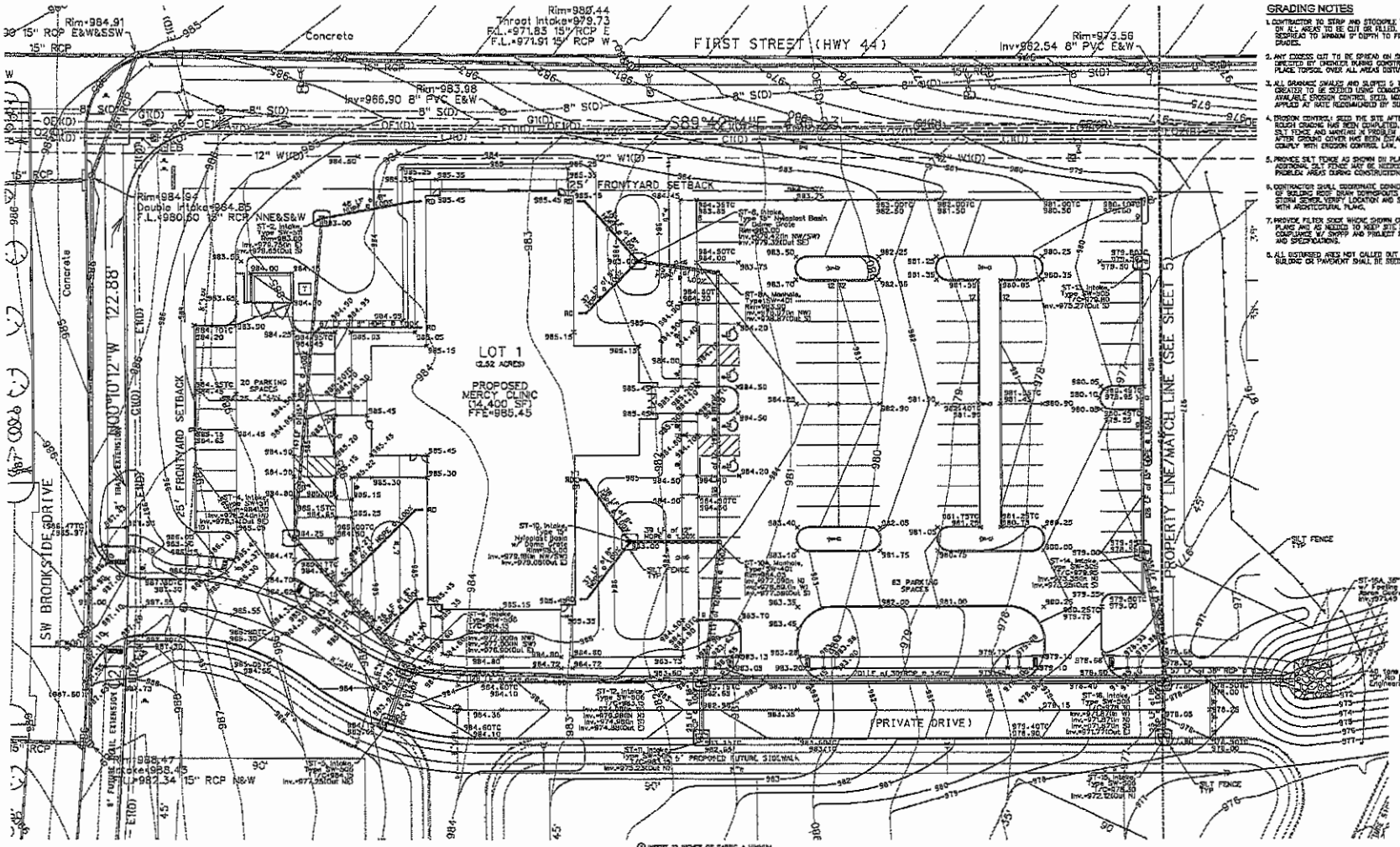
SHEET OF	
PN:	
FN:	
DATE:	
TECH:	

SNYDER & ASSOCIATES
Engineers and Planners
501 S.W. ORALABOR ROAD
ANKENY, IA 50021 (515) 964-2020

D:\SWPPP Master\Codd\typlotsederosctrlplanB.dgn
11/24/2004
sdb

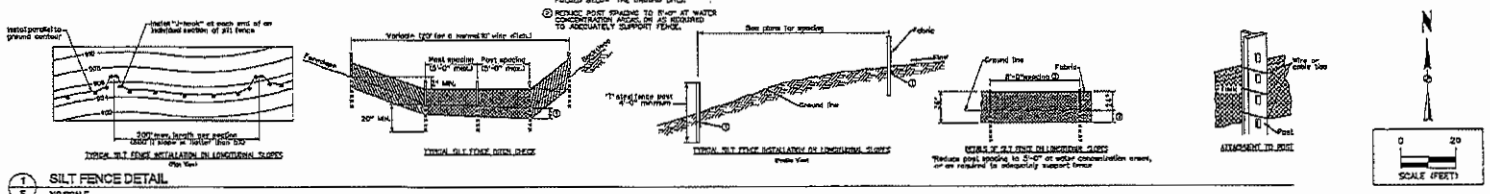
APPENDIX G

GRADING & EROSION CONTROL PLAN



GRADING NOTES

1. CONTRACTOR TO STRIP AND STOCKPILE TOPSOIL ON ALL AREAS TO BE CUT OR FILLED. REDREAD TO MINIMUM 9" DEPTH TO FINISH GRADES.
2. ANY EXCESS CUT TO BE SPREAD ON SITE AS DIRECTED BY ENGINEER DURING CONSTRUCTION. PLACE TOPSOIL OVER ALL AREAS DISTURBED.
3. ALL DRAINAGE SWALES AND SLOPES 5 TO 1 OR GREATER TO BE SEEDED USING COMMERCIALLY AVAILABLE EROSION CONTROL SEED MIXTURE APPLIED AT RATE RECOMMENDED BY SUPPLIER
4. EROSION CONTROL: SEED THE SITE AFTER ROUGH GRADING HAS BEEN COMPLETED. PLACE SILT FENCE AND MAINTAIN IN PROBLEM AREAS AFTER GROUND COVER HAS BEEN ESTABLISHED. COMPLY WITH EROSION CONTROL LAW.
5. PROVIDE SILT FENCE AS SHOWN ON PLAN. ADDITIONAL SILT FENCE MAY BE NEEDED IN PROBLEM AREAS DURING CONSTRUCTION.
6. CONTRACTOR SHALL COORDINATE CONNECTION OF BUILDING ROOF DRAIN DOWNSPOUTS TO STORM SEWER. VERIFY LOCATION AND SIZE WITH ARCHITECTURAL PLANS.
7. PROVIDE FILTER SOCK WHERE SHOWN ON PLANS AND AS NEEDED TO KEEP SITE IN COMPLIANCE W/ SWPPP AND PROJECT PLAN AND SPECIFICATIONS.
8. ALL DISTURBED AREAS NOT CALLED OUT FOR BUILDING OR PAVEMENT SHALL BE SEEDED.



1/5 SILT FENCE DETAIL
NO SCALE

MARK	REVISIONS	DATE	BY

Engineer: SVS | Checked by: MAA | Scale: 1"=20'
Technician: TLS | Date: 08/23/18 | Drawing: Per
Project No: 16.0514 | Sheet 4 of 6

MERCY CLINICS - GRIMES

SITE GRADING, STORM SEWER AND EROSION CONTROL PLAN

GRIMES, IOWA

SNYDER & ASSOCIATES, INC.
2727 S.W. SNYDER BLVD.
ALGONA, IOWA 50523
515-464-2001 | www.snyder-associates.com

Project No: 16.0514

Sheet 4 of 6

SITE PLANS

FOR

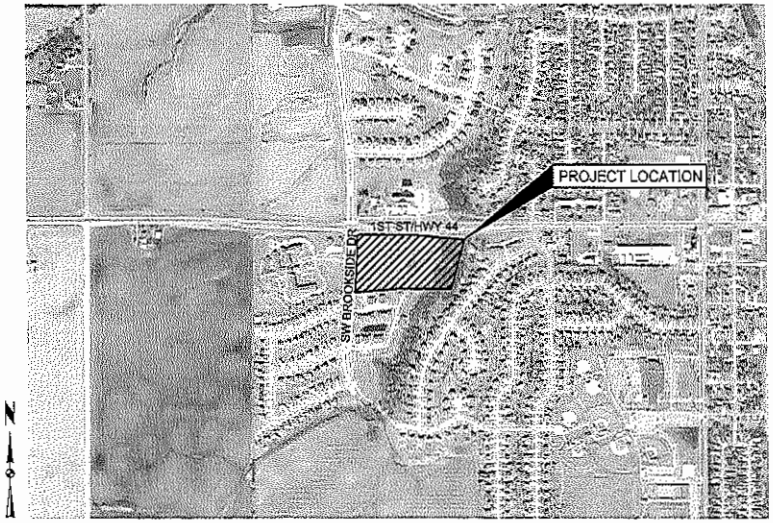
MERCY CLINICS - GRIMES

BROOKSIDE COMMERCIAL PLAT 1

CITY OF GRIMES, POLK COUNTY, IOWA

OWNER/DEVELOPER

KR&C PROPERTIES
1688 U AVENUE
GRAND JUNCTION, IA 50107
CONTACT: KIM RUETER
PH: 515-370-0245



VICINITY MAP

INDEX OF SHEETS

1. TITLE SHEET
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4. SITE GRADING, STORM SEWER AND EROSION CONTROL PLAN
5. SITE GRADING, STORM SEWER AND EROSION CONTROL PLAN
6. PLANTING PLAN

LICENSED PROFESSIONAL ENGINEER
SETH SUNDERMAN
23468
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.

Seth Sunderman, P.E. Date
License Number 23468
My License Renewal Date is December 31, 2017
Pages or sheets covered by this seal:
SHEETS 1-6

MARK	REVISION	DATE	BY

Engineer: SYS | Checked by: MAA | Scale: 1"=50'
Technician: TLS | Date: 08/23/16 | Field Bk: Pg:
Project No: 116.0514 | Sheet 1 of 6

MERCY CLINICS - GRIMES
GRIMES, IOWA

TITLE SHEET

SNYDER & ASSOCIATES, INC.
2222 S.W. SNYDER BLVD.
ANKENY, IOWA 50023
515-964-2020 | www.snyder-associates.com

Project No: 116.0514
Sheet 1 of 6

LEGEND

Features	Existing	Proposed
Spot Elevation	93.0	93.0
Contour Elevation	93	93
Fence (Barbed, Field, Hog)		
Fence (Chain Link)		
Fence (Wood)		
Fence (Silt)		
Tree Line		
Tree Stump		
Deciduous Tree \ Shrub		
Coniferous Tree \ Shrub		
Communication	—C(•)—	—C—
Overhead Communication	—OC(•)—	—OC—
Fiber Optic	—FO(•)—	—FO—
Underground Electric	—E(•)—	—E—
Overhead Electric	—OE(•)—	—OE—
Gas Main with Size	—4" G(•)—	—4" G—
High Pressure Gas Main with Size	—4" HPG(•)—	—4" HPG—
Water Main with Size	—8" W(•)—	—8" W—
Sanitary Sewer with Size	—8" S(•)—	—8" S—
Duct Bank	—DUCT(•)—	
Test Hole Location for SUE w/ID		

(•) Denotes the survey quality service level for utilities

Features	Existing	Proposed
Sanitary Manhole		
Storm Sewer with Size	12" ST	12" ST
Storm Manhole		
Single Storm Sewer Intake		
Double Storm Sewer Intake		
Fire Hydrant		
Fire Hydrant on Building		
Water Main Valve		
Water Service Valve		
Well		
Utility Pole		
Guy Anchor		
Utility Pole with Light		
Utility Pole with Transformer		
Street Light		
Yard Light		
Electric Box		
Electric Transformer		
Traffic Sign		
Communication Pedestal		
Communication Manhole		
Communication Handhole		
Fiber Optic Manhole		
Fiber Optic Handhole		
Gas Valve		
Gas Manhole		
Gas Apparatus		
Fence Post or Guard Post		
Underground Storage Tank		
Above Ground Storage Tank		
Sign		
Satellite Dish		
Mailbox		
Soil Boring		+

UTILITY QUALITY SERVICE LEVELS

QUALITY LEVELS OF UTILITIES ARE SHOWN IN THE PARENTHESES WITH THE UTILITY TYPE AND WHEN APPLICABLE, SIZE. THE QUALITY LEVELS ARE BASED ON THE CI/ ASCE 38-02 STANDARD.

QUALITY LEVEL (D) INFORMATION IS DERIVED FROM EXISTING UTILITY RECORDS OR ORAL RECOLLECTIONS.

QUALITY LEVEL (C) INFORMATION IS OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION WITH QUALITY D INFORMATION.

QUALITY LEVEL (B) INFORMATION IS OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES.

QUALITY LEVEL (A) IS HORIZONTAL AND VERTICAL POSITION OF UNDERGROUND UTILITIES OBTAINED BY ACTUAL EXPOSURE OR VERIFICATION OF PREVIOUSLY EXPOSED SUBSURFACE UTILITIES, AS WELL AS THE TYPE, SIZE, CONDITION, MATERIAL, AND OTHER CHARACTERISTICS.

UTILITY WARNING

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN COMPRISE ALL SUCH ITEMS IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN ARE IN THE EXACT LOCATION INDICATED EXCEPT WHERE NOTED AS QUALITY LEVEL A.

UTILITY CONTACT INFORMATION

C1-COMMUNICATION LINE	CENTURYLINK Tom Sturmer 303-664-8090 Thomas.sturmer@centurylink.com
C2-COMMUNICATION LINE	HICKORY TECH Joni McCabe 507-387-1770 Joni.McCabe@HickoryTech.com
S-SANITARY SEWER	US WATER CORP Jacob Solomo 515-986-3176
FO1-FIBER OPTIC	IOWA COMMUNICATIONS NETWORK Doug Ebelsheiser 515-725-4742 doug.ebelsheiser@iowa.gov
CLEAR	IOWA NETWORK SERVICES Jeff Klocko 515-830-0445 jeff@netins.com
OE-OVERHEAD ELECTRIC E2-ELECTRIC LINE	MIDAMERICAN ELECTRIC Craig Ranfeld 515-252-6632 MECDSMDesignLocates@midamerican.com
G-GAS LINE	BLACK HILLS ENERGY 888-890-5554
E1-ELECTRIC LINE	BLACK HILLS ENERGY Joe McAready 515-343-2030 Joe.mcaready@blackhillscorp.com
FO2-FIBER OPTIC C3-COMMUNICATION LINE	MEDIACOM COMMUNICATIONS CORP Paul May 515-246-2252 pmay@mediacomcc.com
NO MAPS RECEIVED	UNITE PRIVATE NETWORKS, LLC Clark Lundy 515-321-3336 clark.lundy@upnllc.com
W1-WATER	WATER DEVELOPMENT COMPANY Tom W Thorpe 515-289-2345 tom@thorpewater.com

IOWA ONE CALL
1-800-292-8989 | 811
www.iowaonecall.com

CITY OF GRIMES STANDARD NOTES

1. GENERAL NOTES:
   - A. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT VERSION OF THE URBAN STANDARDS SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE SOILS REPORTS PREPARED BY OTHERS.
   - B. A PRECONSTRUCTION MEETING IS REQUIRED PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THIS MEETING. CONTACT BRANDT WILLIAMSON WITH FOX ENGINEERING (515.233.0000).
   - C. ALL PERMITS (IDNR, IDOT, ARMY CORP., ETC.) SHALL BE OBTAINED PRIOR TO THE START OF CONSTRUCTION.
   - D. THE DEVELOPER AND/OR CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE THE CITY OF GRIMES WITH RECORD DRAWINGS OF ALL IMPROVEMENTS AS PER CITY STANDARD PROCEDURES.
   - E. A KNOX BOX IS REQUIRED BY THE FIRE DEPARTMENT AND SHALL BE OBTAINED AT CITY HALL.
   - F. ALL SITE LIGHTING SHALL NOT SPILL ONTO ADJACENT PROPERTIES OR RIGHT-OF-WAYS.
2. SANITARY SEWER NOTES:
   - A. THE CONTRACTOR IS REQUIRED TO PLACE A TEMPORARY PLUG IN THE EXISTING DOWNSTREAM SANITARY SEWER MANHOLE PRIOR TO THE START OF CONSTRUCTION. THE PLUG SHALL BE REMOVED FOLLOWING APPROVAL OF CONSTRUCTION BY THE CITY OF GRIMES.
   - B. SANITARY GRAVITY PIPE MATERIAL SHALL BE PVC SDR 26 OR TRUSS (8" TO 15").
   - C. SANITARY GRAVITY SERVICE PIPE MATERIAL SHALL BE PVC SDR 23.5 (4" TO 6").
   - D. ALL SANITARY SEWER MANHOLES SHALL HAVE STEPS.
   - E. ALL SANITARY SEWER MANHOLES CASTINGS SHALL BE SEALED WITH INTERIOR CHIMNEY SEALS.
   - F. ALL SANITARY SEWER MANHOLE CASTINGS LOCATED WITHIN PAVEMENT SHALL BE BOXED OUT.
   - G. SANITARY SEWER TESTING & TELEVISING (8" TO 15") SHALL BE COMPLETED PRIOR TO PAVING. THE SEWER SYSTEM SHALL BE FLUSHED WITH WATER PRIOR TO TELEVISING.
3. WATER MAIN NOTES:
   - A. ALL FIRE HYDRANTS SHALL BE AMERICAN FLOW CONTROL-WATEROUS PACER WB-67-250, MUELLER SUPER CENTURION 250 (3-WAY A-423), OR CLOW MEDALLION F-2545. ALL HYDRANTS SHALL HAVE THE FOLLOWING: 6" MJ SHOE, 2-1/2" HOSE NOZZLE, 4-1/2" STEAMER NOZZLE, NST THREADS, PENTAGON OPERATING NUT, CHAIN ON CAP, OPEN LEFT, 5-1/2' BURY, AND FACTORY PAINTED RED. THE MINIMUM SPOOL PIPE LENGTH FROM AUXILIARY VALVE TO HYDRANT SHOE SHALL BE 2.0'.
   - B. ALL HYDRANTS WILL IMMEDIATELY BE COVERED WITH A BLACK PLASTIC BAG (OR EQUIVALENT) ONCE THE HYDRANT IS INSTALLED. THE CITY OF GRIMES WILL NOTIFY THE CONTRACTOR WHEN THE BAGS CAN BE REMOVED.
   - C. A TRACER WIRE RECEPTACLE SHALL BE INSTALLED AT EACH HYDRANT.
   - D. ALL VALVES SHALL BE RESILIENT WEDGE GATE VALVES.
   - E. WATER SERVICE SHALL BE 1-INCH MINIMUM TYPE K COPPER.
   - F. PROPOSED WATER MAIN SHALL BE PRESSURE TESTED AND CHLORINATED BY THE DEVELOPER. THE FILLING OF THE WATER MAIN SHALL BE DONE BY THE CITY OF GRIMES. THE BACTERIA TEST AND SUBMITTAL OF TEST TO LAB SHALL BE DONE BY THE DEVELOPER AND RESULTS PROVIDED BY FAX TO US WATER AT 515-986-7300. IF THE TEST DOES NOT PASS, THE CONTRACTOR WILL BE REQUIRED TO PAY FOR ALL THE WATER USED TO REPEAT THE TEST.
4. STORM SEWER NOTES:
   - A. ALL STORM SEWER IN THE ROW SHALL BE RCP, UNLESS OTHERWISE APPROVED BY THE CITY.
   - B. ALL FLARED END SECTIONS SHALL HAVE FOOTINGS AND APRON GRATES. THE LAST 3 PIPE SECTIONS AND THE FLARED END SECTION ON ALL CULVERTS SHALL BE TIED. ALL STORM SEWER JOINTS SHALL BE WRAPPED WITH ENGINEERING FABRIC.
   - C. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY FIELD TILE DAMAGED DURING CONSTRUCTION. THE TILE SHOULD BE DIRECTED TO PUBLIC STORM SEWER IF POSSIBLE. THE CONTRACTOR SHALL RECORD THE ELEVATION AND LOCATION OF ALL TILES.
   - D. ALL SUMP SERVICE LINES SHALL HAVE TRACER WIRE.

GENERAL NOTES

A. NOTIFY UTILITY PROVIDERS PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES AND COORDINATE WITH UTILITY PROVIDERS AS NECESSARY DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTENCE, EXACT LOCATION, AND DEPTH OF ALL UTILITIES. PROTECT ALL UTILITY LINES AND STRUCTURES NOT SHOWN FOR REMOVAL OR MODIFICATION. ANY DAMAGES TO UTILITY ITEMS NOT SHOWN FOR REMOVAL OR MODIFICATION SHALL BE REPAIRED TO THE UTILITY OWNER'S SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.

B. CONSTRUCTION OF ALL STREET AND UTILITY IMPROVEMENTS SHALL CONFORM TO SUDAS 2016 STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE SOILS REPORTS PREPARED BY OTHERS.

C. LENGTH OF UTILITIES SHOWN ON PLANS ARE DIMENSIONED FROM CENTERLINE OF STRUCTURE TO CENTERLINE OF STRUCTURE.

D. ALL TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). WHEN CONSTRUCTION ACTIVITIES OBSTRUCT PORTIONS OF THE ROADWAY, FLAGGERS SHALL BE PROVIDED. FLAGGERS SHALL CONFORM TO THE MUTCD IN APPEARANCE, EQUIPMENT AND ACTIONS.

E. NOTIFY OWNER, ENGINEER, AND GRIMES PUBLIC WORKS AT LEAST 48 HOURS PRIOR TO BEGINNING WORK.

F. CONSTRUCT MANHOLES AND APPURTENANCES AS WORK PROGRESSES. BACKFILL WITH SUITABLE MATERIAL AND COMPACT TO 95% MAXIMUM DENSITY.

G. IN THE EVENT OF A DISCREPANCY BETWEEN THE QUANTITY ESTIMATES AND THE DETAILED PLANS, THE DETAILED PLANS SHALL GOVERN.

H. ALL FIELD TILES ENCOUNTERED DURING CONSTRUCTION SHALL BE RECONNECTED AND NOTED ACCORDINGLY ON THE AS-BUILT DOCUMENTS.

I. DIMENSIONS, BUILDING LOCATION, UTILITIES AND GRADING OF THIS SITE ARE BASED ON AVAILABLE INFORMATION AT THE TIME OF DESIGN. DEVIATIONS MAY BE NECESSARY IN THE FIELD. ANY SUCH CHANGES OR CONFLICTS BETWEEN THIS PLAN AND FIELD CONDITIONS ARE TO BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT VERIFICATION OF ALL SITE IMPROVEMENTS PRIOR TO CONSTRUCTION.

J. CONTRACTOR TO LOAD AND TRANSPORT ALL MATERIALS CONSIDERED TO BE UNDESIRABLE TO BE INCORPORATED INTO THE PROJECT TO AN APPROVED OFF-SITE WASTE SITE.

K. CONTRACTOR TO STRIP AND STOCKPILE TOPSOIL FROM ALL AREAS TO BE CUT OR FILLED. RESPREAD TO MINIMUM 6" DEPTH TO FINISH GRADES.

L. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN ARE FINISHED GRADES AND/OR TOP OF PAVING SLAB (GUTTER), UNLESS OTHERWISE NOTED.

M. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING DIRT AND DEBRIS FROM NEIGHBORING STREETS, DRIVEWAYS, AND SIDEWALKS CAUSED BY CONSTRUCTION ACTIVITIES IN A TIMELY MANNER.

N. THE ADJUSTMENT OF ANY EXISTING UTILITY APPURTANENCES TO FINAL GRADE IS CONSIDERED INCIDENTAL TO THE SITE WORK.

O. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING EROSION CONTROL MEASURES AS NECESSARY. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAINTAINING ANY EXISTING EROSION CONTROL MEASURES ON SITE AT THE TIME OF CONSTRUCTION. GRADING AND SOIL EROSION CONTROL CODE REQUIREMENTS SHALL BE MET BY CONTRACTOR. A GRADING PERMIT IS REQUIRED FOR THIS PROJECT.

P. CONTRACTOR TO COORDINATE NATURAL GAS, ELECTRICAL, TELEPHONE AND ANY OTHER FRANCHISE UTILITY SERVICES WITH UTILITY SERVICE PROVIDER, CITY OF GRIMES, AND THE OWNER PRIOR TO CONSTRUCTION.

Q. CONTRACTOR TO VERIFY ALL UTILITY CROSSINGS AND MAINTAIN MINIMUM 18" VERTICAL AND HORIZONTAL CLEARANCE BETWEEN UTILITIES. CONTRACTOR TO COORDINATE UTILITY ROUTING TO BUILDING AND VERIFY CONNECTION LOCATIONS AND INVERTS PRIOR TO CONSTRUCTION.

SITE BENCHMARK & CONTROL POINTS

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88 - GEOID12A)
IOWA STATE PLANE SOUTH COORDINATE SYSTEM NAD83(2011)(EPOCH 2010.00)
(ARTN DERIVED - US SURVEY FEET
(ALL CONTROL POINTS SHOWN ON SURVEY.)

CP1 N=614688.12 E=1556848.00 ELEV=990.34
MAG NAIL IN CENTERLINE JOINT OF SW BROOKSIDE DRIVE JUST NORTH OF MEDIAN NOSE, SOUTHWEST CORNER OF SITE.

CP2 N=615757.70 E=1556872.73
MAG NAIL IN CENTERLINE JOINT OF W 1ST STREET WEST OF MEDIAN NOSE AT SW BROOKSIDE DRIVE INTERSECTION, NORTHWEST CORNER OF SITE.

CP3 N=615253.41 E=1557791.67
1/2" IRON ROD WITH RED IN CENTER MEDIAN OF W 1ST STREET NORTH-NORTHWEST OF BOX CULVERT OUTLET, NORTHEAST CORNER OF SITE.

CP4 N=614691.79 E=1557354.76
MAG NAIL IN ASPHALT AT NORTH END OF SW CREEKSIDE COURT, SOUTH SIDE OF SITE.

BUILDING DESCRIPTION

TOTAL BUILDING HEIGHT = 23.0'
FLOOR SF = 14,400 SF

PARKING REQUIREMENTS:

PROFESSIONAL OFFICE: 50% GROSS FLOOR AREA (1 STALL/200 SF)
14,400 SF X 50% / 200 = 36 STALLS REQUIRED
PROVIDED 103 SPACES (INCLUDES 5 HANDICAP STALLS)

PROPERTY DESCRIPTION

NW 2.35 ACRES, LOT 100 KENNYBROOK ESTATES PLAT 14

ZONING

C-2 - GENERAL AND HIGHWAY SERVICE COMMERCIAL DISTRICT AND TRANSPORTATION CORRIDOR MIXED USE DEVELOPMENT OVERLAY DISTRICT.

GENERAL USE

MEDICAL CLINIC

LOT INFORMATION

LOT AREA: 109,757 SF (2.52 AC)
OPEN SPACE: 33,943 SF (22.3%)
SETBACKS:
FRONT YARD: 25'
SIDE YARD: NONE OR 25' IF ADJACENT TO 'R' DISTRICT OR STREET R.O.W.
REAR YARD: 40' (30' BASED ON APPROVED VARIANCE BY CITY OF GRIMES)
MAX BUILDING HEIGHT: 45'

PROJECT SCHEDULE

START CONSTRUCTION: FALL 2016
COMPLETE CONSTRUCTION: FALL 2017

POLLUTION PREVENTION NOTES

A. POLLUTION PREVENTION AND EROSION PROTECTION

1. CODE COMPLIANCE: THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL POTENTIAL POLLUTION AND SOIL EROSION CONTROL REQUIREMENTS OF THE IOWA CODE, THE IOWA DEPARTMENT OF NATURAL RESOURCES (IDNR) NPDES PERMIT, THE U.S. CLEAN WATER ACT AND ANY LOCAL ORDINANCES. THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO PROTECT AGAINST EROSION AND POLLUTION FROM THIS PROJECT SITE AND ALL OFF-SITE BORROW OR DEPOSIT AREAS DURING PERFORMANCE OR AS A RESULT OF PERFORMANCE.

2. DAMAGE CLAIMS: THE CONTRACTOR WILL HOLD THE OWNER AND ARCHITECT / ENGINEER HARMLESS FROM ANY AND ALL CLAIMS OF ANY TYPE WHATSOEVER RESULTING FROM DAMAGES TO ADJOINING PUBLIC OR PRIVATE PROPERTY, INCLUDING REASONABLE ATTORNEY FEES INCURRED TO OWNER. FURTHER, IF THE CONTRACTOR FAILS TO TAKE NECESSARY STEPS TO PROMPTLY REMOVE EARTH SEDIMENTATION OR DEBRIS WHICH COMES ONTO ADJOINING PUBLIC OR PRIVATE PROPERTY, THE OWNER MAY, BUT NEED NOT, REMOVE SUCH ITEMS AND DEDUCT THE COST THEREOF FROM AMOUNTS DUE TO THE CONTRACTOR.

B. STORM WATER DISCHARGE PERMIT

1. THIS PROJECT REQUIRES COVERAGE UNDER THE NPDES GENERAL PERMIT NO. 2 FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES FROM THE IDNR, AS REQUIRED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS ARE RESPONSIBLE FOR COMPLIANCE WITH AND FULFILLMENT OF ALL REQUIREMENTS OF THE NPDES GENERAL PERMIT NO. 2 INCLUDING CREATING OR MAINTAINING THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND POSSIBLY OBTAINING THE GENERAL PERMIT COVERAGE FROM THE IDNR.

2. ALL DOCUMENTS RELATED TO THE STORM WATER DISCHARGE PERMIT, INCLUDING, BUT NOT LIMITED TO, THE NOTICE OF INTENT, PROOF OF PUBLICATIONS, DISCHARGE AUTHORIZATION LETTER, CURRENT SWPPP, SITE INSPECTION LOG, AND OTHER ITEMS, SHALL BE KEPT ON SITE AT ALL TIMES AND MUST BE PRESENTED TO ANY JURISDICTIONAL AGENCIES UPON REQUEST. FAILURE TO COMPLY WITH THE NPDES PERMIT REQUIREMENTS IS A VIOLATION OF THE CLEAN WATER ACT AND THE CODE OF IOWA.

3. A "NOTICE OF DISCONTINUATION" MUST BE FILED WITH THE IDNR UPON FINAL STABILIZATION OF THE DISTURBED SITE AND REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURES. ALL PLANS, INSPECTION REPORTS, AND OTHER DOCUMENTS MUST BE RETAINED FOR A PERIOD OF THREE YEARS AFTER PROJECT COMPLETION. THE CONTRACTOR SHALL RETAIN A RECORD COPY AND PROVIDE THE ORIGINAL DOCUMENTS TO THE OWNER UPON PROJECT ACCEPTANCE AND/OR SUBMITTAL OF THE NOTICE OF DISCONTINUATION.

C. POLLUTION PREVENTION PLAN:

1. THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS A SEPARATE DOCUMENT IN ADDITION TO THESE PLAN DRAWINGS. THE CONTRACTOR SHOULD REFER TO THE SWPPP FOR ADDITIONAL REQUIREMENTS AND MODIFICATIONS TO THE POLLUTION PREVENTION PLAN MADE DURING CONSTRUCTION.

2. THE SWPPP ILLUSTRATES GENERAL MEASURES AND BEST MANAGEMENT PRACTICES (BMP) FOR COMPLIANCE WITH THE PROJECT'S NPDES PERMIT COVERAGE. ALL BMP'S AND EROSION CONTROL MEASURES REQUIRED AS A RESULT OF CONSTRUCTION ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY, NOTE AND IMPLEMENT. ADDITIONAL BMP'S FROM THOSE SHOWN ON THE PLAN MAY BE REQUIRED.

3. THE SWPPP AND SITE MAP SHOULD BE EXPEDITIOUSLY REVISED TO REFLECT CONSTRUCTION PROGRESS AND CHANGES AT THE PROJECT SITE.

4. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL REQUIREMENTS OF THE GENERAL PERMIT AND SWPPP, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING BMP'S UNLESS INFEASIBLE OR NOT APPLICABLE:

   a. UTILIZE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE WHEN DISCHARGING FROM TEMPORARY SEDIMENT BASINS. PROVIDE AND MAINTAIN NATURAL BUFFERS AROUND SURFACE WATERS, DIRECT STORM WATER TO VEGETATED AREAS TO INCREASE SEDIMENT REMOVAL AND MAXIMIZE STORM WATER INFILTRATION, AND MINIMIZE SOIL COMPACTION.

   b. INSTALL PERIMETER AND FINAL SEDIMENT CONTROL MEASURES SUCH AS SILT BARRIERS, DITCH CHECKS, DIVERSION BERMS, OR SEDIMENTATION BASINS DOWNSTREAM OF SOIL DISTURBING ACTIVITIES PRIOR TO SITE CLEARING AND GRADING OPERATIONS.

   c. PRESERVE EXISTING VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION AND LIMIT TO A MINIMUM THE TOTAL AREA DISTURBED BY CONSTRUCTION OPERATIONS AT ANY TIME.

   d. MAINTAIN ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES IN WORKING ORDER, INCLUDING CLEANING, REPAIRING, REPLACEMENT, AND SEDIMENT REMOVAL THROUGHOUT THE PERMIT PERIOD. CLEAN OR REPLACE SILT CONTROL DEVICES WHEN THE MEASURES HAVE LOST 50% OF THEIR ORIGINAL CAPACITY.

   e. INSPECT THE PROJECT AREA AND CONTROL DEVICES (BY QUALIFIED PERSONNEL ASSIGNED BY THE CONTRACTOR) EVERY SEVEN CALENDAR DAYS. RECORD THE FINDINGS OF THESE INSPECTIONS AND ANY RESULTING ACTIONS IN THE SWPPP WITH A COPY SUBMITTED WEEKLY TO THE OWNER OR ENGINEER DURING CONSTRUCTION. REVISE THE SWPPP AND IMPLEMENT ANY RECOMMENDED MEASURES WITHIN 7 DAYS.

   f. PREVENT ACCUMULATION OF EARTH AND DEBRIS FROM CONSTRUCTION ACTIVITIES ON ADJOINING PUBLIC OR PRIVATE PROPERTIES, INCLUDING STREETS, DRIVEWAYS, SIDEWALKS, DRAINAGEWAYS, OR UNDERGROUND SEWERS. REMOVE ANY ACCUMULATION OF EARTH OR DEBRIS IMMEDIATELY AND TAKE REMEDIAL ACTIONS FOR FUTURE PREVENTION.

   g. INSTALL NECESSARY CONTROL MEASURES SUCH AS SILT BARRIERS, EROSION CONTROL MATS, MULCH, DITCH CHECKS OR RIPRAP AS SOON AS AREAS REACH THEIR FINAL GRADES AND AS CONSTRUCTION OPERATIONS PROGRESS TO ENSURE CONTINUOUS RUNOFF CONTROL. PROVIDE INLET AND OUTLET CONTROL MEASURES AS SOON AS STORM SEWERS ARE INSTALLED.

   h. RESPREAD A MINIMUM OF 4 INCHES OF TOPSOIL (INCLUDING TOPSOIL FOUND IN SOD) ON ALL DISTURBED AREAS, EXCEPT WHERE PAVEMENT, BUILDINGS OR OTHER IMPROVEMENTS ARE LOCATED.

   i. STABILIZE UNDEVELOPED, DISTURBED AREAS WITH MULCH, TEMPORARY SEED MIX, PERMANENT SEED MIX, OR SOD AS SOON AS PRACTICAL UPON COMPLETION OR DELAY OF GRADING OPERATIONS. INITIATE STABILIZATION MEASURES NO LATER THAN 14 CALENDAR DAYS AFTER CONSTRUCTION ACTIVITY HAS FINISHED OR IS PLANNED TO BE DELAYED MORE THAN 21 CALENDAR DAYS.

   j. COORDINATE LOCATIONS OF STAGING AREAS WITH THE OWNER AND RECORD IN THE SWPPP. UNLESS NOTED OTHERWISE, STAGING AREAS SHOULD CONTAIN THE FOLLOWING: JOB TRAILERS, FUELING / VEHICLE MAINTENANCE AREA, TEMPORARY SANITARY FACILITIES, MATERIALS STORAGE, AND CONCRETE WASHOUT FACILITY. CONTROL RUNOFF FROM STAGING AREAS WITH DIVERSION BERMS AND/OR SILT BARRIERS AND DIRECT TO A SEDIMENT BASIN OR OTHER CONTROL DEVICE WHERE POSSIBLE. CONCRETE WASHOUT MUST BE CONTAINED ONSITE.

   k. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND SITE WASTE PRIOR TO FILING OF THE "NOTICE OF DISCONTINUATION".

MERCY CLINICS - GRIMES

PROJECT INFORMATION

GRIMES, IOWA

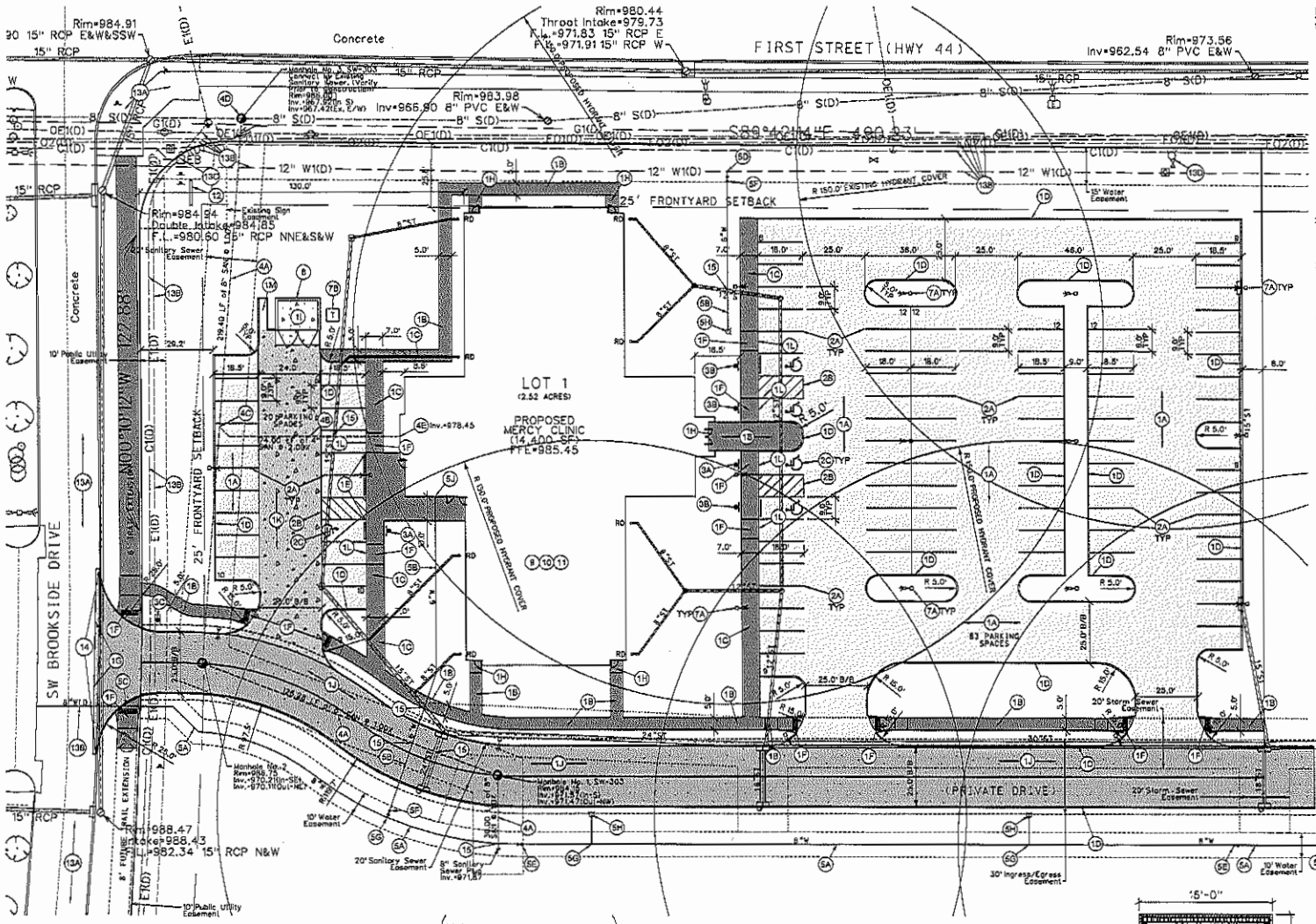
SNYDER & ASSOCIATES, INC.

