

COUNCIL ACTION FORM

SUBJECT: MAJOR FINAL PLAT FOR QUARRY ESTATES SUBDIVISION, FIRST ADDITION

BACKGROUND:

The City's subdivision regulations are included in Chapter 23 of the Ames Municipal Code. This "Subdivision Code" includes the process for creating or modifying property boundaries, and specifies whether any improvements are required in conjunction with the platting of property. The creation of new lots is classified as either a major or minor subdivision, with a major subdivision requiring a two step platting process to finalize the creation of new lots. The "Preliminary Plat" is first approved by the City Council, and identifies the layout of the subdivision and any necessary or required public improvements. Once the applicant has completed the necessary requirements, including provision of required public improvements or provision of financial security for their completion, an application for a "Final Plat" may then be made for City Council approval. Often the subdivision is developed in phases, called "additions." After City Council approval of the Final Plat, it must then be recorded with the County Recorder to become an officially recognized subdivision plat.

Quarry Estates LLC, represented by Kurt Friedrich, has submitted a final subdivision plat for Quarry Estates Subdivision, First Addition. The Quarry Estates development lies north of Ada Hayden Heritage Park as shown on the location map in Attachment 1.

This final plat is consistent with the master plan approved by the City Council on October 14, 2014 and with the preliminary plat approved on April 14, 2015. The plat proposes 53 residential lots (of which 28 on Quarry Drive are sized for twin homes), two outlots for conservation areas (Outlots A and B), and a large outlot for future development (Outlot ZZ). The residential lots lie at the east end of the development adjacent to the H. P. Jensen Subdivision on Alta Vista Court. Trail connections to Ada Hayden Park is also part of this first addition of Quarry Estates.

A loop street, Quarry Drive, contains lots for twin homes. Portions of Ada Hayden Road and Ledges Drive are a part of this phase and will be fronted with single-family detached homes.

Very little of the required improvements, including streets, sanitary sewer, public water, and storm sewer system, have been completed or inspected so financial security in the amount of \$1,698,761.80 has been provided. The financial security also includes costs of installing all the sidewalks within this phase. **In accordance with recent changes to the subdivision code, all public improvements, including 5-foot sidewalks, must be installed within three years of final plat approval.** Street trees can still be deferred until occupancy of a home. The financial security allows the City to complete the improvements, including the sidewalks, after three years if necessary. The City

Council is being asked to accept the signed Improvement Agreement with financial security for those improvements. Financial security can be reduced by the City Council as the required infrastructure is installed, inspected, and accepted by the City Council.

This subdivision is unique in that it is the first to be submitted under the requirements of the Conservation Subdivision section of the subdivision regulations. The Conservation Management Plan, prepared by Inger Lamb of Prairie Landscapes of Iowa, details the installation, long-term maintenance, public outreach and education, and lawn care coordination of the prairie and woodland areas. A draft copy of the plan is included for the City Council's information in Attachment 3. **The Parks and Recreation and Public Works staff have reviewed it and will require a few amendments before the Municipal Engineer will approve it, as required by the Conservation Subdivision Ordinance.** Staff wants to ensure that the plan will protect the Ada Hayden lake watershed as well as the upland park area. **However, in order to meet a staff agreed upon timetable and to minimize delay for the Developer, staff is recommending approval of the plat with an additional condition that it not be released for recording until city staff has approved the Conservation Management Plan.** It is not anticipated to take more than an additional day or two beyond Council approval to finalize and incorporate staff's recommended revisions.

The approval of the preliminary plat in April placed some very specific requirements on the final plat. **One condition is that the developer provide a north bound and south bound turn lane on Grant Avenue.** Since this plat does not include any connection to Grant Avenue (all access for the First Addition will be from 190th Street), this requirement for a turn lane will be fulfilled in a later phase when the connection to Grant Avenue is made.

A second condition is that the developer provide a layout showing the lighting of the intersection of Ada Hayden Road with 190th Street. The Subdivision Code has since been amended to require the illumination of intersections and adjacent streets. This condition will be accomplished with the coordination of Ames Electric Department and Midland Power.

A third condition is that a plan be provided to the Planning and Housing Department showing the placement of street trees, street lights, driveways, and fire hydrants on Quarry Drive. This street will contain narrow lots to accommodate twin homes and the review is needed to minimize conflicts with this infrastructure and to maximize on-street parking. In this plan, streets trees are provided in a manner that clusters some of the trees into groups rather than uniformly placing street trees in linear spacing along the streets. Staff has reviewed the plan and finds that it is acceptable per the standards of the Conservation Subdivision Ordinance.

After reviewing the proposed Final Plat, staff finds that it complies with the approved Master Plan, Preliminary Plat, and all other relevant design and improvement standards required by the Municipal Code except as noted for the conservation management plan.

