OWNER CITY OF DETROIT DETROIT BUILDING AUTHORITY TYRONE CLIFTON 1301 THIRD STREET SUITE 328 DETROIT, MI 48226 (313) 224-0174 PHONE

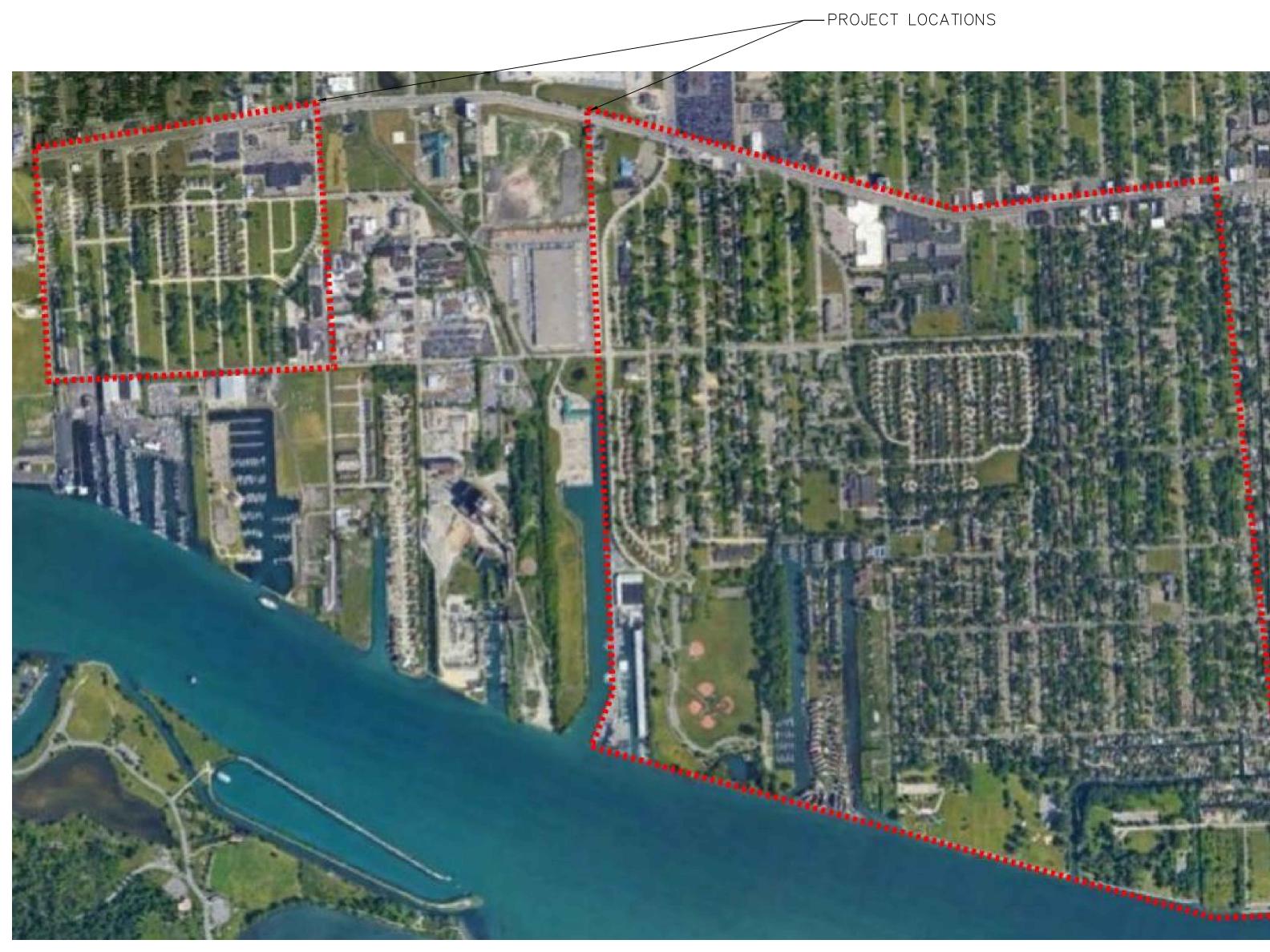
# 2020 TEMPORARY FLOODPLAIN MITIGATION PLAN

# ENGINEER

GIFFELS WEBSTER SCOTT CLEIN, PE 28 WEST ADAMS ROAD SUITE 1200 DETROIT, MI 48226 (313) 962-4442 PHONE (313) 962-5068 FAX

# TABLE OF CONTENTS

T-01	OVERALL STUDY AND SURVEY AREAS
T-02	HARDING CANAL
T-03	ASHLAND STREET (NORTH)
T-04	ASHLAND STREET (SOUTH)
T-05	SCRIPPS STREET AND LAKEWOOD STREET
T-06	HARBOR ISLAND, KLENK ISLAND, AND LAKEWOOD STREET
T-07	MARINER PARK
T-08	ANGEL PARK AND RIVERFRONT-LAKEWOOD EAST PARK
D-01	DETAILS



CITY OF DETROIT, WAYNE COUNTY, MICHIGAN

NO SCALE

	giffels <b>=</b> webster
	Webster
	Engineers
	Surveyors Planners
	Landscape Architects
	28 West Adams Road
	Suite 1200 Detroit, MI 48226
	p (313) 962-4442
	f (313) 962-5068 www.giffelswebster.com
	Executive: S.C.
	Manager: M.K.
	Designer:J.B.Quality Control:B.K.
	Professional Seal:
Al a	
	<b>O m</b>
	Know what's below.
	Know what's <b>below.</b> <b>Call</b> before you dig.
	DATE: ISSUE:
	3/13/2020 RFQ FOR SUPPORTIVE SERVICES
	Developed For:
	City of Detroit Detroit Building Authority
	1301 Third Street, Suite 328 Detroit, MI 48226
	(313) 224-0174
	COVER
	2020 Temporary Flood Mitigation Plan
	City of Detroit
	Wayne County MICHIGAN
	Date: 03-12-2020
	Scale: NO SCALE
	Sheet: COVER

# NOT FOR CONSTRUCTION

Copyright © 2020 Giffels Webster. No reproduction shall be made without the prior written consent of Giffels Webster.

