



**Roll Call Number**

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**Agenda Item Number**

42 A

**Date** May 24, 2021

**RESOLUTION ON APPEAL OF FLOODPLAIN PERFORMANCE STANDARDS AND  
REQUEST FOR VARIANCE FOR THE CENTRAL IOWA WATER TRAILS  
SCOTT AVENUE PROJECT (DES MOINES MUNICIPAL CODE  
SECTIONS 50-35(C) AND 50-34(14))**

**WHEREAS**, Des Moines Municipal Code Chapter 50 requires that development within the City’s floodplain and floodway districts, as designated by flood insurance studies published by the Federal Emergency Management Agency (FEMA) and shown on related flood insurance rate maps utilized by the City, comply with the City’s floodplain performance standards; and

**WHEREAS**, specifically, Des Moines Municipal Code Section 50-34(14) prohibits proposed development within a designated floodway from increasing flood levels within the flood plain during the occurrence of a 100-year flood; and

**WHEREAS**, Des Moines Municipal Code Section 50-35 requires that a certificate of compliance, or floodplain development permit, must be issued by the City prior to commencement of any proposed development within a floodplain area, and that any application for such certificate/permit shall be denied if the City Engineer determines that the proposed development does not meet applicable performance standards of Section 50-34; and

**WHEREAS**, the Des Moines Area Metropolitan Planning Organization (DMAMPO) applied for and has been awarded a Better Utilizing Investments to Leverage Development (BUILD) Transportation Discretionary Grant for the Central Iowa Water Trail: Phase I Dam Mitigation and User Access Project; and

**WHEREAS**, the project is proceeding as a joint effort by the DMAMPO and Central Iowa Water Trails, LLC (CIWT) and includes mitigating the low-head dam at Scott Avenue to help facilitate a water recreational trail, and enhance three additional access points along the Des Moines River, including Prospect Park, Birdland Marina, and the Harriet Street Corridor; and

**WHEREAS**, the scope of improvements for the CIWT Scott Avenue Project (“Project”) include modifications to the Scott Avenue dam, construction of two drop structures and multiple rock outcrops for recreational purposes, safety improvements, and improved river access, located within and adjacent to the Des Moines River and is bounded by Scott Avenue (upstream) and SE 6<sup>th</sup> Street (downstream); and

**WHEREAS**, DMAMPO and CIWT have applied for a floodplain development permit for the Project, which application was denied by the City Engineer for failure to meet Section 50-34(14) development standards because the Project proposes to increase flood levels in the project area by between 0.01 and 0.06 feet; and

Date May 24, 2021

**WHEREAS**, on April 30, 2021, by communication attached hereto as Exhibit A, DMAMPO and CIWT appealed said denial in accordance with Des Moines Municipal Code Section 50-35(c); and

**WHEREAS**, Section 50-35(c) allows the City Council to authorize a variance of the floodplain development standards in order to avoid unnecessary hardship to the applicant or to further the public interest, when the requested variance meets six criteria as set forth in the Council Communication No. 21-228, submitted herewith and incorporated herein by this reference; and

**WHEREAS**, said criteria include the concurrence or approval of the Iowa Department of Natural Resources (IDNR), which has been provided by May 14, 2021 communication from IDNR attached hereto as Exhibit B, subject to DMAMPO and CIWT meeting specified conditions which said parties have agreed to meet by May 14, 2021 communication attached hereto as Exhibit C; and

**WHEREAS**, as stated in Council Communication No. 21-228, the City Engineer has determined that the Project fulfills the criteria required by Section 50-35(c) for Council to grant a variance, subject to conditions stated below.