ALTERNATIVES:

1. The City Council can approve the Final Plat of Quarry Estates Subdivision, First Addition, based upon the staff's findings that the Final Plat conforms to relevant and applicable design standards, ordinances, policies, and plans with an Improvement Agreement and financial security. **This option would also direct staff to not to release the Final Plat for recording until city staff has approved the Conservation Management Plan.**
2. The City Council can delay approval of the Final Plat for Quarry Estates Subdivision, First Addition until the City staff has approved the Conservation Management Plan.
3. The City Council can deny the Final Plat for Quarry Estates Subdivision, First Addition if it finds that the development creates a burden on existing public improvements or creates a need for new public improvements that have not yet been installed.

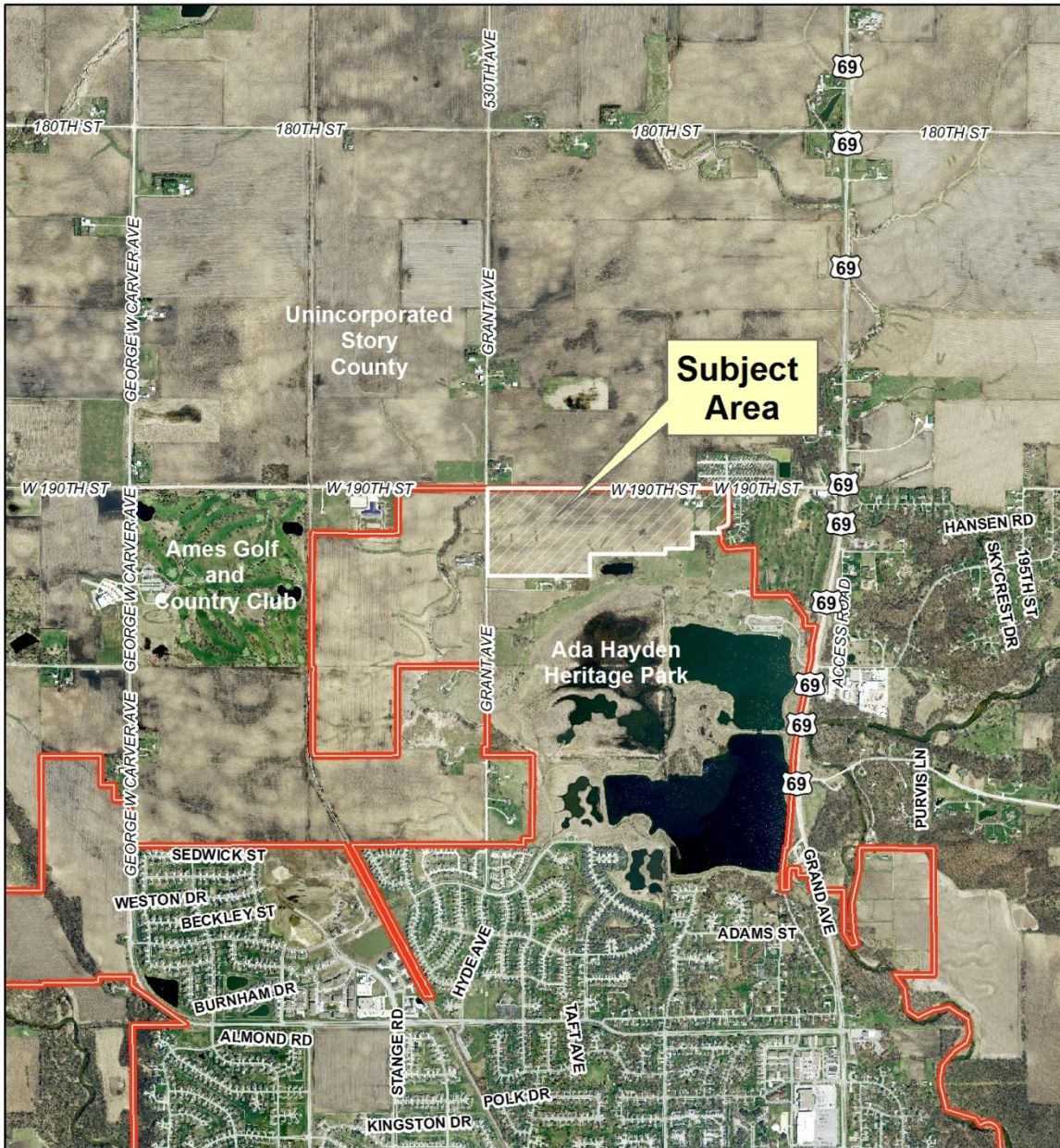
MANAGER'S RECOMMENDED ACTION:

City staff has evaluated the proposed final subdivision plat and determined that the proposal is consistent with the master plan and preliminary plat approved by City Council and that the plat conforms to the adopted ordinances and policies of the City as required by Code.