19676.10D



9676-10D Flood Mitigation Plan (Drawing Files Only)/Design/CAD/Work Sheets/19676.10D Preliminary Flood Mitigation Plan - T-01 Overall.dwg

				NOTES
PRIVATE PARCELS PUBLIC PARCELS SB SB SB PROPOSED SANDBAGS: 18- SB SB SB PROPOSED SANDBAGS: 24- SB SB SB PROPOSED SANDBAGS: 36- SB SB SB PROPOSED SANDBAGS: 42- SB SB SB PROPOSED SANDBAGS: 54- EXISTING FENCING TREES AND TREE LINES	-INCH HEIGHT	<ul> <li>STUDY AREA</li> <li>AREA OF INTEREST</li> <li>PROPOSED BARRIER: SINGLE CONFIGURATION (</li> <li>PROPOSED BARRIER: SINGLE CONFIGURATION (</li> <li>PROPOSED BARRIER: 2-1 CONFIGURATION OF</li> <li>PROPOSED EARTHEN BERM (4:1)</li> </ul>	DF 36-INCH BLADDER DF 42-INCH BLADDER	<ol> <li>FLOOD PROTE FIPS 2113 FE</li> <li>DRONE AERIA</li> <li>DRONE AERIA</li> <li>DRONE AERIA</li> <li>DRONE AERIA</li> <li>ALL OTHER A</li> <li>ALL WORK, E</li> <li>CITY EMERGE</li> </ol>
E JEFFERSON 9 EDLIE ST	AVE BUILD OF AVE	DICITERSON ST OCRAN ST	EXERCISE OF CONTRACT OF CONTRA	NEWPORT ST
		ALGONOUN ENTRE CONNET	ERVIN AVE DFON-AVE ABERTON AVE HURSTON FOSTER LN FREUD ST VICTORIA PARK DR N VICTORIA PARK DR N VIC	LAKEWOOD ST NEWPORTST
ESEX AVE	CONVERSIONAL ALE	ALCOUNT ON THE ST	A PARK DR S DR ST ET T T T T T T T T T T T T T T T T T	
KORTE	UPARK DR		INVERSIDE DR	INTERPORTIST
DETROIT	RIVER			FOX OREEX

ROTECTION MEASURES MUST BE INSTALLED TO A TOP ELEVATION OF 580.00 (MAP PROJECTION: NAD 1983 STATEPLANE MICHIGAN SOUTH 3 FEET; WESTERN HEMISPHERE; VERTICAL DATUM: NAVD 88).

ERIAL IMAGERY FOR HARDING CANAL WAS PERFORMED IN THE SPRING OF 2019.

ERIAL IMAGERY FOR ASHLAND AND SCRIPPS STREETS WAS PERFORMED IN DECEMBER 2019. ERIAL IMAGERY FOR HARBOR ISLAND AND KLENK ISLAND STREETS WAS PERFORMED IN SUMMER 2019.

R AERIAL IMAGERY WAS PROVIDED BY MICROSOFT CORPORATION, DIGITALGLOBE, CNES, DISTRIBUTION AIRBUS DS.

K, ESPECIALLY THAT PERTAINING TO RELOCATION OF PERSONAL PROPERTY, MUST BE COORDINATED WITH PROPERTY OWNERS. DURING A RGENCY, SHOULD A MOVEABLE OBJECT BE ENCOUNTERED ALONG A BLADDER/SANDBAG ALIGNMENT, THE OBJECT SHALL BE MOVED AT "S DISCRETION.

SANDBAGS SHALL BE MADE AVAILABLE IN ORDER TO CORRECT ANY SEEPAGE OCCURING AT BLADDER CONNECTIONS OR ELSEWHERE. OVIDED WORKSHEETS PORTRAY AN ASSUMED LAYOUT OF BLADDERS, SIZED ACCORDING TO THE ELEVATIONS AT THAT LOCATION. SPECIAL HALL BE UTILIZED TO ENSURE THAT DEVIATIONS FROM THAT LAYOUT MEET THE REQUIRED TOP ELEVATION OF 580.00. ONS IN LEGEND ARE GENERAL RANGES USED TO DETERMINE REQUIRED BLADDER SIZES. PROPOSED BLADDER SIZES MAY BE LARGER THAN NEEDED TO GET TO A TOP ELEVATION OF 580.00.



giffels

Engineers Surveyors Planners Landscape Architects

28 West Adams Road Suite 1200 Detroit, MI 48226 p (313) 962-4442 f (313) 962-5068 www.giffelswebster.com

Vanager:	M.K.
Designer:	J.B.
Quality Control:	B.K.

Professional Seal:

Know what's below. Call before you dig.

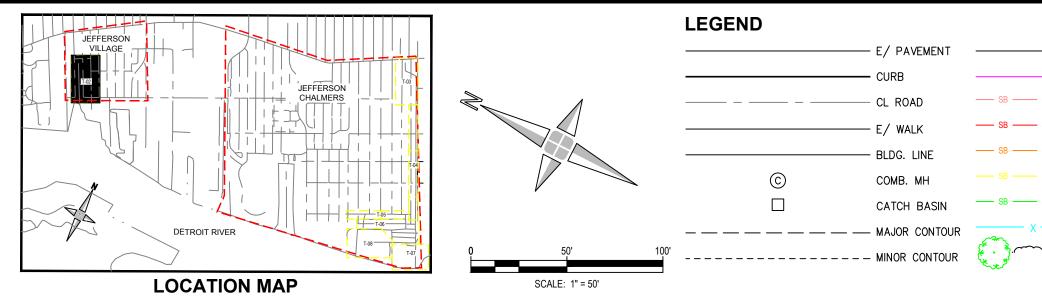
DATE:	ISSUE:
3/13/2020	RFQ FOR SUPPORTIVE SERVICES
Developed Fo	or:
C	City of Detroit
Detroit	Building Authority
	nird Street, Suite 328 etroit, MI 48226
(4	313) 224-0174