**NOW, THEREFORE, BE IT RESOLVED** by the City Council of the City of Des Moines, Iowa, that:

1. The attached Exhibits are hereby received and filed:
  - a. April 30, 2021 communication requesting appeal, from the DMAMPO and attached hereto as Exhibit A;
  - b. May 14, 2021 communication concurring with the variance request, from the IDNR and attached hereto as Exhibit B; and
  - c. May 14, 2021 communication asserting that the Project will comply with the conditions required by the City and by IDNR, from the DMAMPO and attached hereto as Exhibit C.
2. The City Council hereby adopts the findings and determinations of the City Engineer as set forth in Council Communication No. 21-228, regarding the criteria required for variance approval for the CIWT Scott Avenue Project.
3. Based on the findings and determinations set forth in Council Communication No. 21-228, and based on the representations made in the attached Exhibits, the City Council hereby further finds in regard to the CIWT Scott Avenue Project that:
  - a. An exception to full application of performance standard Section 50-34(14) is necessary to avoid unnecessary hardship to the applicant and to further the public interest; and
  - b. All variance approval criteria have been met by DMAMPO and CIWT.
4. Pursuant to Section 50-35(c), the City Council hereby conditionally approves the variance to Section 50-34(14) as requested by DMAMPO and CIWT for the CIWT Scott Avenue Project, subject to the following:
  - a. The design and construction of the Project must conform to the representations made in the submitted floodplain development application and the Exhibits attached hereto,

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- including but not limited to the requirement that the Project does not increase flood levels in the project area by more than 0.01 and 0.06 feet depending on location.
- b. Any change or revision to the design or construction of the Project requires review by the City Engineering Department pursuant to Des Moines Municipal Code Chapter 50, and the City Engineer may request reconsideration of this variance by the City Council as a result of said further review.
  - c. This variance will be revoked, effective immediately and with no further action required by the City Engineer and/or City Council, in the event of (i) any change in projected or actual rise in the flood levels above those represented by DMAMPO and/or CIWT of between 0.01 and 0.06 feet in the project area, as shown in the design or construction plans for the Project; and/or (ii) any failure by the DMAMPO and/or CIWT to comply with the IDNR conditions of concurrence set forth in Exhibit B hereto. The applicant may submit a subsequent variance application pursuant to Section 50-35(c) in the event of such revocation.
  - d. This variance is subject to City approval of design, construction, maintenance and operations, and similar related agreements between the City and DMAMPO and CIWT and other required entities or consultants, which agreements shall be submitted to Council for consideration and approval.

(Council Comm. No. 21-228)

MOVED BY \_\_\_\_\_ TO ADOPT.

APPROVED AS TO FORM:

/s/ Glenna K. Frank  
Glenna K. Frank, Assistant City Attorney

COUNCIL ACTION	YEAS	NAYS	PASS	ABSENT
BOESEN				
COWNIE				
GATTO				
GRAY				
MANDELBAUM				
VOSS				
WESTERGAARD				
TOTAL				
MOTION CARRIED			APPROVED	

**CERTIFICATE**

I, P. KAY CMELIK, City Clerk of said City hereby certify that at a meeting of the City Council of said City of Des Moines, held on the above date, among other proceedings the above was adopted.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year first above written.

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
City Clerk



Exhibit A

420 Watson Powell Jr. Parkway, Suite 200  
Des Moines, Iowa 50309  
Phone: 515.334.0075  
Email: info@dmampo.org  
www.dmampo.org

April 30, 2021

City of Des Moines  
Attn: Steve Naber  
400 Robert D. Ray Drive  
Des Moines, Iowa 50309

RE: Central Iowa Water Trails - Performance Standard Section 50-34 (14) Variance Request

Dear Steve,

With respect to the floodplain development of the Central Iowa Water Trails Scott Avenue Project (Project), a variance is requested from the City. The variance is related to the Performance Standard Section 50-34 (14) in the City Code, as follows:

*Section 50-34 (14) - All encroachments, including fill, new construction, substantial improvements, and other development, within a designated floodway are hereby prohibited unless it has been demonstrated to the reasonable satisfaction of the city engineer through hydrologic and hydraulic analysis performed in accordance with standard engineering practices that the proposed encroachment will not result in any increase in flood levels within the flood plain during the occurrence of a 100-year flood.*

While flood levels related to the Project result in a non-zero increase (See attached Figure 1 and Table 1) ft between stations 39,145 ft and 39,511 ft (366 ft) during the encroached 1-percent annual chance event the increase is completely contained by the Des Moines Levee System. The maximum increase is 0.07 ft under the Scott Avenue Bridge – contained by Abutments – and over a channel length of 1 ft. In other places along the impacted reach the increase is 0.01 ft and 0.06 ft. The increase related to the Project does not propagate further upstream nor downstream from the Project reach. Furthermore, the current and ongoing Des Moines Levee Reach C Design and Construction project has been shown to be able to absorb the increase related to the CWIT Scott Avenue Project without impacting the levee's performance, minimum freeboard criteria, or certification eligibility.