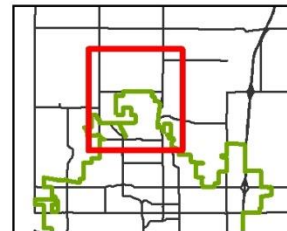
Since this is the first conservation subdivision requiring a Conservation Management Plan, staff wants to ensure that the plan meets the statutory requirements of Sec. 23.605(3). In addition, the covenants need to reflect the adoption by the property owners association of the management plan and ensure it is binding on the conservation easement areas. Staff has thoroughly reviewed the plan, has provided comments to the applicant, and is waiting updated documents. Since the conservation ordinance requires only staff approval of the Conservation Management Plan, it does not need to return to the City Council.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative #1 to approve the final plat for Quarry Estates Subdivision, First Addition, but direct staff to not release it for recording until the Conservation Management Plan is approved by the City staff.

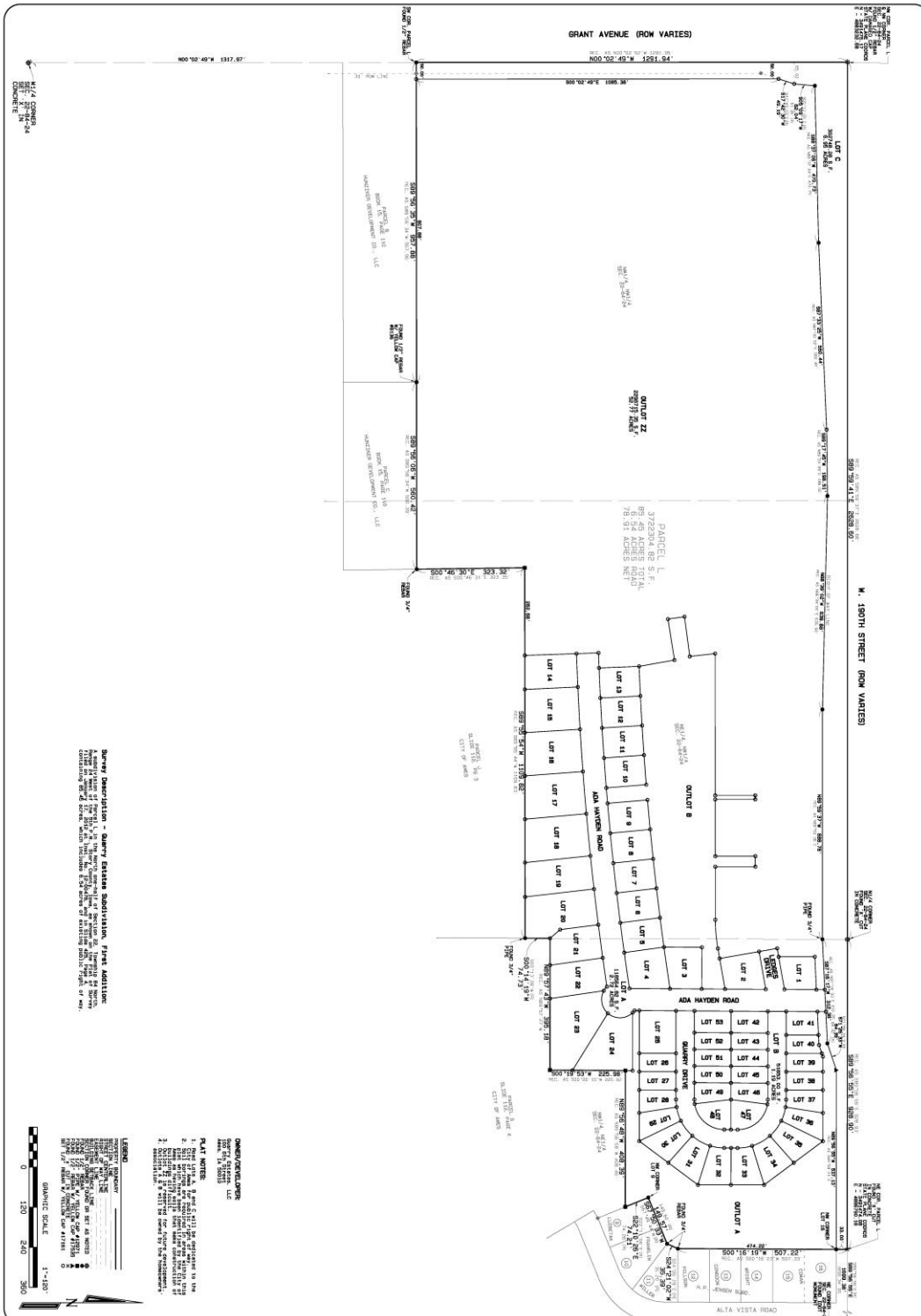
ATTACHMENT 1: LOCATION MAP



Location Map
Quarry Estates Property
904 W 190th Street



ATTACHMENT 2: QUARRY ESTATES SUBDIVISION FIRST ADDITION



**STUMBO & ASSOCIATES
 LAND SURVEYING**
 510 S. 17th STREET, SUITE 102 AMES, IOWA 50010
 PHONE 515-233-3604 FAX 515-233-4403

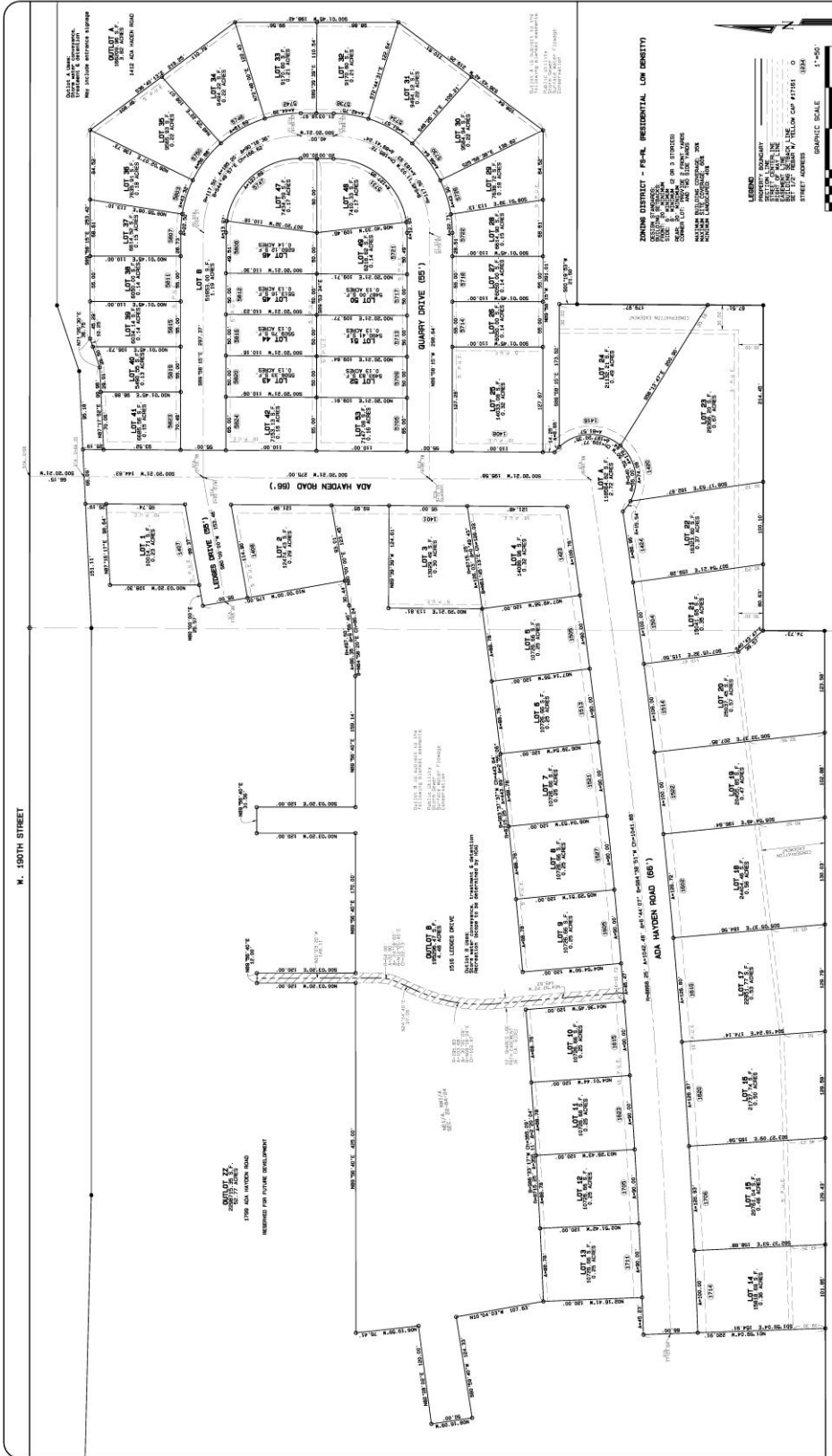
**FINAL PLAT
 QUARRY ESTATES SUBDIVISION,
 FIRST ADDITION**
 A SUBDIVISION OF PARCEL L.F. IN THE N1/2 OF
 SECTION 22-84-24, STORY COUNTY, IOWA
 JOB #15442FP DATE: 10/22/15 PAGE: 1 of 2

Certification: I hereby certify that this land surveying was conducted in accordance with the Iowa Code, Chapter 222, and the Iowa Surveying Board's Rules and Regulations, and that I am a duly licensed land surveyor under the laws of the State of Iowa.

