CITY OF GRAND PRAIRIE

FLOODPLAIN DEVELOPMENT PERMIT (FDP) APPLICATION – PART 2

(Unified Development Code (UDC) – Article 15)

January 2017 Update

DATE: _____

MODELING

Part 2 of the FDP application is required to be prepared, signed, and sealed by a licensed professional engineer in the State of Texas. Electronic copies of the associated models must be provided to the City for review.

Typically, the U.S. Army Corps of Engineer's hydrologic model Hydrologic Engineering Center River Analysis System (HEC-RAS) is used to determine the impacts of the proposed project on the base flood elevation and valley storage. The FEMA effective model should be used to determine the potential impacts of the proposed project for the existing conditions scenario. The ultimate conditions model should be based on the U.S. Army Corps of Engineers model for the Corridor Development Certificate (CDC) or the City's ultimate conditions model. The engineer may obtain the base models from the City's Floodplain Administrator.

VALLEY STORAGE MITIGATION:

Describe hydraulic mitigation used to compensate for project valley storage impacts. (Use a separate attachment if necessary.)

EXISTING 100-YEAR (1% ANNUAL CHANCE) FLOOD

Hydrologic and Hydraulic Impact		Pre-Project	Post-Project	Change
Discharge	Downstream Boundary of Project (DB)	cfs	cfs	cfs
	Upstream Boundary of Project (UB)	cfs	cfs	cfs
Channel Velocity	Downstream Boundary of Project	fps	fps	fps
	Upstream Boundary of Project	fps	fps	fps
Water Surface Elevation (NGVD)				
Cross Section				
	___ ft downstream of DB	ft	ft	ft
	___ ft downstream of DB	ft	ft	ft
	___ ft downstream of DB	ft	ft	ft
	___ ft downstream of DB	ft	ft	ft
	Downstream Boundary of Project	ft	ft	ft
	Mid-Project	ft	ft	ft
	Upstream Boundary of Project	ft	ft	ft
	___ ft upstream of UB	ft	ft	ft
	___ ft upstream of UB	ft	ft	ft
	___ ft upstream of UB	ft	ft	ft
	___ ft upstream of UB	ft	ft	ft
Project Lands in Floodplain		ac	ac	ac
Valley Storage on Project Lands		ac-ft	ac-ft	ac-ft

ULTIMATE 100-YEAR (1% ANNUAL CHANCE) FLOOD

Hydrologic and Hydraulic Impact		Pre-Project	Post-Project	Change
Discharge	Downstream Boundary of Project (DB)	cfs	cfs	cfs
	Upstream Boundary of Project (UB)	cfs	cfs	cfs
Channel Velocity	Downstream Boundary of Project	fps	fps	fps
	Upstream Boundary of Project	fps	fps	fps
Water Surface Elevation (NGVD)				
Cross Section				
	___ ft downstream of DB	ft	ft	ft
	___ ft downstream of DB	ft	ft	ft
	___ ft downstream of DB	ft	ft	ft
	___ ft downstream of DB	ft	ft	ft
	Downstream Boundary of Project	ft	ft	ft
	Mid-Project	ft	ft	ft
	Upstream Boundary of Project	ft	ft	ft
	___ ft upstream of UB	ft	ft	ft
	___ ft upstream of UB	ft	ft	ft
	___ ft upstream of UB	ft	ft	ft
	___ ft upstream of UB	ft	ft	ft
Project Lands in Floodplain		ac	ac	ac
Valley Storage on Project Lands		ac-ft	ac-ft	ac-ft

Application is hereby submitted for a City of Grand Prairie Floodplain Development Permit. I certify that I am knowledgeable of the information contained in this application, and that to the best of my knowledge and belief, this information is true, complete and accurate.

Professional Engineer in the State of Texas:

(Printed Name)	(Signature)	(Date)

(Title)

Professional Engineer/License Number/Seal or Stamp