Therefore, on behalf of the CIWT LLC, we are asking for relief from this code requirement, in the form of a City-granted variance. More explanation and support for granting the variance follows in accordance with City Code.

- (1) *Variations shall only be issued upon (i) a showing of good and sufficient cause (ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant and (iii) a determination that the granting of the variance will not result in increased*

*flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing local codes or ordinances.*

The Project goals include increasing public safety through mitigating the Scott Avenue drowning hazard, increasing fish habitat, promoting economic development, and providing recreational benefits. Numerous attempts at modifying the design to meet the project goals and meet no-rise criteria were not successful. The U.S. Department of Transportation BUILD grant funding of \$25 million requires the project goals to be met so failure to receive the variance would result in forfeiture of this funding. The increase in flood heights occurs in a reach that is already contained by levees, with no effect on levee system performance. Therefore, this would create no additional threats to public safety, public or private property, or require the city to incur additional expense.

- (2) *Variances shall not be issued within any designated floodway if any increase in flood levels during the 100-year flood would result. Consideration of the effects of any development on flood levels shall be based upon the assumption that an equal degree of development would be allowed for similarly situated lands. Equal degree of development would still be allowed.*

The increase in flood heights occurs in a reach that is already contained by levees. The future design of the levees through this reach account for this increase while still meeting the City's other design criteria.

- (3) *Variances shall only be granted upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.*

After numerous attempts to meet the project goals and maintain a no rise, a 0.07' increase has been determined to be the minimum increase achievable over a 1 ft length of channel under the Scott Ave Bridge. The increases in the remainder of the reach are between 0.01 ft and 0.06 ft. The levee's future design accommodates this increase so no additional flood hazard will be created. T

- (4) *In cases where the variance involves a lower level of flood protection for buildings than what is ordinarily required by this article, the applicant shall be notified in writing over the signature of the city engineer that: (i) the issuance of a variance will result in increased premium rates for flood insurance up to amounts as high as \$25.00 for \$100.00 of insurance coverage and (ii) such construction increases risks to life and property. This statement shall be maintained as a required record under section 50-35(e) below.*

Not Applicable.

- (5) *All variances granted shall have the concurrence or approval of the department of natural resources.*

Coordination with the Iowa DNR is ongoing and we anticipate concurrence in the time frame that is required by the City.

*(6) In addition to the above conditions in this subsection, variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.*

This project received cultural resources clearance and a finding of No Adverse Effect from the Iowa DOT and SHPO as part of the compliance review for Section 106 of the National Historic Preservation Act and the Statewide Programmatic Agreement (2018).

Please let me know if you have any questions regarding our responses to these explanations in support of our request for a variance.

Sincerely,



R. Todd Ashby  
CEO/Executive Director  
Des Moines Area Metropolitan Planning Organization

cc: Pam Cooksey, City of Des Moines  
Adam Prilipp, City of Des Moines  
Maggie McClelland, CIWT  
Mark Land, Snyder & Associates