Bradley Stumbo License #17151 Date: _____
My License Renewal Date is December 31, 2015

THIS SIGNATURE COVERS TWO PAGES.





DETAIL OF LOTS
QUARRY ESTATES SUBDIVISION,
FIRST ADDITION

STUMBO & ASSOCIATES
LAND SURVEYING
 510 S. 17TH STREET, SUITE 103, ANNEA, IOWA 5000
 PHONE 319-233-3604 FAX 319-233-4423

JOB #15442FP PAGE: 2 of 2

ATTACHMENT 3: CONSERVATION MANAGEMENT PLAN

Guidance for Establishment & Management of Prairie and Woodland Areas

Quarry Estates, Ames Iowa

September 2015

Contents:

1. Long-term Maintenance
2. Prairie and Woodland Understory Establishment
Site Preparation
Prairie Establishment – outlying areas
Prairie Establishment – internal areas
Wetland and Drainage Area Vegetation
3. Site-wide maintenance During Construction Phase
4. Public Outreach and Education
5. Coordination with Lawn Care
6. Review of Allowed Tree List

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CITY OF AMES, IOWA
DEPT. OF PLANNING & HOUSING

1. Long-Term Maintenance:

- This section is listed first to underscore the essential need for long-term management planning for maintenance of the prairie, wetland and woodland areas. Activities directed at keeping all natural areas in good condition should be considered on *the same level of importance as planning for lawn care and snow removal*. Furthermore, routine maintenance of established natural areas, performed by knowledgeable and experienced staff, will not only keep the needed labor and inputs to a minimum, it will also be less costly per acre than traditional lawn management and result in a considerably more ecologically desirable setting.
- Once established, all natural areas should receive, at a minimum, an annual assessment by an ecologist experienced in management of such areas. This includes inspection of all relevant landscapes for environmental (invasive species entry, weeds or tree seedlings, drought effects etc.) and mechanical (mowing damage, herbicide overspray, vandalism) issues. Areas in need of repair or restoration should be addressed promptly.
- An annual sweep to remove shrub and tree seedlings should be expected. This can be in the form of prescribed fire or mechanical removal by hand.
 - A healthy prairie area will have few new weeds but surrounding unmanaged areas may serve as a seed source.
 - Introduction of trees near prairie areas for landscaping purposes should be seen as increasing prairie management needs due to increased need to remove encroaching tree seedlings.
- All prairie and woodland understory areas should be mowed annually if a prescribed fire has not been administered.
 - Generally mowing is done late spring to allow winter cover to remain in place for animal benefit and leave a more interesting landscape during the dormant season.
 - Prescribed fire is usually done on a three-year rotation, usually in early spring but fall burns are also acceptable. This activity in particular should only be performed by experienced crews with National Wildfire Coordinating Group (NWCG) training and all relevant insurance policies and permits.
- After periods of unusually dry or wet weather some reduction of desirable prairie species may occur. In such cases the annual inspection should especially include recommendations that address any significant areas of bare or sparsely populated ground. These areas should be re-seeded with appropriate seed mix or planted with live plants rather than allowed to become weedy and leading to larger problems.