2727 S.W. SNYDER BLVD.
ANKENY, IOWA 50023
515-964-2020 | www.snyder-associates.com

MARK	REVISION	DATE	BY

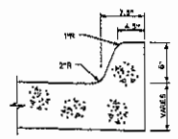
Engineer: SVS | Checked By: MAA | Scale: 1"=N/A
Technician: TLS | Date: 08/23/16 | Field Bk: Fy

Project No: 116.0514

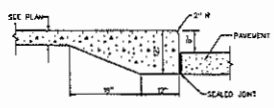


DIMENSION PLAN CONSTRUCTION NOTES

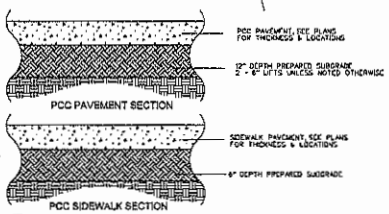
1. PAVEMENTS, PROVIDE THE FOLLOWING:
   A. 6" DEPTH PCC PAVEMENT ON 12" DEPTH PREPARED SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
   B. 4" DEPTH PCC SIDEWALK ON 6" DEPTH PREPARED SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
   C. 4" DEPTH PCC SIDEWALK WITH INTEGRAL CURB ON 6" DEPTH PREPARED SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
   D. STANDARD CURB, SEE DETAIL
   E. NO CURB.
   F. PEDESTRIAN RAMP WITH MAXIMUM SLOPE OF 8.33% AND DETECTABLE WARNING WHERE SHOWN.
   G. CONNECT TO EXISTING PAVEMENT USING TYPE B JOINT.
   H. PCC STOOP, SEE ARCHITECTURAL PLANS FOR DETAILS.
   I. 10" PCC PAVEMENT ON 12" DEPTH PREPARED SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
   J. 8" DEPTH PCC PAVEMENT ON 8" DEPTH PREPARED SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
   K. 7" PCC PAVEMENT ON 12" DEPTH PREPARED SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
   L. TAPER CURB.
   M. 6" DEPTH PCC PLANE ON 12" DEPTH PREPARED SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
2. PAVEMENT MARKINGS, PROVIDE THE FOLLOWING:
   A. 4" PAINTED PARKING STALL LINES, WHITE.
   B. 45° STRIPING AT 3' O.C. WHERE SHOWN.
   C. PAINTED STATE OF IOWA APPROVED DISABLED SYMBOL AS PER ADAAG REQUIREMENTS.
3. SIGNAGE, PROVIDE THE FOLLOWING:
   A. POLE MOUNTED VAN ACCESSIBLE PARKING SIGNAGE AS PER ADAAG REQUIREMENTS.
   B. POLE MOUNTED ACCESSIBLE PARKING SIGNAGE AS PER ADAAG REQUIREMENTS.
   3. STOP SIGN PER MUTCD.
4. SANITARY SEWER SERVICE, PROVIDE THE FOLLOWING:
   A. 8" PVC PUBLIC SANITARY SEWER MAIN AT A 1.0% SLOPE.
   B. 4" PVC PRIVATE SANITARY SEWER SERVICE AT MINIMUM 2.0% SLOPE.
   C. CONNECT TO 8" SANITARY SEWER MAIN WITH WYE AND RISER AS NECESSARY.
   D. CONNECT TO EXISTING 8" PUBLIC SANITARY SEWER MAIN WITH SW-303, VERIFY LOCATION AND DEPTH PRIOR TO CONSTRUCTION.
   E. BUILDING SANITARY SEWER SERVICE CONNECTION, SEE ARCHITECTURAL AND MECHANICAL PLANS FOR DETAILS.
5. WATER SERVICE, PROVIDE THE FOLLOWING:
   A. 8" PUBLIC WATER MAIN WITH FITTINGS AND BEND AS NECESSARY, MINIMUM 5.0' DEPTH.
   B. 6" PRIVATE WATER MAIN WITH FITTINGS AND BEND AS NECESSARY, MINIMUM 5.5' DEPTH.
   C. CONNECT TO EXISTING 8" WATER MAIN STUB.
   D. CONNECT TO EXISTING 12" WATER MAIN WITH 8" TAPPING VALVE AND SLEEVE.
   E. 8" WATER VALVE.
   F. 6" WATER VALVE.
   G. 8"x8"x6" TEE.
   H. HYDRANT ASSEMBLY.
   I. TEMPORARY HYDRANT ASSEMBLY.
   J. BUILDING WATER SERVICE CONNECTION, SEE ARCHITECTURAL AND MECHANICAL PLANS FOR DETAILS.
6. REFER TO SITE PLAN SHEET 5 FOR DETAILED STORM SEWER INFORMATION.
7. SITE ELECTRICAL, PROVIDE THE FOLLOWING:
   A. SITE LIGHTING LOCATIONS SHOWN ARE FOR REFERENCE PURPOSES ONLY. REFER TO ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.
   B. ELECTRICAL TRANSFORMER AND PCC PAD, REFER TO ELECTRICAL DRAWINGS FOR DETAILS.
8. SITE IMPROVEMENTS, PROVIDE THE FOLLOWING:
   A. TRASH ENCLOSURE, SEE DETAIL THIS SHEET AND ARCHITECTURAL PLANS FOR ADDITIONAL DETAILS.
9. COORDINATE ELECTRICAL AND NATURAL GAS SERVICES WITH UTILITY SERVICE PROVIDER AND CITY OF GRIMES PRIOR TO CONSTRUCTION.
10. COORDINATE CABLE TELEVISION AND TELEPHONE SERVICES WITH UTILITY SERVICES PRIOR TO CONSTRUCTION.
11. SEE ARCHITECTURAL DRAWINGS FOR DETAILED BUILDING CONSTRUCTION INFORMATION.
12. MERCY CLINIC MONUMENT SIGN, REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS.
13. EXISTING FEATURES, PROTECT THE FOLLOWING:
   A. EXISTING PAVEMENTS TO REMAIN. ANY DAMAGE TO PAVEMENT DUE TO CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE OWNERS SPECIFICATIONS.
   B. EXISTING UTILITIES, VERIFY LOCATIONS PRIOR TO CONSTRUCTION. ANY DAMAGE TO UTILITIES DUE TO CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE OWNERS SPECIFICATIONS. ADJUST EXISTING UTILITY APPURTENANCES TO FINISH GRADE. COORDINATE ANY ADJUSTMENTS WITH UTILITY.
14. REMOVE AND DISPOSE OF THE FOLLOWING:
   A. CURB AND GUTTER. SAW CUT TO FULL DEPTH TO NEAREST JOINT LINE AT REMOVAL LIMITS.
15. CRITICAL CROSSING CONTRACTOR TO VERIFY ALL CROSSINGS AND PROVIDE 18" MINIMUM SEPARATION.



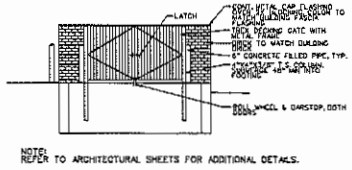
1/4 PCC STANDARD CURB
NO SCALE



2/4 INTEGRAL WALK/CURB DETAIL
NO SCALE

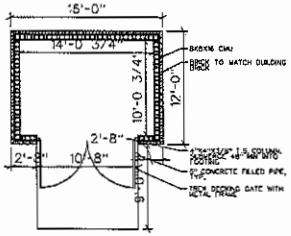


3/4 TYPICAL PAVEMENT CROSS SECTIONS
NO SCALE



NOTE: REFER TO ARCHITECTURAL SHEETS FOR ADDITIONAL DETAILS.

4/4 TRASH ENCLOSURE DETAIL
NO SCALE



SEE CIVIL FOR LOCATION OF TRASH ENCLOSURE

5" PCC SIDEWALK
6" PCC PAVEMENT
7" PCC PAVEMENT
8" PCC PAVEMENT
10" PCC PAVEMENT

0 20
SCALE (FEET)

ISSUE	REVISION	DATE	BY

Engineer: SVS | Checked By: MAA | Scale: 1"=20' | Date: 08/23/16 | Drawn By: TLS | Field Bk: | Pg:

Project No: 116.0514 | Sheet 3 of 6

GRIMES, IOWA

2727 S.W. SNYDER BLVD.
ANKENY, IOWA 50023
515-964-2020 | www.snyder-associates.com

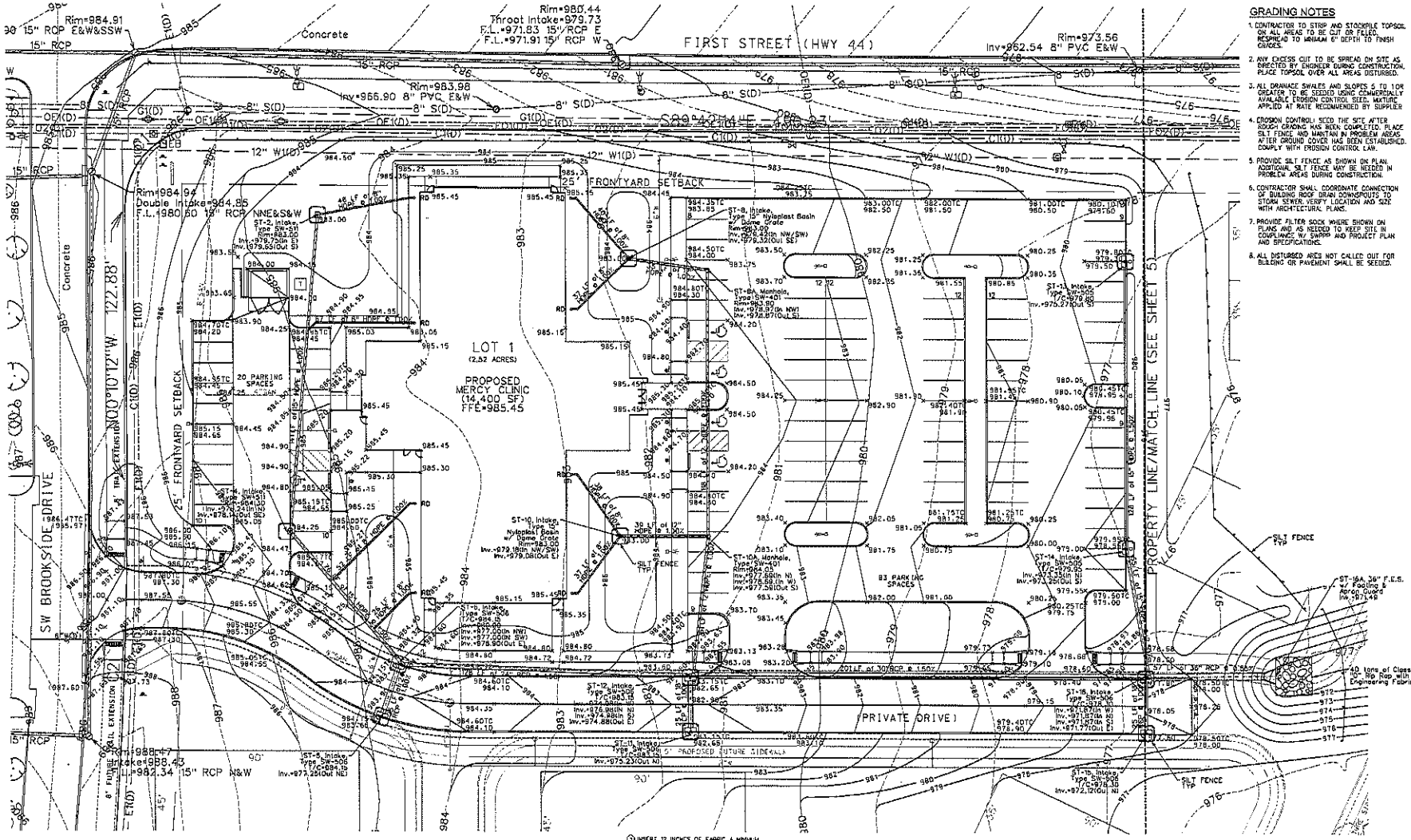
MERCY CLINICS - GRIMES

DIMENSION AND UTILITY PLAN

SNYDER & ASSOCIATES, INC.

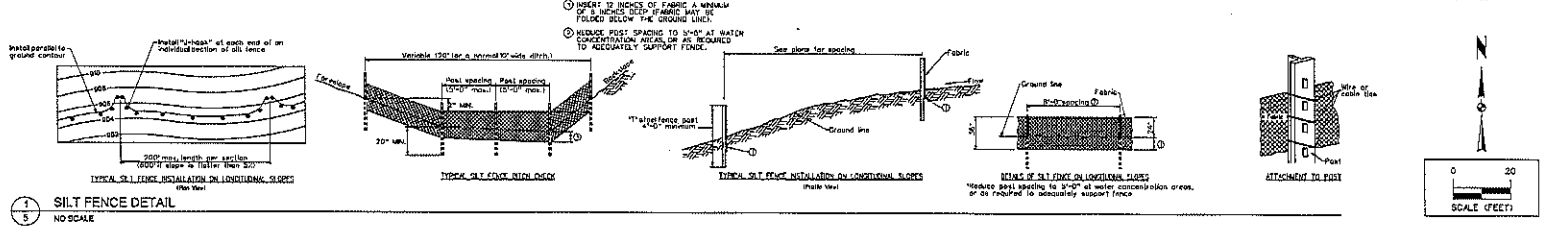
Project No: 116.0514

Sheet 3 of 6



GRADING NOTES

1. CONTRACTOR TO STRIP AND STOCKPILE TOPSOIL ON ALL AREAS TO BE CUT OR FILLED. RESPREAD TO MINIMUM 6" DEPTH TO FINISH GRADES.
2. ANY EXCESS CUT TO BE SPREAD ON SITE AS DIRECTED BY ENGINEER DURING CONSTRUCTION. PLACE TOPSOIL OVER ALL AREAS DISTURBED.
3. ALL DRAINAGE SWALES AND SLOPES 5 TO 1 OR GREATER TO BE SEEDED USING COMMERCIALLY AVAILABLE EROSION CONTROL SEED, MIXTURE APPLIED AT RATE RECOMMENDED BY SUPPLIER
4. EROSION CONTROL: SEED THE SITE AFTER ROUGH GRADING HAS BEEN COMPLETED. PLACE SILT FENCE AND MAINTAIN IN PROBLEM AREAS AFTER GROUND COVER HAS BEEN ESTABLISHED. COMPLY WITH EROSION CONTROL LAW.
5. PROVIDE SILT FENCE AS SHOWN ON PLAN. ADDITIONAL SILT FENCE MAY BE NEEDED IN PROBLEM AREAS DURING CONSTRUCTION.
6. CONTRACTOR SHALL COORDINATE CONNECTION OF BUILDING ROOF DRAIN DOWNSPOUTS TO STORM SEWER. VERIFY LOCATION AND SIZE WITH ARCHITECTURAL PLANS.
7. PROVIDE FILTER SOCK WHERE SHOWN ON PLANS AND AS NEEDED TO KEEP SITE IN COMPLIANCE W/ SWPPP AND PROJECT PLAN AND SPECIFICATIONS.
8. ALL DISTURBED AREA NOT CALLED OUT FOR BUILDING OR PAVEMENT SHALL BE SEEDED.



1/5 SILT FENCE DETAIL
NO SCALE

	REVISION	DATE	BY
VERIFY		Scale: 1"=20'	
Engineer: SVS	Checked By: MAA	Field Bk: Pg:	
Technician: TLS	Date: 08/23/16		Sheet 4 of 6
Project No: 116.0514			

GRIMES, IOWA

2727 S.W. SNYDER BLVD.
ANKENY, IOWA 50023
515-964-0020 | www.snyder-associates.com

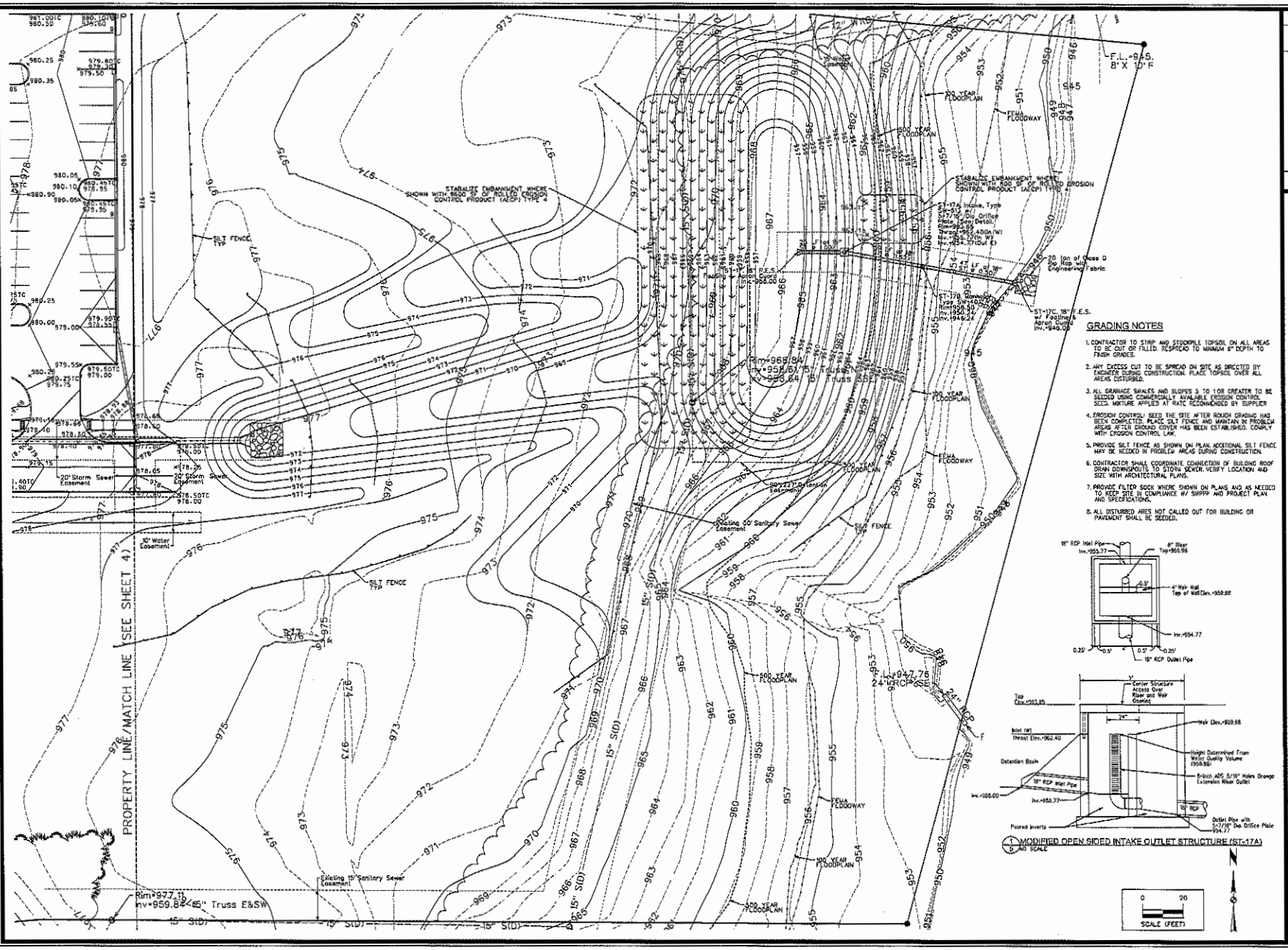
MERCY CLINICS - GRIMES

SITE GRADING, STORM SEWER AND EROSION CONTROL PLAN

SNYDER & ASSOCIATES, INC.

Project No: 116.0514

Sheet 4 of 6



GRADING NOTES

1. CONTRACTOR TO STRIP AND STOCKPILE TOPSOIL ON ALL AREAS TO BE CUT OR FILLED. RESPREAD TO MINIMUM 6" DEPTH TO FINISH GRADES.
2. ANY EXCESS CUT TO BE SPREAD ON SITE AS DIRECTED BY ENGINEER DURING CONSTRUCTION. PLACE TOPSOIL OVER ALL AREAS DISTURBED.
3. ALL DRAINAGE SWALES AND SLOPES 3 TO 1 OR GREATER TO BE SEEDED USING COMMERCIALLY AVAILABLE EROSION CONTROL SEED MIXTURE APPLIED AT RATE RECOMMENDED BY SUPPLIER
4. EROSION CONTROL: SEED THE SITE AFTER ROUGH GRADING HAS BEEN COMPLETED. PLACE SILT FENCE AND MAINTAIN IN PROBLEM AREAS AFTER GROUND COVER HAS BEEN ESTABLISHED. COMPLY WITH EROSION CONTROL LAW.
5. PROVIDE SILT FENCE AS SHOWN ON PLAN. ADDITIONAL SILT FENCE MAY BE NEEDED IN PROBLEM AREAS DURING CONSTRUCTION.
6. CONTRACTOR SHALL COORDINATE CONNECTION OF BUILDING ROOF DRAIN DOWNSPOUTS TO STORM SEWER. VERIFY LOCATION AND SIZE WITH ARCHITECTURAL PLANS.
7. PROVIDE FILTER SOCK WHERE SHOWN ON PLANS AND AS NEEDED TO KEEP SITE IN COMPLIANCE W/ SWPPP AND PROJECT PLAN AND SPECIFICATIONS.
8. ALL DISTURBED AREA NOT CALLED OUT FOR BUILDING OR PAVEMENT SHALL BE SEEDED.

1 MODIFIED OPEN SIDED INTAKE OUTLET STRUCTURE (ST-17A)
NO SCALE

WORK	REVISION	DATE	BY
Engineer: SVS	Checked By: MAA	Scale: 1"=20'	
Technician: TLS	Date: 08/23/16	Field Bk:	Pg:
Project No: 116.0514		Sheet 5 of 6	

GRIMES, IOWA

MERCY CLINICS - GRIMES

SITE GRADING, STORM SEWER AND EROSION CONTROL PLAN

SNYDER & ASSOCIATES, INC.
2727 S.W. SNYDER BLVD.
ANKENY, IOWA 50023
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Project No: 116.0514

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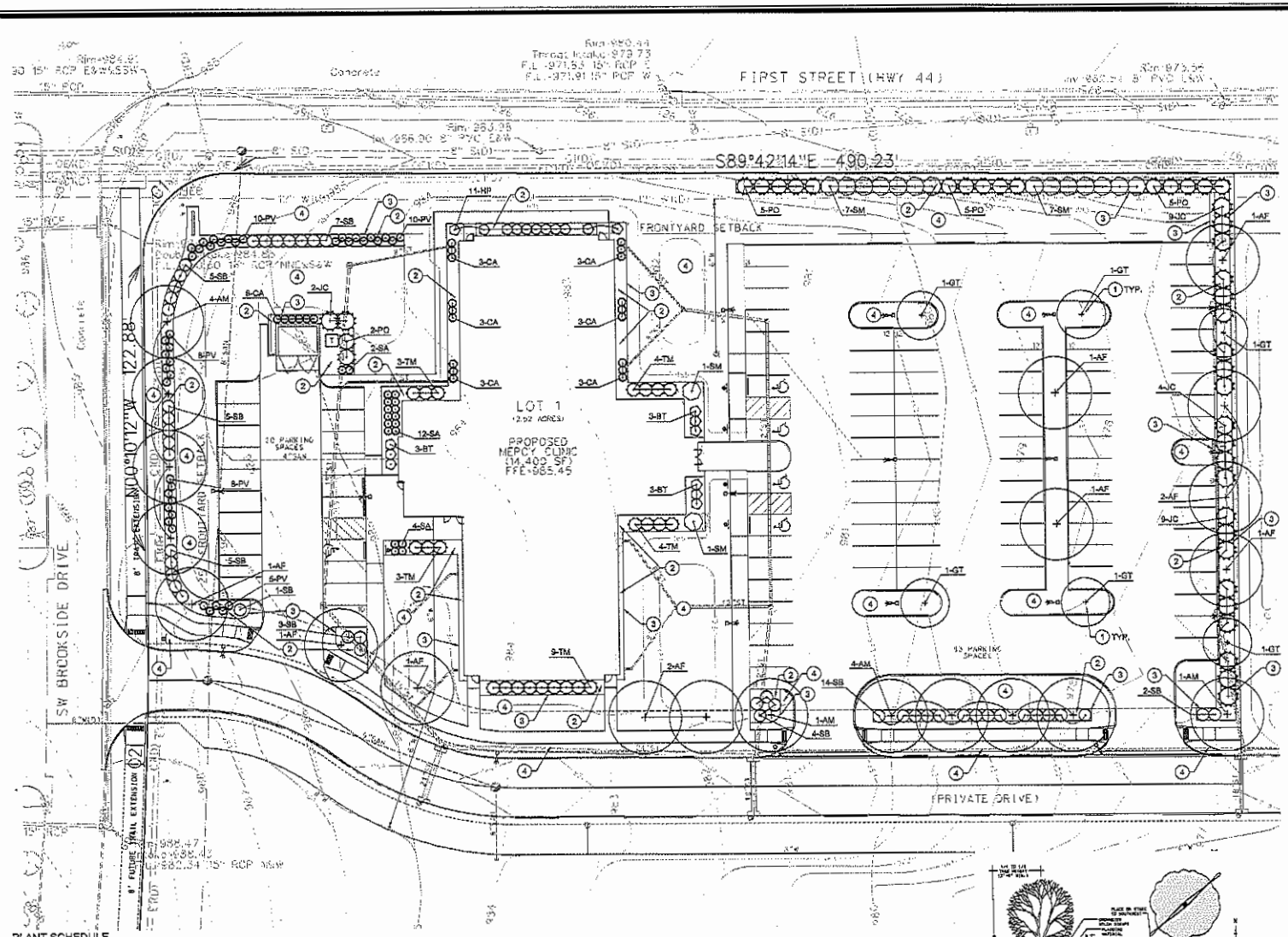


PLANTING PLAN GENERAL NOTES

A. NOTIFY UTILITY COMPANIES PRIOR TO BEGINNING WORK. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTENCE OF EXACT LOCATION AND DEPTH OF ALL UTILITIES. ANY DAMAGE TO UTILITIES AND SERVICES DURING CONSTRUCTION DUE TO THE CONTRACTOR'S CARELESSNESS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.

B. CONTRACTOR SHALL FLAG ALL PLANT MATERIAL LOCATIONS IN THE FIELD FOR OWNER OR OWNERS REPRESENTATIVE APPROVAL PRIOR TO PLANTING. CONTRACTOR TO PROVIDE 3 DAYS NOTICE PRIOR TO PLANTING.

C. ALL PLANT MATERIAL SHALL AT LEAST MEET MINIMUM REQUIREMENTS SHOWN IN THE " AMERICAN STANDARDS FOR NURSERY STOCK" ANSI Z60.1 LATEST EDITION. ALL PLANTS ARE TO BE INSPECTED BY THE LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE PRIOR TO PLANTING. ANY PLANTS NOT MEETING SPECIFICATIONS MAY BE REJECTED.

D. CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR THE DURATION OF THE WARRANTY PERIOD. WARRANTY PERIOD SHALL BE ONE YEAR FROM THE DATE OF FINAL PROJECT ACCEPTANCE. REPLACEMENTS OF PLANTS SHALL MEET MINIMUM REQUIREMENTS SET FORTH IN THE ORIGINAL PLANTING. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE FOR WARRANTY PERIOD. OWNER SHALL ASSUME RESPONSIBILITY FOR MAINTENANCE ONCE THE WARRANTY PERIOD EXPIRES.

E. ALL TREES TO BE PLANTED A MINIMUM OF 5 FEET FROM UTILITIES, PROPERTY LINES, FIRE HYDRANTS AND PAVEMENTS. NOTIFY THE OWNERS REPRESENTATIVE IF FIELD ADJUSTMENTS ARE NECESSARY.

PLANTING PLAN CONSTRUCTION NOTES

1. PROVIDE 3- INCH DEPTH SHREDDED HARDWOOD MULCH AROUND ALL INDIVIDUAL DECIDUOUS TREES IN LAWN AREAS. MULCH SHALL BE A MINIMUM 3 FOOT RADIUS AROUND TREES. PROVIDE A SAMPLE OF THE MULCH FOR OWNERS REPRESENTATIVE FOR REVIEW AND APPROVAL.
2. PROVIDE 2 INCH RIVER ROCK MULCH PLACED TO A DEPTH OF 4 INCHES WITH WEED BARRIER FABRIC UNDERLAYMENT IN ALL MASS PLANTING BED AREAS. PROVIDE SAMPLE OF THE ROCK MULCH FOR OWNERS REPRESENTATIVE FOR REVIEW AND APPROVAL.
3. ALL PLANTING BEDS TO RECEIVE 4 INCH VERTICAL CUT EDGE ADJACENT TO LAWN AREAS UNLESS OTHERWISE DIRECTED BY OWNER.
4. CONTRACTOR SHALL SEED ALL AREAS DISTURBED BY CONSTRUCTION WITH SUDAS TYPE 2 PERMANENT LAWN MIX UNLESS OTHERWISE NOTED ON PLANS.

LANDSCAPE REQUIREMENTS

SCREENING REQUIREMENTS:

NORTH PROPERTY LINE: (ROW HIGHWAY 44)
- --8 FOOT WIDE STRIP OF LAND
- --LOCATED BETWEEN ROW AND PARKING.
- --3 FOOT HEIGHT HEDGE.
- --TREES NOT REQUIRED ALONG HIGHWAY 44 ROW.

EAST PROPERTY LINE: (R2)
- --8 FOOT WIDE STRIP OF LAND
- --LOCATED ALONG ENTIRE PROPERTY LINE.
- --6 FOOT HEIGHT OPAQUE HEDGE.
- --1 TREE PER 40 LF.

SOUTH PROPERTY LINE: (R3)
- --8 FOOT WIDE STRIP OF LAND
- --LOCATED BETWEEN PARKING AND PRIVATE DRIVE.
- --3 FOOT HEIGHT HEDGE.
- --1 TREE PER 40 LF.

WEST PROPERTY LINE: (ROW SW BROOKSIDE DRIVE)
- --8 FOOT WIDE STRIP OF LAND.
- --3 FOOT HEIGHT HEDGE.
- --LOCATED BETWEEN ROW AND PARKING.
- --1 TREE PER 40 LF.

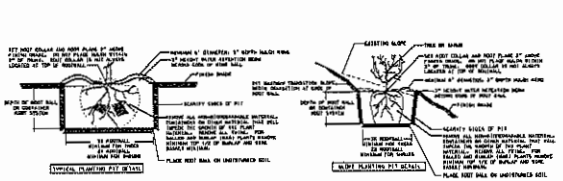
PARKING LOT REQUIREMENTS:
- --1 TREE PER REQUIRED ISLAND
- --1 TREE PER 40 LF OF REQUIRED MEDIAN

FOUNDATION PLANTINGS:
- --REQUIRED ALONG FRONTS AND SIDES OF COMMERCIAL, GOVERNMENTAL, INSTITUTIONAL BUILDINGS, AND MULTIPLE DWELLINGS.

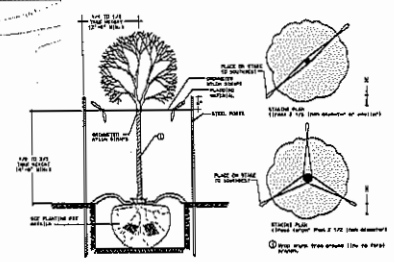
MECHANICAL EQUIPMENT:
- --SCREENED FROM THE ADJACENT STREET AND FROM ADJACENT RESIDENTIALLY ZONED PROPERTIES BY FENCE AND/OR EVERGREEN SHRUBS.

PLANT SCHEDULE

	KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
TREES	AF	11	Acer x freemanii 'Sienna'	SIENNA GLEN MAPLE	1-1/2" CAL.	B&B
	AM	10	Acer miyabei 'Morton'	STATE STREET MAPLE	1-1/2" CAL.	B&B
	GT	6	Gleditsia triacanthos 'Draves'	STREET KEEPER HONEYLOCUST	1-1/2" CAL.	B&B
SHRUBS, ORNAMENTAL GRASSES	BT	9	Berberis thunbergii var. atropurpurea 'Bailtwo'	BURGANDY CARPET® BARBERRY	24" HT.	CONT. (4' O.C.)
	CA	24	Calamagrostis x acutiflora 'Karl Foerster'	KARL FOERSTER GRASS	24" HT.	CONT. (2' O.C.)
	HP	11	Hydrangea paniculata 'Grow'	LITTLE LINE HYDRANGEA	24" HT.	CONT. (3' O.C.)
	JC	24	Juniperus chinensis 'Sea Green'	SEA GREEN JUNIPER	24" HT.	CONT. (3' O.C.)
	PO	17	Physocarpus opulifolius	SUMMER WINE NINEBARK	36" HT.	CONT. (3' O.C.)
	PV	41	Panicum virgatum 'Shenandoah'	SHENANDOAH SWITCHGRASS	24" HT.	CONT. (3' O.C.)
	SA	18	Sesleria autumnalis	AUTUMN MOOR GRASS	12" HT.	CONT. (2' O.C.)
	SB	46	Spiraea betulifolia 'Tor'	TOR BIRCHLEAF SPIREA	18" HT.	CONT. (3' O.C.)
	SM	16	Syringa meyeri 'Palibin'	DWARF KOREAN LILAC	12" HT.	CONT. (3' O.C.)
	TM	33	Taxus x media 'Townsend'	TAUNTON'S YEW	18" HT.	CONT. (5' O.C.)



2/5 PLANTING PIT DETAILS
NO SCALE



1/5 DECIDUOUS TREE STAKING DETAIL
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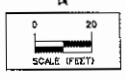

STATE OF IOWA
NOTTE A. APPLEGATE
Landscape Architect
No. 242
License Expires June 30, 2016

I hereby certify that this portion of the technical submission described below was prepared by me or under my direct supervision and responsibility. I am a duly licensed Professional Landscape Architect under the laws of the State of Iowa.

Name A. Applegate ASLA Date
License Number 242
Pages or sheets covered by this seal: SHEET 6

REVISION	DATE	BY

Project: MERCY CLINICS - GRIMES, IOWA
Engineer: SVS Checked By: MAA Scale: 1"=20'
Technician: TLS Date: 08/23/15 Path: Pg
Project No: 116.0514 Sheet 4 of 6

PLANTING PLAN

SNYDER & ASSOCIATES, INC.
2727 S.W. SNYDER BLVD.
AUBURN, IOWA 50023
515-564-2020 | www.snyder-associates.com

Project No: 116.0514
Sheet 6 of 6

NPDES GENERAL PERMIT No. 2

STORM WATER POLLUTION PREVENTION PLAN
FOR
MERCY CLINIC-GRIMES

City of Grimes, Polk County, Iowa
Project No. 116.0514

NPDES Permit Discharge Authorization Number: _____

August 16, 2016

Prepared by:

SNYDER & ASSOCIATES, INC.
2727 SW Snyder Blvd
Ankeny, Iowa 50023
(515) 964-2020

IMPORTANT NOTICE

This Storm Water Pollution Prevention Plan (SWPPP) shall be retained on the construction site from the date the construction activities begin to the date of final stabilization. In addition, all contractors shall be supplied with a copy of the SWPPP and shall certify their role as co-permittee by signing the appropriate form in Part 5. It shall be the duty of the OWNER to see that these requirements are met and that the SWPPP is maintained up to date.

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PART 2	CONTROLS
PART 3	CONSTRUCTION / IMPLEMENTATION
PART 4	FINAL STABILIZATION / DISCONTINUATION
PART 5	CERTIFICATION
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APPENDIX B	PUBLIC NOTICES / NOTICE OF INTENT
APPENDIX C	CHECKLISTS
APPENDIX D	SOILS REPORT
APPENDIX E	MONITORING REPORTS
APPENDIX F	TYPICAL LOT SEDIMENT/EROSION CONTROL PLAN
APPENDIX G	GRADING & EROSION CONTROL PLAN

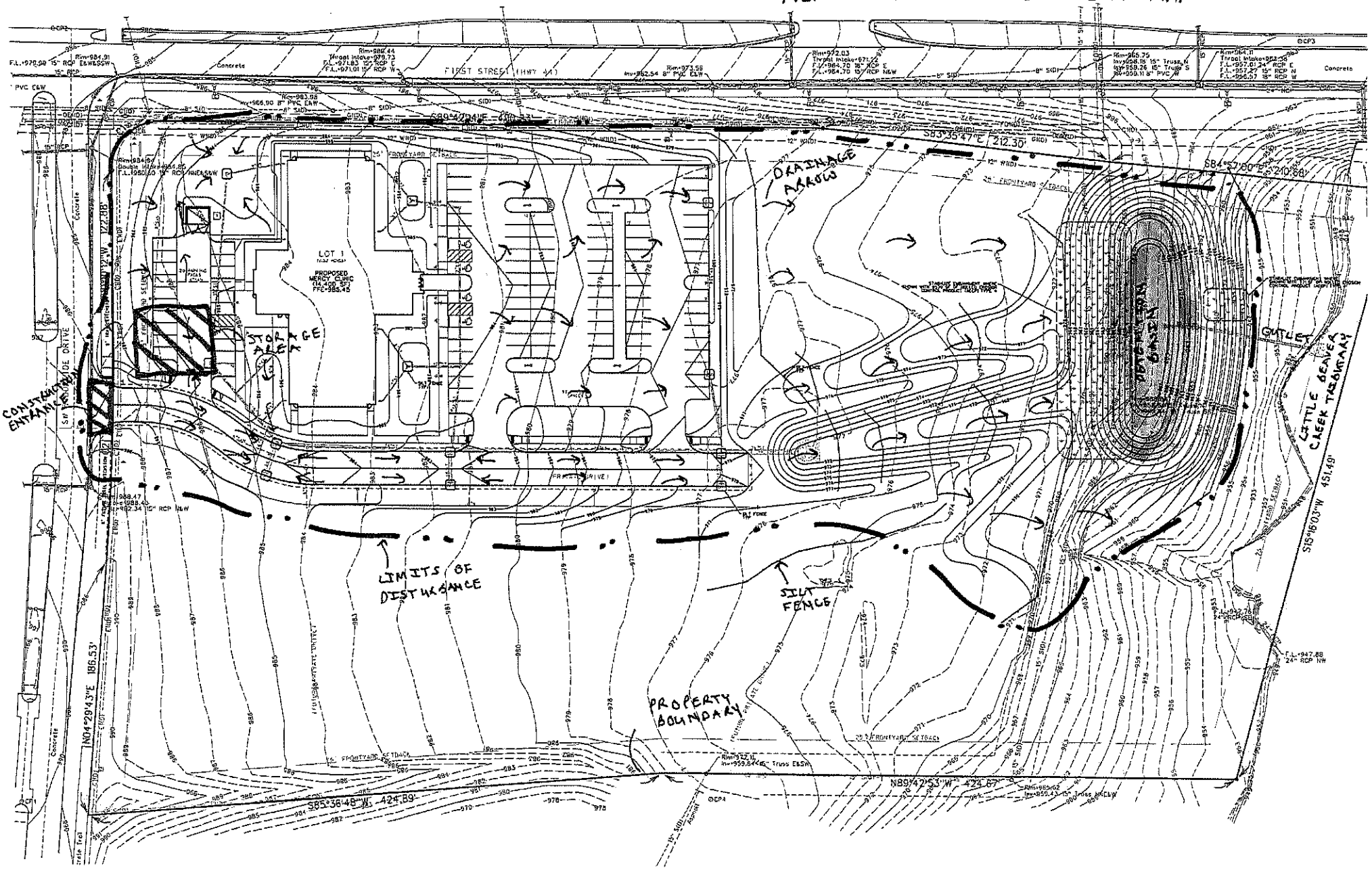
PART 1

SITE DESCRIPTION / SITE MAP

SITE INFORMATION:

Project Name	**MERCY CLINIC-GRIMES**
Project Location (address, latitude/longitude or Section-Township-Range)	Intersection of SW Brookside Dr & First Street(Hwy 44) City of Grimes, Polk County, Iowa
Owner Name	KR&C Properties
Representative / Title	Kim Rueter, Representative
Owner Address/Phone	1688 U Avenue Grand Junction IA 50107 (515) 370-0245
Site Area	9.76 acres
Disturbed Area	6.00 acres
Final Runoff Coefficient	0.85
Soil type / characteristics	Silty clay loam with moderate susceptibility to sheet & rill erosion. (per NRCS Soil Survey of Polk Co., Iowa &/or soils report)
Receiving Waters	Runoff discharged to unnamed tributary of Little Beaver Creek
Description (purpose and types of soil disturbing activities)	Project consists of a new building associated drives, parking and utilities. Soil disturbing activities include grading, detention basin excavation, utility installation, paving, and building foundation.
Expected Sequence of Major Construction Activities (subject to change; any deviations shall be noted on this plan)	1. Install stabilized construction entrance, staging area controls & perimeter silt barrier 2. Clear and grub for detention/sediment basin installation 3. Construct initial detention/sediment basin 4. Clear and grub for earthwork operations 5. Continue grading operations beginning with topsoil stockpiling (interior silt barrier installation) 6. Stabilize denuded areas and stockpiles within 14 days of last construction activity in that area 7. Install utilities & storm sewer 8. Install curb & gutter, paving 9. Backfill / finish grading 10. Temporary seeding / stabilization 11. Building construction 12. Permanent seeding/stabilization 13. Final completion, removal of temporary erosion control measures

MERCY CLINIC - GAINES SWPPP MAP



PART 2

CONTROLS

A. Erosion and Sediment Controls

Measures to be used for controlling erosion and sediment throughout the construction project. Includes stabilization measures for limiting soil erosion from disturbed areas and structural controls to divert runoff and remove sediment. Contractor/subcontractor is responsible for the implementation and management of control measures specific to this site. As work progresses, field investigation may indicate additional erosion control measures may be required as determined by the contractor, owner, engineer, city or other governmentally regulated agencies.

1. Stabilization
    a. Preserve existing vegetation in areas not disturbed during construction
    b. The total area of soil disturbed by construction operations at any time shall be held to a minimum.
    c. Soil Compaction – compaction of soils in areas to be seeded or sodded will be kept to a minimum to increase infiltration of storm water runoff into the groundwater, reducing the amount of runoff.
    d. Temporary Stabilization - areas where construction activity is not planned to occur for at least 21 days will be stabilized within 14 days of ceasing construction activities in that area by one or more of the following temporary erosion control measures.
        - Topsoil stockpiles and disturbed portions of the site will be stabilized with temporary seed and mulch.
        - Areas of the site to be paved will be temporarily stabilized with geotextile and stone sub-base until pavement can be installed.
        - Frequent watering during construction in dry weather shall minimize wind erosion from exposed soil.
    e. Permanent Stabilization - areas where construction activity has permanently ended will be stabilized within 14 days of ceasing construction activities in that area by one or more of the following permanent erosion control measures.
        - Sodding or permanent seeding/mulch and mulch in all unpaved areas where final grading is complete.
        - Permanently seed drainage swales and install erosion control matting where required immediately upon reaching final grades to decrease erosion and facilitate sediment deposition in surface runoff.
    f. Vegetative buffer strips
        - Vegetation strip will be planted along the downstream boundary of the site to increase infiltration and sediment deposition by reducing runoff velocity.
    g. Protection of Trees and Natural Vegetation
        - Undisturbed areas will utilize existing vegetation as a natural buffer zone to increase infiltration and sediment deposition by reducing runoff velocity.
    h. Dust control
        - Mulch or surface watering will be utilized to control wind erosion of susceptible soils during and/or immediately after mass site grading

operations.

i. Channel Stabilization
   - Riprap and engineering fabric placed in channel to prevent erosion.
   - Erosion control mat in conjunction with seeding placed in channel to prevent erosion.
   - Concrete drainage flume installed in channel flow line to prevent erosion in minor storms.

j. Outlet Stabilization
   - Rock / riprap and engineering fabric installed at storm sewer outlets to prevent erosion.
   - Non-rock stabilization installed at storm sewer outlets to prevent erosion.
   - Concrete drainage flume installed at storm sewer outlets to prevent erosion.

k. Geotextiles
   - Erosion control matting placed over seeded areas on bare slopes where rill or gully erosion is evident or likely in order to establish vegetation growth and prevent erosion.

l. Chemical stabilization

m. Soil retaining measures

n. Stream bank stabilization

2. Structural Controls
   a. At all areas where runoff can move offsite, silt fence or approved equal will be installed along the perimeter of the project downstream of soil disturbing activities and storm water discharge points prior to site clearing and grading operations as required and/or shown on the plans.
   b. Temporary sediment basins are provided at the rate of 3,600 cubic feet of storage per acre for disturbed areas over 10 acres. If not attainable, a combination of silt fences, multiple sediment traps, or equivalent sediment controls are required for all side slopes and downslope boundaries of the disturbed area.
   c. Silt fence, sediment traps or equivalent measures for all side slopes and downslope boundaries of the disturbed area provided for disturbed areas of 10 acres or less.
   d. Silt barrier enclosures will be installed around all area intakes and flared end section inlets to protect storm sewers from sediment immediately after construction of inlet.
   e. All storm water street intakes will be protected from silt with filter socks or equivalent sediment protection measures after paving.
   f. Silt fence, temporary silt basins, earthen dikes and ditch checks will be installed along concentrated drainageways to control flow velocity and encourage sediment deposition.
   g. Storm water detention/retention facilities will retain flows and act as temporary sediment basin with the installation of a temporary outlet riser.
      - Installed prior to commencing upstream grading operations and storm sewer installation.
   h. Curb & gutter will divert storm water once installed.

i. Drainage swales
   - Permanently seeded immediately upon reaching final grade to facilitate sediment deposition in surface runoff.
   - Convey runoff to sediment basins/acceptable outlet.
   - Used in conjunction with sediment traps, ditch checks, or other control measures to trap sediment.

j. Earthen dike will be constructed along the downslope boundaries of undeveloped rough graded areas to divert sheet flow runoff to silt trap/storm sewer outlet.

k. Surface roughening – temporarily roughen the surface of graded slopes perpendicular to the slope as an end of day practice and in conjunction with other stabilization measures. Reduces runoff velocity, traps sediment, increases infiltration and aids in establishment of vegetative cover.

l. Subsurface drains

m. Brush barrier

n. Pipe slope drains

o. Level spreaders

p. Reinforced soil retaining systems

q. Gabions

r. Check dams

s. Gradient Terraces

t. Additional erosion control measures may be required on embankments, stockpiles and other areas to ensure runoff control.