Attachment

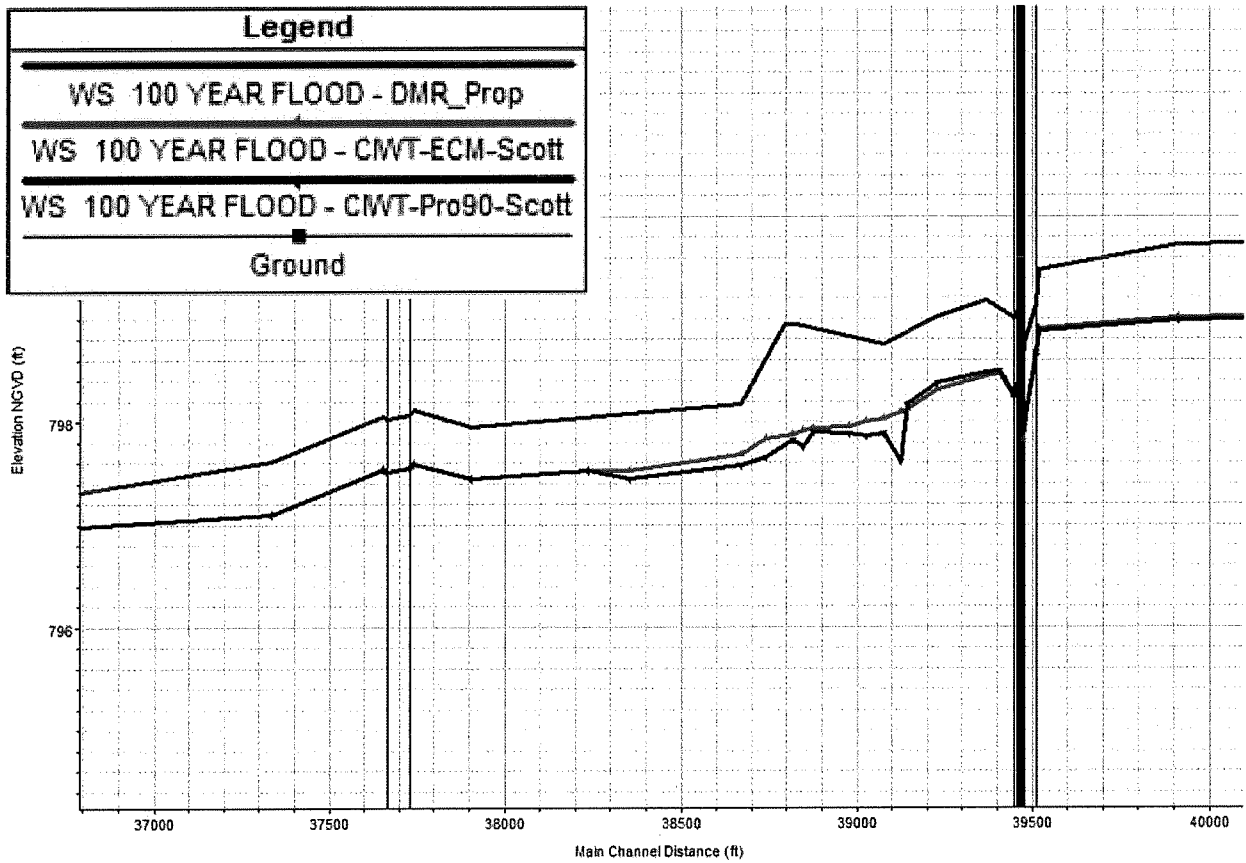


Figure1. WSE Profiles between SE 6th and Scott Ave for 100 year flood (Purple Line is Proposed Conditions, Red Line is Existing Conditions, and Blue Line is for reference only). The area where the purple line is above the red line is the 366 ft that requires the variance (Between 39,145 ft and 39,511 ft)