# OVERALL STUDY AND SURVEY AREAS

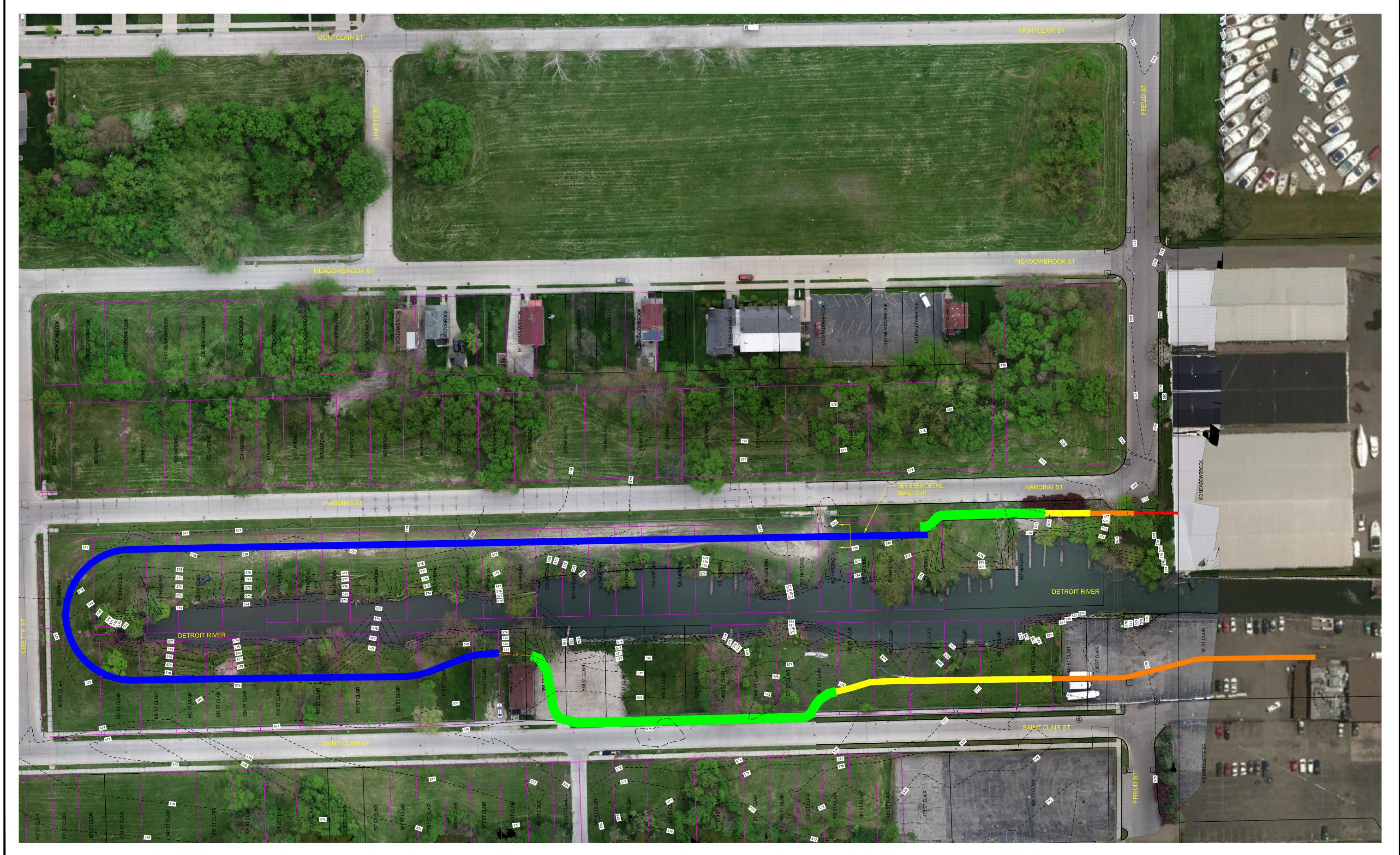
2020 Temporary Flood Mitigation Plan

> City of Detroit Wayne County MICHIGAN

Date:	03-12-2020
Scale:	1" = 500'
Sheet:	T-01
Project:	19676.10D



NOTE: ALL WORK THIS SHEET SHALL BE COMPLETED BY THE UNITED STATES ARMY CORPS OF ENGINEERS



		NOTES
PRIVATE PARCELS		1. FLOOD PROTE
PUBLIC PARCELS	STUDY AREA	FIPS 2113 FEE
- SB SB PROPOSED SANDBAGS: 18-INCH HEIGHT	AREA OF INTEREST	2. DRONE AERIAL
- SB SB PROPOSED SANDBAGS: 24-INCH HEIGH	PROPOSED HESCO FLOOD BARRIER: ELEV 580.00 TO ELEV 578.00	3. DRONE AERIAL
- SB SB PROPOSED SANDBAGS: 36-INCH HEIGH		4. DRONE AERIAL 5. ALL OTHER AE
- SB SB SB PROPOSED SANDBAGS: 42-INCH HEIGH		6. ALL WORK, ES
- SB - SB - SB - PROPOSED SANDBAGS: 54-INCH HEIGH		CITY EMERGEN
		THE CITY'S DI
X EXISTING FENCING	PROPOSED EARTHEN BERM (4:1)	7. EXTRA SANDB
TREES AND TREE LINES		8. THE PROVIDED
		CARE SHALL E
		9. ELEVATIONS IN
		WHAT IS NEED

DTECTION MEASURES MUST BE INSTALLED TO A TOP ELEVATION OF 580.00 (MAP PROJECTION: NAD 1983 STATEPLANE MICHIGAN SOUTH FEET; WESTERN HEMISPHERE; VERTICAL DATUM: NAVD 88).

RIAL IMAGERY FOR HARDING CANAL WAS PERFORMED IN THE SPRING OF 2019.

RIAL IMAGERY FOR ASHLAND AND SCRIPPS STREETS WAS PERFORMED IN DECEMBER 2019. RIAL IMAGERY FOR HARBOR ISLAND AND KLENK ISLAND STREETS WAS PERFORMED IN SUMMER 2019.

R AERIAL IMAGERY WAS PROVIDED BY MICROSOFT CORPORATION, DIGITALGLOBE, CNES, DISTRIBUTION AIRBUS DS.

ESPECIALLY THAT PERTAINING TO RELOCATION OF PERSONAL PROPERTY, MUST BE COORDINATED WITH PROPERTY OWNERS. DURING A GENCY, SHOULD A MOVEABLE OBJECT BE ENCOUNTERED ALONG A BLADDER/SANDBAG ALIGNMENT, THE OBJECT SHALL BE MOVED AT DISCRETION.

NDBAGS SHALL BE MADE AVAILABLE IN ORDER TO CORRECT ANY SEEPAGE OCCURING AT BLADDER CONNECTIONS OR ELSEWHERE. IDED WORKSHEETS PORTRAY AN ASSUMED LAYOUT OF BLADDERS, SIZED ACCORDING TO THE ELEVATIONS AT THAT LOCATION. SPECIAL LL BE UTILIZED TO ENSURE THAT DEVIATIONS FROM THAT LAYOUT MEET THE REQUIRED TOP ELEVATION OF 580.00. S IN LEGEND ARE GENERAL RANGES USED TO DETERMINE REQUIRED BLADDER SIZES. PROPOSED BLADDER SIZES MAY BE LARGER THAN WHAT IS NEEDED TO GET TO A TOP ELEVATION OF 580.00.



Engineers Surveyors Planners Landscape Architects

28 West Adams Road Suite 1200 Detroit, MI 48226 p (313) 962-4442 f (313) 962-5068 www.giffelswebster.com

Executive:	S.C.
Manager:	M.K.
Designer:	J.B.
Quality Control:	B.K.

Professional Seal:



DATE: ISSUE: 3/13/2020 RFQ FOR SUPPORTIVE Developed For: City of Detroit Detroit Building Authority 1301 Third Street, Suite 328 Detroit, MI 48226