B. Other Controls

Measures for controlling other sources of potential pollution that may exist on the construction site. During the course of construction, it is possible that situations may arise where unknown materials will be encountered. When such situations occur, they will be handled according to all applicable federal, state, and local regulations in effect at the time.

1. Waste materials
   a. Disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive laws, rules or regulations shall apply.

2. Hazardous waste
   a. Hazardous waste materials will be disposed of in accordance with applicable local, State, and/or Federal regulations.
   b. Equipment refueling and maintenance operations will be carried out in such a manner so as to prevent any spills and contamination to the soil and groundwater.
   c. Potentially hazardous materials will be used with great care to prevent spillage in any volume.

3. Sanitary waste

   A portable restroom facility may be located onsite at the contractor's discretion. Wastes will be collected and disposed of in complete compliance with local, state and federal regulations. This facility will be located in an area where contact with the storm water discharge is minimal.

4. Vehicle tracking
   a. Stabilized construction entrances and/or vehicle washing racks will be installed at all site access points to reduce vehicle tracking of sediment offsite.
   b. Paved streets adjacent to the site will be inspected daily and cleaned as necessary to remove any excess mud, dirt or rock tracked from the site.
   c. Dump trucks hauling material from the site will be properly covered with a tarpaulin.
   d. Dust control measures will be utilized as necessary.

5. Non-storm water discharges
   a. Expected sources of non-storm water discharges from the site during construction may include:
      - Potable water sources including water line flushings, irrigation drainage and fire fighting activities.
      - Pavement/building wash waters where no spills or leaks of toxic or hazardous materials have occurred and excluding detergents.
      - Uncontaminated groundwater from de-watering excavation.
      - Natural springs, wetland, water sources.
      - Foundation or footing drains where flows have not been exposed to solvents.
   b. Non-storm water discharges will be directed to the sediment basin or other appropriate control measure prior to discharging off-site.

C. Storm Water Management

Post-construction storm water drainage will be facilitated by curb and gutter, storm sewer, intake structures, and established drainage swales for the developed areas. Runoff will be directed to onsite storm water management controls and/or the City of Grimes public storm sewer/drainage ditch.

Measures implemented to control pollution of storm water after construction is complete include the following:

1. Retention Pond – permanent pool providing sediment control and detention. Designed to release storm water at a 5-year/24 hour storm pre-development peak rate.

2. Detention Pond – dry bottom basin providing detention of peak storm water runoff. Designed to release storm water at a 5-year/24 hour storm pre-development peak rate.

3. Open channels

a. Vegetated Swales and natural depressions will reduce storm water runoff by increasing infiltration and increase sedimentation by reducing runoff velocity.
b. Riprap placed as channel lining in high-flow drainage ditches to prevent erosion and increase sedimentation by reducing runoff velocity.
c. Permanent erosion control or turf reinforcement mats will be placed in drainage swales to prevent erosion.
d. Concrete drainage flumes installed at channel flowlines to reduce erosion of channel in small storm events.

4. Undeveloped areas will be graded at the slopes indicated and have permanent seeding and/or landscaping designed to reduce runoff velocities and increase infiltration.

5. Approximately 3.76 acres of the site will remain undisturbed and in its original vegetative state, limiting the amount of exposed soil and providing a continuous vegetation buffer zone that will reduce runoff velocities and increase infiltration.

6. Outlets of all storm sewer systems and culverts will be stabilized with riprap aprons underlain by engineering fabric or non-rock outlet protection measures to dissipate flow velocities and prevent erosion.

7. Infiltration Measures
   a. Infiltration trenches, basins, dry wells

CONTROL MEASURE MASTER INDEX

Use this index to track the status of all erosion & sediment control BMP's on your site as they relate to the current construction phase. Note the corresponding number of the BMP on the erosion control plan (ie: B3) and record installtion and removal dates in the table. BMP's will not necessarily be removed during the same phase as their installation. Site conditions should dictate installation and removal.

NUMBER	CONTROL	DATE INSTALLED	DATE REMOVED
PHASE A - GRADING			
A1			
A2			
A3			
A4			
A5			
A6			
A7			
A8			
A9			
A10			
A11			
A12			
A13			
A14			
A15			
A16			
A17			
A18			
A19			

PHASE B - UNDERGROUND UTILITIES			
B1			
B2			
B3			
B4			
B5			
B6			
B7			
B8			
B9			
B10			
B11			
B12			
B13			
B14			
B15			
B16			
B17			
B18			

CONTROL MEASURE MASTER INDEX

Use this index to track the status of all erosion & sediment control BMP's on your site as they relate to the current construction phase. Note the corresponding number of the BMP on the erosion control plan (ie: B3) and record installition and removal dates in the table. BMP's will not necessarily be removed during the same phase as their installation. Site conditions should dictate installation and removal.

NUMBER	CONTROL	DATE INSTALLED	DATE REMOVED
PHASE C - PAVING / FINE GRADING			
C1			
C2			
C3			
C4			
C5			
C6			
C7			
C8			
C9			
C10			
C11			
C12			
C13			
C14			
C15			
C16			
PHASE D - LOT CONSTRUCTION			
D1			
D2			
D3			
D4			
D5			
D6			
D7			
D8			
D9			
D10			
PHASE E - FINAL STABILIZATION			
E1			
E2			
E3			
E4			
E5			
E6			
E7			
E8			
E9			
E10			

PART 3

CONSTRUCTION / IMPLEMENTATION

A. State and Local Requirements

1. The storm water pollution prevention plan reflects the State of Iowa requirements for storm water management and erosion and sediment control, as established in 161A.64 Code of Iowa, State of Iowa Statutory Requirements Pertaining to Erosion Control Plans.

2. Prior to initiating a land disturbing activity, a person engaged in land disturbing activity shall file a signed affidavit with the soil and water conservation district that the project will not exceed the soil loss limits.

3. The soil erosion and sedimentation control ordinance of the City of Grimes requires that:
   - A grading permit is obtained from the city prior to starting grading operations.
   - The grading permit is posted at the project site.
   - A "Certificate of Completion" is returned to the City Engineer prior to the expiration of the grading permit or any subsequent extensions of the expiration date.

4. All work shall be done in accordance with Division 9 of the latest edition of the Statewide Urban Standard Specifications (SUDAS) or the latest edition of the Grimes Standard Specifications for Street Improvements.

5. Code Compliance: The contractor shall comply with the soil erosion control requirements of the Iowa Code, the Iowa DNR NPDES permit and all local ordinances.

B. Timing of Controls/Measures

1. Install down-slope and side-slope perimeter silt fence prior to commencing land-disturbing activity.
2. Install construction entrance and vehicle tracking controls.
3. Construct temporary sediment basins or detention basin as sediment basin and route all runoff from disturbed areas to the basin and/or erosion control measures at storm water discharge points – sediment traps/basins, riprap channel lining, erosion control mat.
4. Do not disturb an area until necessary for construction to proceed.
5. Install interior silt fences, earthen dikes, sediment traps, etc. as grading progresses.
6. Cover or stabilize disturbed areas and stockpiles as soon as possible and no later than 14 days after ceasing construction for more than 21 days or permanently.
7. Place swale control measures (erosion control mats, silt traps, ditch checks, seed & mulch) in drainageways as soon as final grades are achieved and before storm sewer is installed where possible.
8. Construct outlet stabilization measures at storm outlets and place silt barriers at storm sewer inlets immediately after storm sewer is installed.
9. As areas reach their final grade, provide additional silt fence, sediment traps, earthen dikes, ditch checks or filter sock as necessary.
10. Complete permanent stabilization seeding/mulch or sod stabilization as soon as

possible after work is complete in an area.

11. Remove temporary sediment controls and accumulated sediment once entire site is stabilized. Re-seed/mulch any areas disturbed during removal.

PROJECTED CONSTRUCTION SCHEDULE / CONSTRUCTION PROGRESS:

PHASE A – GRADING	Anticipated Start-End	**August 2016-September 2016**

Initial control measure installation (sediment basin, construction entrance, perimeter silt fence)			
Operator Responsible			
Anticipated Start Date	August 2016	Anticipated End Date	September 2016
Actual Start Date		Actual End Date	

Initial Grading Operations (clearing/grubbing, topsoil stripping/stockpiling/stabilization)			
Operator Responsible			
Anticipated Start Date	August 2016	Anticipated End Date	September 2016
Actual Start Date		Actual End Date	

Major Grading Operations (mass grading, sediment/detention basins, pond, interior silt barrier, temporary stabilization)			
Operator Responsible			
Anticipated Start Date	August 2016	Anticipated End Date	September 2016
Actual Start Date		Actual End Date	

PHASE B – UNDERGROUND UTILITIES	Anticipated Start-End	**October 2016-December 2016**

Sewer / Water installation (sanitary sewer, water main)			
Operator Responsible			
Anticipated Start Date	October 2016	Anticipated End Date	December 2016
Actual Start Date		Actual End Date	

Storm System (storm sewer/structures, culverts, outlet structures)			
Operator Responsible			
Anticipated Start Date	October 2016	Anticipated End Date	December 2016
Actual Start Date		Actual End Date	

PHASE C – PAVING / FINE GRADING	Anticipated Start-End	**January 2017-March 2017**

Paving (subgrade prep, curb & gutter, street, sidewalk, drive, parking lot paving)			
Operator Responsible			
Anticipated Start Date	January 2017	Anticipated End Date	March 2017
Actual Start Date		Actual End Date	

Franchise Utilities (electric, gas, telephone, cable, _____, _____)			
Operator Responsible	Attach additional sheets listing utility companies working on the site		
Anticipated Start Date	January 2017	Anticipated End Date	March 2017
Actual Start Date		Actual End Date	

Finish Grading (backfill, finish grading, temporary seed stabilization)			
Operator Responsible			
Anticipated Start Date	January 2017	Anticipated End Date	March 2017
Actual Start Date		Actual End Date	

PHASE D – BUILDING CONSTRUCTION	Anticipated Start-End	**January 2017-June 2017**

Building Construction (basement excavation, building construction, driveway paving, sod stabilization)			
Operator Responsible	Attach additional sheets listing any individual lot ownership transfers		
Anticipated Start Date	January 2017	Anticipated End Date	June 2017
Actual Start Date		Actual End Date	

PHASE E – FINAL STABILIZATION	Anticipated Start-End	**July 2017-August 2017**

Permanent Stabilization (final seeding / sod stabilization, temporary erosion control measure removal)			
Operator Responsible			
Anticipated Start Date	July 2017	Anticipated End Date	August 2017
Actual Start Date		Actual End Date	

C. Inspection & Maintenance

1. All documents related to the storm water discharge permit shall be kept on site at all times and must be presented to the Iowa DNR or EPA upon request. Including but not limited to the Storm Water Pollution Prevention Plan, Notice of Intent, Proof of Publication, and project inspection diary.

2. The contractor will be responsible for selecting a "qualified" inspector to conduct the inspections. "Qualified" is defined as a person knowledgeable in the principles and practices of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity.

3. The project area and control devices will be inspected by personnel assigned by the contractor a minimum of every seven calendar days. The findings and any actions taken as a result of this inspection shall be recorded in the project diary with a copy submitted weekly to the owner or owner's representative during the project.
    a. Inspect silt fence for depth of sediment, tears, fabric securely attached to posts and posts firmly in the ground.
    b. Inspect sediment basins for depth of sediment.
    c. Inspect diversion dikes for any breaches.
    d. Inspect seeding for bare spots, washouts and healthy growth.
    e. Inspect site for any other conditions or deficiencies which may allow or contribute to polluted runoff discharging offsite.

4. This pollution prevention plan shall be revised as construction progresses to reflect current ownership, responsibilities, operations and findings.
    a. The plan will be revised due to any deficiencies in the plan or changes in conditions noted during an inspection and the contractor will implement any and all revisions as soon as practical but no later than 3 business days after the inspection.
    b. Maintain record of major construction operations start and ending dates and operators responsible for the various phases.
    c. The plan will be modified within 14 calendar days of a hazardous condition, describing the release, the date of release and the circumstances leading to the release. Steps to prevent the reoccurrence of such releases will be identified in a plan revision and implemented.

5. Maintain all temporary and permanent erosion control measures in good working order by cleaning, repairing, replacement and sediment removal throughout the permit period. Any necessary repairs will be initiated within 24 hours of report.
    a. Built up sediment will be removed from silt barrier or the silt barrier replaced when it has reached 1/2 the height of the barrier.
    b. Built up sediment will be removed from sediment basins when it reaches 25% of the design capacity or at the end of the project.
    c. Accumulation of earth, silt or debris on adjoining properties or streets will be minimized. Remove any accumulation of earth, silt or debris immediately and

take remedial actions for prevention.

d. Minor spills of potentially hazardous materials will be cleaned up by removing and disposing of contaminate soils properly. Major spills shall be reported in accordance with 455B.386 Code of Iowa with clean up procedures dependant on the severity of the spill.

6. Hazardous substance spill prevention and response
   a. The contractor is responsible for training all personnel in the proper handling and cleanup of spilled materials. No spilled hazardous materials or wastes will be allowed to come into contact with storm water discharges. If contact does occur, the storm water discharge will be contained on site until appropriate measures in compliance with all Federal, State, and local regulations are followed to dispose of the hazardous substance.
   b. In addition to Good Housekeeping and material management practices, the following practices shall be done to minimize the potential for hazardous material spills and to reduce the risk of the spill coming in contact with storm water.
      - Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be trained regarding these procedures and the location of the information and cleanup supplies.
      - Materials and equipment necessary for spill control, containment and cleanup will be provided onsite in a material storage area. Equipment and materials will include but not be limited to brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers.
   c. In the event of a spill, the following procedures will be followed:
      - All spills will be cleaned up immediately following discovery.
      - The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with the hazardous substance.
      - Spill of toxic or hazardous material will be reported to the appropriate state or local governmental agency and to the project manager and engineer, regardless of the size of the spill.
   d. In the event the construction site has a release of a hazardous substance or oil in an amount which exceeds a reportable quantity (RQ) as defined at 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 then the permittee shall:
      - Person in charge of the site at the time of the spill shall call the EPA National Response Center to report the spill (800-424-8802, or 202-426-2675).
      - Modify the Pollution Prevention Plan accordingly within 14 days of the spill including the items mentioned below.
      - Within 14 days of the release, submit a written description of the release including: a description of the release, type of material, estimated amount of spill, date of release, explanation of why the spill happened, and a description of the steps taken to prevent and control future releases.

D. Materials Management

Site sources of pollution generated as a result of this work related to silts and sediment which may be transported as a result of a storm event. However, this SWPPP provides conveyance for other (non-project related) operations. These other operations have storm water runoff, the regulation of which is beyond the control of this SWPPP.

1. Materials or substances expected to be present onsite during construction:
    a. Concrete
    b. Detergents
    c. Paints
    d. Tar
    e. Soil stabilization additives
    f. Fertilizers
    g. Petroleum based additives
    h. Cleaning solvents
    i. Wood
    j. Solids and construction wastes
    k. Pesticides

2. Material Management Practices – the following is a list of practices that will be used onsite to minimize the risk of spills or other accidental exposure of materials and substances to storm water runoff.
    a. Good Housekeeping
        - An effort will be made to store onsite only enough products required to complete the job.
        - All materials stored onsite will be kept in a neat, orderly manner and in their appropriate containers. If possible, products shall be kept under a roof or other enclosure.
        - Materials will be kept in their original containers with the original manufacturer's label.
        - Substances will not be mixed with one another unless recommended by the manufacturer.
        - Whenever possible, all of a product will be used up before disposing of the container.
        - Manufacturer's recommendations for proper use and disposal will be followed.
        - The job site superintendent will be responsible for daily inspections to ensure proper use and disposal of materials.
    b. Hazardous Products
        - Products will be kept in their original containers with the original manufacturer's label.
        - The original labels and material safety data will be kept for each of the materials as they contain important product information.
        - Disposal of any excess product will be done in a manner that follows all manufacturers', federal, local and state recommended methods for proper disposal.

3. Product Specific Practices – the following is a list of potential sources of pollution and specific practices to reduce pollutant discharges from materials or sources expected to be present during construction.
    a. Petroleum Storage Tanks
        - All onsite vehicles shall be inspected and monitored for leaks and receive preventative maintenance to reduce the chance of leakage.
        - Steps will be taken by the contractor to eliminate contaminants from storage tanks form entering ground soil. Any petroleum storage tanks kept onsite will be located with an impervious surface between the tank and the ground.
    b. Fertilizers – shall be applied in minimal amounts as recommended by the manufacturer. It shall be worked into the soil as to minimize the contact with storm water discharge.
    c. Paints, paint solvents and cleaning solvents – Excess paints and solvents shall not be discharged into the storm sewer system. The contractor shall refer to the manufacturer's instructions and federal regulations on the proper disposal techniques.
    d. Concrete wastes
        - Concrete trucks will be allowed to washout or discharge excess concrete only in specifically designated areas which have been prepared to minimize contact between the concrete and storm water discharge from the site.
        - The hardened product from the concrete washout areas will be disposed of as other non-hazardous waste materials or may be broken up and used on the site for other appropriate uses.
    e. Solid and construction wastes – All trash and construction debris shall be deposited into a dumpster that will be emptied as necessary. No construction waste materials will be buried on site. The dumpsters must be put in a location where the contact with storm water discharge is minimized.

PART 4

FINAL STABILIZATION / DISCONTINUATION

A. Final Stabilization / Discontinuation

1. The storm water discharge from a construction activity is no longer considered to be a discharge subject to the storm water permit requirements when final stabilization has been reached and temporary erosion and sediment controls have been or will be removed. A permittee must submit a Notice of Discontinuation (NOD) to inform the IDNR that storm water discharge from the site will no longer need to be covered by the general permit.

2. "Final Stabilization" – the point at which all soil disturbing activities are complete, and a uniform perennial vegetative cover with a density of 70% of the cover for unpaved areas and areas not covered by permanent structures has been established or equivalent permanent stabilization measures have been employed.

3. Notice of Discontinuation should be mailed to the following address:

   Storm Water Coordinator
   Iowa Department of Natural Resources
   502 E. 9th Street
   Des Moines, Iowa 50319-0034

4. All plans, inspection reports and other related documents must be retained for a period of three years after project completion. The contractor shall retain a record copy and provide the original documents to the owner upon issuance of the NOD.

NOTICE OF DISCONTINUATION

OF A STORM WATER DISCHARGE
COVERED UNDER IOWA NPDES GENERAL PERMIT NO. 2
FOR CONSTRUCTION ACTIVITIES

Name of the owner or facility to which the storm water discharge general permit coverage was issued.

_____

County: _____

List the complete permit authorization number for the discharge. This number is provided on the bottom of the authorization sheet.

IA- _____ --- _____

List the date the construction site reached final stabilization as defined on the back of this form.

_____

The following certification must be signed in accordance with the signatory requirements of the general permit (see back side).

I certify under penalty of law that disturbed soils at the identified facility have been finally stabilized and temporary erosion and sediment control measures have been removed or will be removed at an appropriate time. I understand that by submitting this Notice of Discontinuation, I am no longer authorized to discharge storm water associated with industrial activity for construction activities by Iowa Department of Natural Resources NPDES General Permit No. 2 and that discharging pollutants from storm water associated with industrial activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by an NPDES permit.

I further 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 known violations.

_____	_____
Name (print)	Title
_____	_____
Signature	Date

Return to:

Storm Water Coordinator
Department of Natural Resources
502 E. 9th Street
Des Moines, IA 50319-0034

Final Stabilization means that all soil disturbing activities at the site have been completed and that a uniform perennial vegetative cover for the area has been established or equivalent stabilization measures have been employed. All building must be completed before the project is considered finally stabilized.

SIGNATORY REQUIREMENTS All Notices of Intent, storm water pollution prevention plans, reports, certifications or information either submitted to the Department or the operator of a large or medium municipal separate storm sewer system, or that this permit requires be maintained by the permittee, shall be signed in accordance with rule 567--64.3(8) of the Iowa Administrative Code as follows:

64.3(8) *Identity of signatories of operation permit applications.* The person who signs the application for an operation permit shall be:

a. *Corporations.* In the case of corporations, a principal executive officer of at least the level of vice-president.

b. *Partnerships.* In the case of a partnership, a general partner.

c. *Sole proprietorships.* In the case of a sole proprietorship, the proprietor.

d. *Public facilities.* In the case of a municipal, state, or other public facility, by either the principal executive officer, or the ranking elected official.

e. *Storm water discharge associated with construction activity.* In the case of a storm water discharge associated with industrial activity from construction as identified in 40 CFR 122.26(b)(14)(*x*), either the owner of the site or the general contractor.

PART 5

CERTIFICATION

A. Storm Water Pollution Prevention Plan Certification

1. This project is subject to section 402(b) of the Clean Water Act and IAC 455 B.174 Subrule 567-64.4 (projects disturbing one or more total acres) and requires inclusion in the National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 or individual NPDES Permit for storm water discharge associated with industrial activity for construction activities. The Contractor shall perform all pollution prevention measures as identified in the plans and specifications. A copy of the Storm Water Pollution Prevention Plan (SWPPP) must be kept at the construction site from the time construction begins until the site has reached final stabilization.

2. The owner and prime contractor must sign the NPDES Certification Statement. The prime contractor must identify which contracting entity will be responsible for each portion of the pollution prevention plan and maintain the site in compliance with the SWPPP, Pollution Prevention Plan drawings and NPDES Permit. The certification must be signed in accordance with the signatory requirements found in the general permit; i.e., principal executive officer, vice president, general partner, proprietor, elector official, and will be incorporated into the pollution prevention plan.

3. All subcontractors, including short-term contractors and subcontractors, prior to approval, must sign the NPDES Certification Statement before conducting any work at the site. The certification must be signed in accordance with the signatory requirements found in the general permit; i.e., principal executive officer, vice president, general partner, proprietor, elector official, and will be incorporated into the pollution prevention plan.

4. Upon signing the certification, the contractor or subcontractor becomes a co-permittee with the owner and other co-permittee contractors. In signing the plan, the authorized representative certifies that the information is true and assumes liability for the plan and its implementation. Note that Section 309 of the Clean Water Act provides for significant penalties where information is false or the permittee violates, either knowingly or negligently, the permit requirements.

5. A copy of the NPDES Certification Statement of the Owner, Prime Contractor and all Subcontractors shall be filed in and become a part of the project SWPPP.

NPDES CERTIFICATION STATEMENT
(Owner certification)

Project	**MERCY CLINIC-GRIMES**
Project Location (address, lat./long., Sec.-T-R)	Intersection of SW Brookside Dr & First Street(Hwy 44) City of Grimes, Polk County, Iowa

I certify under penalty of law that this document and all attachments were prepared under my direction of 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.

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 "Storm Water 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 storm water pollution prevention plan developed under this NPDES permit and the terms of this NPDES permit.

Owner	KR&C Properties		
Address	1688 U Avenue Grand Junction IA 50107	Phone	(515) 370-0245
Representative	Kim Rueter	Title	Representative
Signature		Date	

NPDES CERTIFICATION STATEMENT

(for contractors with authority to modify SWPPP)

Project	**MERCY CLINIC-GRIMES**
Project Location (address, lat./long., Sec.-T-R)	Intersection of SW Brookside Dr & First Street(Hwy 44) City of Grimes, Polk County, Iowa

I certify under penalty of law that this document and all attachments were prepared under my direction of 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.

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 "Storm Water 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 storm water pollution prevention plan developed under this NPDES permit and the terms of this NPDES permit.

Contractor / Sub-contractor	
Responsible for	
Address	Phone
Representative	Title
Signature	Date

NPDES CERTIFICATION STATEMENT

(for contractors with NO authority to modify SWPPP)

Project	**MERCY CLINIC-GRIMES**
Project Location (address, lat./long., Sec.-T-R)	Intersection of SW Brookside Dr & First Street(Hwy 44) City of Grimes, Polk County, Iowa

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 "Storm Water 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 storm water pollution prevention plan developed under this NPDES permit and the terms of this NPDES permit.

Contractor / Sub-contractor	
Responsible for	
Address	Phone
Representative	Title
Signature	Date

APPENDIX A

NPDES GENERAL PERMIT No. 2

IOWA DEPARTMENT OF NATURAL RESOURCES

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

GENERAL PERMIT NO. 2

EFFECTIVE DATES
OCTOBER 1, 2012 THROUGH OCTOBER 1, 2017

FOR

STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES

502 EAST 9th STREET DES MOINES, IOWA 50319
515-725-8417 FAX 515-725-8202 www.iowadnr.gov/water/stormwater/index.html

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PART I. COVERAGE UNDER THIS PERMIT

A. PERMIT AREA This permit covers all areas of the State of Iowa.

B. ELIGIBILITY

1. A. Except for discharges identified under Parts I.B.2. and I.B.3., this permit may authorize the discharge of storm water associated with industrial activity from construction sites, (those sites or common plans of development or sale that will result in the disturbance of one or more acres total land area), (hereafter referred to as storm water discharge associated with industrial activity for construction activities) occurring after the effective date of this permit (including discharges occurring after the effective date of this permit where the construction activity was initiated before the effective date of this permit), including storm water discharge associated with industrial activity from areas that are dedicated to producing earthen materials, such as soils, sand and gravel, for use at a single construction site.

B. This permit may authorize storm water discharge from a construction site that is mixed with storm water discharge associated with industrial activity from sources other than construction activities provided that the storm water discharge from the industrial (non-construction) source is in compliance with the terms of a NPDES general permit, other than this general permit, or individual permit authorizing such discharge. In addition, the storm water other than from construction, shall be in compliance with Part IV.D.6. of this permit.

2. LIMITATIONS ON COVERAGE The following storm water discharges associated with industrial activity for construction activities are not authorized by this permit:

A. storm water discharges that are mixed with sources of non-storm water other than discharges identified in Part III.A.2. of this permit;

B. storm water discharges associated with industrial activity for construction activities which are covered by an existing individual NPDES permit or which are issued a permit in accordance with Part I.C. of this permit.

Storm water discharges authorized by an existing individual NPDES permit will be eligible to apply for coverage under this general permit as the existing individual permit expires; and

C. storm water discharges associated with industrial activity for construction activities that the Iowa Department of Natural Resources has determined to be or may reasonably be expected to be contributing to a violation of a water quality standard.

D. new or expanded "storm water discharge associated with industrial activity" that discharges to Outstanding Iowa Waters or to Outstanding National Resource Waters.

3. EXCLUSIONS The following "storm water discharges associated with industrial activity" from construction activities do not require a NPDES permit:

discharges from agricultural and silvicultural activities including storm water runoff from orchards, cultivated crops, pastures, range lands, and forest lands, but not discharges from concentrated animal feeding operations as defined in 40 CFR 122.23, concentrated aquatic production facilities as defined in 40 CFR 122.24, discharges to aquaculture projects as defined in 40 CFR 122.25, and discharges from silvicultural point sources as defined in 40 CFR 122.27.

C. REQUIRING AN INDIVIDUAL PERMIT

1. The Department may require any person authorized by this permit to apply for and obtain an individual NPDES permit. The Department may require any owner or operator authorized to discharge under this permit to apply for an individual NPDES permit only if the owner or operator has been notified in writing that a permit application is required. This notice shall include a brief

statement of the reasons for this decision, an application form, a statement setting a deadline for the owner or operator to file the application, and a statement that on the effective date of the individual NPDES permit, coverage under this general permit shall automatically terminate. If an owner or operator fails to submit an individual NPDES permit application required by the Department under this paragraph, coverage of this general permit automatically is terminated at the end of the day specified for submittal of the individual NPDES application.

2. Any person authorized to discharge under this permit may apply for an individual NPDES permit. In such cases, the discharger shall submit the following in accordance with the requirements of subrule (567)--64.3(4) in the Iowa Administrative Code:

A. an individual application, using DNR Form 1 and EPA Form 2F, and,

B. all applicable fees identified in rule (567)--64.16 in the Iowa Administrative Code.

3. When an individual NPDES permit is issued to a discharger covered under this general permit, the applicability of this general permit to the individual NPDES permittee is automatically terminated on the effective date of the individual NPDES permit.

When an individual NPDES permit is denied to a discharger otherwise subject to this permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the date of such denial, unless otherwise specified by the Department.

D. AUTHORIZATION

A discharger must submit a Notice of Intent (NOI) in accordance with the requirements of Part II of this permit in order for storm water discharge associated with industrial activity for construction activities pursuant to Part I.B. of this permit to be authorized to discharge under this general permit.

PART II. NOTICE OF INTENT (NOI) REQUIREMENTS

A. DEADLINES FOR FILING A NOTICE OF INTENT

For storm water discharge associated with industrial activity for construction activities where construction begins after October 1, 1992, construction activities shall not commence until an authorization has been issued for the project by the Department.

B. FAILURE TO NOTIFY Dischargers who fail to notify the Department of their intent to be covered, and discharge pollutants to water of the United States within Iowa, without an NPDES permit, are in violation of the Clean Water Act and the Code of Iowa.

C. CONTENTS OF THE NOTICE OF INTENT A complete Notice of Intent shall include the items described in Parts II.C.1., II.C.2., and II.C.3. of this permit.

1. A completed Notice of Intent (NOI) form, DNR Form 542-1415, signed in accordance with Part VI.G. of this permit. The information on the form shall include the following:

A. Name, address, and location of the construction site for which this notification is submitted. The location should be provided as the 1/4 section, township, range, and the county in which the storm water discharge is located.

B. The owner's name, address, telephone number, and status (federal, state, private, public or other entity).

C. The name, address and telephone number of any operator (contractor) that has been identified as having a role in the storm water pollution prevention plan for the site required under Part IV.D.7. of this permit. Contractors (operators) identified after the submittal of the completed Notice of Intent shall be identified in the pollution prevention plan.

D. The type of discharge (new or existing as related to October 1, 1992); whether or not the discharge is to a municipal separate storm sewer system; the date the discharge is to commence; the permit status of the discharge; and, the name of the receiving waters.

E. An indication if any existing quantitative data is available describing the concentration of pollutants in storm water discharges and a summary of available existing data. (Existing data should not be included as part of the NOI, it should retained as part of the Pollution Prevention Plan).

F. A brief description of the project; an estimated timetable for major activities; and, an estimate of the number of acres of the site on which soil will be disturbed.

G. A certification that compliance with **G.(1).** through **G.(4).** are met:

G.(1). the pollution prevention plan has been developed before this Notice of Intent is submitted to the Department;

G.(2). the pollution prevention plan will be implemented on October 1, 1992 for any existing storm water discharge associated with industrial activity for construction activities. For a storm water discharge associated with industrial activity for construction activities that commence after October 1, 1992, the pollution prevention plan shall be implemented with the start of construction activities;

G.(3). this Notice of Intent will be included and incorporated into the pollution prevention plan and will be updated as required; and,

G.(4). the storm water pollution prevention plan provides compliance with section 467A.64 of the Code of Iowa and local sediment and erosion plans and are consistent with the requirements of Part IV of this general permit.

2. APPLICABLE FEES The applicable fees specified in Iowa Administrative Code 567 -- 64.16(455B).

3. PUBLIC NOTIFICATION A demonstration that the public notice specified in Iowa Administrative Code 567--64.6(1)"c"(2) was published at least one day, in one newspaper with the largest circulation in the area in which the facility is located or the activity will occur.

D. WHERE TO SUBMIT Facilities which discharge storm water associated with industrial activity for construction activities must submit items described in Parts II.C.1., 2., and 3. of this permit to the Department at the following address:

Storm Water Coordinator
Iowa Department of Natural Resources
502 E. 9th St.
Des Moines, IA 50319-0034

E. RENOTIFICATION Prior to the expiration of an authorization issued under this general permit, the permittee is required to resubmit a Notice of Intent (no additional public notice is required) with the Department for coverage under the new general permit. If a new general permit has not been reissued prior to the expiration of the current permit, the provisions and coverage of the current permit are extended until replaced by the adoption of a new general permit.

F. TRANSFER OF COVERAGE UNDER THIS PERMIT For storm water discharge associated with industrial activity for construction activities where the ownership changes, the Department must be notified of the title transfer within 30 days. Both the previous owner(s) and the new owner(s) are responsible for notifying the Department of the transfer and the new owner's name and contact information. This requirement shall be satisfied upon the Department's receipt of the notification of this information by either the previous owner(s) or the new owner(s). If a storm water discharge associated with industrial activity for construction activities is covered by this general permit, the new owner(s) shall be subject to all terms and

conditions of this general permit. A copy of the notice of transfer that was sent to the Department shall be included in the pollution prevention plan. For construction activity which is part of a larger common plan of development such as a housing or commercial development project, if a permittee transfers ownership of all or any part of property subject to this permit, both the permittee and transferee shall be responsible for compliance with the provisions of this permit for that portion of the project which has been transferred including when the transferred property is less than one acre in area. If the new owner(s) agree in writing to be solely responsible for compliance with the provisions of this permit for the property which has been transferred, then the existing permittee(s) shall be relieved of responsibility for compliance with this permit for the transferred property, from and after the date the Department receives written notice of transfer of responsibility. A copy of the notice of transfer of responsibility shall be included in the pollution prevention plan.

G. NOTICE OF DISCONTINUATION

1. Within 30 days after final stabilization at a construction site (as defined in Part VIII of this permit), the operator or owner of the facility shall submit a Notice of Discontinuation to the Department.

2. The Notice of Discontinuation shall include the following information:

A. the name of the owner/operator to which the permit was issued;

B. the general permit number and permit authorization number;

C. the date the construction site reached final stabilization; and,

D. the following certification signed in accordance with Part VI.G. of this permit:

"I certify under penalty of law that disturbed soils at the identified facility have been finally stabilized and temporary erosion and sediment control measures have been removed or will be removed at an appropriate time. I understand that by submitting this Notice of Discontinuation, that I am no longer authorized to discharge storm water associated with industrial activity for construction activities by Iowa Department of Natural Resources General NPDES Permit No. 2. and that discharging pollutants from storm water associated with industrial activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit."

PART III. SPECIAL CONDITIONS, MANAGEMENT PRACTICES, AND OTHER NON-NUMERIC LIMITATIONS

A. PROHIBITION ON NON-STORM WATER DISCHARGES

1. All discharges authorized by this permit shall be composed entirely of storm water except for non-storm discharges listed in Part III.A.2.

2. Discharges from fire fighting activities; fire hydrant flushings; waters used to wash vehicles in accordance with Part IV.D.2.c.(2).; potable water sources including waterline flushings; irrigation drainage; routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; springs; uncontaminated groundwater; and foundation or footing drains where flows are not contaminated with process materials such as solvents; may be authorized by this permit provided the non-storm water component of the discharge is in compliance with Part IV.D.5. of this permit.

B. RELEASES IN EXCESS OF REPORTABLE QUANTITIES Any owner or operator identified in the pollution prevention plan is subject to the spill notification requirements as specified in 455B.386 of the Iowa Code. Iowa law requires that as soon as possible but not more than six hours after the onset of a "hazardous condition" the Department and local

sheriff's office or the office of the sheriff of the affected county be notified.

The storm water pollution prevention plan described in Part IV of this permit must be modified within 5 calendar days of knowledge of the release to provide a description of the release and the circumstances leading to the release and to identify and provide for the implementation of steps to prevent the reoccurrence of such releases and to respond to such releases.

PART IV. STORM WATER POLLUTION PREVENTION PLANS

A storm water pollution prevention plan shall be developed for each construction site covered by this permit. Storm water pollution prevention plans shall be prepared in accordance with good engineering practices. The plan shall identify potential sources of pollution which may reasonably be expected to affect the quality of the storm water discharge from the construction activities. In addition, the plan shall describe and ensure the implementation of practices which will be used to reduce the pollutants in storm water discharge associated with industrial activity for construction activities at the construction site and to assure compliance with the terms and conditions of this permit. Facilities must implement the provisions of the storm water pollution prevention plan required under this part as a condition of this permit.

A. DEADLINES FOR POLLUTION PREVENTION PLAN PREPARATION AND COMPLIANCE

1. POLLUTION PREVENTION PLAN PREPARATION DEADLINE The pollution prevention plan shall be completed prior to the submittal of an NOI to the Department to be covered under this permit and shall be updated as appropriate.

2. POLLUTION PREVENTION PLAN COMPLIANCE DEADLINE The pollution prevention plan shall provide for compliance with the terms and schedule of the plan prior to the initiation of construction activities.

B. SIGNATURE AND PLAN REVIEW

1. The plan shall be signed in accordance with Part VI.G., and be retained at the construction site from the date construction activities begin to the date of final stabilization.

2. The permittee shall make plans available to the Department upon request, or in the case of a storm water discharge associated with industrial activity for construction activities which discharge through a municipal separate storm sewer system with an NPDES permit, to the municipal operator of the system.

3. The Department may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this Part. After such notification from the Department, the permittee shall make changes to the plan and shall submit to the Department a written certification that the requested changes have been made. Unless otherwise provided by the Department, the permittee shall have 3 business days after such notification to make the necessary changes.

4. All storm water pollution prevention plans received by the Department from the permittee are considered reports that shall be available to the public under Section 308(b) of the CWA and Chapter 22 of the Code of Iowa. However, the permittee may claim any portion of a storm water pollution plan as confidential in accordance with Chapter 22 of the Code of Iowa and Iowa Administrative Code (561)--2.5.

C. KEEPING PLANS CURRENT

The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not been addressed in the plan or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified in Part IV.D.2. of this permit, or in otherwise achieving the general objectives of controlling pollutants in storm water discharge associated with industrial activity for construction

activities. In addition, the pollution prevention plan shall be updated to: expeditiously change the site map to include changes at the site, include contractors identified after the submittal of the Notice of Intent as Co-permittees, described in Part IV.D.7. of this permit; identify any change in ownership or transference of the permit and permit responsibilities; or, if required, by the occurrence of a hazardous condition (as defined in Part VIII of this permit). Amendments to the plan may be reviewed by the Department of Natural Resources in the same manner as Part IV.B.2.

D. CONTENTS OF THE POLLUTION PREVENTION PLAN. The storm water pollution prevention plan shall include the following items:

1. SITE DESCRIPTION Each plan shall provide a description of the following:

A. a description of the nature of the construction activity;

B. estimates of the total area of the site and the area of the site that is expected to be disturbed by excavation, grading, or other activities;

C. an estimate of the runoff coefficient of the site after construction activities are completed and existing data describing the soil or the quality of any discharge from the site;

D. a site map indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of soil disturbance, the location of structural and nonstructural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands), and locations where storm water is discharged to a surface water; and

E. the name of the receiving water(s) and the ultimate receiving water(s).

2. CONTROLS Each plan shall include a description of controls that will be implemented at the construction site. The plan will clearly describe the intended sequence of major activities and for each activity, the appropriate control measures and the timing during the construction process that the measures will be implemented. (For example, perimeter controls for one portion of the site will be installed after the clearing and grubbing necessary for installation of the measure, but before the clearing and grubbing for the remaining portions of the site. Perimeter controls will be actively maintained until final stabilization of those portions of the site upward of the perimeter control. Temporary perimeter controls will be removed after final stabilization). The description of controls shall address the following minimum components:

A. EROSION AND SEDIMENT CONTROLS

A.(1). STABILIZATION PRACTICES A description of temporary and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans should ensure that existing vegetation is preserved where attainable and that disturbed areas are stabilized. Stabilization practices may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as precluded by snow cover, stabilization measures shall be initiated on all disturbed areas as soon as practical but in no case where construction activity will not occur for a period of 21 or more calendar days later than the 14th day after no construction activity has occurred on such area. Where the initiation of stabilization measures by the 14th day after no construction activity occurs is precluded by snow cover, then stabilization measures shall be initiated as soon as practicable thereafter.

A.(2). STRUCTURAL PRACTICES A description of structural practices to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff from exposed areas of the site. Such practices may include silt fences, earth dikes, brush barriers, drainage swales, sediment

traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. Structural practices should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA.

A.(2).(*a*). For common drainage locations that serve an area with more than 10 disturbed acres at one time, a temporary or permanent sediment basin providing 3,600 cubic feet of storage per acre drained shall be provided where attainable until final stabilization of the site has been achieved. The 3,600 cubic feet of storage area per acre drained does not apply to flows from offsite areas and flows from onsite areas that are either undisturbed or have undergone final stabilization where such flows are diverted around the sediment basin. For drainage locations which serve more than 10 disturbed acres at one time and where a temporary sediment basin providing 3,600 cubic feet of storage per acre drained is not attainable, sediment traps, silt fences, or equivalent sediment controls are required for all sideslope and downslope boundaries of the construction area.

A.(2).(*b*). For drainage locations serving 10 or fewer acres, sediment traps, silt fences or equivalent sediment controls are required for all sideslope and downslope boundaries of the construction area or a sediment basin providing for 3,600 cubic feet of storage per acre drained.

A.(2).(c). Unless infeasible, the following measures shall be implemented at all sites: utilize outlet structures that withdraw water from the surface when discharging from basins, provide and maintain natural buffers around surface waters and direct storm water to vegetated areas to both increase sediment removal and maximize storm water infiltration.

The permittee(s) shall minimize soil compaction and, unless infeasible, preserve topsoil. "Infeasible" shall mean not technologically possible, or not economically practicable and achievable in light of the best industry practices. "Unless infeasible, preserve topsoil" shall mean that, unless infeasible, topsoil from any areas of the site where the surface of the ground for the permitted construction activities is disturbed shall remain within the area covered by the applicable General Permit No. 2 authorization. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted. Preserving topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed. The permittee(s) shall control storm water volume and velocity to minimize soil erosion in order to minimize pollutant discharges and shall control storm water discharges, including both peak flowrates and total storm water volume, to minimize channel and stream bank erosion and scour in the immediate vicinity of discharge points. An affidavit signed by the permittee(s) may be submitted to demonstrate compliance.

