

HASTINGS PLANNING COMMISSION

A meeting of the Hastings Planning Commission has been scheduled for Tuesday, March 16, 2021 at 4:00 PM in the City Building, 220 North Hastings Avenue.

AGENDA:

1. Call to Order
2. Roll Call
3. Pledge of Allegiance
4. Motion to adopt the current agenda for the Planning Commission Meeting
5. Public Notice - Official Notice of the Regular Meeting was published in the Hastings Tribune on Friday, (Month) (day), 2020. Pursuant to Nebraska Revised Statute Section 84-1412, the public is advised that a copy of today's agenda and all reproducible written material which will be discussed at today's meeting is located at the back of the Council Chambers. Also, a current copy of the Nebraska Open Meetings Act is posted on the south wall of the Council Chambers which is accessible to members of the public.
6. Approval of Minutes
7. Special Order of Business
8. Unfinished Business
9. Public Hearings.
 - a. **2021-015.** Public hearing to recommend approval for an ordinance to amend Hastings City Code 28-104, adopting the 2018 International Energy Conservation Code.

Motion to recommend approval for an ordinance to amend Hastings City Code 28-104, adopting the 2018 International Energy Conservation Code.
 - b. **2021-012.** Public hearing to recommend a request for a Conditional Use Permit (CUP) for self storage and storage areas to be located at property commonly addressed as 306 W 2nd Street in the City of Hastings, Adams County, Nebraska.

Motion to recommend approval for a CUP resolution for self storage and storage areas to be located at property commonly addressed as 306 W 2nd Street in the City of Hastings, Adams County, Nebraska.
 - c. **2021-016.** Public hearing for a change of zoning for undeveloped land that is currently being platted and is located directly to the south of 4635 N Baltimore Avenue in the extraterritorial jurisdiction of the City of Hastings, Adams County, Nebraska, from "A, Agricultural" to "R-1A, Single Family Large Lot Residential District", and to amend the Official Zoning District Map.

Motion to recommend approval for an ordinance and the amendment to the Official Zoning District Map to rezone undeveloped land that is currently being platted and is located directly to the south of 4635 N Baltimore Ave the extraterritorial jurisdiction of

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the City of Hastings, Adams County, Nebraska, from "A- Agriculture" to "R-1A, Single Family Large Lot Residential District".

10. Subdivisions

- a. **2021-013.** Preliminary/Final plat for O'Keeffe Subdivision, platting of tax lot land south of address known as 4635 N. Baltimore Avenue
- b. **2021-014.** Preliminary Plat for Theatre District Subdivision, commonly addressed 3101 W. 12th Street

11. Reports

Adjourn

CITY OF HASTINGS, NEBRASKA
MINUTES OF PLANNING COMMISSION
Tuesday, February 16, 2021

Pursuant to due call and notice thereof, a meeting of the Hastings Planning Commission was conducted in the City Building, 220 North Hastings Avenue, on February 16, 2021.

The meeting was called to order at 4:00 p.m. in Regular Session by Chair Gaines with the following members present: Willis Hunt, Marshall Gaines, Ann Hinton, Michelle Lewis, Greg Sinner, LaDaun Schoenhals. Absent: Gavin Raitt, Lou Kully, Rakesh Srivastava, Mac Rundle, absent by reason of resignation.

The Chair led the Commission in recital of the Pledge of Allegiance to the United States of America.

Moved by Hunt, seconded by Sinner, to adopt the current agenda for the Planning Commission Meeting. Roll Call: Ayes: Hunt, Gaines, Hinton, Lewis, Sinner, Schoenhals. Nays: None. Absent: Raitt, Kully, Srivastava. The motion carried.

PUBLIC NOTICE – Official Notice of the Regular Meeting was published in the Hastings Tribune on Friday, February 12, 2021. Pursuant to the Nebraska Revised Statute Section 84-1412, the public is advised that a copy of today's agenda and all reproducible written material which will be discussed at today's meeting is located at the back of the Council Chambers. Also, a current copy of the Nebraska Open Meetings Act is posted on the south wall of the Council Chambers which is accessible to members of the public.

Moved by Hinton, seconded by Lewis, to approve the minutes of the January 19, 2021 meeting. Roll Call: Ayes: Hunt, Gaines, Hinton, Lewis, Sinner, Schoenhals. Nays: None. Absent: Raitt, Kully, Srivastava. The motion carried.

7. Special Order of Business

a. Election of Officers: Chair; First Vice-Chair; Second Vice-Chair.

Moved by Hinton, seconded by Lewis, to nominate Marshall Gaines as Chair. Roll Call: Ayes: Hunt, Gaines, Hinton, Lewis, Sinner, Schoenhals. Nays: None. Absent: Raitt, Kully, Srivastava. The motion carried.

Moved by Schoenhals, seconded by Hunt, to nominate Ann Hinton as First Vice Chair. Roll Call: Ayes: Hunt, Gaines, Hinton, Lewis, Sinner, Schoenhals. Nays: None. Absent: Raitt, Kully, Srivastava. The motion carried.

Moved by Gaines, seconded by Hunt, to nominate Michelle Lewis, as Second Vice-Chair. Roll Call: Ayes: Hunt, Gaines, Hinton, Lewis, Sinner, Schoenhals. Nays: None. Absent: Raitt, Kully, Srivastava. The motion carried.

9. Public Hearings.

a. **2020-061.** Public hearing to recommend a request for Randy Chick regarding Plan Modification No. 2021-1 to Redevelopment Area Number #7, Redline Properties, for the following collective property, to wit: Lot Two (2), Redline Properties Subdivision, a replat of Lot Two (2) Garden Subdivision in the City of Hastings, Adams County, Nebraska.

Lisa Parnell-Rowe discussed the agenda item.

Redline Properties 2, LLC will purchase property north of physical address 2415 Osborne Drive E and just west of Osborne Drive East between 24th and 26th streets. The developer intends to build a 7,000-sq. ft building on the approximately 29,844-sq. ft site. Grading and new paved parking lot will be installed as part of the development. This will be used for a medical/office/retail center with a modern upscale look. The developer plans to purchase the property in the winter of 2020/2021 and commence construction in the spring of 2021. Development of this project is anticipated to be completed between

April 2021 and December 2022.

The applicant intends to utilize Tax Increment Financing (TIF) to aid in the site development, including the purchase of the property, necessary site work, engineering, surveying and other consultant costs associated with and necessary for the redevelopment of the property. Total anticipated project costs are approximately \$1,600,000.00 for construction and installation of the project and related ancillary improvements. Cost of TIF eligible public improvements are estimated to exceed \$450,000.00 and encompasses acquisition, public sidewalks, sewer fees, façade enhancements, planning and engineering services and capital interest. Up to \$300,000.00 in TIF over the 15-year TIF period will be used for eligible public expenditures associated with the Project. The redevelopment project area currently has an estimated valuation of \$37,305. The proposed redevelopment will create additional valuation of \$1,362,695.

Future Land Use for this area is Commercial – Retail. The Imagine Hastings Comprehensive Plan stated a desire for a land use pattern that is supportive of similar and/or supportive uses, like the development of commercial that serves the residents of Hastings at the neighborhood and community level through the creation of mixed-use centers. The City continues to develop commercial property along the Urban Principal Arterial, Tom Osborne Expressway. This area is currently zoned C-3 and will not require rezone to accommodate this use.

See Plan Modification 2021-1 which details further information.

Randy Chick, 522 W. 1st St, Hastings, Nebraska, spoke in favor of the application.

Moved by Hunt, seconded by Schoenhals, to recommend approval to the Mayor and City Council Plan Modification No. 2021-1 which assesses the initial concept to fit with the Imagine Hastings Comprehensive plan. Roll Call: Ayes: Hunt, Gaines, Hinton, Lewis, Sinner, Schoenhals. Nays: None. Absent: Raitt, Kully, Srivastava. The motion carried.

b.2021-005. Public hearing to recommend a request for Randy Chick regarding Plan Modification No. 2021-2, an amendment to Plan Modification 2019-2 for Redevelopment Area Number #1, Brant Rentals LLC, 731 W 2nd St, for the following collective property, to wit: Units #3, #4, #5, #6, Central Block Condominium, in the City of Hastings, Adams County, Nebraska

Lisa Parnell-Rowe discussed the agenda item.

Brant Rentals, LLC has purchased and is developing condominiums located at physical addresses 731 W. 2ND, AKA UNITS #3, #4, #5, #6. These units are currently under construction. The project consists of redevelopment of all three levels and the basement area of the property into a mixed-use building containing up to four residential condominiums on the 2nd and 3rd levels of the building and main floor commercial condo space. The project will result in renovating this historic building into a combination of commercial space and residential space.

There has been drastic change in the actual costs from what was estimated initially when approved in Plan Modification 2019-2. At the beginning of the Project, costs for the acquisition, façade, elevator, basement parking garage, common hallways and stairways, and white box spaces were estimated to be \$1,000,000. The actual cost of the white box space is \$1,400,000. When each condo space is fully renovated the total project costs are anticipated to be \$2,500,000. The new anticipated project valuation when completed is \$1,700,000 and the developer projects an incremental valuation increase of approximately \$1,587,940. The CRA has reviewed the information by applicant regarding his increased costs and has approved his request for additional TIF funding. The Hastings Community Redevelopment Authority (CRA) intends to pledge the ad valorem taxes generated over the 15-year period beginning January 1, 2021 towards the allowable costs and associated financing for rehabilitation. The Authority will assist the project by granting the sum of \$350,000 from the proceeds of the TIF which after interest is paid will result in approximately \$466,000 of direct aid to the project. The CRA will reserve the right to issue additional debt in the form of a second bond issuance for public parking and other public improvements to benefit the Brant Rentals, LLC - 731 W. 2nd Redevelopment project upon verification that there is sufficient valuation to support such debt.

Future Land Use for this area remains Mixed Use-Downtown. One of the Imagine Hastings Comprehensive Plan guiding principles best states the importance of this project. This is that the Downtown is physically and socially the heart of the community and the future. Though this project has clearly come in much higher than anticipated in Plan Modification 2019-2, it is in the heart of the community and many projects have followed suit since this one began; it's clearly investing in the heart of our community and also preserving a historical time and place that our community loves. Existing zoning remains C-2. The move towards a mixed use of commercial and residential fits nicely with the future land use for this area. The addition of the residential units is consistent with the 2013 Downtown Revitalization Plan and the 2016 Hastings Housing Study priorities to add an additional 84 housing units downtown by 2021.

See Plan Modification 2021-2 which details further information.

Randy Chick, 522 W. 1st St., Hastings, Nebraska, spoke in favor of the application.

Moved by Sinner, seconded by Hunt, to recommend approval to the Mayor and City Council a Resolution for Plan Modification #2021-2, an amendment to Plan Modification 2019-2 for Redevelopment Area Number 1, Brant Rental, LLC Redevelopment Project, for the following physical addresses 731 W. 2ND, AKA UNITS #3, #4, #5, #6. Roll Call: Ayes: Hunt, Gaines, Hinton, Lewis, Sinner, Schoenhals. Nays: None. Absent: Raitt, Kully, Srivastava. The motion carried.

c.2021-003. Public hearing to recommend approval for an ordinance to amend Hastings City Code 34.217, Airport Zoning regulations, location boundaries zones, and height restrictions.

Lisa Parnell-Rowe discussed the agenda item.

City Code Section 34.217, Airport Zoning regulations provides guidance regarding location boundaries of this zone, as well as restrictions. These regulations were last updated over 12 years ago in 2009. Nebraska State statutes 3-301 and 3-302 are the State guidance handed down to municipalities to ensure regulations are in place to prevent airport hazards for the general public health, public safety, and general welfare. While 3-301 addresses the reason and intent for these regulations, it is Section 3-302 that actually establishes specific thresholds to for ensure safe distances are maintained to achieve this hazard prevention. It is imperative that our local City code comply to these particular standards and be as restrictive as the State on all accounts. This must occur to ensure the safety of all citizens prior to any upcoming development that might encroach on the Airport airspace. Unfortunately, with the latest State statute amendment dated 2013 and the latest City Code amendment for these regulations, it is clear that our code is not up-to-date. Therefore, Staff has prepared a text amendment to bring our City code for Airport Zoning up to par with the State directives.

Changes to this section are to add definitions, update important dimension and height changes, and better define the related permit and the process for which it is reviewed and handled. Below is a summary of these proposed changes:

Definitions: In our previous version there were no definitions, however, much of the material that is discussed is better understood with definitions of the basic terminology that is unique to this particular content. These definitions were added and can be found in 34.217 (1), which is at the beginning of this section. Some key changes were the addition of the term Electrical Facility, which covers all towers, wires, poles and transmitters and tree which is defined to cover all natural growth. The term inner area that was used previously to describe a portion of the approach was removed all together.

Dimension & Height Changes: There description of this zone is still further broken out into the Operation, Approach, Transition and Turning zones; however, the way these various zones are calculated and defined has changed. Many of these changes appear to be done to better differentiate the necessary variances for an instrument runway versus a visual or other runway. Though there was an acknowledgement in the previous version of the 2 different runways and some differentiation; this has been expanded upon greatly in the 2013 State guidance. The newer version even goes so far as to differentiate a turf versus paved runway. Below is a summary of these changes for each zone:

Operation Zone:

Dimensions:

Starting point for Operation Zone now based on whether runway is paved or turf.

Turf - begins and ends at the same points as the runway begins and ends

Paved - 200 feet beyond the end of each runway

Feet width measurements now specified to be split evenly on either side of centerline. (Both Instrument & Visual)

Height: WAS: described as above finished grade or runway. NOW: above runway centerline elevations (Both Instrument & Visual)

Approach Zone:

Dimensions:

WAS: Starting point used to begin at the end of operation zone for both Instrument & Visual. NOW:

Instrument runway extends 10 miles from the respective operation zone and is measured along the extended runway center line and Visual runway extends from the operation zone to the limits of the turning zone as measured along the runway centerline.

WAS: Instrument runway extended at a rate of 30 feet of width for each 100 feet of horizontal length and all other runways rate of 20 feet of width for each 100 feet of horizontal length. NOW: Instrument runway is 1000 feet wide at the end of the zone nearest the runway and expands uniformly to 16,840 feet wide at the farthest end of the zone or 10 miles from the operation zone and for Visual runway is five hundred 500 feet wide at the end of the zone nearest the runway and expands uniformly so that at a point on the extended runway centerline three (3) miles from the operation zone, the approach zone is 3700 feet wide.

Height: WAS: described as not allowable in excess of 150 feet above the elevation at end of runway.

NOW: For Visual runways not to exceed 150 feet above the elevation at end of runway when within three (3) miles of the end of the operation zone at that runway end. In addition, for Instrument runways, at the 3 miles the height limit resumes sloping at 50:1 horizontally to the 10-mile limit.

Transition Zone:

Dimension: Description of this area cut significantly to now state it extends outward at a right angle to the runway centerline and upward. Upward rates figured with same ratio.

Height: WAS: described as to a height above the planes forming transition slope. NOW: it starts at the height limit of the adjacent approach zone or operation zone and ends at a height of 150 feet above the highest elevation (Both Instrument & Visual)

Turning Zone:

Dimension: Distance remained 3 miles but descriptive of where 3 miles was figured from changed slightly. WAS: nearest points along the airport property lines. NOW: the corners of the operation zone of each runway and connecting adjacent arcs with tangent lines.

Permit / Approval Process:

Unfortunately though our City Code stated a permit was to be available in Development Services, there was not one found. A Permit application for this purpose has been added to our new software. Fee will be forthcoming in future fee schedule for 2022. We are close to updating this schedule in the coming months so for as little as this permit will be used we are recommending the related fee be added at that time.

Also missing from this guidance was the fact that each individual must first submit FAA 7460-1 at the start of their development and then a form 7460-2 at the end to facilitate an inspection by the FAA, as required. This has now all been added to this section. We also added language that planning & zoning or building permits involving placement of structures, trees or electrical facilities would not be fully processed or approved until Airport Zoning Permit is approved. There are some exceptions to this, such as subdivisions, conditional use permits and rezoning.

The exception that was stated in (5) (b). No permit shall be required for any construction or planting which is not higher than 75 feet above the elevation of the end of the nearest runway or landing strip, has been

removed. After discussions with our Kirkham Michael consultant and discovering that technically the FAA requires 7460-1 without exception we have replaced this language to read, Initial assessment of applicability for permit processing will be determined by Development Services. Consultant will provide Development Services an overlay on the Airport Airspace Map indicating permit applicability. We also replaced references to administer to local Ordinance # with reference to the Nebraska State amendments, in event they change guidance again this will bridge the gap to update, ensuring we comply to State Statute. Lastly, we also added a paragraph to establish Airport Advisory Boards given roles in making recommendations to airport layout changes, as well as any area development that might be affected by this zoning. This is to better establish the appropriate procedure for their review and advise on such matters prior to Planning Commission and City Council.

Other changes: The Airport Layout Plan was added. This was not referenced in our code previously. As state statute references it multiple times and refers us to this plan for all designated instrument approaches it was felt that it should also be memorialized in our city code. Both the Airport Layout Plan and the Hastings Airport Airspace Maps are now available on our website and are located in document central for Development Services and also a document central being developed on Airport page. We removed the language stating that a copy of the Airspace map would be on file with the Clerk at all times and replaced this to say both are available on our City website.

On February 8, 2021 Staff presented this proposed Code Change to the Airport Advisory Board and the matter was recommended to move forward to Planning Commission with only one comment. The board would like for Planning Commission to consider recommendation to new Theater District Development to cover potential noise pollution as a notation in their lease and/or rental contracts. Staff advised them this would be more appropriate to recommend at the time they review this particular development plan, but still passes this as it was a part of their motion.

Moved by Hunt, seconded by Schoenhals, to recommend approval to the Mayor and City Council an ordinance to amend Hastings City Code 34.217, Airport Zoning regulations, location boundaries zones, and height restrictions. Roll Call: Ayes: Hunt, Gaines, Hinton, Lewis, Sinner, Schoenhals. Nays: None. Absent: Raitt, Kully, Srivastava. The motion carried.

d.2021-001. Public hearing for a change of zoning for Schardt Family Partnership, LTD, Lots One (1), Two (2), and Three (3), Block Four (4), Assembly of God Second Subdivision, an addition to City of Hastings, Adams County, Nebraska from "R-3, Multiple Family Residential" to "C-O, Commercial Office Non-Retail" and to amend the Official Zoning District Map.

Lisa Parnell-Rowe discussed the agenda item.

Surrounding zoning is as follows:

North – R-1 Urban Single Family Residential
South – R-1 Urban Single Family Residential
East – C-3 Commercial Business District
West – R-1 Urban Single Family Residential

As stated in the Narrative provided by the applicant the rezone request is to C-O in order to build an approximate 10,000-SF medical office. Currently this property is zoned R-3, *Multiple Family Residential*. A medical office is not permitted in the R-3 District, but it is in the C-O district. This property has been vacant and zoned as R-3 for at least 10 years. The R-1 zoning to the south has been partially developed to the southwest off of Fisherman Lane. The R-1 to the southeast has not yet been developed and only the street cut exists at this time for access to the lots on this portion of the R-1 strip to the south. Any development of the remaining R-1 would need to accomplish and be willing to develop this street right-of-way (ROW) for it to be utilized for access. This may not be cost-beneficial for development of the six remaining R-1 lots. However, a commercial endeavor may have greater return to finish it in the future. To the north across the 60' street ROW for 33rd we also have R-1, but this is also where a church has been developed. There is C-3 Commercial Business District directly to the east. It would seem with the church directly to the north and commercial to the east that potential residential development across from this area would be unlikely. Utilizing this land for a low-impact medical office for surgeons, where only a limited number of patients would be seen per day for pre & post operation instructions is a nice option for

this space. The rezone to C-O would still allow for residential uses in the future once this area is fully developed and not permit outright many of your higher impact commercial uses. This zone district is intended for both *“urban and suburban residential and professional office uses that are appropriate in areas undergoing a transition, or in areas where commercial uses might be damaging to established residential neighborhoods.”*

Additionally, Staff has been provided with a Site Plan to demonstrate the applicant’s willingness to ensure an appropriate 30’ buffer of landscaping to the south between any adjacent R-1 residential structures. It also demonstrates that once this is rezoned to C-O the development will be able to meet the required setbacks for this zoning district.

The comprehensive plan and future land use map does show this area slated for future Suburban Residential. However, as stated above, with this area still undergoing transition with some areas not yet built out and considering there is only a few residential lots on the east side remaining with the street ROW yet to be developed it is felt that this remaining area will have a greater likelihood of development as a low-impact commercial zone. The proposed zoning of C-O will still allow for multiple family, as well as Single Family residential property to develop. The use will be a low impact commercial use with minimal traffic generated on a daily basis. Staff recommends approval.

Aaron Schardt, 1406 N. Shore Dr., Hastings, Nebraska, stated he originally purchased the area to develop under the R-3 regulations, however, it was not economically feasible to do so. The plan is to develop for a low impact medical office.

Moved by Schoenhals, seconded by Sinner, to recommend approval to the Mayor and City Council an ordinance and the amendment to the Official Zoning District Map to rezone Schardt Family Partnership, LTD, Lots One (1), Two (2), and Three (3), Block Four (4), Assembly of God Second Subdivision, an addition to the City of Hastings, Adams County, Nebraska from “R-3, Multiple Family Residential” to “C-O, Commercial Office Non-Retail”. Roll Call: Ayes: Hunt, Gaines, Hinton, Lewis, Sinner, Schoenhals. Nays: None. Absent: Raitt, Kully, Srivastava. The motion carried.

11. Reports

Chair Gaines acknowledged Mac Rundle and Eric Arneson for their service on the Planning Commission. Lou Kully was reappointed to the Commission on February 8. He also welcomed Greg Sinner to the Commission, who will be replacing Eric Arneson.

Ann Hinton reported the Ad Hoc Committee met on the airport item.

Lisa Parnell-Rowe welcomed Rachael Haynes, a new intern for the DSD and Emilia Kienbaum, the new administrative assistant for the Department. She also spoke on the new online permitting.

Moved by Hinton, seconded by LaDaun Schoenhals to adjourn.

Chairman

Department: Development Services
Staff Contact: Lisa Parnell-Rowe, Mark Evans
Planning Commission Meeting Date: 3/16/2021
File No: 2021-015
Prepared By: Emilia Kienbaum, Administrative Assistant

AGENDA ITEM SUMMARY SHEET

Description of Item:

Public hearing to recommend approval for an ordinance to amend Hastings City Code 28.104, International Energy Conservation Code

Motion to recommend approval for an ordinance to amend Hastings City Code 28.104, International Energy Conservation Code

Names of People/Business affected by this action:

Developers, Contractors, Homeowners, the Public and the City of Hastings.

Why Planning Commission action is required:

Nebraska Revised State Statute 81-1618 provides the procedure for a City to adopt the 2018 International Energy Conservation Code.

Type of action requested:

Motion

Suggested motion:

Deadlines associated with action:

The 2018 International Energy Conservation Code was adopted by the State Legislature in 2020. The effective date was July 1, 2020.

Department head comments:

The City of Hastings Development Services is requesting that the City Council adopt the 2018 International Energy Conservation Code (IECC).

The model codes are developed and published by the International Code Council and are updated on a three-year cycle. Current State law requires cities that adopt a model energy code to adopt the 2018 International Energy Conservation Code. (Neb Rev Stat 81-1618). This update is to fulfill the State requirement.

The State adopted the 2018 IECC during the 2019 legislative session, with an effective date of July 1, 2020. This adoption brings the City of Hastings in line with State Statute.

There are several updates to the Energy Conservation Code, as the State jumped from the 2009 IECC to the 2018 IECC.

With this adoption, there are five main local amendments the Development Services is recommending:

1. Delete the mandatory blower door test. The code, as written would require a blower door test to be performed on each new home. The local amendment makes it optional, not required.
2. Amend duct testing to provide the option of adding spray foam insulation to the ductwork located in the unconditioned attic space in lieu of sealing and then testing the ductwork. The rationale is that the cost of testing the ductwork is comparable to the application of spray foam in the attic space, so why not spend the money on spray foam insulation, and be done with it.
3. Wall cavities may be used for duct or plenum as long as they are completely panned and sealed. This amendment especially addresses floor spaces and wall spaces that have been used as air returns in the past. The code, as written would require a complete return air duct in this space. The local amendment allows use of these spaces as long as they are properly sealed and pan material is used to enclose the space. This will result in cost and space savings.
4. Mandatory requirement for mechanical ventilation has been deleted. This amendment eliminates the mandate for mechanical whole house ventilation. This amendment makes it optional.
5. Basement walls need to be insulated to minimum R13 rather than the prescribed R15 or R19. This would eliminate 2x6 basement furring for walls.

These amendments are essentially the same as the City of Lincoln, and they are what a number of jurisdictions that are members of the Nebraska Code Officials Association have stated they plan to adopt.

Recommendation:

Motion to recommend approval of adoption of the 2018 International Energy Conservation Code (IECC) with the inclusive staff amendments by ordinance.

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY OF HASTINGS, NEBRASKA TO AMEND SECTION 28-104 OF THE OFFICIAL CITY CODE ADOPTING THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE; TO REPEAL ANY ORDINANCES OR SECTIONS OF THE OFFICIAL CITY CODE INCONSISTENT HERewith; TO PROVIDE FOR AN EFFECTIVE DATE OF THIS ORDINANCE; AND TO PROVIDE FOR THE PUBLICATION OF THIS ORDINANCE IN PAMPHLET FORM.

BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF HASTINGS, NEBRASKA:

Section 1. That Section 28-104 of the Official City Code be amended to read as follows:

28-104. International Energy Conservation Code adopted.

The International Energy Conservation Code, 2018 Edition, as published by the International Code Council, is hereby adopted as the Energy Code of this municipality for regulating and governing energy efficient building envelopes and installation of energy efficient mechanical, lighting and power systems as herein provided; providing for issuance of permits and collection of fees therefore; and each and all of the regulations, provisions, penalties, conditions and terms of said Energy Conservation Code on file in the office of the Municipal Clerk are hereby referred to, adopted, and made a part hereof, as if fully set out herein, insofar as such code does not conflict with the Statutes of the State of Nebraska or other specific model codes adopted by the City of Hastings with the additions, insertions, deletions and changes, if any, prescribed herein. The provisions of the Energy Conservation Code shall be controlling throughout the municipality and throughout its extraterritorial zoning jurisdiction.

The following sections of the Energy Code are hereby revised:

Section C101.1 Insert, "City of Hastings, Nebraska".

Section R101.1 Insert, "City of Hastings, Nebraska".

Section R402.4.1.2 of the International Energy Conservation Code is hereby deleted.

Section R403.3.3 of the International Energy Conservation Code is hereby is amended to

read as follows:

R403.3.3 Duct Testing (Mandatory). Ducts shall be pressure tested to determine air leakage by one of the following methods:

1. Rough-in test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure if installed at the time of the test. Registers shall be taped or otherwise sealed during the test.
2. Post construction test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. Registers shall be taped or otherwise sealed during the test.

Exceptions:

1. A duct air-leakage test shall not be required where the ducts and air handlers are located entirely within the building thermal envelope.
2. A duct air-leakage test shall not be required for ducts servicing heat or energy recovery ventilators that are not integrated with ducts serving heating or cooling systems.
3. A duct air-leakage test shall not be required for ducts that are sprayed with closed cell foam.

A written report of the results of the test shall be signed by the party conducting the test and provided to the code official.

Section R403.6 of the International Energy Conservation Code is hereby deleted.

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Table R402.1.2 of the International Energy Conservation Code is amended to read as follows:

TABLE R402.1.2 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a										
CLIMATE ZONE	FENESTRATION U-FACTOR ^b	SKYLIGHT U-FACTOR	GLAZED FENESTRATION SHGC ^{b,e}	CEILING R-FACTOR	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE ⁱ	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE & DEPTH	SPACE ^e WALL R-VALUE
1	NR	0.75	0.25	30	13	3/4	13	0	0	0
2	0.40	0.65	0.25	38	13	4/6	13	0	0	0
3	0.32	0.55	0.25	38	20 or 13+5 ^h	8/13	19	5/13 ^f	0	5/13
4 except Marine	0.32	0.55	0.25	38	20 or 13+5 ^h	8/13	19	10/13	10, 2 ft	10/13
5 and Marine 4	0.30	0.55	NR	49	20 or 13+5 ^h	13/17	30 ^g	13	10, 2 ft	15/19
6	0.30	0.55	NR	49	20+5 ^h or 13+5 ^h	15/20	30 ^g	15/19	10, 4 ft	15/19
7 and 8	0.30	0.55	NR	49	20+5 ^h or 13+5 ^h	19/21	38 ^g	15/19	10, 4 ft	15/19

NR = Not Required.

For SI: 1 foot = 304.8 mm.

- R*-values are minimums. *U*-factors and SHGC are maximums. Where insulation is installed in a cavity that is less than the label or design thickness of the insulation, the installed *R*-value of the insulation shall be not less than the *R*-value specified in the table.
- The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration.

Exception: In Climate Zones 1 through 3, skylights shall be permitted to be excluded from glazed fenestration SHGC requirements provided that the SHGC for such skylights does not exceed 0.30.

- “10/13” means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation on the interior of the basement wall. “15/19” means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. Alternatively, compliance with “15/19” shall be R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home. “13” means furred 2x4 walls with R-13 cavity insulation throughout on the interior of the basement wall.
- R-5 insulation shall be provided under the full slab area of a heated slab in addition to the required slab edge insulation *R*-value for slabs, as indicated in the table. The slab edge insulation for heated slabs shall not be required to extend below the slab.
- There are no SHGC requirements in the Marine Zone.
- Basement wall insulation is not required in warm-humid locations as defined by Figure R301.1 and Table R301.1
- Alternatively, insulation sufficient to fill the framing cavity and providing not less than an *R*-value of R-19.
- The first value is cavity insulation, the second value is continuous insulation. Therefore, as an example, “13+5” means R-13 cavity insulation plus R-5 continuous insulation.

- i. Mass walls shall be in accordance with Section R402.2.5. The second *R*-value applies where more than half of the insulation is on the interior of the mass wall.

Section 2. That any ordinance passed and approved prior to the passage, approval and publication or posting of this ordinance, and any sections of the Official City Code in conflict with these provisions, is hereby repealed.

Section 3. This ordinance shall take effect and be in full force from and after its passage, approval and publication in pamphlet form.

PASSED AND APPROVED this _____ day of _____, 2021.

Corey Stutte, Mayor

ATTEST:

Kimberly S. Jacobitz, City Clerk

(S E A L)

APPROVED TO FORM:

Clint Schukei, City Attorney

Department: Development Services
Staff Contact: Lisa Parnell-Rowe
Planning Commission Meeting Date: 3/16/2021
File No: 2021-012
Prepared By: Emilia Kienbaum, Administrative Assistant

AGENDA ITEM SUMMARY SHEET

Description of Item:

Public hearing to recommend a request for a Conditional Use Permit (CUP) for self storage and storage areas to be located at property commonly addressed as 306 W 2nd Street in the City of Hastings, Adams County, Nebraska.

Motion to recommend approval for a CUP resolution for self storage and storage areas to be located at property commonly addressed as 306 W 2nd Street in the City of Hastings, Adams County, Nebraska.

Names of People/Business affected by this action:

The applicant, the people of Hastings, and the City.

Why Planning Commission action is required:

Neb. Rev. Stat. 19-929 requires a conditional use permit to be approved by the City Council unless the City Council has, through a zoning ordinance or special ordinance, generally authorized the Planning Commission to exercise such power and has approved the standards and procedures adopted by the Planning Commission for equitably and judiciously granting such conditional uses or special exceptions. City Code 34-401 requires a recommendation from the Planning Commission before City Council can approve a CUP.

Type of action requested:

Motion

Suggested motion:

Motion to recommend approval of CUP resolution for self storage and storage areas to be located at property commonly addressed as 306 W 2nd Street in the City of Hastings, Adams County, Nebraska, subject to following conditions:

1. The existing sidewalk was noted in the 2019 Hastings Barriers to Mobility study as being in poor condition (uneven, cracked, and lifted panels). At a minimum, portions of sidewalk that are uneven, cracked, or uplifted must be re-laid at the property owner's expense (City Code 25-203). The driveway/sidewalk looks to be in particular poor condition. This should be re-laid as paving at 6-inches thickness since it's also a driveway. Owner will contact City Engineering to ensure parking stall and markings, curb, and sidewalk placement also conforms to the latest ADA standards for Accessible Design.

2. As stipulated in the Specific Standards for conditional uses found in 34-404 (9) (e) (iv). This is an existing building with a disclosed height of 18.5', which deviates from the requirement for 14'. In approving this CUP for this use the Planning Commission and the City Council are waiving this particular requirement as is allowable in this section (see attached picture with elevation submitted on 3/8/21 by the applicant).
3. Applicant will need to provide ADA units for storage: 2% of units, not less than 1.56 units = 2 ADA units. Office restrooms will also need to be ADA compliant. Includes door hardware, accessible route, accessible entrance, etc.
4. There shall be compliance with any other applicable City, County, State or Federal regulations that shall apply.
5. This resolution shall be filed with the registrar of deeds so as to provide notice to any person examining the real estate records of the existence of this CUP. The recording costs incurred to comply with this section shall be paid by the applicant for the CUP

Deadlines associated with action:

This item is scheduled to be heard at the next regular City Council Meeting April, 12, 2021.

Department head comments:

1. The proposed development will integrate compatibility with existing land uses and with permitted uses that may be established within any area to be affected by the proposed development.

Surrounding land uses are:

This lot is surrounded in almost all directions by C-2, Central Business district. There is also some Light Industrial adjacent to the southeast corner of this lot. Zoning for this lot is also C-2. C-2 in Table of Uses and Districts is listed as an "R", which indicates it is allowed subject to specific use standards. When you go to Article III where these standards are normally listed, there are none established in this section for self-storage and storage areas. Making this even more confusing there are use standards specifically spelled out in City Code Section 34-404 (9) specifically for storage units, but these are for conditional uses. The real problem in interpreting this all is that there is also a line that is completely contrary to allowing the use with restrictions spelled out in the C-2 District intent, Section 34-210 (1). Here in the actual intent of this district it states, "This district is intended to protect and enhance the central business district core for efficient performance of its primary function as a center for retail, commercial, financial, professional and service facilities; and to discourage uses not requiring a prime central location. This district is not intended for storage as a use and there shall not be storage as a primary use on the first floor of a store front throughout the central business district." So, in one section of our code it states this use is allowed for this C-2 district and then another section it discourages and even instructs us to not allow this use. As Director I am allowed discretion in City Code Section 34-104 to interpret uses and how they are applied when there is more than one option or none at all (and in this case 2 opposing directives). In reviewing this use to those standards, I do not feel the intent of the C-2 district is up-to-date with our Comprehensive Plan and, in particular, the vision for downtown to be a mixed-use center that includes residential uses. In fact, I believe this section was written well before most of our mixed uses were incorporated into this C-2 Central Business District. The

intent does not list that C-2 is for residential and only acknowledges retail, commercial, financial, professional and service facilities. Therefore, where residential uses are allowed and there would be needs for self-storage (as such) in the vicinity, I do not feel this use should be excluded. It is my judgement call that as there are standards for self-storage established with a conditional use permit (CUP) and as the CUP is the middle ground allowing Planning Commission and City Council to vet the facts and make a final decision, we are taking the path in between the 2 extremes that are contradictory and applying the use standards that do exist for storage units in City Code Section 34-404 (9) towards this use.

Future land use of this area is for mixed downtown so establishing this use in this area should be acceptable if we are looking to support the residential living spaces now incorporated in this area and anticipating support for more of it in our future.

2. The use does not have a permanent negative impact that is substantially greater than the impact anticipated from development permitted in the base zone district.

Pedestrian and vehicular traffic circulation and safety. The applicant provided this concept to Staff in mid-February 2021 and it was initially reviewed with engineering staff representing the streets during this time as part of Engineering Meeting. This was also emailed out for formal internal review on 1/27/21, 2/23/21 & 2/25/21. City Engineering staff has discussed and will approve the change in parking (as agreed upon). This would be to change some existing parallel parking in front of this building off of 2nd Street to diagonal parking; however, it was agreed that this would be done at the expense of the applicant. Effort has been taken on the part of the applicant to ensure parking will be available in the immediate area, but staff notes that there are not Off-street parking requirements in C-2 District. However, specific parking requirements for the self-storage use found in Section 34-404 9, e, iii. have been addressed in their narrative and are listed on the site plan.

Reasonable and economic extension of public utilities and facilities. As this is within City limits and already serviced by the City there is no extension of service required. Utilities has reviewed and approved this site plan.

Noise, fumes and/or environmental pollution. No noise, fumes and/or environmental pollution are anticipated. The following rules for the use of the self-storage units and area will be included in the lease documents and be posted inside the facility. These rules will include but are not limited to the following:

- a. It shall be unlawful for any owner, operator or lessee of any self-service storage facility or portion thereof to offer for sale, or to sell any item of personal property or to conduct any type of commercial activity of any kind whatsoever, other than leasing of the storage units, or to permit same to occur upon any area designated as a self-service storage facility.
 - b. Because of the danger from fire or explosion caused by the accumulation of vapors from gasoline, diesel fuel, paint, paint remover and other flammable materials, the repair, construction, or reconstruction of any boat, engine, motor vehicle, or furniture, and the storage of any propane or gasoline storage tank is prohibited.
 - c. All storage shall be kept within an enclosed building
- Applicant is also installing a temperature control system and a state-of-the-art video security

system throughout the storage facility as well as externally at the entrance points. Additionally, access to the facility will only be granted with a random generated code and lock box for both the access doors and the roll up doors. This will also alert the management team of any access granted after hours when there is no one onsite.

The maintenance of logical and efficient development patterns and land use mixtures. The addition of these storage uses to this area is logical due to its use compatibility to the now present and growing trend for a mixture of residential with commercial in our downtown C-2 Central Business District. This use of storage will fit nicely within this existing structure and make good use of space that has been vacant for many years now, while also adding to the appeal of the downtown area with its building updates and upgrades, which will inevitably have a positive impact on the area property values.

3. The conditions imposed are necessary to ensure the maintenance of property values and the safety, health, comfort, and repose of the residents.

The use of storage unit should not evoke safety concerns and property values should remain, if not increase due to the property improvements that will be made to this structure. Providing these units will provide a service that is currently not provided in this district at all and also provide greater selection within the City for temperature-controlled units. This is demonstrated in the market research that is provided as part of our applicant's narrative. Adjacent property notice letters were sent out to all properties within 300 feet of this location and there have been calls to inquire into the matter, but none have communicated opposition to this use. In fact, a few were quite supportive of this added use in the downtown area.

4. That the use, subject to conditions, maintains compliance with the Comprehensive Plan and the purpose and intent of the zoning regulations.

In this particular case, not allowing this use (which is advised in the intent of this district as found in our zoning regulations) would adversely go against the vision demonstrated in our Comprehensive Plan for the downtown C-2 District to move towards mixed use for both residential and commercial tenants. In fact, on page 2-11 of our existing Comprehensive Plan, Imagine Hastings it states "Downtown Hastings is a good example of a mixed-use center containing mix of cultural, financial, governmental, institutional, retail, entertainment, residential and recreational uses. The continued mix and growth of all types of land uses is appropriate for Downtown Hastings. Small industrial manufacturing that is not a detriment to the surrounding uses with regard to noise, odor/other noxious practices are also allowed within downtown". Based on the character and nature of this structure and area of the C-2 District, Staff feels comfortable with the use of storage units as described in the applicant's narrative and site plan, with the conditions established in the Staff recommendation.

A self-service storage facility has additional criteria that it must meet as spelled out in Chapter 34-404 (9). The applicant has received a copy of these criteria and has either incorporated those things in their site plan or talked to those aspects in their narrative. The proposed Site Plan includes the dimensions of the interior storage spaces and exterior parking locations. The narrative they provided addresses how each aspect will function. All zoning requirements for the C-2 zoning

district are shown and also met with the existing structure, except the height of this existing structure does exceed the requirement spelled out in City Code Section 34-404 9, e, iv. This section states that the building heights should be limited to one story and not exceed 14' at the eaves. However, it also states that an applicant can ask for Planning Commission and City Council to waive this for an existing building. Our applicant is asking for this deviation in height requirement to be waived and a condition has been added to the recommendation to memorialize that waiver as part of this CUP approval recommendation.

Recommendation:

Staff recommends a motion to recommend approval of CUP resolution for self-storage and storage area uses to be located at property commonly addressed 306 West 2nd Street in the City of Hastings, Adams County, Nebraska, subject to following conditions:

1. The existing sidewalk was noted in the 2019 Hastings Barriers to Mobility study as being in poor condition (uneven, cracked, and lifted panels). At a minimum, portions of sidewalk that are uneven, cracked, or uplifted must be re-laid at the property owner's expense (City Code 25-203). The driveway/sidewalk looks to be in particular poor condition. This should be re-laid as paving at 6-inches thickness since it's also a driveway. Owner will contact City Engineering to ensure parking stall and markings, curb, and sidewalk placement also conforms to the latest ADA standards for Accessible Design.
2. As stipulated in the Specific Standards for conditional uses found in 34-404 (9) (e) (iv). This is an existing building with a disclosed height of 18.5', which deviates from the requirement for 14'. In approving this CUP for this use the Planning Commission and the City Council are waiving this particular requirement as is allowable in this section (see attached picture with elevation submitted on 3/8/21 by the applicant).
3. Applicant will need to provide ADA units for storage: 2% of units, not less than 1. 56 units = 2 ADA units. Office restrooms will also need to be ADA compliant. Includes door hardware, accessible route, accessible entrance, etc.
4. There shall be compliance with any other applicable City, County, State or Federal regulations that shall apply.
5. This resolution shall be filed with the registrar of deeds so as to provide notice to any person examining the real estate records of the existence of this CUP. The recording costs incurred to comply with this section shall be paid by the applicant for the CUP.