2. Prairie and Woodland Understory Establishment:

Site Preparation: ongoing July – October 2015

- Existing tree assessment:
 - Road and lot line markers should be installed on the east end of the site.
 - Careful evaluation of existing trees relative to future construction should follow lot line delineation with emphasis on preservation of select hackberries and oaks. There are numerous walnut trees also; some of these are good size and should be left standing where feasible.
 - Weedy maples (box elder and silver/soft maple), mulberry and honeysuckle should be removed. These species re-seed prolifically, leading to increased annual maintenance.
 - Remove by cutting and treating the stumps with glyphosate or triclopyr
 - No use of Tordon should be allowed onsite
 - Consider leaving larger stumps for signage, art installations, and/or casual seating.
 - Some trees are large enough for sculpture carving of the trunk
 - If not left for use mounting signs or seating, cut low to ground = do not grind out stumps – resulting soil disturbance stimulates weeds and resulting shallow soil cover is not suitable for deep-rooted species
- Existing lawn grass and hayfield to be converted to prairie and woodland understory:
 - Mow in normal cycle until herbicide treatment begins
 - If possible late 2015 unwanted vegetation can be eliminated
 - spray with glyphosate (grass) and aminopyralid (areas with clover, alfalfa, bird's foot trefoil)
 - Repeated inspections and additional treatments as green-up occurs
 - No tilling or soil disturbance
 - *Seed will go directly onto killed grass so no erosion control needed*
- Areas on south edge of Quarry Estates that are contiguous with Ada Hayden Heritage Park property:
 - Discussions should be held with City and County stakeholders to coordinate establishment and management of this interface
 - *Recommend eliminating all lawn grass between the two properties and managing southern border as continuous native landscape with Ada Hayden northern property*
 - This will dramatically reduce management issues stemming from cool season non-native grass border between properties
 - This will significantly broaden the natural area aspect
 - Woody sections just south of Quarry Estates property can be improved as part of tree and old home site clean-up on east end
 - Emphasis on cedar and honeysuckle removal
 - If left in current condition these areas will be weed-producers, leading to increased management needs on QE areas

Prairie Establishment- Outlying Areas:

Early winter 2015

- all areas with treated vegetation should be seeded by hand-broadcasting
- areas on outer edges, especially those adjacent to Ada Hayden Heritage Park property, to be seeded with seed mix originating from Doolittle State Preserve
- areas closer to walkways to be seeded with a high density mix of somewhat shorter species, emphasizing flowering species with a wide range of blooming times

- areas under trees on east end to be seeded with a savanna species mix, again emphasizing showy species but maintaining diversity and high plant density

Spring – Fall 2016

- Seeded areas monitored approximately every two weeks for weed growth
 - if weed growth is sufficient to cause significant shade on desirable seedlings: weed or mow
 - weeding to be done by hand in areas not too dense with weeds
 - if necessary spot mow or use mechanical trimmer on weedy areas.
 - This sets back weeds and favors growth of native species, but *does reduce flowering and lead to a less attractive stand during establishment.*
 - Desirable to maximize flower display to improve public and new landowner reception, therefore hand weeding is preferred where possible
 - Monitor for alfalfa, bird's foot trefoil, quackgrass, brome etc. and treat with herbicide as needed
- Areas that have been damaged or not developing as expected should be evaluated and re-seeded
 - Care to be taken to use species that germinate readily during any warm season seeding
- Continued monitoring and removal of maple seedlings, honeysuckle, cedars, mulberry etc.

Spring – Fall 2017

- Early spring mowing of all seeded areas
- Continued iterative maintenance: monitor for weeds and damage, treat as needed

Spring – Fall 2018

- Possible spring burn, depending on stand establishment. Coordinate with Ada Hayden HP staff. Mow site if not burned.
- Continued iterative maintenance: monitor for weeds and damage, treat as needed

Prairie Establishment in Internal Areas:

- These areas to have somewhat shorter vegetation than the outlying border areas, with greater emphasis on showy flowering species
- To be seeded as soon as possible after heavy equipment is off the areas
- *Speed of establishment very dependent on keeping weeds from setting seed during construction phase (see "3. Site-wide Management During Construction")*

Wetland/Drainage Areas Vegetation:

- Recommend that native species be utilized to the largest degree possible
 - Many engineered hardscapes have been tried in recent years, few are attractive
 - Focus on infiltration via native species
 - Weeds virtually always establish in drainage-bottom hard surfaces, unattractively.
 - Use of appropriate native species solves both drainage and weed issues
- Species with a broad moisture tolerance will be selected
 - Often wetland species area used in these areas – can't make it through dry summer spells, weeds move in when the wetland species die out
- Having vegetation (vs. impervious surfaces) on a broad range of moisture regimes across this site will lead to better habitat establishment because many animal species require a variety of habitats thru growing season

3. Site-wide Management during construction:

It is important to understand the impact of letting a weedy stand of vegetation develop during construction:

- In traditional post-construction landscaping either sod or lawn grass seed is established.
 - Sod and seeded lawns can be managed for weeds by use of broad-leaf herbicides (and the weed-smothering effect of sod).
- *Establishing a natural prairie landscape post-construction is considerably different:*
 - Broad-leaf herbicides will damage prairie species along with the weedy species, and there is no sod to smother weed seeds.
 - Furthermore, the weed seeds will contaminate the border areas being prepared for seeding fall 2015.
 - For these reasons it is strongly recommended that weeds in the areas to be developed are kept well under control, to a larger degree than with typical construction, with mowing or spraying treatments as construction goes on. *Not following thru with this recommendation will lead to a longer (unattractive) establishment period and considerably more management labor expense.*