For construction activity which is part of a larger common plan of development, such as a housing or commercial development project, in which a new owner agrees in writing to be solely responsible for compliance with the provisions of this permit for the property which has been transferred or in which the new owner has obtained authorization under this permit for a lot or lots (as specified in subrule 567-64.6(6) of the Iowa Administrative Code), the topsoil preservation requirements described above must be met no later than at the time the lot or lots have reached final stabilization as described in this permit.

The topsoil preservation requirement described above shall be implemented for projects that have not received an authorization under this permit prior to October 1, 2012. The topsoil preservation requirements are not required to be implemented for projects that have been authorized prior to October 1, 2012. In residential and commercial developments, a plat is considered a project. For other large areas that have been authorized for multiple

construction sites, including those to be started at a future date, such as those located at industrial facilities, military installations and universities, a new construction project not yet surveyed and platted out is considered a project. This stipulation is intended to be interpreted as requiring the topsoil preservation requirements on development plats and construction activities on other extended areas that may have several construction projects permitted under the same authorization to be implemented on those projects not yet surveyed and platted out prior to October 1, 2012 even if other plats and construction activities in the same development or other extended area were authorized prior to October 1, 2012.

B. STORM WATER MANAGEMENT A description of measures that will be installed during construction to control pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the CWA. This permit only addresses the installation of storm water management measures, and not the ultimate operation and maintenance of such structures after the construction activities have been completed and the site has undergone final stabilization. Permittees are only responsible for the installation and maintenance of storm water management measures prior to final stabilization of the site, and are not responsible for maintenance after storm water discharges associated with industrial activity have been eliminated from the site.

B.(1). Such practices may include: storm water detention structures (including wet ponds); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; and infiltration of runoff onsite; and sequential systems (which combine several practices). A goal of 80 percent removal of total suspended solids from those flows which exceed predevelopment levels should be used in designing and installing storm water management controls (where practicable). Where this goal is not met, the permittee shall provide justification for rejecting each practice based on site conditions.

B.(2). Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions present prior to the initiation of construction activities).

C. OTHER CONTROLS

C.(1). WASTE DISPOSAL All wastes composed of building materials must be removed from the site for disposal in permitted disposal facilities. No building material wastes or unused building materials shall be buried, dumped, or discharged at the site.

C.(2). Off-site vehicle tracking of sediments shall be minimized.

C.(3). The plan shall ensure and demonstrate compliance with applicable State or local waste disposal, sanitary sewer or septic system regulations.

D. APPROVED STATE OR LOCAL PLANS Facilities which discharge storm water associated with industrial activity for construction activities must include in their storm water pollution prevention plan procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by State or local officials. Applicable requirements specified in sediment and erosion plans, site permits or storm water management plans approved by State or local officials that are applicable to protecting surface water resources are, upon submittal of an NOI to be authorized to discharge under this permit, incorporated by reference and are enforceable under this permit even if they are not specifically included in a storm water pollution prevention plan required under this permit.

Operators of facilities seeking alternative permit requirements shall submit an individual permit application in accordance with Part I.C.2. of this permit along with a description of why requirements in approved State or local plans should not be applicable as a condition of an NPDES permit.

3. MAINTENANCE A description of procedures to maintain in good and effective operating conditions vegetation, erosion and sediment control measures and other protective measures identified in the site plan.

4. INSPECTIONS Qualified personnel (provided by the discharger) shall inspect disturbed areas of the construction site that have not been stabilized with a perennial, vegetative cover of sufficient density to preclude erosion at least once every seven calendar days. Unless erosion is evident or other conditions warrant them, regular inspections are not required on areas that have been stabilized with a perennial, vegetative cover of sufficient density to preclude erosion.

A. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

B. Based on the results of the inspection, the description of potential pollutant sources identified in the plan in accordance with paragraph IV.D.1. of this permit and pollution prevention measures identified in the plan in accordance with paragraph IV.D.2. of this permit shall be revised as appropriate as soon as practicable after such inspection. Such modifications shall provide for implementation of any changes to the plan within 7 calendar days following the inspection.

C. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph IV.D.4.B. of the permit shall be made and retained as part of the storm water pollution prevention plan for at least three years after final stabilization has been achieved and a Notice of Discontinuation has been submitted to the Department. The report shall be signed in accordance with Part VI.G. of this permit.

5. NON-STORM WATER DISCHARGES Except for flows from fire fighting activities, sources of non-storm water listed in Part III.A.2. of this permit that are combined with storm water discharges associated with industrial activity from construction activities must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

6. ADDITIONAL REQUIREMENTS FOR STORM WATER DISCHARGE FROM INDUSTRIAL ACTIVITIES OTHER THAN CONSTRUCTION, INCLUDING DEDICATED ASPHALT PLANTS, AND DEDICATED CEMENT PLANTS This permit may only authorize a storm water discharge associated with industrial activity from a construction site that is mixed with a storm water discharge from an industrial source other than construction, where:

A. the industrial source other than construction is located on the same site as the construction activity;

B. storm water discharges associated with industrial activity from the areas of the site where construction activities are occurring are in compliance with the terms of this permit; and,

C. storm water discharges associated with industrial activity from the areas of the site

where industrial activity other than construction are occurring (including storm water discharges from dedicated asphalt plants and dedicated cement plants) are in compliance with the terms and conditions, including applicable NOI or application requirements, of a different NPDES general permit or individual permit authorizing such discharges.

7. CONTRACTORS

A. The storm water pollution prevention plan must clearly identify for each measure in the plan, the contractor(s) and/or subcontractor(s) that will implement the measure. All contractors and subcontractors identified in the plan must sign a copy of the certification statement in Part IV.D.7.B. of this permit in accordance with Part VI.G. of this permit. Upon signing the certification, the contractor or sub-contractor is a co-permittee with the owner and other co-permittee contractors. All certifications must be included in the storm water pollution prevention plan.

B. CERTIFICATION STATEMENT All contractors and subcontractors identified in a storm water pollution prevention plan in accordance with Part IV.D.7.A. of this permit shall sign a copy of the following certification statement before conducting any professional service at the site identified in the storm water pollution prevention plan:

"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 "Storm Water 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 storm water pollution prevention plan developed under this NPDES permit and the terms of this NPDES permit."

The 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.

PART V. RETENTION OF RECORDS

A. The permittee shall retain copies of storm water pollution prevention plans and all reports required by this permit, and records of all data used to complete the Notice of Intent to be covered by this permit, for a period of at least three years from the date that the site is finally stabilized and a Notice of Discontinuation has been submitted to the Department.

B. If there is a construction trailer, shed or other covered structure located on the property the permittee shall retain a copy of the storm water pollution prevention plan required by this permit at the construction site from the date of project initiation to the date of final stabilization. If there is no construction trailer, shed or other covered structure located on the property, the permittee shall retain a copy of the plan at a readily available alternative site approved by the Department and provide it for inspection upon request. If the plan is maintained at an off-site location such as a corporate office, it shall be provided for inspection no later than three hours after being requested.

C. ADDRESSES All written correspondence to the Department should be sent to the following address:

Storm Water Coordinator
Iowa Department of Natural Resources
502 E. 9th St.
Des Moines, IA 50319-0034

PART VI. STANDARD PERMIT CONDITIONS

A. DUTY TO COMPLY

1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Code of Iowa and the Clean Water Act and is grounds for enforcement action; for termination of coverage under this general permit; or, for denial of a request for coverage under a reissued general permit.

2. TOXIC POLLUTANTS The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act (CWA) for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

B. CONTINUATION OF THE EXPIRED GENERAL PERMIT This permit expires on October 1, 2017. An expired general permit continues in force until replaced by adoption of a new general permit.

C. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. DUTY TO MITIGATE The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. DUTY TO PROVIDE INFORMATION The permittee shall furnish to the Department, within three hours, any information which the Department may request to determine compliance with this permit. The permittee shall also furnish to the Department upon request copies of records required to be kept by this permit.

F. OTHER INFORMATION When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report to the Department, he or she shall promptly submit such facts or information.

G. SIGNATORY REQUIREMENTS All Notices of Intent, storm water pollution prevention plans, reports, certifications or information either submitted to the Department or the operator of a municipal separate storm sewer system, or that this permit requires be maintained by the permittee, shall be signed in accordance with rule 567--64.3(8) of the Iowa Administrative Code as follows:

64.3(8) *Identity of signatories of operation permit applications.* The person who signs the application for an operation permit shall be:

a. *Corporations.* In the case of corporations, a principal executive officer of at least the level of vice-president.

b. *Partnerships.* In the case off a partnership, a general partner.

c. *Sole proprietorships.* In the case of a sole proprietorship, the proprietor.

d. *Public facilities.* In the case of a municipal, state, or other public facility, by either the principal executive officer, or the ranking elected official.

e. *Storm water discharge associated with industrial activity from construction activity.* In the case of a storm water discharge associated with industrial activity from construction as identified in 40 CFR 122.26(b)(14)(*x*), either the owner of the site or the general contractor.

The person who signs NPDES reports shall be the same, except that in the case of a corporation or a public body, monitoring reports required under the terms of the permit may be submitted by the person who is responsible for the overall operation of the facility from which the discharge originated.

H. CERTIFICATION Any person signing documents under paragraph VI.G. shall make the following certification:

"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."

I. OIL AND HAZARDOUS SUBSTANCE LIABILITY Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under section 311 of the Clean Water Act.

J. PROPERTY RIGHTS The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

K. SEVERABILITY The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

L. TRANSFERS This permit is not transferable to any person except after notice to the Department. The Department may require the discharger to apply for and obtain an individual NPDES permit as stated in Part I.C.

M. PROPER OPERATION AND MAINTENANCE The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions or this permit.

N. INSPECTION AND ENTRY The permittee shall allow the Department or an authorized representative of EPA, the State, or, in the case of a facility which discharges through a municipal separate storm sewer, an authorized representative of the municipal operator or the separate storm sewer receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and,

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

O. PERMIT ACTIONS Coverage under this permit may be terminated for cause. The filing of a request by the permittee for a permit discontinuance, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

P. ENVIRONMENTAL LAWS No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

PART VII. REOPENER CLAUSE

If there is evidence indicating potential or realized impacts or water quality due to any storm water discharge associated with industrial activity for construction activities covered by this permit, the owner or operator of such discharge may be required to obtain individual permit in accordance with Part I.C of this permit.

PART VIII. DEFINITIONS

"*Best Management Practices*" ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

"*Construction site*" means a site or common plan of development or sale on which construction activity, including clearing, grading and excavating, results in soil disturbance. A construction site is considered one site if all areas of the site are contiguous with one another and one entity owns all areas of the site.

"*CWA*" or "*Clean Water Act*" means the Federal Water Pollution Control Act.

"*Dedicated portable asphalt plant*" means a portable asphalt plant that is located on or contiguous to a construction site and that provides asphalt only to the construction site that the plant is located on or adjacent to.

"*Dedicated portable concrete plant*" means a portable concrete plant that is located on or contiguous to a construction site and that provides concrete only to the construction site that the plant is located on or adjacent to.

"*Dedicated sand or gravel operation*" means an operation that produces sand and/or gravel for a single construction project.

"*Department*" means the Iowa Department of Natural Resources.

"*Final Stabilization*" means that all soil disturbing activities at the site have been completed, and that a uniform perennial vegetative cover with a density of 70% for the area has been established or equivalent stabilization measures have been employed or which has been returned to agricultural production.

"*Hazardous condition*" means any situation involving the actual, imminent, or probable spillage, leakage, or release of a hazardous substance on to the land, into a water of the state, or into the atmosphere, which creates an immediate or potential danger to the public health or safety or to the environment. 455B.381(2) 1991, Code of Iowa

"*Hazardous substance*" means any substance or mixture of substances that presents a danger to the public health or safety and includes, but is not limited to, a substance that is toxic, corrosive, or flammable, or that is an irritant or that, in confinement, generates pressure through decomposition, heat, or other means. The following are examples of substances which, in sufficient quantity may be hazardous: acids; alkalis; explosives; fertilizers; heavy metals such as chromium, arsenic, mercury, lead and cadmium; industrial chemicals; paint thinners; paints; pesticides; petroleum products; poisons, radioactive materials; sludges; and organic solvents. "Hazardous substances" may include any hazardous waste identified or listed by the administrator of the United State Environmental Protection Agency under the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976, or any toxic pollutant listed under section 307 of the federal Water Pollution Control Act as amended to January 1, 1977, or any hazardous substance designated under section 311 of the federal Water Pollution Control Act as amended to January 1, 1977, or any hazardous material designated by the secretary of transportation under the Hazardous Materials Transportation Act (49 CFR 172.101). 455B.381(1), 1991 Code of Iowa

"*Municipality*" means a city, town, borough, county, parish, district, association, or other public body created by or under State law.

"*NOI*" means Notice of Intent to be covered by this permit (see Part II of this permit.)

"*Outstanding Iowa Waters*" means those waters which constitute an outstanding state resource such as waters of exceptional recreational or ecological significance. These waters are identified in Appendix B of the Iowa Antidegradation Implementation Procedure manual.

"*Outstanding National Resource Waters*" means those waters which constitute an outstanding national resource such as waters of national and state parks and wildlife refuges and also waters of exceptional recreational or ecological significance. These waters are identified in Appendix B of the Iowa Antidegradation Implementation Procedure manual.

"*Permittee*" means the owner of the facility or site.

"*Qualified personnel*" means those individuals capable enough and knowledgeable enough to perform the required functions adequately well to ensure compliance with the relevant permit conditions and requirements of the Iowa Administrative Code.

"*Runoff coefficient*" means the fraction of total rainfall that will appear at the conveyance as runoff.

"*Storm Water*" means storm water runoff, snow melt runoff, and surface runoff and drainage.

"*Storm water discharge associated with industrial activity*" means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 CFR part 122. For the categories of industries identified in paragraphs (i) through (x) of this definition, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR part 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.

For the categories of industries identified in paragraph (xi) of this definition, the term includes only storm water discharges from all the areas (except access roads and rail lines) that are listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water. For the purposes of this paragraph, material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product, or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are Federally, State, or municipally owned or operated that meet the description of the facilities listed in these paragraphs (i)-(xi) of the definition) include those facilities designated under 40 CFR 122.26(a)(1)(v). The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this definition;

(*i*) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR Subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category (*xi*) of this definition);

(*ii*) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285), 29, 311, 32 (except 323), 33, 3441, 373;

(*iii*). Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area

under 40 CFR 434.11(1) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; (inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator; inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, nor sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim);

(*iv*) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of RCRA;

(*v*) Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under Subtitle D of RCRA;

(*vi*) facilities involved in the recycling of materials, including metal scrap yards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;

(*vii*) Steam electric power generating facilities, including coal handling sites;

(*viii*) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-4225), 43, 44, 45 and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under paragraphs (*i*)-(*vii*) or (*ix*)-(*xi*) of this definition are associated with industrial activity;

(*ix*) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with 40 CFR 503;

(*x*) Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than one acre of total land area which are not part of a larger common plan of development or sale;

(*xi*) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-4225, (and which are not otherwise included within categories (*ii*)-(*x*));

"***Storm water discharge associated with industrial activity for construction activities***" means activities that fall under subparagraph (x) in the definition of storm water discharge associated with industrial activity.

"***Topsoil***" means the fertile, uppermost part of the soil containing significant organic matter largely devoid of debris and rocks and often disturbed in cultivation.

"***Uncontaminated groundwater***" means water that is potable for humans, meets the narrative water quality standards in subrule 567-61.3(2) of the Iowa Administrative Code, contains no more than half the listed concentration of any pollutants in subrule 567-61.3(3) of the IAC, has a pH of 6.5-9.0 and is located in soil or rock strata.

APPENDIX B

PUBLIC NOTICE / NOTICE OF INTENT

ENGINEERS & PLANNERS
SNYDER & ASSOCIATES
ANKENY, IA (515) 964-2020 | ATLANTIC, IA (712) 243-6505 | CEDAR RAPIDS, IA (319) 362-9394 | COUNCIL BLUFFS, IA (712) 322-3202 | MARYVILLE, MO (660) 582-8888 | ST. JOSEPH, MO (816) 364-5222

FACSIMILE / ELECTRONIC TRANSMITTAL

Date: August 15, 2016

To: Des Moines Register – Andrea Houghton e-mail: legals@dmreg.com

e-mail:

From: Seth Sunderman

Subject: Public Notice of Storm Water Discharge – Mercy Clinic

This transmission contains 2 pages, including the cover sheet. If you do not receive the total number of pages, please contact this office.

This document is transmitted as checked below:

- ☐ For Approval
- ☐ For Your Use
- ☐ As Requested
- ☐ For Review & Comment
- ☐ Signature & Return
- ☒ FOR PUBLICATION

Original to follow in mail: ☐ *Yes* ☒ *No*

Comments:

PLEASE PUBLISH IN NEXT ISSUE

PLEASE SEND BILL AND AN AFFIDAVIT OF PUBLICATION TO:

Snyder & Associates, Inc.
Attn: Seth Sunderman
2727 SW Snyder Blvd.
PO Box 1159
Ankeny, IA 50023
Ph. (515) 964-2020

The information transmitted in this facsimile message is intended to be confidential and for the use of only the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any retention, dissemination, distribution or copy of this telecopy is strictly prohibited. If you have received this facsimile in error, please notify us immediately by telephone and return the original message to us at the address above via the mail service (we will reimburse postage). Thank you.

Instructions - To complete the public notice, fill in the blanks with the required information or select the appropriate response and send to the newspapers.
The public notice must be published at least one day **at your own expense** in two newspapers.

PUBLIC NOTICE OF STORM WATER DISCHARGE

Two Rivers Real Estate, LLC plans to submit a Notice of Intent to the Iowa Department of Natural Resources to be covered under NPDES General Permit No. 2 "Storm Water Discharge Associated with Industrial Activity for Construction Activities".

The storm water discharge will be from a new commercial development located in the NW 1/4 of Section 6, Township 79N, Range 25W, Polk County.

Storm water will be discharged from 1 point source(s) and will be discharged to Private storm sewer to an unnamed tributary of Little Beaver Creek.

Comments may be submitted to the Storm Water Discharge Coordinator, IOWA DEPARTMENT OF NATURAL RESOURCES, Environmental Protection Division, 900 E. Grand Avenue, Des Moines, IA 50319-0034. The public may review the Notice of Intent from 8 a.m. to 4:30 p.m., Monday through Friday, at the above address after it has been received by the department.

APPENDIX C

CHECKLISTS

EPA BASELINE CONSTRUCTION GENERAL PERMIT REQUIREMENTS PRE-CONSTRUCTION CHECKLIST

Storm Water Pollution Prevention Plans

1. A site description, including:
   - ☐ The nature of the activity?
   - ☐ Intended sequence of major construction activities
   - ☐ The total area of the site
   - ☐ The area of the site that is expected to undergo excavation
   - ☐ The runoff coefficient of the site after construction is complete
   - ☐ Existing soil or storm water data
   - ☐ A site map with:
     - ☐ Drainage patterns
     - ☐ Approximate slopes after major grading
     - ☐ Area of soil disturbance
     - ☐ Outline of areas which won't be disturbed
     - ☐ Location of major structural and non-structural controls
     - ☐ Areas where stabilization practices are expected to occur
     - ☐ Surface waters
     - ☐ Storm water discharge locations
   - ☐ The name of the receiving water(s)
2. A description of controls:
   - 2.1 Erosion and sediment controls, including:
     - ☐ Stabilization practices for all areas disturbed by construction
     - ☐ Structural practices for all drainage/discharge locations
   - 2.2 Storm water management controls, including:
     - ☐ Measures used to control pollutants occurring in storm water discharges after construction activities are complete.
     - ☐ Velocity dissipation devices to provide nonerosive flow conditions from the discharge point along the length of any outfall channel.
   - 2.3 Other controls including:
     - ☐ Waste disposal practices which prevent discharge of solid materials to waters of the U.S.?
     - ☐ Measures to minimize offsite tracking of sediments by construction vehicles
     - ☐ Measures to ensure compliance with State or local waste disposal, sanitary sewer, or septic system regulations
   - 2.4 ☐ Description of the timing during the construction when measures will be implemented.
3. ☐ Are State or local requirements incorporated into the plans?
4. ☐ Are maintenance procedures for control measures identified in the plan?
5. ☐ Identification of allowable non-storm water discharges and pollution prevention measures.
6. ☐ Contractor certification.
7. ☐ Plan certification.

EPA BASELINE CONSTRUCTION GENERAL PERMIT CHECKLIST

Storm Water Pollution Prevention Plan
Construction/Implementation Checklist

1. Maintain Records of Construction Activities, including:
   - ☐ Dates when major grading activities occur
   - ☐ Dates when construction activities temporarily cease on a portion of the site
   - ☐ Dates when construction activities permanently cease on a portion of the site
   - ☐ Dates when stabilization measures are initiated on the site
2. Prepare Inspection reports summarizing:
   - ☐ Name of inspector
   - ☐ Qualifications of inspector
   - ☐ Measures/areas inspected
   - ☐ Observed conditions
   - ☐ Changes necessary to the SWPPP
3. Report Releases of Reportable Quantities of Oil or Hazardous Materials (if they occur):
   - ☐ Notify National Response Center 800/424-8802 immediately
   - ☐ Notify permitting authority in writing within 14 days
   - ☐ Modify the pollution prevention plan to include:
     - the date of release
     - circumstances leading to the release
     - steps taken to prevent reoccurrence of the release
4. Modify Pollution Prevention Plan as necessary to:
   - ☐ Comply with minimum permit requirements when notified by EPA that the plan does not comply
   - ☐ Address a change in design, construction operation or maintenance which has an effect on the potential for discharge of pollutants
   - ☐ Prevent reoccurrence of reportable quantity releases of a hazardous material or oil

EPA BASELINE CONSTRUCTION GENERAL PERMIT CHECKLIST

Storm Water Pollution Prevention Plan
Final Stabilization/Termination Checklist

1. ☐ All soil disturbing activities are complete
2. ☐ Temporary erosion and sediment control measures have been removed or will be removed at an appropriate time
3. ☐ All areas of the construction site not otherwise covered by a permanent pavement or structure have been stabilized with a uniform perennial vegetative cover with a density of 70% or equivalent measures have been employed

POLLUTION PREVENTION PLAN FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES
EROSION AND SEDIMENT CONTROL SELECTION CHECKLIST

INSTRUCTIONS: THIS CHECKLIST LISTS THE MINIMUM SEDIMENT EROSION CONTROL REQUIREMENTS UNDER THE USEPA GENERAL PERMIT. CHECK [✓] EACH ITEM AND FILL IN THE BLANKS BELOW TO EVALUATE COMPLIANCE FOR EACH DRAINAGE AREA AND LOCATION. NOTE: THIS CHECKLIST WAS PREPARED FOR THE USEPA GENERAL PERMIT. REQUIREMENTS FOR STATE GENERAL PERMITS MAY VARY.

Stabilization Practices

☐ Stabilization will be initiated on all disturbed areas where construction activity will not occur for a period of more than 21 calendar days by the 14th day after construction activity has permanently or temporarily ceased.

Stabilization measures to be used include:

☐ Temporary Seeding	☐ Sod Stabilization
☐ Permanent Seeding	☐ Geotextiles
☐ Mulching	☐ Other _____

Structural Practices

☐ Flows from upstream areas will be diverted from exposed soils. Measures to be used include:

☐ Earth Dike	☐ Pipe Slope Drain
☐ Drainage Swale	☐ Other
☐ Interceptor Dike and Swale	

Drainage locations serving less than 10 disturbed acres	Drainage locations serving 10 or more disturbed acres
☐ Sediment controls will be installed	☐ A Sediment Basin will be installed
Sediment controls include:	☐ A Sediment Basin is not attainable on the site; therefore, the following sediment controls will be installed:
☐ Sediment Basin	Sediment Trap
☐ Sediment Trap	Silt Fence or equivalent controls along the sideslope and downslope boundaries
☐ Silt Fence or equivalent controls along all sideslope and downslope boundaries	

Sediment Basin Runoff Storage Calculation

_____ acres area draining to the sediment basin

X
3,600 cubic feet of storage/acre
=

_____ cubic feet of storage required for the basin.

APPENDIX D

SOILS REPORT

INSERT SOILS REPORT IF APPLICABLE

APPENDIX E

INSPECTION REPORTS

EROSION AND SEDIMENT CONTROL MONITORING REPORT

Project: Mercy Clinic-Grimes _____ Date of Inspection: _____

Prime Contractor: _____ Permit No: _____

Inspector: _____ Project No: _____

Reason for Inspection: ☐ Weekly ☐ Rainfall Event (_____ in.) ☐ Other _____

EROSION AND SEDIMENT CONTROL MONITORING

Area Inspected: _____

Inspection of Best Management Practices:

BMP	Control Practice Effective			Maintenance/ Modification Required			BMP	Control Practice Effective			Maintenance/ Modification Required		
	Y	N	N/A	Y	N	N/A		Y	N	N/A	Y	N	N/A
Silt Fencing	☐	☐	☐	☐	☐	☐	Stockpile Stabilization	☐	☐	☐	☐	☐	☐
Ditch Checks	☐	☐	☐	☐	☐	☐	Mulching	☐	☐	☐	☐	☐	☐
Rip Rap	☐	☐	☐	☐	☐	☐	Erosion Matting	☐	☐	☐	☐	☐	☐
Inlet Protection	☐	☐	☐	☐	☐	☐	Temporary Seeding	☐	☐	☐	☐	☐	☐
Drainage Swales	☐	☐	☐	☐	☐	☐	Permanent Seeding	☐	☐	☐	☐	☐	☐
Construction Site Exits	☐	☐	☐	☐	☐	☐	Sodding	☐	☐	☐	☐	☐	☐
Project Schedule	☐	☐	☐	☐	☐	☐	Staging Area	☐	☐	☐	☐	☐	☐
Grading Practices	☐	☐	☐	☐	☐	☐	Other _____	☐	☐	☐	☐	☐	☐
Good Housekeeping	☐	☐	☐	☐	☐	☐	Other _____	☐	☐	☐	☐	☐	☐

OBSERVATION COMMENTS / RECOMMENDATIONS

Note: Any 'Control Practice Effective' box checked 'N' or 'Maintenance/Modification Required' box checked 'Y' must have comments, recommended improvements, and date implemented. Any modifications must be sketched, described, dated, and initialed on the drawing included with the Pollution Prevention Plan.

ITEM	COMMENTS / RECOMMENDED IMPROVEMENTS	DATE IMPLEMENTED

☐ See reverse side for sketches or additional comments/recommendations

CERTIFICATION

Copy to: ☐ Onsite Pollution Prevention Plan ☐ Owner ☐ Project Engineer ☐ Project Observer

"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"

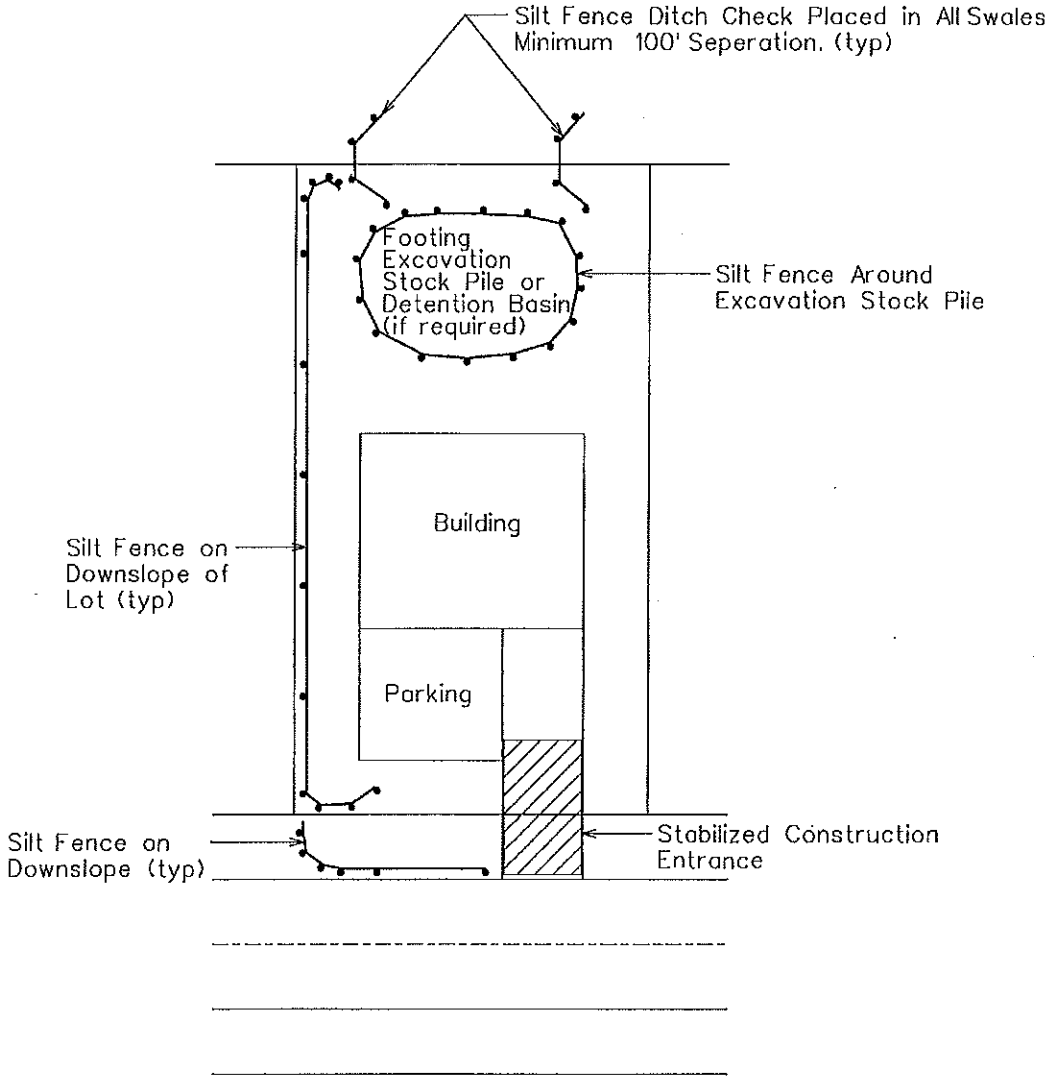
_____

Signature of Monitor

APPENDIX F

TYPICAL LOT SEDIMENT/EROSION CONTROL PLAN

TYPICAL LOT SEDIMENT/EROSION CONTROL PLAN



NOTES

1. POTENTIALLY HAZARDOUS MATERIALS SHALL BE STORED WITHIN AN ENCLOSED OR CONTROLLED STRUCTURE.
2. NOTE TEMPORARY SANITARY FACILITIES ON PLAN IF INDIVIDUALLY PROVIDED.
3. LAYOUT IS TYPICAL AND SHALL BE MODIFIED FOR SITE SPECIFIC CONDITIONS.
4. KEEP ROADWAYS FREE OF SILT AND OTHER DEBRIS.
5. PERMANENT STABILIZATION BY SEEDING AND MULCHING AND/ OR SOD OF FINAL DISTURBANCE.

	SHEET OF
	PN:
	FN:
SNYDER & ASSOCIATES Engineers and Planners 501 S.W. ORALABOR ROAD ANKENY, IA 50021 (515) 964-2020	DATE:
	TECH:

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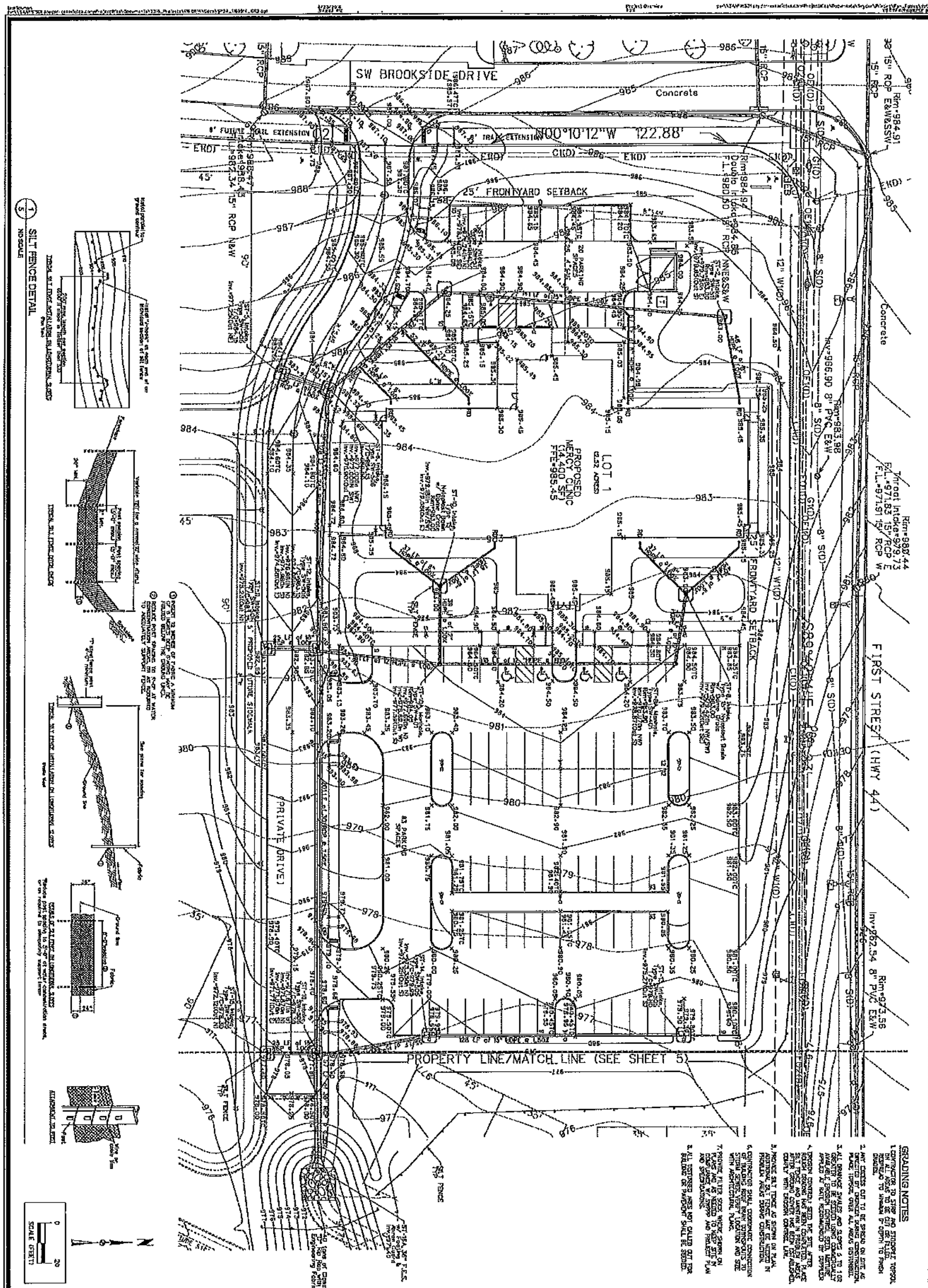
11/24/2004
sdb

APPENDIX G

GRADING & EROSION CONTROL PLAN



MERCY CLINICS - GRIMES

SITE GRADING, STORM SEWER AND EROSION CONTROL PLAN — GRIMES, IOWA

SNYDER & ASSOCIATES, INC.

2727 S.W. SNYDER BLVD.
ANKENY, IOWA 50023
515-964-2020 | www.snyder-associates.com

Mark	Revision	Date	By
Engineer: SVS	Checked By: MAA	Scale: 1"=20'	
Technician: TLS	Date: 08/23/16		

Project No: 115.0514

Sheet 4 of 6

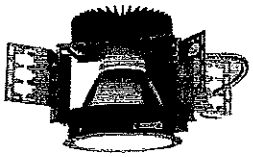
Mercy Clinics-Grimes
Building Lighting

R1

Lumination™ LED Luminaires

Downlights Powered by Infusion™

DI6R - 6" Round Aperture



Project name _____

Date _____

Type _____

Product Description:

Lumination DI Series LED downlights are powered by the Infusion™ downlight module for exceptional efficacy and color rendering. Designed for new construction applications, the DI6R is available in four color temperatures and five lumen packages, all with 90+ CRI. Matching custom engineered reflectors ensure a 45 degree cutoff. The twist-in Infusion DLM LED module allows for tool-free replacement and upgrade as LED technology advances, ensuring the lowest total cost of ownership.

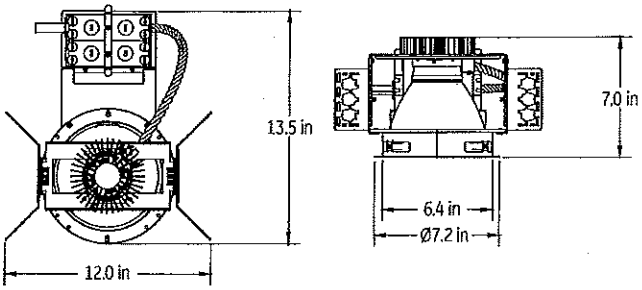
Performance Summary:

Distribution Patterns: Narrow, Wide
Input Voltage: 120, 277V, 347V
Standard Dimming Controls: 0-10V or Phase Dimming to 10%
CCT: 2700K, 3000K, 3500K, 4000K
CRI: 90
Color Consistency: 4 Step MacAdam Ellipse
Lifetime Rating: 50,000 Hours
Input Frequency (Hz): 60Hz
Power Factor: >0.9
Mounting Options: Hanger bars for grid or drywall ceilings
Weight: 6.1 lb
IC Rating: Non-IC Rated
Limited Warranty: 5 years system
Files Available: LM79, LM80, IES, Revit

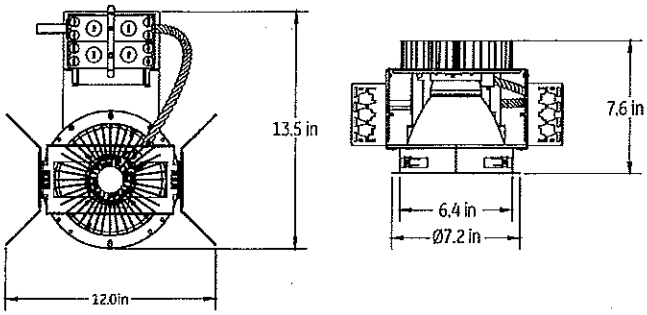
Nominal Module Lumens	1000	1500	2000	3000	4000
Delivered Lumen Output	830	1220	1650	2480	3250
System Input Power (W)	17	23	29	43	56
System Efficacy (LPW)	49	53	57	58	58
Emergency Mode Lumens	585	650	710	750	750

Product Dimensions:

DI6R (1000, 1500, 2000 lm)



DI6R (3000, 4000 lm)



Listings: • UL and cUL Listed. • Suitable for damp locations.

Awards: Next Generation

a product of ecomagination™

Ordering Information: A complete fixture consists of a **Housing + Reflector**

For shortest lead times, order **standard reflector options shown in bold.**

1. Housing - Example: DI6R209351V10

INTERNAL CODE	FIXTURE TYPE	MODULE LUMEN OUTPUT	CRI/CCT	VOLTAGE	DRIVER	OPTIONS
DI	6R = 6 inch round downlight	10 = 1000 LM 15 = 1500 LM 20 = 2000 LM 30 = 3000 LM 40 = 4000 LM	927 = 90CRI, 2700K 930 = 90CRI, 3000K 935 = 90CRI, 3500K 940 = 90CRI, 4000K	1V = 120V 2V[3] = 277V 3V = 347V	10 = 0-10V Dimming Driver PH[5] = Phase Dimming LU[6] = Lutron EcoSystem	(blank) = None EL[3,4] = Bodine Emergency Backup with Remote Test Switch

2. Reflector - Example: RDI6RWSDWT

REFLECTOR	HOUSING TYPE	BEAM SPREAD	REFLECTOR FINISH	REFLECTOR COLOR	FLANGE FINISH
R = Reflector	DI6R = 6" Round	W = Wide N = Narrow	SD = Semi-diffused DF = Diffused SP = Specular	Blank = Clear (no color) WE[1] = Wheat PW[1] = Pewter GO[1] = Gold BL[2] = Black WT = White Paint	WT = White Paint MR = Match Reflector

Accessories

Ordering Notes:

1. Wheat, pewter, and gold anodized reflector colors available in SD = Semi-Diffuse reflector finish only.
2. Black anodized reflectors available in DF = Diffused finish only.
3. 277V input, 1000 lumen version and all EL versions are not Energy Star certified.
4. EL option not available with 347V input voltage.
5. Phase dimming only available with 1000, 1500, and 2000 lumen packages.
6. Lutron Ecosystem only available with 1000, 1500, and 2000 lumen packages.

imagination at work

R1

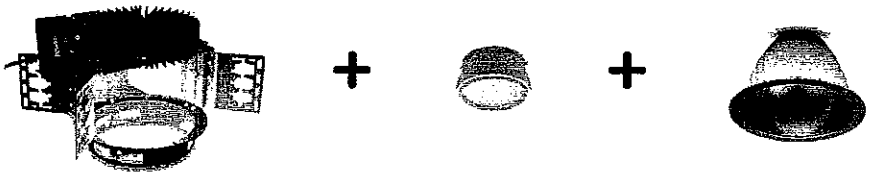
Housing-Only Option

Lumination DI series fixtures without LED modules are stocked in GE distribution centers for quick shipment. These fixtures can be shipped directly to job sites for rough-in, and then later fitted with the appropriate Infusion LED module and trim kit to complete the installation. The unprecedented interchangeabiltiy and flexibility of the Infusion LED module makes this possible.