City of Hastings
Development Services Department
Zoning Development Approval (ZDA)
Conditional Use Permit Application

Date:

Please fill out the Pre-Qualification form first if you are unsure of what action needs to occur. Contact Development Services for minimum requirements at 402-461-2302. Incomplete applications will not be processed. All applications must be complete prior to submission. Deadline for Planning Commission Approval is the last Monday of each month or ZDA will be held until the next months session.

Property Address: 306 West 2nd Street

Legal Description: E 1/2 LOT 21 & ALL LOTS 22, 23, 24 BLK 19 JOHNSONS ADD

Current Zoning: C-2

Proposed Use: Self Storage Facility

Description of Proposed Use:
Applicant is proposing an indoor climate controlled storage facility

Applicant:	David Waters	Company:	DAVALWAT Properties LLC
Address:	52 Sonja Drive	Telephone:	(402) 902-2941
City/State/Zip:	Doniphan, NE 68832	Email:	drdavidwaters@gmail.com
Property Owner:	Bob Foote	Company:	Foote Realty Company
Address:	3202 Osborne Drive West	Telephone:	(402) 462-5181
City/State/Zip:	Hastings, NE 68901	Email:	bfoote@biggace.com
Key Contact:		Company:	
Address:		Telephone:	
City/State/Zip:		Email:	

If the Applicant is not the Owner, an Owner Verification Form must be filled out and sent to the Owner for authorization of the application. This form is also available at www.cityofhastings.org.

I hereby acknowledge that all information provided with this application is true to the best of my knowledge. You will be required to upload a copy of a Site Plan and a Detailed Narrative Statement. Sections 34-402 through 34-404 of the Hastings City Code will assist in your preparation. You must affirm receipt and review of these codes as part of your permit process.

Signature of Applicant:

Date:

2/17/21

HDS Staff Comments:

HDS Staff Acceptance:

Date:

HDS Application Number:

HDS Case #:

Total Fee:



**City of Hastings
Development Services Department
Zoning Development Approval (ZDA)
Conditional Use Permit Affirmation**

As the applicant named herein, I acknowledge that I have familiarized myself with the City of Hastings Conditional Use Permit regulations as established in Chapter 34 - Zoning City Code, Sections 34-401 through 34-404. I agree to uphold all required conditions and cooperate with any necessary site inspections by the Code Enforcement Official for continued maintenance. I also further acknowledge the written and graphic information provided as part of this application are true and accurate to the best of my knowledge and belief.

Please click the link provided below for access to the Hastings City Code, Chapter 34 - Zoning City Code:

[Hastings City Code - Chapter 34](#)

Signature of Applicant:

A handwritten signature in dark ink, appearing to be "D. [unclear]".

Date:

2/17/21

Owner's Authorization Letter

I/we hereby certify that I/we are the owner(s) of the property described herein. I/we am/are respectfully requesting processing and approval of the application(s) referenced herein. I/we hereby authorize the Applicant(s) listed on this application to act on my/our behalf during the processing and presentation of this request. The person(s) identified as Applicant shall be the principal contact with the City in processing this application.

Project **DAVALWAT**

Address/Location **306 W. 2nd Street; Hastings, NE 68901**

Legal Description **E1/2 Lot 21 & ALL LOTS 22,23, 24 BLK 19 Johnsons ADD**

Applicant(s) **David Waters**

Robert Foote



Owner

Owner's Signature

Owner

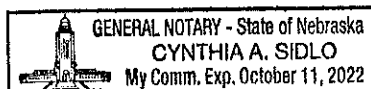
Owner's Signature

State of Nebraska)
) ss:
County of Adams)

The foregoing document was acknowledged before me this 25 day of February, 2021

Cynthia A. Sidlo by _____

Cynthia A. Sidlo
Notary Public



City of Hastings

220 N. Hastings Avenue
Hastings NE 68901

Payee: DR. DAVID WATERS

Date: 2/22/2021 Time: 10:01 AM

Receipt Number: DS1 / 90845

Clerk: EMILIA

ITEM	REFERENCE	AMOUNT
ZONE	WATERS CU	
Zoning Fees		400.00
DEED Name	FILING FE	
Recording Fees		16.00
Total:		416.00
assCC 1380		416.00
Change:		0.00

Conditional Use Permit Application

Project Narrative

Applicant: Dr. David Waters

Property Address: 306 W. 2nd St Hastings, NE 68901

The building at 306 W. 2nd St is currently under contract for purchase. Dr. David Waters and his real estate holding company Davalwat Properties is agreeing to purchase the building which is 10,875 sq. ft. in size. Presently the building is vacant and has been for several years. The use of the building would be two-fold after purchase. One would be to renovate 4500 sq. ft. of the building into high end medical office space which the owner would then lease to Platte River Foot and Ankle Surgeons for use. Two, the remaining space on the west side of the building would be converted into an indoor self-storage facility.

Part one:

4500 sq. ft of space to be renovated to high end medical office space then it is to be leased to Platte River Foot and Ankle Surgeons LLC. Platte River Foot and Ankle Surgeons is the only full-time foot and ankle practice in Hastings, NE. It supports the Hastings area but also services the area south to the Kansas border, east to Hebron and Geneva and North to Grand Island. Additionally, Dr. David Waters is the only board certified rearfoot and ankle reconstructive foot and ankle surgeon for over 100 miles. The practice opened its doors in January 2021. It is already exceeding early projections. When it gets to full capacity it will see between 100-200 patients a week at this facility. The building on 2nd street is a great location for its permanent location. Its is downtown and would provide additional foot traffic to the other downtown businesses in the area. Patients will come for appointments and stay downtown increasing the visibility of the other businesses in the area. The façade of the building will be updated to a clean and professional look. Wall signage will be placed on both the 2nd street façade as well as the façade on Kansas Ave. The area immediately around the practice will be beautified with planter boxes and windows that invite the patients and the public. It will serve as a fantastic anchor to the east end of 2nd street.

Part Two:

The remaining sq. ft. on the west end of the building will be converted into self-storage space. This portion will then be leased to Downtown Storage LLC (entity yet to be formed). This portion of the building will be used for self-storage of basic household and small business goods and furniture. It is a much-needed facility considering the redevelopment plan of the downtown area.

"To enhance the physical and economic well-being of the Central Business District; to improve the environment in which people shop, live and work; to demonstrate private commitment through physical and economic improvements; to maintain physical, economic and social improvements through a long-term operations strategy; and to maintain an organization to oversee the promotion, design, maintenance, appearance and economic restructuring of the Central Business District."

Hastings downtown district has experienced tremendous growth and redevelopment over the last several years. The plan for this includes mixed use of business, professional and residential use. In fact, multiple lofts and apartments have been renovated recently and are being leased. This can be verified on the CRA website for a complete listing.

If people are going to live in apartments and lofts in the downtown area and if small businesses are going to operate in the downtown area, then storage is going to be a premium in the downtown area.

Market research was performed on Hastings and the surrounding communities for storage facilities.

Here is the breakdown of storage availability in the area.

Hastings's stuff and storage No vacancy \$55.00 Outdoor

J street self-storage 402-462-4108 new units with indoor and outdoor

Davis drive up storage 402-461-3464 south street storage No vacancy \$40.00 Outdoor

Halloran Self Storage No Vacancy \$55.00 Outdoor

stuff self-storage no vacancy \$55.00 Outdoor

A&S Self storage Vancancy 45-55 Outdoor

Grand island Uhaul 75-101 Indoor

There is limited vacancy in the self-storage inventory in the immediate Hastings area. There are no self-storage options in the immediate downtown area per my market research. Indoor temperature-controlled storage is of shortage. Only a few units are available on the south end of town otherwise there are no temperature-controlled units. Some of the comments during market research included the need for temperature-controlled storage in the city, the need for storage in the immediate downtown vicinity, temperature-controlled storage would get twice the rate as outdoor storage, the business model is very stable, they rarely have vacancies once the units are rented.

The downtown storage place would be the best storage facility in the area. It would be temperature controlled. It will store basic household goods and furniture. The below statements will be posted on all lease agreements as well as inside the facility for public awareness.

a. It shall be unlawful for any owner, operator or lessee of any self-service storage facility or portion thereof to offer for sale, or to sell any item of personal property or to conduct any type of commercial activity of any kind whatsoever, other than leasing of the storage units, or to permit same to occur upon any area designated as a self-service storage facility.

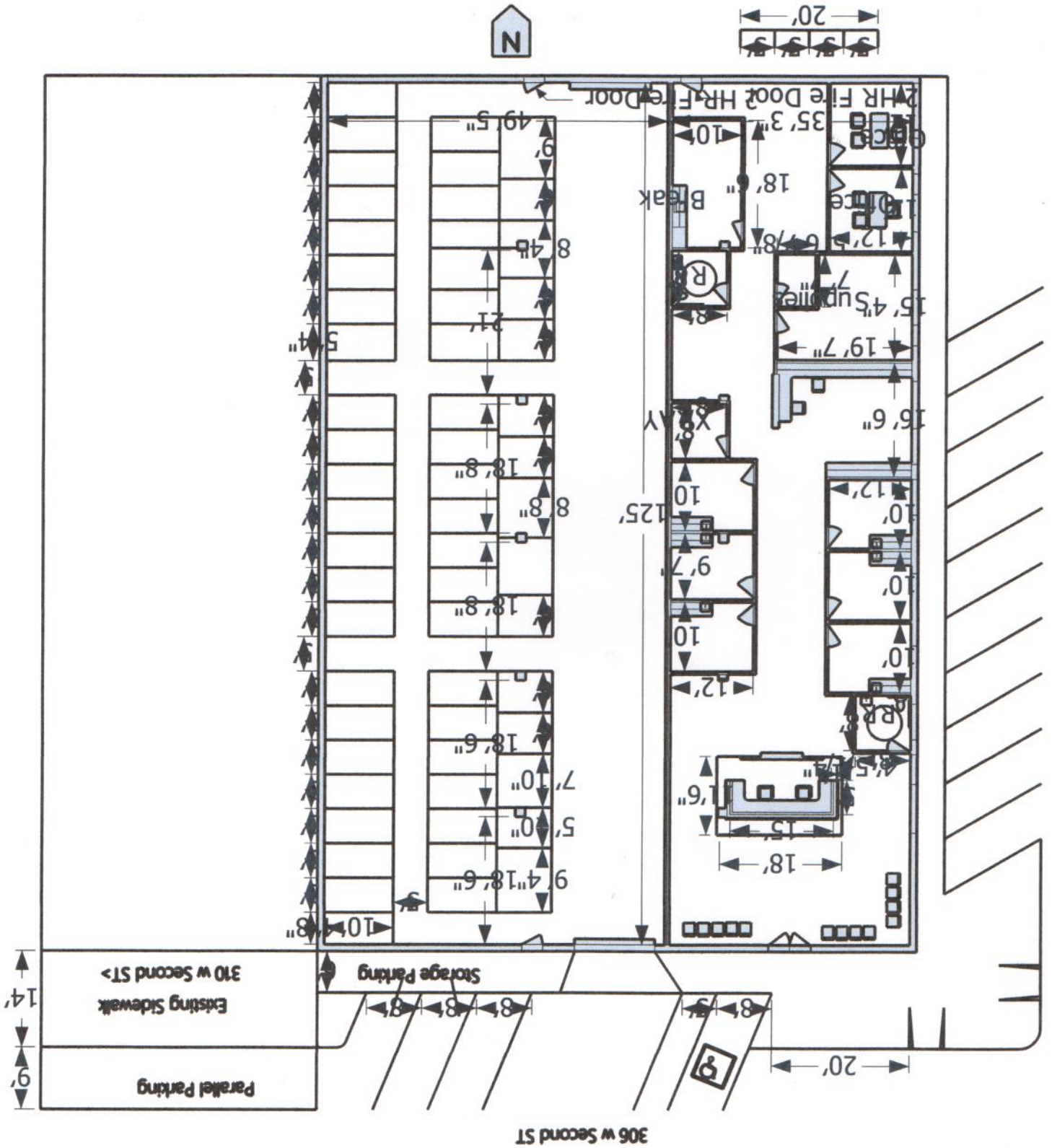
b. Because of the danger from fire or explosion caused by the accumulation of vapors from gasoline, diesel fuel, paint, paint remover and other flammable materials, the repair, construction, or reconstruction of any boat, engine, motor vehicle, or furniture, and the storage of any propane or gasoline storage tank is prohibited.

c. all storage shall be kept within a enclosed building

The present design of the space calls for 59 units. All the units are separate entities unto themselves and none are interconnected to one another. All units are ADA compliant as we have chosen to utilize the roll up door option on the units giving plenty of access for our ADA clients. There will be designated parking for the storage facility with the diagonal space we are creating and paying for. One of these spaces is designated for ADA and van access and has been marked on the drawing that has been submitted with this application. Parking will be paid for by our entity and has been submitted to the city engineer and has already been included in the estimate for renovation.

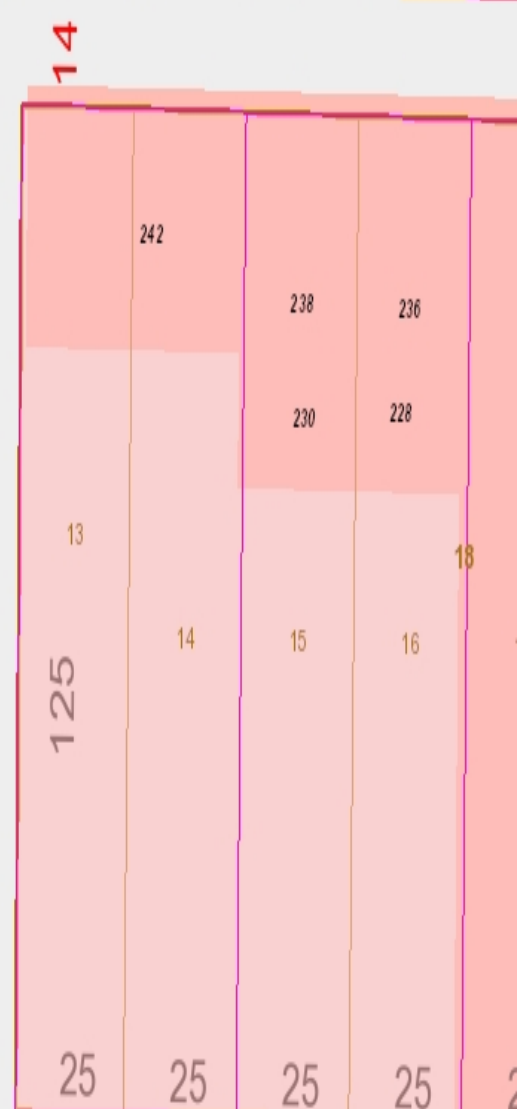
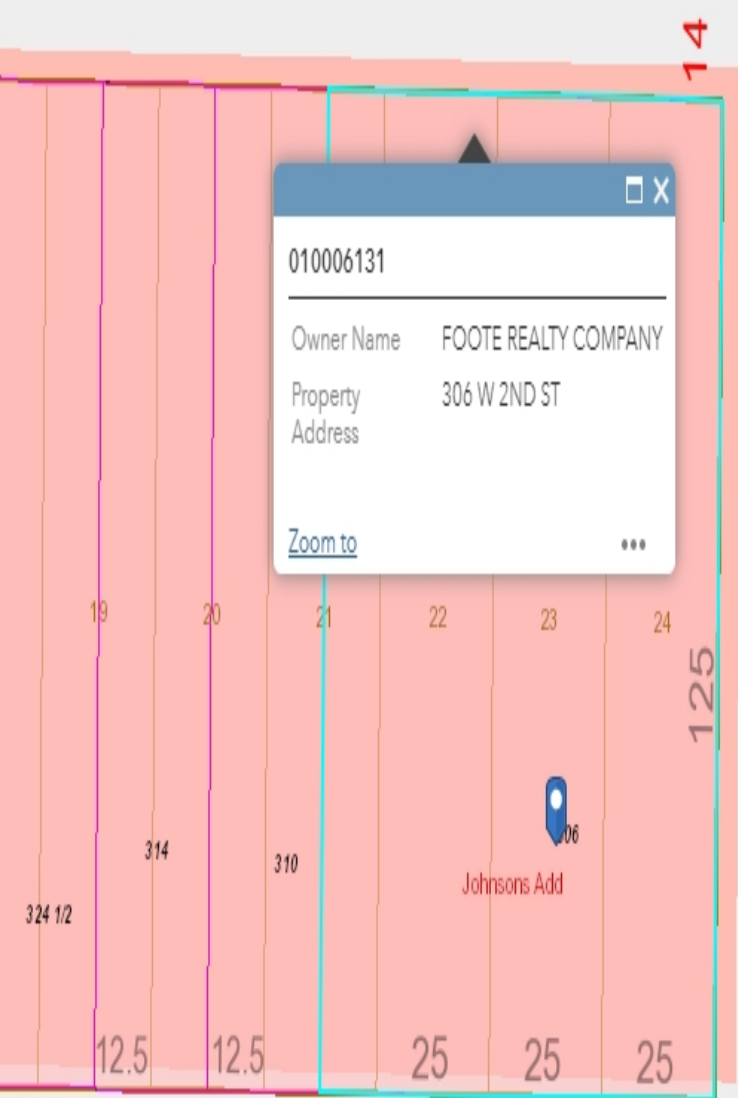
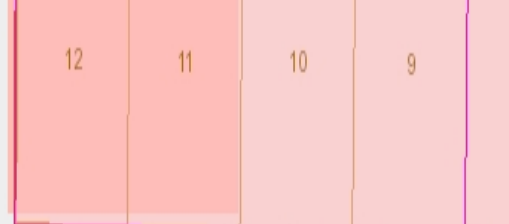
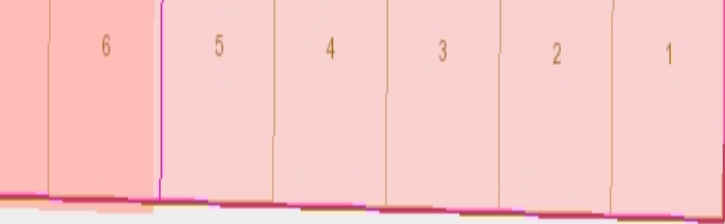
The facility will be operated by administrative staff that will run both the medical practice as well as the storage facility. This means we will have someone on site from 8am – 5pm daily. There will be state of the art video security system installed internally throughout the storage facility as well as externally at the entrance points. Additionally, access to the facility will only be granted with a random generated code and lock box for both the access doors and the roll up doors. This will also alert the management team of any access granted after hours when there is no one onsite.

Outside wall signage on the 2nd st side will be in place. Beautification of the area will be done with planter boxes and it will have a very professional and clean look to the building. The address on the two units will be separated by suite numbers.

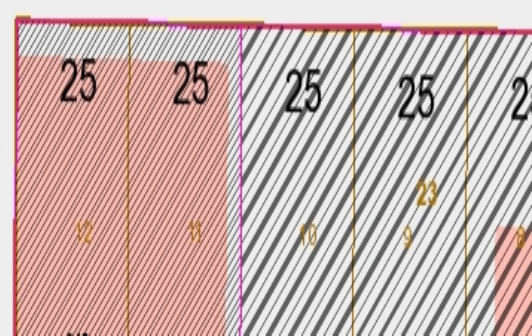
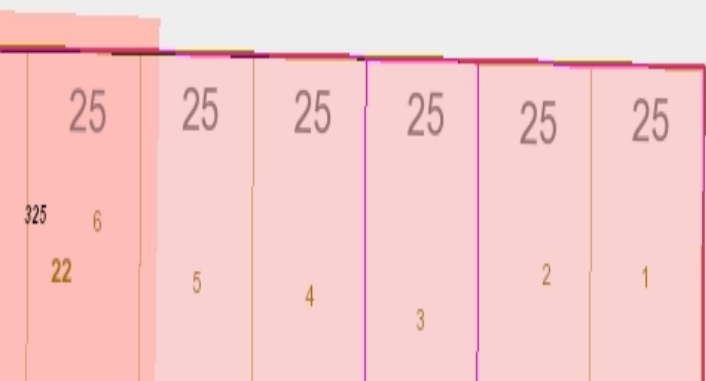


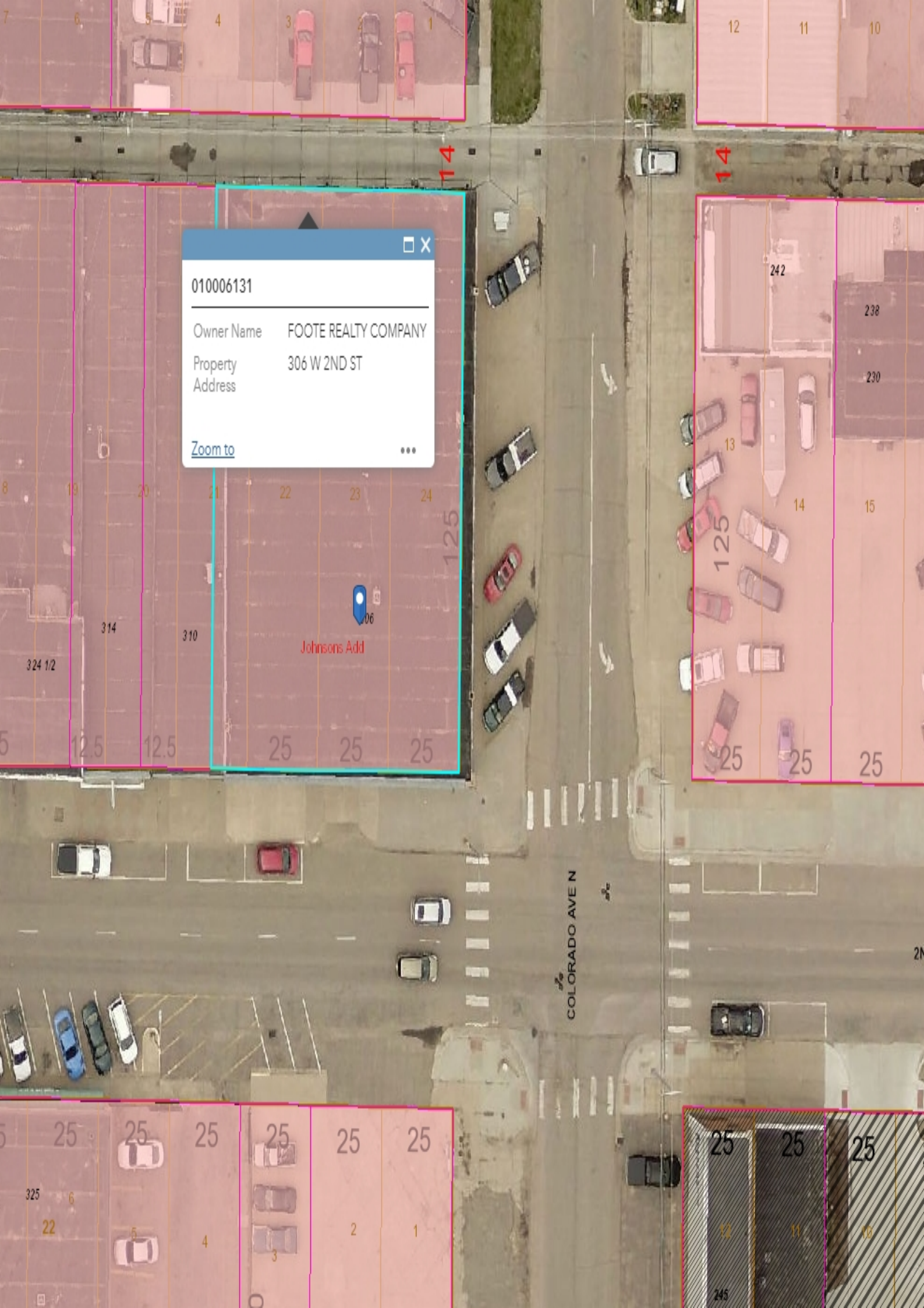


18.5 FT



2ND ST W





Department: Development Services
Staff Contact: Lisa Parnell-Rowe
Planning Commission Meeting Date: 3/16/2021
File No: 2021-016
Prepared By: Emilia Kienbaum, Administrative Assistant

AGENDA ITEM SUMMARY SHEET

Description of Item:

Public hearing for a change of zoning for undeveloped land that is currently being platted and is located directly to the south of 4635 N Baltimore Avenue in the extraterritorial jurisdiction of the City of Hastings, Adams County, Nebraska, from "A, Agricultural" to "R-1A, Single Family Large Lot Residential District", and to amend the Official Zoning District Map.

Motion to recommend approval for an ordinance and the amendment to the Official Zoning District Map to rezone undeveloped land that is currently being platted and is located directly to the south of 4635 N Baltimore Ave the extraterritorial jurisdiction of the City of Hastings, Adams County, Nebraska, from "A- Agriculture" to "R-1A,Single Family Large Lot Residential District".

Names of People/Business affected by this action:

The applicant, prospective buyers, the people of Hastings, the County and the City.

Why Planning Commission action is required:

Neb. Rev. Stat. 19-902 provides the city council shall receive the advice of the planning commission before taking definite action on any contemplated amendment, supplement, change, modification, or repeal, and no such regulation, restriction, or boundary shall become effective until after separate public hearings are held by both the planning commission and the city council in relation thereto, at which parties in interest and citizens shall have an opportunity to be heard. Notice of the time and place of such hearing shall be given by publication thereof in a legal newspaper in or of general circulation in such municipality at least one time ten days prior to such hearing.

Type of action requested:

Motion

Suggested motion:

Staff recommends motion to recommend approval for an ordinance and the amendment to the Official Zoning District Map for undeveloped land that is currently being platted and generally located directly to the south of 4635 N Baltimore Ave from "A, Agricultural" to "R-1A, Single Family Large Lot Residential District".

Deadlines associated with action:

O'Keeffe Preliminary/Final Plat approval is in concurrent review with this rezone.

Department head comments:

Surrounding zoning is as follows:

North – R-1A, Single Family Large Lot Residential and A, Agricultural

South – A Agricultural

East – A Agricultural

West – A Agricultural

It is not uncommon to see residential single-family large lot zoning (R-1A) on the outskirts of cities due to the larger lot sizes—a minimum of 20,000 square feet. A draft Site Plan was provided by our applicant and demonstrates the ability to meet setback requirements. This newly created lot will also meet minimum lot requirements for the R-1A zoning District. The Comprehensive Plan and Future Land Use map show this area slatted for Suburban Residential. As the area is slated for future Suburban Residential, the R-1A, Single Family Large Lot Residential District is an ideal zone considering it allows for lower population densities with larger lots sizes—a minimum of 20,000 square feet. Only the future Suburban Residential zone can accommodate lots up to 20,000 square feet. There are several large lot single-family residential R-1A subdivisions directly to the north of this area. In fact, once platted, this piece of land will be sold from the Saathoff & Saathoff Trustee ownership to the owner of the Wolfe Subdivision to the north. This new lot will serve as a residence for his farming help.

Recommendation:

Staff recommends motion to recommend approval for an ordinance and the amendment to the Official Zoning District Map for undeveloped land that is currently being platted and generally located directly to the south of 4635 N Baltimore Ave from “A, Agricultural” to “R-1A, Single Family Large Lot Residential District”.



Zoning Application

Date: 02/26/2021

Project

Permit Type:	Zoning Change (Rezone)	Existing Zoning:	A, Agriculture
Project Name:	O'Keeffe Subdivision	Proposed Zoning:	R-1A, Single Family Large Lot Residential
Project Address:	4635 N Baltimore Ave	Comprehensive Plan:	R1-A
City, State, Zip:	HASTINGS, NE 68901	Gross Area:	1
In City Limits:		# of Lots:	1
Legal:		Proposed Use:	Residential

Reason for Request: Currently AG and would like to make a single lot for residential purposes

Applicant / Owner

Applicant Name:	Timothy O'Keeffe	Owner Name:	SAATHOFF LELAND L
Company:		Address:	904 NORTH 6TH AVE
Address:	PO Box 152	City, State, Zip:	HASTINGS, NE 68901-0000
City, State, Zip:	Hastings, NE, 68901	Phone:	
Phone:	785-493-4714	Email:	
Email:	galtokeeffe@gmail.com		

Key Contact

Key Contact:	Address:
Company:	City, State, Zip:
Phone:	Email:

I do hereby certify that the information contained herein is true and correct.

Timothy O'Keeffe

Applicant

02/26/2021

Date

02/26/2021

Date

Owner

City of Hastings

220 N. Hastings Avenue
Hastings NE 68901

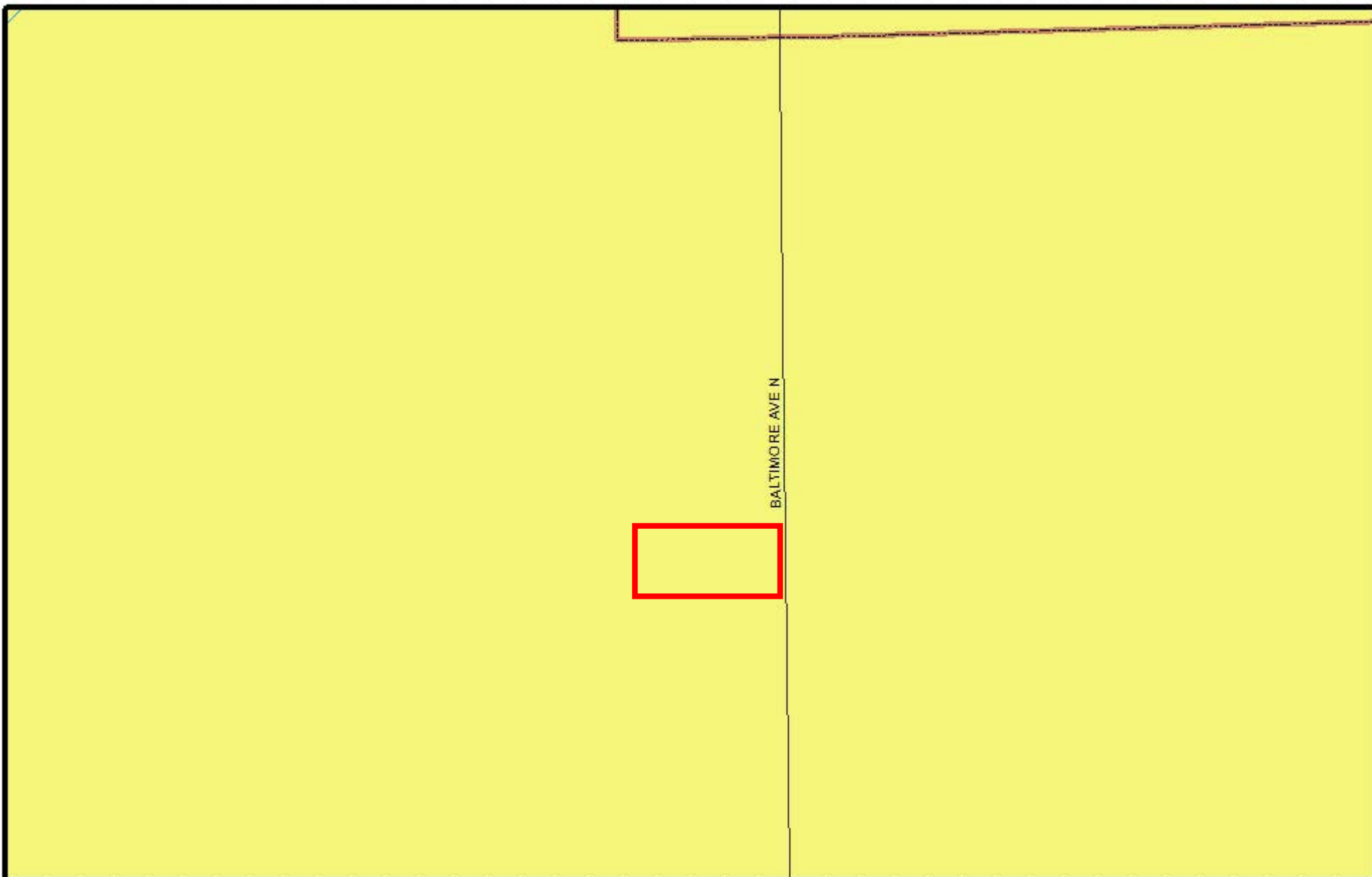
Payee: JOSH GRUMMERT

Date: 2/26/2021 Time: 9:35 AM

Receipt Number: DS1 / 90864

Clerk: TERI

ITEM	REFERENCE	AMOUNT
ZONE	OKEEFE RE	
Zoning Fees		450.00
ZONE	PREL FINA	
Zoning Fees		500.00
ZONE	1 LOT OKE	
Zoning Fees		40.00
DEED Name	OKEEFE FI	
Recording Fees		20.00
Total:		1,010.00
assv9039		1,010.00
Change:		0.00



Future Land Use

City of Hastings, Nebraska

0 100 200 400 Feet



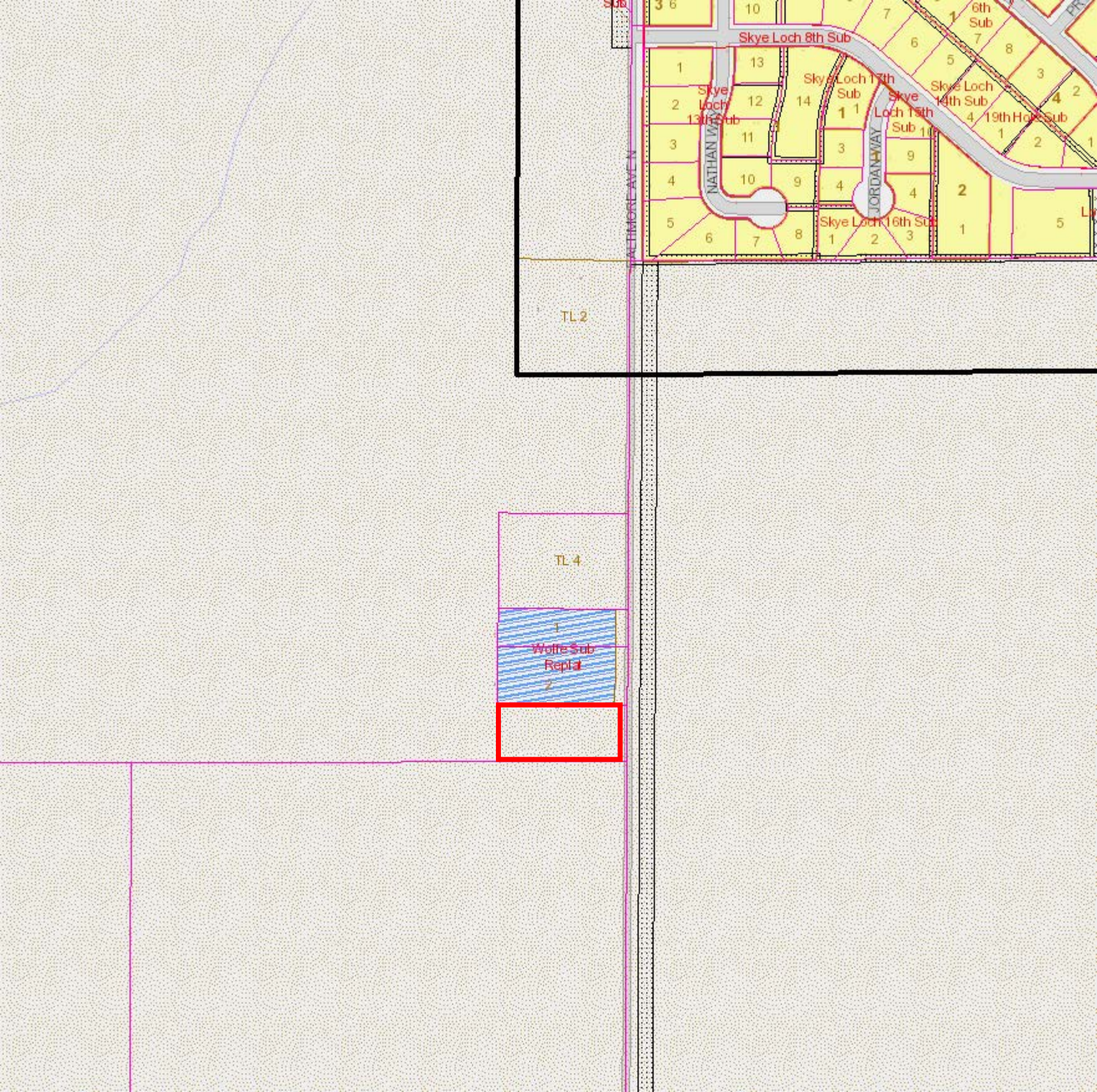
Land Use:

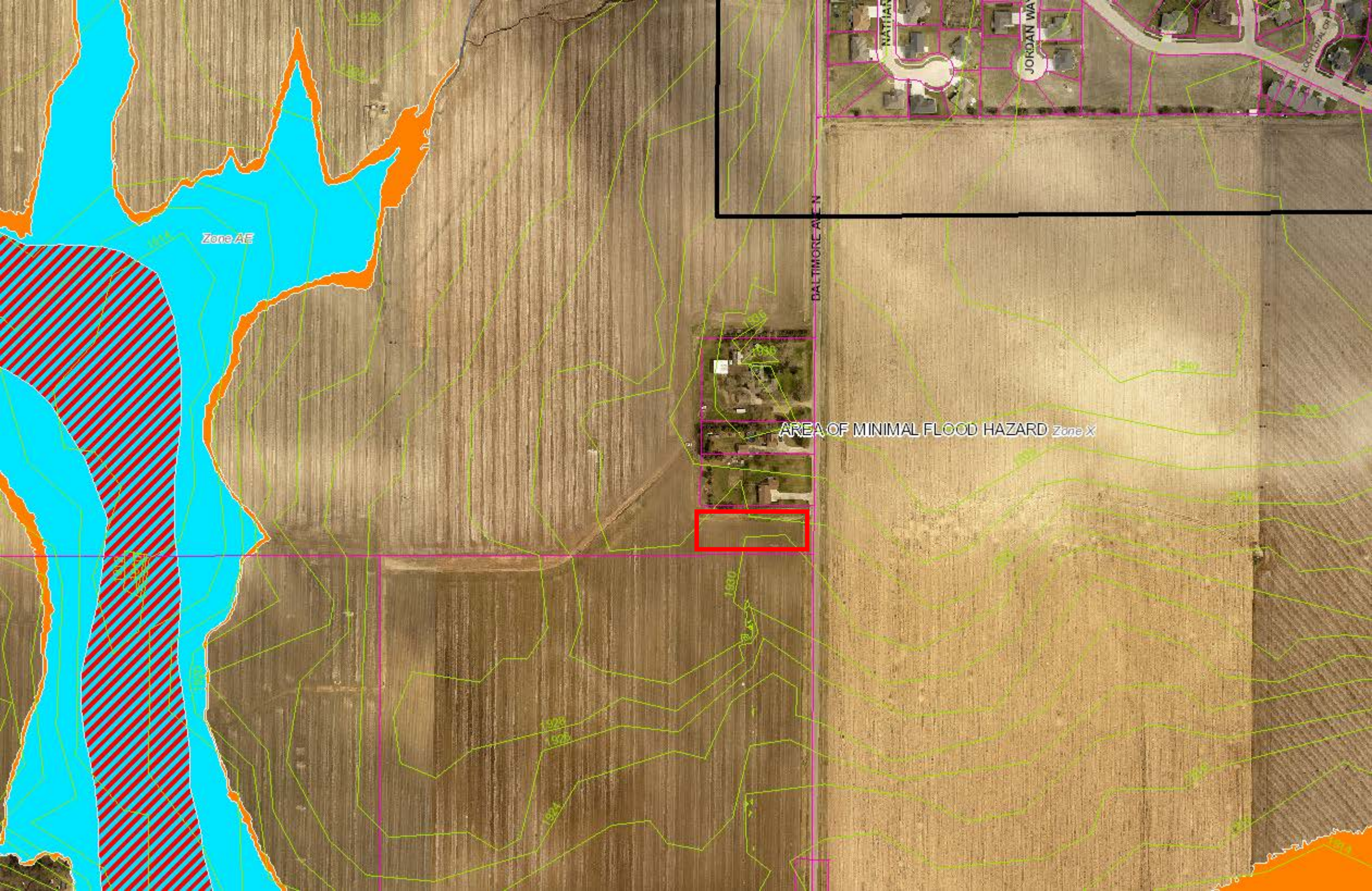
- | | | | |
|---|----------------------|---|--------------------------|
|  | Rural Residential |  | Mixed-Use - Neighborhood |
|  | Suburban Residential |  | Mixed-Use - Community |
|  | Urban Residential |  | Mixed-Use Downtown |
| | |  | Commercial/Retail |
| | |  | Employment/Industrial |

- | | |
|---|----------------------|
|  | Public / Semi-Public |
|  | Parks & Recreation |
|  | Agriculture |

Overlay Districts:

- | | | | |
|---|--------------------------|---|---------------|
|  | South Burlington Overlay |  | Floodplain |
|  | Highway 6 Overlay |  | City Boundary |
|  | Urban Industrial Overlay |  | ETJ Boundary |





Department: Development Services
Staff Contact: Lisa Parnell-Rowe
Planning Commission Meeting Date: 3/16/2021
File No: 2021-013
Prepared By: Emilia Kienbaum, Administrative Assistant

AGENDA ITEM SUMMARY SHEET

Description of Item:

Preliminary/Final plat for O'Keeffe Subdivision, platting of tax lot land south of address known as 4635 N. Baltimore Avenue

Names of People/Business affected by this action:

The applicant, the citizens of the City of Hastings and the County.