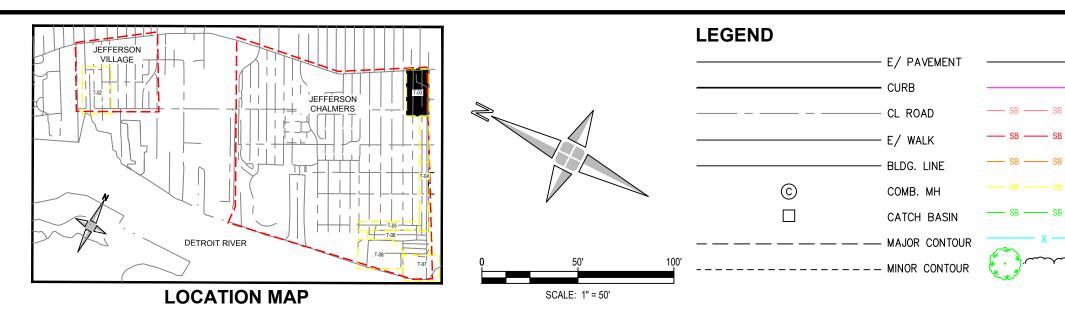
(313) 224-0174

# HARDING CANAL

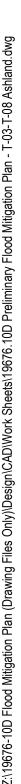
2020 Temporary Flood Mitigation Plan

> City of Detroit Wayne County MICHIGAN

Date:	03-12-2020
Scale:	1" = 50'
Sheet:	T-02
Project:	19676.10D







			NC	TES
	PRIVATE PARCELS		1.	FLOOD PROTE
	PUBLIC PARCELS	STUDY AREA		FIPS 2113 FEE
- SB SB SB	PROPOSED SANDBAGS: 18-INCH HEIGHT	AREA OF INTEREST	2.	DRONE AERIAL
_ 92 92 92	PROPOSED SANDBAGS: 24-INCH HEIGHT	PROPOSED BARRIER: SINGLE CONFIGURATION OF 24-INCH BLADDER	3.	DRONE AERIAL
- 38 38 38	FROFUSED SANDBAGS. 24-INCH HEIGHT	PROPOSED BARNIER. SINGLE CONFIGURATION OF 24-INCH BEADDER	4.	DRONE AERIAL
- SB SB SB	PROPOSED SANDBAGS: 36-INCH HEIGHT	PROPOSED BARRIER: SINGLE CONFIGURATION OF 36-INCH BLADDER	5.	ALL OTHER AE
	PROPOSED SANDBAGS: 42-INCH HEIGHT	PROPOSED BARRIER: SINGLE CONFIGURATION OF 42-INCH BLADDER	6.	ALL WORK, ES
- SB SB SB	PROPOSED SANDBAGS: 54-INCH HEIGHT	PROPOSED BARRIER: 2-1 CONFIGURATION OF 36-INCH BLADDERS TO 54-INCH HEIGHT		CITY EMERGEN
				THE CITY'S DIS
(	EXISTING FENCING	PROPOSED EARTHEN BERM (4:1)	7.	EXTRA SANDB
	TREES AND TREE LINES		8.	THE PROVIDED
				CARE SHALL E
			9.	ELEVATIONS IN

## NOTES

- DTECTION MEASURES MUST BE INSTALLED TO A TOP ELEVATION OF 580.00 (MAP PROJECTION: NAD 1983 STATEPLANE MICHIGAN SOUTH FEET; WESTERN HEMISPHERE; VERTICAL DATUM: NAVD 88).
- RIAL IMAGERY FOR HARDING CANAL WAS PERFORMED IN THE SPRING OF 2019.
- RIAL IMAGERY FOR ASHLAND AND SCRIPPS STREETS WAS PERFORMED IN DECEMBER 2019. RIAL IMAGERY FOR HARBOR ISLAND AND KLENK ISLAND STREETS WAS PERFORMED IN SUMMER 2019.
- R AERIAL IMAGERY WAS PROVIDED BY MICROSOFT CORPORATION, DIGITALGLOBE, CNES, DISTRIBUTION AIRBUS DS.
- ESPECIALLY THAT PERTAINING TO RELOCATION OF PERSONAL PROPERTY, MUST BE COORDINATED WITH PROPERTY OWNERS. DURING A GENCY, SHOULD A MOVEABLE OBJECT BE ENCOUNTERED ALONG A BLADDER/SANDBAG ALIGNMENT, THE OBJECT SHALL BE MOVED AT DISCRETION.
- EXTRA SANDBAGS SHALL BE MADE AVAILABLE IN ORDER TO CORRECT ANY SEEPAGE OCCURING AT BLADDER CONNECTIONS OR ELSEWHERE. THE PROVIDED WORKSHEETS PORTRAY AN ASSUMED LAYOUT OF BLADDERS, SIZED ACCORDING TO THE ELEVATIONS AT THAT LOCATION. SPECIAL CARE SHALL BE UTILIZED TO ENSURE THAT DEVIATIONS FROM THAT LAYOUT MEET THE REQUIRED TOP ELEVATION OF 580.00. ELEVATIONS IN LEGEND ARE GENERAL RANGES USED TO DETERMINE REQUIRED BLADDER SIZES. PROPOSED BLADDER SIZES MAY BE LARGER THAN WHAT IS NEEDED TO GET TO A TOP ELEVATION OF 580.00.



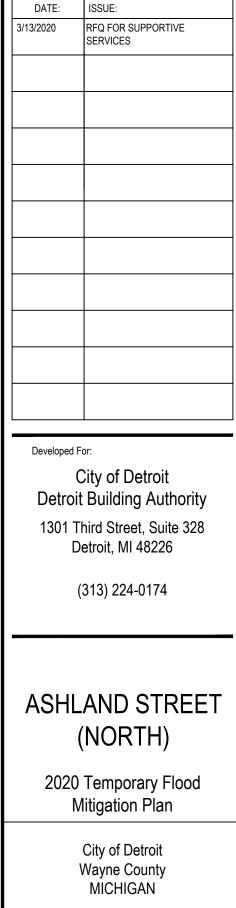
Engineers Surveyors Planners Landscape Architects

28 West Adams Road Suite 1200 Detroit, MI 48226 p (313) 962-4442 f (313) 962-5068 www.giffelswebster.com

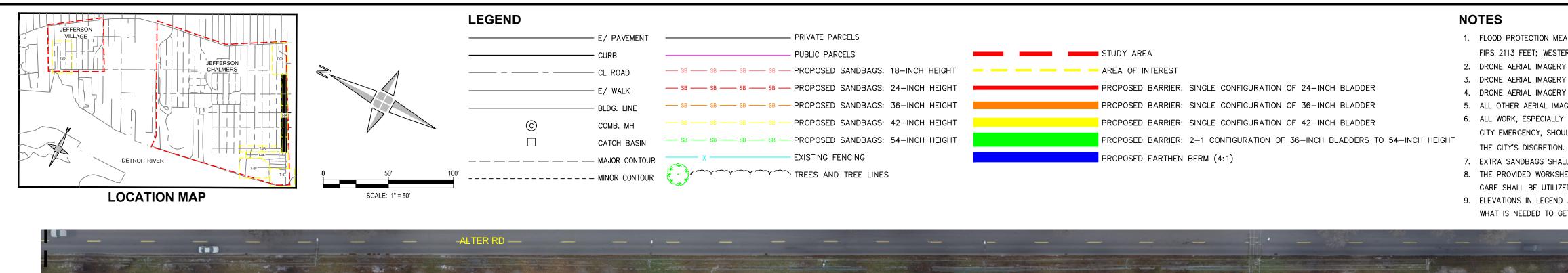
Manager:	M.K.
Designer:	J.B.
Quality Control:	B.K.