With the Housing-Only option, distributors can:

- Order just the housings for stock, and then complete the order with the appropriate Infusion LED module and reflector at a later date
- Order the stocked housing, module, and reflector all at once for a complete fixture in under 2 weeks

For the housing-only option: A complete fixture consists of a **Housing + Infusion LED Module + Reflector**



6" Round Housing-Only Fixtures & LED Modules

Downlight Housing-Only			Compatible LED Modules		
PRODUCT CODE	DESCRIPTION CODE	PRODUCT DESCRIPTION	PRODUCT CODE	DESCRIPTION CODE	PRODUCT DESCRIPTION
83630 83632	DI6RLL1V10HO DI6RLL2V10HO	6" Round Housing-Only, 120V, Low Lumen Platform, 0-10V 6" Round Housing-Only, 277V, Low Lumen Platform, 0-10V	99607 99608 99609 99610 99611 99612 99613 99614 99615 99616 99617 99618	DLM1000/927 DLM1000/930 DLM1000/935 DLM1000/940 DLM1500/927 DLM1500/930 DLM1500/935 DLM1500/940 DLM2000/927 DLM2000/930 DLM2000/935 DLM2000/940	1000 LM, 90 CRI, 2700K 1000 LM, 90 CRI, 3000K 1000 LM, 90 CRI, 3500K 1000 LM, 90 CRI, 4000K 1500 LM, 90 CRI, 2700K 1500 LM, 90 CRI, 3000K 1500 LM, 90 CRI, 3500K 1500 LM, 90 CRI, 4000K 2000 LM, 90 CRI, 2700K 2000 LM, 90 CRI, 3000K 2000 LM, 90 CRI, 3500K 2000 LM, 90 CRI, 4000K
83633 83638	DI6RHL1V10HO DI6RHL2V10HO	6" Round Housing-Only, 120V, High Lumen Platform, 0-10V 6" Round Housing-Only, 277V, High Lumen Platform, 0-10V	99619 99620 99621 99622 99623 99624 99625 99626	DLM3000/927 DLM3000/930 DLM3000/935 DLM3000/940 DLM4000/927 DLM4000/930 DLM4000/935 DLM4000/940	3000 LM, 90 CRI, 2700K 3000 LM, 90 CRI, 3000K 3000 LM, 90 CRI, 3500K 3000 LM, 90 CRI, 4000K 4000 LM, 90 CRI, 2700K 4000 LM, 90 CRI, 3000K 4000 LM, 90 CRI, 3500K 4000 LM, 90 CRI, 4000K

6" Round Stocked Reflectors

PRODUCT CODE	DESCRIPTION CODE	PRODUCT DESCRIPTION
93988	RDI6RNSDMR	6" Round Reflector, Narrow Distribution, Semi-Diffuse, Polished Flange
93989	RDI6RNSDWT	6" Round Reflector, Narrow Distribution, Semi-Diffuse, White Flange
93990	RDI6RWSDMR	6" Round Reflector, Wide Distribution, Semi-Diffuse, Polished Flange
93991	RDI6RWSDWT	6" Round Reflector, Wide Distribution, Semi-Diffuse, White Flange

R1

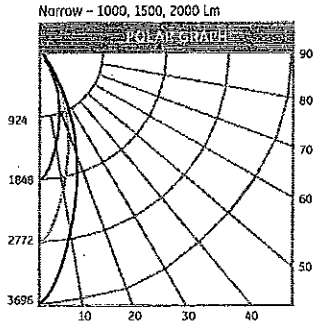
Photometric Data: Lumination™ DI6R Series Downlights

Narrow Distribution

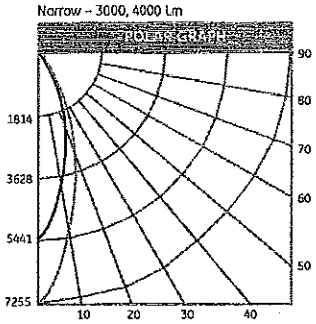
	COEFFICIENTS OF UTILIZATION																	
RC	80%				70%				50%				30%			10%		0%
RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%	10%	10%	0%
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	112	109	107	112	110	108	106	106	104	102	102	101	99	98	97	97	95
2	109	105	101	98	107	103	100	97	100	98	95	97	95	93	95	93	91	90
3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	88	86	85
4	100	94	89	85	99	93	88	85	91	87	84	89	85	83	87	84	82	81
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76
6	92	85	79	76	91	84	79	75	82	78	75	81	77	74	80	77	74	73
7	89	81	75	72	87	80	75	72	79	74	71	78	74	71	77	73	70	69
8	85	77	72	68	84	76	71	68	75	71	68	74	70	67	73	70	67	66
9	82	73	68	65	81	73	68	65	72	68	65	71	67	64	71	67	64	63
10	79	70	65	62	78	70	65	62	69	65	62	68	64	62	68	64	61	60

NOTE: Floor Cavity Reflectance : 20%

Narrow – 1000, 1500, 2000 Lm



Narrow – 3000, 4000 Lm



CANDLEPOWER SUMMARY

	NOMINAL MODULE LUMENS				
	1000	1500	2000	3000	4000
Angle	Candela	Candela	Candela	Candela	Candela
0	1841	2717	3682	5523	7227
5	1698	2507	3397	5095	6668
10	1389	2050	2777	4166	5452
15	1101	1625	2202	3303	4323
20	833	1229	1665	2498	3268
25	601	887	1202	1803	2359
30	347	512	694	1041	1362
35	148	218	295	443	580
40	56	83	113	169	222
45	17	26	35	52	68
50	9	14	18	27	36
55	5	8	11	16	21
60	3	5	7	10	14

ZONAL LUMEN SUMMARY

	NOMINAL MODULE LUMENS					
	1000	1500	2000	3000	4000	
Zone	Lumens	Lumens	Lumens	Lumens	Lumens	% of fixture
0 - 30°	716	1057	1432	2148	2811	85.7
0 - 40°	812	1198	1623	2435	3186	97.2
0 - 60°	832	1227	1663	2495	3264	99.6
0 - 90°	835	1232	1670	2505	3278	100

CONE OF LIGHT

	NOMINAL MODULE LUMENS					
	1000	1500	2000	3000	4000	
Height	fc	fc	fc	fc	fc	Dia. (ft.)
6'	51	75	102	153	201	3.9
8'	29	42	58	86	113	5.2
10'	18	27	37	55	72	6.5
12'	13	19	26	38	50	7.8
14'	9	14	19	28	37	9.1
16'	7	11	14	22	28	10.4
18'	6	8	11	17	22	11.7
20'	5	7	9	14	18	13.0

APPLICATION REFERENCE (Open Space)

	NOMINAL MODULE LUMENS									
	1000		1500		2000		3000		4000	
Spacing	Avg fc	W/ft	Avg fc	W/ft	Avg fc	W/ft	Avg fc	W/ft	Avg fc	W/ft
4' x 4'	53.6	1.08	79.0	1.50	107.1	1.92	141.5	2.58	185.1	3.36
6' x 6'	25.0	0.50	36.9	0.70	50.0	0.90	66.0	1.20	86.4	1.57
8' x 8'	13.4	0.27	19.8	0.38	26.8	0.48	35.4	0.65	46.3	0.84
10' x 10'	8.9	0.18	13.1	0.25	17.8	0.32	23.6	0.43	30.8	0.56
	10' ceiling, Open Space: 50' x 40' x 10'						20' ceiling, Open Space: 50' x 40' x 20'			

LLF: 1.0 Initial, 80/50/20 Reflectances, 2.5' workplane

APPLICATION REFERENCE (Corridor)

	NOMINAL MODULE LUMENS									
	1000		1500		2000		3000		4000	
Spacing	Avg fc	W/ft	Avg fc	W/ft	Avg fc	W/ft	Avg fc	W/ft	Avg fc	W/ft
4' on ctr.	25.8	0.75	38.1	1.04	51.6	1.33	55.2	1.79	72.2	2.33
6' on ctr.	17.6	0.51	25.9	0.71	35.1	0.91	37.5	1.22	49.1	1.59
8' on ctr.	12.4	0.36	18.3	0.50	24.8	0.64	26.4	0.86	34.5	1.12
10' on ctr.	10.3	0.30	15.2	0.42	20.6	0.53	22.1	0.72	28.9	0.93
	10' ceiling, Corridor: 6' W x 100' L						20' ceiling, Corridor: 6' W x 100' L			

LLF: 1.0 Initial, 80/50/20 Reflectances, Light levels on the ground

Spacing Criteria: DI6R - Narrow = 0.58

R1

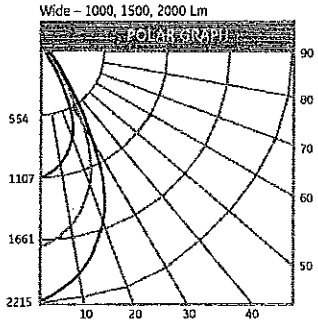
Photometric Data: Lumination™ DI6R Series Downlights

Wide Distribution

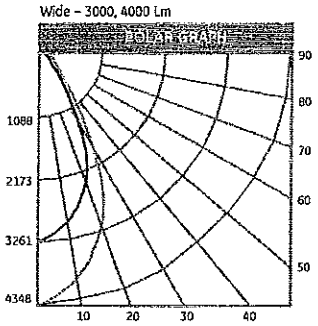
COEFFICIENTS OF UTILIZATION																		
RC	80%				70%				50%			30%			10%			0%
RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	108	104	100	97	106	102	99	96	99	96	94	96	94	92	93	91	90	88
3	103	97	93	89	101	96	92	88	93	90	87	91	88	85	89	86	84	82
4	98	91	86	82	97	90	85	82	88	84	81	86	83	80	84	81	79	77
5	94	86	80	76	92	85	80	76	83	79	75	82	78	75	80	77	74	73
6	89	81	75	71	88	80	75	71	79	74	71	77	73	70	76	72	70	68
7	85	77	71	67	84	76	71	67	75	70	66	73	69	66	72	69	66	64
8	82	72	67	63	80	72	67	63	71	66	63	70	65	62	69	65	62	61
9	78	69	63	59	77	68	63	59	67	62	59	66	62	59	66	62	59	57
10	75	65	60	56	74	65	60	56	64	59	56	63	59	56	63	59	56	54

NOTE: Floor Cavity Reflectance : 20%

Wide – 1000, 1500, 2000 Lm



Wide – 3000, 4000 Lm



CANDLEPOWER SUMMARY

NOMINAL MODULE LUMENS					
	1000	1500	2000	3000	4000
Angle	Candela	Candela	Candela	Candela	Candela
0	1088	1606	2177	3265	4273
5	1067	1574	2133	3200	4188
10	1007	1486	2014	3021	3953
15	925	1366	1850	2776	3632
20	818	1207	1636	2453	3211
25	670	989	1340	2010	2630
30	433	639	866	1299	1699
35	213	314	426	639	836
40	94	139	188	282	368
45	37	55	74	111	145
50	19	29	39	58	76
55	11	16	22	33	43
60	6	9	13	19	25

ZONAL LUMEN SUMMARY

NOMINAL MODULE LUMENS						
	1000	1500	2000	3000	4000	
Zone	Lumens	Lumens	Lumens	Lumens	Lumens	% of Fixture
0 - 30°	651	961	1302	1953	2556	78.9
0 - 40°	782	1153	1563	2345	3068	94.8
0 - 60°	820	1210	1640	2460	3219	99.4
0 - 90°	825	1218	1650	2475	3239	100

CONE OF LIGHT

NOMINAL MODULE LUMENS						
	1000	1500	2000	3000	4000	
Height	fc	fc	fc	fc	fc	Dia. (ft)
6'	30	45	60	91	119	6.2
8'	17	25	34	51	67	8.2
10'	11	16	22	33	43	10.3
12'	8	11	15	23	30	12.3
14'	6	8	11	17	22	14.4
16'	4	6	9	13	17	16.4
18'	3	5	7	10	13	18.5
20'	3	4	5	8	11	20.6

APPLICATION REFERENCE (Open Space)

NOMINAL MODULE LUMENS										
	1000		1500		2000		3000		4000	
Spacing	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²
4' x 4'	52.4	1.08	77.3	1.50	104.7	1.92	135.9	2.58	177.8	3.36
6' x 6'	24.5	0.50	36.1	0.70	48.9	0.90	63.5	1.20	83.0	1.57
8' x 8'	13.1	0.27	19.3	0.38	26.2	0.48	34.1	0.65	44.6	0.84
10' x 10'	8.8	0.18	12.9	0.25	17.5	0.32	22.7	0.43	29.6	0.56
	10' ceiling, Open Space: 50' x 40' x 10'						20' ceiling, Open Space: 50' x 40' x 20'			

LLF: 1.0 initial, 80/50/20 Reflectances, 2.5' workplane

APPLICATION REFERENCE (Corridor)

NOMINAL MODULE LUMENS										
	1000		1500		2000		3000		4000	
Spacing	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²	Avg. fc	W/ft²
4' on ctr.	23.9	0.75	35.2	1.04	47.7	1.33	48.0	1.79	62.8	2.33
6' on ctr.	16.2	0.51	23.9	0.71	32.4	0.91	32.6	1.22	42.6	1.59
8' on ctr.	11.5	0.36	16.9	0.50	22.9	0.64	23.0	0.86	30.0	1.12
10' on ctr.	9.6	0.30	14.1	0.42	19.1	0.53	19.2	0.72	25.1	0.93
	10' ceiling, Corridor: 6' W x 100' L						20' ceiling, Corridor: 6' W x 100' L			

LLF: 1.0 initial, 80/50/20 Reflectances, Light levels on the ground

Spacing Criteria: DI6R - Wide =.90

Product Specifications:

Construction:

- 16 gauge galvanized steel housing
- 16 gauge reflectors resist dents during transporation and installation
- Custom engineered heat sinks for passive cooling at all lumen options
- Galvanized steel junction box with multiple knockouts

Installation:

- Universal mounting brackets with over 3" of vertical adjustment accommodate several types of hanger bars
- Accommodates ceilings up to 1.5" thick
- Mount in T-bar grid or drywall ceilings
- LED module twists in at time of trim installation, preventing damage to module during ceiling installation

Optical System:

- Custom engineered reflectors for precise beam distributions and 45° cutoff to light source and source image
- Self-flanged design with white painted or reflector-matching trim
- Standard semi-diffuse finish for ideal combination of optical efficiency and low glare

Electrical System:

- Infusion DLM LED module for exceptional performance and tool-free upgradeability
- Standard 0-10V dimming, high efficiency drivers
- Thermal protection feature in module protects LEDs from overheating in abnormal conditions

For more information and access to all of our resources, including our design tool visit: www.gelighting.com

www.gelighting.com

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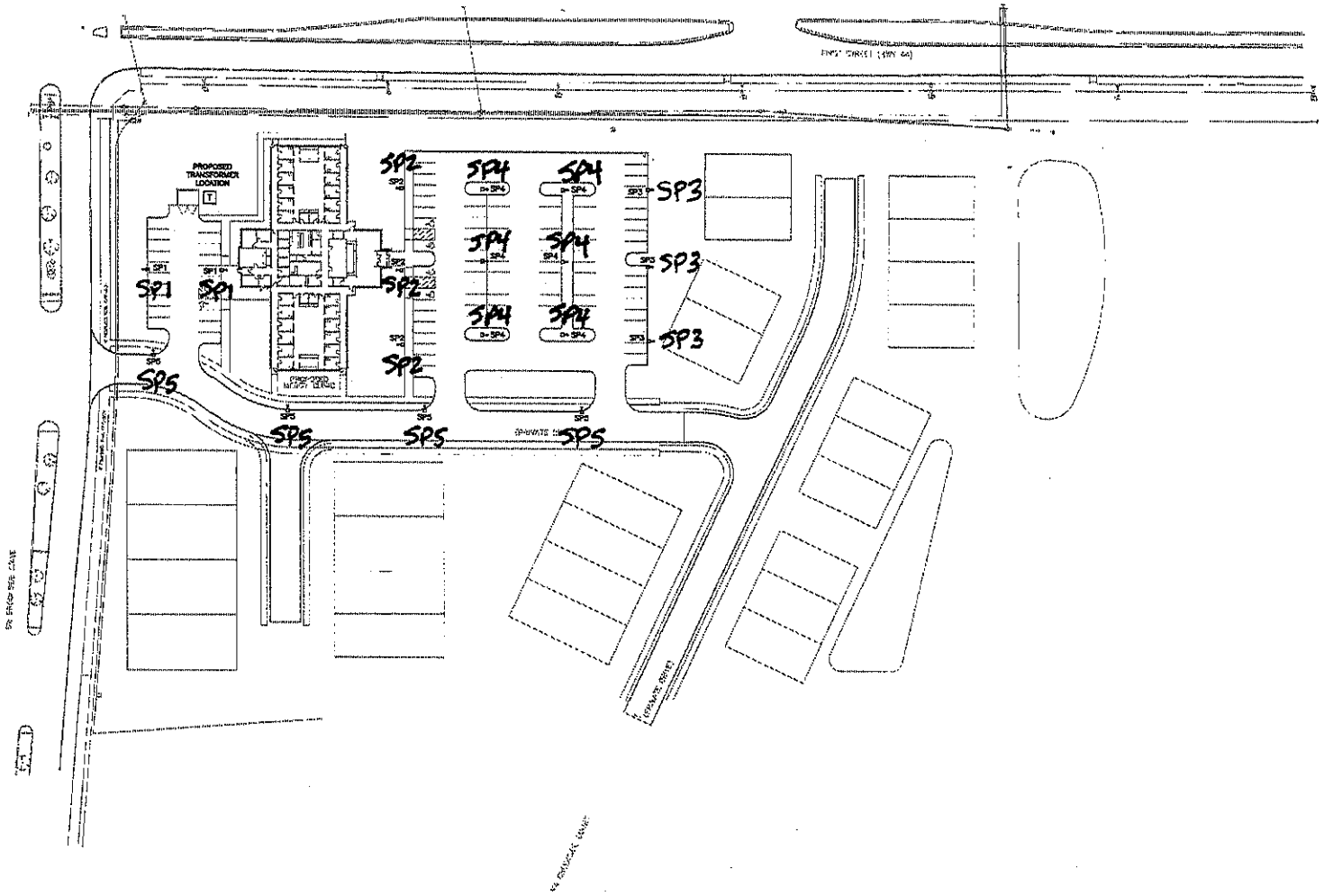
IND083 (Rev 05/28/15)



1 ELECTRICAL SITE PLAN
1" = 40'-0"

ELECTRICAL SITE PLAN

ES100

Mercy Clinics - Grimes
Site Lighting

SP1

VIPER S SERIES

SMALL VIPER LUMINAIRE

Cat.# VP-S-60NB-136-4K-T3-UNV-BCW-RA-BZT 1

Job: Mercy Clinic, Grimes, IA 2

Type: P1

Approvals 3

BEACON design . performance . technology

SPECIFICATIONS

Intended Use:

The Beacon Viper luminaire is available with a wide choice of different LED Wattage configurations and optical distributions designed to replace HID lighting up to 400W MH or HPS.

Construction:

- Manufactured with a low copper content, die cast aluminum.
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements.
- External hardware is corrosion resistant.
- One piece optical cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel.
- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system.
- Two-piece silicone and micro-cellular polyurethane foam gasket ensures a weather-proof seal around each individual LED.

LED/Optics:

- 100V through 277V, 50 Hz to 60 Hz (UNV), or 347V or 480V input.
- Power factor is .92 at full load.
- All electrical components are rated at 50,000 hours at full load and 25°C ambient conditions per MIL- 217F Notice 2.
- Dimming drivers are standard with connections for external dimming equipment available upon request.
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is listed by UL for use at 600VAC at 50°C or higher.
- Plug disconnects are listed by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only.

Electrical:

- Fixture electrical compartment shall contain all LED driver components and shall be provided with a push-button terminal block for AC power connections.
- The housing is designed for an optional twist lock photo control receptacle.
- Ambient operating temperature -40°C to 40°C
- Surge protection - 20KA; shuts off at end of life.
- Optional 7-pin ANSI C136.41-2013 twist-lock photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices.
- Lifeshield™ Circuit - protects luminaire from excessive temperature. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F). Operation shall be smooth and undetectable to the eye. Thermal circuit is designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers. The device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.).

Controls/Options:

- Available with an optional passive Infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the Motion Response system reduces the Wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full Wattage and full light output. Please contact Beacon Products if project requirements vary from standard configuration.
- Available with Energeni for optional set dimming, timed dimming with simple delay, or timed dimming based on hours of operation or time of night (see www.beaconproducts.com/products/energeni).
- Also available with **Beacon**nect Wireless Control System (see **Beacon**nect product page for more details www.beaconproducts.com/products/beaconnect).

Installation:

- Mounting options for horizontal arm, vertical tenon or traditional arm mounting available. Mounting hardware included.

Finish:

- Beacote V polyester powder-coat electro-statically applied and thermocured.
- Beacote V finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish.
- The finish meets the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds.

Listings:

- DesignLights Consortium (DLC) qualified, consult DLC website for more details: http://www.designlights.org/QPL
- Listed to UL1598 and CSA22.2#250.0-24 for wet locations and 40°C ambient temperatures
- 3G rated for ANSI C136.31 high vibration applications
- IDA approved

Warranty:

Five year limited warranty (for more information visit: www.hubbelllighting.com/resources/warranty).

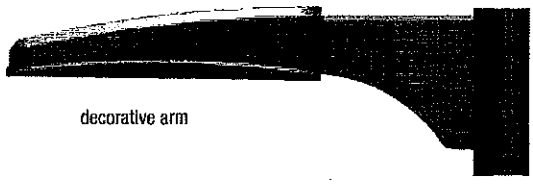
CERTIFICATIONS/LISTINGS

C US

*3000K and warmer CCTs only

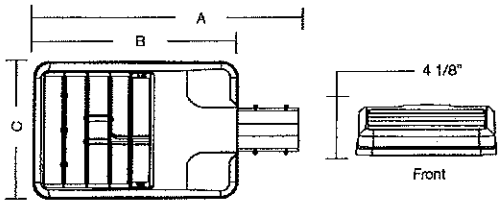
PRODUCT IMAGE(S)

rectangular arm



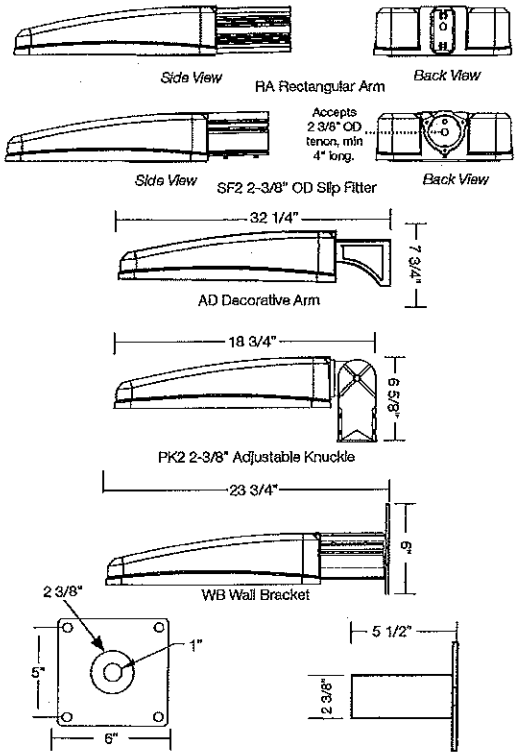
decorative arm

DIMENSIONS



A	B	C	Weight:	EPA
22.75" (578 mm)	16.75" (425 mm)	11.25" (286 mm)	15.0 lbs (6.8 kg)	.67 ft²

MOUNTING OPTIONS



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HUBBELL Lighting

SP1

ORDERING INFORMATION

ORDERING EXAMPLE: VPS/36NB-80/5K/T4/UNV/PCR-TL/BCW/BLC/RA/BBT

VPS

SERIES

- VPS viper-small [1]

ENGINE-WATTS

- 24NB-55 55W, LED array
- 36NB-80 80W, LED array
- 48NB-110 110W, LED array
- 60NB-136 136W, LED array [5]

LED COLOR

- 3K 3000K
- 4K 4000K [3]
- 5K 5000K

OPTICS[1]

- T1 type I
- T2 type II
- T3 type III [6]
- T4 type IV
- T5R type V, rectangular
- T5QM type V, square medium
- T5W type V, round wide
- FR front row auto optic

VOLTAGE

- UNV 120-277V [2]
- 347V 347V
- 480V 480V

ELECTRICAL OPTIONS

- PCR-TL Twist lock receptacle with photo control
- PCR-SC Twist lock receptacle with shorting cap
- PCRU Twist lock receptacle
- 2PF[7] dual power feed

HOUSE SIDE SHIELD OPTIONS

- HSS-90 house side shield 90°
- HSS-180 house side shield 180°
- BLC[3] backlight control

SENSOR OPTIONS

- BMD[1,2,5] motion sensor for beaconnect
- MDD[2,5] motion dimming detector

MOUNTING OPTIONS

- RA rectangular arm for round or square pole mount. RPA included. [7]
- SF2 2 3/8" OD slip-fitter
- PK2 2 3/8" adjustable knuckle
- AD decorative arm with universal mounting slot. RPA ordered separately. See referenced table.
- WB wall bracket (use with SF2 or PK2), SF2 standard

CONTROL OPTIONS

- GENI-XX[6] energeni
- BCW[1,5] beaconnect [8]

FINISH

- BBT basic black textured
- BMT black matte textured
- WHT white textured
- MBT metallic bronze textured
- BZT bronze textured [4]
- DBT dark bronze textured
- GYS gray smooth
- DPS dark platinum smooth
- GNT green textured
- MST metallic silver textured
- MTT metallic titanium textured
- OWI old world iron
- CAL _____

MDD ORDERING INFORMATION: When ordering a fixture with the motion detection option (MDD), please specify the appropriate information. These settings are specified in the ordering as shown in the example below:

VPS / 36NB-135 / 5K / T5W / UNV / MDD - 1 to 30 min. - 33% or 50% - ?? / MT

High to Dim Delay - Low Level - Mounting Height (ft.)

BEACONNECT ORDERING INFORMATION: When ordering a fixture with the Beaconnect lighting control options please specify the appropriate group and sensor information. Please provide dimming schedule information in either the Beaconnect excel spreadsheet or Beaconnect software. For more detailed information please visit www.beaconproducts.com/beaconnect or contact beacon tech support at (800) 345-4928. These settings are specified in the ordering as shown in the example below. (Family) / 24NB-55 / 5K/ T3 / UNV / BCW-(Group 1-16) _____ (Optional Zone 1-250) _/BMD - __Time Delay(1 to 255) - ____Dimming% (1 to 100) - __ mounting height(1-20ft) ___/
Example: TRV/24NB-55/5K/T3/UNV/BCW-G1 /BMD-30M-50%-10F/DBT for luminaires without sensors in the group omit the BMD ordering logic Example: TRV/24NB-55/5K/T3/UNV/BCW-G1 /DBT

[1] Must specify group and zone information at time of order. See www.beaconproducts.com/controls/beaconnect for further details.
[2] Specify time delay, dimming level and mounting height.
[3] T4 optic only.
[4] To rotate optics left or right 90 degrees, specify L or R after the optical distribution example T4L.
[5] Not available with other control or sensor options.
[6] When ordering Energeni, specify the routine setting code (example GENI-04). See Energeni brochure and instructions for setting table and options. Not available with sensor options.
[7] Not available for 347V or 480V input.

Catalog Number	Description
VPS-AD-RPA3	3.5" - 4.125"
VPS-AD-RPA4	4.188" - 5.25"
VPS-AD-RPA5	5.5" - 6.5"

Order Separately

Catalog Number	Description (must choose one option below / 1-per site required)
ASM-USB-BCW	Beaconnect Software loaded on USB flash drive* (Windows based only)
ASM-TABLET-BCW	Beaconnect 7" Windows Tablet*

*Includes USB Radio

DesignLights Consortium qualified. Consult DLC website for more details: http://www.designlights.org/QPL

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HUBBELL Lighting

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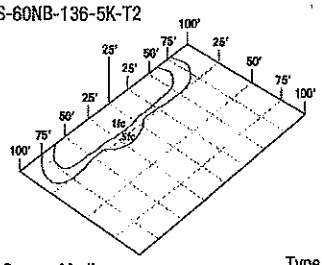
PERFORMANCE DATA

# LED'S	DRIVE CURRENT (MILLIAMPS)	SYSTEM WATTS	DISTRIBUTION TYPE	5K (5000K nominal, 70 CRI) LUMENS	LPW[1]	B	U	G	4K (4000K nominal, 70 CRI) LUMENS	LPW[1]	B	U	G	3K (3000K nominal, 70 CRI) LUMENS	LPW[1]	B	U	G
24	700 mA	55 W	FR/T1	6339	114	1	0	1	6276	112	1	0	1	5389	97	1	0	1
			T2	5666	102	2	0	2	5610	101	2	0	2	4816	86	1	0	2
			T3	5610	101	1	0	2	5554	100	1	0	2	4784	86	1	0	2
			T4	6171	111	1	0	2	6110	109	1	0	2	5245	94	1	0	2
			T5R	6283	113	3	0	3	6221	111	3	0	3	5341	96	3	0	3
			T5QM	6171	111	3	0	1	6110	109	3	0	1	5245	94	2	0	1
			T5W	6087	109	3	0	1	6027	108	3	0	1	5201	93	3	0	1
36	700 mA	80 W	FR/T1	9515	114	1	0	1	9414	112	1	0	1	8083	96	1	0	1
			T2	8505	101	2	0	3	8415	100	2	0	3	7224	87	2	0	2
			T3	8415	100	2	0	2	8331	99	2	0	2	7175	86	2	0	2
			T4	9256	110	1	0	3	9164	109	1	0	3	7868	94	1	0	3
			T5R	9425	112	3	0	3	9331	111	3	0	3	8011	96	3	0	3
			T5QM	9257	110	3	0	1	9164	109	3	0	1	7868	94	3	0	1
			T5W	9131	109	3	0	2	9040	108	3	0	2	7801	93	3	0	2
48	700 mA	110 W	FR/T1	12679	114	2	0	1	15522	113	2	0	1	10777	97	1	0	1
			T2	11332	102	3	0	3	11220	101	3	0	3	9633	87	2	0	3
			T3	11220	101	2	0	3	11108	100	2	0	3	9567	86	2	0	3
			T4	12342	111	2	0	3	12219	110	2	0	3	10491	95	2	0	3
			T5R	12567	113	4	0	4	12441	112	4	0	4	10682	96	3	0	3
			T5QM	12342	111	3	0	2	12219	111	3	0	2	10491	95	3	0	2
			T5W	12175	110	4	0	2	12053	109	4	0	2	10402	94	4	0	2
4	700 mA	136 W	FR/T1	15848	116	2	0	1	15690	115	2	0	1	13471	98	2	0	1
			T2	14165	103	3	0	3	14025	102	3	0	3	12041	88	3	0	3
			2	14025	102	3	0	3	3 885	101	3	0	3	1 11959	87	3	0	3
			T4	15427	113	2	0	3	15274	111	2	0	3	13114	96	2	0	3
			T5R	15708	115	4	0	4	15259	111	4	0	4	13352	97	4	0	4
			T5QM	15427	113	4	0	2	15274	111	4	0	2	13314	96	3	0	2
			T5W	15218	111	4	0	2	15066	111	4	0	2	13002	95	4	0	2

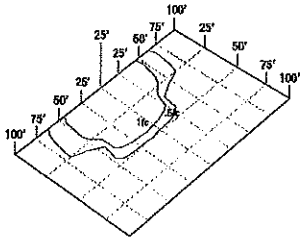
[1]Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

PHOTOMETRICS

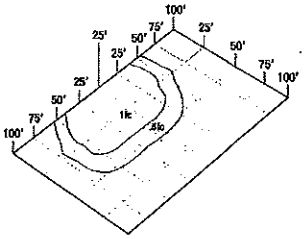
Type II
VP-S-60NB-136-5K-T2



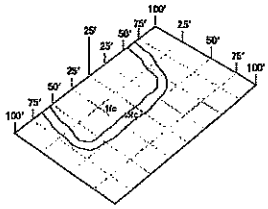
Type III
VP-S-60NB-136-5K-T3



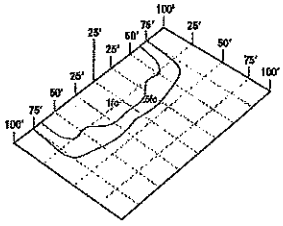
Type IV
VP-S-60NB-136-5K-T4



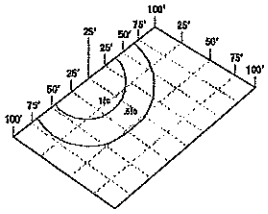
Type V Square Medium
VP-S-60NB-136-5K-T5QM



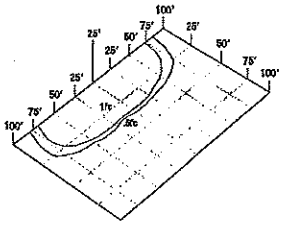
Type V Rectangular
VP-S-60NB-136-5K-T5R



Type V Round Wide
VP-S-60NB-136-5K-T5W



Front Row Auto Optic / Type I
VP-S-60NB-136-5K-FR
VP-S-60NB-136-5K-T1



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SP1

ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
24	2	700 mA	120	55	0.5
			277		0.2
			347		0.2
			480		0.1
36	1	700 mA	120	80	0.7
			277		0.3
			347		0.2
			480		0.2
48	1	700 mA	120	110	0.9
			277		0.4
			347		0.3
			480		0.2
60	1	700 mA	120	136	1.1
			277		0.5
			347		0.4
			480		0.3

PROJECTED LUMEN MAINTENANCE

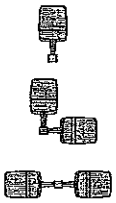
AMBIENT TEMP.	0	25,000	50,000	[1]TM-21-11 60,000	100,000	Calculated L70 (HOURS)
25°C / 77°C	1.00	0.97	0.95	0.95	0.92	>470,000

[1] Projected per IESNA TM-21-11
Data references the extrapolated performance projections for the base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

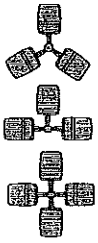
AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	0.98
40°C	104°F	0.98

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

EPA

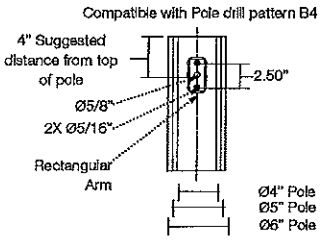


Config.	EPA
1	.67
2 @ 90°	.95
2 @ 180°	1.34



Config.	EPA
3 @ 120°	1.36
3 @ 90°	1.5
4 @ 90°	1.5

DRILL PATTERN



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SP2

VIPER S SERIES

SMALL VIPER LUMINAIRE

Cat.# VP-S-60NB-136-4K-T4-UNV-BCW-RA-BZT 1

BEACON design . performance . technology

Job: Mercy Clinic, Grimes, IA 2

Type: P2

Approval: 3

SPECIFICATIONS

Intended Use:

The Beacon Viper luminaire is available with a wide choice of different LED Wattage configurations and optical distributions designed to replace HID lighting up to 400W MH or HPS.

Construction:

- Manufactured with a low copper content, die cast aluminum.
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements.
- External hardware is corrosion resistant.
- One piece optical cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel.
- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system.
- Two-piece silicone and micro-cellular polyurethane foam gasket ensures a weather-proof seal around each individual LED.

LED/Optics:

- 100V through 277V, 50 Hz to 60 Hz (UNV), or 347V or 480V input.
- Power factor is .92 at full load.
- All electrical components are rated at 50,000 hours at full load and 25°C ambient conditions per MIL- 217F Notice 2.
- Dimming drivers are standard with connections for external dimming equipment available upon request.
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is listed by UL for use at 600VAC at 50°C or higher.
- Plug disconnects are listed by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only.

Electrical:

- Fixture electrical compartment shall contain all LED driver components and shall be provided with a push-button terminal block for AC power connections.
- The housing is designed for an optional twist lock photo control receptacle.
- Ambient operating temperature -40°C to 40°C
- Surge protection - 20KA; shuts off at end of life.
- Optional 7-pin ANSI C136.41-2013 twist-lock photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices.
- Lifeshield™ Circuit - protects luminaire from excessive temperature. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F). Operation shall be smooth and undetectable to the eye. Thermal circuit is designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.The device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.).

Controls/Options:

- Available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the Motion Response system reduces the Wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full Wattage and full light output. Please contact Beacon Products if project requirements vary from standard configuration.
- Available with Energeni for optional set dimming, timed dimming with simple delay, or timed dimming based on hours of operation or time of night (see www.beaconproducts.com/products/energeni).
- Also available with **Beacon**nect Wireless Control System (see **Beacon**nect product page for more details www.beaconproducts.com/products/beaconnect).

Installation:

- Mounting options for horizontal arm, vertical tenon or traditional arm mounting available. Mounting hardware included.

Finish:

- Beacote V polyester powder-coat electro-statically applied and thermocured.
- Beacote V finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish.
- The finish meets the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds.

Listings:

- DesignLights Consortium (DLC) qualified, consult DLC website for more details: http://www.designlights.org/QPL
- Listed to UL1598 and CSA22.2#250.0-24 for wet locations and 40°C ambient temperatures
- 3G rated for ANSI C136.31 high vibration applications
- IDA approved

Warranty:

Five year limited warranty (for more information visit: www.hubbelllighting.com/resources/warranty).

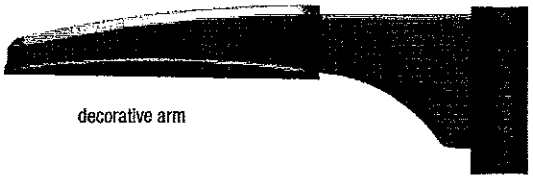
CERTIFICATIONS/LISTINGS

C US

*3000K and warmer CCTs only

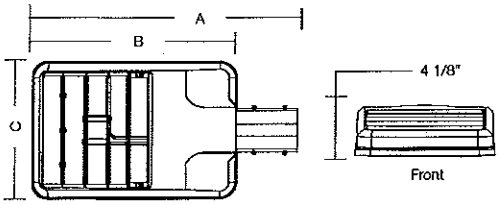
PRODUCT IMAGE(S)

rectangular arm



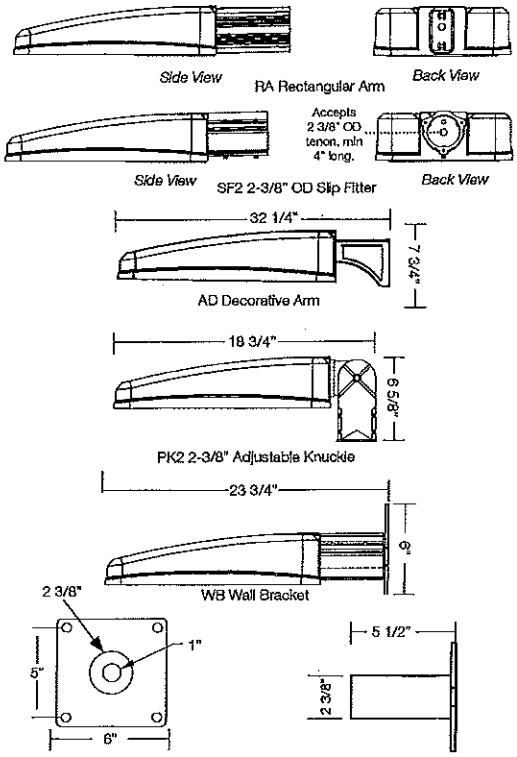
decorative arm

DIMENSIONS



A	B	C	Weight:	EPA
22.75" (578 mm)	16.75" (425 mm)	11.25" (286 mm)	15.0 lbs (6.8 kg)	.67 ft²

MOUNTING OPTIONS



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HUBBELL Lighting

SP2

ORDERING INFORMATION

ORDERING EXAMPLE: VPS/36NB-80/5K/T4/UNV/PCR-TL/BCW/BLC/RA/BBT

VPS

SERIES

- VPS viper-small [1]

ENGINE-WATTS

- 24NB-55 55W, LED array
- 36NB-80 80W, LED array
- 48NB-110 110W, LED array
- 60NB-136 136W, LED array [5]

LED COLOR

- 3K 3000K
- 4K 4000K [3]
- 5K 5000K

OPTICS[4]

- T1 type I
- T2 type II
- T3 type III
- T4 type IV
- T5R type V, rectangular
- T5QM type V, square medium [6]
- T5W type V, round wide
- FR front row auto optic

VOLTAGE

- UNV 120-277V [2]
- 347V 347V
- 480V 480V

ELECTRICAL OPTIONS

- PCR-TL Twist lock receptacle with photo control
- PCR-SC Twist lock receptacle with shorting cap
- PCRU Twist lock receptacle
- 2PF[7] dual power feed

HOUSE SIDE SHIELD OPTIONS

- HSS-90 house side shield 90°
- HSS-180 house side shield 180°
- BLC[3] backlight control

SENSOR OPTIONS

- BMD[1,2,5] motion sensor for beaconnect
- MDD[2,5] motion dimming detector

MOUNTING OPTIONS

- RA rectangular arm for round or square pole mount. RPA included. [7]
- SF2 2 3/8" OD slip-fitter
- PK2 2 3/8" adjustable knuckle
- AD decorative arm with universal mounting slot. RPA ordered separately. See referenced table.
- WB wall bracket (use with SF2 or PK2), SF2 standard

CONTROL OPTIONS

- GENI-XX[6] energeni
- BCW[1,5] beaconnect [8]

FINISH

- BBT basic black textured
- BMT black matte textured
- WHT white textured
- MBT metallic bronze textured
- BZT bronze textured [4]
- DBT dark bronze textured
- GYS gray smooth
- DPS dark platinum smooth
- GNT green textured
- MST metallic silver textured
- MTT metallic titanium textured
- OWI old world iron
- HAL _____

MDD ORDERING INFORMATION: When ordering a fixture with the motion detection option (MDD), please specify the appropriate information. These settings are specified in the ordering as shown in the example below.

VPS / 36NB-135 / 5K / T6W / UNV / MDD - 1 to 30 min. - 33% or 50% - ?? - / MT-

High to Dim Delay - Low Level - Mounting Height (ft.)

BEACONNECT ORDERING INFORMATION: When ordering a fixture with the Beaconnect lighting control options please specify the appropriate group and sensor information. Please provide dimming schedule information in either the Beaconnect excel spreadsheet or Beaconnect software. For more detailed information please visit www.beaconproducts.com/beaconnect or contact beacon tech support at (800) 345-4928. These settings are specified in the ordering as shown in the example below. (Family) / 24NB-55 / 5K/ T3 / UNV / BCW-(Group 1-16) - (Optional Zone 1-250) /BMD - Time Delay(1 to 255) - Dimming% (1 to 100) - mounting height(1-20ft) - /
Example: TRV/24NB-55/5K/T3/UNV/BCW-G1 /BMD-30M-50%-10F/DBT for luminaires without sensors in the group omit the BMD ordering logic Example: TRV/24NB-55/5K/T3/UNV/BCW-G1 /DBT

[1] Must specify group and zone information at time of order. See www.beaconproducts.com/controls/beaconnect for further details.
[2] Specify time delay, dimming level and mounting height.
[3] T6 optic only.
[4] To rotate optics Left or right 90 degrees, specify L or R after the optical distribution example T4L.
[5] Not available with other control or sensor options.
[6] When ordering Energeni, specify the routine setting code (example GENI-04). See Energeni brochure and instructions for setting table and options. Not available with sensor options.
[7] Not available for 347V or 480V input.