Why Planning Commission action is required:

Neb. Rev. Stat. 19-929 states that city council shall not take final action on subdivision development matters without the recommendation of the Planning Commission.

Type of action requested:

Motion

Suggested motion:

Motion to recommend approval of Preliminary/Final plat for O'Keeffe Subdivision

Deadlines associated with action:

There is also a concurrent rezone on this agenda. Both the rezone and this item for preliminary/final plat approval are scheduled for consideration at the April 12, 2021 regular meeting of City Council.

Department head comments:

The Development Department and Plat Track review teams (to include County officials) have reviewed this preliminary/final subdivision plat and the applicant has incorporated all recommendations found to be relevant with subdivision design standards and regulations in both 38-202 and 38-203. Platting land located in the south of address commonly addressed 4635 N. Baltimore Avenue. This is a replat incorporates a portion of tax lot parcel of record into a 1 lot subdivision in order to Mr. Timothy O'Keeffe to provide housing for his farmland help. Our applicant, Mr. Timothy O'Keeffe has also provided a draft site plan that shows where he will place a single-family home on this lot. This structure will meet all the related R-1A lot size and building setbacks. Applicant has agreed to and applied for rezone to the R-1A Zoning District. All related utilities requirements were reviewed with the applicant. Due to the expense to tap into City services the applicant has decided to use a well out front and a septic to the rear of the

property. The Civil Engineer is working with the Surveyor to acquire necessary invert elevations, size, and runoff calculations to confirm that the existing culvert to the north is adequate for the new development and impervious footprint.

Recommendation:

Staff recommends motion to recommend approval of Preliminary/Final plat for O'Keeffe Subdivision.



Permit #: 21013

Permit Date: 02/22/21

Permit Type: Preliminary / Final Plat

Title: O'Keeffe Preliminary/Final Plat

Site Address: 4635 N. Baltimore Ave

Owner Name: Leland Saathoff

Owner Address: 904 N. 6th Avenue

City State Zip: Hastings, Nebraska 68901

Owner Phone:

Owner Email:

Applicant Name: Tim O'Keeffe

Applicant Address: PO Box 152

City, State, Zip: Hastings, NE 68901

Phone Number: 785-493-4714

Applicant Email: galtokeeffe@gmail.com

Proposed Use: residential

Description: new subdivision for his help

Project Cost: 0

Square Feet: 0

Within City Limits: No

Current Zoning: A, Agriculture

Current Zoning Explained: new unplatted is AG and existing subdivision is R-1A

Proposed Zoning: R-1A, Single Family Large Lot Residential

Conditions:

Conditions Defined:

1st PN & Agenda Send By (11:30):

1st PN & Agenda Due Date:

1st PN & Agenda Sent:

2nd PN & Agenda Send By (11:30):

2nd PN & Agenda Due Date:

2nd PN & Agenda Sent:

Sign / Website Posting - Post By:

Sign / Website Posting - Posted:

APO Letter - Send By:

APO Letter - Sent:

PC Approval - Date Approved:

PC Outcome Letter - Due: 03/17/2021

PC Outcome - Completed:

CRA Approval - Meeting Date:

CRA Approval - Approved:

CC Packet - Goal Load Date: 04/02/2021

CC Packet - Due Date: 04/06/2021

CC Packet - Completed:

CC Out/Admin Due Date:

CC Out/Admin - Completed:

Status: Open

Assigned To: Lisa Parnell-Rowe

Property

Parcel #	Address	Legal Description	Owner Name	Owner Phone	Zoning
010000585			SAATHOFF LELAND L		

Contractors

Contractor	Primary Contact	Phone	Address	Contractor Type	License	License #
Grummert Professional Services, LLC	Joshua E. Grummert	402-879-5701	501 N Forbes Ave	Surveyor		

Inspections

Date	Inspection Type	Description	Scheduled Date	Completed Date	Inspector	Status
02/26/2021	City Council Meeting		04/12/2021		Lisa Parnell-Rowe	Open
02/26/2021	Planning Commission Meeting		03/16/2021		Lisa Parnell-Rowe	Open

Uploaded Files

Date	File Name
03/01/2021	8241202-O'Keeffe Fees.pdf
02/22/2021	ce37497bd39bdc47009d67f6cf53157b_final-plat---submittal-requirements-check-list1585232316.pdf
02/22/2021	81037a5b3a43582b7dd204833bc09458_title_report.pdf
02/22/2021	68eac9fc3f932b97eb78b1dfd1259934_topography.pdf
02/22/2021	f08987683a679ff03f8899e0d3b337f0_006-2021.pdf

City of Hastings

220 N. Hastings Avenue

Hastings NE 68901

Payee: JOSH GRUMMERT

Date: 2/26/2021 Time: 9:35 AM

Receipt Number: DS1 / 90864

Clerk: TERI

ITEM	REFERENCE	AMOUNT
ZONE	OKEEFE RE	
Zoning Fees		450.00
ZONE	PREL FINA	
Zoning Fees		500.00
ZONE	1 LOT OKE	
Zoning Fees		40.00
DEED Name	OKEEFE FI	
Recording Fees		20.00
Total:		1,010.00
assv9039		1,010.00
Change:		0.00



Owner's Authorization Letter

I/we hereby certify that I/we are the owner(s) of the property described herein. I/we am/are respectfully requesting processing and approval of the application(s) referenced herein. I/we hereby authorize the Applicant(s) listed on this application to act on my/our behalf during the processing and presentation of the request. The person(s) identified as Applicant shall be the principal contact with the City in processing this application.

Project: O'Keeffe Preliminary/Final Plat

Address/Location: 4635 N. Baltimore Ave

Applicant(s): Tim O'Keeffe

Leland Seathoff

Owner:

Leland Seathoff

Owner's Signature

Owner:

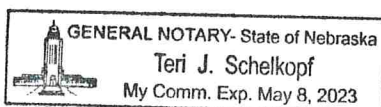
Owner's Signature

State of Nebraska)

) ss:

County of Adams)

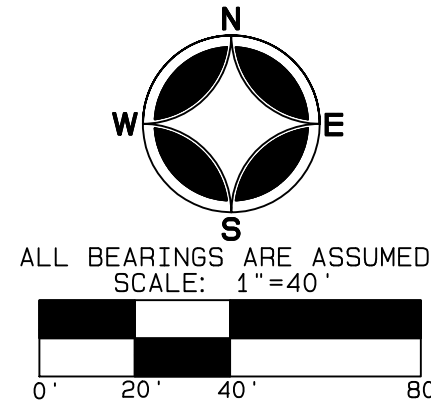
The foregoing document was acknowledged before me this 26th day of February
2021, by Leland Seathoff



Teri J. Schelkopf
Notary Public

O'KEEFFE 2ND SUBDIVISION
PRELIMINARY / FINAL PLAT

A TRACT OF LAND LOCATED IN THE NE 1/4 OF THE SE 1/4 OF SECTION 26-T8N-R10W OF THE 6TH P.M., ADAMS COUNTY NEBRASKA, BEING WITHIN THE E.T.J. OF THE CITY OF HASTINGS, ADAMS COUNTY, NEBRASKA.



CURRENT ZONING:
A-AGRICULTURAL DISTRICT

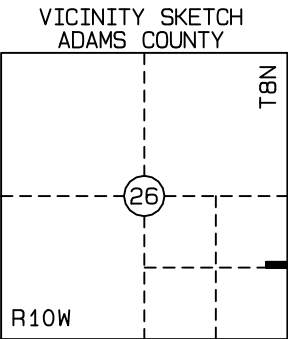
FUTURE ZONING:
R-1A SINGLE FAMILY
LARGE RESIDENTIAL

CURRENT OWNERS:
LELAND L.SAATHOFF 1/4 INTEREST
AND TRUSTEE OF THE MARIAN J.SAATHOFF
FAMILY TRUST, AN UNDIVIDED 1/2 INTEREST
DANIEL L.SAATHOFF AND RENEE D.SAATHOFF
AN UNDIVIDED 1/4 INTEREST

FLOODPLAIN INFORMATION:
NO PORTION OF THE PROPERTY LEGALLY DESCRIBED ON THE PLAT HEREON FALLS WITHIN THE CONFINES OF THE SPECIAL FLOOD HAZARD AREAS AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY AND FIRM MAP, COMMUNITY PANEL NO.31001C0070C, EFFECTIVE 7/5/2018.

GPS PROJECT # 006-2021 SHEET 1 OF 3

- LEGEND :
M-MEASURED DISTANCE
R-ROGER PARKS 2005
P-PLATTED DISTANCE
D-DEED DISTANCE
- FOUND CORNER
- CALCULATED POINT
- SET MAG-NAIL IN ASPHALT
- SET 1/2" X 24" REBAR WITH BLUE LS-783 CAP UNLESS NOTED OTHERWISE



SURVEYOR'S CERTIFICATE:

I, HEREBY CERTIFY THAT THIS PLAT OF A SURVEY WAS MADE BY ME OR UNDER MY SUPERVISION AND IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE, AND THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF NEBRASKA. COMPLETED ON FEBRUARY 3RD, 2021.

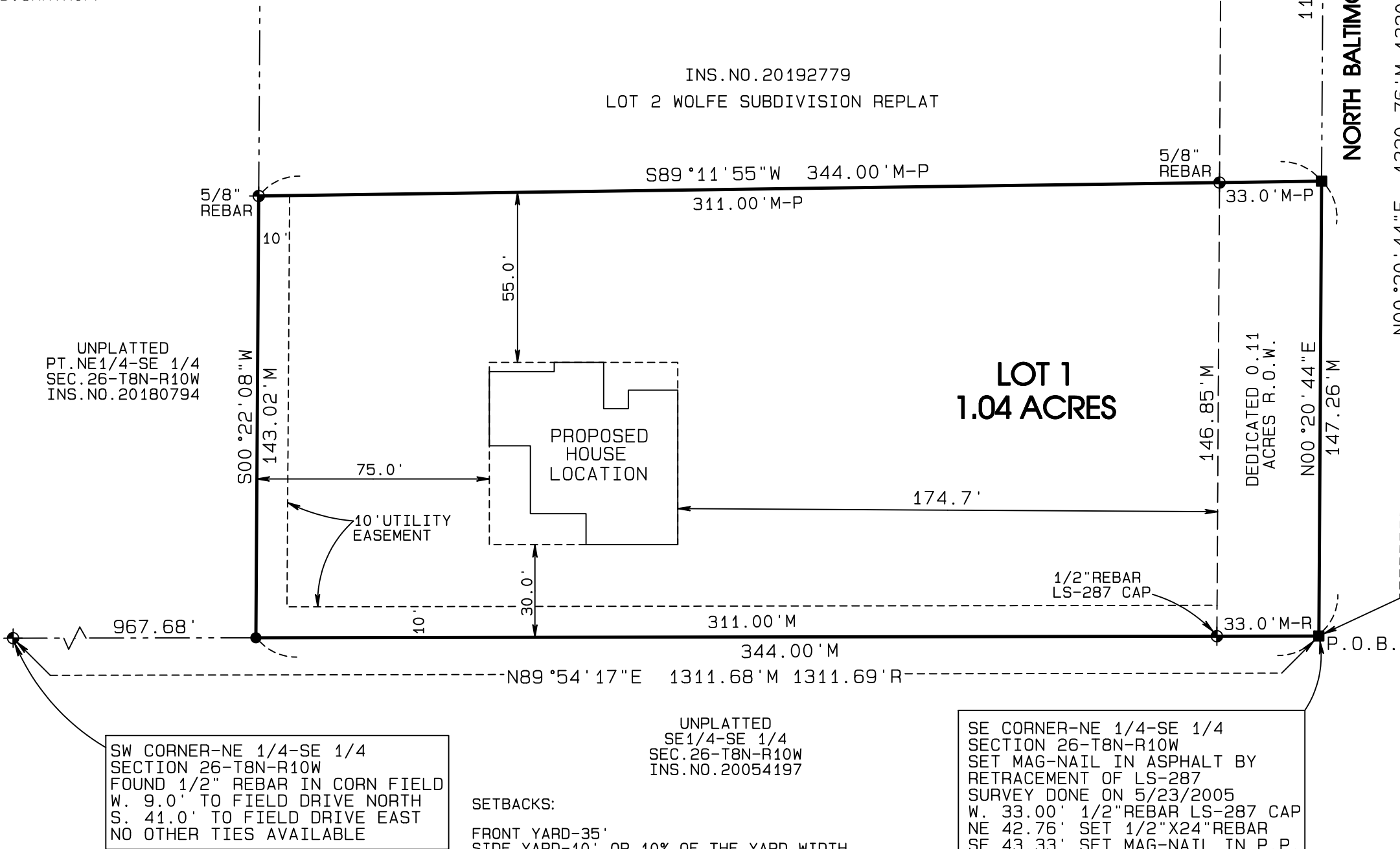
JOSHUA E. GRUMMERT | LS-783

GRUMMERT PROFESSIONAL SERVICES, LLC
2837 WEST HIGHWAY 6, SUITE 206, HASTINGS, NE 68901
PHONE 402-879-5701 EMAIL jmgrummert@yahoo.com
WEBSITE www.grummertsurveying.com

LEGAL DESCRIPTION:

A TRACT OF LAND LOCATED IN THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 26, TOWNSHIP 8 NORTH, RANGE 10 WEST OF THE 6TH P.M., ADAMS COUNTY, NEBRASKA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHEAST CORNER OF SAID NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 26, THENCE N00°20'44"E (ASSUMED BEARING) ON THE EAST LINE OF SAID NORTHEAST 1/4 OF THE SOUTHEAST 1/4 A DISTANCE OF 147.26 FEET TO THE SOUTHEAST CORNER OF WOLFE SUBDIVISION REPLAT, THENCE S89°11'55"W ON THE SOUTH LINE OF SAID WOLFE SUBDIVISION REPLAT A DISTANCE OF 344.00 FEET TO THE SOUTHWEST CORNER OF SAID WOLFE SUBDIVISION REPLAT, THENCE S00°22'08"W A DISTANCE OF 143.02 FEET TO THE SOUTH LINE OF SAID NORTHEAST 1/4 OF THE SOUTHEAST 1/4, THENCE N89°54'17"E ON SAID SOUTH LINE OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 A DISTANCE OF 344.00 FEET TO THE POINT OF BEGINNING, CONTAINING 1.15 ACRES MORE OR LESS, OF WHICH 0.11 ACRES IS BEING OCCUPIED AS PUBLIC ROAD RIGHT OF WAY.

EAST 1/4 CORNER SEC.26-T8N-R10W
FOUND MAG-NAIL IN ASPHALT
E. 32.62' 1/2" PIPE
NW 47.98' 5/8" REBAR W/RM CAP
SW 51.10' 5/8" REBAR W/RM CAP



NORTH BALTIMORE AVENUE

OWNERS CERTIFICATE AND DEDICATION:

KNOW ALL MEN BY THESE PRESENTS, THAT LELAND L.SAATHOFF AND EILEEN C.SAATHOFF, HUSBAND AND WIFE, 1/4 INTEREST AND LELAND L.SAATHOFF BEING THE TRUSTEE OF THE MARIAN J.SAATHOFF FAMILY TRUST, AN UNDIVIDED 1/2 INTEREST DANIEL L.SAATHOFF AND RENEE D.SAATHOFF (HUSBAND AND WIFE) AN UNDIVIDED 1/4 INTEREST ,BEING THE OWNER OF RECORD OF THE LAND SHOWN ON THIS PLAT AND DESCRIBED IN THE LEGAL DESCRIPTION HEREON, HAVE CAUSED THE SAME TO BE SURVEYED, SUBDIVIDED, PLATTED AND DESIGNATED AS"O'KEEFFE 2ND SUBDIVISION"A SUBDIVISION WITHIN THE EXTRATERRITORIAL JURISDICTION OF THE CITY OF HASTINGS, ADAMS COUNTY, NEBRASKA AND THAT SAID SURVEYING, SUBDIVIDING, PLATTING AND DESIGNATION WAS DONE WITH THE FREE CONSENT AND IN ACCORDANCE WITH THE DESIRES AND WISHES OF THE UNDERSIGNED OWNERS. BE IT FURTHER KNOWN, THAT SAID OWNER DOES HEREBY DEDICATE THE 33 FEET OF BALTIMORE AVENUE FOR PUBLIC RIGHT OF WAY AND ANY EASEMENTS SHOWN ON THE PLAT TO THE CITY OF HASTINGS, ADAMS COUNTY, NEBRASKA.

SIGNED THIS _____ DAY OF _____, 2021.

_____ LELAND L.SAATHOFF	_____ LELAND L.SAATHOFF (TRUSTEE)
_____ DANIEL L.SAATHOFF	_____ EILEEN C.SAATHOFF
_____ RENEE D.SAATHOFF	

ACKNOWLEDGEMENT

STATE OF NEBRASKA }
COUNTY OF _____ } SS

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THE _____ DAY
OF _____, 2021, BY LELAND L.SAATHOFF AND
EILEEN C.SAATHOFF, HUSBAND AND WIFE, ALSO BE KNOWN THAT LELAND L.SAATHOFF
IS THE TRUSTEE OF THE MARIAN J.SAATHOFF FAMILY TRUST

MY COMMISSION EXPIRES THE _____ DAY OF
_____, _____.

NOTARY (SEAL)

ACKNOWLEDGEMENT

STATE OF NEBRASKA }
COUNTY OF _____ } SS

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THE _____ DAY
OF _____, 2021, BY DANIEL L.SAATHOFF AND
RENEE D.SAATHOFF, HUSBAND AND WIFE

MY COMMISSION EXPIRES THE _____ DAY OF
_____, _____.

NOTARY (SEAL)

CITY ENGINEER'S APPROVAL

I, THE UNDERSIGNED, DO HEREBY _____ THIS PLAT OF O'KEEFFE 2ND SUBDIVISION, A SUBDIVISION WITHIN THE EXTRATERRITORIAL JURISDICTION OF THE CITY OF HASTINGS, ADAMS COUNTY, NEBRASKA.

CITY ENGINEER

CITY PLANNING COMMISSION RECOMMENDATION

THIS PLAT OF O'KEEFFE 2ND SUBDIVISION, A SUBDIVISION WITHIN THE EXTRATERRITORIAL JURISDICTION OF THE CITY OF HASTINGS, ADAMS COUNTY, NEBRASKA, HAS BEEN SUBMITTED TO AND REVIEWED BY THE CITY PLANNING COMMISSION FOR APPROVAL AND IS HEREBY TRANSMITTED TO THE GOVERNING BODY OF THE CITY OF HASTINGS, ADAMS COUNTY, NEBRASKA,

WITH THE RECOMMENDATION THAT SAID PLAT BE _____AS PROPOSED

DATED THIS _____ DAY OF _____ , _____ .

CHAIRMAN

DIRECTOR

COUNTY TREASURER'S CERTIFICATE

I HEREBY CERTIFY THAT THE RECORDS OF MY OFFICE SHOW NO TAXES ARE DUE OR DELINQUENT UPON THE PROPERTY IN THE LEGAL DESCRIPTION

ON THIS PLAT AS OF THIS _____ DAY OF _____ , _____.

ADAMS COUNTY TREASURER

REGISTER OF DEEDS CERTIFICATE

STATE OF NEBRASKA }
COUNTY OF ADAMS } SS

THIS IS TO CERTIFY THAT THIS INSTRUMENT WAS FILED FOR RECORD IN THE REGISTER OF DEEDS OFFICE OF ADAMS COUNTY, NEBRASKA

DATE: _____ TIME: _____ INSTRUMENT NO.: _____

REGISTER OF DEEDS

CITY TREASURER'S CERTIFICATE

I HEREBY CERTIFY THAT THE RECORDS OF MY OFFICE SHOW NO SPECIAL ASSESSMENTS ARE DELINQUENT UPON THE PROPERTY DESCRIBED IN THE LEGAL DESCRIPTION ON THIS PLAT.

CITY OF HASTINGS TREASURER

MAYOR AND CITY COUNCIL ACTION

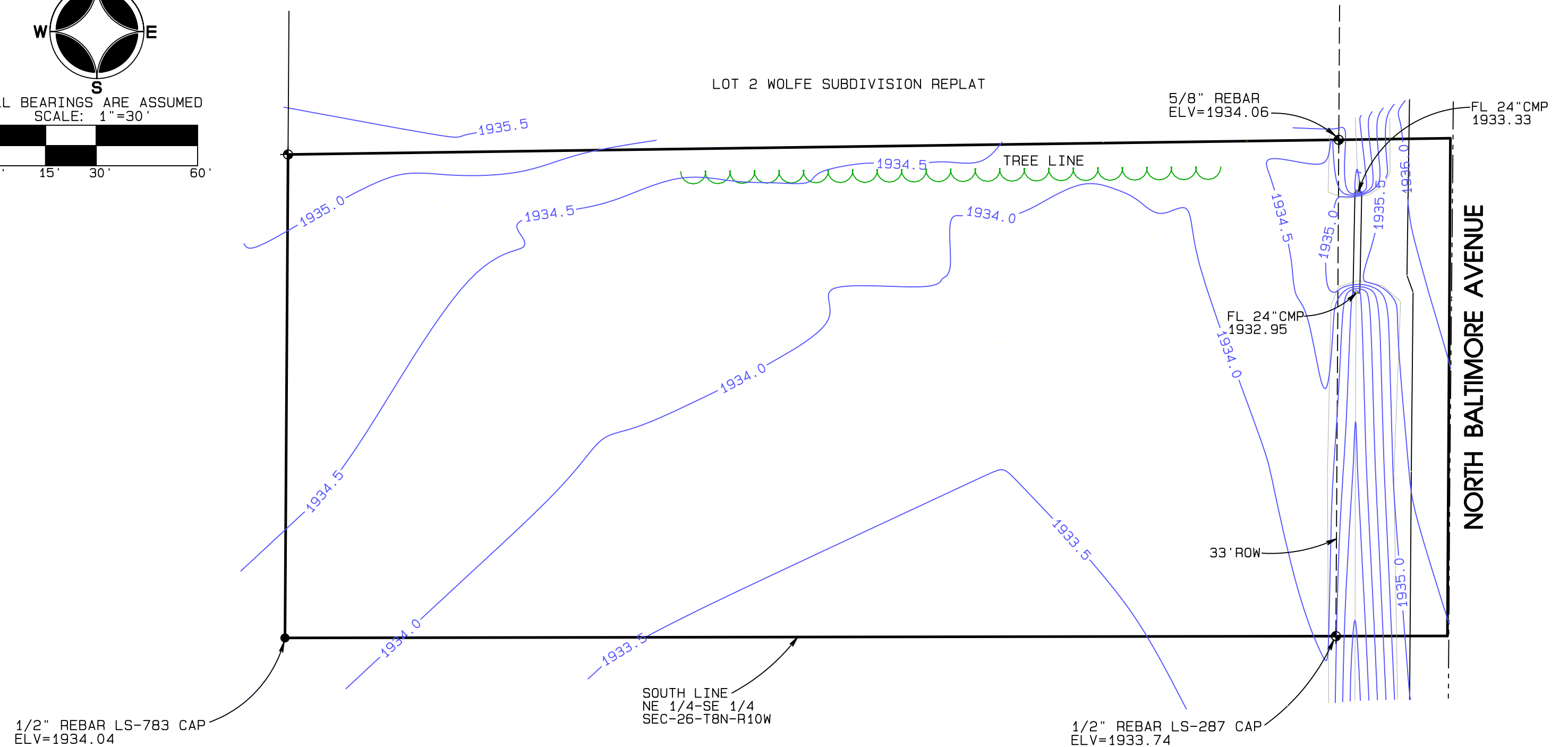
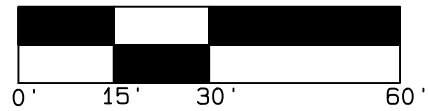
THIS PLAT OF O'KEEFFE 2ND SUBDIVISION, A SUBDIVISION WITHIN THE EXTRATERRITORIAL JURISDICTION OF THE CITY OF HASTINGS, ADAMS COUNTY, NEBRASKA, IS

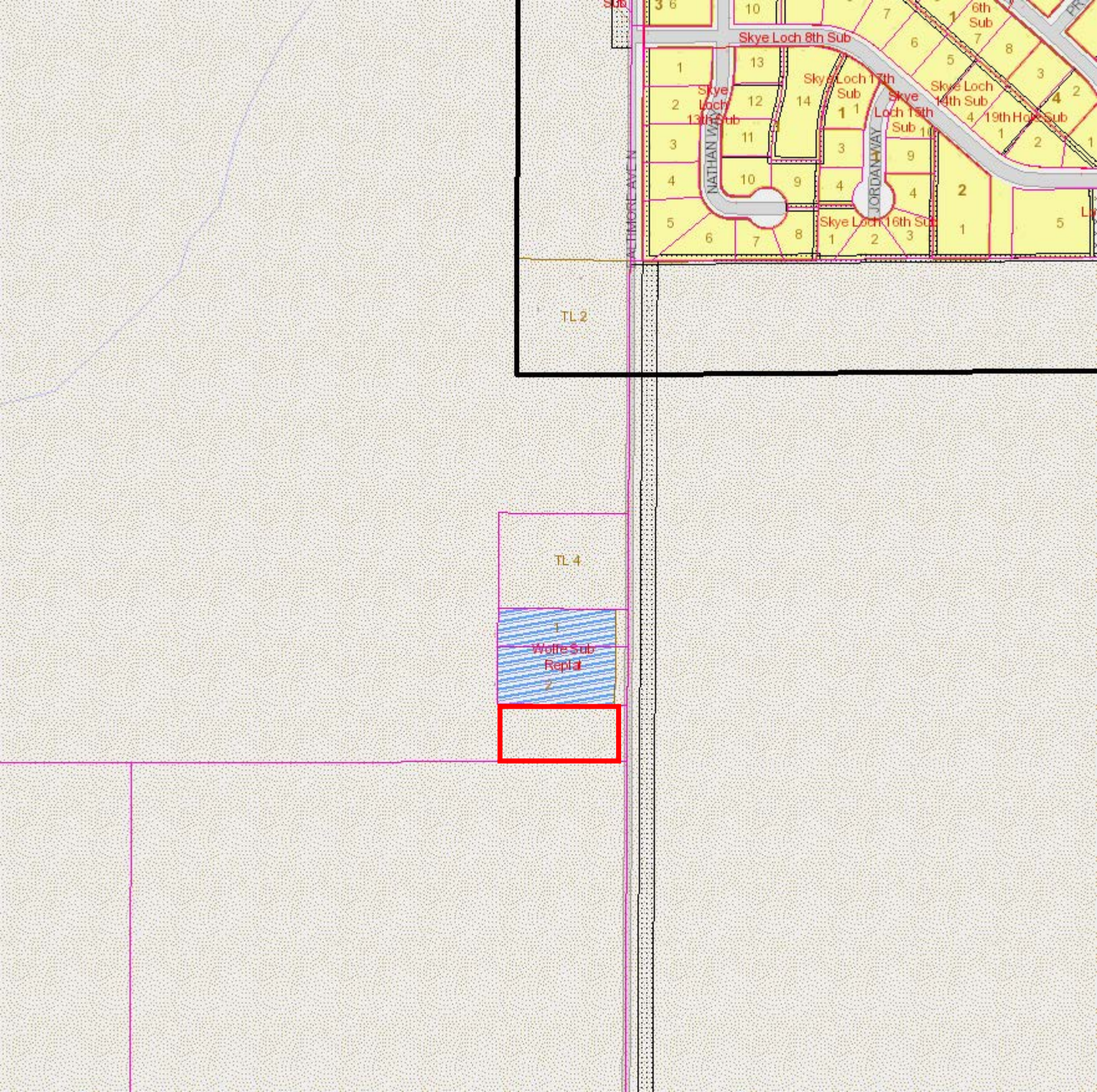
HEREBY_____, DATED THIS _____ DAY OF _____ , _____.

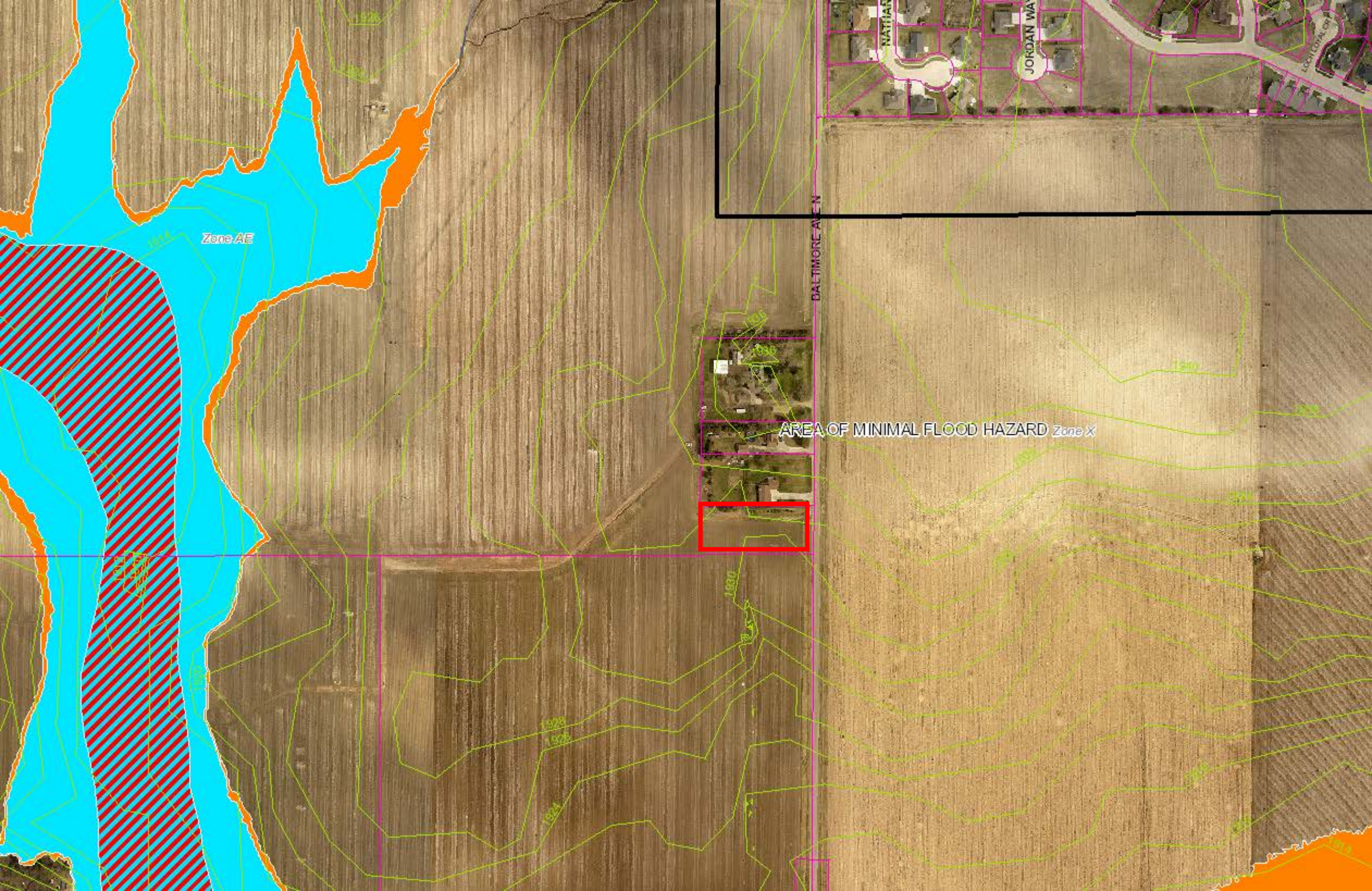
MAYOR

CITY CLERK

NAVD 1988 ELEVATIONS







Department: Development Services
Staff Contact: Lisa Parnell-Rowe
Planning Commission Meeting Date: 3/16/2021
File No: 2021-014
Prepared By: Emilia Kienbaum, Administrative Assistant

AGENDA ITEM SUMMARY SHEET

Description of Item:

Preliminary Plat for Theatre District Subdivision, commonly addressed 3101 W. 12th Street

Names of People/Business affected by this action:

The applicant, the citizens of the City of Hastings and the County.

Why Planning Commission action is required:

Neb. Rev. Stat. 19-929 states that city council shall not take final action on subdivision development matters without the recommendation of the Planning Commission.

Type of action requested:

Motion

Suggested motion:

Motion to recommend approval of preliminary plat for Theatre District Subdivision.

Deadlines associated with action:

This item for preliminary plat approval is scheduled for consideration at the April 12, 2021 regular meeting of City Council.

Department head comments:

This subdivision is a replat of a tract of land consisting of all of Block 9, Imperial Village Addition and Lot 1, Imperial Theatre Subdivision. Theatre District, LLC has purchased this land and will be utilizing this area for a mixed-use development to include both commercial and residential properties. This project will be done in phases and so this plat is being done to allow for eventually selling off lots for development in the future where there may be interest for purchasing outlying lots. The plan modification for tax increment financing (TIF) was approved December 14, 2020 by City Council. The project plan is to repurpose and remodel the remaining K-Mart portion of the old mall for an indoor recreational facility, construct 2 multi-family structures geared at living for 55 and older, and the old mall theatre building will also be repurposed and remodeled back to its original use as a theatre. There are also plans for a few outlying lots to the north and east being proposed, where a variety of commercial uses are from retail to grocery in order to create a mixed neighborhood community atmosphere. Phase 1 is to include construction of the northern-most multi-family apartment building on Lot 3 of Block 1, Theatre District Subdivision,

repurposing the former K-mart building into an indoor sports facility and redeveloping the former SunMart building into a multi-tenant building for neighborhood services. Phase 2 will be for the second the southern-most multi-family apartment building on Lot 2 of Block 1 and all subsequent phases will be dependent upon pad site interests.

The intent of the Preliminary Plat is three-fold and laid out in City Code Section 38-202

(1). Below is a brief discussion of each aspect and the how the Theatre District Subdivision Preliminary plat meets this intent.

Compliance to Comprehensive Development Plan: Future Land Use for this area is Mixed Use – Community. The City of Hastings Comprehensive Plan discusses the need move away from segregating separate uses and the reliance on the automobile to travel within the community. It prescribes to encourage mixed uses where appropriate and locating services in proximity of neighborhoods and people as well as the reuse of land in older areas of town. The concept that has been provided to us for this redevelopment demonstrates this element very well and the uses incorporated fit the mixed use-community concept perfectly.

Compliance to Design Standards: All Planning and Community Design Standards found in Article III (38-301 to 38-304) have been incorporated. A few of these standards are not required in Preliminary plat (38-202) but are found to be required in Final Plat (38-203) requirements. These are covered in the conditions for final plat approval and also listed in the final plat checklist for developer to add.

Buildable lots Capability: All of this development is outside of floodplain areas and are considered an area of minimal flood hazard. This development is within the airport zoning space and the developers have submitted their plans to the Federal Aviation Administration (FAA) for review in Form 7460-1. Due to the zoning overlay of Planned Development District the developers will be submitting a Planned Development Plan as well. This Development Plan will not be fully processed for approvals until the recommendations from the FAA are received and these recommendations are fully considered against the local code requirements found in Section 34-217. As the platting process does not affect placement of structures Staff has determined that these case actions can be accomplished without these recommendations. Section 34-217 (5) (a) provides guidance for this assessment. The Planned Development Overlay should allow for some flexibility that may be needed to rearrange or approve potential deviations that would be necessary to mitigate when it comes time to assess FAA recommendations to the existing requirements of airport zoning. To be clear, these deviations will NOT be to the airport zoning requirements, but to any of the allowable variations and departures allowable in a Planned District as spelled out separately for residential and commercial developments (note: some of these vary) in sections 34-215 (3) and (4). In other words, should there need to be adjustments to fit the buildings to lots established in this plat the planned district overlay will provide allowance for departures including but not limited to: 1) buildings may be constructed on platted tracts which are smaller than the minimum lot size requirements where other adjacent permanent open space is provided; 2) buildings may be grouped in clusters or around courts; 3) buildings may be located closer to lot lines than otherwise permitted provided such buildings are architecturally suitable for such a relationship to adjoining buildings and property.

Meeting Existing / Proposed Zoning Regulations: The base zoning district for this subdivision is C-3, Commercial Business District. This base district allows outright as permitted uses for the multi-family dwellings, a large array of service, commercial and retail uses and conditionally allows for many of the recreation, assembly and entertainment uses proposed. Additionally, though the Base C-3 Commercial Business District will in general need to comply to these regulations in the way of height and bulk of buildings, the amount of light, air and open space, and the parking and loading requirements all the deviations listed in the previous “building lot capability” discussion (above) will also be available for this development to utilize so long as it can be demonstrated as suitable to surrounding area. Further, the uses permitted and the performance standards shall be the same as the base district as well; however, that the applicant, when applying for the Planned Development Plan may voluntarily limit the plan as to buildings, improvements and use thereof.

In summary, the Development Department and Plat Track review teams (to include County officials) have reviewed this preliminary plat. The applicant has provided all the necessary submittal documentation (i.e., Grading & Drainage Plan, Landscape Plan, Public Road Plan & Profile), as well as additional plans to demonstrate all the submittal requirements required in City Code Section 38-202 (2) more accurately. All recommendations to the extent necessary to approve the Preliminary Plat have been satisfactorily mitigated with the conditions established as part of the Staff Recommendation for final plat approval.

Recommendation:

Staff recommends Planning Commission motion to recommend approval to City Council for this Preliminary Plat with the following conditions approval:

1. All pending property taxes will be paid prior to signing Preliminary Plat.
2. Landscape Plan will be finalized with Final Plat and species that are native and can survive our local climate in accordance with the approved species list will be included. All street trees will also be reviewed and approved by the City Parks and Recreation Department. Additionally, incorporation of native vegetation, where needed, to promote infiltration and storm-sewer water quality with BMPs should also be incorporated into this plan.
3. Four (4') feet sidewalks to the east side of Theatre Drive and eight (8') trail way to the west side of Theatre Drive will be required to be shown in the Final Plat. The trails will be part of the public ROW.
4. Drainage Study, Grading and Drainage Plan will continue to be discussed with Civil Engineer and must be fully approved and finalized before Final Plat is completed.
5. Stormwater Post Construction Maintenance Agreement must be approved and finalized before Final Plat is completed.
6. Applicant must disclose and include areas for all lienholders to sign the Final Plat.



Permit #: 21014

Permit Date: 02/23/21

Permit Type: Preliminary Plat

Title: Theatre Development District Preliminary Plat

Site Address: 3101 West 12th Street

Owner Name:

Owner Address:

City State Zip:

Owner Phone:

Owner Email:

Applicant Name: Tom Huston

Applicant Address: 9200 Andermatt Drive, Suite A

City, State, Zip: Lincoln, NE 68526

Phone Number: 402-488-1666 Ext, 118

Applicant Email: thuston@perryreid.com

Proposed Use: Mixed-Use

Description: Redevelopment of the former Imperial Mall into the Theatre District

Project Cost: 0

Square Feet: 0

Within City Limits: Yes

Current Zoning: C-3, General Business

Current Zoning Explained:

Proposed Zoning: C-3, General Business

Conditions:

Conditions Defined:

1st PN & Agenda Send By (11:30):

1st PN & Agenda Due Date:

1st PN & Agenda Sent:

2nd PN & Agenda Send By (11:30):

2nd PN & Agenda Due Date:

2nd PN & Agenda Sent:

Sign / Website Posting - Post By:

Sign / Website Posting - Posted:

APO Letter - Send By:

APO Letter - Sent:

PC Approval - Date Approved:

PC Outcome Letter - Due: 03/17/2021

PC Outcome - Completed:

CRA Approval - Meeting Date:

CRA Approval - Approved:

CC Packet - Goal Load Date: 03/15/2021

CC Packet - Due Date: 03/16/2021

CC Packet - Completed:

CC Out/Admin Due Date: 02/23/2021

CC Out/Admin - Completed:

Status: Open

Assigned To: Lisa Parnell-Rowe

Property

Parcel #	Address	Legal Description	Owner Name	Owner Phone	Zoning
010013610	3101 W 12TH ST		THEATRE DISTRICT LLC		

Inspections

Date	Inspection Type	Description	Scheduled Date	Completed Date	Inspector	Status
02/23/2021	City Council Meeting	Fast-track to next City Council	03/22/2021		Lisa Parnell-Rowe	Open
02/23/2021	Planning Commission Meeting		03/16/2021		Lisa Parnell-Rowe	Open

Uploaded Files

Date	File Name
02/23/2021	27c201c1f9784aac63621ebcaaac00a_preliminary_plat_for_theatre_district_addition_-_submittal_checklist.pdf
02/23/2021	37333d6463da5e922dceb10de61e6246_preliminary_plat_for_theatre_district_addition_sheet_4_-_public_road_p_p.pdf
02/23/2021	9535c95c01dc660c73a014c19dec2055_preliminary_plat_for_theatre_district_addition_sheet_5_-_landscape_plan.pdf
02/23/2021	8bd1171bd4e5c457874d52a39941d83f_preliminary_plat_for_theatre_district_addition_-_drainage_study_02_19_2021.pdf
02/23/2021	5a9ce4e3bea61de22e2f9eccbbf6686a_preliminary_plat_for_theatre_district_addition_sheet_1_-_preliminary_plat.pdf
02/23/2021	a96f492c99cdb5584073e72bb87f36b2_preliminary_plat_for_theatre_district_addition_sheet_2_-_site_utility_plan.pdf
02/23/2021	9af83510c8f48c624c1ad5da54380def_preliminary_plat_for_theatre_district_addition_sheet_3_-_grading_drainage_plan.pdf
02/23/2021	a77ee3b755f337536988c067242ea4a3_intent_letter-_preliminary_plat_for_theatre_district_addition.pdf
02/23/2021	602661616778298b54c86d0648e6ea96_title_certificate_issued_by_charter_title_company.pdf

City of Hastings

220 N. Hastings Avenue

Hastings NE 68901

Payee: PERRY REID

Date: 3/2/2021 Time: 10:25 AM

Receipt Number: DS1 / 90882

Clerk: EMILIA

ITEM	REFERENCE	AMOUNT
ZONE	THEA DIS	
Zoning Fees		300.00
ZONE	THEA DIS	
Zoning Fees		240.00
Total:		540.00
assVISA 7742		540.00
Change:		0.00



PERRY REID PROPERTIES

February 19, 2021

Lisa R. Parnell-Rowe
Director of Development Services
220 North Hastings Avenue
Hastings, NE 68901
LParnell-Rowe@cityofhastings.org

RE: Preliminary Plat for Theatre District Addition

Dear Ms. Parnell-Rowe:

I serve as general counsel for Perry Reid Properties- Management, LLC which is affiliated with Theatre District, LLC, owner of the former Imperial Mall located at the intersection of 12th Street and Marian Road in Hastings. I am pleased to submit the Application and Checklist for the Preliminary Plat of Theatre District Addition. This letter shall serve as the Intent Letter for the Preliminary Plat.