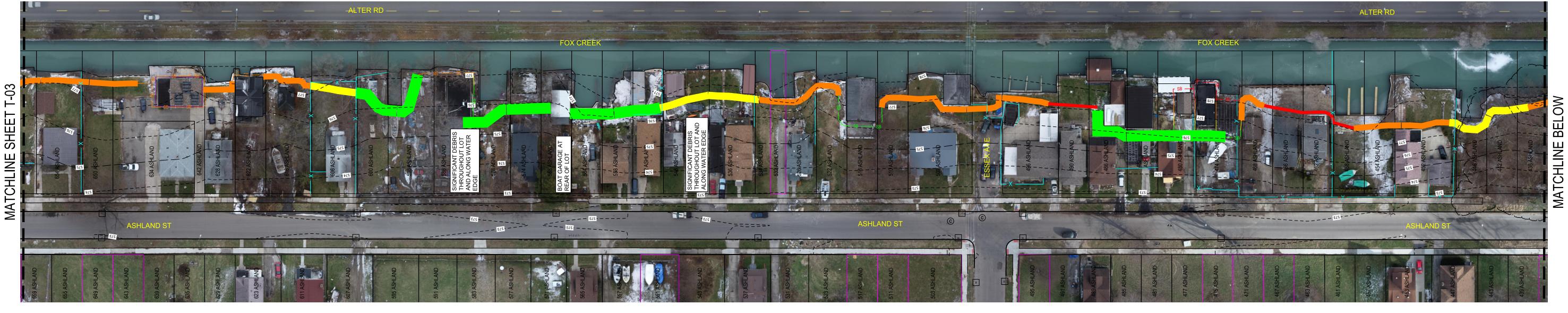
Professional Seal:

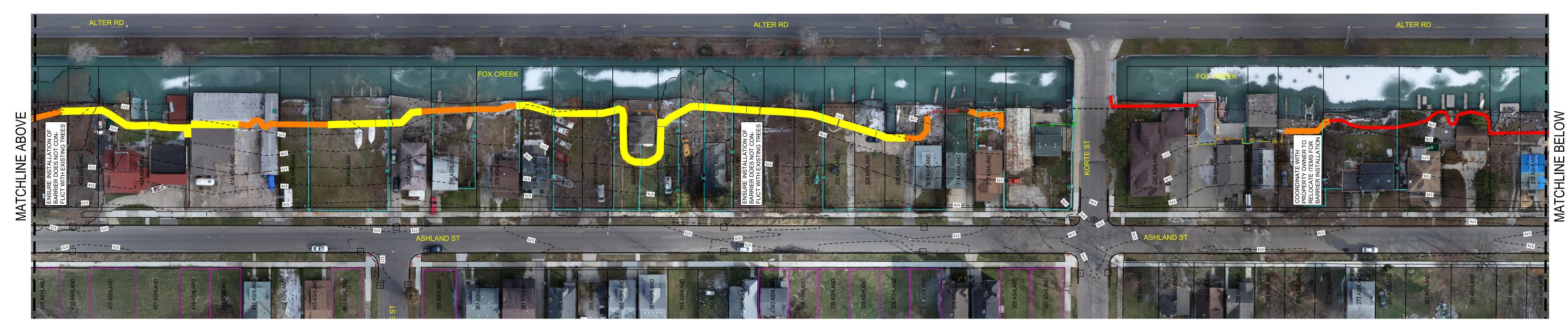




Date:	03-12-2020
Scale:	1" = 50'
Sheet:	T-03
Project:	19676.10D
	Convright © 2020 Giffels Webster









MATCHLINE SHEET T-05

- 1. FLOOD PROTECTION MEASURES MUST BE INSTALLED TO A TOP ELEVATION OF 580.00 (MAP PROJECTION: NAD 1983 STATEPLANE MICHIGAN SOUTH FIPS 2113 FEET; WESTERN HEMISPHERE; VERTICAL DATUM: NAVD 88).
- 2. DRONE AERIAL IMAGERY FOR HARDING CANAL WAS PERFORMED IN THE SPRING OF 2019.
- DRONE AERIAL IMAGERY FOR ASHLAND AND SCRIPPS STREETS WAS PERFORMED IN DECEMBER 2019.
   DRONE AERIAL IMAGERY FOR HARBOR ISLAND AND KLENK ISLAND STREETS WAS PERFORMED IN SUMMER 2019.
- 5. ALL OTHER AERIAL IMAGERY WAS PROVIDED BY MICROSOFT CORPORATION, DIGITALGLOBE, CNES, DISTRIBUTION AIRBUS DS.
- 6. ALL WORK, ESPECIALLY THAT PERTAINING TO RELOCATION OF PERSONAL PROPERTY, MUST BE COORDINATED WITH PROPERTY OWNERS. DURING A CITY EMERGENCY, SHOULD A MOVEABLE OBJECT BE ENCOUNTERED ALONG A BLADDER/SANDBAG ALIGNMENT, THE OBJECT SHALL BE MOVED AT THE CITY'S DISCRETION.
- 7. EXTRA SANDBAGS SHALL BE MADE AVAILABLE IN ORDER TO CORRECT ANY SEEPAGE OCCURING AT BLADDER CONNECTIONS OR ELSEWHERE.
   8. THE PROVIDED WORKSHEETS PORTRAY AN ASSUMED LAYOUT OF BLADDERS, SIZED ACCORDING TO THE ELEVATIONS AT THAT LOCATION. SPECIAL CARE SHALL BE UTILIZED TO ENSURE THAT DEVIATIONS FROM THAT LAYOUT MEET THE REQUIRED TOP ELEVATION OF 580.00.
   9. ELEVATIONS IN LEGEND ARE GENERAL RANGES USED TO DETERMINE REQUIRED BLADDER SIZES. PROPOSED BLADDER SIZES MAY BE LARGER THAN WHAT IS NEEDED TO GET TO A TOP ELEVATION OF 580.00.



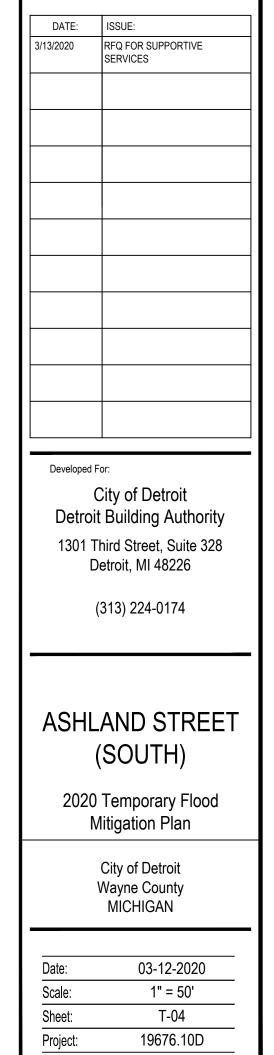
Engineers Surveyors Planners Landscape Architects

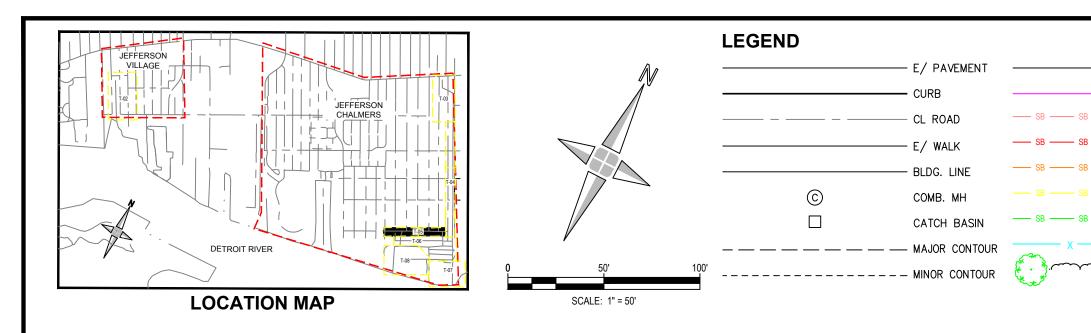
28 West Adams Road Suite 1200 Detroit, MI 48226 p (313) 962-4442 f (313) 962-5068 www.giffelswebster.com

Executive:	S.C.
Manager:	M.K.
Designer:	J.B.
Quality Control:	B.K.