Catalog Number	Description
VPS-AD-RPA3	3.5" - 4.125"
VPS-AD-RPA4	4.188" - 5.25"
VPS-AD-RPA5	5.5" - 6.5"

Order Separately

Catalog Number	Description (must choose one option below / 1-per site required)
ASM-USB-BCW	Beaconnect Software loaded on USB flash drive* (Windows based only)
ASM-TABLET-BCW	Beaconnect 7" Windows Tablet*

*Includes USB Radio

DesignLights Consortium qualified. Consult DLC website for more details: http://www.designlights.org/QPL

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SP2

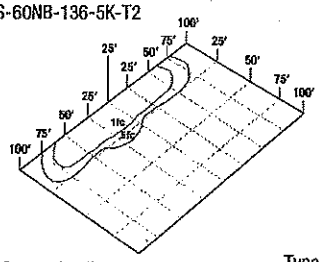
PERFORMANCE DATA

				5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 70 CRI)				
# LED'S	DRIVE CURRENT (MILLIAMPS)	SYSTEM WATTS	DISTRIBUTION TYPE	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G
24	700 mA	55 W	FR/T1	6339	114	1	0	1	6276	112	1	0	1	5389	97	1	0	1
			T2	5666	102	2	0	2	5610	101	2	0	2	4816	86	1	0	2
			T3	5610	101	1	0	2	5554	100	1	0	2	4784	86	1	0	2
			T4	6171	111	1	0	2	6110	109	1	0	2	5245	94	1	0	2
			T5R	6283	113	3	0	3	6221	111	3	0	3	5341	96	3	0	3
			T5QM	6171	111	3	0	1	6110	109	3	0	1	5245	94	2	0	1
			T5W	6087	109	3	0	1	6027	108	3	0	1	5201	93	3	0	1
36	700 mA	80 W	FR/T1	9515	114	1	0	1	9414	112	1	0	1	8083	96	1	0	1
			T2	8505	101	2	0	3	8415	100	2	0	3	7224	87	2	0	2
			T3	8415	100	2	0	2	8331	99	2	0	2	7175	86	2	0	2
			T4	9256	110	1	0	3	9164	109	1	0	3	7868	94	1	0	3
			T5R	9425	112	3	0	3	9331	111	3	0	3	8011	96	3	0	3
			T5QM	9257	110	3	0	1	9164	109	3	0	1	7868	94	3	0	1
			T5W	9131	109	3	0	2	9040	108	3	0	2	7801	93	3	0	2
48	700 mA	110 W	FR/T1	12679	114	2	0	1	15522	113	2	0	1	10777	97	1	0	1
			T2	11332	102	3	0	3	11220	101	3	0	3	9633	87	2	0	3
			T3	11220	101	2	0	3	11108	100	2	0	3	9567	86	2	0	3
			T4	12342	111	2	0	3	12219	110	2	0	3	10491	95	2	0	3
			T5R	12567	113	4	0	4	12441	112	4	0	4	10682	96	3	0	3
			T5QM	12342	111	3	0	2	12219	111	3	0	2	10491	95	3	0	2
			T5W	12175	110	4	0	2	12053	109	4	0	2	10402	94	4	0	2
2	700 mA	136 W	FR/T1	15848	116	2	0	1	15690	115	2	0	1	13471	98	2	0	1
			T2	14165	103	3	0	3	14025	102	3	0	3	12041	88	3	0	3
			T3	14025	102	3	0	3	13885	101	3	0	3	11959	87	3	0	3
			3	15427	113	2	0	3	4 15274	111	2	0	3	1 13114	96	2	0	3
			T5R	15708	115	4	0	4	15259	111	4	0	4	13352	97	4	0	4
			T5QM	15427	113	4	0	2	15274	111	4	0	2	13314	96	3	0	2
			T5W	15218	111	4	0	2	15066	111	4	0	2	13002	95	4	0	2

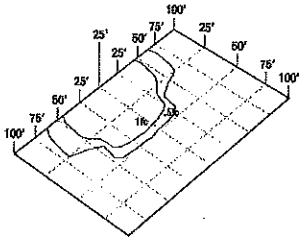
[1]Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

PHOTOMETRICS

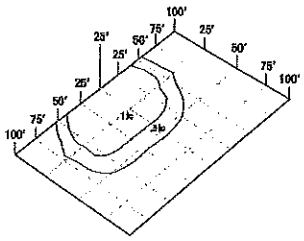
Type II
VP-S-60NB-136-5K-T2



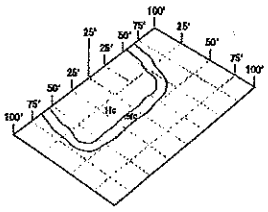
Type III
VP-S-60NB-136-5K-T3



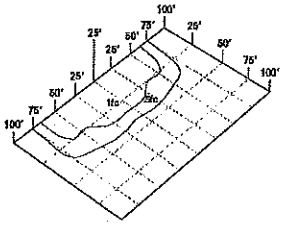
Type IV
VP-S-60NB-136-5K-T4



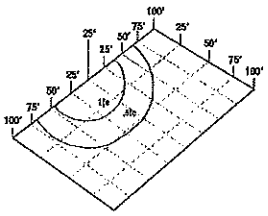
Type V Square Medium
VP-S-60NB-136-5K-T5QM



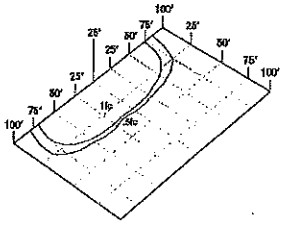
Type V Rectangular
VP-S-60NB-136-5K-T5R



Type V Round Wide
VP-S-60NB-136-5K-T5W



Front Row Auto Optic / Type I
VP-S-60NB-136-5K-FR
VP-S-60NB-136-5K-T1



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HUBBELL Lighting

SP2

ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
24	2	700 mA	120	55	0.5
			277		0.2
			347		0.2
			480		0.1
36	1	700 mA	120	80	0.7
			277		0.3
			347		0.2
			480		0.2
48	1	700 mA	120	110	0.9
			277		0.4
			347		0.3
			480		0.2
60	1	700 mA	120	136	1.1
			277		0.5
			347		0.4
			480		0.3

PROJECTED LUMEN MAINTENANCE

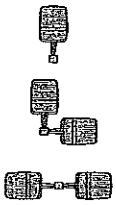
AMBIENT TEMP.	0	25,000	50,000	[1]TM-21-11 60,000	100,000	Calculated L70 (HOURS)
25°C / 77°C	1.00	0.97	0.95	0.95	0.92	>470,000

[1] Projected per IESNA TM-21-11
Data references the extrapolated performance projections for the base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

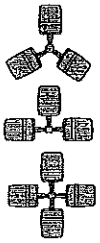
AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	0.98
40°C	104°F	0.98

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

EPA

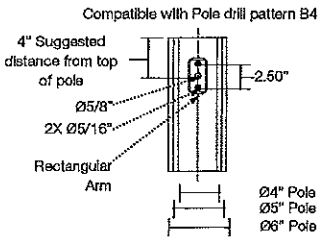


Config.	EPA
1	.67
2 @ 90°	.95
2 @ 180°	1.34



Config.	EPA
3 @ 120°	1.36
3 @ 90°	1.5
4 @ 90°	1.5

DRILL PATTERN



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SP3

VIPER S SERIES

SMALL VIPER LUMINAIRE

Cat.# VP-S-60NB-136-4K-T4-BLC-UNV-BCW-RA-BZT 1

BEACON design . performance . technology

Job: Mercy Clinic, Grimes, IA 2

Type: P3

Approvals 3

SPECIFICATIONS

Intended Use:

The Beacon Viper luminaire is available with a wide choice of different LED Wattage configurations and optical distributions designed to replace HID lighting up to 400W MH or HPS.

Construction:

- Manufactured with a low copper content, die cast aluminum.
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements.
- External hardware is corrosion resistant.
- One piece optical cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel.
- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system.
- Two-piece silicone and micro-cellular polyurethane foam gasket ensures a weather-proof seal around each individual LED.

LED/Optics:

- 100V through 277V, 50 Hz to 60 Hz (UNV), or 347V or 480V input.
- Power factor is .92 at full load.
- All electrical components are rated at 50,000 hours at full load and 25°C ambient conditions per MIL- 217F Notice 2.
- Dimming drivers are standard with connections for external dimming equipment available upon request.
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is listed by UL for use at 600VAC at 50°C or higher.
- Plug disconnects are listed by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only.

Electrical:

- Fixture electrical compartment shall contain all LED driver components and shall be provided with a push-button terminal block for AC power connections.
- The housing is designed for an optional twist lock photo control receptacle.
- Ambient operating temperature -40°C to 40°C
- Surge protection - 20KA; shuts off at end of life.
- Optional 7-pin ANSI C136.41-2013 twist-lock photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices.
- Lifeshield™ Circuit - protects luminaire from excessive temperature. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F). Operation shall be smooth and undetectable to the eye. Thermal circuit is designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers. The device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.).

Controls/Options:

- Available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the Motion Response system reduces the Wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full Wattage and full light output. Please contact Beacon Products if project requirements vary from standard configuration.
- Available with Energeni for optional set dimming, timed dimming with simple delay, or timed dimming based on hours of operation or time of night (see www.beaconproducts.com/products/energeni).
- Also available with **Beacon**nect Wireless Control System (see **Beacon**nect product page for more details www.beaconproducts.com/products/beaconnect).

Installation:

- Mounting options for horizontal arm, vertical tenon or traditional arm mounting available. Mounting hardware included.

Finish:

- Beacote V polyester powder-coat electro-statically applied and thermocured.
- Beacote V finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish.
- The finish meets the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds.

Listings:

- DesignLights Consortium (DLC) qualified, consult DLC website for more details: http://www.designlights.org/QPL
- Listed to UL1598 and CSA22.2#250.0-24 for wet locations and 40°C ambient temperatures
- 3G rated for ANSI C136.31 high vibration applications
- IDA approved

Warranty:

Five year limited warranty (for more information visit: www.hubbelllighting.com/resources/warranty).

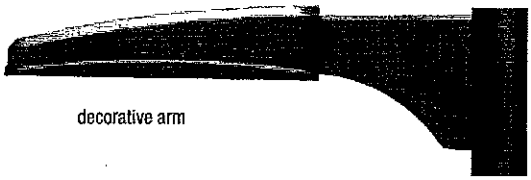
CERTIFICATIONS/LISTINGS

C US

*3000K and warmer CCTs only

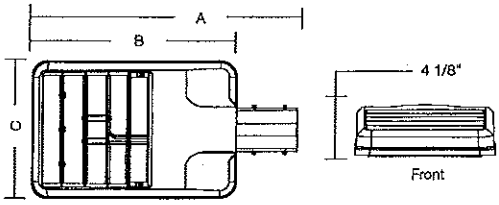
PRODUCT IMAGE(S)

rectangular arm



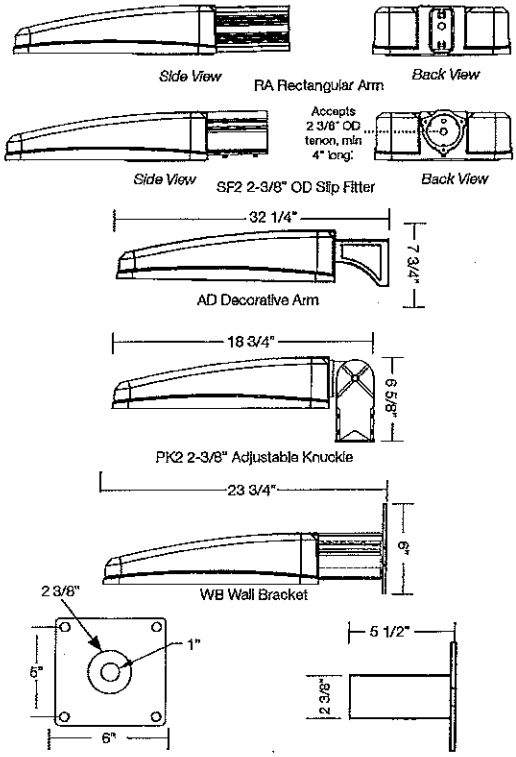
decorative arm

DIMENSIONS



A	B	C	Weight:	EPA
22.75" (578 mm)	16.75" (425 mm)	11.25" (286 mm)	15.0 lbs (6.8 kg)	.67 ft²

MOUNTING OPTIONS



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HUBBELL Lighting

SP3

ORDERING INFORMATION

ORDERING EXAMPLE: VPS/36NB-80/5K/T4/UNV/PCR-TL/BCW/BLC/RA/BBT

VPS

SERIES

- VPS viper-small [1]

ENGINE-WATTS

- 24NB-55 55W, LED array
- 36NB-80 80W, LED array
- 48NB-110 110W, LED array
- 60NB-136 136W, LED array [6]

LED COLOR

- 3K 3000K
- 4K 4000K [3]
- 5K 5000K

VOLTAGE

- UNV 120-277V [2]
- 347V 347V
- 480V 480V

OPTICS[4]

- T1 type I
- T2 type II
- T3 type III
- T4 type IV
- T5R type V, rectangular
- T5QM type V, square medium [7]
- T5W type V, round wide
- FR front row auto optic

ELECTRICAL OPTIONS

- PCR-TL Twist lock receptacle with photo control
- PCR-SC Twist lock receptacle with shorting cap
- PCRU Twist lock receptacle
- 2PF[7] dual power feed

HOUSE SIDE SHIELD OPTIONS

- HSS-90 house side shield 90°
- HSS-180 house side shield 180°
- BLC[5] backlight control [5]

SENSOR OPTIONS

- BMD[1,2,5] motion sensor for beaconnect
- MDD[2,5] motion dimming detector

MOUNTING OPTIONS

- RA rectangular arm for round or square pole mount. RPA included. [8]
- SF2 2 3/8" OD slip-fitter
- PK2 2 3/8" adjustable knuckle
- AD decorative arm with universal mounting slot. RPA ordered separately. See referenced table.
- WB wall bracket (use with SF2 or PK2), SF2 standard

CONTROL OPTIONS

- GENI-XX[6] energeni
- BCW[1,5] beaconnect [9]

FINISH

- BBT basic black textured
- BMT black matte textured
- WHT white textured
- MBT metallic bronze textured
- BZT bronze textured [4]
- DBT dark bronze textured
- GYS gray smooth
- DPS dark platinum smooth
- GNT green textured
- MST metallic silver textured
- MTT metallic titanium textured
- OWI old world iron
- CAL _____

MDD ORDERING INFORMATION: When ordering a fixture with the motion detection option (MDD), please specify the appropriate information. These settings are specified in the ordering as shown in the example below.

VPS / 36NB-135 / 5K / T5W / UNV / MDD - 1 to 30 min. - 33% or 50% - ?? / MT

High to Dim Delay - Low Level - Mounting Height (ft.)

BEACONNECT ORDERING INFORMATION: When ordering a fixture with the Beaconnect lighting control options please specify the appropriate group and sensor information. Please provide dimming schedule information in either the Beaconnect excel spreadsheet or Beaconnect software. For more detailed information please visit www.beaconproducts.com/beaconnect or contact beacon tech support at (800) 345-4928. These settings are specified in the ordering as shown in the example below. (Family) / 24NB-55 / 5K/ T3 / UNV / BCW-(Group 1-16)_ _ - (Optional Zone 1-250)_ /BMD - __Time Delay(1 to 255)_ - ___Dimming% (1 to 100)_ - __mounting height(1-20ft)_ / Example: TRV/24NB-55/5K/T3/UNV/BCW-G1 /BMD-30M-50%-10F/DBT for luminaires without sensors in the group omit the BMD ordering logic Example: TRV/24NB-55/5K/T3/UNV/BCW-G1 /DBT

[1] Must specify group and zone information at time of order. See www.beaconproducts.com/controls/beaconnect for further details.
[2] Specify time delay, dimming level and mounting height.
[3] T4 optic only.
[4] To rotate optics Left or right 90 degrees, specify L or R after the optical distribution example T4L.
[5] Not available with other control or sensor options.
[6] When ordering Energeni, specify the routine setting code (example GEN-04). See Energeni brochure and instructions for setting table and options. Not available with sensor options.
[7] Not available for 347V or 480V input.

Order Separately

Catalog Number	Description
VPS-AD-RPA3	3.5" - 4.125"
VPS-AD-RPA4	4.188" - 5.25"
VPS-AD-RPA5	5.5" - 6.5"

Order Separately

Catalog Number	Description (must choose one option below / 1-per site required)
ASM-USB-BCW	Beaconnect Software loaded on USB flash drive* (Windows based only)
ASM-TABLET-BCW	Beaconnect 7" Windows Tablet*

*Includes USB Radio

DesignLights Consortium qualified. Consult DLC website for more details: http://www.designlights.org/QPL

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HUBBELL Lighting

SP3

ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
24	2	700 mA	120	55	0.5
			277		0.2
			347		0.2
			480		0.1
36	1	700 mA	120	80	0.7
			277		0.3
			347		0.2
			480		0.2
48	1	700 mA	120	110	0.9
			277		0.4
			347		0.3
			480		0.2
60	1	700 mA	120	136	1.1
			277		0.5
			347		0.4
			480		0.3

PROJECTED LUMEN MAINTENANCE

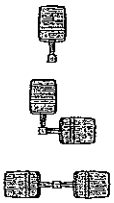
AMBIENT TEMP.	0	25,000	50,000	[1]TM-21-11 60,000	100,000	Calculated L70 (HOURS)
25°C / 77°C	1.00	0.97	0.95	0.95	0.92	>470,000

[1] Projected per IESNA TM-21-11
Data references the extrapolated performance projections for the base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	0.98
40°C	104°F	0.98

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

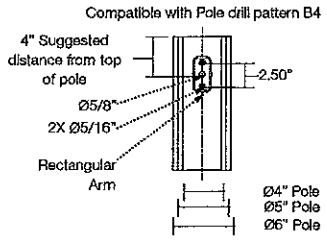
EPA



Config.	EPA
1	.67
2 @ 90°	.95
2 @ 180°	1.34

Config.	EPA
3 @ 120°	1.36
3 @ 90°	1.5
4 @ 90°	1.5

DRILL PATTERN



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SP3

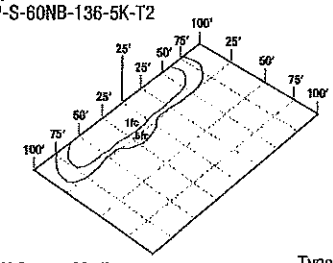
PERFORMANCE DATA

				5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 70 CRI)				
# LED'S	DRIVE CURRENT (MILLIAMPS)	SYSTEM WATTS	DISTRIBUTION TYPE	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G
24	700 mA	55 W	FR/T1	6339	114	1	0	1	6276	112	1	0	1	5389	97	1	0	1
			T2	5666	102	2	0	2	5610	101	2	0	2	4816	86	1	0	2
			T3	5610	101	1	0	2	5554	100	1	0	2	4784	86	1	0	2
			T4	6171	111	1	0	2	6110	109	1	0	2	5245	94	1	0	2
			T5R	6283	113	3	0	3	6221	111	3	0	3	5341	96	3	0	3
			T5QM	6171	111	3	0	1	6110	109	3	0	1	5245	94	2	0	1
			T5W	6087	109	3	0	1	6027	108	3	0	1	5201	93	3	0	1
36	700 mA	80 W	FR/T1	9515	114	1	0	1	9414	112	1	0	1	8083	96	1	0	1
			T2	8505	101	2	0	3	8415	100	2	0	3	7224	87	2	0	2
			T3	8415	100	2	0	2	8331	99	2	0	2	7175	86	2	0	2
			T4	9256	110	1	0	3	9164	109	1	0	3	7868	94	1	0	3
			T5R	9425	112	3	0	3	9331	111	3	0	3	8011	96	3	0	3
			T5QM	9257	110	3	0	1	9164	109	3	0	1	7868	94	3	0	1
			T5W	9131	109	3	0	2	9040	108	3	0	2	7801	93	3	0	2
48	700 mA	110 W	FR/T1	12679	114	2	0	1	15522	113	2	0	1	10777	97	1	0	1
			T2	11332	102	3	0	3	11220	101	3	0	3	9633	87	2	0	3
			T3	11220	101	2	0	3	11108	100	2	0	3	9567	86	2	0	3
			T4	12342	111	2	0	3	12219	110	2	0	3	10491	95	2	0	3
			T5R	12567	113	4	0	4	12441	112	4	0	4	10682	96	3	0	3
			T5QM	12342	111	3	0	2	12219	111	3	0	2	10491	95	3	0	2
			T5W	12175	110	4	0	2	12053	109	4	0	2	10402	94	4	0	2
2[b]	700 mA	136 W	FR/T1	15848	116	2	0	1	15690	115	2	0	1	13471	98	2	0	1
			T2	14165	103	3	0	3	14025	102	3	0	3	12041	88	3	0	3
			T3	14025	102	3	0	3	13885	101	3	0	3	11959	87	3	0	3
			3	15427	113	2	0	3	4 15274	111	2	0	3	1 13114	96	2	0	3
			T5R	15708	115	4	0	4	15259	111	4	0	4	13352	97	4	0	4
			T5QM	15427	113	4	0	2	15274	111	4	0	2	13314	96	3	0	2
			T5W	15218	111	4	0	2	15066	111	4	0	2	13002	95	4	0	2

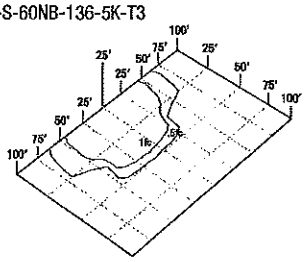
[1]Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

PHOTOMETRICS

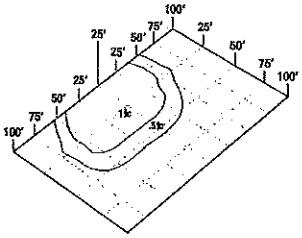
Type II
VP-S-60NB-136-5K-T2



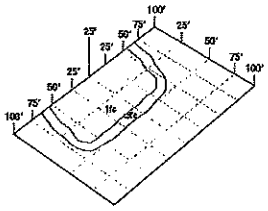
Type III
VP-S-60NB-136-5K-T3



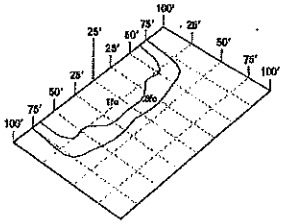
Type IV
VP-S-60NB-136-5K-T4



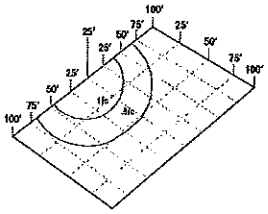
Type V Square Medium
VP-S-60NB-136-5K-T5QM



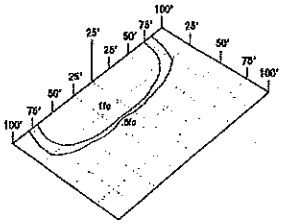
Type V Rectangular
VP-S-60NB-136-5K-T5R



Type V Round Wide
VP-S-60NB-136-5K-T5W



Front Row Auto Optic / Type I
VP-S-60NB-136-5K-FR
VP-S-60NB-136-5K-T1



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SP4

VIPER S SERIES

SMALL VIPER LUMINAIRE

Cat.# VP-S-60NB-136-4K-T5QM-UNV-BCW-RA-BZT 1

Job: Mercy Clinic, Grimes, IA 2

Type: P4

Approvals 3

BEACON design . performance . technology

SPECIFICATIONS

Intended Use:

The Beacon Viper luminaire is available with a wide choice of different LED Wattage configurations and optical distributions designed to replace HID lighting up to 400W MH or HPS.

Construction:

- Manufactured with a low copper content, die cast aluminum.
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements.
- External hardware is corrosion resistant.
- One piece optical cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel.
- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system.
- Two-piece silicone and micro-cellular polyurethane foam gasket ensures a weather-proof seal around each individual LED.

LED/Optics:

- 100V through 277V, 50 Hz to 60 Hz (UNV), or 347V or 480V input.
- Power factor is .92 at full load.
- All electrical components are rated at 50,000 hours at full load and 25°C ambient conditions per MIL- 217F Notice 2.
- Dimming drivers are standard with connections for external dimming equipment available upon request.
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is listed by UL for use at 600VAC at 50°C or higher.
- Plug disconnects are listed by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only.

Electrical:

- Fixture electrical compartment shall contain all LED driver components and shall be provided with a push-button terminal block for AC power connections.
- The housing is designed for an optional twist lock photo control receptacle.
- Ambient operating temperature -40°C to 40°C
- Surge protection - 20KA; shuts off at end of life.
- Optional 7-pin ANSI C136.41-2013 twist-lock photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices.
- Lifeshield™ Circuit - protects luminaire from excessive temperature. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F). Operation shall be smooth and undetectable to the eye. Thermal circuit is designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.The device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.).

Controls/Options:

- Available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the Motion Response system reduces the Wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full Wattage and full light output. Please contact Beacon Products if project requirements vary from standard configuration.
- Available with Energeni for optional set dimming, timed dimming with simple delay, or timed dimming based on hours of operation or time of night (see www.beaconproducts.com/products/energeni).
- Also available with **Beacon**nect Wireless Control System (see **Beacon**nect product page for more details www.beaconproducts.com/products/beaconnect).

Installation:

- Mounting options for horizontal arm, vertical tenon or traditional arm mounting available. Mounting hardware included.

Finish:

- Beacote V polyester powder-coat electro-statically applied and thermocured.
- Beacote V finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish.
- The finish meets the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds.

Listings:

- DesignLights Consortium (DLC) qualified, consult DLC website for more details: http://www.designlights.org/QPL
- Listed to UL1598 and CSA22.2#250.0-24 for wet locations and 40°C ambient temperatures
- 3G rated for ANSI C136.31 high vibration applications
- IDA approved

Warranty:

Five year limited warranty (for more information visit: www.hubbelllighting.com/resources/warranty).

CERTIFICATIONS/LISTINGS

C US

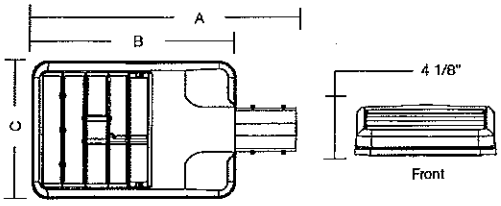
*3000K and warmer CCTs only

PRODUCT IMAGE(S)

rectangular arm

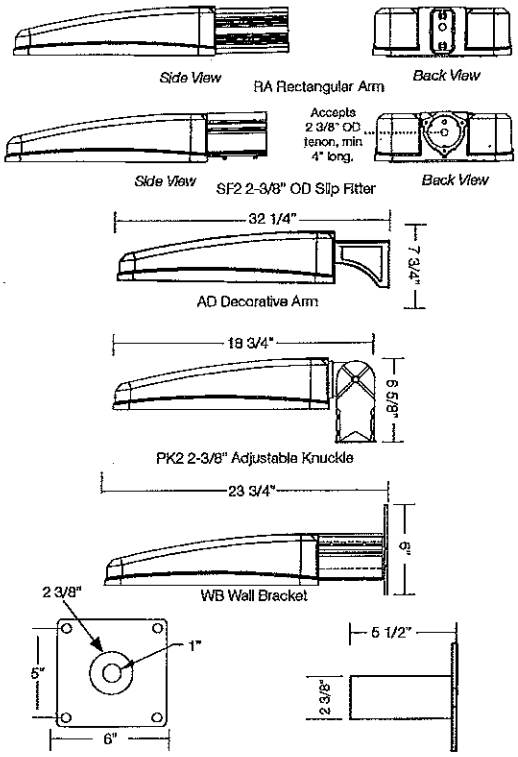
decorative arm

DIMENSIONS



A	B	C	Weight:	EPA
22.75" (578 mm)	16.75" (425 mm)	11.25" (286 mm)	15.0 lbs (6.8 kg)	.67 ft²

MOUNTING OPTIONS



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HUBBELL Lighting

SP4

ORDERING INFORMATION

ORDERING EXAMPLE: VPS/36NB-80/5K/T4/UNV/PCR-TL/BCW/BLC/RA/BBT

VPS

SERIES

- VPS viper-small [1]

ENGINE-WATTS

- 24NB-55 55W, LED array
- 36NB-80 80W, LED array
- 48NB-110 110W, LED array
- 60NB-136 136W, LED array [5]

LED COLOR

- 3K 3000K
- 4K 4000K [3]
- 5K 5000K

OPTICS[4]

- T1 type I
- T2 type II
- T3 type III
- T4 type IV
- T5R type V, rectangular
- T5QM type V, square medium [6]
- T5W type V, round wide
- FR front row auto optic

VOLTAGE

- UNV 120-277V [2]
- 347V 347V
- 480V 480V

ELECTRICAL OPTIONS

- PCR-TL Twist lock receptacle with photo control
- PCR-SC Twist lock receptacle with shorting cap
- PCRU Twist lock receptacle
- 2PF[7] dual power feed

CONTROL OPTIONS

- GENI-XX[6] energenl
- BCW[1,5] beaconnect [8]

HOUSE SIDE SHIELD OPTIONS

- HSS-90 house side shield 90°
- HSS-180 house side shield 180°
- BLC[3] backlight control

SENSOR OPTIONS

- BMD[1,2,5] motion sensor for beaconnect
- MDD[2,5] motion dimming detector

MOUNTING OPTIONS

- RA rectangular arm for round or square pole mount. RPA included. [7]
- SF2 2 3/8" OD slip-fitter
- PK2 2 3/8" adjustable knuckle
- AD decorative arm with universal mounting slot. RPA ordered separately. See referenced table.
- WB wall bracket (use with SF2 or PK2), SF2 standard

FINISH

- BBT basic black textured
- BMT black matte textured
- WHT white textured
- MBT metallic bronze textured
- BZT bronze textured [4]
- DBT dark bronze textured
- GYS gray smooth
- DPS dark platinum smooth
- GNT green textured
- MST metallic silver textured
- MTT metallic titanium textured
- OWI old world iron
- CAL _____

MDD ORDERING INFORMATION: When ordering a fixture with the motion detection option (MDD), please specify the appropriate information. These settings are specified in the ordering as shown in the example below.

VPS / 36NB-135 / 5K / T5W / UNV / MDD - 1 to 30 min. - 33% or 50% - ?? / MT

High to Dim Delay - Low Level - Mounting Height (ft.)

BEACONNECT ORDERING INFORMATION: When ordering a fixture with the Beaconnect lighting control options please specify the appropriate group and sensor information. Please provide dimming schedule information in either the Beaconnect excel spreadsheet or Beaconnect software. For more detailed information please visit www.beaconproducts.com/beaconnect or contact beacon tech support at (800) 345-4928. These settings are specified in the ordering as shown in the example below. (Family) / 24NB-55 / 5K/T3 / UNV / BCW-(Group 1-16) - (Optional Zone 1-250) /BMD - Time Delay(1 to 255) - Dimming% (1 to 100) - mounting height(1-20ft) - /
Example: TRV/24NB-55/5K/T3/UNV/BCW-G1 /BMD-30M-50%-10ft/DBT for luminaires without sensors in the group omit the BMD ordering logic Example: TRV/24NB-55/5K/T3/UNV/BCW-G1 /DBT

[1] Must specify group and zone information at time of order. See www.beaconproducts.com/controls/beaconnect for further details.
[2] Specify time delay, dimming level and mounting height.
[3] T4 optic only.
[4] To rotate optics Left or right 90 degrees, specify L or R after the optical distribution example T4L.
[5] Not available with other control or sensor options.
[6] When ordering Energenl, specify the routine setting code (example GENI-04). See Energenl brochure and instructions for setting table and options. Not available with sensor options.
[7] Not available for 347V or 480V input.

Catalog Number	Description
VPS-AD-RPA3	3.5" - 4.125"
VPS-AD-RPA4	4.188" - 5.25"
VPS-AD-RPA5	5.5" - 6.5"

Order Separately

Catalog Number	Description (must choose one option below / 1-per site required)
ASM-USB-BCW	Beaconnect Software loaded on USB flash drive* (Windows based only)
ASM-TABLET-BCW	Beaconnect 7" Windows Tablet*

*Includes USB Radio

DesignLights Consortium qualified.
Consult DLC website for more details:
http://www.designlights.org/QPL

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HUBBELL Lighting

SP4

PERFORMANCE DATA

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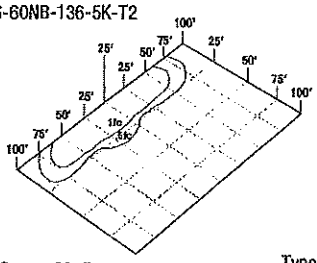
# LED'S	DRIVE CURRENT (MILLIAMPS)	SYSTEM WATTS	DISTRIBUTION TYPE	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G
24	700 mA	55 W	FR/T1	6339	114	1	0	1	6276	112	1	0	1	5389	97	1	0	1
			T2	5666	102	2	0	2	5610	101	2	0	2	4816	86	1	0	2
			T3	5610	101	1	0	2	5554	100	1	0	2	4784	86	1	0	2
			T4	6171	111	1	0	2	6110	109	1	0	2	5245	94	1	0	2
			T5R	6283	113	3	0	3	6221	111	3	0	3	5341	96	3	0	3
			T5QM	6171	111	3	0	1	6110	109	3	0	1	5245	94	2	0	1
			T5W	6087	109	3	0	1	6027	108	3	0	1	5201	93	3	0	1
36	700 mA	80 W	FR/T1	9515	114	1	0	1	9414	112	1	0	1	8083	96	1	0	1
			T2	8505	101	2	0	3	8415	100	2	0	3	7224	87	2	0	2
			T3	8415	100	2	0	2	8331	99	2	0	2	7175	86	2	0	2
			T4	9256	110	1	0	3	9164	109	1	0	3	7868	94	1	0	3
			T5R	9425	112	3	0	3	9331	111	3	0	3	8011	96	3	0	3
			T5QM	9257	110	3	0	1	9164	109	3	0	1	7868	94	3	0	1
			T5W	9131	109	3	0	2	9040	108	3	0	2	7801	93	3	0	2
48	700 mA	110 W	FR/T1	12679	114	2	0	1	15522	113	2	0	1	10777	97	1	0	1
			T2	11332	102	3	0	3	11220	101	3	0	3	9633	87	2	0	3
			T3	11220	101	2	0	3	11108	100	2	0	3	9567	86	2	0	3
			T4	12342	111	2	0	3	12219	110	2	0	3	10491	95	2	0	3
			T5R	12567	113	4	0	4	12441	112	4	0	4	10682	96	3	0	3
			T5QM	12342	111	3	0	2	12219	111	3	0	2	10491	95	3	0	2
			T5W	12175	110	4	0	2	12053	109	4	0	2	10402	94	4	0	2
1	700 mA	136 W	FR/T1	15848	116	2	0	1	15690	115	2	0	1	13471	98	2	0	1
			T2	14165	103	3	0	3	14025	102	3	0	3	12041	88	3	0	3
			T3	14025	102	3	0	3	13885	101	3	0	3	11959	87	3	0	3
			T4	15427	113	2	0	3	15274	111	2	0	3	13114	96	2	0	3
			T5R	15708	115	4	0	4	15259	111	4	0	4	13352	97	4	0	4
			3 5QM	15427	113	4	0	2	4 274	111	4	0	2	2 13314	96	3	0	2
			T5W	15218	111	4	0	2	15066	111	4	0	2	13002	95	4	0	2

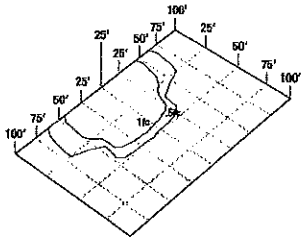
[1]Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

PHOTOMETRICS

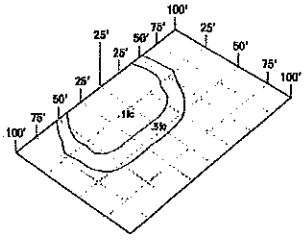
Type II
VP-S-60NB-136-5K-T2



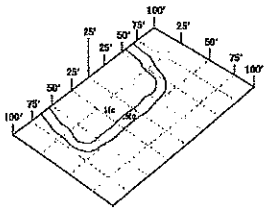
Type III
VP-S-60NB-136-5K-T3



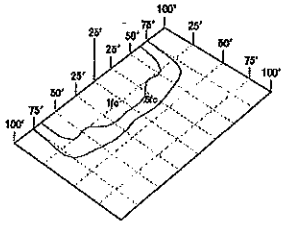
Type IV
VP-S-60NB-136-5K-T4



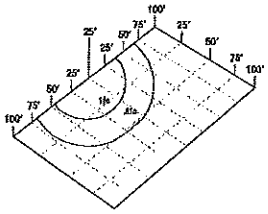
Type V Square Medium
VP-S-60NB-136-5K-T5QM



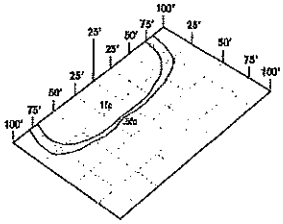
Type V Rectangular
VP-S-60NB-136-5K-T5R



Type V Round Wide
VP-S-60NB-136-5K-T5W



Front Row Auto Optic / Type I
VP-S-60NB-136-5K-FR
VP-S-60NB-136-5K-T1



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HUBBELL Lighting

SP4

ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
24	2	700 mA	120	55	0.5
			277		0.2
			347		0.2
			480		0.1
36	1	700 mA	120	80	0.7
			277		0.3
			347		0.2
			480		0.2
48	1	700 mA	120	110	0.9
			277		0.4
			347		0.3
			480		0.2
60	1	700 mA	120	136	1.1
			277		0.5
			347		0.4
			480		0.3

PROJECTED LUMEN MAINTENANCE

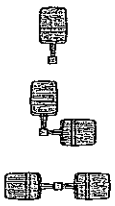
AMBIENT TEMP.	0	25,000	50,000	[1]TM-21-11 60,000	100,000	Calculated L70 (HOURS)
25°C / 77°C	1.00	0.97	0.95	0.95	0.92	>470,000

[1] Projected per IESNA TM-21-11
Data references the extrapolated performance projections for the base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

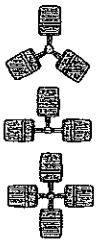
AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	0.98
40°C	104°F	0.98

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

EPA

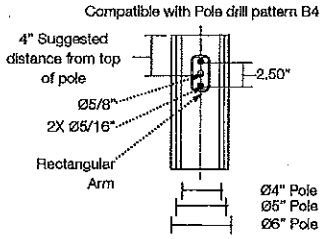


Config.	EPA
1	.67
2 @ 90°	.95
2 @ 180°	1.34



Config.	EPA
3 @ 120°	1.36
3 @ 90°	1.5
4 @ 90°	1.5

DRILL PATTERN



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SP 5

SternbergLighting
ESTABLISHED 1923 / EMPLOYEE OWNED
GENESIS 3D Product Configurator

Catalog Number:
1A-1531LED-F-FFG-8ARC30T3-MDL03-EZ/OFPT/550P520/STD

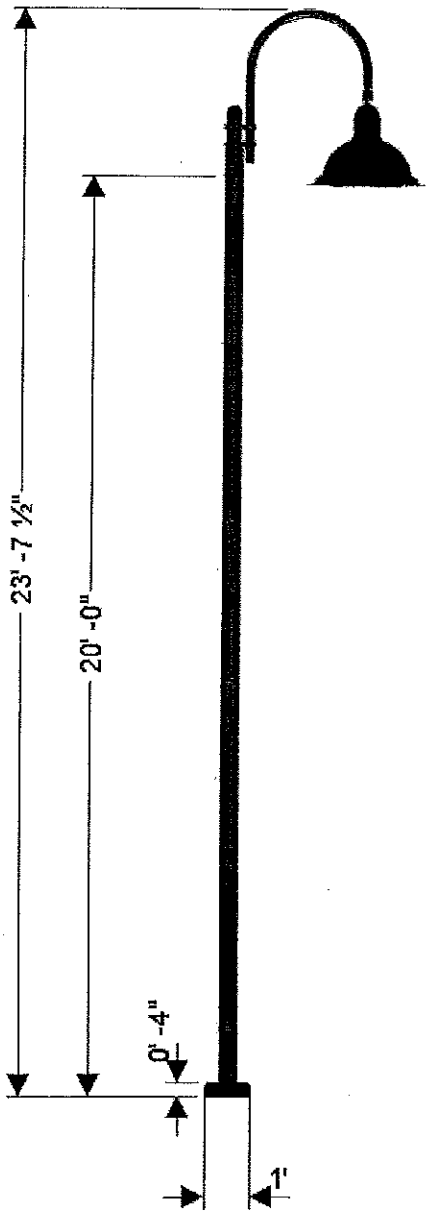
Type:

Customer Approval:

Conceptual assembly drawing, subject to Engineering verification by factory.

Signature

Date



NUMBER OF ARMS: 1

ARM ARM MOUNTED FIXTURE: 1531

1531 Omega decorative downlight fixture features a spun aluminum bell styled shade with a flared or rounded edge. An aluminum casting is attached to the upper portion of the bell shade to allow coupling to multiple arms. Fixture features sealed and rotatable optics. Available with flat, sag, clear or frosted glass.

ARM LIGHT SOURCE: -8ARC30T3-MDL03

Array:	8ARC (112 LEDS, 126 Watts) (8ARC)
Color Temp:	3000K (30)
Distribution:	Type 3 (T3)
Driver:	Multi-Volt Dimmable Low-Range Driver,120-277V, 350mA (MDL03)

OPTIONS: -EZ

Hangstraight:	EZ Vertical (EZ)

ARM: OFPT

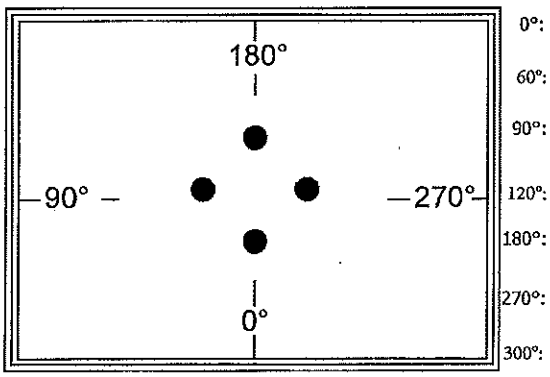
POLE: 550P520/

The 12" diameter cast 356 aluminum alloy base and aluminum shaft shall be a one-piece construction. For fixtures using remote ballasts or drivers, the servicing of these components requires pulling the pole. The pole shall be U.L. or E.T.L. listed in U.S. and Canada.

Model:	550
Shaft Type:	Smooth Straight 5 Inch, 6061-T6 Aluminum Alloy (P5)
Height:	20 Ft (20/)

FINISH: STD

Assembly shall be powder coated to a yet to be determined standard finish. This option may be used for quoting purposes when a final decision on the finish specification is pending.