- A. **Purpose of Subdivision.** The former Imperial Mall site is comprised of one legal lot of record which impedes the ability to convert the land use to a mixed-use development. That status also impedes the ability to bring differing types of financing to the project. Thus, the purpose of the subdivision is to permit different ownership for the various planned uses and to permit a variety of development financing.
- B. **Brief Description of the Tract.** The former Imperial Mall parcel contains approximately 37 acres. The proposed subdivision will create 12 parcels which will be capable of separate ownership to facilitate the mixed-use objective of the redevelopment of this site.
- C. **Proposed Structures:** Concurrent to this Preliminary Plat submittal, or in the near future, the applicant will also be seeking to amend the Planned Development permit for this site seeking to approve the

proposed uses identified in the Site Plan. The proposed site plan demonstrates the intent to retain several structures containing approximately 137,000 square feet. The site plan also depicts the intent to develop up to 80,000 square feet of new structures as part of the Mixed-Use Development. In addition, the site plan depicts the two proposed multifamily structures each containing approximately 75 dwelling units or an aggregate of 150 dwelling units in approximately 165,000 total square feet. The Project Narrative submitted as part of the PD Amendment also sets forth the development phasing plan and the parking plan.

- D. **Infrastructure.** Theatre District LLC intends to install water lines, sanitary sewer lines and construct the proposed Theatre District Drive as part of the Phase I development. Theatre District LLC will likely utilize a combination of tax increment financing and owner equity/ construction financing for the installation of infrastructure.
- E. **Proposed Variances.** Theatre District LLC does not contemplate the need to request any variances from the Zoning code as part of this submittal.

Please let me know if there are questions.

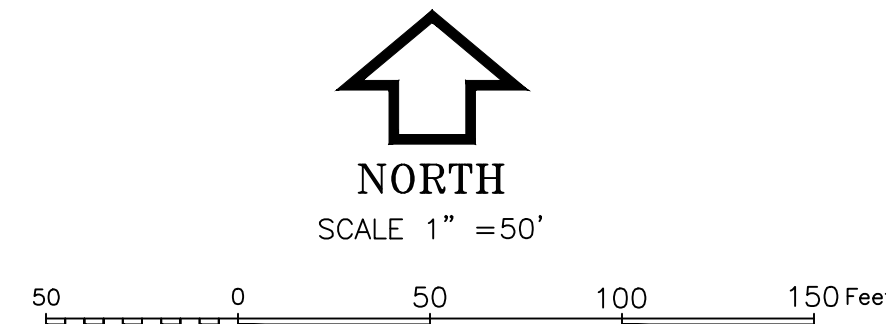


Tom Huston
General Counsel

PRELIMINARY PLAT
THEATRE DISTRICT SUBDIVISION

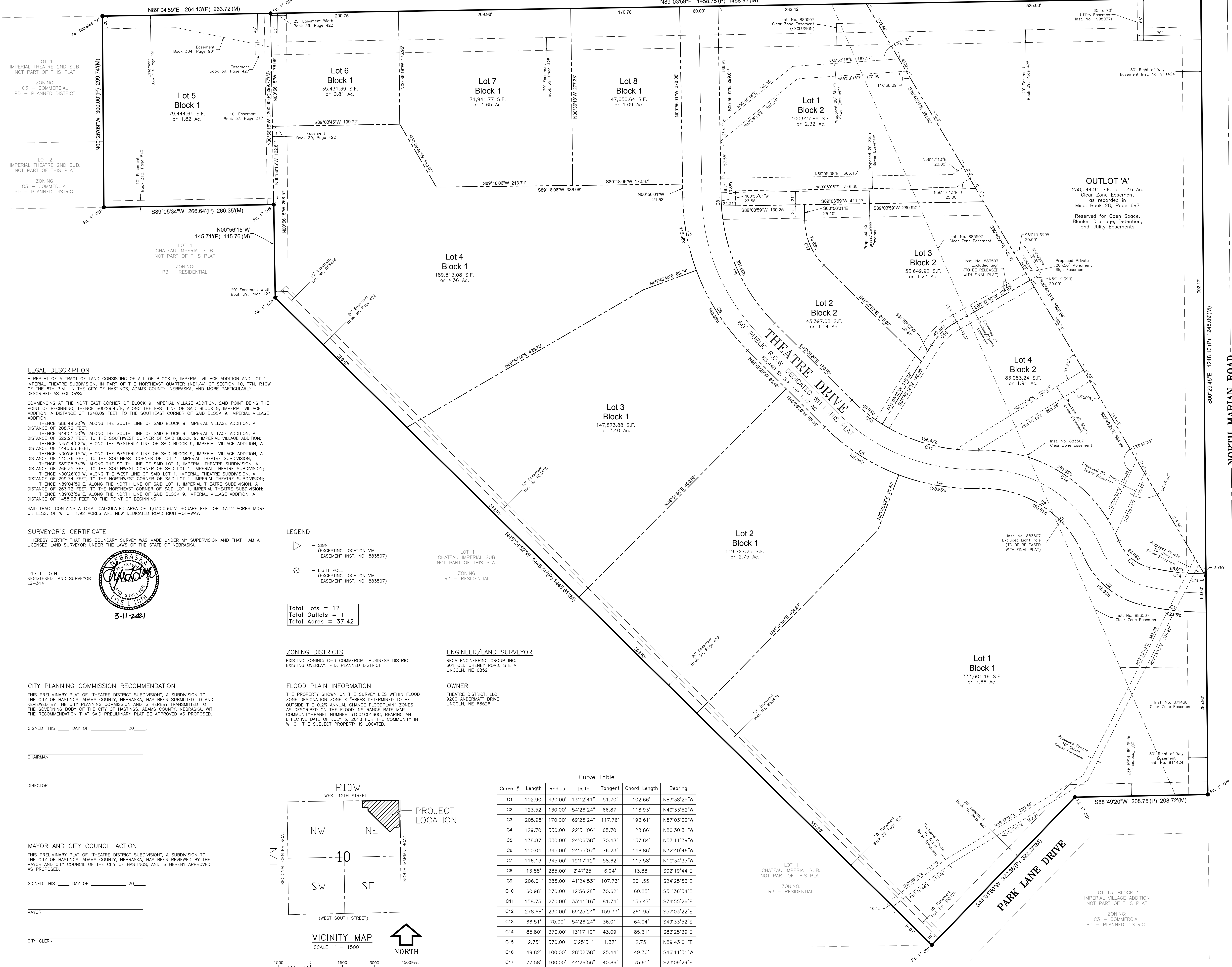
A REPLAT OF ALL OF BLOCK 9, IMPERIAL VILLAGE ADDITION AND LOT 1, IMPERIAL THEATRE SUBDIVISION,
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IN THE CITY OF HASTINGS, ADAMS COUNTY, NEBRASKA
SAID REPLAT TO BE HEREFTER KNOWN AS
"THEATRE DISTRICT SUBDIVISION"

WEST 12TH STREET



PROJECT
201055
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LINCOLN, NEBRASKA 68512
(402) 484.7342
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ARCHITECTURE
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PP SUBMIT 02/23/21
CITY COMMENTS 03/10/21



THEATRE DISTRICT SUBDIVISION
PRELIMINARY PLAT
W. 12TH ST. & N. MARIAN RD.
HASTINGS, NEBRASKA

SHEET INDEX
PRELIMINARY PLAT 1
SITE & UTILITY PLAN 2
GRADING & DRAINAGE PLAN 3
PUBLIC ROAD PLAN & PROFILE 4
LANDSCAPE PLAN 5

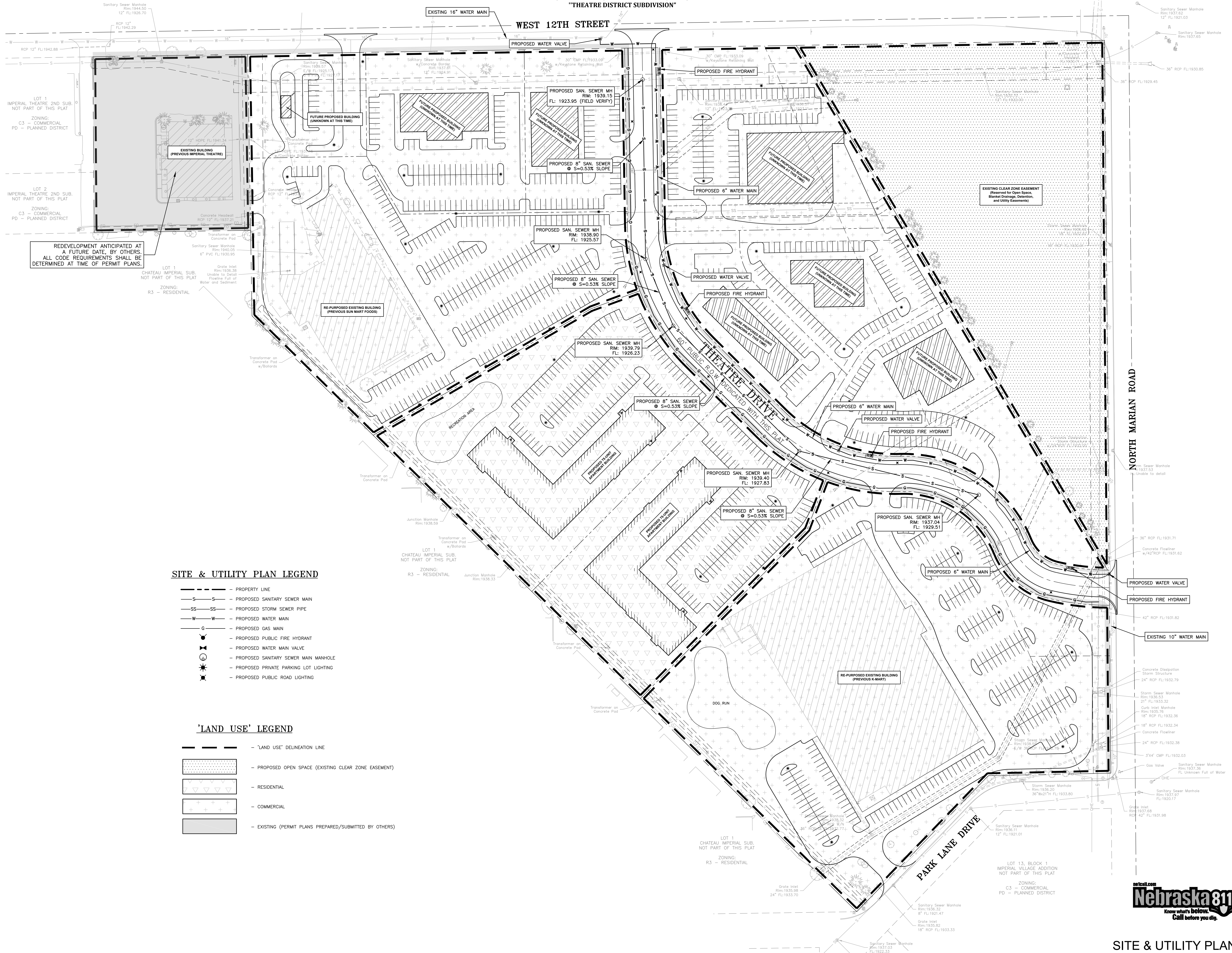
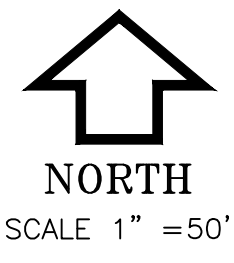


PRELIMINARY PLAT

SHEET NO.
1 of 5

PRELIMINARY PLAT
THEATRE DISTRICT SUBDIVISION

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SITE & UTILITY PLAN LEGEND

- PROPERTY LINE
- S-S- PROPOSED SANITARY SEWER MAIN
- SS-SS- PROPOSED STORM SEWER PIPE
- W-W- PROPOSED WATER MAIN
- G-G- PROPOSED GAS MAIN
- ☉ PROPOSED PUBLIC FIRE HYDRANT
- ⊗ PROPOSED WATER MAIN VALVE
- ⊗ PROPOSED SANITARY SEWER MAIN MANHOLE
- ★ PROPOSED PRIVATE PARKING LOT LIGHTING
- ✱ PROPOSED PUBLIC ROAD LIGHTING

'LAND USE' LEGEND

- 'LAND USE' DELINEATION LINE
- [Pattern] PROPOSED OPEN SPACE (EXISTING CLEAR ZONE EASEMENT)
- [Pattern] RESIDENTIAL
- [Pattern] COMMERCIAL
- [Pattern] EXISTING (PERMIT PLANS PREPARED/SUBMITTED BY OTHERS)

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HASTINGS, NEBRASKA

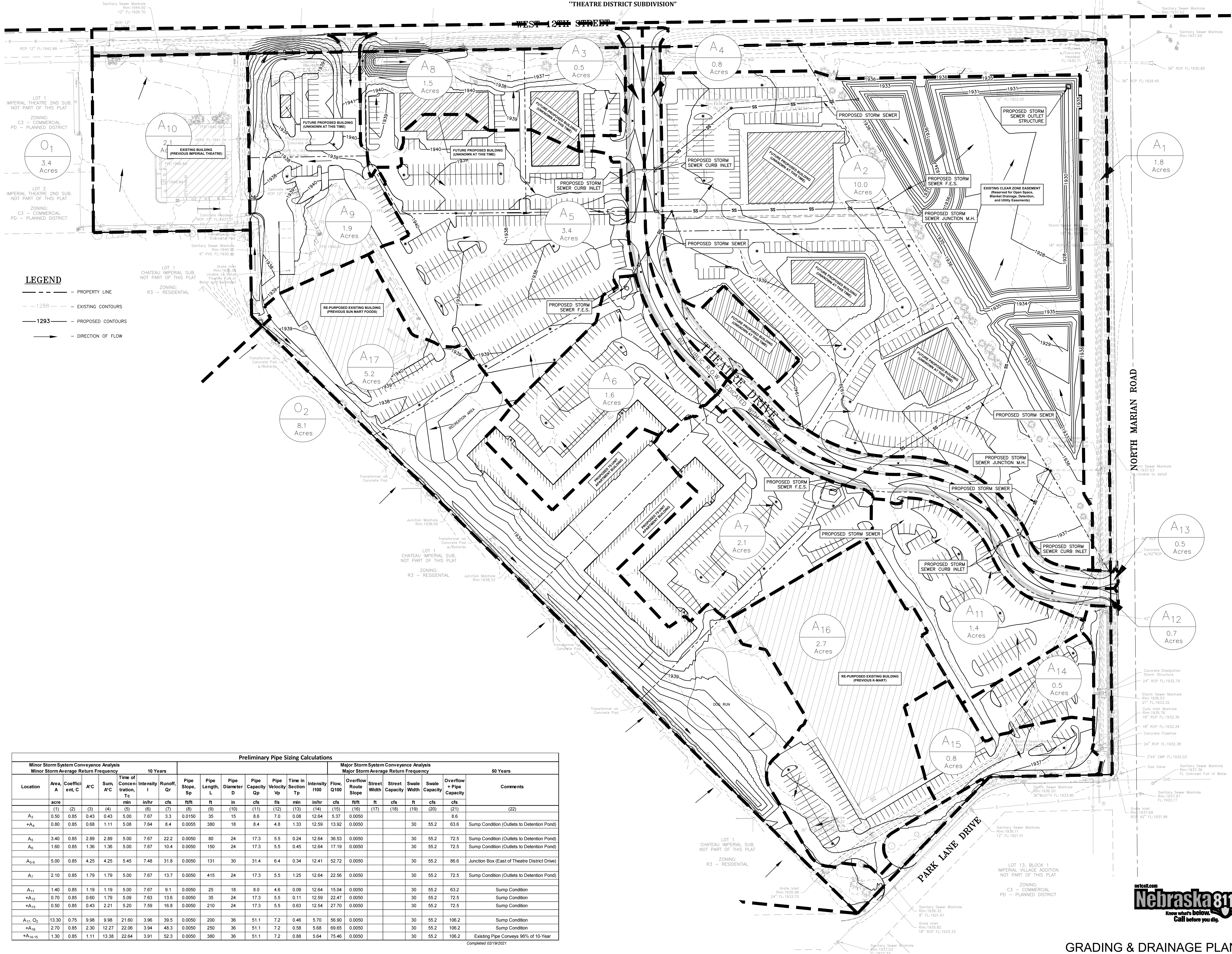
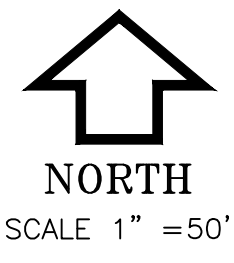


SITE & UTILITY PLAN

SHEET NO.
2 of 5

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- LEGEND**
- PROPERTY LINE
 - - - 1288 --- EXISTING CONTOURS
 - 1293 — PROPOSED CONTOURS
 - DIRECTION OF FLOW

Preliminary Pipe Sizing Calculations																							
Minor Storm System Conveyance Analysis												Major Storm System Conveyance Analysis											
Minor Storm Average Return Frequency												Major Storm Average Return Frequency											
Location	Area, A	Coeffi- ent, C	A'C	Sum A'C	10 Years				Pipe Slope, Sp	Pipe Length, L	Pipe Diameter D	Pipe Capacity Qp	Pipe Velocity Vp	Time in Section Tp	Intensity I100	Flow, Q100	Overflow Route Slope	Street Width	Street Capacity	Swale Width	Swale Capacity	Overflow + Pipe Capacity	Comments
					Intensity I	Runoff, Qr	Pipe Length, L	Pipe Diameter D															
					Time of Concentration, Tc	Intensity I	Runoff, Qr	Pipe Length, L															
acre	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	
A3	0.50	0.85	0.43	0.43	5.00	7.67	3.3	0.0150	35	15	8.6	7.0	0.08	12.64	5.37	0.0050						8.6	
+A4	0.80	0.85	0.68	1.11	5.08	7.64	8.4	0.0055	380	18	8.4	4.8	1.33	12.59	13.92	0.0050			30	55.2	63.6		Sump Condition (Outlets to Detention Pond)
A5	3.40	0.85	2.89	2.89	5.00	7.67	22.2	0.0050	80	24	17.3	5.5	0.24	12.64	36.53	0.0050			30	55.2	72.5		Sump Condition (Outlets to Detention Pond)
A6	1.60	0.85	1.36	1.36	5.00	7.67	10.4	0.0050	150	24	17.3	5.5	0.45	12.64	17.19	0.0050			30	55.2	72.5		Sump Condition (Outlets to Detention Pond)
A5,6	5.00	0.85	4.25	4.25	5.45	7.48	31.8	0.0050	131	30	31.4	6.4	0.34	12.41	52.72	0.0050			30	55.2	86.6		Junction Box (East of Theatre District Drive)
A7	2.10	0.85	1.79	1.79	5.00	7.67	13.7	0.0050	415	24	17.3	5.5	1.25	12.64	22.56	0.0050			30	55.2	72.5		Sump Condition (Outlets to Detention Pond)
A11	1.40	0.85	1.19	1.19	5.00	7.67	9.1	0.0050	25	18	8.0	4.6	0.09	12.64	15.04	0.0050			30	55.2	63.2		Sump Condition
+A12	0.70	0.85	0.60	1.79	5.09	7.63	13.6	0.0050	35	24	17.3	5.5	0.11	12.59	22.47	0.0050			30	55.2	72.5		Sump Condition
+A13	0.50	0.85	0.43	2.21	5.20	7.59	16.8	0.0050	210	24	17.3	5.5	0.63	12.54	27.70	0.0050			30	55.2	72.5		Sump Condition
A17, O2	13.30	0.75	9.98	9.98	21.60	3.96	39.5	0.0050	200	36	51.1	7.2	0.46	5.70	56.90	0.0050			30	55.2	106.2		Sump Condition
+A16	2.70	0.85	2.30	12.27	22.06	3.94	48.3	0.0050	250	36	51.1	7.2	0.58	5.68	69.65	0.0050			30	55.2	106.2		Sump Condition
+A14-15	1.30	0.85	1.11	13.38	22.64	3.91	52.3	0.0050	380	36	51.1	7.2	0.88	5.64	75.46	0.0050			30	55.2	106.2		Existing Pipe Conveys 96% of 10-Year

Completed 02/19/2021

PROJECT
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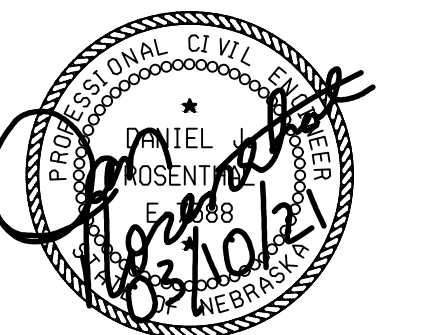
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THEATRE DISTRICT SUBDIVISION
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W. 12TH ST. & N. MARIAN RD.
HASTINGS, NEBRASKA

SHEET NO.

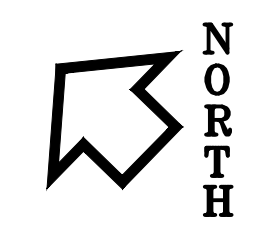
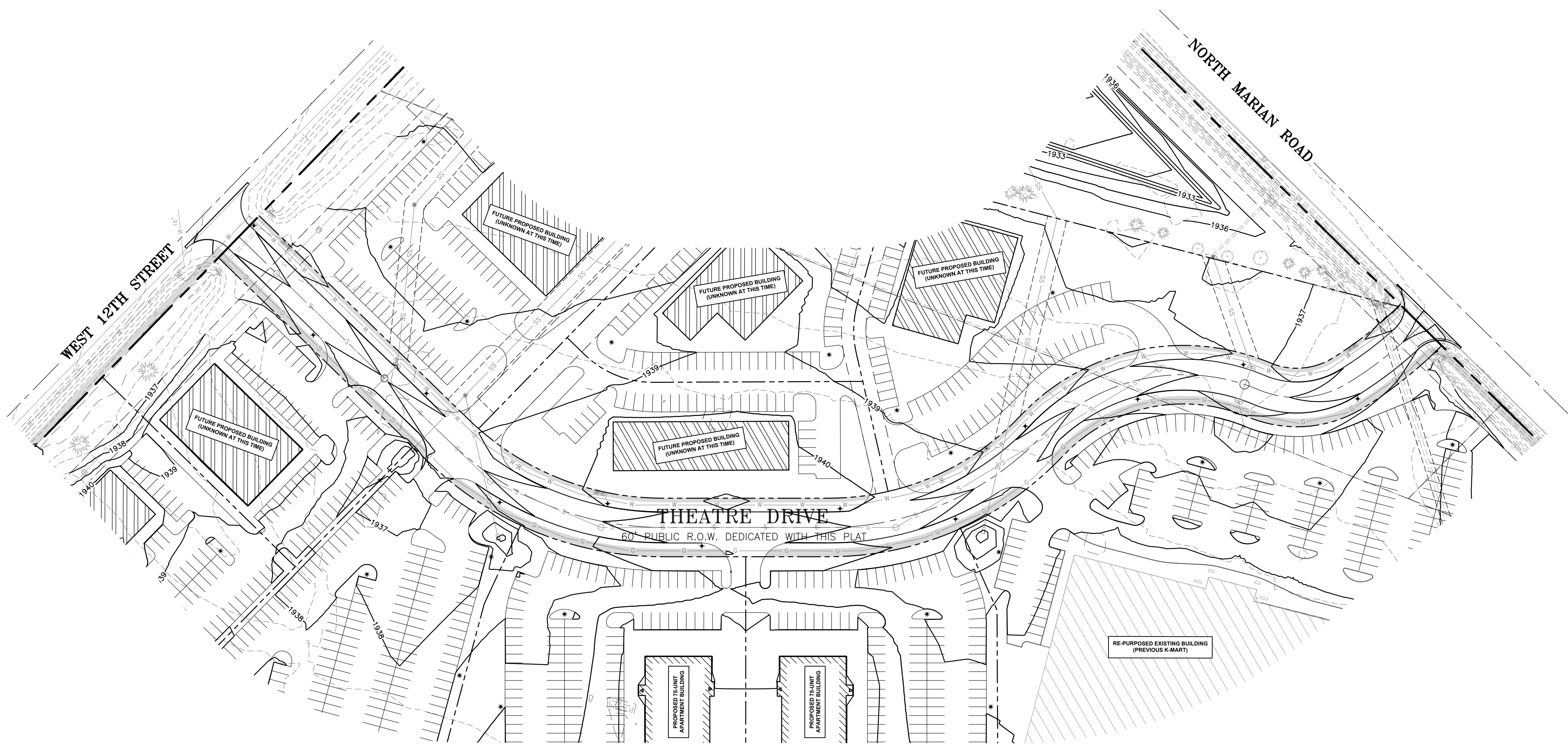
3 of 5



GRADING & DRAINAGE PLAN

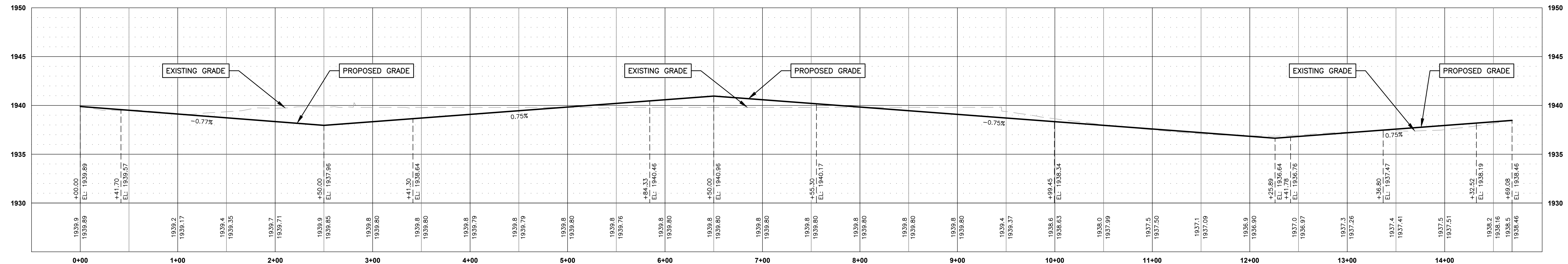
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THEATRE DISTRICT DRIVE - PROPOSED PAVING PLAN

SCALE: HORIZONTAL 1"=50'



THEATRE DISTRICT DRIVE - PROPOSED PAVING PROFILE

SCALE: HORIZONTAL 1"=50'
VERTICAL 1"=5'

PROJECT
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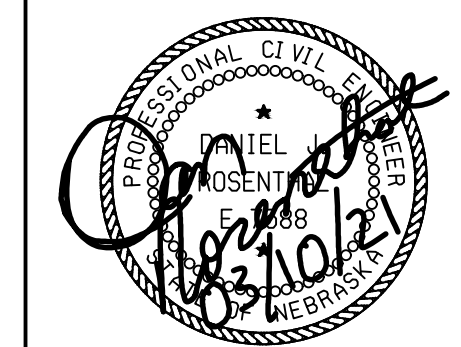
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THEATRE DISTRICT SUBDIVISION
PRELIMINARY PLAT
W. 12TH ST. & N. MARIAN RD.
HASTINGS, NEBRASKA



DRAINAGE STUDY REPORT

THEATRE DISTRICT

Hastings, Nebraska

March 10th, 2021

REGA PROJECT 201055

PREPARED FOR:

City of Hastings

PREPARED BY:

REGA ENGINEERING GROUP, INC.

LINCOLN, NEBRASKA

REGA

**ENGINEERING
GROUP, INC.**



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DRAINAGE SUMMARY

THEATRE DISTRICT DRAINAGE STUDY

PURPOSE

The primary objective of this study was to analyze pre- and post-development drainage areas for the proposed Planned District development in order to attenuate the peak post-development runoff. Lastly, the proposed district development falls under development criteria specified in Chapter 42 of the Hastings Municipal Code and will demonstrate the ability to meet these water quality requirements.

PROJECT LOCATION & DESCRIPTION

The proposed project is located to the southwest of West 12th Street and North Marian Road. The parcels, approximately 37.5 acres, were used for a retail center. Recently, the mall has been demolished. Pre-development conditions are shown in **Figure 1: Pre-development conditions for the Theatre District**. The proposed project consists of re-developing the site into 11 commercial lots and repurposing two existing buildings. The site is adjacent to townhouse and residential to the south and west, the Hastings Airport to the north of West 12th Street and agricultural ground east of North Marian Road. Half of the existing site sheet flows to the northeast corner of the property, while the west half drains to an existing concrete liner that conveys runoff along the edges of the property. Both the existing site and off-site areas drain to the existing box culvert under West 12th Street. The open ditches flow north along North Marian Road and east along West 12th Street, and both converge at the existing box culvert under West 12th Street before continuing in an open ditch along the east side of the City of Hasting's Airport.



Figure 1: Pre-development conditions for Theatre District

STUDY PROCEDURE

A hydrologic analysis was performed using HydroCAD to determine the impacts of the proposed drainage on post-construction conditions. The NRCS Method was used to model storm events and estimate hydrologic conditions for this study. This method relates runoff rates to precipitation depths, land use and topography. The peak runoff rate is determined by an empirical equation that relates the quantity of runoff from a given area to a total rainfall falling at a uniform rate on the same area. Inputs required for the NRCS method include:

- Drainage area (acres)
- Curve Number (CN)
- Time of concentration (Tc)
- Storm distribution

NRCS curve numbers, used for predicting peak runoff, are based on the various land uses and soil types as determined by the National Cooperative Soil Survey published by the United States Department of Agriculture Natural Resources Conservation Service, see **APPENDIX E** for the *USDA Web Soil Survey*. In the case of multiple land uses, a weighted average is calculated. The low curve number of 74 was used for the well vegetated open space with type C soils. The high curve number of 98 was used for interconnected parking lots and building roofs with an estimated 50% impervious area with type C/D soils. The sub basin area, land use, hydrologic soil group, curve number and time of concentration for each sub-basin were calculated and are shown below in **Table 1: Pre-development sub-basin information** and **Table 2: Post-development sub-basin information**.

Table 1: Pre-development sub-basin information

Designation	Area	Land Use	Curve Number*	Time of Concentration**
	(Acres)			(minutes)
A	37.50	Parking/Roofs & Open Space	93	30.0
Off-Site #1	3.40	Residential (1/8 Acre)	90	20.1
Off-Site #2	8.13	Residential (1/8 Acre)	90	13.5

Table 2: Post-development sub-basin information

Designation	Area	Land Use	Curve Number*	Time of Concentration**
	(Acres)			(minutes)
A ₁ , A ₈ -A ₁₇	21.00	Parking/Roofs & Open Space	90	21.6
A ₂ -A ₇	16.50	Parking/Roofs & Open Space	89	12.9
Off-Site #1	3.40	Residential (1/8 Acre)	90	20.1
Off-Site #2	8.13	Residential (1/8 Acre)	90	13.5

* Calculations for the Curve Number were calculated in HydroCAD

** Time of concentration was calculated in HydroCAD

Time of concentration was calculated using the TR-55 method, which takes into account the average basin slope and hydraulic length for each subarea. The hydraulic length is the

distance required from the most remote point in the drainage area to the catchment point. Time of concentration was calculated with HydroCAD. The maximum sheet flow distance used was 150 feet.

A type II rainfall distribution, which has a storm duration of 24 hours, was used to model the 2, 10 and 100-year storm event. The design rainfall intensity rates were from the Hastings Drainage Criteria Manual, Chapter 2, Table 2-9 and are shown below in **Table 3: City of Hastings, NE 24-hour design rainfall**.

Table 3: City of Hastings, NE 24-hour design rainfall

Frequency	24-hr Rainfall (in.)
Water Quality	0.53
2-Year	2.85
10-Year	4.16
100-Year	6.64

PRE-DEVELOPMENT RUNOFF CONDITIONS

The land was previously used for as a commercial shopping center with nearly 80% of the land comprised of impervious pavement or rooftops. The existing site had a high point and stormwater runoff was directed to the property's perimeter where it was conveyed by a concrete liner, storm sewer pipes, or an open ditch before exiting the property through a box culvert under West 12th Street. One drainage sub-basin was used to represent the property within the Planned District Development and two off-site sub-basins were used for areas contributing to the perimeter flows. These drainage sub-areas and their flow paths are illustrated in **Figure 2: Pre-development drainage plan**.

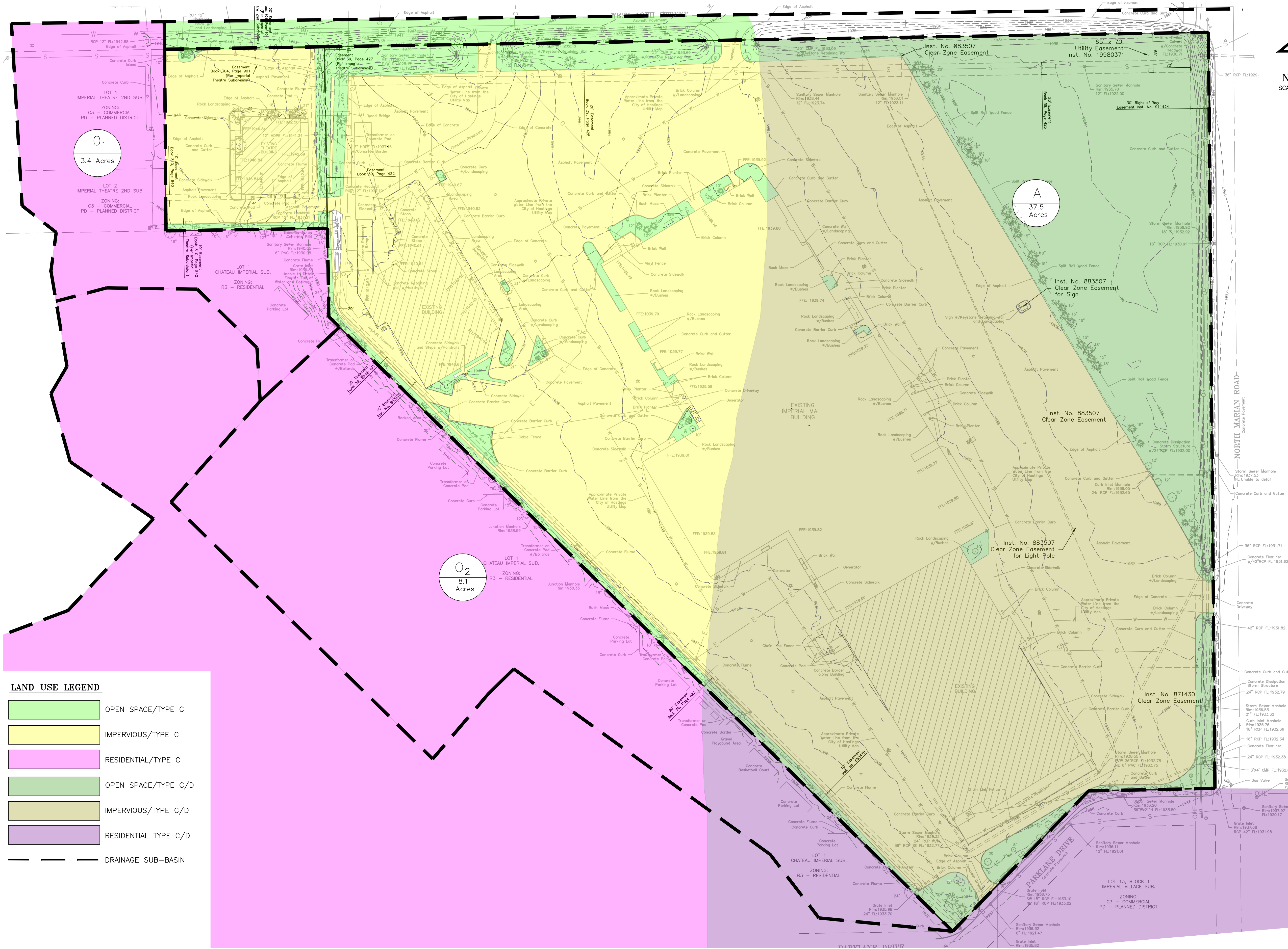
POST-DEVELOPMENT RUNOFF CONDITIONS

The post-development sub-basins is comprised of two sub-basins which can be viewed as the area draining to the proposed retention pond and the remaining areas that continue to drain to the existing open ditches along West 12th Street and North Marian Road. The rational method was used to size new or modified storm sewer pipes, ditches, and inlets, while the NRCS (formerly known as the SCS) method was used to compare the pre- and post-development runoff rates. The post development drainage areas and flow paths are illustrated in **Figure 3: Post-development drainage plan**.

HYDROCAD MODEL

The hydrographs established for the pre-development and post-development sub-basins are shown in **Appendix B: HydroCAD models**. The resulting flow rates and water surface elevations for the pre-development and post-development sub-basins and proposed retention pond are summarized in **Table 4: Hydrologic Results**.

While the proposed development has less impervious area than the existing conditions, the stormwater runoff will be more efficiently conveyed to the northeast corner of the site resulting in higher post-development runoff rates. The proposed retention and water quality pond is in the northeast corner of the site. An outlet structure will be constructed to reduce the flow during the water quality event, while also providing enough storage for a 1-foot freeboard during the 100-year storm event.



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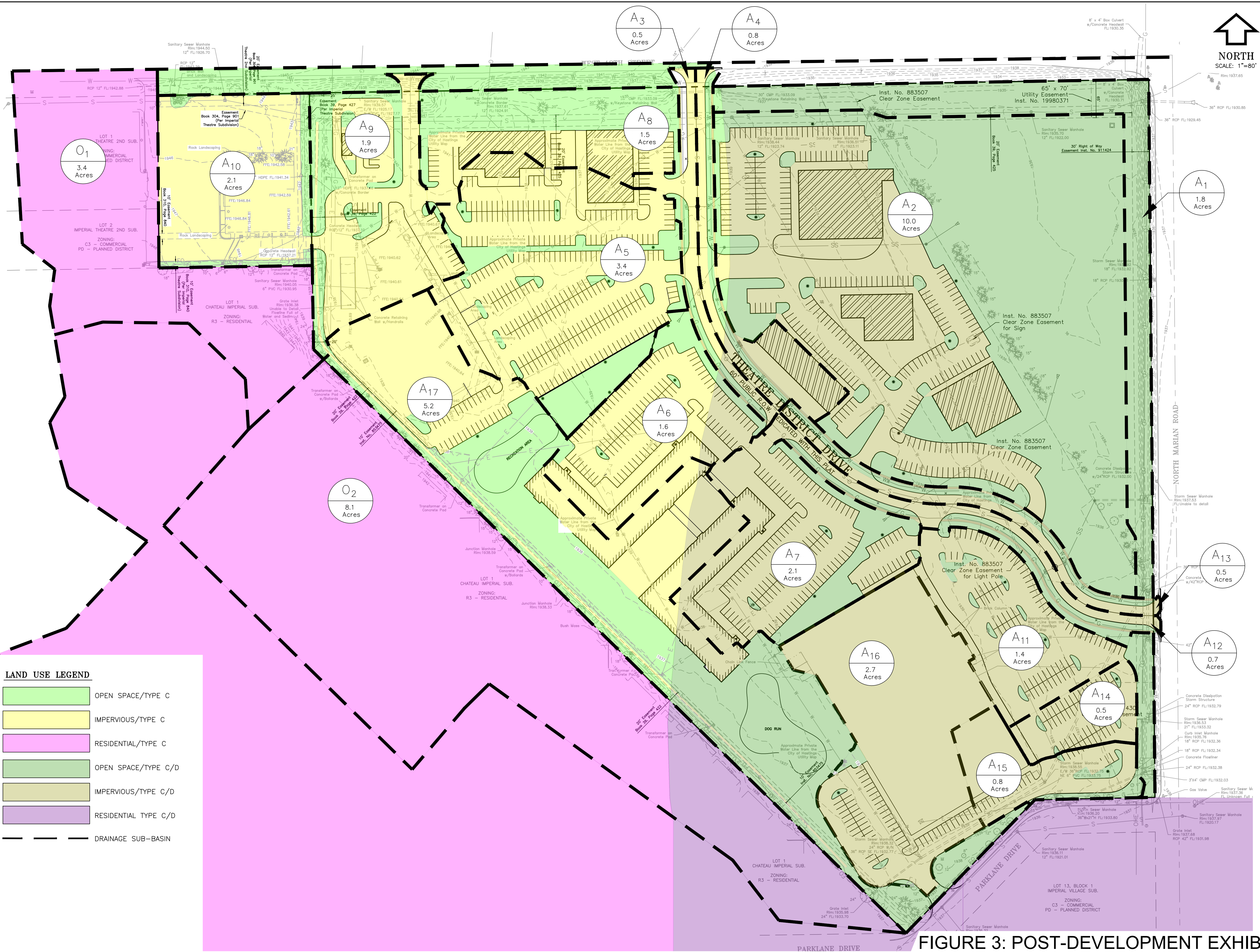
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PD SET	02/19/21

THEATRE DISTRICT
PLANNED DISTRICT DEVELOPMENT
WEST 12TH STREET & NORTH MARIAN ROAD
HASTINGS, NEBRASKA

SHEET NO.
1 of 3

FIGURE 2: PRE-DEVELOPMENT EXHIBIT



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THEATRE DISTRICT
PLANNED DISTRICT DEVELOPMENT
WEST 12TH STREET & NORTH MARIAN ROAD
HASTINGS, NEBRASKA

SHEET NO.