-10D Flood Mitigation Plan (Drawing Files Only)/Design\CAD\Work Sheets\19676.10D Preliminary Flood Mitigation Plan - T-03-T-08 Ashland.dw

			NC	DTES
	- PRIVATE PARCELS		1.	FLOOD PROTEC
	- PUBLIC PARCELS	STUDY AREA		FIPS 2113 FEE
- SB SB SB	PROPOSED SANDBAGS: 18-INCH HEIGHT	AREA OF INTEREST	2.	DRONE AERIAL
- SB SB SB	PROPOSED SANDBAGS: 24-INCH HEIGHT	PROPOSED BARRIER: SINGLE CONFIGURATION OF 24-INCH BLADDER		DRONE AERIAL DRONE AERIAL
- SB SB SB	PROPOSED SANDBAGS: 36-INCH HEIGHT	PROPOSED BARRIER: SINGLE CONFIGURATION OF 36-INCH BLADDER	5.	ALL OTHER AE
	PROPOSED SANDBAGS: 42-INCH HEIGHT	PROPOSED BARRIER: SINGLE CONFIGURATION OF 42-INCH BLADDER	6.	ALL WORK, ES
- SB SB SB	PROPOSED SANDBAGS: 54-INCH HEIGHT	PROPOSED BARRIER: 2-1 CONFIGURATION OF 36-INCH BLADDERS TO 54-INCH HEIGHT		CITY EMERGEN THE CITY'S DIS
(	EXISTING FENCING	PROPOSED EARTHEN BERM (4:1)	7.	EXTRA SANDB
	TREES AND TREE LINES		8.	THE PROVIDED
				CARE SHALL E
			9.	ELEVATIONS IN

MATCHLINE SHEET T-06

MATCHLINE SHEET T-06

- DTECTION MEASURES MUST BE INSTALLED TO A TOP ELEVATION OF 580.00 (MAP PROJECTION: NAD 1983 STATEPLANE MICHIGAN SOUTH FEET; WESTERN HEMISPHERE; VERTICAL DATUM: NAVD 88).
- RIAL IMAGERY FOR HARDING CANAL WAS PERFORMED IN THE SPRING OF 2019.
- RIAL IMAGERY FOR ASHLAND AND SCRIPPS STREETS WAS PERFORMED IN DECEMBER 2019. RIAL IMAGERY FOR HARBOR ISLAND AND KLENK ISLAND STREETS WAS PERFORMED IN SUMMER 2019.
- R AERIAL IMAGERY WAS PROVIDED BY MICROSOFT CORPORATION, DIGITALGLOBE, CNES, DISTRIBUTION AIRBUS DS.
- ESPECIALLY THAT PERTAINING TO RELOCATION OF PERSONAL PROPERTY, MUST BE COORDINATED WITH PROPERTY OWNERS. DURING A GENCY, SHOULD A MOVEABLE OBJECT BE ENCOUNTERED ALONG A BLADDER/SANDBAG ALIGNMENT, THE OBJECT SHALL BE MOVED AT DISCRETION.
- EXTRA SANDBAGS SHALL BE MADE AVAILABLE IN ORDER TO CORRECT ANY SEEPAGE OCCURING AT BLADDER CONNECTIONS OR ELSEWHERE. THE PROVIDED WORKSHEETS PORTRAY AN ASSUMED LAYOUT OF BLADDERS, SIZED ACCORDING TO THE ELEVATIONS AT THAT LOCATION. SPECIAL CARE SHALL BE UTILIZED TO ENSURE THAT DEVIATIONS FROM THAT LAYOUT MEET THE REQUIRED TOP ELEVATION OF 580.00. ELEVATIONS IN LEGEND ARE GENERAL RANGES USED TO DETERMINE REQUIRED BLADDER SIZES. PROPOSED BLADDER SIZES MAY BE LARGER THAN WHAT IS NEEDED TO GET TO A TOP ELEVATION OF 580.00.



Engineers Surveyors Planners Landscape Architects

28 West Adams Road Suite 1200 Detroit, MI 48226 p (313) 962-4442 f (313) 962-5068 www.giffelswebster.com

Executive:	S.C.
Manager:	M.K.
Designer:	J.B.
Quality Control:	B.K.

Professional Seal:



DATE: ISSUE: 3/13/2020 RFQ FOR SUPPORTIVE SERVICES DEVELOPMENTINE Developed For: City of Detroit Detroit Building Authority 1301 Third Street, Suite 328 Detroit, MI 48226 (313) 224-0174