Table 1. WSEL and River Stations for Scott Ave Project

Cross Section	100-year (1% annual chance) Water Surface Elevation [feet]			Floodway (1% annual chance) Water Surface Elevation [feet]			10-Year (10% annual chance) Water Surface Elevation [feet]			50-Year (2% annual chance) Water Surface Elevation [feet]			500-Year (0.2% annual chance) Water Surface Elevation [feet]		
	CIWT-Ex-Scott	CIWT-Pro-Scott	Difference	CIWT-Ex-Scott	CIWT-Pro-Scott	Difference	CIWT-Ex-Scott	CIWT-Pro-Scott	Difference	CIWT-Ex-Scott	CIWT-Pro-Scott	Difference	CIWT-Ex-Scott	CIWT-Pro-Scott	Difference
40200.00	799.04	799.02	-0.02	799.49	799.46	-0.03	790.36	790.38	0.02	796.18	796.18	0.00	803.08	802.94	-0.14
39511.40	798.67	798.68	0.02	799.13	799.14	0.01	790.22	790.25	0.03	795.98	796.00	0.02	802.21	802.24	0.03
39477.45	797.98	798.00	0.02	798.47	798.48	0.01	789.86	789.89	0.03	795.43	795.45	0.02	801.19	801.23	0.04
39476.45	797.81	797.89	0.08	798.31	798.38	0.07	789.74	789.82	0.08	795.28	795.35	0.07	800.97	801.08	0.11
39475.45	797.83	797.91	0.07	798.34	798.40	0.06	789.76	789.83	0.07	795.30	795.37	0.07	801.00	801.11	0.10
39472.45	798.02	798.06	0.04	798.52	798.54	0.03	789.88	789.93	0.04	795.46	795.50	0.03	801.27	801.32	0.05
39469.45	798.26	798.28	0.02	798.74	798.75	0.01	790.00	790.04	0.04	795.65	795.68	0.02	801.62	801.65	0.03
39467.45	798.33	798.35	0.02	798.81	798.82	0.01	790.03	790.07	0.04	795.71	795.73	0.02	801.72	801.75	0.03
39465.45	798.34	798.36	0.02	798.82	798.83	0.01	790.04	790.07	0.04	795.71	795.73	0.02	801.74	801.76	0.02
39460.45	798.34	798.36	0.02	798.82	798.83	0.01	790.04	790.07	0.04	795.71	795.73	0.02	801.74	801.76	0.02
39457.95	798.26	798.28	0.02	798.74	798.75	0.01	790.00	790.04	0.04	795.65	795.67	0.02	801.61	801.64	0.03
39456.45	798.26	798.28	0.02	798.74	798.75	0.01	790.00	790.04	0.04	795.65	795.67	0.02	801.61	801.64	0.03
39448.00	798.25	798.28	0.02	798.74	798.75	0.01	790.00	790.04	0.04	795.65	795.67	0.03	801.61	801.64	0.03
39406.00	798.47	798.49	0.03	798.94	798.96	0.02	790.07	790.11	0.04	795.79	795.82	0.03	802.01	802.05	0.04
39368.00	798.45	798.48	0.04	798.93	798.95	0.02	790.06	790.10	0.04	795.78	795.81	0.03	801.98	802.04	0.05
39230.00	798.31	798.39	0.07	798.80	798.86	0.06	790.00	790.05	0.05	795.67	795.73	0.06	801.82	801.93	0.12
39145.00	798.12	798.17	0.05	798.62	798.66	0.04	789.93	789.97	0.04	795.53	795.57	0.04	802.23	802.30	0.07
39125.00	798.09	797.62	-0.47	798.59	798.15	-0.44	789.92	789.60	-0.31	795.51	795.09	-0.42	802.19	802.22	0.03
39078.00	798.02	797.89	-0.14	798.53	798.39	-0.13	789.89	789.82	-0.07	795.46	795.34	-0.12	802.25	801.70	-0.56
39028.00	798.00	797.86	-0.14	798.51	798.37	-0.14	789.88	789.79	-0.08	795.44	795.31	-0.13	802.22	801.77	-0.45
38978.00	797.95	797.90	-0.06	798.46	798.40	-0.06	789.86	789.82	-0.04	795.40	795.34	-0.06	801.71	801.78	0.07
38878.00	797.93	797.91	-0.03	798.44	798.41	-0.03	789.85	789.82	-0.03	795.38	795.34	-0.04	802.07	802.24	0.17
38848.00	797.91	797.77	-0.14	798.42	798.28	-0.14	789.83	789.74	-0.09	795.36	795.23	-0.13	802.07	801.61	-0.46
38818.00	797.88	797.83	-0.05	798.39	798.34	-0.05	789.82	789.79	-0.03	795.33	795.29	-0.04	802.06	802.01	-0.05
38743.00	797.84	797.58	-0.25	798.35	798.11	-0.24	789.80	789.71	-0.09	795.29	795.10	-0.19	802.09	802.00	-0.09
38671.00	797.67	797.58	-0.09	798.19	798.10	-0.09	789.75	789.69	-0.06	795.18	795.09	-0.09	802.02	801.99	-0.03
38356.00	797.53	797.44	-0.09	798.00	797.93	-0.07	789.65	789.62	-0.03	795.03	794.98	-0.05	802.09	801.91	-0.18
38237.00	797.53	797.53	0.00	797.97	797.97	0.00	789.64	789.64	0.00	795.04	795.04	0.00	801.91	801.90	0.00
37909.00	797.45	797.45	0.00	797.93	797.93	0.00	789.60	789.60	0.00	794.98	794.98	0.00	801.35	801.35	0.00





5/14/2021

Adam Prilipp,  
City of Des Moines Permit and Development Center  
602 Robert D Ray Dr  
Des Moines, IA 50309-1891

RE: Iowa DNR Joint Application 2021-0174 (Des Moines Area Metropolitan Planning Organization's Des Moines River Trail Activation and Under Scott Avenue Low Head Dam Modification Project)

Dear Mr. Prilipp:

The Department has received an application for the Central Iowa Water Trails Scott Avenue Project from the Des Moines Metropolitan Planning Organization on behalf of CIWT LLC. This application is for work between the Scott Avenue and SE 6<sup>th</sup> Street Bridges. To date, the Department has received draft plans and preliminary hydraulic modeling of the proposed construction. We have reviewed the preliminary plans and calculations for the project and, if the conditions below are met, we expect that a Department floodplain permit will be granted when the design is completed and a final submittal is provided to the Department.