2 of 3

Table 4: Hydrologic Results

	Peak Runoff Rate (CFS)			Maximum Water Surface Elevation (Ft.)			
	2-Year	10-Year	100-Year	2-Year	10-Year	100-Year	Top of Pond
Pre-Development							
A - generated	67.52	105.90	177.60	---	---	---	---
Off-Site #1 - generated	6.90	11.28	19.55	---	---	---	---
Off-Site #2 - generated	20.06	32.67	56.38	---	---	---	---
Overall Pre-Development (PRE)	83.16	131.97	223.12				
Post-Development							
A ₂ -A ₇ - generated	46.13	75.08	129.52	---	---	---	---
A ₂ -A ₇ - attenuated	1.85	5.63	17.58	1933.16	1933.57	1934.26	1935.50
A ₁ , A ₈ -A ₁₇ - generated	35.75	59.44	104.33	---	---	---	---
Off-Site #1 - generated	6.90	11.28	19.55	---	---	---	---
Off-Site #2 - generated	20.06	32.67	56.38	---	---	---	---
Overall Post-Development (POST)	61.02	100.71	183.35				

In addition to the flow rates from HydroCAD, it was desirable to see what the output velocity would be from the 30" RCP daylighting from the retention pond to the existing ditch. The outlet velocity was modeled in (2) different softwares to double-check from scour potential. The resulting velocities for the 2, 10, and 100-year storm events are shown in **Table 5: Storm Sewer Outlet Structure Velocity**. Results of the analysis show the proposed pipe velocities are below 10 ft/second which is the regulated velocity for requiring scour measures.

Table 5: Storm Sewer Outlet Structure Velocity

Storm Water Event	30" RCP Velocity from HydroCAD (ft/sec)	30" RCP Velocity from HY-8 (ft/sec)
2-Year	4.9	5.0
10-Year	6.9	6.5
100-Year	9.5	8.5

WATER QUALITY

The City of Hastings Drainage Manual was referenced for water quality calculations. Water Quality for this project was separated into two different categories (Flow Rate and Volume-Based). The first category was based on discharge rates from Table 9-2 of the Hastings Drainage Manual. Table 9-2 describes how water quality can be achieved for impervious surface areas of 6 Acres or less. This methodology was applied to the Vegetative Filter Strips, Grass Swale and Area Inlet Filter.

Sub-basins A8 and A17 utilize the previously mentioned vegetative buffers with native grasses to help slow the sheet flow runoff from the proposed apartments and small parking lots. These areas will receive a native seed mix and shall have a maximum slope of 6%. The impervious areas for each of the sub-basins were determined and applied to the Central

Region from Table 9-2. For example, Sub-basin A-8 has an impervious area of 1.0 Acres, therefore from Table 9-2 the designed Water Quality Discharge rate is 0.8 cfs. This is shown below in **Table 6: Post-Construction Stormwater Management Plan** for STF 2.

The existing concrete low flow liner on the south side of the property will be removed and replaced with an 8-foot-wide native grass swale with a 6" perforated underdrain pipe. The maximum side slopes will be 4:1. Due to the proposed swale length, rock check dams will be installed every 200 feet to allow for sedimentation and ease of maintenance. Similarly, to the vegetative filter strips, the contributing drainage areas were converted to cfs.

Sub-basin A11 drains to an interior parking lot with a proposed area inlet filter. This will collect sediment and trash before discharging into the ditch along North Marian Road. The area inlet filter proposed is a Flexstorm FX Standard-S. The specification of this has been added to the drainage report. The proposed vegetative filter strip, area inlet filter, and grass swales are BMP's designed from a flow rate. **Table 6: Post-Construction Stormwater Management Plan** summarizes the planned best management practices (BMP's) and correlates the contributing area from each affected sub-basin.

Table 6: Post-Construction Stormwater Management Plan

STF Identification Number	STF Type	STF Location (Lat/Long)	Drainage Area (Acres)		Impervious Area (Acres)	Design WQCV (CF) or QWQ (CFS)	WQCV (CF) or QWQ (CFS) Provided
1	Vegetative Filter Strip	40°35'38.52"/98°25'25.01"	2.6	[A ₁₇]	0.7	0.6	N/A
2	Vegetative Filter Strip	40°35'48.20"/98°25'27.30"	1.0	[A ₈]	1.0	0.8	N/A
3	Grass Swale	40°35'45.48"/98°25'33.55"	4.0	[A ₉₋₁₀]	3.6	3.0	3.0
4	Grass Swale	40°35'40.82"/98°25'28.82"	10.6	[A ₁₇ & O ₂]	6.0	5.1	5.1
5	Area Inlet Filter	40°35'40.06"/98°25'17.44"	1.4	[A ₁₁]	1.4	1.2	N/A
6	Extended Dry Basin	40°35'16.49"/98°25'17.49"	18.4	[A ₂₋₇]	11.0	21,390	21,484

Table 7: Stormwater Treatment Facilities (STF) #3 & #4, provides the design details for the two proposed grass swales for the water quality event, 2-year, and 100-year storm events. The intention is to design the swale to have a water quality control velocity less than 1 foot per second.

Table 7: Stormwater Treatment Facilities (STF) #3 & #4

STF #3 [A ₉₋₁₀]			STF #4 [A ₁₇ & O ₂]		
Bottom Width, W _s	8	ft	Bottom Width, W _s	8	ft
Manning's Roughness, n	0.24		Manning's Roughness, n	0.24	
Channel Bottom Slope, S	0.005	ft/ft	Channel Bottom Slope, S	0.005	ft/ft
Side Slope, z (horizontal:vertical) z:1	4		Side Slope, z (horizontal:vertical) z:1	4	
Flow Rate, WQCV	3.00	cfs	Flow Rate, WQCV	5.10	cfs
Flow Rate, 2-Year	14.39	cfs	Flow Rate, 2-Year	24.16	cfs
Flow Rate, 100-Year	37.12	cfs	Flow Rate, 100-Year	70.61	cfs
Flow Depth, WQCV	0.68	ft	Flow Depth, WQCV	0.82	ft
Flow Depth, 2-Year	1.16	ft	Flow Depth, 2-Year	1.37	ft
Flow Depth, 100-Year	1.57	ft	Flow Depth, 100-Year	1.89	ft
Flow Area, WQCV	7.29	ft ²	Flow Area, WQCV	9.25	ft ²
Flow Area, 2-Year	14.66	ft ²	Flow Area, 2-Year	18.47	ft ²
Flow Area, 100-Year	22.42	ft ²	Flow Area, 100-Year	29.41	ft ²
Velocity, WQCV	0.41	ft/s	Velocity, WQCV	0.55	ft/s
Velocity, 2-Year	0.98	ft/s	Velocity, 2-Year	1.31	ft/s
Velocity, 100-Year	1.66	ft/s	Velocity, 100-Year	2.40	ft/s
Minimum Swale Length	497	ft	Minimum Swale Length	720	ft

As discussed previously, the second category for water quality was volume-based calculations. Drainage sub-basins 2-7 were modeled based on the volume-based formula found in section 9.4.4.1. Drainage sub-basins 2-7 represent a total of 17.9 acres. The retention pond is in the northeast corner of the site near the intersection of West 12th Street and North Marian Road was modeled to handle this water quality volume. During the water quality event, the pond's outlet structure slowly releases runoff through a 6" opening and a 4" slot at the top of the retention pond. This allowed the water quality to drawdown within approximately 36 hours.

Table 8: Proposed Water Quality Control Volume Table

A	Area (Acres)	17.90
P	Relevant Storm (in.)	0.53
I	% impervious of drainage area	61.22
Required Volume (cubic feet)		20,696
Design Volume (cubic feet)		21,484

The post development BMP's and retention facility are illustrated in **Figure 4: Post Construction Stormwater Management Plan (PCSMP)**.

ENVIRONMENTAL IMPACTS

The Information for Planning and Consultation (IPaC) for U.S. Fish and Wildlife Services was used to generate a preliminary list of threatened and endangered species that may be affected by the development of the parcels. There were four threatened, endangered, or candidate species in the vicinity of the project, but none were determined to have any critical habitats. More information can be found in ***APPENDIX D: ENDANGERED AND THREATENED SPECIES LIST***.

FINDINGS

The Theatre District is comprised of approximately 37.5 acres of mostly impervious surfacing, except for areas where the FAA has height restrictions. While the proposed plan significantly cuts down on the impervious surfaces, the efficiencies gained in stormwater routing required detention to attenuate the post-development's peak runoff rate to below the pre-development conditions. The existing concrete swale is being removed and replaced with a grass swale planted with native grasses and vegetative buffers intercepting site sheet flows. Furthermore, the proposed pond's outlet structure is configured to comply with the Hastings Drainage Criteria Manual's water quality requirements. The two existing ditches along West 12th Street and North Marian Road and the existing box culvert structure are not being re-developed and therefore have not been included within this study.

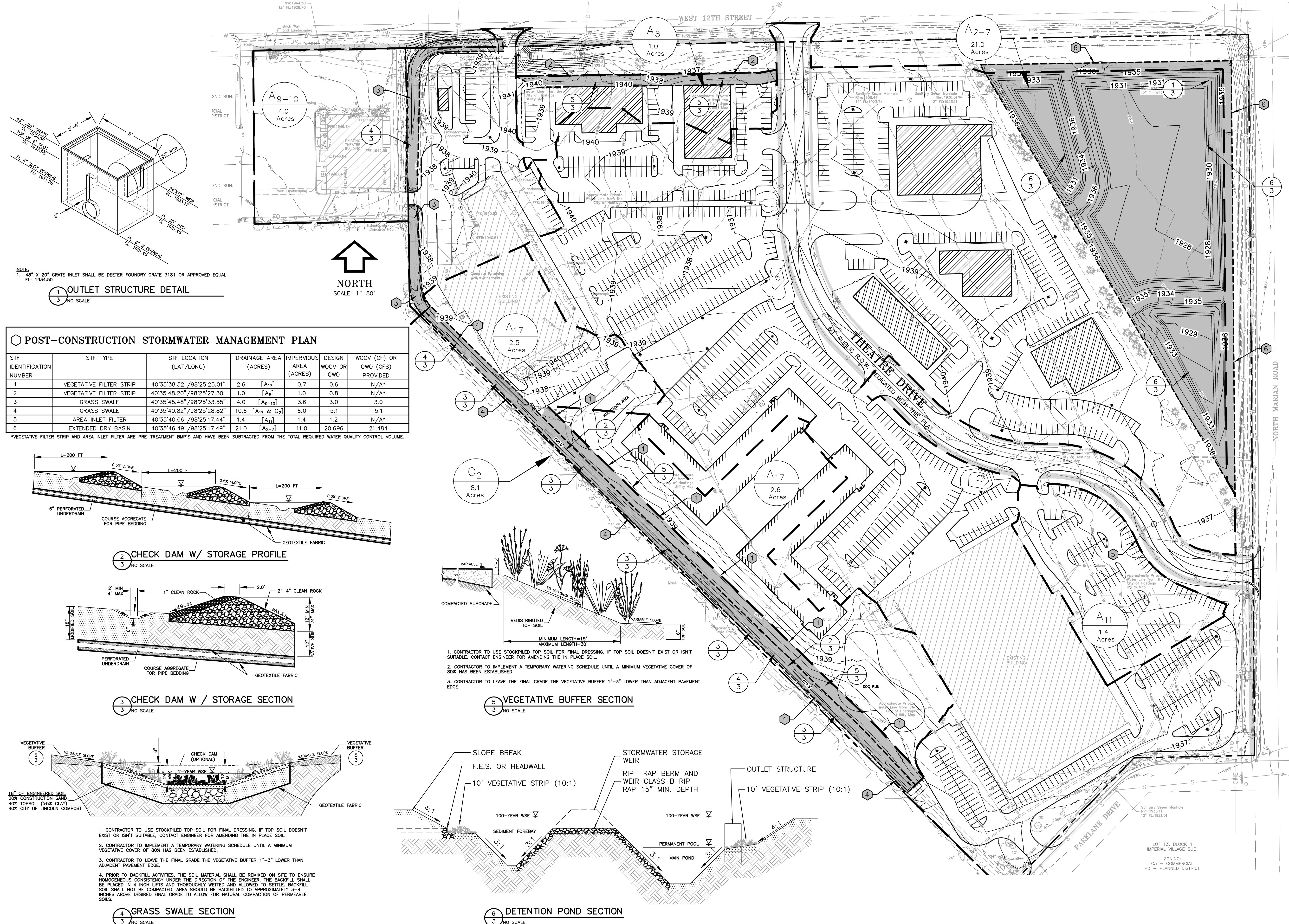


FIGURE 4: POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN (PCSMP)

APPENDIX A

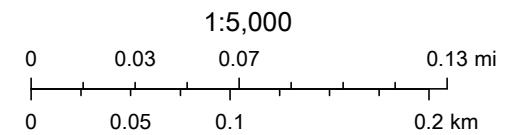
Hastings GIS Map

Imperial Mall - Hastings, Nebraska



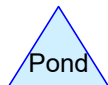
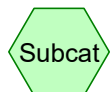
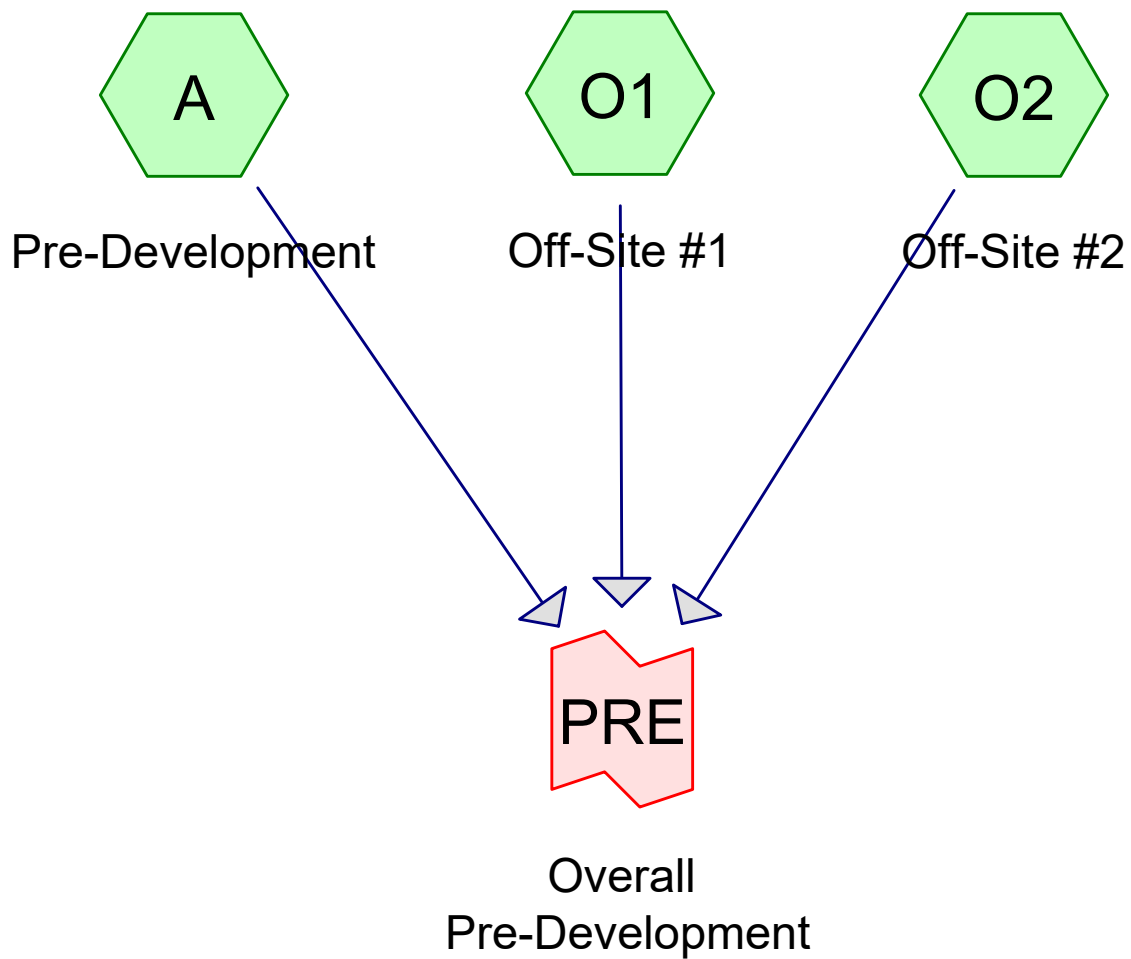
January 25, 2021

Limits OneMile TwoMile



APPENDIX B

HydroCad Models (WQ, 2-year, 10-year, 100-year)
PRE-DEVELOPMENT
POST-DEVELOPMENT



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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
10.230	90	1/8 acre lots, 65% imp, HSG C (O1, O2)
1.300	91	1/8 acre lots, 65% imp, HSG C/D (O2)
1.920	74	>75% Grass cover, Good, HSG C (A)
6.410	77	>75% Grass cover, Good, HSG C/D (A)
16.850	98	Unconnected pavement, HSG C/D (A)
12.320	98	Unconnected roofs, HSG C (A)
49.030	92	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
49.030	HSG C	A, O1, O2
0.000	HSG D	
0.000	Other	
49.030		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	11.530	0.000	0.000	11.530	1/8 acre lots, 65% imp	O1, O2
0.000	0.000	8.330	0.000	0.000	8.330	>75% Grass cover, Good	A
0.000	0.000	16.850	0.000	0.000	16.850	Unconnected pavement	A
0.000	0.000	12.320	0.000	0.000	12.320	Unconnected roofs	A
0.000	0.000	49.030	0.000	0.000	49.030	TOTAL AREA	

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	A	0.00	0.00	360.0	0.0027	0.012	24.0	0.0	0.0
2	A	0.00	0.00	380.0	0.0027	0.012	36.0	0.0	0.0
3	O2	0.00	0.00	100.0	0.0035	0.012	15.0	0.0	0.0

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Type II 24-hr 2-Year Rainfall=2.85"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentA: Pre-Development

Runoff Area=37.500 ac 77.79% Impervious Runoff Depth>1.96"
Flow Length=3,488' Tc=30.0 min CN=93 Runoff=67.52 cfs 6.139 af

SubcatchmentO1: Off-Site #1

Runoff Area=3.400 ac 65.00% Impervious Runoff Depth>1.71"
Flow Length=675' Tc=20.1 min CN=90 Runoff=6.90 cfs 0.485 af

SubcatchmentO2: Off-Site #2

Runoff Area=8.130 ac 65.00% Impervious Runoff Depth>1.72"
Flow Length=475' Tc=13.5 min CN=90 Runoff=20.06 cfs 1.163 af

Link PRE: Overall Pre-Development

Inflow=83.16 cfs 7.787 af
Primary=83.16 cfs 7.787 af

Total Runoff Area = 49.030 ac Runoff Volume = 7.787 af Average Runoff Depth = 1.91"
25.22% Pervious = 12.365 ac 74.78% Impervious = 36.665 ac

201055 Pre Development Hydrologic Model

Type II 24-hr 2-Year Rainfall=2.85"

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Summary for Subcatchment A: Pre-Development

Runoff = 67.52 cfs @ 12.24 hrs, Volume= 6.139 af, Depth> 1.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.85"

Area (ac)	CN	Description
1.920	74	>75% Grass cover, Good, HSG C
* 6.410	77	>75% Grass cover, Good, HSG C/D
12.320	98	Unconnected roofs, HSG C
* 16.850	98	Unconnected pavement, HSG C/D
37.500	93	Weighted Average
8.330		22.21% Pervious Area
29.170		77.79% Impervious Area
29.170		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	150	0.0060	0.76		Sheet Flow, Smooth surfaces n= 0.011 P2= 2.15"
1.7	150	0.0051	1.45		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.9	68	0.0043	1.33		Shallow Concentrated Flow, Paved Kv= 20.3 fps
3.8	180	0.0015	0.79		Shallow Concentrated Flow, Paved Kv= 20.3 fps
14.6	1,315	0.0009	1.50	76.72	Channel Flow, Concrete Liner Area= 51.1 sf Perim= 176.4' r= 0.29' n= 0.013 Concrete, trowel finish
1.5	360	0.0027	4.05	12.73	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
1.2	380	0.0027	5.31	37.55	Pipe Channel, 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012
3.0	885	0.0015	4.92	437.12	Channel Flow, Area= 88.9 sf Perim= 34.5' r= 2.58' n= 0.022 Earth, clean & straight
30.0	3,488	Total			

201055 Pre Development Hydrologic Model

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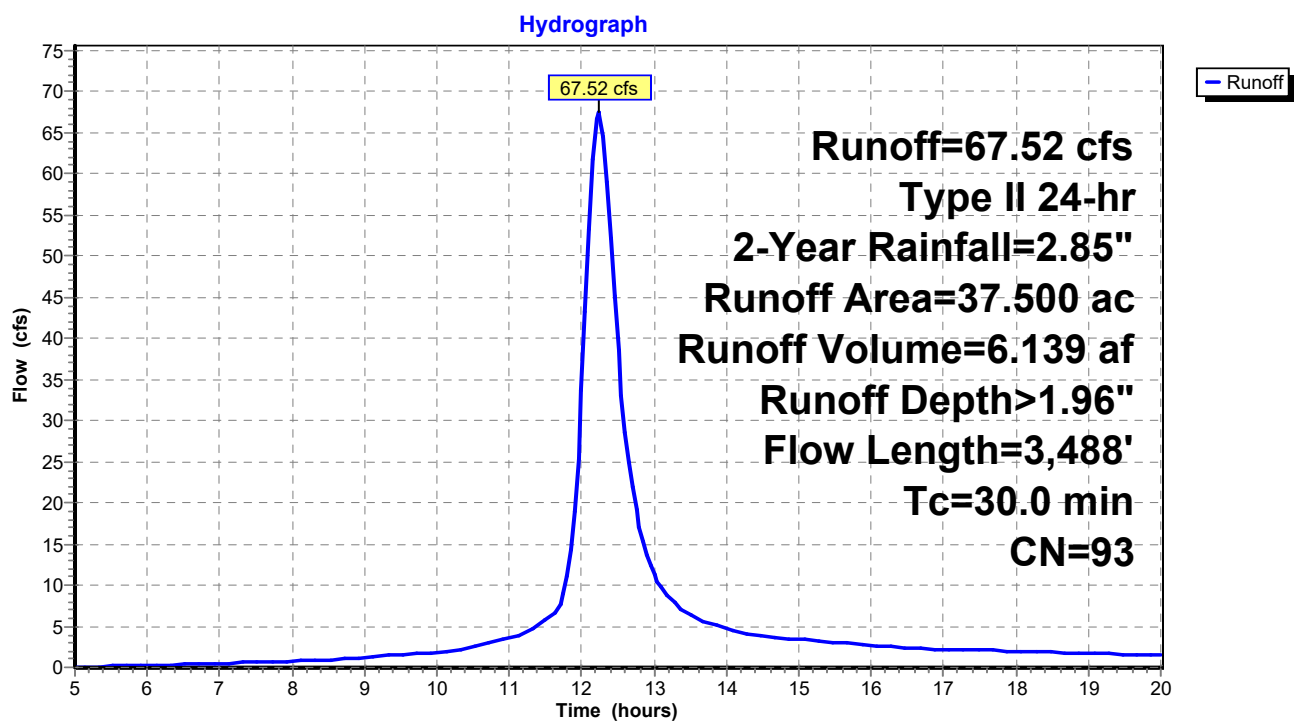
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Type II 24-hr 2-Year Rainfall=2.85"

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Subcatchment A: Pre-Development



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Type II 24-hr 2-Year Rainfall=2.85"

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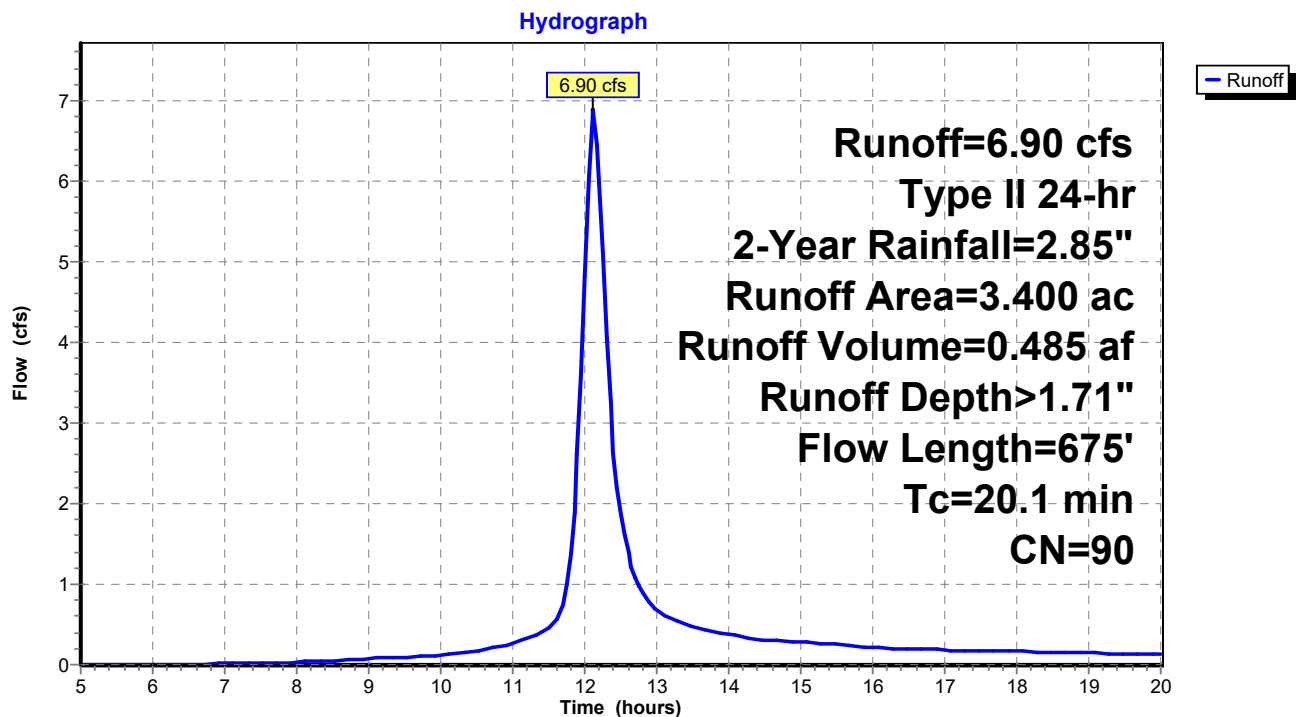
Summary for Subcatchment O1: Off-Site #1

Runoff = 6.90 cfs @ 12.12 hrs, Volume= 0.485 af, Depth> 1.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.85"

Area (ac)	CN	Description
3.400	90	1/8 acre lots, 65% imp, HSG C
1.190		35.00% Pervious Area
2.210		65.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	75	0.0200	0.13		Sheet Flow, Grass: Short n= 0.150 P2= 2.15"
4.4	300	0.0050	1.14		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
6.2	300	0.0025	0.81		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
20.1	675	Total			

Subcatchment O1: Off-Site #1

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Type II 24-hr 2-Year Rainfall=2.85"

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Summary for Subcatchment O2: Off-Site #2

Runoff = 20.06 cfs @ 12.05 hrs, Volume= 1.163 af, Depth> 1.72"

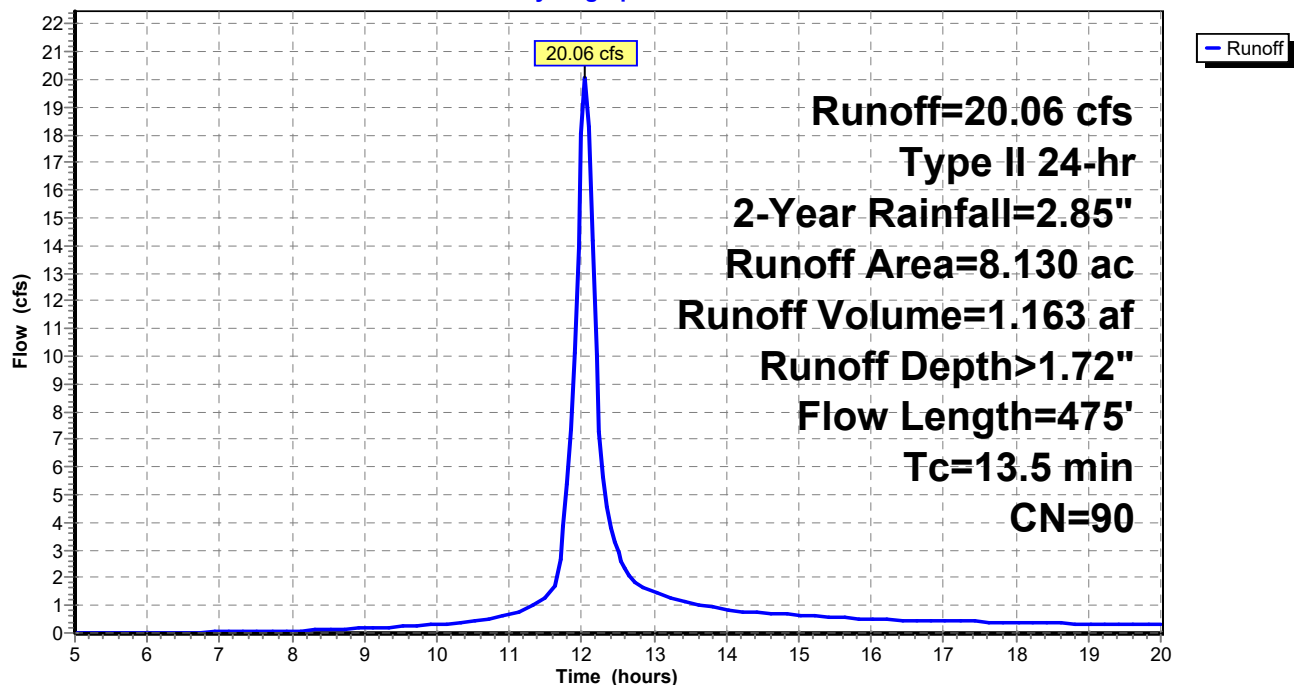
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.85"

Area (ac)	CN	Description
6.830	90	1/8 acre lots, 65% imp, HSG C
* 1.300	91	1/8 acre lots, 65% imp, HSG C/D
8.130	90	Weighted Average
2.845		35.00% Pervious Area
5.284		65.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	75	0.0200	0.13		Sheet Flow, Grass: Short n= 0.150 P2= 2.15"
3.5	300	0.0050	1.44		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	100	0.0035	3.37	4.14	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
13.5	475	Total			

Subcatchment O2: Off-Site #2

Hydrograph



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Type II 24-hr 2-Year Rainfall=2.85"

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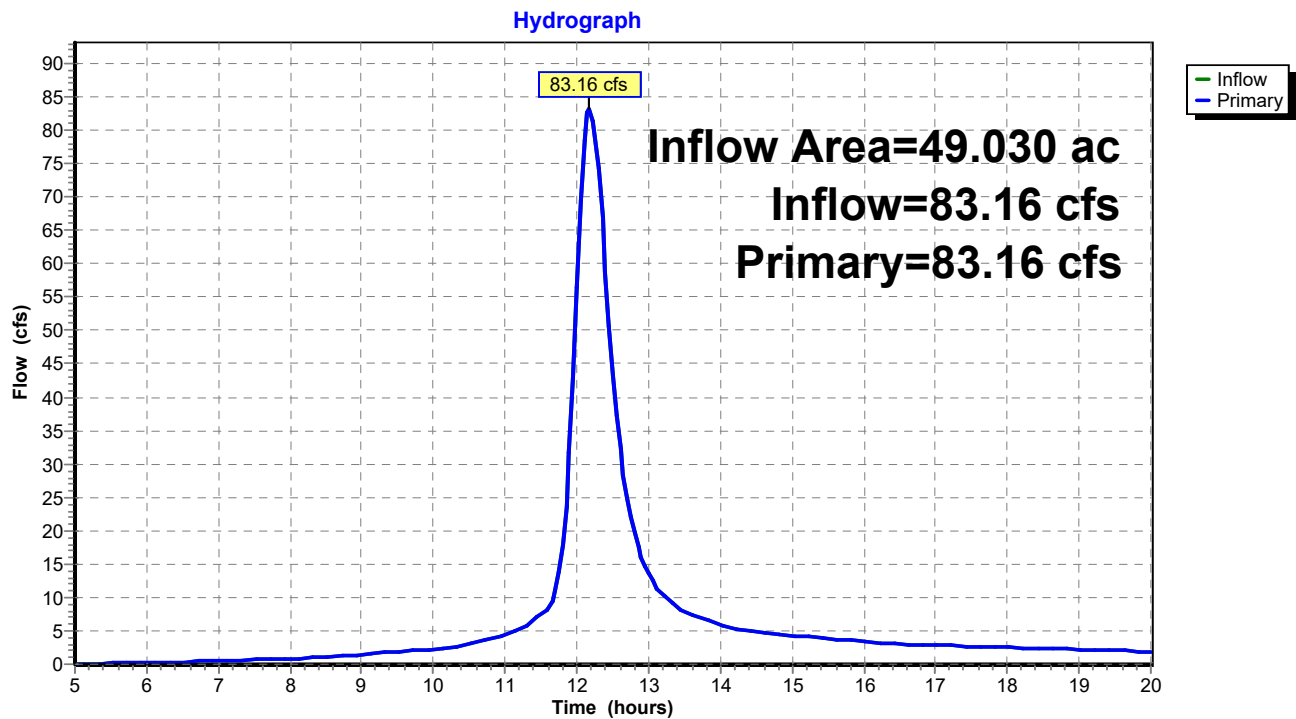
Page 11

Summary for Link PRE: Overall Pre-Development

Inflow Area = 49.030 ac, 74.78% Impervious, Inflow Depth > 1.91" for 2-Year event
Inflow = 83.16 cfs @ 12.18 hrs, Volume= 7.787 af
Primary = 83.16 cfs @ 12.18 hrs, Volume= 7.787 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link PRE: Overall Pre-Development



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Type II 24-hr 10-Year Rainfall=4.16"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentA: Pre-Development

Runoff Area=37.500 ac 77.79% Impervious Runoff Depth>3.15"
Flow Length=3,488' Tc=30.0 min CN=93 Runoff=105.90 cfs 9.841 af

SubcatchmentO1: Off-Site #1

Runoff Area=3.400 ac 65.00% Impervious Runoff Depth>2.87"
Flow Length=675' Tc=20.1 min CN=90 Runoff=11.28 cfs 0.812 af

SubcatchmentO2: Off-Site #2

Runoff Area=8.130 ac 65.00% Impervious Runoff Depth>2.87"
Flow Length=475' Tc=13.5 min CN=90 Runoff=32.67 cfs 1.945 af

Link PRE: Overall Pre-Development

Inflow=131.97 cfs 12.598 af
Primary=131.97 cfs 12.598 af

Total Runoff Area = 49.030 ac Runoff Volume = 12.598 af Average Runoff Depth = 3.08"
25.22% Pervious = 12.365 ac 74.78% Impervious = 36.665 ac

201055 Pre Development Hydrologic Model

Type II 24-hr 10-Year Rainfall=4.16"

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Summary for Subcatchment A: Pre-Development

Runoff = 105.90 cfs @ 12.23 hrs, Volume= 9.841 af, Depth> 3.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=4.16"

Area (ac)	CN	Description
1.920	74	>75% Grass cover, Good, HSG C
* 6.410	77	>75% Grass cover, Good, HSG C/D
12.320	98	Unconnected roofs, HSG C
* 16.850	98	Unconnected pavement, HSG C/D
37.500	93	Weighted Average
8.330		22.21% Pervious Area
29.170		77.79% Impervious Area
29.170		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	150	0.0060	0.76		Sheet Flow, Smooth surfaces n= 0.011 P2= 2.15"
1.7	150	0.0051	1.45		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.9	68	0.0043	1.33		Shallow Concentrated Flow, Paved Kv= 20.3 fps
3.8	180	0.0015	0.79		Shallow Concentrated Flow, Paved Kv= 20.3 fps
14.6	1,315	0.0009	1.50	76.72	Channel Flow, Concrete Liner Area= 51.1 sf Perim= 176.4' r= 0.29' n= 0.013 Concrete, trowel finish
1.5	360	0.0027	4.05	12.73	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
1.2	380	0.0027	5.31	37.55	Pipe Channel, 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012
3.0	885	0.0015	4.92	437.12	Channel Flow, Area= 88.9 sf Perim= 34.5' r= 2.58' n= 0.022 Earth, clean & straight
30.0	3,488	Total			

201055 Pre Development Hydrologic Model

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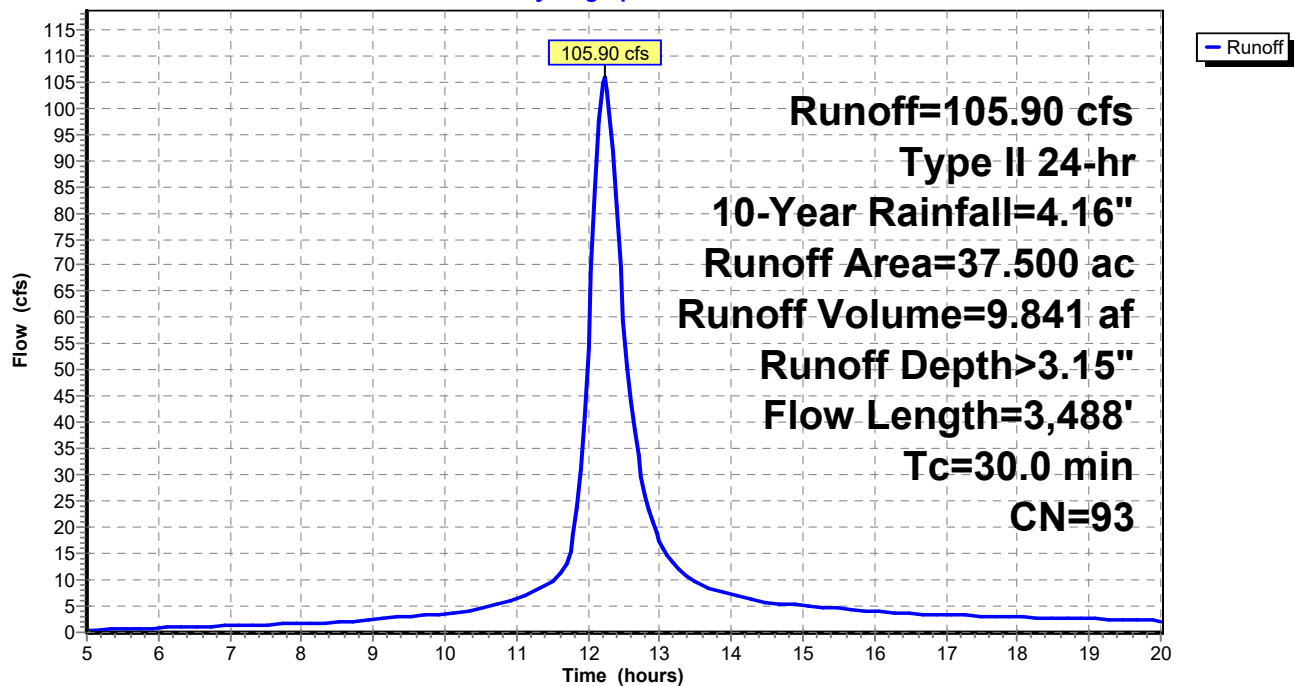
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Subcatchment A: Pre-Development

Hydrograph



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Type II 24-hr 10-Year Rainfall=4.16"

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Summary for Subcatchment O1: Off-Site #1

Runoff = 11.28 cfs @ 12.12 hrs, Volume= 0.812 af, Depth> 2.87"