4. Public Outreach and Education:

- People who are not familiar with native landscapes (or have seen failed attempts at establishing such areas) are often put off by what can be a weedy appearance when compared to traditional park-like landscaping.
 - This is especially true during establishment years, and even more so during establishment on weedy sites.
 - Again, emphasis on benefits of preventing weeds from setting seed during construction phase
 - There will always be some people that prefer a traditional high maintenance, controlled landscape, but with education and exposure to healthy natural landscapes many people will enthusiastically embrace a more natural appearance and the benefits offered.
- To help people have accurate and realistic interpretations of these natural areas the following outreach and education is recommended:
 - Education:
 - Signage onsite, both temporary explanations during establishment and more permanent once the site is well underway. This should include QR codes for access to websites with broader information than that immediately available onsite.
 - Especially useful to point out the natural landscape as historic, and in scarce supply
 - Today many people are interested in milkweeds for butterfly gardens, this is great but useful to argue many less showy species benefit from a broad prairie matrix – not just butterflies
 - *emphasis on habitat establishment is generally well received*
 - phrasing like “During establishment of prairies, first year they sleep, second year they creep, third year they leap” conveys need for patience
 - Know that education in the second growing season after seeding is important – this is when patience can wane in those unaccustomed to the timeframe needed to establish prairie. Keeping residents and other interested parties updated with progress during this time period can prevent many frustrations on both the part of managers and those waiting to see a mature stand.
 - Hold onsite meetings advertised to both the public and new homeowners to provide opportunity for questions and comments (see comment directly above).

- Once established, scheduled walking tours around the natural areas with knowledgeable ecologist
- Provide website and other social media with current information updates and access to deeper explanations
- *Consider interviewing previous landowners* for oral history of site, historic perspective on century farm as part of education signage. Old photos could be useful for website development.
- Borders:
 - Research has shown that a paved edge, fencing, signage etc. silently send a *message that the landscaping is designed and intentional*, not just a case of someone not bothering to mow or otherwise maintain the area
 - Recommend that the *internal prairie areas between parallel lots be delineated by spaced boulders*
 - Zero maintenance “fencing”
 - Spacing can be fairly broad
 - Brings in the “glacial erratic” story to the historic landscapes educational piece
 - Allows some seating for watching birds and butterflies
 - Lawnmowers prevented from cutting into prairie areas to turn etc.
 - Heavy enough to prevent creative re-location

5. Coordination with Lawn Care Providers:

Typically lawn care companies do not understand prairie management and often don't appreciate prairie vegetation. This commonly leads to issues with herbicide overspray during dandelion treatments, mowing damage and other issues. Any contract with a lawn care provider should include specific language to address potential damage and significant financial penalties when such occurs. *Note, minor penalties can be (and have been) seen as cheaper than taking time to mow carefully.*

Placement of boulders near lawn-prairie interfaces is one of the most effective methods of preventing mowing damage, and requires much less maintenance than fencing.

6. Trees to be planted:

- Use only native species, *this feeds into the native landscapes story for this subdivision and aids habitat establishment.*
- Planting trees in prairie areas will lead to ongoing increased management via the need for tree seedling removal
- Recommend adding Bur oak, White oak, swamp white oak, hazelnut, eastern wahoo, service berry to list
 - Other species to be recommended for specific locations
- Some comments on current tree list:
 - Avoid invasive species or those that re-seed profusely (leading to increased management needs):
 - *Amur maple should be actively avoided:*
 - <http://www.dnr.state.mn.us/invasives/terrestrialplants/woody/amurmaple.html>
 - <http://dnr.wi.gov/topic/Invasives/fact/AmurMaple.html>
 - Flowering pear: includes the very invasive Bradford pear:
 - <http://mdc.mo.gov/newsroom/avoid-invasive-trees-such-bradford-pear-landscape-plantings>
 - <http://caseytrees.org/blog/invasive-tree-week-bradford-pear/>
 - Norway maple: not native to the US and considered invasive
 - <http://www.nps.gov/plants/alien/pubs/midatlantic/acpl.htm>

- <http://www.dnr.state.mn.us/invasives/terrestrialplants/woody/norwaymaple.html>

Maples:

- Invasive Norway & Amur maples covered under Invasive heading
- Tartarian maple: Not as invasive as Amur maple but not native to our area
- Sugar maple:
 - we are west of its range. This species struggles here unless very well sited.
 - <http://maple.dnr.cornell.edu/pubs/trees.htm>
 - http://www.na.fs.fed.us/pubs/silvics_manual/volume_2/acer/saccharum.htm
- Black Maple: does much better in our area than sugar maple.
 - http://www.na.fs.fed.us/pubs/silvics_manual/volume_2/acer/nigrum.htm