General conditions for project permitting:

- 1) Final and complete certified plans and hydraulic modeling that accurately reflects final plans.
- 2) Final details of impacts to the existing levees will be undertaken in accordance with accepted engineering and construction procedures and practices (567 IAC 72.4(2)e)
- 3) Materials constructed in the channel shall meet the requirements of 567 IAC 72.9(455B)
- 4) Property Owner notifications are complete with assistance of City / County as required by state legal/FPDS staff.

This application includes a request for a waiver from meeting 567 IAC 72.11(1)a., and 567 IAC 72.9(1), due to the project expected to cause an increase in the 1% annual recurrence interval flood (100 year flood). Conditions that need to be met for the department to grant a waiver from Iowa Administrative Rules include:

- 1) The increase in flood height is limited to between the project and the Scott Avenue Dam (any increase in the extent of impact may require additional review and additional requirements/conditions)
- 2) Proposed mitigation of the rise must include completion of the future (currently named phase c) levee project (that will provide 3 foot of freeboard over the 100 year flood event) for the limits of this project in advance of this project starting, or providing an EAP or flood fighting operation plan modification addressing the increased risk to the levees through the impacted area.

The above conditions are based on the current materials received by the Department for review and could change if there are significant changes to the future and final plans and modeling received.

Sincerely,

A handwritten signature in black ink, appearing to read "Jonathan Garton". The signature is fluid and cursive, with a prominent initial "J" and a long, sweeping underline.

Jonathan Garton, P.E.  
Supervisor, Flood Plain and Dam Safety Section



420 Watson Powell Jr. Parkway, Suite 200  
Des Moines, Iowa 50309  
Phone: 515.334.0075  
Email: [info@dmampo.org](mailto:info@dmampo.org)  
[www.dmampo.org](http://www.dmampo.org)

May 14, 2021

Jonathan Garton, P.E.  
Supervisor, Flood Plain and Dam Safety Section  
Iowa Department of Natural Resources  
509 SE. 9th Street, Des Moines, IA 50319

RE: Scott Avenue Dam Modification Project Floodplain Rise Justification (Iowa DNR Joint Application 2021-0174)

Mr. Garton:

The Scott Avenue Dam Modification project requires fill in the floodway to meet its goals of providing dam hazard mitigation, fish passage improvements, angler opportunities, river recreation, and park improvements. In addition to being bound by levees, the project site is challenged by underground utilities and historical structures (Scott Ave Dam) that shall be maintained. Furthermore, all project improvements must meet City of Des Moines, Iowa DNR, EMS, USACE, and NEPA requirements. In order to meet project objectives under the given constraints, grade control structures downstream of the existing dam are essential.

The design team has hydraulically modeled variations of the preferred alternative presented in the Joint Application (Alternative 2 – Dam Modification). Because the project area is bound by levees (DM-I, DM-III) and bridges (Scott Avenue, SE 6th Street), options for design modifications that lower the proposed water surface elevations are limited. Alternatives that include significant excavation of the right descending bank did not provide a no-rise solution. Through an iterative process of design modifications and modeling, the design team made design adjustments to limit the amount of proposed floodplain impacts. Instead of completely drowning out the dam with the proposed downstream structures, the design team allowed a small hydraulic drop across the existing dam by lowering the proposed grade control structures and reducing the overall floodway fill. Other design adjustments to the location and number of downstream structures resulted in lowering the proposed 100-year water surface in some areas of the project.

Please let me know if you have any questions regarding our floodplain rise justification. The CIWT design team acknowledges the remaining conditions provided in your draft letter to Adam Prilipp dated 5/10/2021 and will continue to work with Iowa DNR to comply with all conditions.

Sincerely,

A handwritten signature in black ink, appearing to read "Todd Ashby", written in a cursive style.

Todd Ashby  
CEO/Executive Director

- Pam Cooksey, City of Des Moines
- Adam Prilipp, City of Des Moines
- Maggie McClelland, CIWT
- Mark Land, Snyder & Associates, Inc.
- Walt Pennington, Merrick
- Andy McCoy, HDR