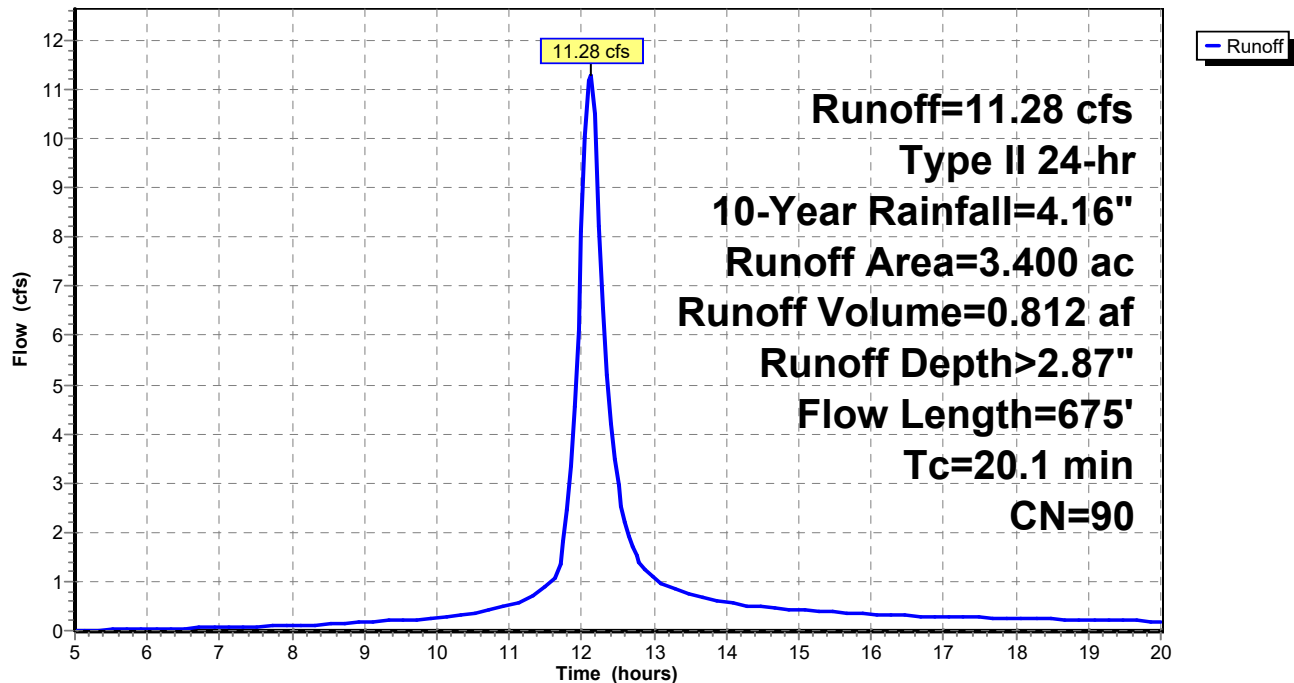
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=4.16"

Area (ac)	CN	Description
3.400	90	1/8 acre lots, 65% imp, HSG C
1.190		35.00% Pervious Area
2.210		65.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	75	0.0200	0.13		Sheet Flow, Grass: Short n= 0.150 P2= 2.15"
4.4	300	0.0050	1.14		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
6.2	300	0.0025	0.81		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
20.1	675	Total			

Subcatchment O1: Off-Site #1

Hydrograph



201055 Pre Development Hydrologic Model

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Type II 24-hr 10-Year Rainfall=4.16"

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Summary for Subcatchment O2: Off-Site #2

Runoff = 32.67 cfs @ 12.05 hrs, Volume= 1.945 af, Depth> 2.87"

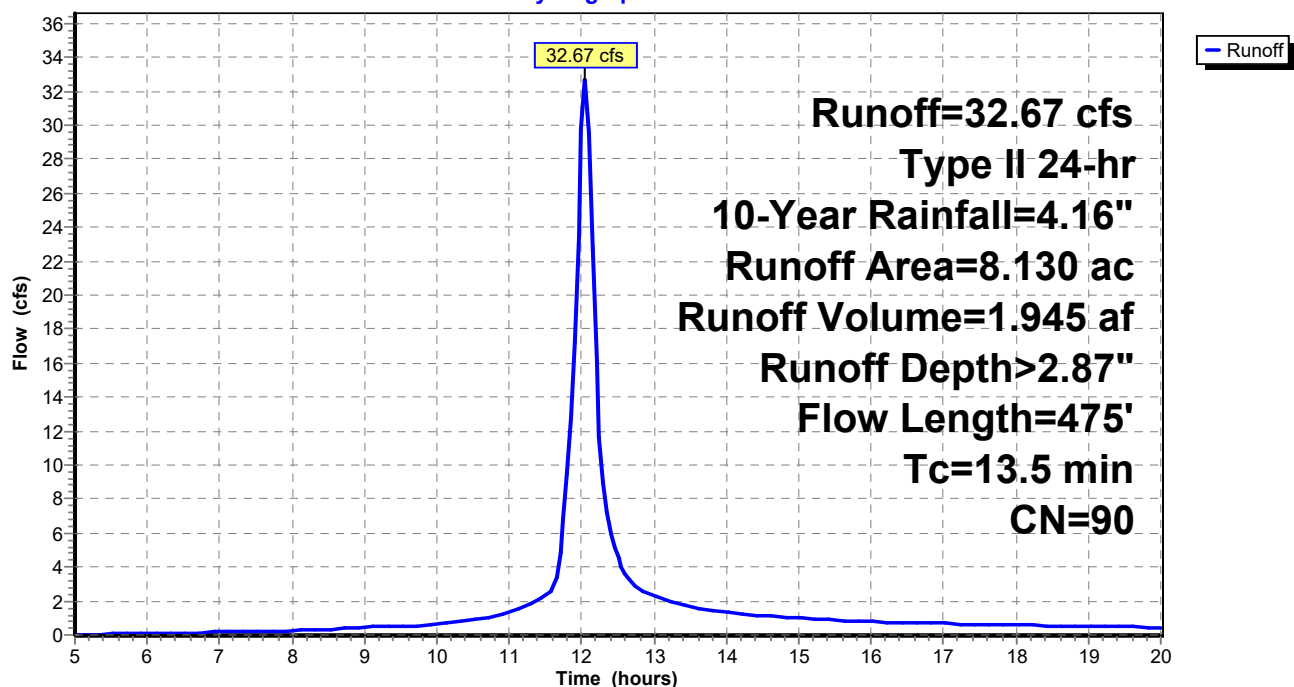
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=4.16"

Area (ac)	CN	Description
6.830	90	1/8 acre lots, 65% imp, HSG C
* 1.300	91	1/8 acre lots, 65% imp, HSG C/D
8.130	90	Weighted Average
2.845		35.00% Pervious Area
5.284		65.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	75	0.0200	0.13		Sheet Flow, Grass: Short n= 0.150 P2= 2.15"
3.5	300	0.0050	1.44		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	100	0.0035	3.37	4.14	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
13.5	475	Total			

Subcatchment O2: Off-Site #2

Hydrograph



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Type II 24-hr 10-Year Rainfall=4.16"

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Summary for Link PRE: Overall Pre-Development

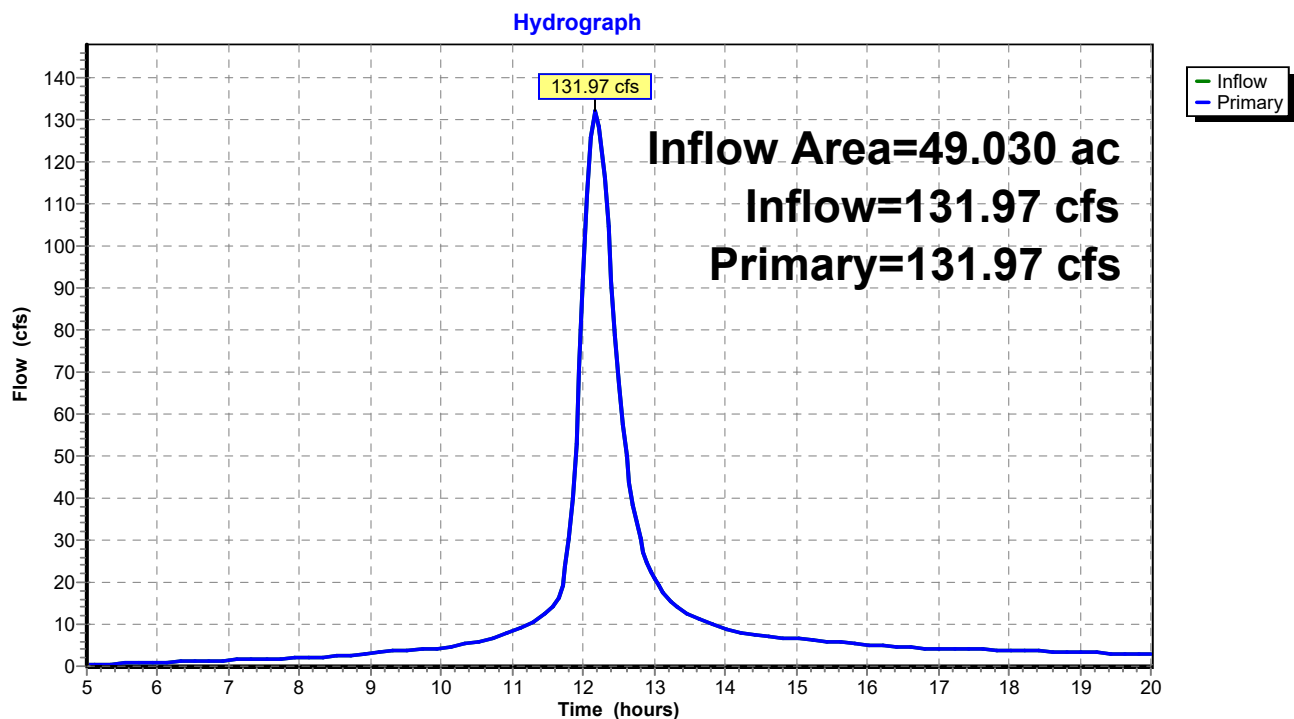
Inflow Area = 49.030 ac, 74.78% Impervious, Inflow Depth > 3.08" for 10-Year event

Inflow = 131.97 cfs @ 12.17 hrs, Volume= 12.598 af

Primary = 131.97 cfs @ 12.17 hrs, Volume= 12.598 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link PRE: Overall Pre-Development



201055 Pre Development Hydrologic Model

Type II 24-hr 100-Year Rainfall=6.64"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentA: Pre-Development Runoff Area=37.500 ac 77.79% Impervious Runoff Depth>5.41"
Flow Length=3,488' Tc=30.0 min CN=93 Runoff=177.60 cfs 16.910 af

SubcatchmentO1: Off-Site #1 Runoff Area=3.400 ac 65.00% Impervious Runoff Depth>5.11"
Flow Length=675' Tc=20.1 min CN=90 Runoff=19.55 cfs 1.449 af

SubcatchmentO2: Off-Site #2 Runoff Area=8.130 ac 65.00% Impervious Runoff Depth>5.12"
Flow Length=475' Tc=13.5 min CN=90 Runoff=56.38 cfs 3.469 af

Link PRE: Overall Pre-Development Inflow=223.12 cfs 21.828 af
Primary=223.12 cfs 21.828 af

Total Runoff Area = 49.030 ac Runoff Volume = 21.828 af Average Runoff Depth = 5.34"
25.22% Pervious = 12.365 ac 74.78% Impervious = 36.665 ac

201055 Pre Development Hydrologic Model

Type II 24-hr 100-Year Rainfall=6.64"

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Summary for Subcatchment A: Pre-Development

Runoff = 177.60 cfs @ 12.23 hrs, Volume= 16.910 af, Depth> 5.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.64"

Area (ac)	CN	Description
1.920	74	>75% Grass cover, Good, HSG C
* 6.410	77	>75% Grass cover, Good, HSG C/D
12.320	98	Unconnected roofs, HSG C
* 16.850	98	Unconnected pavement, HSG C/D
37.500	93	Weighted Average
8.330		22.21% Pervious Area
29.170		77.79% Impervious Area
29.170		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	150	0.0060	0.76		Sheet Flow, Smooth surfaces n= 0.011 P2= 2.15"
1.7	150	0.0051	1.45		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.9	68	0.0043	1.33		Shallow Concentrated Flow, Paved Kv= 20.3 fps
3.8	180	0.0015	0.79		Shallow Concentrated Flow, Paved Kv= 20.3 fps
14.6	1,315	0.0009	1.50	76.72	Channel Flow, Concrete Liner Area= 51.1 sf Perim= 176.4' r= 0.29' n= 0.013 Concrete, trowel finish
1.5	360	0.0027	4.05	12.73	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
1.2	380	0.0027	5.31	37.55	Pipe Channel, 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012
3.0	885	0.0015	4.92	437.12	Channel Flow, Area= 88.9 sf Perim= 34.5' r= 2.58' n= 0.022 Earth, clean & straight
30.0	3,488	Total			

201055 Pre Development Hydrologic Model

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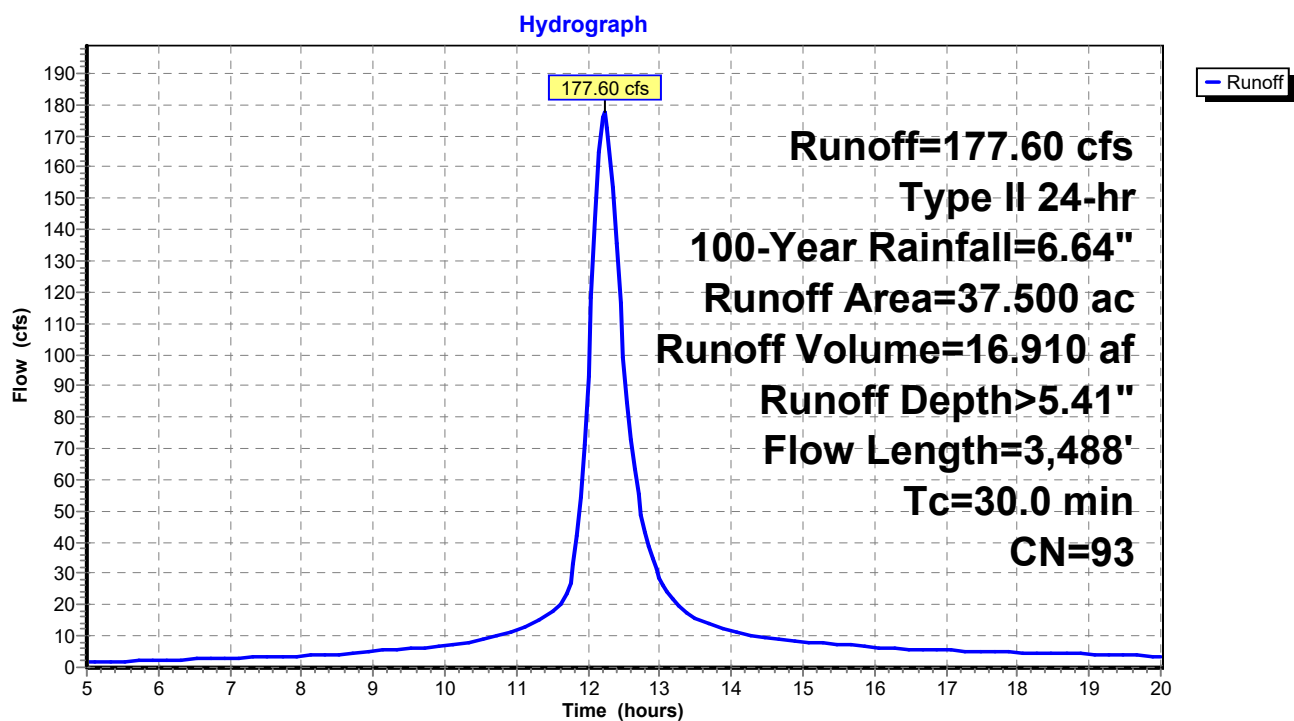
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Type II 24-hr 100-Year Rainfall=6.64"

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Subcatchment A: Pre-Development



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Type II 24-hr 100-Year Rainfall=6.64"

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Summary for Subcatchment O1: Off-Site #1

Runoff = 19.55 cfs @ 12.12 hrs, Volume= 1.449 af, Depth> 5.11"

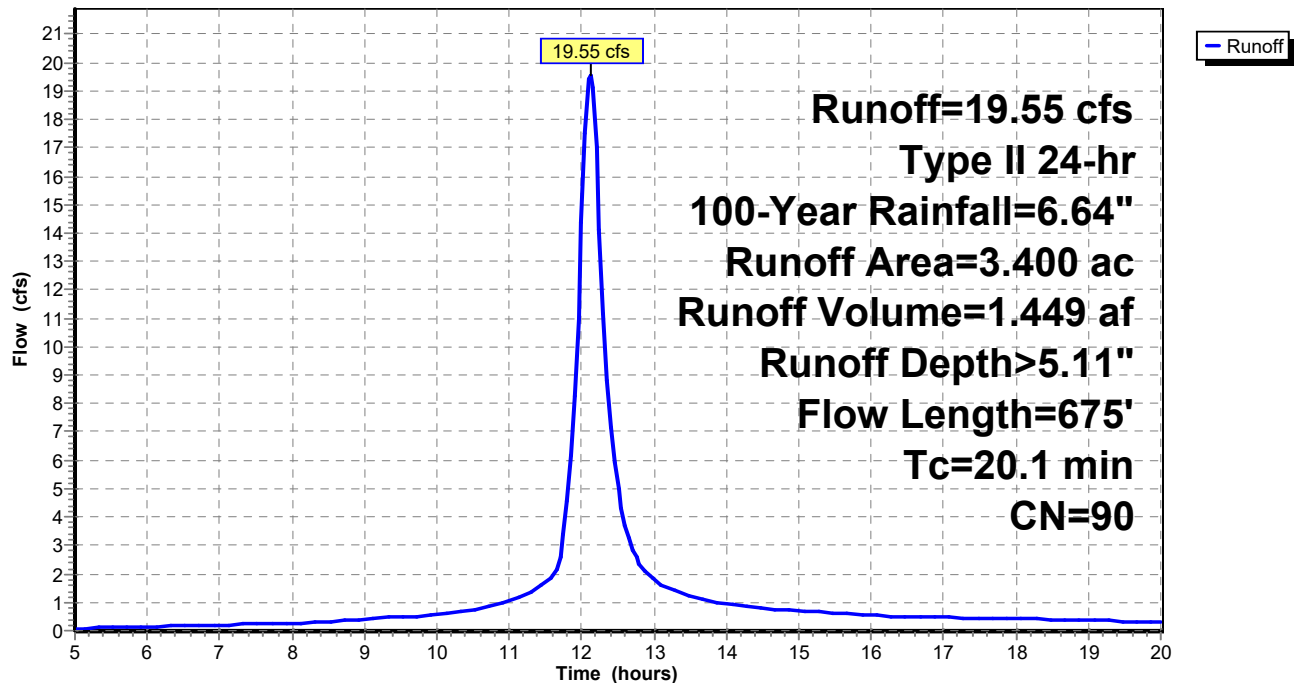
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.64"

Area (ac)	CN	Description
3.400	90	1/8 acre lots, 65% imp, HSG C
1.190		35.00% Pervious Area
2.210		65.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	75	0.0200	0.13		Sheet Flow, Grass: Short n= 0.150 P2= 2.15"
4.4	300	0.0050	1.14		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
6.2	300	0.0025	0.81		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
20.1	675	Total			

Subcatchment O1: Off-Site #1

Hydrograph



201055 Pre Development Hydrologic Model

Type II 24-hr 100-Year Rainfall=6.64"

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Summary for Subcatchment O2: Off-Site #2

Runoff = 56.38 cfs @ 12.05 hrs, Volume= 3.469 af, Depth> 5.12"

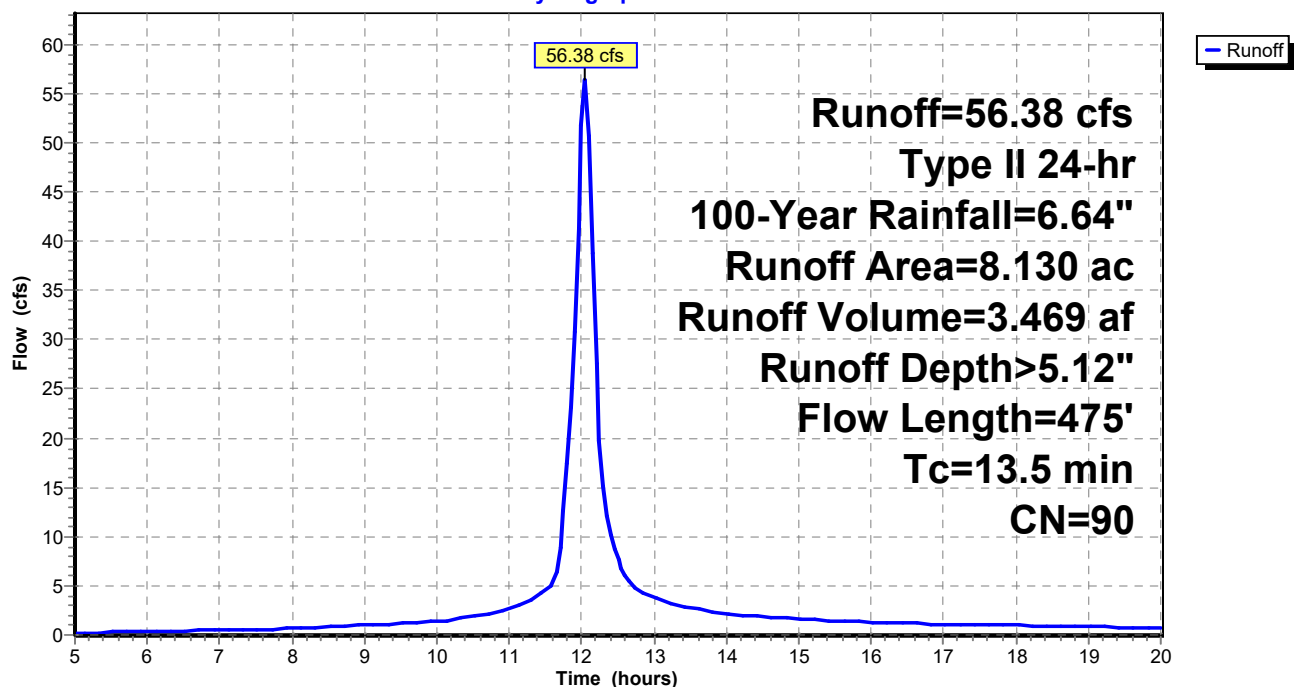
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.64"

Area (ac)	CN	Description
6.830	90	1/8 acre lots, 65% imp, HSG C
* 1.300	91	1/8 acre lots, 65% imp, HSG C/D
8.130	90	Weighted Average
2.845		35.00% Pervious Area
5.284		65.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	75	0.0200	0.13		Sheet Flow, Grass: Short n= 0.150 P2= 2.15"
3.5	300	0.0050	1.44		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	100	0.0035	3.37	4.14	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
13.5	475	Total			

Subcatchment O2: Off-Site #2

Hydrograph



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Type II 24-hr 100-Year Rainfall=6.64"

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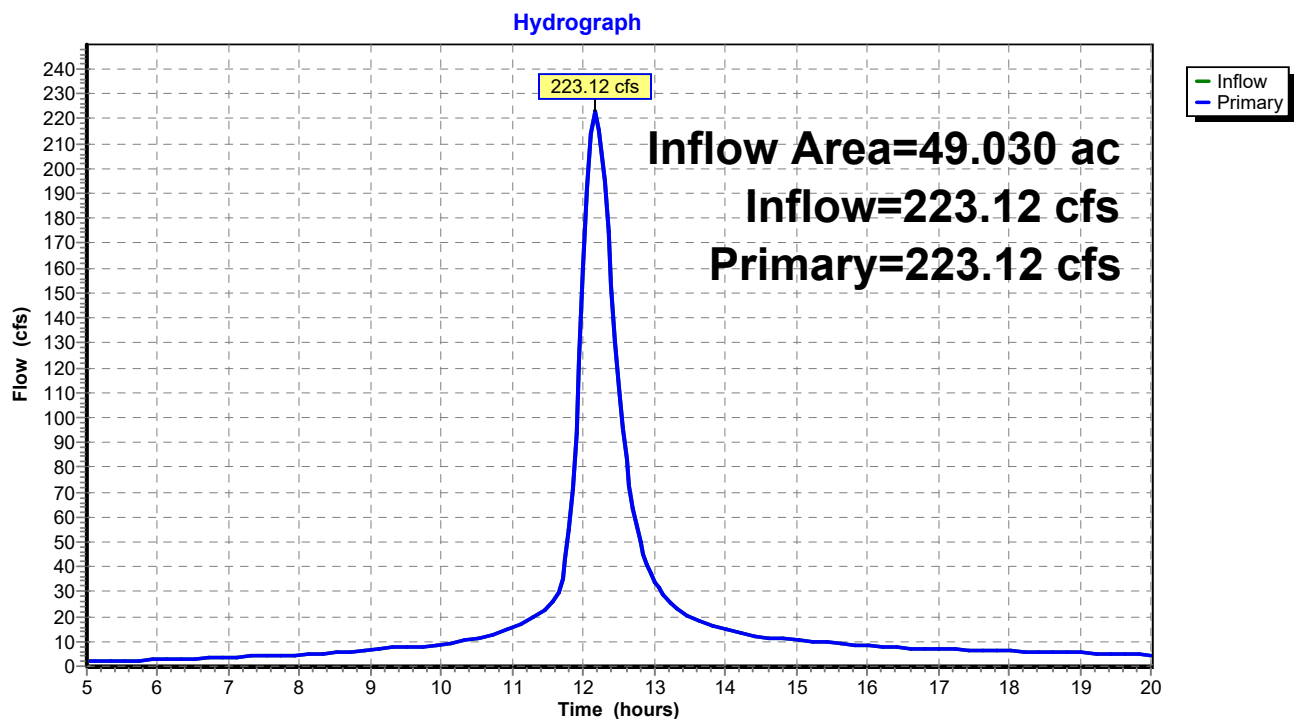
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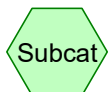
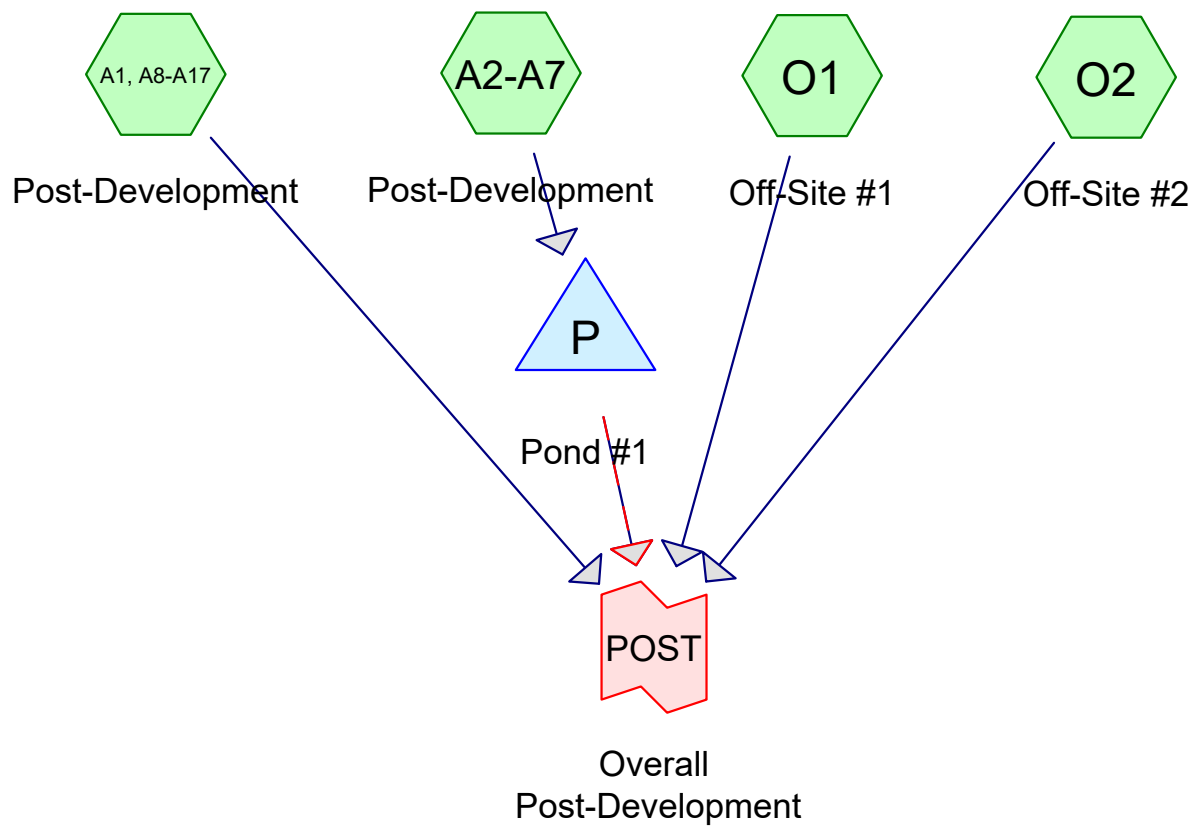
Summary for Link PRE: Overall Pre-Development

Inflow Area = 49.030 ac, 74.78% Impervious, Inflow Depth > 5.34" for 100-Year event
Inflow = 223.12 cfs @ 12.17 hrs, Volume= 21.828 af
Primary = 223.12 cfs @ 12.17 hrs, Volume= 21.828 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link PRE: Overall Pre-Development

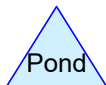




Subcat



Reach



Pond



Link

Routing Diagram for 201055 Post Development Hydrologic Model

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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
10.230	90	1/8 acre lots, 65% imp, HSG C (O1, O2)
1.300	91	1/8 acre lots, 65% imp, HSG C/D (O2)
4.000	74	>75% Grass cover, Good, HSG C (A1, A8-A17, A2-A7)
10.540	77	>75% Grass cover, Good, HSG C/D (A1, A8-A17, A2-A7)
12.710	98	Unconnected pavement, HSG C/D (A1, A8-A17, A2-A7)
10.250	98	Unconnected roofs, HSG C (A1, A8-A17, A2-A7)
49.030	90	TOTAL AREA

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
49.030	HSG C	A1, A8-A17, A1, A8-A17, A1, A8-A17, A1, A8-A17, A2-A7, O1, O2
0.000	HSG D	
0.000	Other	
49.030		TOTAL AREA

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Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	A1, A8-A17	0.00	0.00	360.0	0.0027	0.012	24.0	0.0	0.0
2	A1, A8-A17	0.00	0.00	380.0	0.0027	0.012	36.0	0.0	0.0
3	A2-A7	0.00	0.00	490.0	0.0050	0.012	24.0	0.0	0.0
4	O2	0.00	0.00	100.0	0.0035	0.012	15.0	0.0	0.0
5	P	1,931.45	1,930.65	60.0	0.0133	0.012	30.0	0.0	0.0

201055 Post Development Hydrologic Model

Type II 24-hr 2-Year Rainfall=2.85"

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Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentA1, A8-A17:

Runoff Area=19.150 ac 61.62% Impervious Runoff Depth=1.76"
Flow Length=3,488' Tc=21.6 min CN=89 Runoff=35.75 cfs 2.816 af

SubcatchmentA2-A7: Post-Development

Runoff Area=18.350 ac 60.82% Impervious Runoff Depth=1.85"
Flow Length=753' Tc=12.9 min CN=90 Runoff=46.13 cfs 2.824 af

SubcatchmentO1: Off-Site #1

Runoff Area=3.400 ac 65.00% Impervious Runoff Depth=1.85"
Flow Length=675' Tc=20.1 min CN=90 Runoff=6.90 cfs 0.523 af

SubcatchmentO2: Off-Site #2

Runoff Area=8.130 ac 65.00% Impervious Runoff Depth=1.85"
Flow Length=475' Tc=13.5 min CN=90 Runoff=20.06 cfs 1.251 af

Pond P: Pond #1

Peak Elev=1,933.16' Storage=73,520 cf Inflow=46.13 cfs 2.824 af
Primary=1.85 cfs 2.822 af Secondary=0.00 cfs 0.000 af Outflow=1.85 cfs 2.822 af

Link POST: Overall Post-Development

Inflow=61.02 cfs 7.413 af
Primary=61.02 cfs 7.413 af

Total Runoff Area = 49.030 ac Runoff Volume = 7.415 af Average Runoff Depth = 1.81"
37.89% Pervious = 18.575 ac 62.11% Impervious = 30.454 ac

201055 Post Development Hydrologic Model

Type II 24-hr 2-Year Rainfall=2.85"

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Summary for Subcatchment A1, A8-A17: Post-Development

Runoff = 35.75 cfs @ 12.14 hrs, Volume= 2.816 af, Depth= 1.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.85"

Area (ac)	CN	Description
2.900	74	>75% Grass cover, Good, HSG C
* 4.450	77	>75% Grass cover, Good, HSG C/D
5.670	98	Unconnected roofs, HSG C
* 6.130	98	Unconnected pavement, HSG C/D
19.150	89	Weighted Average
7.350		38.38% Pervious Area
11.800		61.62% Impervious Area
11.800		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	150	0.0060	0.76		Sheet Flow, Smooth surfaces n= 0.011 P2= 2.15"
1.7	150	0.0051	1.45		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.9	68	0.0043	1.33		Shallow Concentrated Flow, Paved Kv= 20.3 fps
3.8	180	0.0015	0.79		Shallow Concentrated Flow, Paved Kv= 20.3 fps
6.2	1,315	0.0050	3.54	180.83	Channel Flow, Concrete Liner Area= 51.1 sf Perim= 176.4' r= 0.29' n= 0.013 Concrete, trowel finish
1.5	360	0.0027	4.05	12.73	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
1.2	380	0.0027	5.31	37.55	Pipe Channel, 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012
3.0	885	0.0015	4.92	437.12	Channel Flow, Area= 88.9 sf Perim= 34.5' r= 2.58' n= 0.022 Earth, clean & straight
21.6	3,488	Total			

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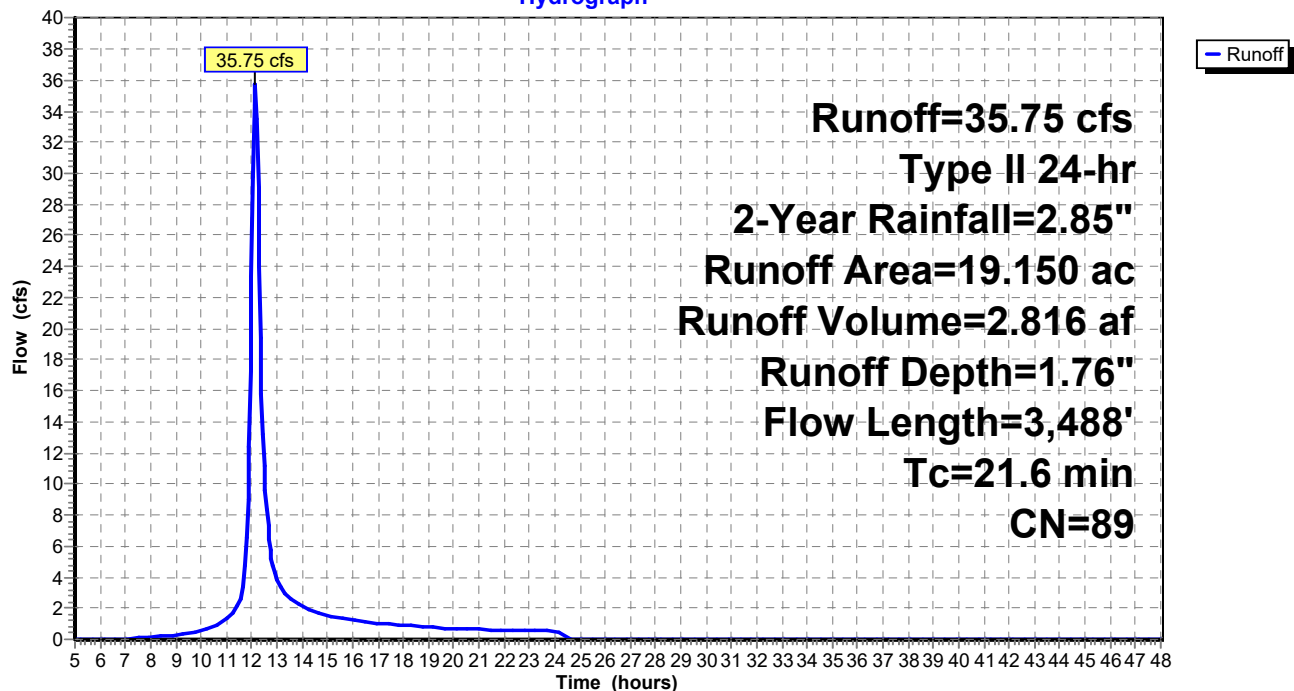
Type II 24-hr 2-Year Rainfall=2.85"

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Subcatchment A1, A8-A17: Post-Development

Hydrograph



201055 Post Development Hydrologic Model

Type II 24-hr 2-Year Rainfall=2.85"

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Summary for Subcatchment A2-A7: Post-Development

Runoff = 46.13 cfs @ 12.05 hrs, Volume= 2.824 af, Depth= 1.85"

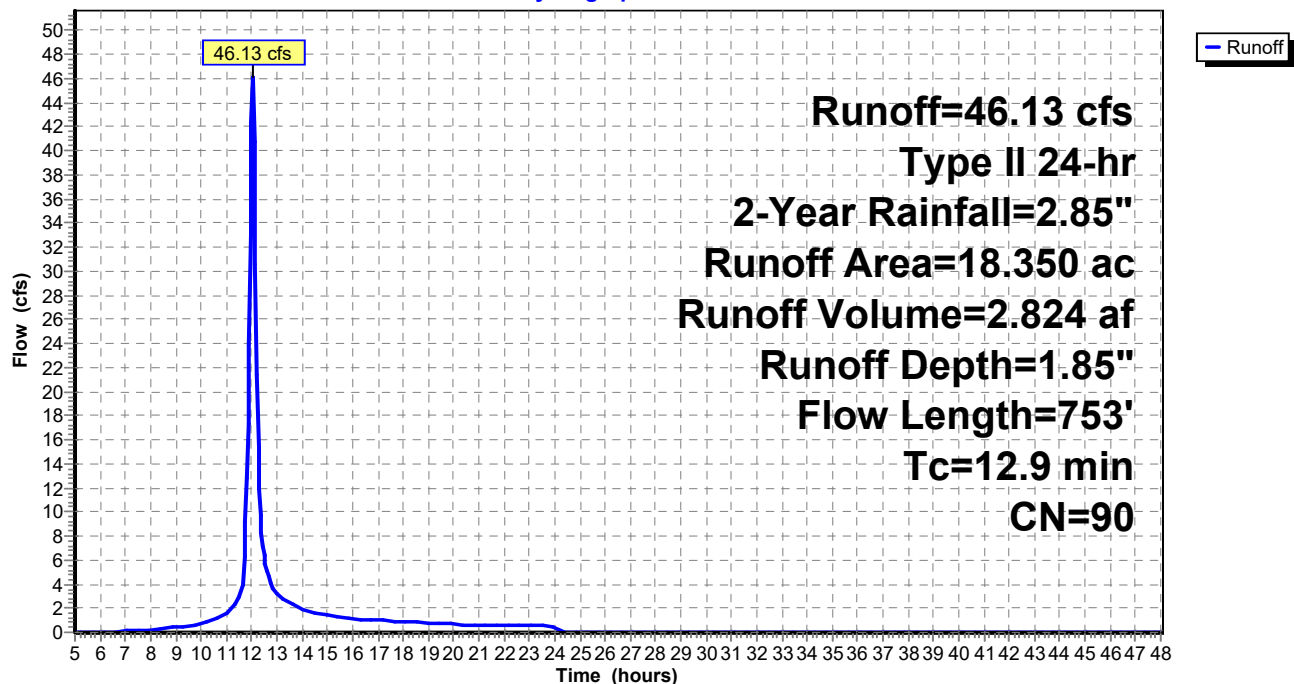
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.85"

Area (ac)	CN	Description
1.100	74	>75% Grass cover, Good, HSG C
* 6.090	77	>75% Grass cover, Good, HSG C/D
4.580	98	Unconnected roofs, HSG C
* 6.580	98	Unconnected pavement, HSG C/D
18.350	90	Weighted Average
7.190		39.18% Pervious Area
11.160		60.82% Impervious Area
11.160		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	45	0.0100	0.09		Sheet Flow, Grass: Short n= 0.150 P2= 2.15"
2.2	150	0.0051	1.15		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.9	68	0.0040	1.28		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.5	490	0.0050	5.52	17.33	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
12.9	753	Total			

Subcatchment A2-A7: Post-Development

Hydrograph



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Type II 24-hr 2-Year Rainfall=2.85"

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Summary for Subcatchment O1: Off-Site #1

Runoff = 6.90 cfs @ 12.12 hrs, Volume= 0.523 af, Depth= 1.85"