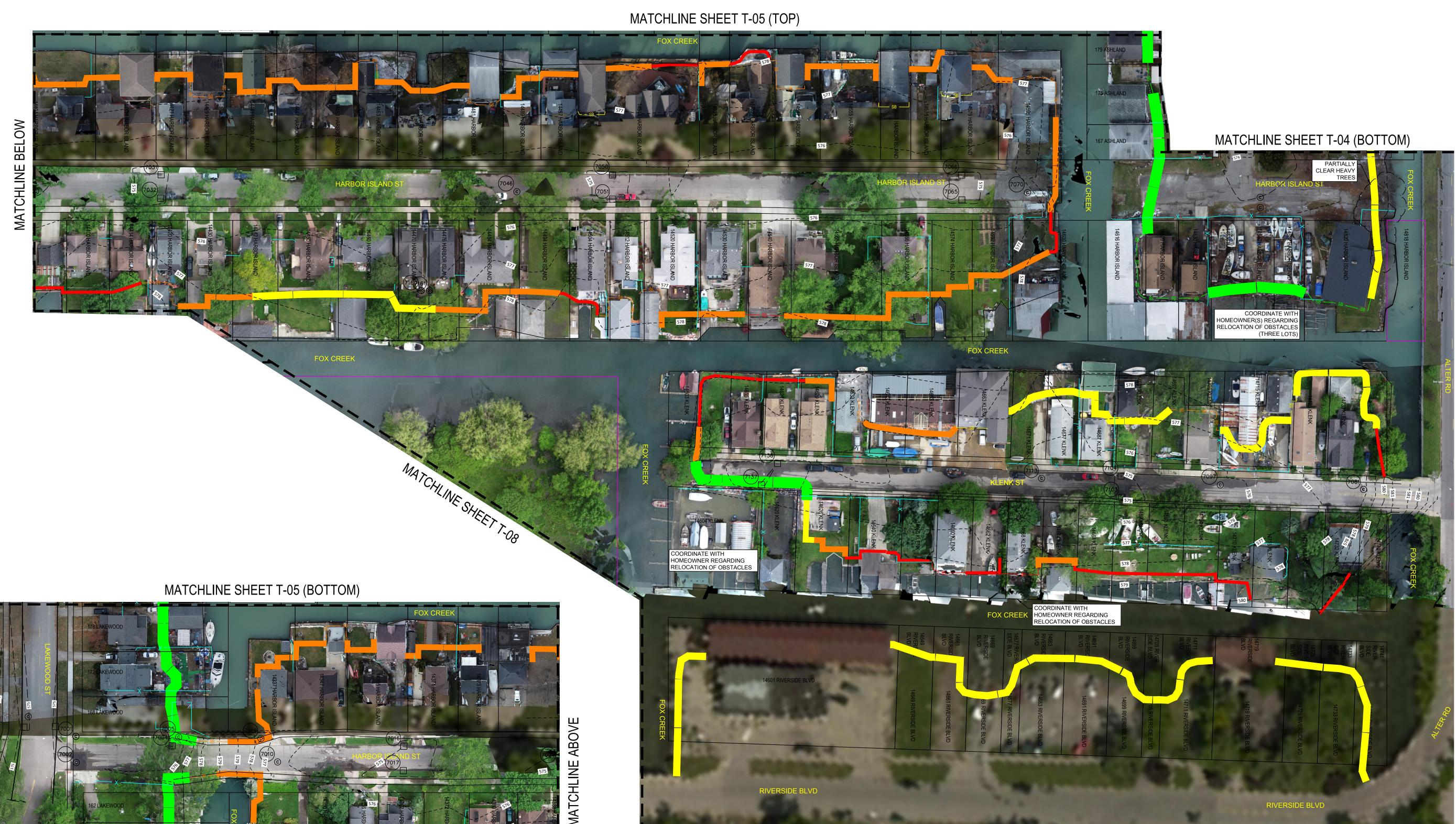
# SCRIPPS STREET AND LAKEWOOD STREET

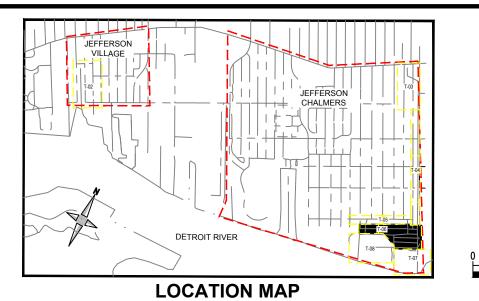
2020 Temporary Flood Mitigation Plan

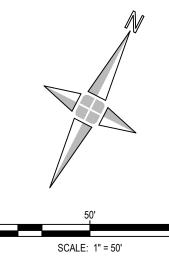
> City of Detroit Wayne County MICHIGAN

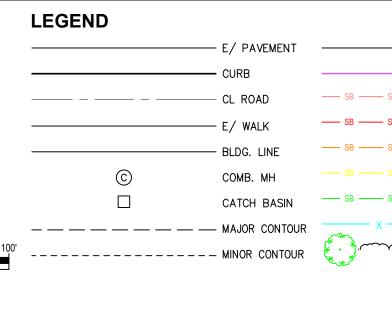
Date:	03-12-2020
Scale:	1" = 50'
Sheet:	T-05
Project:	19676.10D

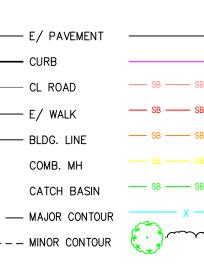












			NC	DTES
	PRIVATE PARCELS		1.	FLOOD PROTEC
	PUBLIC PARCELS	STUDY AREA		FIPS 2113 FEE
- SB SB SB	PROPOSED SANDBAGS: 18-INCH HEIGHT	AREA OF INTEREST	2.	DRONE AERIAL
_ SR SR SR	PROPOSED SANDBAGS: 24-INCH HEIGHT	PROPOSED BARRIER: SINGLE CONFIGURATION OF 24-INCH BLADDER		DRONE AERIAL
				DRONE AERIAL
- SB SB SB	PROPOSED SANDBAGS: 36-INCH HEIGHT	PROPOSED BARRIER: SINGLE CONFIGURATION OF 36-INCH BLADDER		ALL OTHER AE
	PROPOSED SANDBAGS: 42-INCH HEIGHT	PROPOSED BARRIER: SINGLE CONFIGURATION OF 42-INCH BLADDER	6.	ALL WORK, ES
- SB —— SB —— SB ——	PROPOSED SANDBAGS: 54-INCH HEIGHT	PROPOSED BARRIER: 2-1 CONFIGURATION OF 36-INCH BLADDERS TO 54-INCH HEIGHT		CITY EMERGEN
,				THE CITY'S DIS
(	EXISTING FENCING	PROPOSED EARTHEN BERM (4:1)	7.	EXTRA SANDB
	TREES AND TREE LINES		8.	THE PROVIDED
				CARE SHALL E
			9.	ELEVATIONS IN

- DTECTION MEASURES MUST BE INSTALLED TO A TOP ELEVATION OF 580.00 (MAP PROJECTION: NAD 1983 STATEPLANE MICHIGAN SOUTH FEET; WESTERN HEMISPHERE; VERTICAL DATUM: NAVD 88).
- RIAL IMAGERY FOR HARDING CANAL WAS PERFORMED IN THE SPRING OF 2019.
- RIAL IMAGERY FOR ASHLAND AND SCRIPPS STREETS WAS PERFORMED IN DECEMBER 2019. RIAL IMAGERY FOR HARBOR ISLAND AND KLENK ISLAND STREETS WAS PERFORMED IN SUMMER 2019.
- R AERIAL IMAGERY WAS PROVIDED BY MICROSOFT CORPORATION, DIGITALGLOBE, CNES, DISTRIBUTION AIRBUS DS.
- ESPECIALLY THAT PERTAINING TO RELOCATION OF PERSONAL PROPERTY, MUST BE COORDINATED WITH PROPERTY OWNERS. DURING A GENCY, SHOULD A MOVEABLE OBJECT BE ENCOUNTERED ALONG A BLADDER/SANDBAG ALIGNMENT, THE OBJECT SHALL BE MOVED AT DISCRETION.
- NDBAGS SHALL BE MADE AVAILABLE IN ORDER TO CORRECT ANY SEEPAGE OCCURING AT BLADDER CONNECTIONS OR ELSEWHERE. DED WORKSHEETS PORTRAY AN ASSUMED LAYOUT OF BLADDERS, SIZED ACCORDING TO THE ELEVATIONS AT THAT LOCATION. SPECIAL L BE UTILIZED TO ENSURE THAT DEVIATIONS FROM THAT LAYOUT MEET THE REQUIRED TOP ELEVATION OF 580.00. 9. ELEVATIONS IN LEGEND ARE GENERAL RANGES USED TO DETERMINE REQUIRED BLADDER SIZES. PROPOSED BLADDER SIZES MAY BE LARGER THAN WHAT IS NEEDED TO GET TO A TOP ELEVATION OF 580.00.