Bolt Info: (4) 3/4" x 18" Anchor Bolts, 8-5/16" Bolt Circle, Diamond Pattern

Access Door Orientation: 0°
Street Side Otientation: 90°

Rev	Description	By	Date
A			
B			
C			
D			
E			

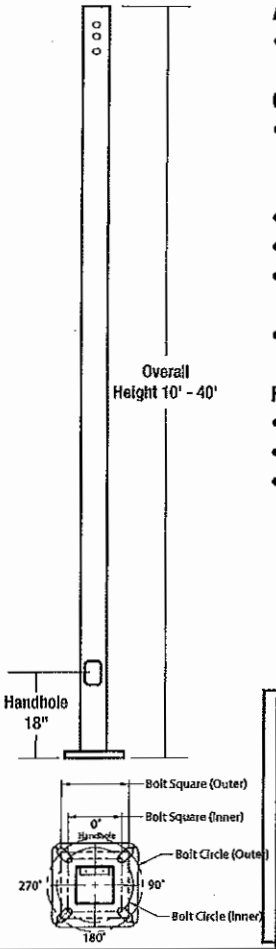
Job Name:			
Job Location:			Drawing No. 10830
Drawn By:	Drawn Date:	Checked By:	Checked Date:

Site Light Poles

SSS-B SERIES POLES

SQUARE STRAIGHT STEEL

Cat.# SSS-B-20-40-A-1-B4-BZT-VM1 [1]		BEACON design . performance . technology
Job	Type P1, P2, P3 [2] & P4	Approvals



APPLICATIONS

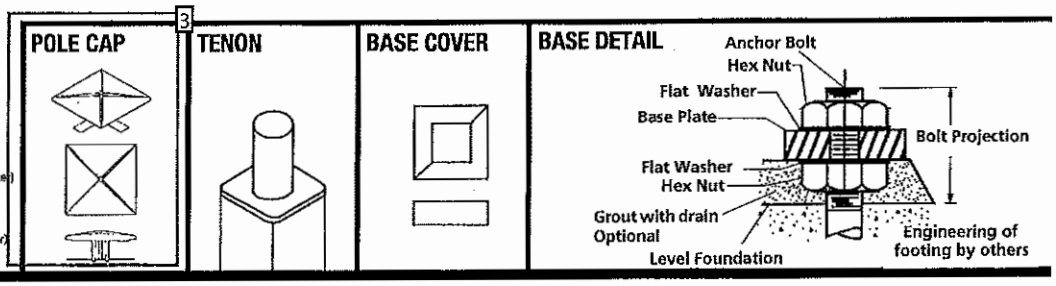
- Lighting installations for side and top mounting of luminaires with effective projected area (EPA) not exceeding maximum allowable loading of the specified pole in its installed geographic location

CONSTRUCTION

- SHAFT: One-piece straight steel with square cross section, flat sides and minimum 0.238" radius on all corners; Minimum yield of 46,000 psi (ASTM-A500, Grade B); Longitudinal weld seam to appear flush with shaft side wall; Steel base plate with axial bolt circle slots welded flush to pole shaft having minimum yield of 36,000 psi (ASTM A36)
- BASE COVER: Two-piece square aluminum base cover included standard
- POLE CAP: Pole shaft supplied with removable cover when applicable; Tenon and post-top configurations also available
- HAND HOLE: Rectangular 3x5 steel hand hole frame (2.38" x 4.38" opening); Mounting provisions for grounding lug located behind gasketed cover
- ANCHOR BOLTS: Four galvanized anchor bolts provided per pole with minimum yield of 55,000 psi (ASTM F1554). Galvanized hardware with two washers and two nuts per bolt for leveling

FINISH

- Durable thermoset polyester powder coat paint finish with nominal 3.0 mil thickness
- Powder paint prime applied over "white metal" steel substrate cleaned via mechanical shot blast method
- Decorative finish coat available in seven standard colors; Custom colors available; RAL number preferable; Internal protective coating available



ORDERING INFORMATION

ORDERING EXAMPLE:

Reference page 2 for available configurations

SSS - B - 25 - 40 - A/B/C - 2L - B2 - BBT - UL

SERIES	HEIGHT	SHAFT	THICKNESS
SSS-B [4] Square Straight Steel Pole Beacon	Reference page 2 Ordering matrix	Reference page 2 Ordering matrix	Reference page 2 Ordering matrix

MOUNTING	
1 [5]	Single arm mount
2	Two fixtures at 180°
2L	Two fixtures at 90°
3T	Three fixtures at 90°
4	Four fixtures at 90°
TA	Tenon (2.375" OD)
TB	Tenon (2.875" OD)
TC	Tenon (3.5" OD)
TR[1]	Removable Tenon (2.375 x 4.25)
OT	No drilling (includes pole cap)

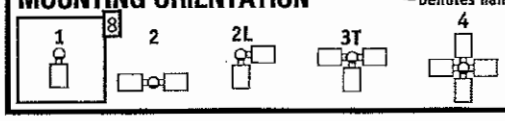
DRILL PATTERN	
B1	Cruzer
B2	SF2
B3	Viper Large
B4 [7]	Viper Small

FINISH	
BBT	Basic Black Textured
BMT	Black MatteTextured
BZT [6]	Bronze Textured
DBT	Dark Bronze Textured
DPS	Dark Platinum Smooth
GNT	Green Textured
GYS	Gray Smooth
MBT	Metallic Bronze Textured
MST	Metallic Silver Textured
MTT	Metallic Titanium Textured
OWI	Old World Iron
WHT	White Textured
CC	Custom Color

OPTIONS	
HSC	Internal Coating (Hubbell Seal)
GFI[2]	20 Amp GFCI Receptacle and Cover
EHH[2]	Extra Handhole
C05[2]	.5" Coupling
C07[2]	.75" Coupling
C20[2]	2" Coupling
MPB[2]	Mid-pole Luminaire Bracket
VM2	2nd mode vibration damper
LAB	Less Anchor Bolts
UL	UL Certified

MOUNTING ORIENTATION

Denotes handhole location



ACCESSORIES - Order Separately

Catalog Number	Description
VM1[3]	1st mode vibration damper
VM2SXX	2nd mode vibration damper

1 Removable tenon used in conjunction with side arm mounting. First specify desired arm configuration followed by the "TR" notation. Example: SSS-B-25-40-A-1-B1-TR-BBT
2 Specify option location using logic found on page 2 (Option Orientation)
3 VM1 required on poles 20' and taller with EPA of less than 1.

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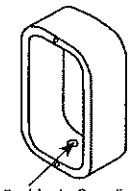
ORDERING INFORMATION Cont.

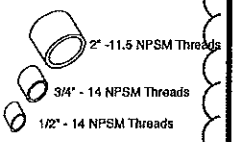
Catalog Number	Height		Nominal Shaft Dimensions	Wall Thickness	Bolt Circle (suggested)	Bolt Circle (range)	Bolt Square (range)	Base Plate Square	Anchor bolt size	Bolt Projection	Pole weight
	Feet	Meters									
SSS-B-10-40-A-XX-XX	10	3.0	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	77
SSS-B-12-40-A-XX-XX	12	3.7	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	90
SSS-B-14-40-A-XX-XX	14	4.3	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	103
SSS-B-16-40-A-XX-XX	16	4.9	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	116
SSS-B-18-40-A-XX-XX	18	5.5	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	129
2 SSS-B-20-40-A-XX-XX	20	6.1	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 3 x 3"	3.5	142 1
SSS-B-25-40-A-XX-XX	25	7.6	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	175
SSS-B-14-40-B-XX-XX	14	4.3	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	152
SSS-B-16-40-B-XX-XX	16	4.9	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	171
SSS-B-18-40-B-XX-XX	18	5.5	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	190
SSS-B-20-40-B-XX-XX	20	6.1	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	209
SSS-B-25-40-B-XX-XX	25	7.6	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	257
SSS-B-30-40-B-XX-XX	30	9.1	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	304
SSS-B-16-50-B-XX-XX	16	4.9	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	219
SSS-B-18-50-B-XX-XX	18	5.5	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	243
SSS-B-20-50-B-XX-XX	20	6.1	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	267
SSS-B-25-50-B-XX-XX	25	7.6	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	327
SSS-B-30-50-B-XX-XX	30	9.1	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	387
SSS-B-25-50-C-XX-XX	25	7.6	5" square	.25"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	427
SSS-B-30-50-C-XX-XX	30	9.1	5" square	.25"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	507
SSS-B-20-60-B-XX-XX	20	6.1	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	329
SSS-B-25-60-B-XX-XX	25	7.6	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	404
SSS-B-30-60-B-XX-XX	30	9.1	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	479
SSS-B-35-60-B-XX-XX	35	10.7	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	554
SSS-B-40-60-B-XX-XX	40	12.2	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	629
SSS-B-30-60-C-XX-XX	30	9.1	6" square	.25"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	614
SSS-B-35-60-C-XX-XX	35	10.7	6" square	.25"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	712
SSS-B-40-60-C-XX-XX	40	12.2	6" square	.25"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	809

NOTE Factory supplied template must be used when setting anchor bolts. Beacon Products will deny any claim for incorrect anchorage placement resulting from failure to use factory supplied template and anchor bolts.

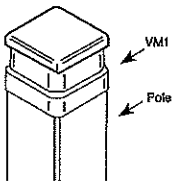
EHH - EXTRA HANDHOLE



C05 - C07 - C20 - COUPLING



4 VM1 - VIBRATION DAMPER 1ST MODE



Field installed Pole Top damper designed to reduce pole top deflection or sway. VM1 is required for pole systems 20' and taller with a total EPA of 1.0 or less.

VM2 - VIBRATION DAMPER 2ND MODE

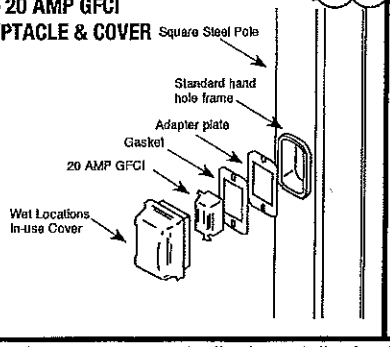
Factory installed, internal damper designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.

VM2SXX - VIBRATION DAMPER 2ND MODE

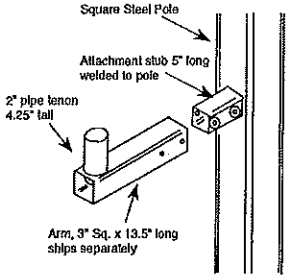
VM2S08 – 8'
VM2S12 – 12'
VM2S16 – 16'
VM2S20 – 20'
VM2S24 – 24'

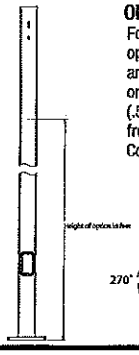
Field installed, internal damper designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.

GFI – 20 AMP GFCI RECEPTACLE & COVER



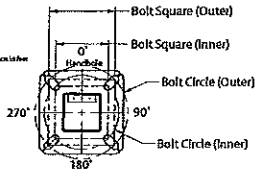
~~MPB - MID POLE BRACKET~~





OPTION ORIENTATION

Follow the logic below when ordering location specific options. For each option, include its orientation (in degrees) and its height (in feet). Example: Option C07 should be ordered as: SSS-B-20-40-A-TA-DB-C07-0-15 (.5" coupling on the handhole/arm side of pole, 15 feet up from the pole base) 1' spacing required between option. Consult factory for other configurations.



For more information about pole vibration and vibration dampers, please consult http://www.beaconproducts.com/content/products/literature/literature_files/Pole_Wind_Induced_Flyer_HL010022.pdf
Due to our continued efforts to improve our products, product specifications are subject to change without notice.

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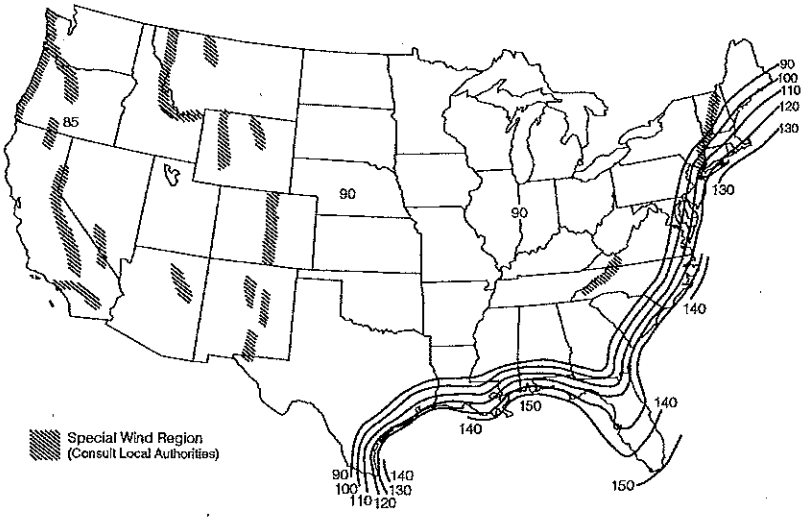
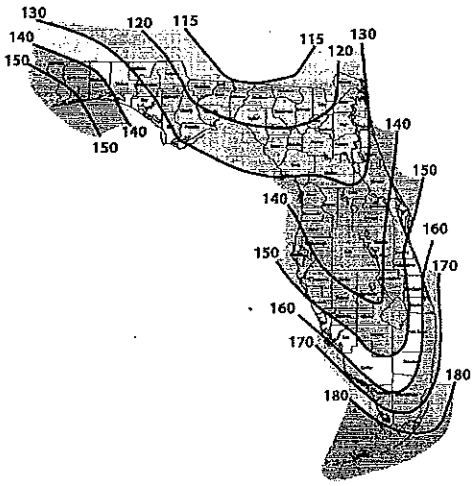
ASCE7-05 WIND MAP



FLORIDA REGION WIND



HAWAII – 105 mph
PUERTO RICO – 145 mph

- Florida region wind map above is based upon 3-second gust winds and the 2010 Florida Building Code

ASCE 7-05 wind map EPA Load Rating - 3 second gust wind speeds							
Catalog Number	85	90	100	110	120	105	145
SSS-B-10-40-A	25.0	25.0	25.0	20.6	17.0	22.8	11.6
SSS-B-12-40-A	25.0	25.0	20.0	16.1	13.2	18.0	8.1
SSS-B-14-40-A	23.1	20.4	16.1	12.8	10.2	14.3	5.9
SSS-B-16-40-A	19.0	16.7	13.0	10.1	7.9	11.5	4.1
SSS-B-18-40-A	15.6	13.6	10.0	7.8	5.9	9.0	2.6
SSS-B-20-40-A	12.7	10.9	7.9	5.9	4.2	6.9	1.3
SSS-B-25-40-A	7.3	5.9	3.8	2.1	0.8	2.9	NR
SSS-B-14-40-B	25.0	25.0	23.3	18.6	15.1	20.8	9.2
SSS-B-16-40-B	25.0	24.9	19.4	15.4	12.3	17.3	7.2
SSS-B-18-40-B	24.0	20.8	16.1	12.5	9.8	14.2	5.3
SSS-B-20-40-B	20.2	17.5	13.2	10.1	7.7	11.6	3.8
SSS-B-25-40-B	12.8	11.0	7.9	5.5	3.7	6.7	0.7
SSS-B-30-40-B	8.0	6.6	4.1	2.2	0.8	3.1	NR
SSS-B-16-50-B	25.0	25.0	25.0	24.8	20.1	25.0	12.3
SSS-B-18-50-B	25.0	25.0	25.0	20.4	16.4	22.9	9.6
SSS-B-20-50-B	25.0	25.0	21.3	16.7	13.2	18.9	7.2
SSS-B-25-50-B	20.7	17.8	13.3	9.8	7.2	11.5	2.6
SSS-B-30-50-B	13.5	11.3	7.7	4.9	2.8	6.2	NR
SSS-B-25-50-C	25.0	25.0	19.4	15.1	11.7	17.1	6.0
SSS-B-30-50-C	20.1	17.3	12.7	9.3	6.6	10.9	2.1
SSS-B-20-60-B	25.0	25.0	25.0	25.0	20.2	25.0	11.5
SSS-B-25-60-B	25.0	25.0	20.6	15.6	11.8	18.0	5.2
SSS-B-30-60-B	21.4	18.1	12.9	8.8	5.7	10.7	NR
SSS-B-35-60-B	14.0	11.3	6.9	3.6	1.0	5.2	NR
SSS-B-40-60-B	8.1	5.8	2.2	NR	NR	NR	NR
SSS-B-30-60-C	24.3	20.5	14.6	10.2	6.8	12.2	1.3
SSS-B-35-60-C	16.6	13.5	8.6	4.9	2.1	6.6	NR
SSS-B-40-60-C	10.6	7.9	3.7	0.6	NR	2.1	NR

Florida Building Code 2010 EPA Load Rating - 3 second gust wind speeds								
Catalog Number	115	120	130	140	150	160	170	180
SSS-B-10-40-A	25.0	25.0	25.0	25.0	21.4	18.4	15.9	13.9
SSS-B-12-40-A	25.0	25.0	23.6	19.8	16.7	14.2	12.1	10.4
SSS-B-14-40-A	25.0	23.1	19.0	15.7	13.1	10.9	99.1	7.6
SSS-B-16-40-A	20.8	18.7	15.2	12.3	10.1	8.2	6.7	5.4
SSS-B-18-40-A	16.8	15.0	11.9	9.4	7.5	5.9	4.5	3.4
SSS-B-20-40-A	13.6	11.9	9.2	7.1	5.3	3.9	2.7	1.7
SSS-B-25-40-A	7.4	6.2	4.1	2.5	1.1	NR	NR	NR
SSS-B-14-40-B	25.0	23.6	19.4	16.1	13.4	11.2	9.4	7.8
SSS-B-16-40-B	21.4	19.2	15.6	12.7	10.4	8.5	6.9	5.6
SSS-B-18-40-B	17.2	15.4	12.2	9.7	7.7	6.1	4.7	3.6
SSS-B-20-40-B	13.9	12.3	9.5	7.3	5.6	4.1	2.9	1.9
SSS-B-25-40-B	7.7	6.4	4.3	2.6	1.3	NR	NR	NR
SSS-B-30-40-B	3.2	2.1	NR	NR	NR	NR	NR	NR
SSS-B-16-50-B	25.0	25.0	25.0	25.0	25.0	21.4	18.2	15.5
SSS-B-18-50-B	25.0	25.0	25.0	24.4	20.4	17.0	14.2	11.9
SSS-B-20-50-B	25.0	25.0	24.4	19.9	16.3	13.4	11.0	8.9
SSS-B-25-50-B	21.8	19.3	15.0	11.5	8.8	6.5	4.7	3.1
SSS-B-30-50-B	13.7	11.7	8.2	5.5	3.3	1.5	NR	NR
SSS-B-25-50-C	21.8	19.3	15.0	11.5	8.8	6.5	4.7	3.1
SSS-B-30-50-C	13.7	11.7	8.2	5.5	3.3	1.5	NR	NR
SSS-B-20-60-B	25.0	25.0	25.0	21.9	17.6	14.5	11.7	9.4
SSS-B-25-60-B	23.8	20.9	16.1	12.3	9.2	6.6	4.5	2.8
SSS-B-30-60-B	14.6	12.3	8.4	5.3	2.8	0.8	NR	NR
SSS-B-35-60-B	7.5	5.6	2.4	NR	NR	NR	NR	NR
SSS-B-40-60-B	1.8	NR	NR	NR	NR	NR	NR	NR
SSS-B-30-60-C	14.6	12.3	8.4	5.3	2.8	0.8	NR	NR
SSS-B-35-60-C	7.5	5.6	2.4	NR	NR	NR	NR	NR
SSS-B-40-60-C	1.8	NR	NR	NR	NR	NR	NR	NR

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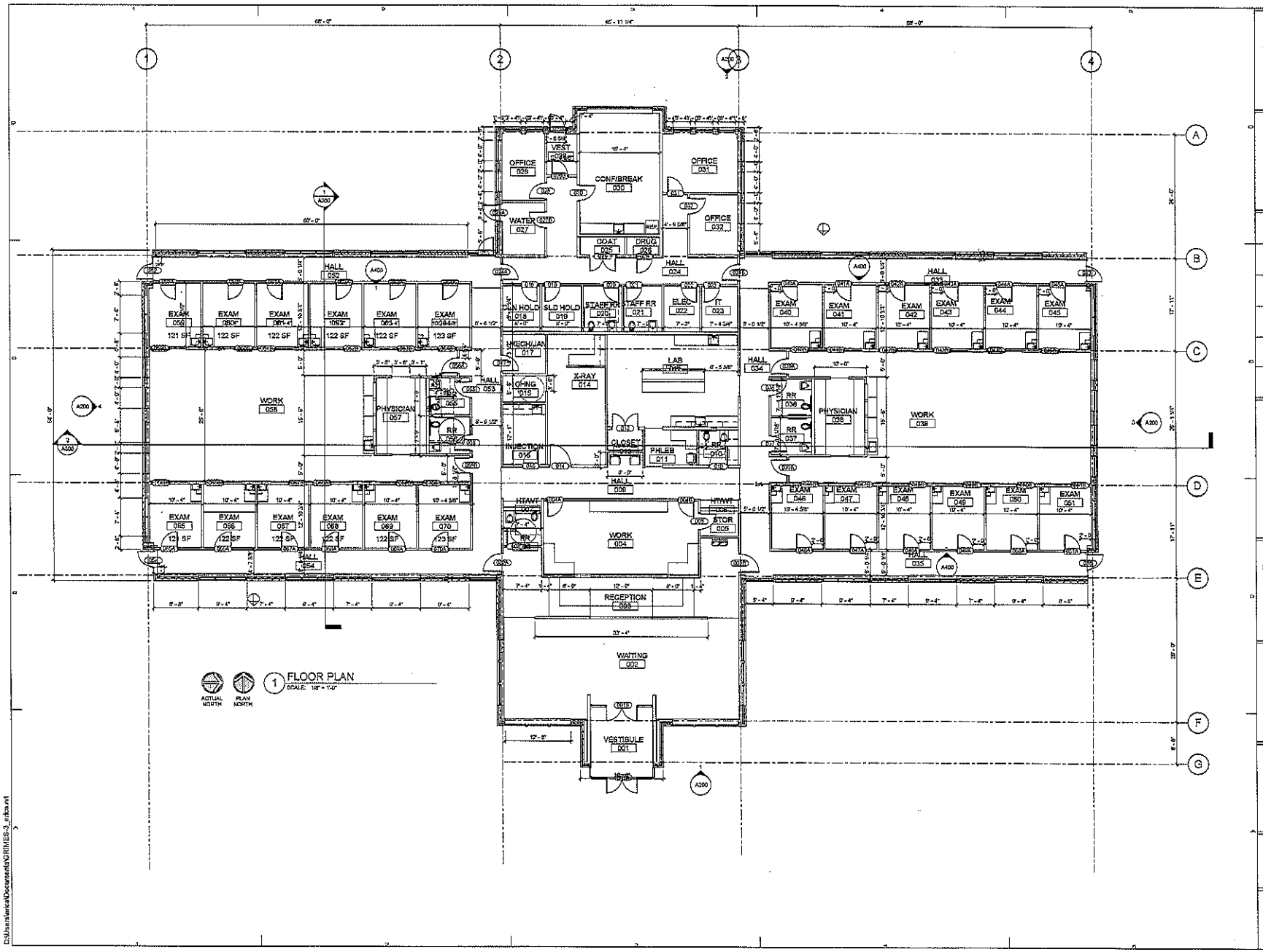

SVPA
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1486 28th Street, Suite 200
West Des Moines, Iowa 50266
515.327.5890 Fax: 515.327.5991

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CONSULT IN ADDRESS
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CLIENT LOGO

PROJECT INFORMATION

MERCY GRIMES

GRIMES, IOWA

DRAWING ISSUE INFORMATION

ISSUE FOR: SCHEMATIC DESIGN

ISSUE DATE: 08/23/2016

REV DATE	REV

MANAGEMENT INFORMATION

PROJECT NO 16038

PRINCIPAL IN CHARGE: RO PROJECT ARCHITECT JR

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SHEET TITLE

FLOOR PLAN

SHEET NUMBER

A100

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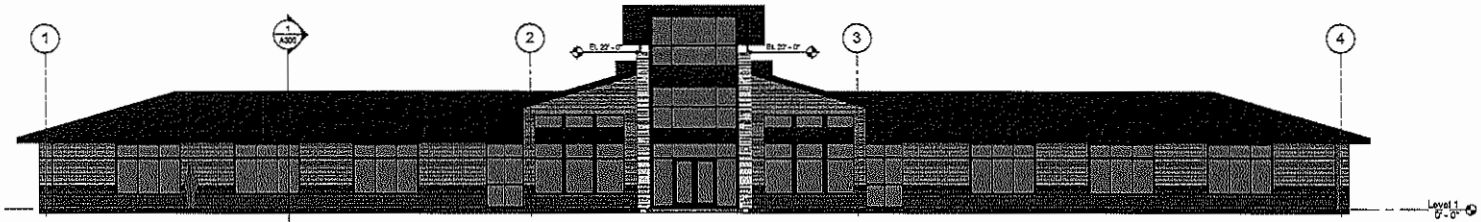
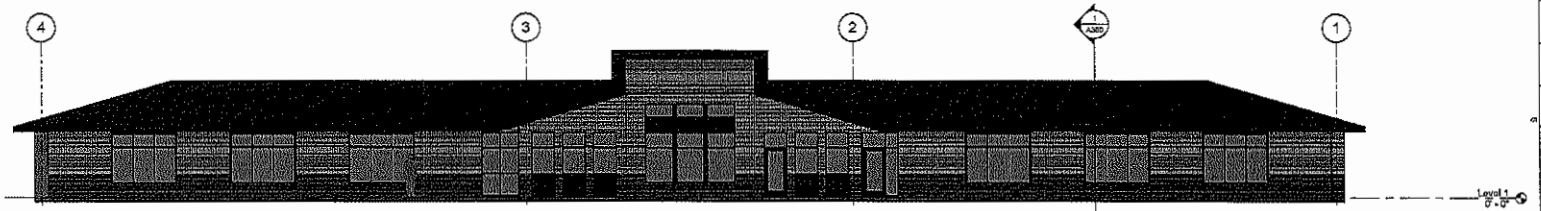
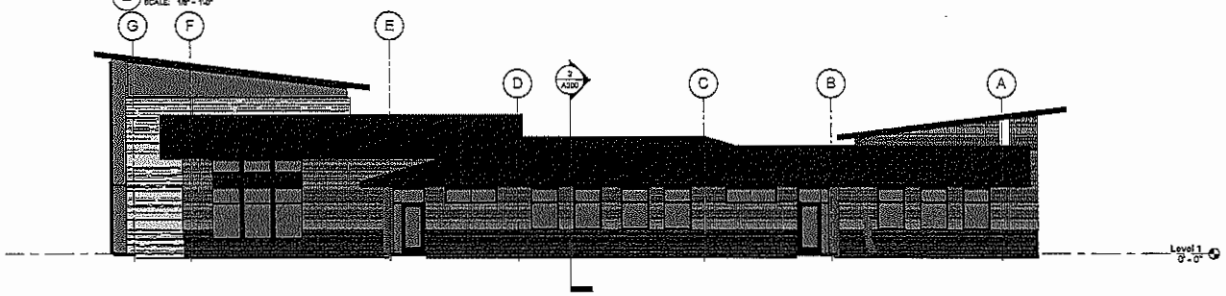


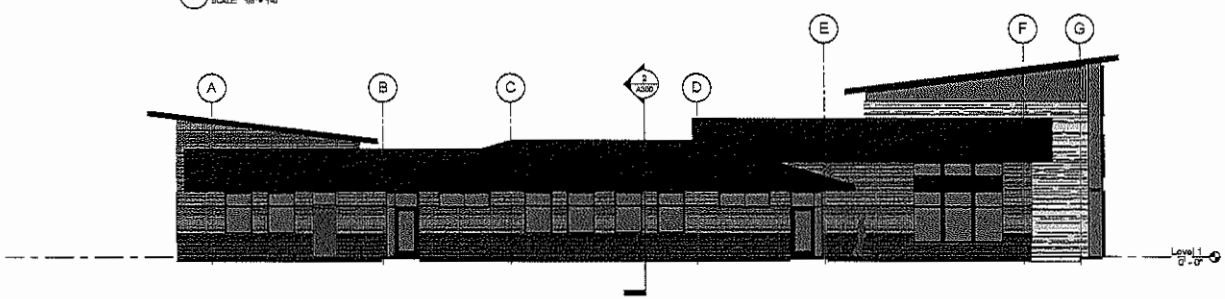
1 EXT ELEV - PLAN SOUTH
SCALE: 1/8" = 1'-0"



2 EXT ELEV - PLAN NORTH
SCALE: 1/8" = 1'-0"



3 EXT ELEV - PLAN EAST
SCALE: 1/8" = 1'-0"



4 EXT ELEV - PLAN WEST
SCALE: 1/8" = 1'-0"

SVPA
Architects, Inc.
1468 26th Street, Suite 200
West Des Moines, Iowa 50266
515.327.5990 Fax: 515.327.5991

CONSULT OF TYPE
CONSULTANT NAME
CONSULTANT ADDRESS
CONSULTANT CITY STATE ZIP
CONSULT PH TEL NO

CLIENT LOGO

PROJECT INFORMATION

MERCY GRIMES

GRIMES, IOWA

DRAWING ISSUE INFORMATION

ISSUE FOR: SCHEMATIC DESIGN

ISSUE DATE: 08/23/2016

REV DATE	REV

MANAGEMENT INFORMATION

PROJECT NO: 16036

PRINCIPAL IN CHARGE: RO PROJECT ARCHITECT: JR

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SHEET TITLE
EXTERIOR ELEVATIONS

SHEET NUMBER
A200

C:\Users\rick\Documents\GRIMES-3_exterior.rvt

FOX engineering

Aspen Business Park | 414 South 17th Street, Suite 107 | Ames, Iowa 50010

September 2, 2016

Att: Bob Gibson
3405 SE Crossroads Drive, Suite G
Grimes, IA 50111

Specialized Wholesale & Technology Site Plan Review
FOX Ref No: 8630-16G.240

FOX Engineering has completed the first review for the Specialized Wholesale & Technology Site Plan, dated August 23, 2016. Please address the following comments:

General Comments:

1. The fire chief has yet to comment on this site plan. His comments will be forthcoming.
2. Please show the location of the dumpster or state how trash is handled.
3. Please show the location and screening of all proposed mechanical units and transformers

Cover Sheet – Sheet 1

4. Zoning: This lot is within Zone 2 of the HWY 141 Mixed Use Corridor. Please state on the plans.
5. Development Summary: Please revise the M-1A Setbacks. The Rear Setback is 25-ft, however, for every foot the front yard is increased over 25-ft, the rear yard may be decreased in direct proportion thereto, but in no case shall the rear yard by less than 10-ft.

Dimension Plan – Sheet 3

6. Water Main Notes: Note that the contact is Gould Heights not the City of Grimes. Please revise Note F. *"Pressure test and disinfection of the water service/main is required. The filling of the water main shall be done by Thorpe Water Development Company. The Bacteria test and submittal of test to lab shall be done by the Developer and results provided by FAX to US Water at 515-986-7300. If the test does not pass, the Contractor will be required to pay for all the water used to repeat the test."*

Grading & Utility Plan – Sheet 4

7. Please state the size of the existing sanitary sewer service.
8. Please show the location of all existing and proposed sanitary sewer cleanouts. Cleanouts are required approximately every 90-ft.
9. It appears that the proposed building is not planned to be sprinkled. Please confirm with Scott Clyce that the proposed use will not require sprinkled building.
10. Please note that the fire hydrant coverage exceeds 150-ft coverage on the new building (proposed at 190-ft to SE Bldg Corner). The Fire Chief will need to review and approval this distance.
11. Please show a water curb stop to the new building.
12. Please state the size of the existing water main (FOX does not know the size). Contact Gould Heights.
13. Please show the location of all rood drains (downspouts) along with erosion protection.
14. The Grading Plan shows that the Developer will be grading on the adjacent property. Please provide documentation to the City that this grading is allowed.

Landscape Plan – Sheet 6

15. Please reference the HWY 141 Overlay Ordinance in regard to landscaping requirements. It appears that additional landscaping along the front yard setback is required (10-ft landscape strip with shrubs).
16. Please state how the detention pond will be seeded. Please provide notes how it will be maintained (mowed).

Stormwater Management Plan

17. FOX has yet to review the stormwater management plan.
18. It is very odd that there is no public storm sewer connection to this property. The proposed storm sewer outfall discharges in the ROW overland flow to the street. Please consider revising the angle of the outlet to discharge through this properties "green parking" area rather than the neighbors.

Stormwater Pollution Prevention Plan & Post Construction Easement

19. A SWPPP is not required since they are disturbing less than 1 acre.
20. A SW Post Con Easement is not required for this site.

Lighting Plan

21. Please state if the new building will have any lighting. Please provide lighting notes.

Elevation Plans:

22. Please attach the elevation plans to the site plan. Note that NO elevation plans were submitted.
23. Please note that the proposed building materials are metal, but this building is NOT along the front yard setback. Thus, it will be allowed according to the overlay district.

SITE PLAN SCHEDULE:

PLANNING & ZONING:	September 6, 2016 at 5:30 at the Grimes City Hall
COUNCIL MEETING:	September 13, 2016 at 5:30 at the Grimes City Hall

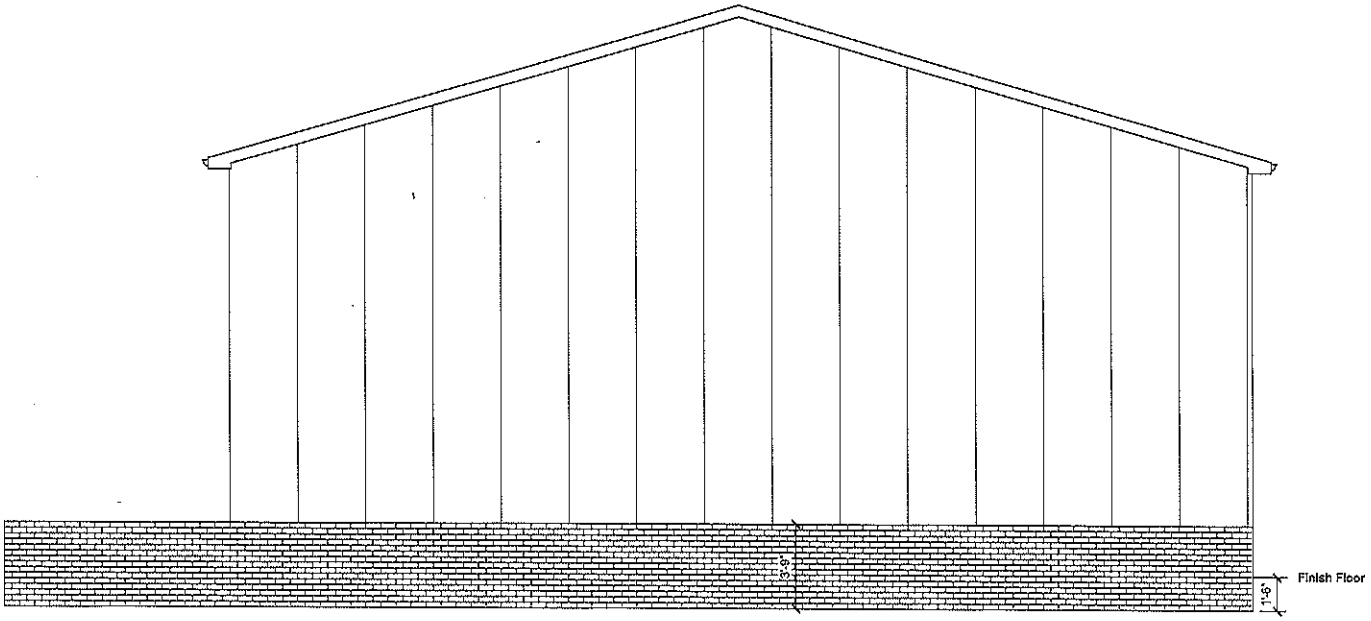
If you have any questions or concerns, please contact John Gade or Mitch Holtz at (515) 233-0000.

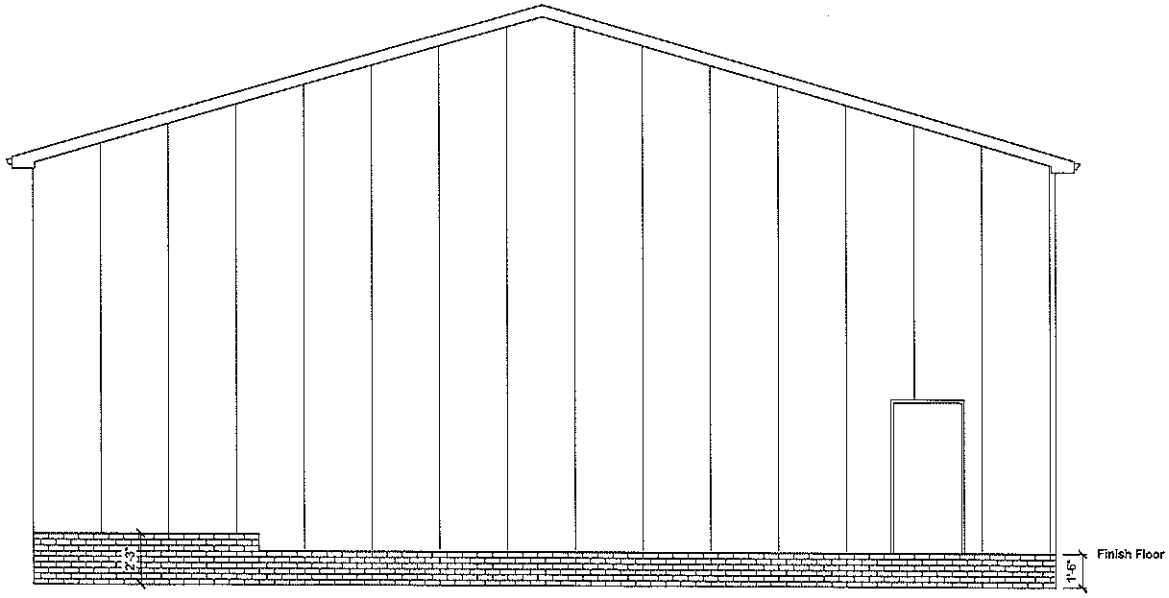
FOX ENGINEERING ASSOCIATES, INC.

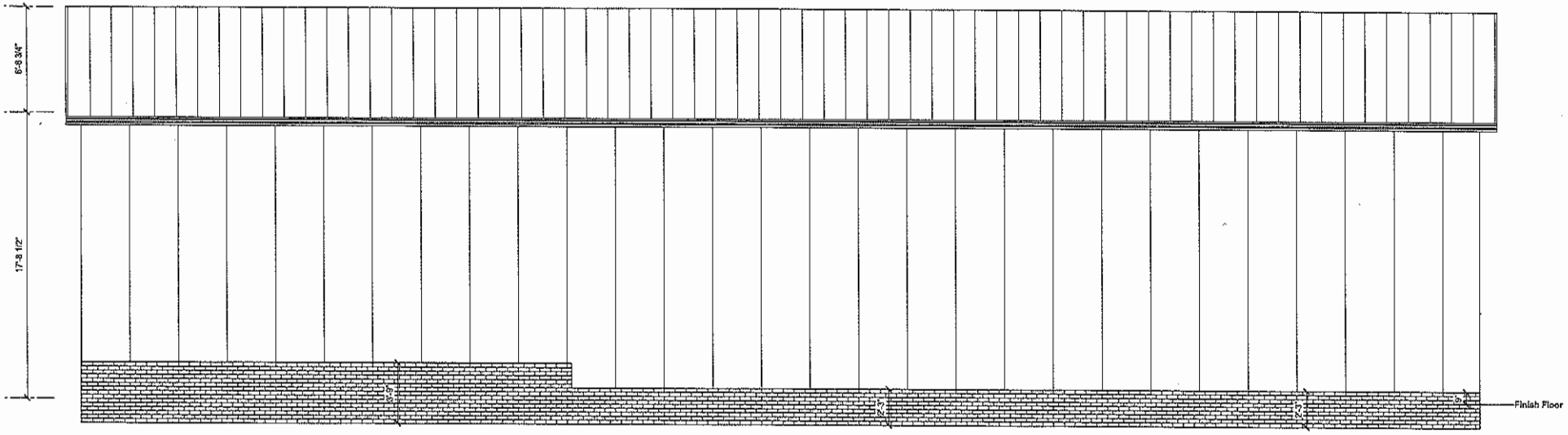
John Gade, P.E.

John Gade, P.E.

Copy to: Kelley Brown, City of Grimes
Scott Clyce, City of Grimes


3'-9"
1'-6"
Finish Floor


2'-3"
1'-6"
Finish Floor


6'-8 3/4"
17'-8 1/2"
3'-9"
2'-3"
2'-3"
1'-9"
Finish Floor

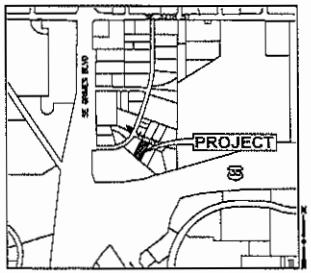
6'-8 3/4"
17'-8 1/2"
Finish Floor
1'-6"
1'-9"
Finish Floor

SITE PLAN FOR:

SPECIALIZED WHOLESALE AND TECHNOLOGY

GRIMES, IOWA

VICINITY MAP
NOT TO SCALE



OWNER
WILLIAM J FRENCH
PO BOX 159
WAUKEE, IA 50263

APPLICANT
KENNY DAVENPOT
2000 SE 44TH COURT
GRIMES, IA 50111
CONTACT: KENNY DAVENPORT
(515) 956-4800

ENGINEER
CIVIL DESIGN ADVANTAGE, LLC
CONTACT: BOB GIBSON
3405 SE CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PH. (515) 369-4400
FX. (515) 369-4410

SURVEYOR
CIVIL DESIGN ADVANTAGE, LLC
CONTACT: MIKE BROOKER
3405 SE CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PH. (515) 369-4400
FX. (515) 369-4410

SUBMITTAL DATES
-SITE PLAN SUBMITTAL TO CITY #1: 8/23/2016

LEGAL DESCRIPTION
LOT 8 CAPITOL CITY PARK PLAT 2

ZONING
M1-A COMMERCIAL AND LIMITED LIGHT INDUSTRIAL DISTRICT

PROJECT SITE ADDRESS
2020 SE 44TH COURT

EXISTING/ PROPOSED USE
TRUCK PARKING, STORAGE, OFFICE

DEVELOPMENT SUMMARY
AREA: .99 ACRES (43,124 SF)

SETBACKS:
FRONT: 25'
SIDE: 0'
REAR: 10'

OPEN SPACE CALCULATION:

TOTAL SITE:	=	43,124 (.99 AC.)
EXISTING BUILDINGS	=	5,192 SF
PROPOSED BUILDING	=	3,828 SF
DRIVES & PARKING AREAS	=	17,816 SF
TOTAL IMPERVIOUS AREA	=	21,448 SF
OPEN SPACE REQUIRED	=	4,312 (10%)
OPEN SPACE PROVIDED	=	15,494 SF (36%)

PARKING:
TOTAL REQUIRED 1/2000 SF = 5
TOTAL PROVIDED = 11

DATE OF SURVEY
APRIL 8, 2016

BENCHMARKS
GRIMES CITY BM#HBJ-008 BURY BOLT ON FIRE HYDRANT AT THE NE CORNER OF SE DESTINATION DRIVE AND SE 37TH STREET INTERSECTION. ELEVATION=938.45

GRIMES CITY BM#HBJ-009 BURY BOLT ON FIRE HYDRANT ON THE EAST SIDE OF SE DESTINATION DRIVE 300 FEET +/- NORTH OF SE DESTINATION DRIVE AND SE 37TH STREET. ELEVATION=935.45

CONSTRUCTION SCHEDULE
ANTICIPATED START DATE = OCTOBER 2016
ANTICIPATED FINISH DATE = MAY 2017

INDEX OF SHEETS

NO.	DESCRIPTION
1	COVER SHEET
2	TOPOGRAPHIC SURVEY/DEMOLITION PLAN
3	DIMENSION PLAN
4	GRADING/UTILITY PLAN
5	DETAILS
6	LANDSCAPE PLAN

IOWA ONE CALL
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www.iowaonecall.com

UTILITY WARNING
ANY UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY AND RECORDS OBTAINED BY THIS SURVEYOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL THE UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION SHOWN.