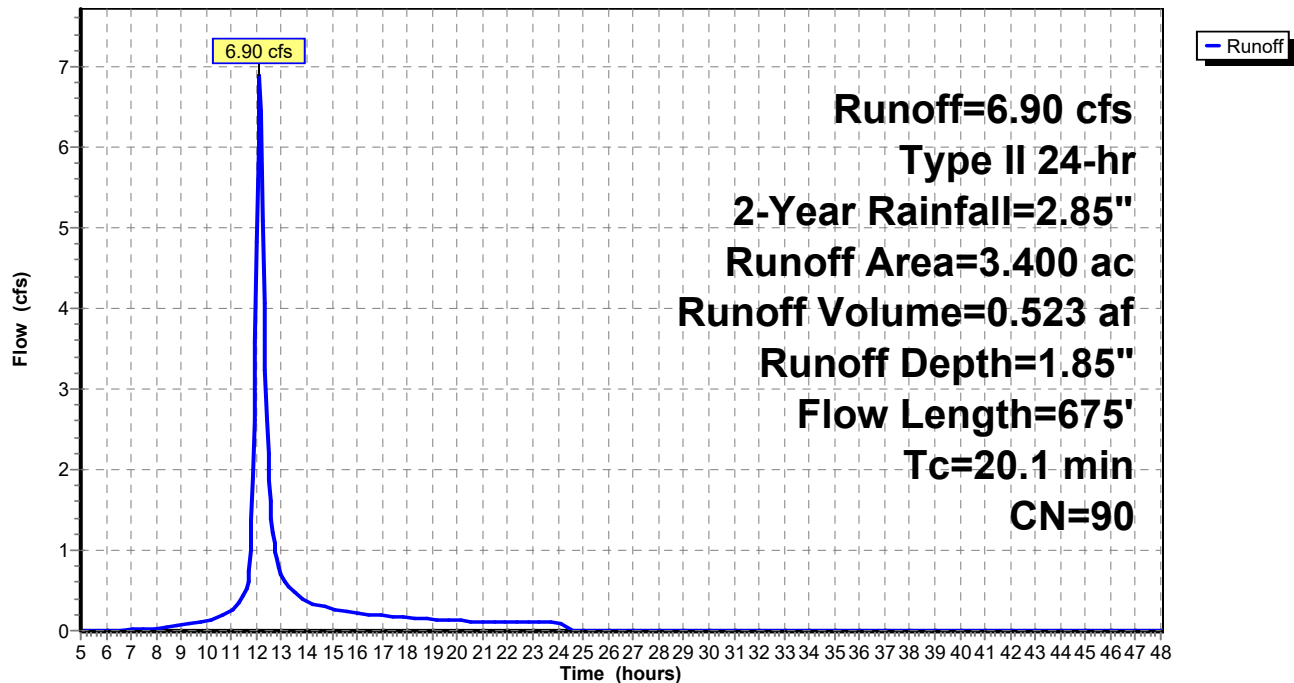
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.85"

Area (ac)	CN	Description
3.400	90	1/8 acre lots, 65% imp, HSG C
1.190		35.00% Pervious Area
2.210		65.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	75	0.0200	0.13		Sheet Flow, Grass: Short n= 0.150 P2= 2.15"
4.4	300	0.0050	1.14		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
6.2	300	0.0025	0.81		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
20.1	675	Total			

Subcatchment O1: Off-Site #1

Hydrograph



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Type II 24-hr 2-Year Rainfall=2.85"

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Summary for Subcatchment O2: Off-Site #2

Runoff = 20.06 cfs @ 12.05 hrs, Volume= 1.251 af, Depth= 1.85"

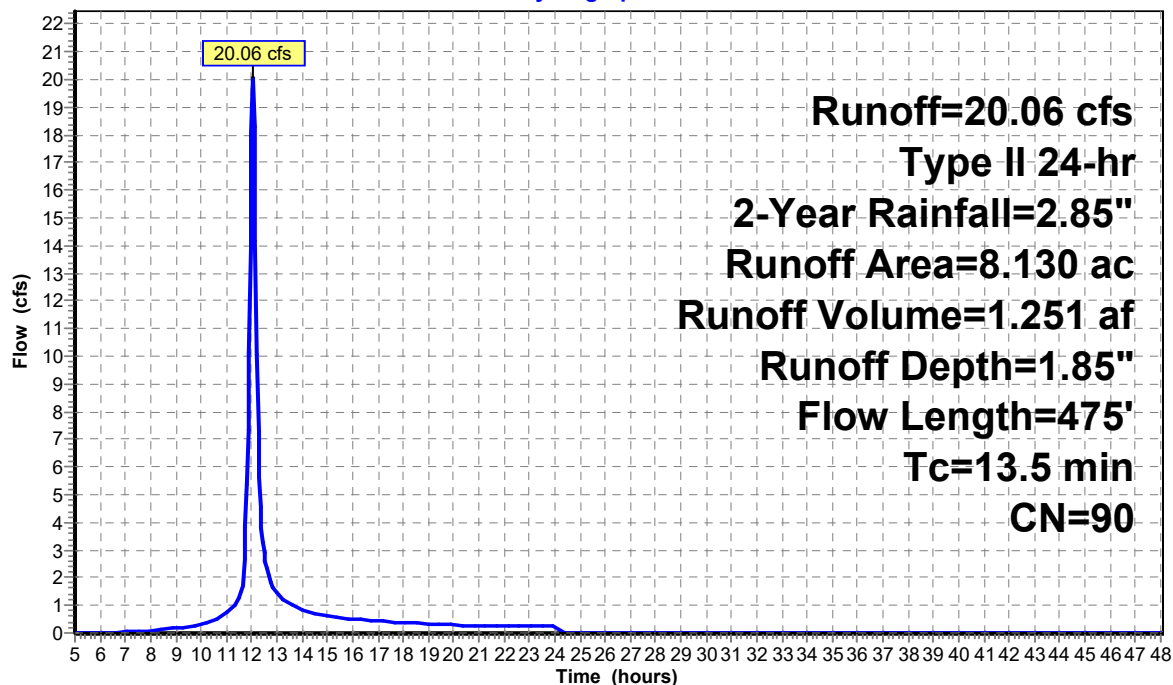
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.85"

Area (ac)	CN	Description
6.830	90	1/8 acre lots, 65% imp, HSG C
* 1.300	91	1/8 acre lots, 65% imp, HSG C/D
8.130	90	Weighted Average
2.845		35.00% Pervious Area
5.284		65.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	75	0.0200	0.13		Sheet Flow, Grass: Short n= 0.150 P2= 2.15"
3.5	300	0.0050	1.44		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	100	0.0035	3.37	4.14	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
13.5	475	Total			

Subcatchment O2: Off-Site #2

Hydrograph



201055 Post Development Hydrologic Model

Type II 24-hr 2-Year Rainfall=2.85"

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Summary for Pond P: Pond #1

Inflow Area = 18.350 ac, 60.82% Impervious, Inflow Depth = 1.85" for 2-Year event
 Inflow = 46.13 cfs @ 12.05 hrs, Volume= 2.824 af
 Outflow = 1.85 cfs @ 14.05 hrs, Volume= 2.822 af, Atten= 96%, Lag= 120.4 min
 Primary = 1.85 cfs @ 14.05 hrs, Volume= 2.822 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 1,933.16' @ 14.05 hrs Surf.Area= 95,430 sf Storage= 73,520 cf

Plug-Flow detention time= 497.7 min calculated for 2.819 af (100% of inflow)
 Center-of-Mass det. time= 498.3 min (1,313.1 - 814.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,931.45'	423,868 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,931.45	0	0	0
1,931.50	4,063	102	102
1,932.00	20,694	6,189	6,291
1,932.50	49,373	17,517	23,808
1,933.00	90,113	34,872	58,679
1,933.50	106,732	49,211	107,890
1,934.00	115,760	55,623	163,513
1,934.50	123,905	59,916	223,430
1,935.00	131,214	63,780	287,209
1,935.50	138,474	67,422	354,631
1,936.00	138,474	69,237	423,868

Device	Routing	Invert	Outlet Devices
#1	Primary	1,931.45'	30.0" Round Culvert L= 60.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,931.45' / 1,930.65' S= 0.0133 ' / Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	1,931.45'	6.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	1,931.95'	2.0" W x 24.0" H Vert. Orifice/Grate C= 0.600
#4	Device 1	1,933.17'	24.0" W x 12.0" H Vert. Orifice/Grate X 2.00 C= 0.600
#5	Device 1	1,934.50'	11.7" x 2.4" Horiz. Orifice/Grate X 2.00 columns X 7 rows C= 0.600 in 30.0" x 30.0" Grate (44% open area) Limited to weir flow at low heads
#6	Secondary	1,935.50'	250.0' long x 14.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.64 2.67 2.70 2.65 2.64 2.65 2.65 2.63

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Type II 24-hr 2-Year Rainfall=2.85"

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Primary OutFlow Max=1.85 cfs @ 14.05 hrs HW=1,933.16' (Free Discharge)

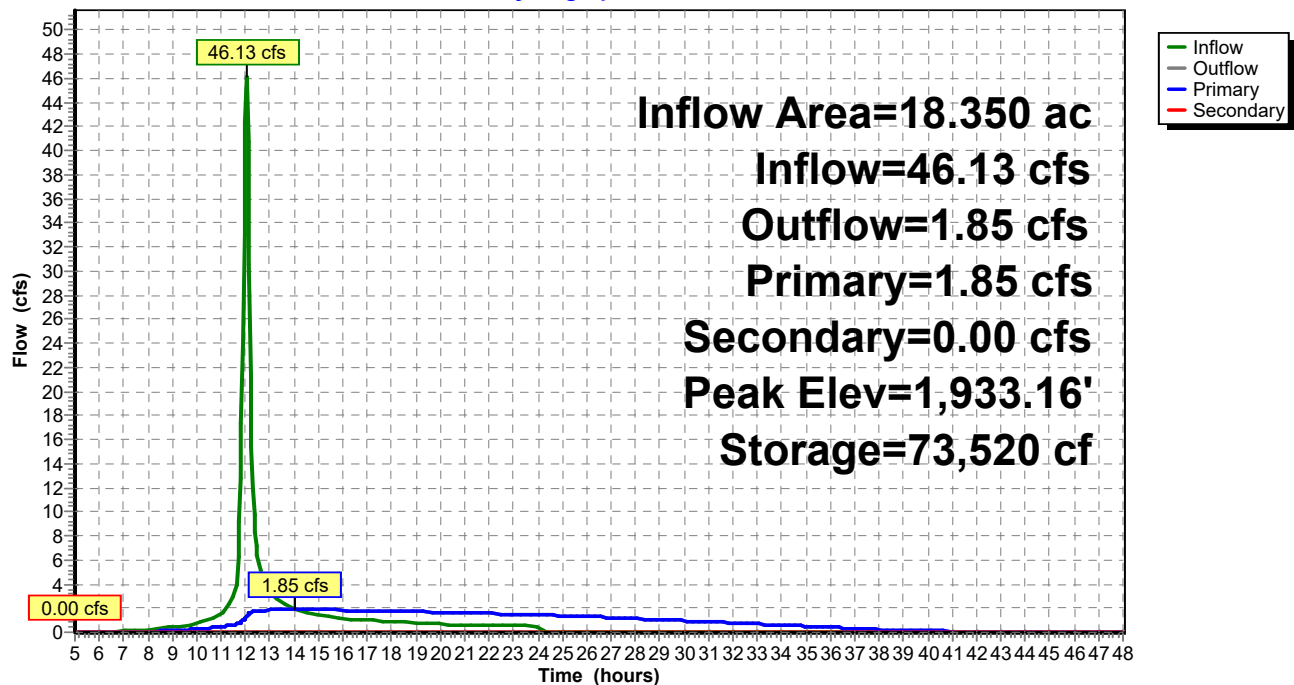
- 1=Culvert (Passes 1.85 cfs of 15.93 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 1.14 cfs @ 5.82 fps)
- 3=Orifice/Grate (Orifice Controls 0.71 cfs @ 3.53 fps)
- 4=Orifice/Grate (Controls 0.00 cfs)
- 5=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,931.45' (Free Discharge)

- 6=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P: Pond #1

Hydrograph



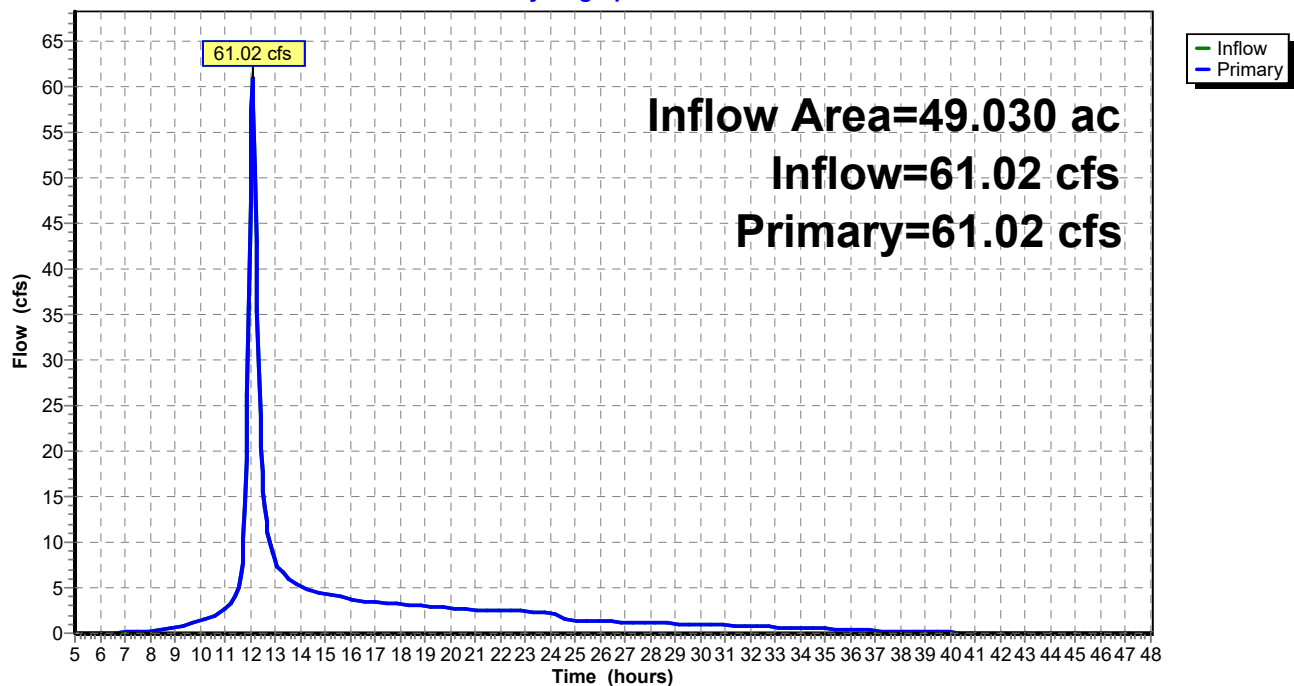
Summary for Link POST: Overall Post-Development

Inflow Area = 49.030 ac, 62.11% Impervious, Inflow Depth > 1.81" for 2-Year event
 Inflow = 61.02 cfs @ 12.10 hrs, Volume= 7.413 af
 Primary = 61.02 cfs @ 12.10 hrs, Volume= 7.413 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Link POST: Overall Post-Development

Hydrograph



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Type II 24-hr 10-Year Rainfall=4.16"

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Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentA1, A8-A17:

Runoff Area=19.150 ac 61.62% Impervious Runoff Depth>2.97"
Flow Length=3,488' Tc=21.6 min CN=89 Runoff=59.44 cfs 4.745 af

SubcatchmentA2-A7: Post-Development

Runoff Area=18.350 ac 60.82% Impervious Runoff Depth>3.07"
Flow Length=753' Tc=12.9 min CN=90 Runoff=75.08 cfs 4.695 af

SubcatchmentO1: Off-Site #1

Runoff Area=3.400 ac 65.00% Impervious Runoff Depth>3.07"
Flow Length=675' Tc=20.1 min CN=90 Runoff=11.28 cfs 0.870 af

SubcatchmentO2: Off-Site #2

Runoff Area=8.130 ac 65.00% Impervious Runoff Depth>3.07"
Flow Length=475' Tc=13.5 min CN=90 Runoff=32.67 cfs 2.080 af

Pond P: Pond #1

Peak Elev=1,933.57' Storage=115,236 cf Inflow=75.08 cfs 4.695 af
Primary=5.63 cfs 4.691 af Secondary=0.00 cfs 0.000 af Outflow=5.63 cfs 4.691 af

Link POST: Overall Post-Development

Inflow=100.71 cfs 12.386 af
Primary=100.71 cfs 12.386 af

Total Runoff Area = 49.030 ac Runoff Volume = 12.391 af Average Runoff Depth = 3.03"
37.89% Pervious = 18.575 ac 62.11% Impervious = 30.454 ac

201055 Post Development Hydrologic Model

Type II 24-hr 10-Year Rainfall=4.16"

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Summary for Subcatchment A1, A8-A17: Post-Development

Runoff = 59.44 cfs @ 12.14 hrs, Volume= 4.745 af, Depth> 2.97"

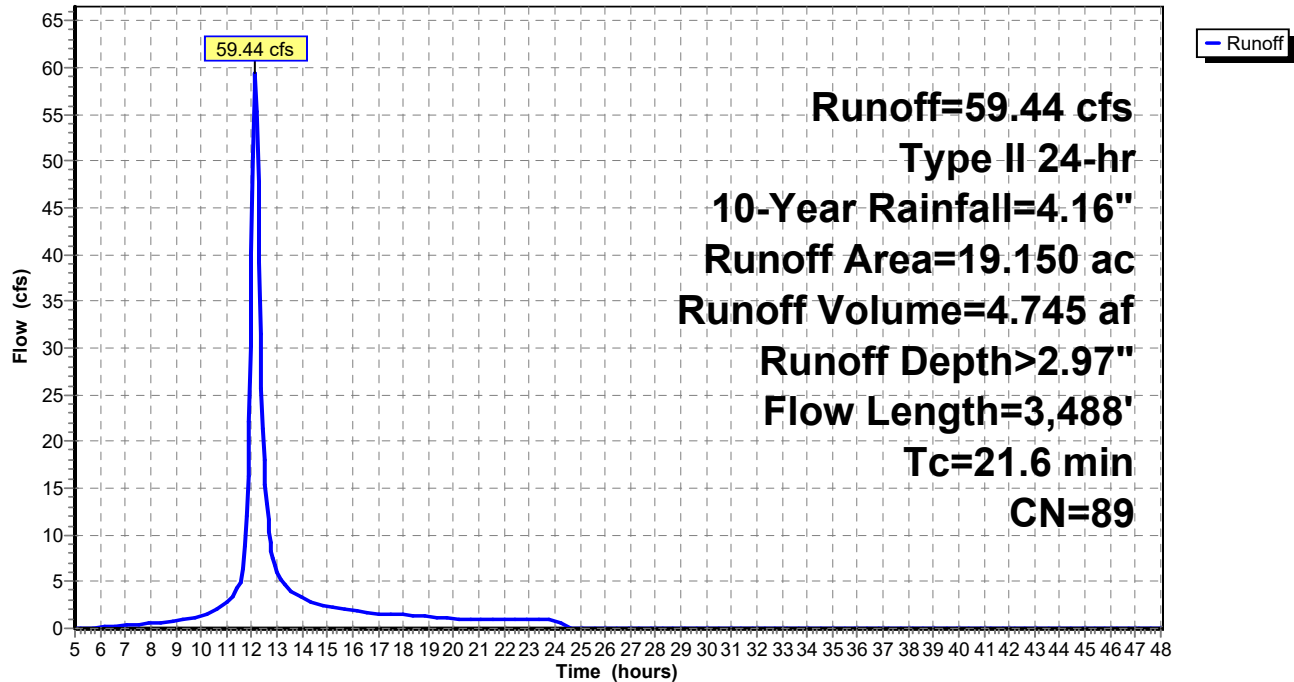
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=4.16"

Area (ac)	CN	Description
2.900	74	>75% Grass cover, Good, HSG C
* 4.450	77	>75% Grass cover, Good, HSG C/D
5.670	98	Unconnected roofs, HSG C
* 6.130	98	Unconnected pavement, HSG C/D
19.150	89	Weighted Average
7.350		38.38% Pervious Area
11.800		61.62% Impervious Area
11.800		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	150	0.0060	0.76		Sheet Flow, Smooth surfaces n= 0.011 P2= 2.15"
1.7	150	0.0051	1.45		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.9	68	0.0043	1.33		Shallow Concentrated Flow, Paved Kv= 20.3 fps
3.8	180	0.0015	0.79		Shallow Concentrated Flow, Paved Kv= 20.3 fps
6.2	1,315	0.0050	3.54	180.83	Channel Flow, Concrete Liner Area= 51.1 sf Perim= 176.4' r= 0.29' n= 0.013 Concrete, trowel finish
1.5	360	0.0027	4.05	12.73	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
1.2	380	0.0027	5.31	37.55	Pipe Channel, 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012
3.0	885	0.0015	4.92	437.12	Channel Flow, Area= 88.9 sf Perim= 34.5' r= 2.58' n= 0.022 Earth, clean & straight
21.6	3,488	Total			

Subcatchment A1, A8-A17: Post-Development

Hydrograph



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Type II 24-hr 10-Year Rainfall=4.16"

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Summary for Subcatchment A2-A7: Post-Development

Runoff = 75.08 cfs @ 12.04 hrs, Volume= 4.695 af, Depth> 3.07"

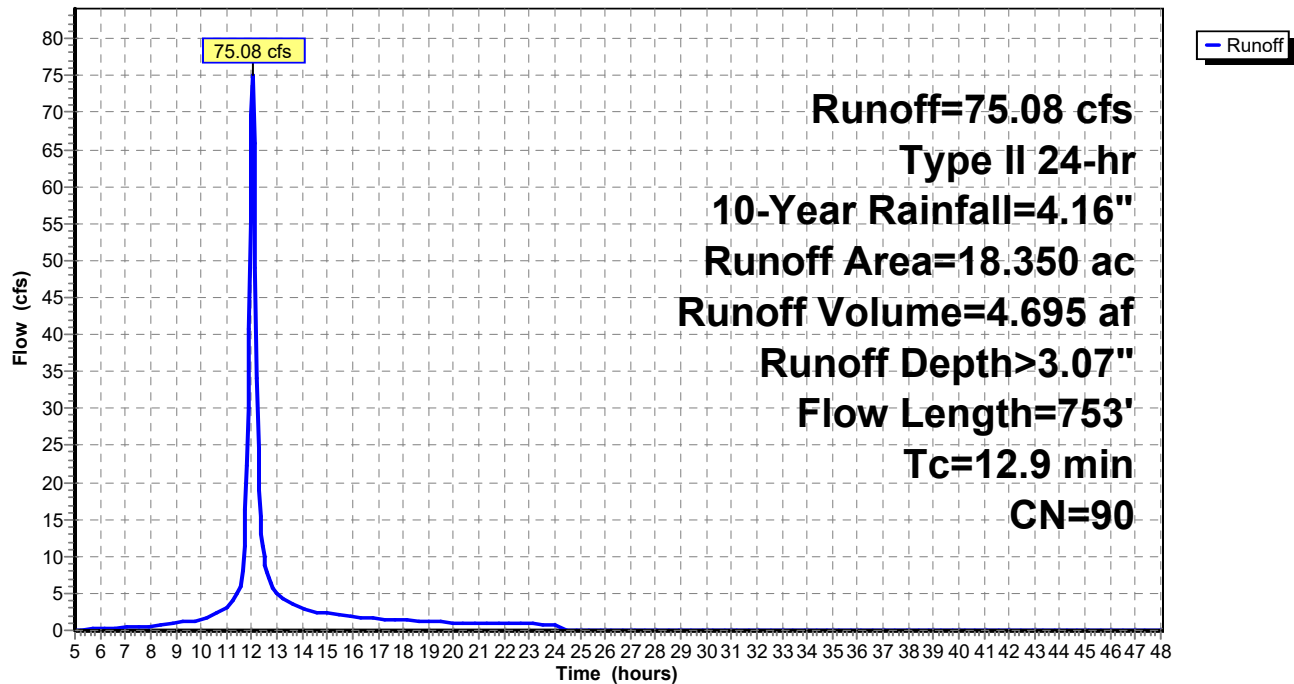
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=4.16"

Area (ac)	CN	Description
1.100	74	>75% Grass cover, Good, HSG C
* 6.090	77	>75% Grass cover, Good, HSG C/D
4.580	98	Unconnected roofs, HSG C
* 6.580	98	Unconnected pavement, HSG C/D
18.350	90	Weighted Average
7.190		39.18% Pervious Area
11.160		60.82% Impervious Area
11.160		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	45	0.0100	0.09		Sheet Flow, Grass: Short n= 0.150 P2= 2.15"
2.2	150	0.0051	1.15		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.9	68	0.0040	1.28		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.5	490	0.0050	5.52	17.33	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
12.9	753	Total			

Subcatchment A2-A7: Post-Development

Hydrograph



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Type II 24-hr 10-Year Rainfall=4.16"

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Summary for Subcatchment O1: Off-Site #1

Runoff = 11.28 cfs @ 12.12 hrs, Volume= 0.870 af, Depth> 3.07"

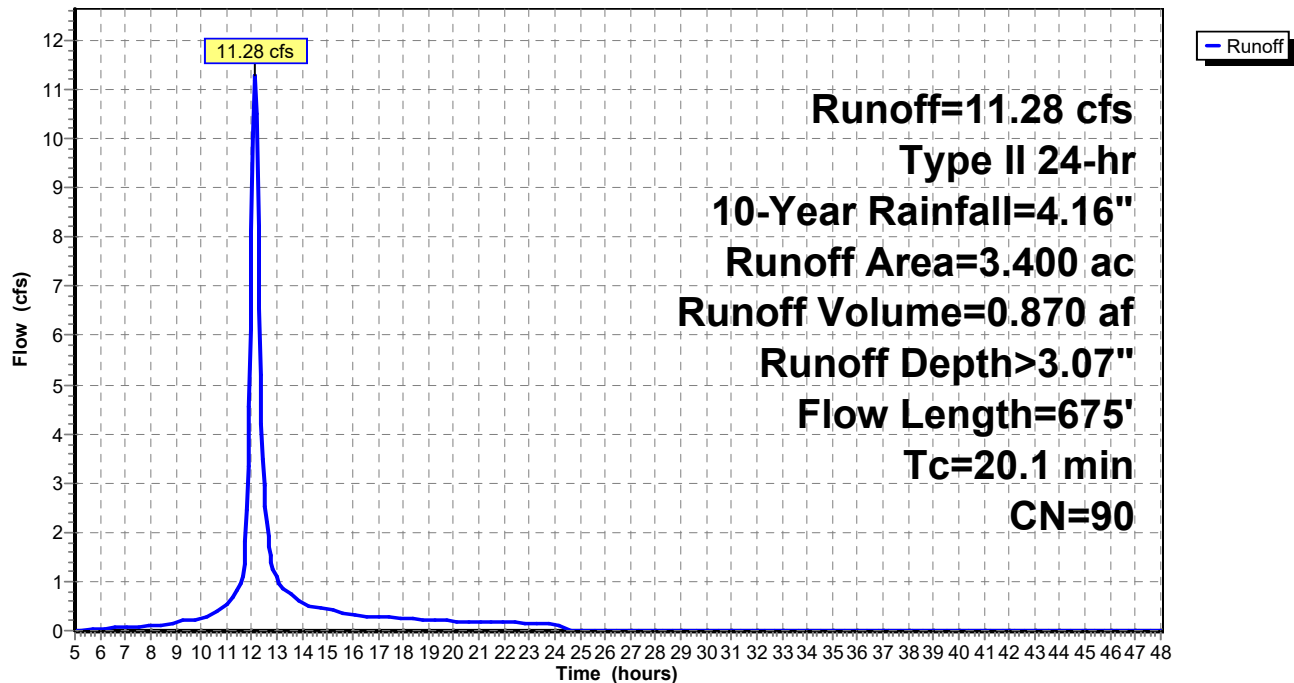
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=4.16"

Area (ac)	CN	Description
3.400	90	1/8 acre lots, 65% imp, HSG C
1.190		35.00% Pervious Area
2.210		65.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	75	0.0200	0.13		Sheet Flow, Grass: Short n= 0.150 P2= 2.15"
4.4	300	0.0050	1.14		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
6.2	300	0.0025	0.81		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
20.1	675	Total			

Subcatchment O1: Off-Site #1

Hydrograph



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Type II 24-hr 10-Year Rainfall=4.16"

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Summary for Subcatchment O2: Off-Site #2

Runoff = 32.67 cfs @ 12.05 hrs, Volume= 2.080 af, Depth> 3.07"

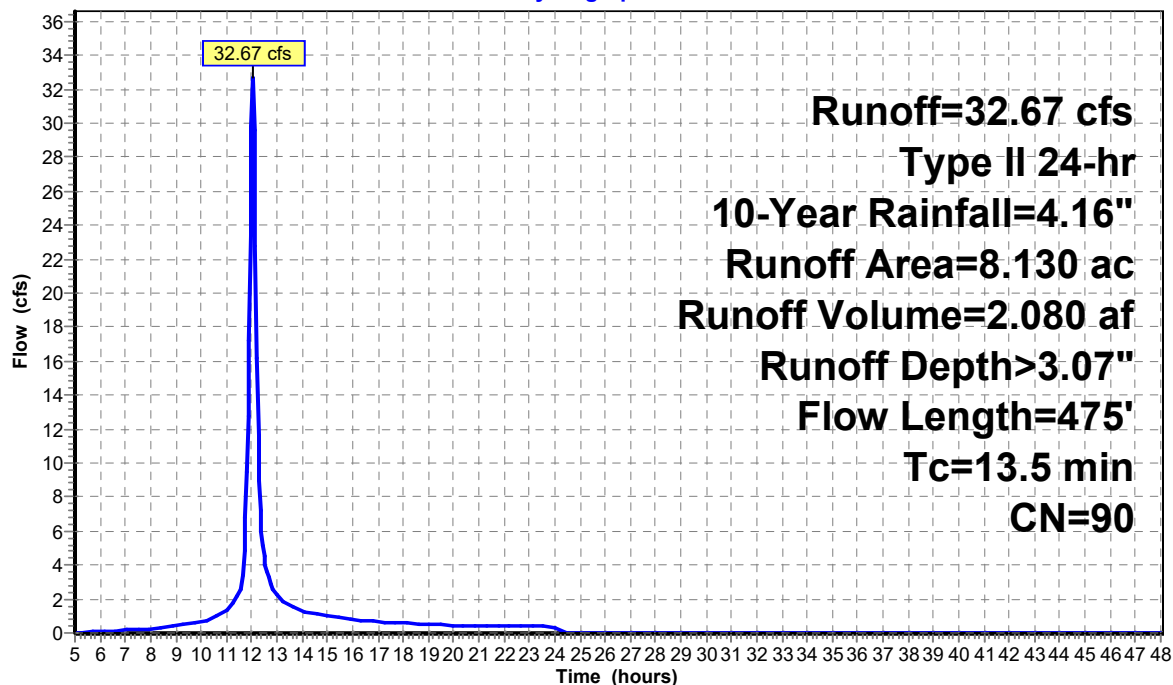
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=4.16"

Area (ac)	CN	Description
6.830	90	1/8 acre lots, 65% imp, HSG C
* 1.300	91	1/8 acre lots, 65% imp, HSG C/D
8.130	90	Weighted Average
2.845		35.00% Pervious Area
5.284		65.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	75	0.0200	0.13		Sheet Flow, Grass: Short n= 0.150 P2= 2.15"
3.5	300	0.0050	1.44		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	100	0.0035	3.37	4.14	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
13.5	475	Total			

Subcatchment O2: Off-Site #2

Hydrograph



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Type II 24-hr 10-Year Rainfall=4.16"

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Summary for Pond P: Pond #1

Inflow Area = 18.350 ac, 60.82% Impervious, Inflow Depth > 3.07" for 10-Year event
 Inflow = 75.08 cfs @ 12.04 hrs, Volume= 4.695 af
 Outflow = 5.63 cfs @ 12.87 hrs, Volume= 4.691 af, Atten= 93%, Lag= 49.4 min
 Primary = 5.63 cfs @ 12.87 hrs, Volume= 4.691 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 1,933.57' @ 12.87 hrs Surf.Area= 107,968 sf Storage= 115,236 cf

Plug-Flow detention time= 451.8 min calculated for 4.685 af (100% of inflow)

Center-of-Mass det. time= 452.1 min (1,252.6 - 800.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,931.45'	423,868 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,931.45	0	0	0
1,931.50	4,063	102	102
1,932.00	20,694	6,189	6,291
1,932.50	49,373	17,517	23,808
1,933.00	90,113	34,872	58,679
1,933.50	106,732	49,211	107,890
1,934.00	115,760	55,623	163,513
1,934.50	123,905	59,916	223,430
1,935.00	131,214	63,780	287,209
1,935.50	138,474	67,422	354,631
1,936.00	138,474	69,237	423,868

Device	Routing	Invert	Outlet Devices
#1	Primary	1,931.45'	30.0" Round Culvert L= 60.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,931.45' / 1,930.65' S= 0.0133 ' / Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	1,931.45'	6.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	1,931.95'	2.0" W x 24.0" H Vert. Orifice/Grate C= 0.600
#4	Device 1	1,933.17'	24.0" W x 12.0" H Vert. Orifice/Grate X 2.00 C= 0.600
#5	Device 1	1,934.50'	11.7" x 2.4" Horiz. Orifice/Grate X 2.00 columns X 7 rows C= 0.600 in 30.0" x 30.0" Grate (44% open area) Limited to weir flow at low heads
#6	Secondary	1,935.50'	250.0' long x 14.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.64 2.67 2.70 2.65 2.64 2.65 2.65 2.63

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Type II 24-hr 10-Year Rainfall=4.16"

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Primary OutFlow Max=5.62 cfs @ 12.87 hrs HW=1,933.57' (Free Discharge)

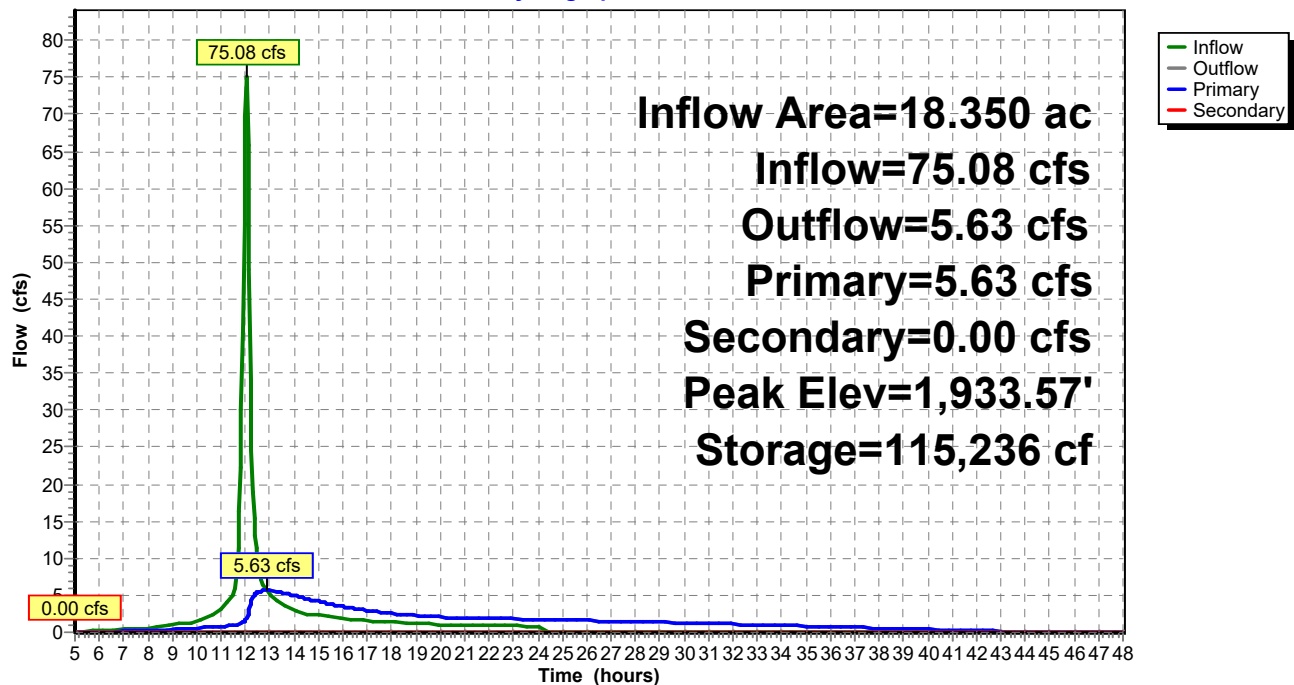
- 1=Culvert (Passes 5.62 cfs of 21.98 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 1.29 cfs @ 6.58 fps)
- 3=Orifice/Grate (Orifice Controls 1.10 cfs @ 4.08 fps)
- 4=Orifice/Grate (Orifice Controls 3.23 cfs @ 2.03 fps)
- 5=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,931.45' (Free Discharge)

- 6=Broad-Crested Rectangular Weir(Controls 0.00 cfs)

Pond P: Pond #1

Hydrograph



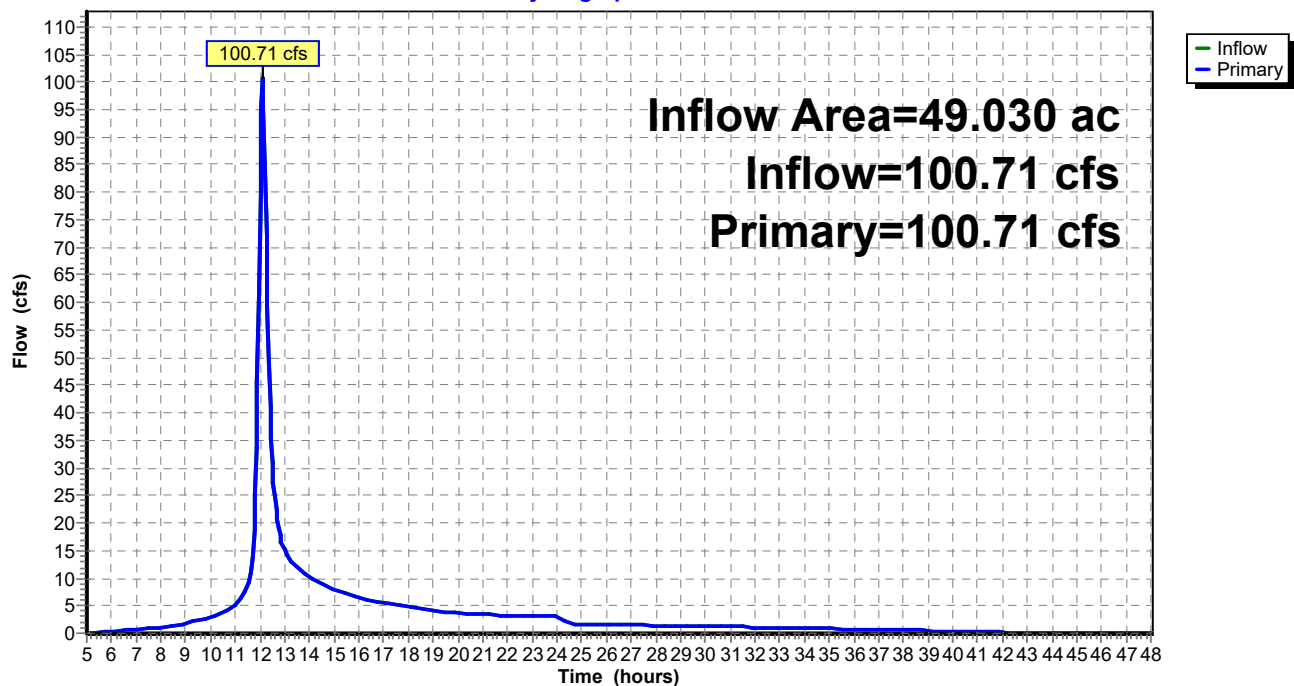
Summary for Link POST: Overall Post-Development

Inflow Area = 49.030 ac, 62.11% Impervious, Inflow Depth > 3.03" for 10-Year event
Inflow = 100.71 cfs @ 12.10 hrs, Volume= 12.386 af
Primary = 100.71 cfs @ 12.10 hrs, Volume= 12.386 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Link POST: Overall Post-Development

Hydrograph



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Type II 24-hr 100-Year Rainfall=6.64"

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Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentA1, A8-A17: Runoff Area=19.150 ac 61.62% Impervious Runoff Depth>5.34"
Flow Length=3,488' Tc=21.6 min CN=89 Runoff=104.33 cfs 8.528 af

SubcatchmentA2-A7: Post-Development Runoff Area=18.350 ac 60.82% Impervious Runoff Depth>5.45"
Flow Length=753' Tc=12.9 min CN=90 Runoff=129.52 cfs 8.330 af

SubcatchmentO1: Off-Site #1 Runoff Area=3.400 ac 65.00% Impervious Runoff Depth>5.45"
Flow Length=675' Tc=20.1 min CN=90 Runoff=19.55 cfs 1.544 af

SubcatchmentO2: Off-Site #2 Runoff Area=8.130 ac 65.00% Impervious Runoff Depth>5.45"
Flow Length=475' Tc=13.5 min CN=90 Runoff=56.38 cfs 3.691 af

Pond P: Pond #1 Peak Elev=1,934.26' Storage=194,294 cf Inflow=129.52 cfs 8.330 af
Primary=17.58 cfs 8.321 af Secondary=0.00 cfs 0.000 af Outflow=17.58 cfs 8.321 af

Link POST: Overall Post-Development Inflow=183.35 cfs 22.083 af
Primary=183.35 cfs 22.083 af

Total Runoff Area = 49.030 ac Runoff Volume = 22.093 af Average Runoff Depth = 5.41"
37.89% Pervious = 18.575 ac 62.11% Impervious = 30.454 ac

201055 Post Development Hydrologic Model

Type II 24-hr 100-Year Rainfall=6.64"

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Summary for Subcatchment A1, A8-A17: Post-Development

Runoff = 104.33 cfs @ 12.14 hrs, Volume= 8.528 af, Depth> 5.34"