○ Lindens:

- Littleleaf linden:
 - *native to Europe*: <http://www.plantmaps.com/nrm/tilia-cordata-small-leaved-lime-little-leaf-linden-native-range-map.php>
- American Linden is native, preferred:
 - http://www.na.fs.fed.us/pubs/silvics_manual/volume_2/tilia/americana.htm

○ Crabapples: showy for short period then very prone to losing leaves and unattractive look

○ Ginko: native to China

○ Hornbeam vs Hophornbeam

- Both species also called ironwood, possibility for confusion amongst suppliers is high
- Hornbeam (*Carpinus caroliniana*) similar to issues w/Sugar maple = we are west of its native range so specimens must be very carefully sited with expectations of only short term survival
- Hophornbeam = ironwood (*Ostrya virginiana*), understory tree genuinely native to central IA

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Storm Water Management Plan – Quarry Estates

OCT 01 2015

CITY OF AMES, IOWA
DEPT. OF PLANNING & HOUSING

MAINTENANCE PLAN

The Contractor is required to maintain all temporary erosion control measures in proper working order, including cleaning, repairing, and replacing them as needed throughout construction. Once the project is completed and all permanent cover is established the erosion control measures will be removed. Onsite storm sewers and ponds will require periodic maintenance by the owner. Maintenance practices followed by the Contractor during construction of the project are as follows:

1. All control measures shall be inspected every 7 calendar days, and following any 0.50 inch rain event. Contractor is to verify that all erosion control measures are in proper working order.
2. Inspection reports shall be completed in accordance of the General Permit No. 2.
3. The Contractor/Owner or representative thereof will be responsible for conducting inspections to insure the SWPPP document is be complied with. They will also insure that water quality and erosion control measures put in place are in proper working order. This person must also have an acceptable level of knowledge regarding equipment and materials used to manage sediment control.

Permanent maintenance conducted post construction by the owner shall include the following:

1. Visual inspection of the site to insure that no erosion is occurring.
2. Visual inspections of onsite storm sewer during rainfall event to insure they are properly working.
3. Removal of any sediment that has collected in designated storm water detention areas.
4. Repair or replacing any damaged structures designed to control storm water runoff, and provided water quality measures for the site.
5. Regularly mow the detention areas.
6. Clear detention facilities of any volunteer trees.
7. Complete annual inspections of detention facilities, and maintain reports for 3 years.

Applicable Laws and Policies Pertaining to Final Plat Approval

Adopted laws and policies applicable to this case file include, but are not limited to, the following:

Ames *Municipal Code* Section 23.302

(10) City Council Action on Final Plat for Major Subdivision:

(a) All proposed subdivision plats shall be submitted to the City Council for review and approval. Upon receipt of any Final Plat forwarded to it for review and approval, the City Council shall examine the Application Form, the Final Plat, any comments, recommendations or reports examined or made by the Department of Planning and Housing, and such other information as it deems necessary or reasonable to consider.

(b) Based upon such examination, the City Council shall ascertain whether the Final Plat conforms to relevant and applicable design and improvement standards in these Regulations, to other City ordinances and standards, to the City's Land Use Policy Plan and to the City's other duly adopted plans.

(c) The City Council may:

(i) deny any subdivision where the reasonably anticipated impact of such subdivision will create such a burden on existing public improvements or such a need for new public improvements that the area of the City affected by such impact will be unable to conform to level of service standards set forth in the Land Use Policy Plan or other capital project or growth management plan of the City until such time that the City upgrades such public improvements in accordance with schedules set forth in such plans; or,

(ii) approve any subdivision subject to the condition that the Applicant contribute to so much of such upgrade of public improvements as the need for such upgrade is directly and proportionately attributable to such impact as determined at the sole discretion of the City. The terms, conditions and amortization schedule for such contribution may be incorporated within an Improvement Agreement as set forth in Section 23.304 of the Regulations.

(d) Prior to granting approval of a major subdivision Final Plat, the City Council may permit the plat to be divided into two or more sections and may impose such conditions upon approval of each section as it deems necessary to assure orderly development of the subdivision.

(e) Following such examination, and within 60 days of the Applicant's filing of the complete Application for Final Plat Approval of a Major Subdivision with the Department of Planning and Housing, the City Council shall approve, approve subject to conditions, or disapprove the Application for Final Plat Approval of a Major Subdivision. The City Council shall set forth its reasons for disapproving any Application or for conditioning its approval of any Application in its official records and shall provide a written copy of such reasons to the developer. The City Council shall pass a resolution accepting the Final Plat for any Application that it approves.

(Ord. No. 3524, 5-25-99)