GENERAL LEGEND
PROPOSED
- PROJECT BOUNDARY
- LOT LINE
- SECTION LINE
- CENTER LINE
- RIGHT OF WAY
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- TYPE SW-501 STORM INTAKE
- TYPE SW-503 STORM INTAKE
- TYPE SW-505 STORM INTAKE
- TYPE SW-506 STORM INTAKE
- TYPE SW-513 STORM INTAKE
- TYPE SW-401 STORM MANHOLE
- TYPE SW-402 STORM MANHOLE
- TYPE SW-301 SANITARY MANHOLE
- STORM/SANITARY CLEANOUT
- WATER VALVE
- FIRE HYDRANT ASSEMBLY
- SIGN
- DETECTABLE WARNING PANEL
- STORM SEWER STRUCTURE NO.
- STORM SEWER PIPE NO.
- SANITARY SEWER STRUCTURE NO.
- SANITARY SEWER PIPE NO.
- SANITARY SEWER WITH SIZE
- SANITARY SERVICE
- STORM SEWER
- STORM SERVICE
- WATERMAIN WITH SIZE
- WATER SERVICE
- SAWCUT (FULL DEPTH)
- SILT FENCE

EXISTING
- SANITARY MANHOLE
- WATER VALVE BOX
- FIRE HYDRANT
- WATER CURB STOP
- WELL
- STORM SEWER MANHOLE
- STORM SEWER SINGLE INTAKE
- STORM SEWER DOUBLE INTAKE
- FLARED END SECTION
- ROOF DRAIN/ DOWNSPOUT
- DECIDUOUS TREE
- CONIFEROUS TREE
- DECIDUOUS SHRUB
- CONIFEROUS SHRUB
- ELECTRIC POWER POLE
- GUY ANCHOR
- STREET LIGHT
- POWER POLE W/ TRANSFORMER
- UTILITY POLE W/ LIGHT
- ELECTRIC BOX
- ELECTRIC TRANSFORMER
- ELECTRIC MANHOLE OR VAULT
- TRAFFIC SIGN
- TELEPHONE JUNCTION BOX
- TELEPHONE MANHOLE/VAULT
- TELEPHONE POLE
- GAS VALVE BOX
- CABLE TV JUNCTION BOX
- CABLE TV MANHOLE/VAULT
- MAIL BOX
- BENCHMARK
- SOIL BORING
- UNDERGROUND TV CABLE
- GAS MAIN
- FIBER OPTIC
- UNDERGROUND TELEPHONE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- FIELD TILE
- SANITARY SEWER W/ SIZE
- STORM SEWER W/ SIZE
- WATER MAIN W/ SIZE

CIVIL DESIGN ADVANTAGE
3405 SE CROSSROADS DR. SUITE G, GRIMES, IOWA 50111
PH: (515) 369-4400 Fax: (515) 369-4410

PROJECT NO. 1603.085

ALL CONSTRUCTION MATERIALS, DUMPSTERS, DETACHED TRAILERS OR SIMILAR ITEMS ARE PROHIBITED ON PUBLIC STREETS OR WITHIN THE PUBLIC R.O.W.

THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS, THE PUBLIC RIGHTS-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG) AND ALL CITY SUPPLEMENTALS, IF APPLICABLE, SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.

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.

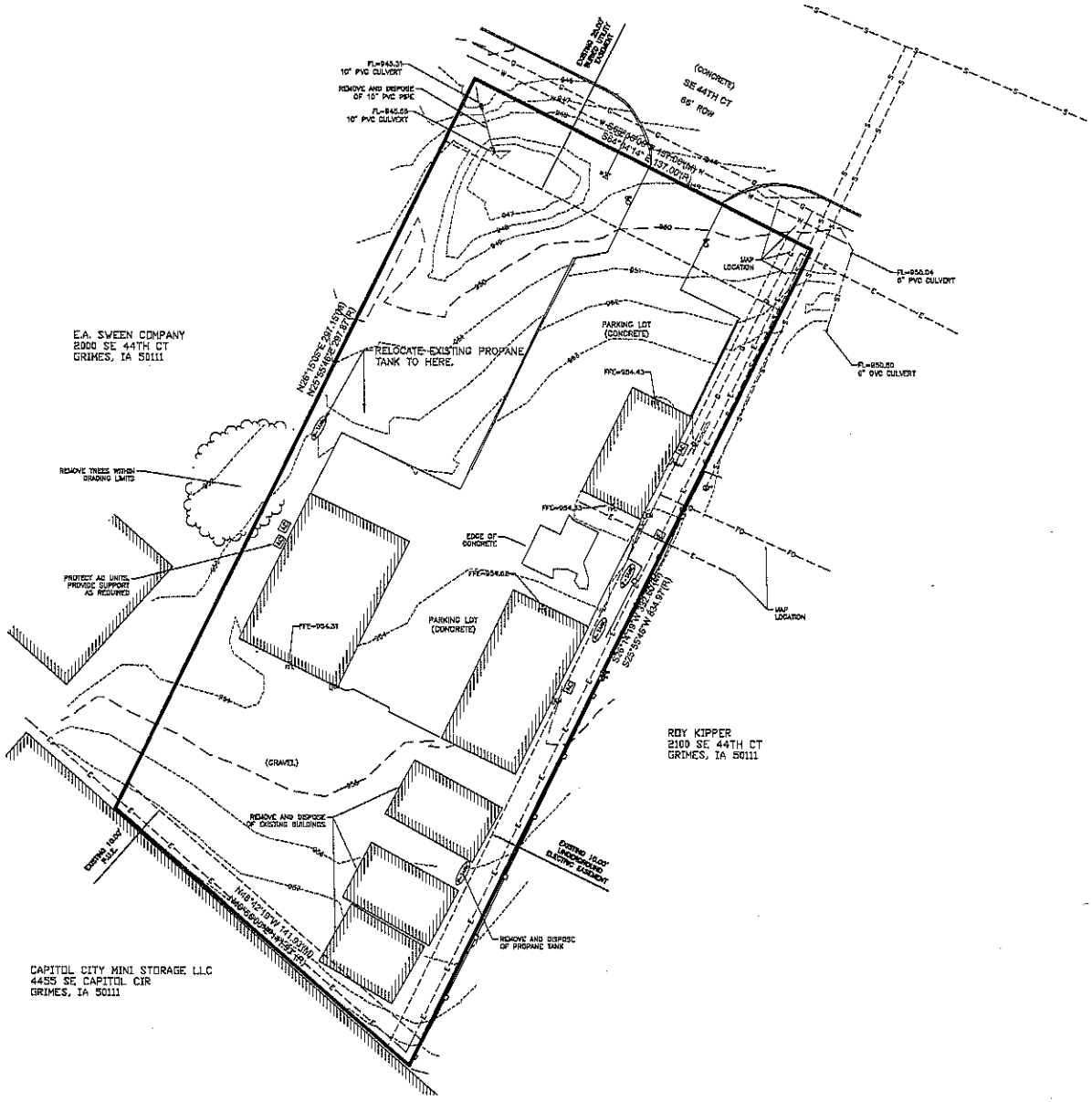
LICENSED PROFESSIONAL ENGINEER EMILY N. HARDING 15976 IOWA

PRELIMINARY

EMILY N. HARDING, P.E. DATE

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2017
PAGES OR SHEETS COVERED BY THIS SEAL:
SHEETS 1-5

SPECIALIZED WHOLESALE & TECHNOLOGY



DEMOLITION NOTES

1. PRIOR TO ANY WORK AT THE SITE, CONTRACTOR SHALL EXAMINE ANY APPLICABLE DRAWINGS AVAILABLE FROM THE OWNER OR ENGINEER AND CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANY REPRESENTATIVES. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
2. PRIOR TO DEMOLITION, CONTRACTOR SHALL NOTIFY IN WRITING (48 HRS NOTICE) THE FOLLOWING:
   THE CITY
   APPROPRIATE UTILITY COMPANIES
   THE OWNER
   CIVIL DESIGN ADVANTAGE
   ARCHITECT
3. DO NOT DISTURB EXISTING UTILITIES UNLESS OTHERWISE NOTED. COORDINATE REMOVAL OR ABANDONMENT OF ALL UTILITIES WITH THE APPROPRIATE UTILITY SUPPLIER AND REGULATORY AGENCIES.
4. PROTECT EXISTING UTILITIES THAT ARE TO REMAIN. THE LOCATIONS OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLAN MAY BE PRESENT.
5. BACKFILL ALL EXCAVATIONS WITH COHESIVE MATERIAL COMPACTED TO 95% MAXIMUM STANDARD PROCTOR DRY DENSITY AND MOISTURE RANGE OF OPTIMUM MOISTURE TO 4% ABOVE OPTIMUM MOISTURE. TESTING OF BACKFILL TO BE BY A GEOTECHNICAL ENGINEER EMPLOYED BY THE OWNER. IN THE EVENT OF A TEST FAILURE, ANY RETESTING SHALL BE PAID FOR BY THE CONTRACTOR.
6. FIELD VERIFY EXISTING GRADES AND LOCATION OF EXISTING UTILITIES, CONDUIT, LINES, POLES, TREES, PAVING, BUILDING AND OTHER SITE FEATURES PRIOR TO DEMOLITION AND IMMEDIATELY INFORM THE ENGINEER AND/OR OWNER OF ANY DISCREPANCIES.
7. DEMOLITION NOTES AS SHOWN ON THE PLAN ARE NOT ALL INCLUSIVE. CONTRACTOR TO ABANDON IN PLACE OR REMOVE AND DISPOSE OF ALL EXISTING SITE IMPROVEMENTS ABOVE AND BELOW GROUND TO COMPLY WITH THE GENERAL INTENT OF THIS DOCUMENT.
8. ALL CONSTRUCTION/DEMOLITION DEBRIS SHALL BE DISPOSED OF OFFSITE IN FULL COMPLIANCE WITH CURRENT ENVIRONMENTAL REGULATIONS.
9. CONSTRUCTION LIMITS SHALL BE CONFINED TO THE SITE BOUNDARY AS NOTED. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. ALL WORK SHALL BE IN ACCORDANCE WITH OSHA STANDARDS. NOTHING INDICATED ON THE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS.

REVISIONS	DATE
FIRST SUBMITTAL	8/23/16

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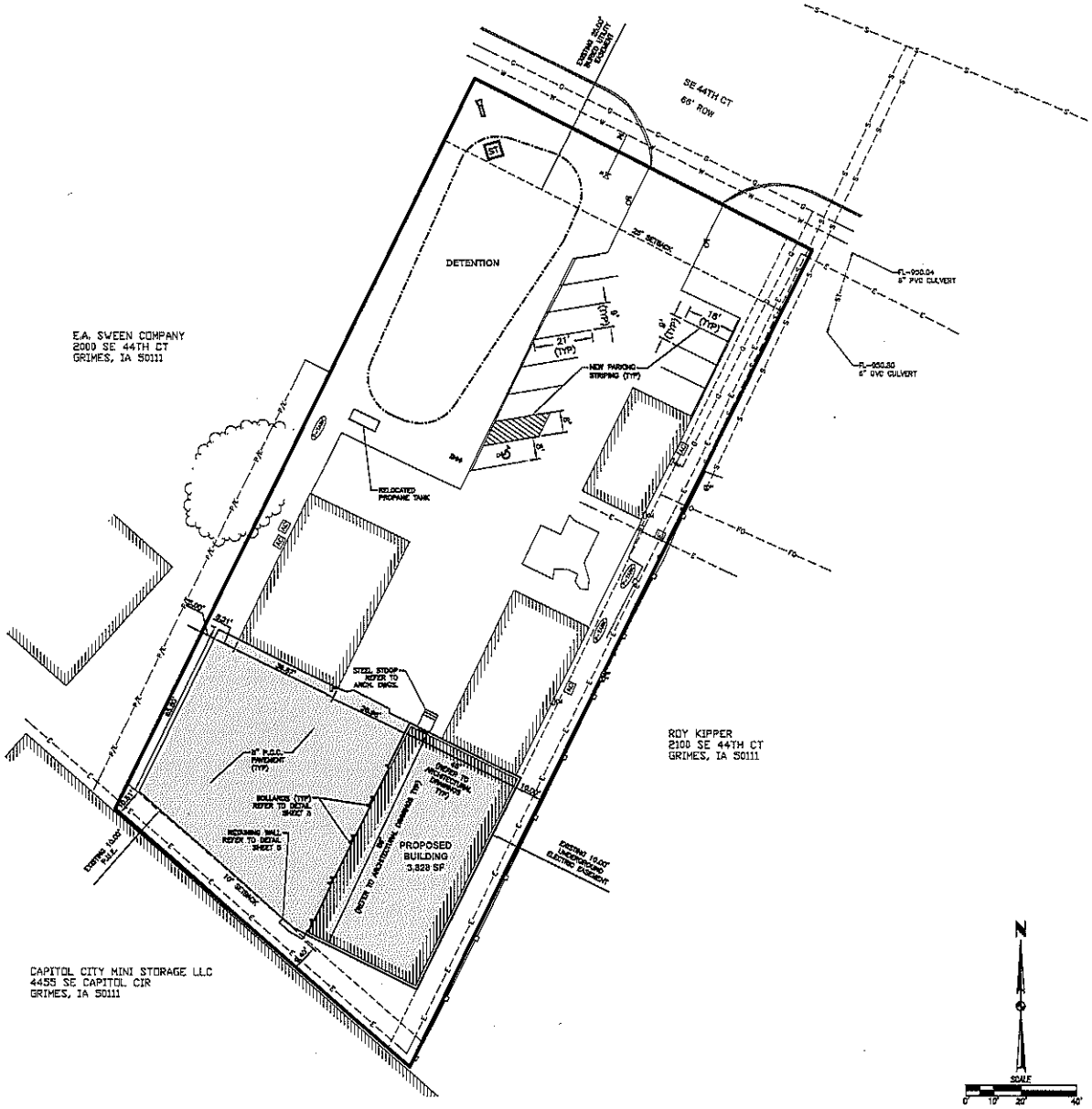
ENGINEER: ENH
TECH:

SPECIALIZED WHOLESALE & TECHNOLOGY

TOPO SURVEY/DEMOLITION PLAN

GRIMES, IOWA

1603.085



GENERAL NOTES

1. THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLIMENTALS, IF APPLICABLE, SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.
2. ALL WORK SHALL COMPLY WITH ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES.
3. ALL WORK SHALL BE IN ACCORDANCE WITH OSHA CODES AND STANDARDS. NOTHING INDICATED ON THE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS.
4. PRIOR TO ANY WORK AT THE SITE, CONTRACTOR SHALL EXAMINE ANY APPLICABLE DRAWINGS AVAILABLE FROM THE OWNER, ENGINEER, AND/OR ARCHITECT, AND CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANY REPRESENTATIVES. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
5. ONE WEEK PRIOR TO CONSTRUCTION WITHIN CITY R.O.W. OR ANY CONNECTION TO PUBLIC SEWERS CONTRACTOR SHALL NOTIFY THE CITY'S CONSTRUCTION DIVISION.
6. ALL CONSTRUCTION WITHIN PUBLIC R.O.W./ EASEMENTS, AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, SHALL COMPLY WITH THE CITY'S STANDARDS.
7. ALL DIMENSIONS ARE TO BACK OF CURB, BUILDING FACE OR PROPERTY LINE UNLESS OTHERWISE NOTED.
8. CONTRACTOR TO VERIFY BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS.
9. PLACE 3/4 INCH EXPANSION JOINT BETWEEN ALL P.C.C. PAVEMENT/SIDEWALKS AND BUILDING. PLACE 1/2 INCH EXPANSION JOINT BETWEEN SIDEWALKS AND P.C.C. PAVEMENT.
10. REMOVE ALL DEBRIS SPILLED INTO R.O.W. AT THE END OF EACH WORK DAY.
11. ALL PROPERTY PINS SHALL BE PROTECTED FROM GRADING OR OTHER OPERATIONS. ANY PINS DISTURBED SHALL BE RESET AT THE CONTRACTOR'S EXPENSE.
12. DO NOT STORE CONSTRUCTION MATERIALS AND EQUIPMENT IN THE RIGHT OF WAY.
13. THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR WILL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THOSE AREAS FOR STORAGE OF MATERIALS. STORAGE, PARKING AND SERVICE AREAS WILL BE SUBJECT TO THE APPROVAL OF THE OWNER.
14. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY AREAS OF PAVEMENT OR SIDEWALK NOT TO BE REMOVED THAT IS DAMAGED DUE TO OPERATING EQUIPMENT ON THE PAVEMENT OR SIDEWALK.
15. THE CONTRACTOR MAY BE REQUIRED TO PLACE TEMPORARY WARNING DEVICES AND SAFETY FENCE AT CERTAIN LOCATIONS WHERE REPLACEMENT FEATURES ARE NOT INSTALLED THE SAME DAY, AS DIRECTED BY THE ENGINEER OR THE CITY.
16. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK BETWEEN SUPPLIERS AND SUBCONTRACTORS INVOLVED IN THE PROJECT, INCLUDING STAGING OF CONSTRUCTION DETAILS.
17. CONCRETE REMOVAL FOR DRIVEWAY APPROACHES SHALL BE REMOVED TO THE NEAREST TRANSVERSE JOINT. CONTRACTOR SHALL VERIFY REMOVAL LIMITS WITH CITY'S CONSTRUCTION INSPECTOR PRIOR TO ANY CONCRETE REMOVAL.
18. ALL SCOUR STOP SHALL BE INSTALLED BY A CERTIFIED CONTRACTOR ACCORDING TO SCOUR STOP PRODUCT SPECIFICATIONS.
19. ALL PERMITS AND ADDITIONAL FEES REQUIRED TO COMPLETE THE WORK SHALL BE INCLUDED IN THE CONTRACTOR BID.

CITY OF GRIMES STANDARD NOTES FOR SITE PLANS

1. GENERAL NOTES:

A. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT VERSION OF THE URBAN STANDARDS SPECIFICATIONS FOR PUBLIC IMPROVEMENTS ON THE DATE OF APPROVAL AND THE CITY OF GRIMES SUPPLEMENTAL SPECIFICATIONS.

B. A PRECONSTRUCTION MEETING IS REQUIRED PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THIS MEETING. CONTACT BRANDT WILLIAMSON WITH FOX ENGINEERING (515) 223-0003.

C. ALL PERMITS (DNR, IDOT, ARMY CORP., ETC.) SHALL BE OBTAINED PRIOR TO THE START OF CONSTRUCTION.

D. THE DEVELOPER AND/OR CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE THE CITY OF GRIMES WITH RECORD DRAWINGS OF ALL IMPROVEMENTS AS PER CITY STANDARD PROCEDURES.

E. A KNOX BOX IS REQUIRED BY THE FIRE DEPARTMENT AND SHALL BE OBTAINED AT CITY HALL.

F. ALL SITE LIGHTING SHALL NOT SPILL ONTO ADJACENT PROPERTIES OR RIGHT-OF-WAYS.

2. SANITARY SEWER NOTES:

A. THE CONTRACTOR IS REQUIRED TO PLACE A TEMPORARY PLUG IN THE EXISTING DOWNSTREAM SANITARY SEWER MANHOLE PRIOR TO THE START OF CONSTRUCTION. THE PLUG SHALL BE REMOVED FOLLOWING APPROVAL OF CONSTRUCTION BY THE CITY OF GRIMES.

B. SANITARY GRAVITY PIPE MATERIAL SHALL BE PVC SDR 26 OR TRUSS (8" TO 15").

C. SANITARY GRAVITY SERVICE PIPE MATERIAL SHALL BE PVC SDR 23.5 (4" TO 6").

D. ALL SANITARY SEWER MANHOLES SHALL HAVE STEPS.

E. ALL SANITARY SEWER MANHOLE CASTINGS SHALL BE SEALED WITH INTERIOR CHIMNEY SEALS.

F. ALL SANITARY SEWER MANHOLE CASTINGS LOCATED WITHIN PAVEMENT SHALL BE BOXED OUT.

G. SANITARY SEWER TESTING & TELEVISING (8" TO 15") SHALL BE COMPLETED PRIOR TO PAVING. THE SEWER SYSTEM SHALL BE FLUSHED WITH ANY DYE WATER PRIOR TO TELEVISING.

3. WATER MAIN NOTES:

A. ALL FIRE HYDRANTS SHALL BE AMERICAN FLOW CONTROL-WATEROUS PACER WB-67-250, MUELLER SUPER CENTURION 250 (3-WAY A-423), OR CLOW MEDALLION F-2545. ALL HYDRANTS SHALL HAVE THE FOLLOWING: 6" MJ SHOE, 2-1/2" HOSE NOZZLE, 4-1/2" STEAMER NOZZLE, NST THREADS, PENTAGON OPERATING NUT, CHAIN ON CAP, OPEN LEFT, 5-1/4" BARREL AND FACTORY PAINTED RED. THE MINIMUM SPOOL PIPE LENGTH FROM AUXILIARY VALVE TO HYDRANT SHOE SHALL BE 2.0'.

B. ALL HYDRANTS WILL IMMEDIATELY BE COVERED WITH A BLACK PLASTIC BAG (OR EQUIVALENT) ONCE THE HYDRANT IS INSTALLED. THE CITY OF GRIMES WILL NOTIFY THE CONTRACTOR WHEN THE BAGS CAN BE REMOVED.

C. A TRACER WIRE RECEPTACLE SHALL BE INSTALLED AT EACH HYDRANT.

D. ALL VALVES SHALL BE RESILIENT WEDGE GATE VALVES.

E. WATER SERVICE SHALL BE 1-INCH MINIMUM TYPE K COPPER.

F. PROPOSED WATER MAIN SHALL BE PRESSURE TESTED AND CHLORINATED BY THE DEVELOPER. THE FILLING OF THE WATER MAIN SHALL BE DONE BY THE CITY OF GRIMES. THE BACTERIA TEST AND SUBMITTAL OF TEST TO LAB SHALL BE DONE BY THE DEVELOPER AND RESULTS PROVIDED BY FAX TO U.S. WATER AT (515) 986-7300. IF THE TEST DOES NOT PASS, THE CONTRACTOR WILL BE REQUIRED TO PAY FOR ALL THE WATER USED TO REPEAT THE TEST.

4. STORM SEWER NOTES:

A. ALL STORM SEWER IN THE ROW SHALL BE RCP, UNLESS OTHERWISE APPROVED BY THE CITY.

B. ALL FLARED END SECTIONS SHALL HAVE FOOTBOXES AND APRON GRATES. THE LAST 3 PIPE SECTIONS AND THE FLARED END SECTION ON ALL CULVERTS SHALL BE TIED. ALL STORM SEWER JOINTS SHALL BE WRAPPED WITH ENGINEERING FABRIC.

C. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY FIELD TILE DAMAGED DURING CONSTRUCTION. THE TILE SHOULD BE REDIRECTED TO PUBLIC STORM SEWER IF POSSIBLE. THE CONTRACTOR SHALL RECORD THE ELEVATION AND LOCATION OF ALL TILES.

D. ALL SUMP SERVICE LINES SHALL HAVE TRACER WIRE.

REVISIONS	DATE
FIRST SUBMITTAL	8/22/16

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GRIMES, IOWA

3/6

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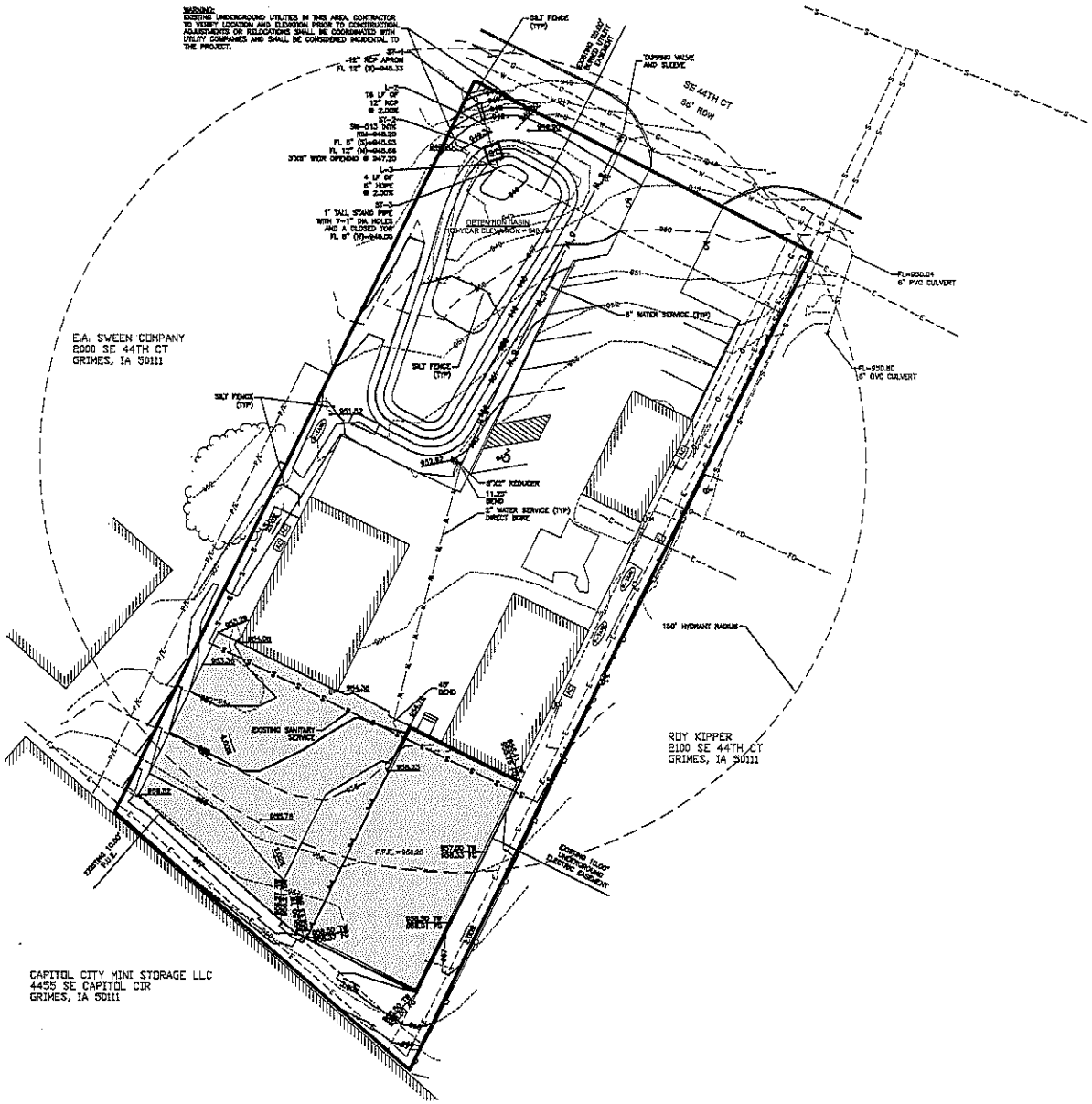

GRADING NOTES

1. PRIOR TO ANY GRADING, A COPY OF THE NPDES PERMIT SHALL BE PROVIDED TO THE CITY'S BUILDING DIVISION.
2. CONTRACTOR SHALL STOP ALL DELETERIOUS MATERIAL. THE TOP 8" OF TOPSOIL IS TO BE STOCKPILED AND REDISTRIBUTED AFTER GRADING IS COMPLETE. CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING A SUITABLE TOPSOIL STOCKPILE SITE.
3. EXCAVATION SHALL BE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLEMENTALS, IF APPLICABLE.
4. MATCH EXISTING GRADES AT PROPERTY LINES AND/ON CONSTRUCTION LIMITS.
5. ALL SPOT ELEVATIONS ARE FORM GRADE (FG) OR TOP OF FINISHED SURFACES UNLESS OTHERWISE NOTED.
6. SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS.
7. SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
8. THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN THE CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
9. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE CONTROL TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
10. REFER TO SEPARATE STORM WATER POLLUTION PREVENTION PLAN FOR DETAILS ON EROSION CONTROL.
11. FINAL FINISH GRADING TO BE APPROVED BY THE ARCHITECT AND CIVIL ENGINEER. MATCH EXISTING GRADES AT THE INTERFACE OF NEW AND EXISTING GRADES OR PAVING.
12. SIDEWALKS:
    MAINTAIN 1% MINIMUM AND 5% MAXIMUM LONGITUDINAL SLOPES ON ALL PAVED WALKWAYS. ALL WALKS TO HAVE 2.0% MAXIMUM TRANSVERSE SLOPE IN THE DIRECTION OF NATURAL DRAINAGE. SAW CUT JOINTS AS SOON AS CONCRETE HAS SET. SAW CUTS TO BE 1/8" TO 1/4" WIDE, DEPTH LONGITUDINAL 1/3, TRANSVERSE 1/4.
13. THE GRADING OF THE DETENTION FACILITY, INSTALLATION OF THE STORM SEWER SYSTEM SHALL BE COMPLETED AND FUNCTIONAL PRIOR TO ANY INCREASE IN IMPERVIOUS SURFACES WITHIN THE SITE OR THE PREVIOUSLY MENTIONED ITEMS SHALL BE GRADED/ INSTALLED AS SOON AS PRACTICAL.

UTILITY NOTES

1. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING PLANS FOR UTILITY SERVICE SIZES AND EXACT LOCATIONS. REFER TO ELECTRICAL PLANS FOR ELECTRIC AND TELEPHONE SERVICE CONSTRUCTION DETAILS. REFER TO MECHANICAL PLANS FOR GAS SERVICE CONSTRUCTION DETAILS.
2. FIELD VERIFY ELEVATIONS AND LOCATIONS OF ALL CONNECTIONS TO EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
3. PROVIDE TEMPORARY SUPPORT FOR EXISTING UTILITY LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION UNTIL BACKFILLING IS COMPLETE.
4. BACKFILL ALL UTILITY TRENCHES ACCORDING TO THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLEMENTALS. MAINTAIN A MINIMUM OF 0.5' COVER OVER ALL WATERMAINS.
5. ALL UTILITIES SHALL BE STUBBED TO 3 FEET FROM BUILDINGS. REFER TO MEP PLANS FOR DESIGN FROM 5' OUTSIDE OF BUILDING FACE.
6. ADJUST ALL MANHOLES AND INTAKES TO FINISHED GRADES.
7. ALL SANITARY SEWER AND WATER SERVICES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY'S PLUMBING CODE.
8. 18" MINIMUM VERTICAL CLEARANCE BETWEEN STORM SEWER AND SANITARY SEWER PIPES.
9. 18" MINIMUM VERTICAL CLEARANCE BETWEEN SANITARY SEWER AND WATER MAIN.
10. MAINTAIN A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LINES AND WATER MAINS.
11. 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 THOSE 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 CONTRACTORS RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATIONS 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. THE CONTRACTOR IS REQUIRED TO UTILIZE THE UTILITIES ONE-CALL SERVICE TO 800-292-8989 AT LEAST 48 HOURS PRIOR TO EXCAVATING ANYWHERE ON THE PROJECT.
12. ALL WATERMAIN WORK PUBLIC OR PRIVATE SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLEMENTALS.
13. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WORK OF ALL SUBCONTRACTOR(S) INVOLVED IN THE PROJECT.
14. PRIVATE UTILITIES TO BE INSTALLED PER THE CITY'S STANDARD CONSTRUCTION SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE 2012 UNIFORM PLUMBING CODE. CONTACT BUILDING INSPECTION A MINIMUM OF 24 HOURS IN ADVANCE FOR UTILITY INSTALLATION INSPECTIONS.
15. OWNER IS RESPONSIBLE FOR MAINTENANCE OF PRIVATE RETENTION FACILITIES AND PRIVATE UTILITIES.
16. CONTRACTOR SHALL PREVENT ENTRY OF MUD, DIRT, DEBRIS AND OTHER MATERIAL INTO NEW AND EXISTING SEWER SYSTEMS. SHOULD ANY CONTAMINATION OCCUR DURING CONSTRUCTION, THE CONTRACTOR SHALL CLEAN AT NO COST TO THE OWNER. INSTALL SILT FENCE AT ALL PERMANENT STORM SEWER INLETS.

REVISIONS	DATE
FIRST SUBMITTAL	6/23/15

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GRADING/UTILITY PLAN

GRIMES, IOWA

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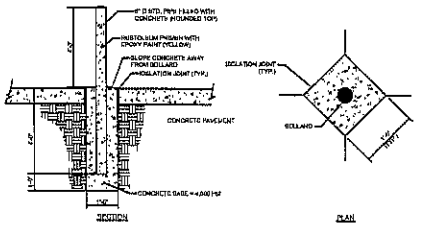
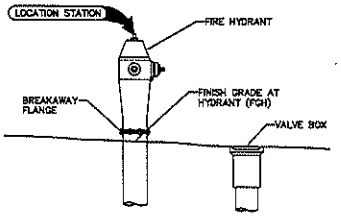


BOLLARD DETAIL
NOT TO SCALE



HYDRANT ASSEMBLY DETAIL
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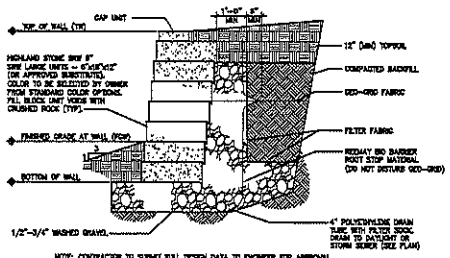

RETAINING WALL DETAIL
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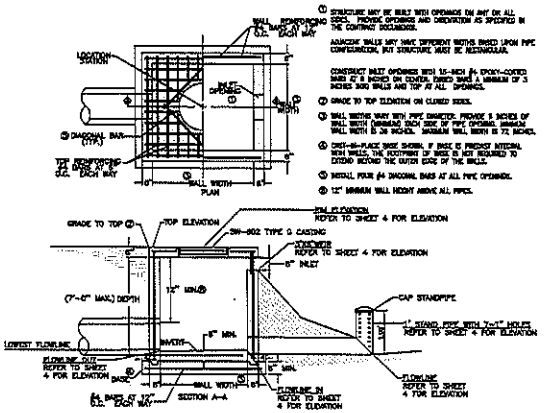

SW-513 INTAKE (ST-3)
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DETAILS

REVISIONS	DATE
FIRST SUBMITTAL	8/22/18

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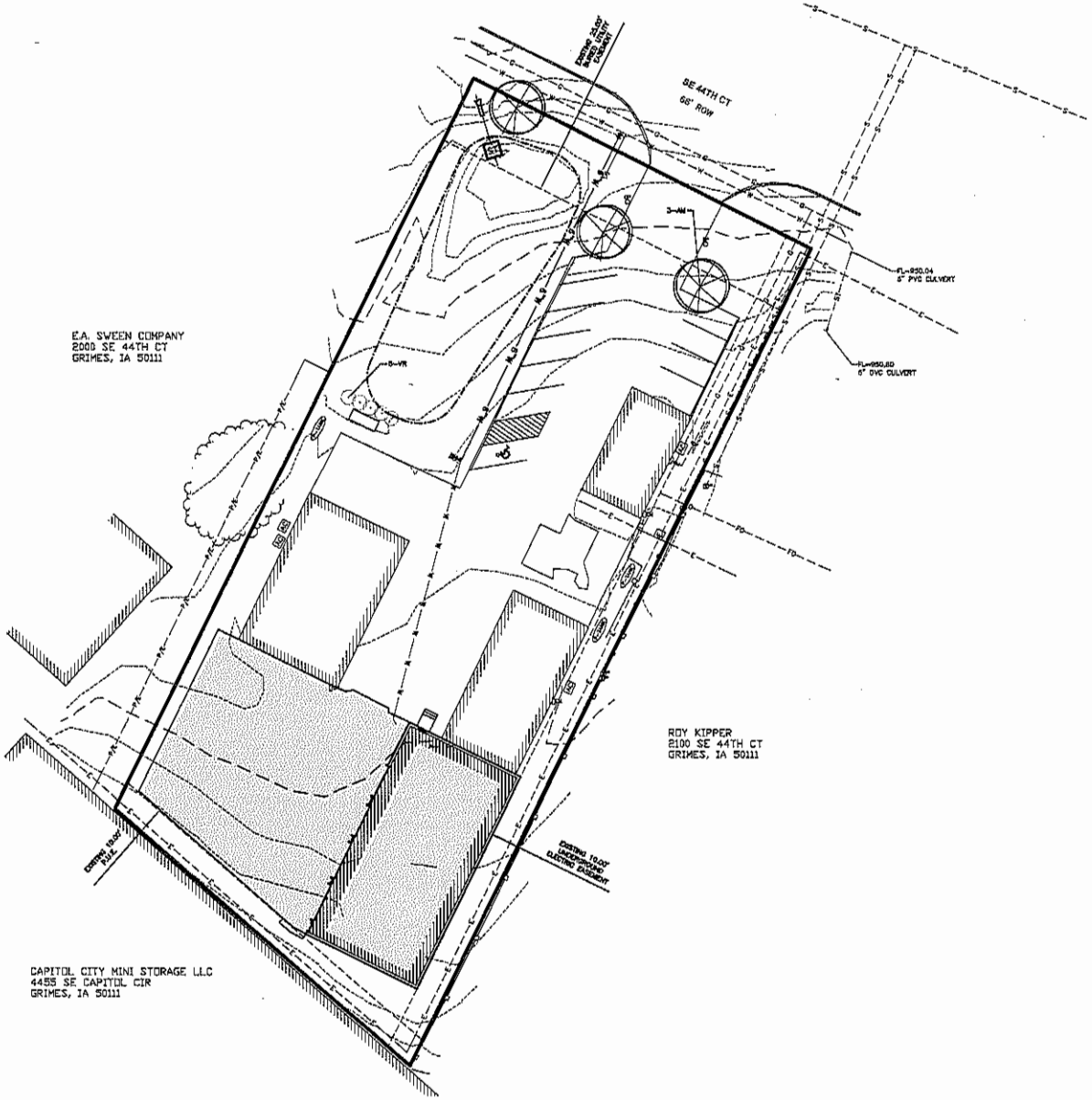

LANDSCAPE NOTES

1. LOCATE ALL UTILITIES BEFORE ANY PLANTING BEGINS.
2. THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLEMENTALS, IF APPLICABLE, SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.
3. TYPE, SIZE, AND QUALITY OF PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1
4. ALL PLANT MATERIAL SHALL BE HEALTHY SPECIMENS WITHOUT DEFORMITIES, VOIDS AND OPEN SPACES, WITH WELL DEVELOPED BRANCH AND ROOT SYSTEMS TRUE TO HEIGHT, SHAPE, AND CHARACTER OF GROWTH OF THE SPECIES OR VARIETY.
5. SEED (TYPE 1) OR SOD ALL DISTURBED AREAS AS DIRECTED BY OWNER.
6. BACKFILL TO TOP OF CURB. (MINUS 1 1/2" FOR SOD, IF REQ.)
7. WEED PREVENTER (PRE-EMERGENT) SHALL BE SPREAD OVER SOIL AFTER PLANTING AND BEFORE MULCHING IN ALL PLANTING BEDS PER MANUFACTURER'S RECOMMENDATIONS.
8. SHREDDED HARDWOOD MULCH SHALL BE PLACED AROUND ALL TREES, SHRUBS AND IN ALL PLANTING BEDS TO A (MIN) DEPTH OF 3".
9. ALL EDGING SHALL BE SPADE CUT EDGE.
10. PLANT QUANTITIES ARE SHOWN FOR INFORMATION ONLY, THE DRAWING SHALL PREVAIL IF ANY CONFLICTS ARISE.
11. ALL DEBRIS SPILLED IN THE PUBLIC R.O.W. SHALL BE PICKED UP BY THE CONTRACTOR AT THE END OF EACH WORK DAY.
12. CONTRACTOR SHALL WARRANTY ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF INSTALLATION.
13. CONTRACTOR SHALL PROVIDE IRRIGATION DESIGN TO OWNER, IF REQUESTED. FOR APPROVAL.

LANDSCAPE REQUIREMENTS

OPEN SPACE CALCULATION:

TOTAL SITE	43,124 (.99 AC.)
EXISTING BUILDINGS	3,192 SF
PROPOSED BUILDING	3,828 SF
DRIVES & PARKING AREAS	17,618 SF
TOTAL IMPERVIOUS AREA	21,446 SF
OPEN SPACE REQUIRED	4,312 (10%)
OPEN SPACE PROVIDED	16,464 SF (38%)

PLANTS REQUIRED:

TREES @ 2/3000 SF OF REQ. OPEN SPACE – 2
SHRUBS @ 1/1000 SF OF REQ. OPEN SPACE – 3

PLANTS PROVIDED:

TREES – 3
SHRUBS – 3

PLANT SCHEDULE

DECIDUOUS OVERSTORY TREES			SIZE	CONDITION	MATURE HT
AM	3	AUTUMN BLAZE MAPLE	2" CAL	B&B	40-50'

DECIDUOUS SHRUBS			SIZE	CONDITION	MATURE HT
VR	5	VIBURNUM RYTI 'PINK DOGWOOD'/DOWNEY VIBURNUM	5 GAL	CONT	4'-6'

REVISIONS	DATE
FIRST SUBMITTAL	6/20/06

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