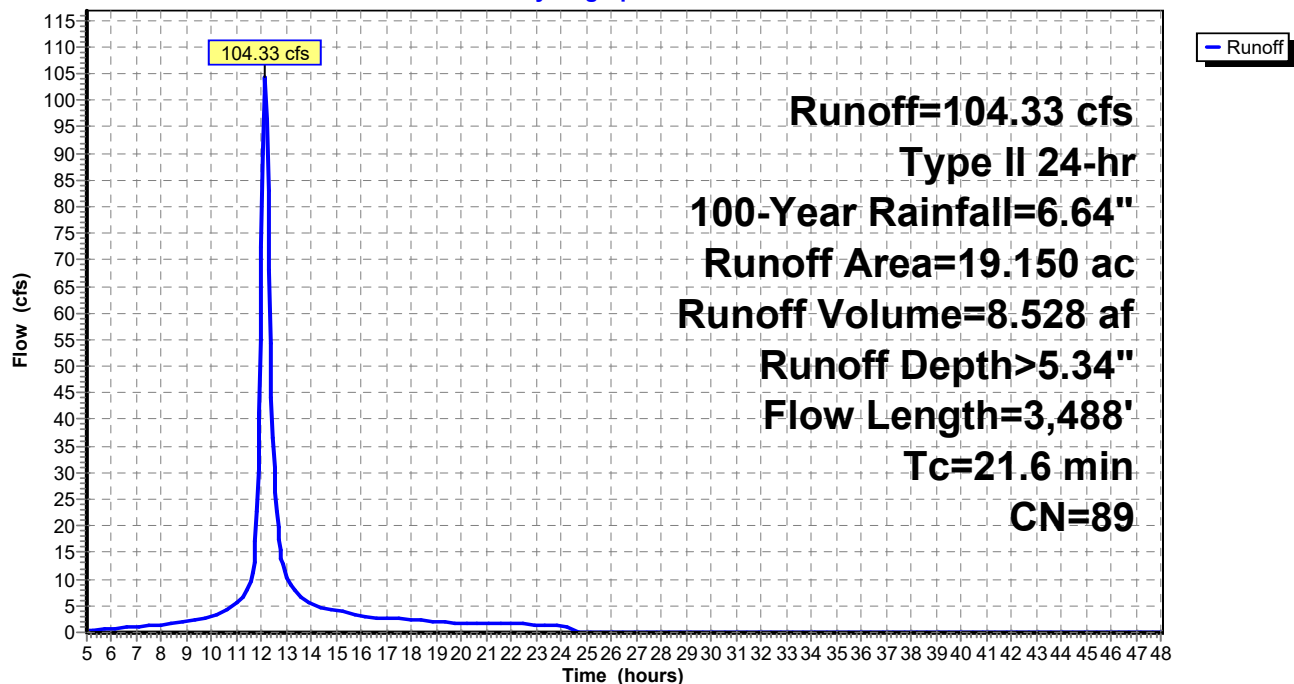
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.64"

Area (ac)	CN	Description
2.900	74	>75% Grass cover, Good, HSG C
* 4.450	77	>75% Grass cover, Good, HSG C/D
5.670	98	Unconnected roofs, HSG C
* 6.130	98	Unconnected pavement, HSG C/D
19.150	89	Weighted Average
7.350		38.38% Pervious Area
11.800		61.62% Impervious Area
11.800		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	150	0.0060	0.76		Sheet Flow, Smooth surfaces n= 0.011 P2= 2.15"
1.7	150	0.0051	1.45		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.9	68	0.0043	1.33		Shallow Concentrated Flow, Paved Kv= 20.3 fps
3.8	180	0.0015	0.79		Shallow Concentrated Flow, Paved Kv= 20.3 fps
6.2	1,315	0.0050	3.54	180.83	Channel Flow, Concrete Liner Area= 51.1 sf Perim= 176.4' r= 0.29' n= 0.013 Concrete, trowel finish
1.5	360	0.0027	4.05	12.73	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
1.2	380	0.0027	5.31	37.55	Pipe Channel, 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012
3.0	885	0.0015	4.92	437.12	Channel Flow, Area= 88.9 sf Perim= 34.5' r= 2.58' n= 0.022 Earth, clean & straight
21.6	3,488	Total			

Subcatchment A1, A8-A17: Post-Development

Hydrograph



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Type II 24-hr 100-Year Rainfall=6.64"

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Summary for Subcatchment A2-A7: Post-Development

Runoff = 129.52 cfs @ 12.04 hrs, Volume= 8.330 af, Depth> 5.45"

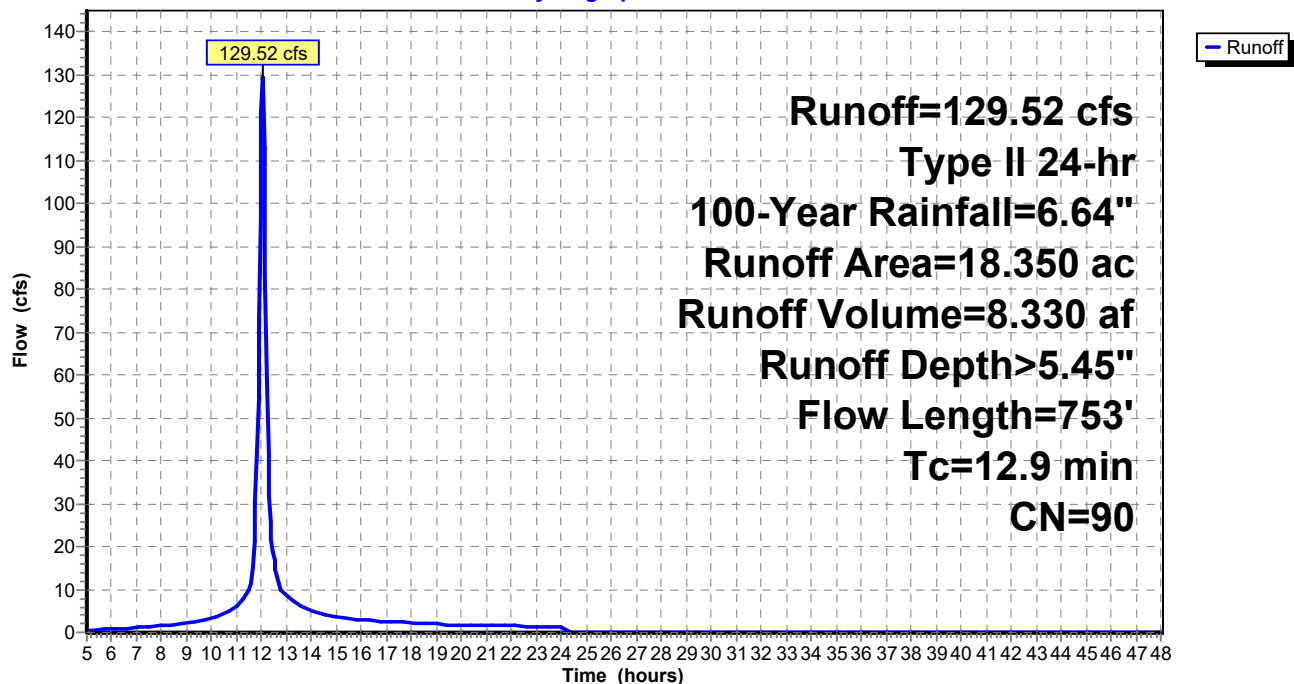
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.64"

Area (ac)	CN	Description
1.100	74	>75% Grass cover, Good, HSG C
* 6.090	77	>75% Grass cover, Good, HSG C/D
4.580	98	Unconnected roofs, HSG C
* 6.580	98	Unconnected pavement, HSG C/D
18.350	90	Weighted Average
7.190		39.18% Pervious Area
11.160		60.82% Impervious Area
11.160		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	45	0.0100	0.09		Sheet Flow, Grass: Short n= 0.150 P2= 2.15"
2.2	150	0.0051	1.15		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.9	68	0.0040	1.28		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.5	490	0.0050	5.52	17.33	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
12.9	753	Total			

Subcatchment A2-A7: Post-Development

Hydrograph



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Type II 24-hr 100-Year Rainfall=6.64"

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Summary for Subcatchment O1: Off-Site #1

Runoff = 19.55 cfs @ 12.12 hrs, Volume= 1.544 af, Depth> 5.45"

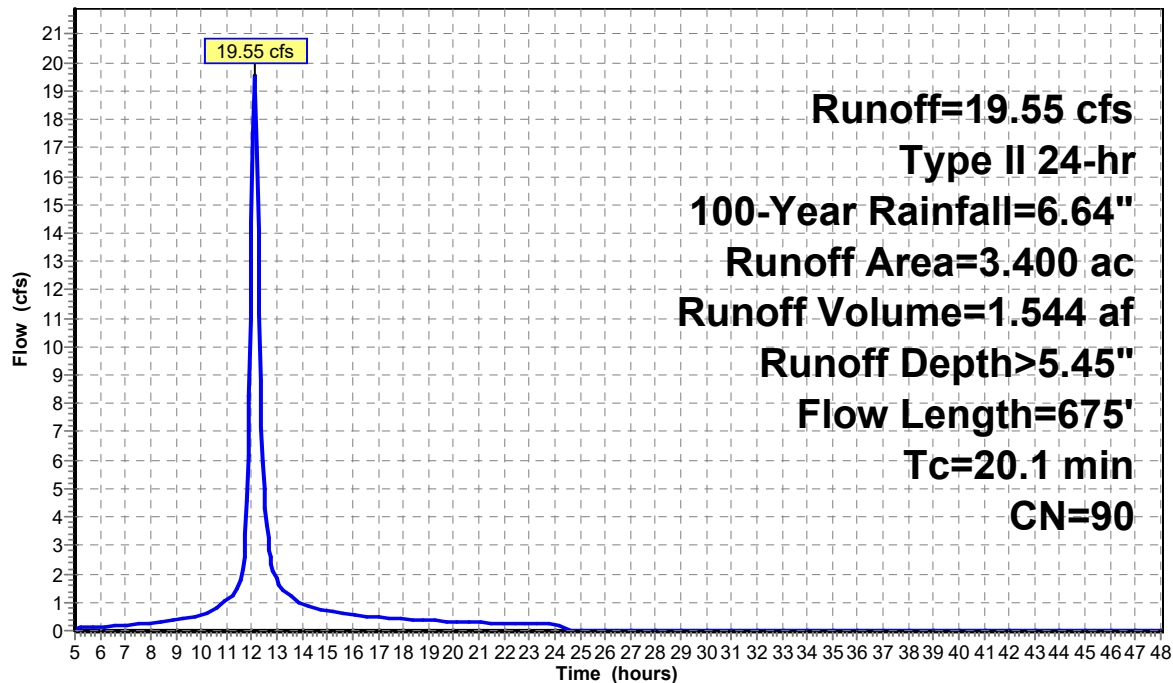
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.64"

Area (ac)	CN	Description
3.400	90	1/8 acre lots, 65% imp, HSG C
1.190		35.00% Pervious Area
2.210		65.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	75	0.0200	0.13		Sheet Flow, Grass: Short n= 0.150 P2= 2.15"
4.4	300	0.0050	1.14		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
6.2	300	0.0025	0.81		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
20.1	675	Total			

Subcatchment O1: Off-Site #1

Hydrograph



201055 Post Development Hydrologic Model

Type II 24-hr 100-Year Rainfall=6.64"

Prepared by REGA Engineering Group

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Summary for Subcatchment O2: Off-Site #2

Runoff = 56.38 cfs @ 12.05 hrs, Volume= 3.691 af, Depth> 5.45"

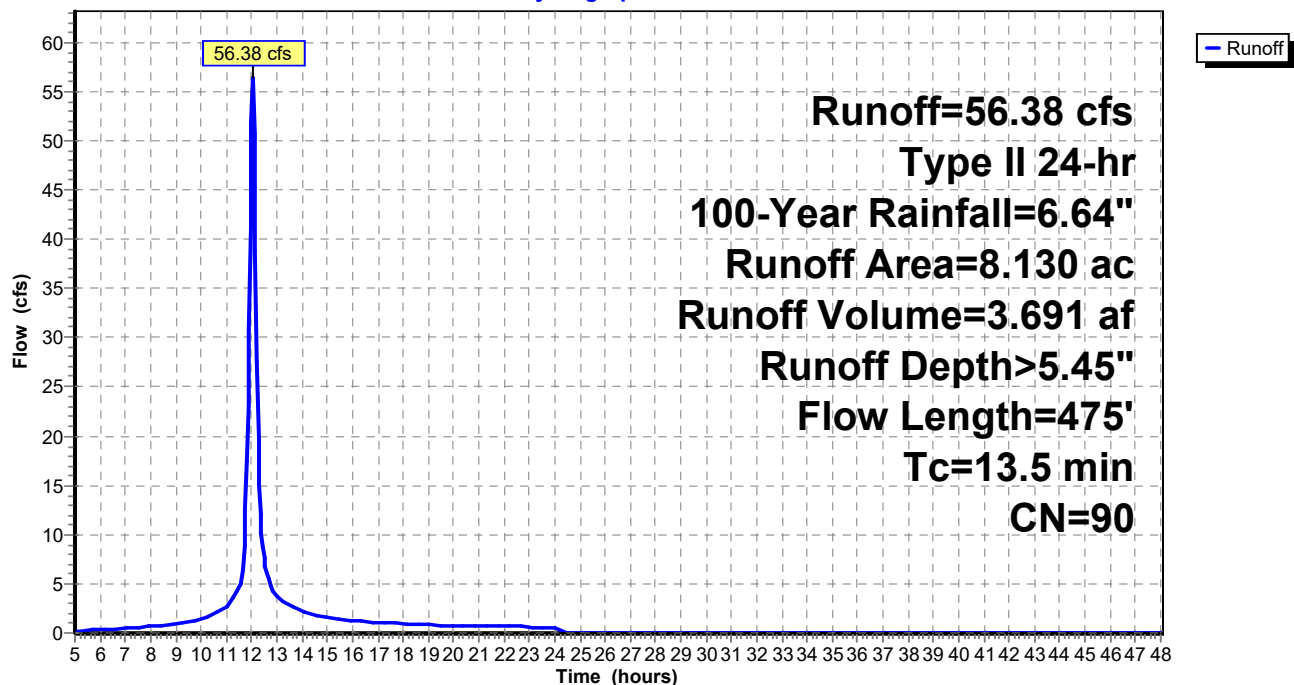
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.64"

Area (ac)	CN	Description
6.830	90	1/8 acre lots, 65% imp, HSG C
* 1.300	91	1/8 acre lots, 65% imp, HSG C/D
8.130	90	Weighted Average
2.845		35.00% Pervious Area
5.284		65.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	75	0.0200	0.13		Sheet Flow, Grass: Short n= 0.150 P2= 2.15"
3.5	300	0.0050	1.44		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	100	0.0035	3.37	4.14	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
13.5	475	Total			

Subcatchment O2: Off-Site #2

Hydrograph



201055 Post Development Hydrologic Model

Type II 24-hr 100-Year Rainfall=6.64"

Prepared by REGA Engineering Group

Printed 2/19/2021

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Summary for Pond P: Pond #1

[82] Warning: Early inflow requires earlier time span

Inflow Area = 18.350 ac, 60.82% Impervious, Inflow Depth > 5.45" for 100-Year event
 Inflow = 129.52 cfs @ 12.04 hrs, Volume= 8.330 af
 Outflow = 17.58 cfs @ 12.48 hrs, Volume= 8.321 af, Atten= 86%, Lag= 26.4 min
 Primary = 17.58 cfs @ 12.48 hrs, Volume= 8.321 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 1,934.26' @ 12.48 hrs Surf.Area= 120,013 sf Storage= 194,294 cf

Plug-Flow detention time= 343.4 min calculated for 8.320 af (100% of inflow)

Center-of-Mass det. time= 342.4 min (1,129.2 - 786.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,931.45'	423,868 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,931.45	0	0	0
1,931.50	4,063	102	102
1,932.00	20,694	6,189	6,291
1,932.50	49,373	17,517	23,808
1,933.00	90,113	34,872	58,679
1,933.50	106,732	49,211	107,890
1,934.00	115,760	55,623	163,513
1,934.50	123,905	59,916	223,430
1,935.00	131,214	63,780	287,209
1,935.50	138,474	67,422	354,631
1,936.00	138,474	69,237	423,868

Device	Routing	Invert	Outlet Devices
#1	Primary	1,931.45'	30.0" Round Culvert L= 60.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,931.45' / 1,930.65' S= 0.0133 ' / Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	1,931.45'	6.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	1,931.95'	2.0" W x 24.0" H Vert. Orifice/Grate C= 0.600
#4	Device 1	1,933.17'	24.0" W x 12.0" H Vert. Orifice/Grate X 2.00 C= 0.600
#5	Device 1	1,934.50'	11.7" x 2.4" Horiz. Orifice/Grate X 2.00 columns X 7 rows C= 0.600 in 30.0" x 30.0" Grate (44% open area) Limited to weir flow at low heads
#6	Secondary	1,935.50'	250.0' long x 14.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.64 2.67 2.70 2.65 2.64 2.65 2.65 2.63

Primary OutFlow Max=17.58 cfs @ 12.48 hrs HW=1,934.26' (Free Discharge)

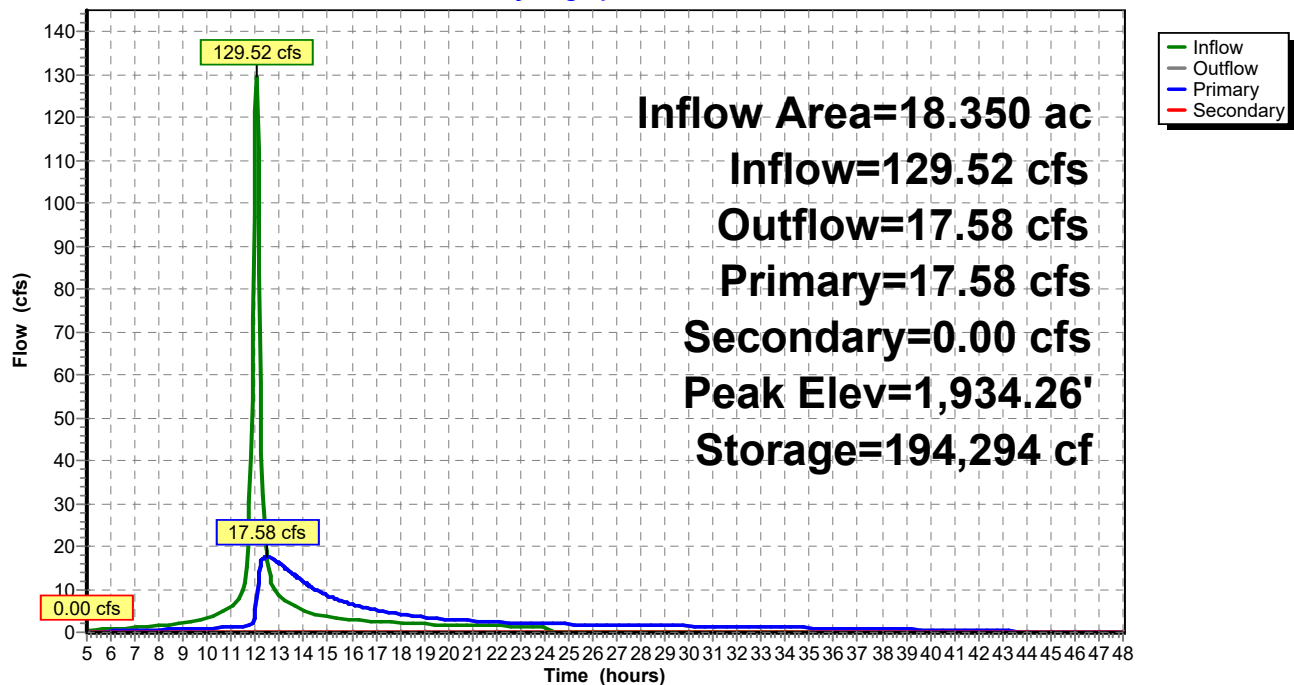
- 1=Culvert (Passes 17.58 cfs of 29.53 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 1.51 cfs @ 7.71 fps)
- 3=Orifice/Grate (Orifice Controls 1.79 cfs @ 5.36 fps)
- 4=Orifice/Grate (Orifice Controls 14.28 cfs @ 3.57 fps)
- 5=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,931.47' (Free Discharge)

- 6=Broad-Crested Rectangular Weir(Controls 0.00 cfs)

Pond P: Pond #1

Hydrograph



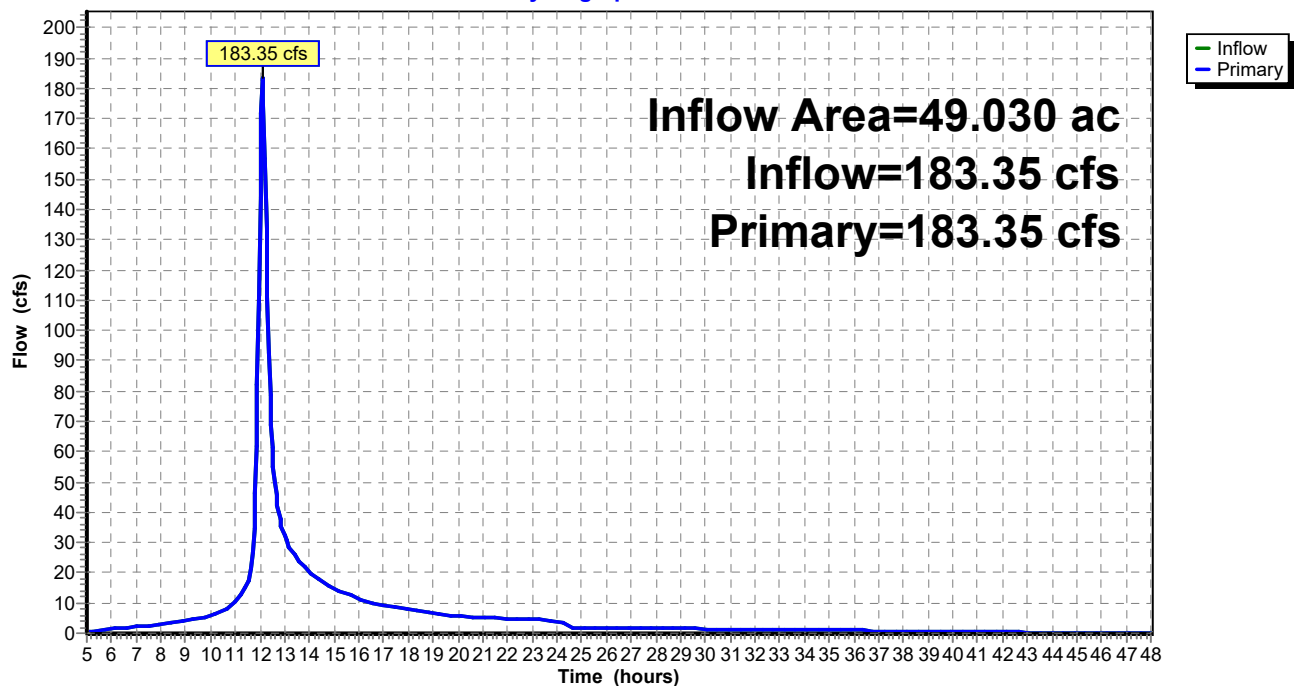
Summary for Link POST: Overall Post-Development

Inflow Area = 49.030 ac, 62.11% Impervious, Inflow Depth > 5.40" for 100-Year event
 Inflow = 183.35 cfs @ 12.11 hrs, Volume= 22.083 af
 Primary = 183.35 cfs @ 12.11 hrs, Volume= 22.083 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Link POST: Overall Post-Development

Hydrograph



APPENDIX C

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN (PCSMP) SUBMITTAL CHECKLIST

Post-Construction Stormwater Management Plan (PCSMP)

Submittal Checklist



Preliminary submittals required by the City will include preliminary information. Final submittals shall be representative of the intended construction bid package.

PROJECT NAME: Theatre District - Hastings, Nebraska

PLANS

- ☒ Site topography including existing contours, property lines and easements, utilities, and site features such as existing water bodies, trees and shrubs, pavement and other structures
- ☒ Proposed contours
- ☒ Proposed inlets, storm sewer, culverts, and drainageways
- ☒ Proposed STFs and/or detention facilities
- ☒ Proposed roadways, parking, building footprints, and other structures
- ☒ A table shall be provided in construction drawings that includes, for each Stormwater Treatment Facility (STF) The information shall be provided on drawings in a format that is consistent with the following:

STF Identification Number	STF Type	STF Location (Lat/Long)	Drainage Area (Acres)	Design WQCV (cf) or Q _{WQ} (cfs)	WQCV (cf) or Q _{WQ} (cfs) Provided

CALCULATIONS

- ☒ Water Quality Volume (WQCV) or Water Quality Volume Discharge Rate (Q_{WQ}) for each STF (To be included with a site design or subdivision drainage study)
- ☒ Drainage Study

AGREEMENTS

A maintenance agreement is required for neighborhood level and lot level STFs. If an agreement is made for mitigation off site or other agreements are made, make note and describe below

- ☐ Inspection and Maintenance Agreement
- ☐ Other Agreement

CERTIFICATION OF PERMANENT STFs

Unless otherwise indicated by the City, a Hold on the Certificate of Occupancy will be placed on the project until the STF has been certified. If applicable, check “Hold” until certification is received. If not applicable, check N/A.

- ☒ Hold on C.O.
- ☐ N/A

Submitted upon completion of a project; a statement by a professional engineer licensed in the State of Nebraska or person(s) under the direct supervision of a professional engineer licensed in the State of Nebraska attesting that the completed project is in compliance with the approved Final Plan.

- ☐ Certification of Permanent STFs
- ☐ Record Drawings (if required by City)

☐ Hold on C.O. Released (if applicable)

Released By:

APPENDIX D

THREATENED AND ENDANGERED SPECIES LIST



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Nebraska Ecological Services Field Office
9325 B South Alda Rd., Ste B
Wood River, NE 68883-9565
Phone: (308) 382-6468 Fax: (308) 384-8835
<http://www.fws.gov/nebraskaes>

In Reply Refer To:
Consultation Code: 06E22000-2021-SLI-0238
Event Code: 06E22000-2021-E-00365
Project Name: Imperial Mall - Hastings, Nebraska

February 05, 2021

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;

<http://www.towerkill.com>; and

[http://](http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html)

www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - Migratory Birds
 - Wetlands
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Nebraska Ecological Services Field Office

9325 B South Alda Rd., Ste B

Wood River, NE 68883-9565

(308) 382-6468

Project Summary

Consultation Code: 06E22000-2021-SLI-0238

Event Code: 06E22000-2021-E-00365

Project Name: Imperial Mall - Hastings, Nebraska

Project Type: DEVELOPMENT

Project Description: REGA Engineering Group, Inc. is applying for a Planned District Development to re-develop the commercial area known as the Imperial Mall in Hastings, Nebraska. The commercial development will remove all the old paving and infrastructure to create a new public street with commercial lots on either side. We are projecting 11 building pads comprised of potential grocery stores, apartments, fast-food restaurants, and retail space. The site demolition will occur in early 2021 with site grading finishing up around June 2021. The majority of the existing trees are to remain, except for trees that were within the old parking lot islands. The public utilities will be completed by the end of 2021. The timeline to achieve the full build out is unknown at this time.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.5949407,-98.42279262296589,14z>



Counties: Adams County, Nebraska

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Whooping Crane <i>Grus americana</i> Population: Wherever found, except where listed as an experimental population There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

Fishes

NAME	STATUS
Pallid Sturgeon <i>Scaphirhynchus albus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7162	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

■ probability of presence ■ breeding season | survey effort — no data

SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Red-headed
Woodpecker
BCC Rangewide
(CON)



Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

APPENDIX E

USDA WEB SOIL SURVEY



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Adams County, Nebraska**

Imperial Mall - Hastings, NE



January 25, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

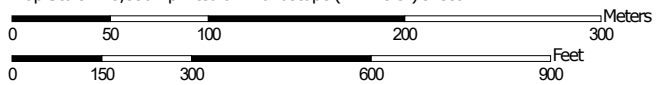
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Map Scale: 1:3,850 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Adams County, Nebraska
Survey Area Data: Version 23, Jun 3, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 2, 2015—Mar 2, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3820	Butler silt loam, 0 to 1 percent slopes	24.3	61.5%
3864	Hastings silt loam, 0 to 1 percent slopes	11.1	28.1%
3880	Holder silt loam, 1 to 3 percent slopes	4.1	10.4%
Totals for Area of Interest		39.6	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Adams County, Nebraska

3820—Butler silt loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2qsjx
Elevation: 1,130 to 2,770 feet
Mean annual precipitation: 23 to 31 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 149 to 175 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Butler and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Butler

Setting

Landform: Swales
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 9 inches: silt loam
E - 9 to 13 inches: silt loam
Bt - 13 to 34 inches: silty clay
BC - 34 to 41 inches: silty clay loam
C - 41 to 79 inches: silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 4 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 4 percent
Maximum salinity: Nonsaline (0.0 to 0.6 mmhos/cm)
Available water capacity: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: R075XY057NE - Clayey Plains
Forage suitability group: Wet (G075XY900NE)
Other vegetative classification: Wet (G075XY900NE)

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Hydric soil rating: No

Minor Components

Fillmore, frequently ponded

Percent of map unit: 8 percent

Landform: Playas

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Ecological site: R075XY049NE - Closed Upland Depression

Other vegetative classification: Closed Upland Depression (G075XY910NE)

Hydric soil rating: Yes

Crete

Percent of map unit: 6 percent

Landform: Hillslopes

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Interfluve

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: R075XY057NE - Clayey Plains

Hydric soil rating: No

Olbut, occasionally ponded

Percent of map unit: 1 percent

Landform: Playas

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Ecological site: R075XY083NE - Saline Depression

Other vegetative classification: Saline (G075XY895NE)

Hydric soil rating: Yes

3864—Hastings silt loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2qsjy

Elevation: 1,130 to 2,770 feet

Mean annual precipitation: 23 to 31 inches

Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 149 to 175 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Hastings and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hastings

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 6 inches: silt loam
A - 6 to 13 inches: silty clay loam
BA - 13 to 17 inches: silty clay loam
Bt - 17 to 32 inches: silty clay loam
Bk - 32 to 39 inches: silty clay loam
C - 39 to 79 inches: silt loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline (0.0 to 0.8 mmhos/cm)
Available water capacity: High (about 11.5 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: C
Ecological site: R075XY058NE - Loamy Plains
Forage suitability group: Loam (G075XY100NE)
Other vegetative classification: Loam (G075XY100NE)
Hydric soil rating: No

Minor Components

Crete

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R075XY057NE - Clayey Plains
Hydric soil rating: No

Fillmore, frequently ponded

Percent of map unit: 4 percent
Landform: Playas

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Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R075XY049NE - Closed Upland Depression
Other vegetative classification: Closed Upland Depression (G075XY910NE)
Hydric soil rating: Yes

Butler

Percent of map unit: 4 percent
Landform: Swales
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R075XY057NE - Clayey Plains
Other vegetative classification: Wet (G075XY900NE)
Hydric soil rating: No

Holder

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R075XY058NE - Loamy Plains
Other vegetative classification: Loam (G075XY100NE)
Hydric soil rating: No

3880—Holder silt loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2qskd
Elevation: 1,130 to 2,770 feet
Mean annual precipitation: 23 to 31 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 149 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Holder and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Holder

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit

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Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 10 inches: silt loam
BA - 10 to 14 inches: silty clay loam
Bt - 14 to 28 inches: silty clay loam
BC - 28 to 36 inches: silt loam
C - 36 to 79 inches: silt loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline (0.0 to 0.8 mmhos/cm)
Available water capacity: High (about 11.9 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: R075XY058NE - Loamy Plains
Forage suitability group: Loam (G075XY100NE)
Other vegetative classification: Loam (G075XY100NE)
Hydric soil rating: No

Minor Components

Hastings

Percent of map unit: 10 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R075XY058NE - Loamy Plains
Other vegetative classification: Loam (G075XY100NE)
Hydric soil rating: No

Butler

Percent of map unit: 5 percent
Landform: Swales
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R075XY057NE - Clayey Plains
Other vegetative classification: Wet (G075XY900NE)

Custom Soil Resource Report

Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

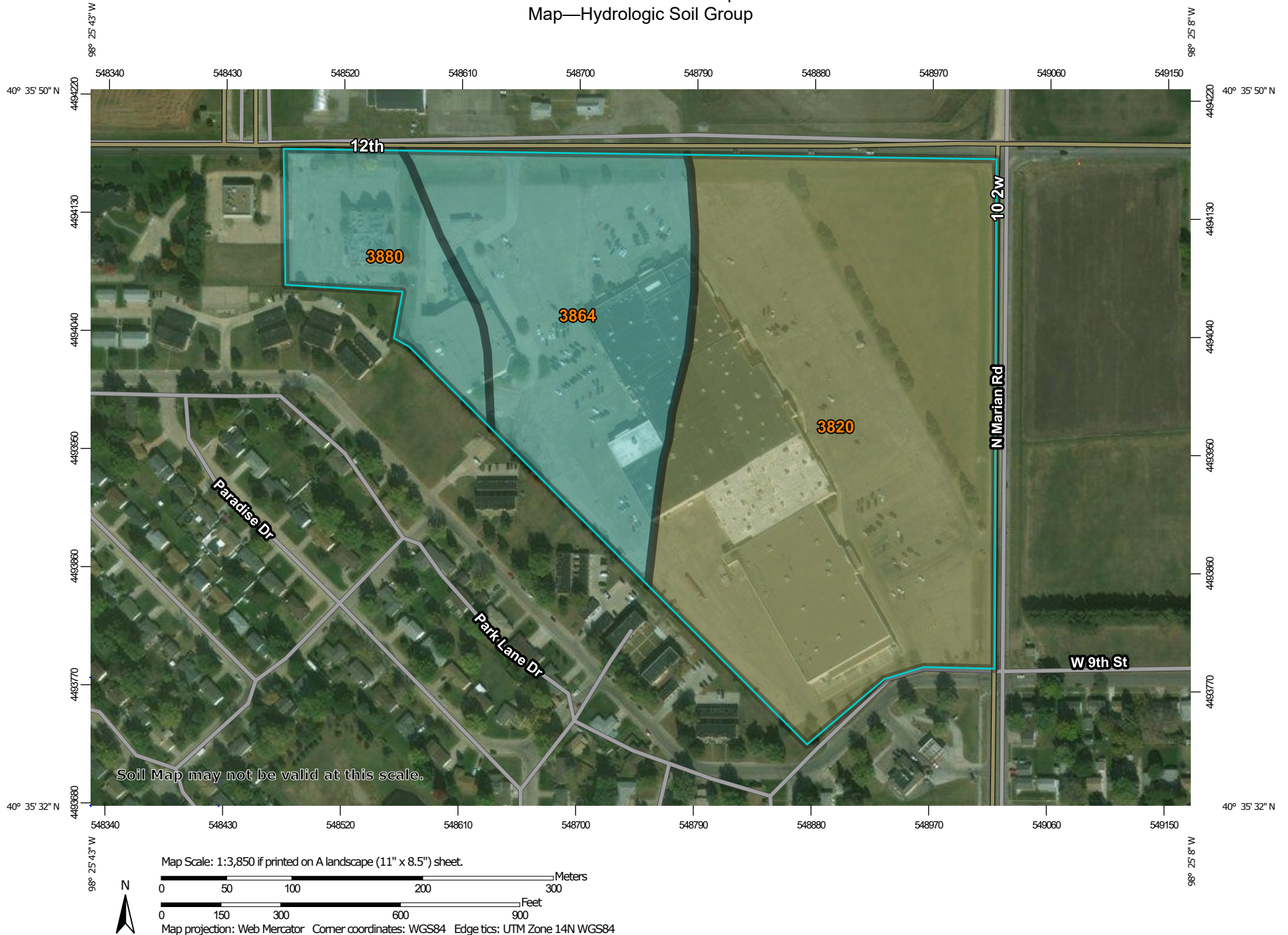
Custom Soil Resource Report

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Custom Soil Resource Report Map—Hydrologic Soil Group



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Adams County, Nebraska
Survey Area Data: Version 23, Jun 3, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 2, 2015—Mar 2, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
3820	Butler silt loam, 0 to 1 percent slopes	C/D	24.3	61.5%
3864	Hastings silt loam, 0 to 1 percent slopes	C	11.1	28.1%
3880	Holder silt loam, 1 to 3 percent slopes	C	4.1	10.4%
Totals for Area of Interest			39.6	100.0%

Rating Options—Hydrologic Soil Group*Aggregation Method: Dominant Condition**Component Percent Cutoff: None Specified**Tie-break Rule: Higher*

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Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

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STORMWATER MANAGEMENT PLAN MAINTENANCE AGREEMENT AND EASEMENT

WHEREAS, Theatre District, LLC, a Nebraska limited liability company, is the owner of Lots 1-8, Block 1, and Lots 1-4, Block 2, and Outlot “A”, Theatre District Subdivision, Hastings, Adams County, Nebraska (“Property”); and

WHEREAS, Theatre District, LLC shall be referred to hereinafter as the “Property Owner”, and its administrators, executors, successors, heirs and assigns, shall hereinafter be referred to collectively as the “Successors”; and

WHEREAS, the City of Hastings, Nebraska (hereinafter the “City”) requires and the Property Owner agrees that the health, safety and welfare of the citizens of the City require that stormwater management facilities (hereinafter referred to as the “facilities”) must be constructed and perpetually maintained on the Property.

NOW, THEREFORE, in consideration of the foregoing premises, the covenants contained herein, and the following terms and conditions, the Property Owner agrees as follows:

1. The Property Owner shall construct the facilities at its sole expense, in strict accordance with the **Theatre District Grading and Drainage Plan** attached as Exhibit “A” (the “Drainage Plan”), which has been reviewed and approved by the City. The Drainage Plan includes a detention facility located on Outlot “A” of the subdivision.
2. The Property Owner and its Successors shall perpetually maintain, at their sole expense, the facilities in strict accordance with the Drainage Plan, which shall include all of the inspection and maintenance activity described in the Maintenance Form attached as Exhibit “B”. The Property Owner and its successors shall also comply with any requirements set forth in the Hastings Municipal Code, the City’s Drainage Criteria Manual, and City’s Design Standards.
3. The Property Owner and its Successors shall submit an annual maintenance report for the facilities in the form of Exhibit “B” to the City commencing one year from the date of this

Agreement. Said report shall be sent to the City of Hastings, Engineering Department, 1228 No. Denver Avenue, Hastings, Nebraska 68901.

4. The Property Owner and its Successors hereby grant the City, its authorized agents and employees, permission to enter upon the Property and to inspect the facilities whenever the City deems necessary. The City shall provide the Property Owner copies of any inspection findings and a directive to commence repairs if necessary. If repairs to the facilities are necessary, the Property Owner must provide the City a written response within seven (7) calendar days addressing what actions will be taken to correct any deficiencies and providing a schedule of repairs within a reasonable timeframe. Whenever possible, the City will provide notice prior to entry.
5. The Property Owner and its Successors agree that should it fail to correct any defects in the facilities within a reasonable time frame agreed to in the response by the Property Owner for corrective actions, or shall fail to maintain the facilities in accordance with the attached Exhibit "A" and with the law and applicable executive regulations or, in the event of an emergency as determined by the City or its designee in its sole discretion, the City or its designee is authorized to enter the Property to make all repairs and to perform all maintenance, construction and reconstruction as the City or its designee deems necessary.
6. The City or its designee shall have the right to recover from the Property Owner any and all reasonable costs the City expends to maintain or repair the facilities or to correct any operational deficiencies subject to the provisions of the immediately preceding sentence relating to acts of the City. Failure to pay the City or its designee all of its expended costs, after forty-five (45) days written notice, shall constitute a breach of the Agreement. The City or its designee shall thereafter be entitled to bring an action against the Property Owner to pay, or foreclose upon the lien hereby authorized by the Agreement against the Property, or both. Interest, collection costs, and reasonable attorney fees shall be added to the recovery of the successful party.
7. The Property Owner shall not obligate the City to maintain or repair the facilities, and the City shall not be liable to any person for the condition or operation of the facilities.
8. The Property Owner and its Successors hereby indemnify and hold harmless the City and its authorized agents and employees for any and all damages, accidents, casualties, occurrences or claims that may arise or be asserted against the City from the construction, presence, existence or maintenance of the facilities by the Property Owner. In the event a claim is asserted against the City, its authorized agents or employees, the City shall promptly notify the Property Owner and the Property Owner shall defend, at its own expense, any suit based on such claim unless due solely to the negligence of the City, in which event the City shall be required to defend any such suit at its own expense. Notwithstanding the foregoing, if any claims are made against both the City and the Property Owner, each will be required to defend any such suit or claim at its own expense. Each shall be responsible for payment of any recovery to the extent determined in such suit. If any judgment or claims against the City, its authorized agents or employees shall

be allowed, the Property Owner shall pay for all costs and expenses in connection therewith except to the extent of the negligence or intentional act of the City.

9. The Property Owner shall not in any way diminish, limit or restrict the right of the City to enforce any of its ordinances as authorized by law.
10. The Agreement shall be recorded with the Register of Deeds of Lancaster County, Nebraska and shall constitute a covenant running with the land and shall be binding on the Property Owner and its Successors, including any homeowners or business association or any other successors in interest.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the dates as set forth below.

“CITY”

CITY OF HASTINGS, NEBRASKA,

By: _____
Engineering Department Director

“PROPERTY OWNER”

Theatre District, LLC, a Nebraska limited liability company

By: _____
Craig Reid, Manager

STATE OF NEBRASKA)
) ss.
COUNTY OF _____)

The foregoing was acknowledged before me this ____ day of _____, 20__, by _____ dated.

Notary Public

EXHIBIT A
DRAINAGE PLAN

EXHIBIT B
(Maintenance Form)