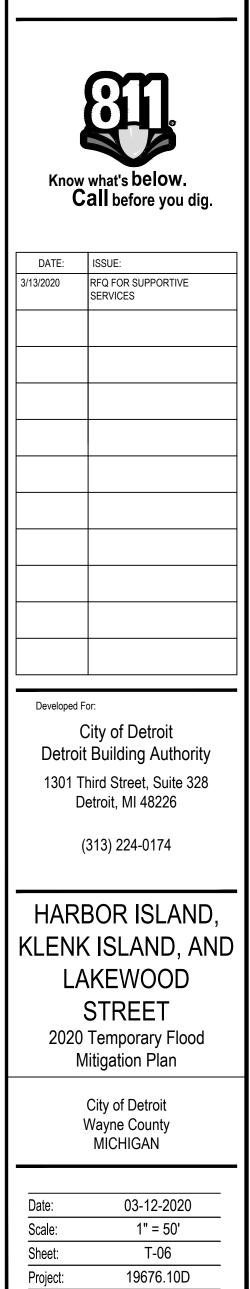


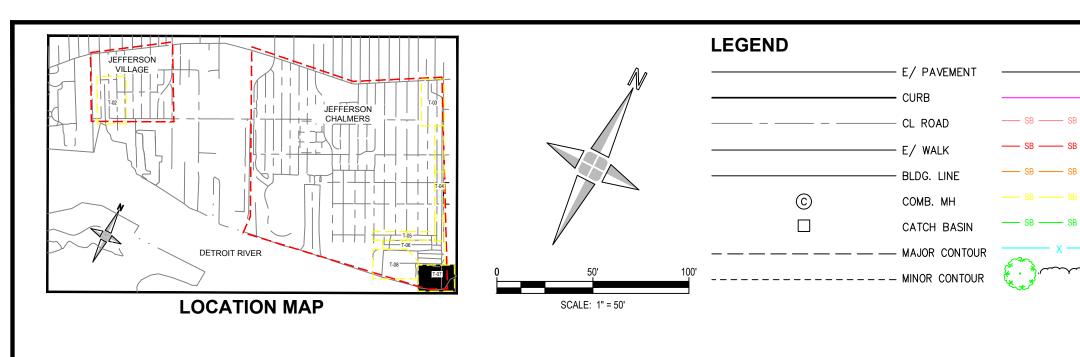
Engineers Surveyors Planners Landscape Architects

28 West Adams Road Suite 1200 Detroit, MI 48226 p (313) 962-4442 f (313) 962-5068 www.giffelswebster.com

Executive:	S.C.
Manager:	M.K.
Designer:	J.B.
Quality Control:	B.K.

Professional Seal:







MATCHLINE SHEET T-08

			NC	DTES
	- PRIVATE PARCELS		1.	FLOOD PROTEC
	- PUBLIC PARCELS	STUDY AREA		FIPS 2113 FEE
- SB SB SB	- PROPOSED SANDBAGS: 18–INCH HEIGHT		2.	DRONE AERIAL
- SB SB SB	- PROPOSED SANDBAGS: 24-INCH HEIGHT	PROPOSED BARRIER: SINGLE CONFIGURATION OF 24-INCH BLADDER		DRONE AERIAL
- SB —— SB —— SB —	- PROPOSED SANDBAGS: 36-INCH HEIGHT	PROPOSED BARRIER: SINGLE CONFIGURATION OF 36-INCH BLADDER		ALL OTHER AE
	- PROPOSED SANDBAGS: 42-INCH HEIGHT	PROPOSED BARRIER: SINGLE CONFIGURATION OF 42-INCH BLADDER	6.	ALL WORK, ES
- SB SB SB	- PROPOSED SANDBAGS: 54-INCH HEIGHT	PROPOSED BARRIER: 2–1 CONFIGURATION OF 36–INCH BLADDERS TO 54–INCH HEIGHT		CITY EMERGEN THE CITY'S DIS
(	- EXISTING FENCING	PROPOSED EARTHEN BERM (4:1)	7.	EXTRA SANDB
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	TREES AND TREE LINES		8.	THE PROVIDED
				CARE SHALL E
			9.	ELEVATIONS IN

# MATCHLINE SHEET T-06

- DTECTION MEASURES MUST BE INSTALLED TO A TOP ELEVATION OF 580.00 (MAP PROJECTION: NAD 1983 STATEPLANE MICHIGAN SOUTH FEET; WESTERN HEMISPHERE; VERTICAL DATUM: NAVD 88).
- RIAL IMAGERY FOR HARDING CANAL WAS PERFORMED IN THE SPRING OF 2019.
- RIAL IMAGERY FOR ASHLAND AND SCRIPPS STREETS WAS PERFORMED IN DECEMBER 2019. RIAL IMAGERY FOR HARBOR ISLAND AND KLENK ISLAND STREETS WAS PERFORMED IN SUMMER 2019.
- R AERIAL IMAGERY WAS PROVIDED BY MICROSOFT CORPORATION, DIGITALGLOBE, CNES, DISTRIBUTION AIRBUS DS.
- ESPECIALLY THAT PERTAINING TO RELOCATION OF PERSONAL PROPERTY, MUST BE COORDINATED WITH PROPERTY OWNERS. DURING A GENCY, SHOULD A MOVEABLE OBJECT BE ENCOUNTERED ALONG A BLADDER/SANDBAG ALIGNMENT, THE OBJECT SHALL BE MOVED AT DISCRETION.
- EXTRA SANDBAGS SHALL BE MADE AVAILABLE IN ORDER TO CORRECT ANY SEEPAGE OCCURING AT BLADDER CONNECTIONS OR ELSEWHERE. THE PROVIDED WORKSHEETS PORTRAY AN ASSUMED LAYOUT OF BLADDERS, SIZED ACCORDING TO THE ELEVATIONS AT THAT LOCATION. SPECIAL CARE SHALL BE UTILIZED TO ENSURE THAT DEVIATIONS FROM THAT LAYOUT MEET THE REQUIRED TOP ELEVATION OF 580.00. ELEVATIONS IN LEGEND ARE GENERAL RANGES USED TO DETERMINE REQUIRED BLADDER SIZES. PROPOSED BLADDER SIZES MAY BE LARGER THAN WHAT IS NEEDED TO GET TO A TOP ELEVATION OF 580.00.



Engineers Surveyors Planners Landscape Architects

28 West Adams Road Suite 1200 Detroit, MI 48226 p (313) 962-4442 f (313) 962-5068 www.giffelswebster.com

Executive:	S.C.
Manager:	M.K.
Designer:	J.B.
Quality Control:	B.K.

Professional Seal:



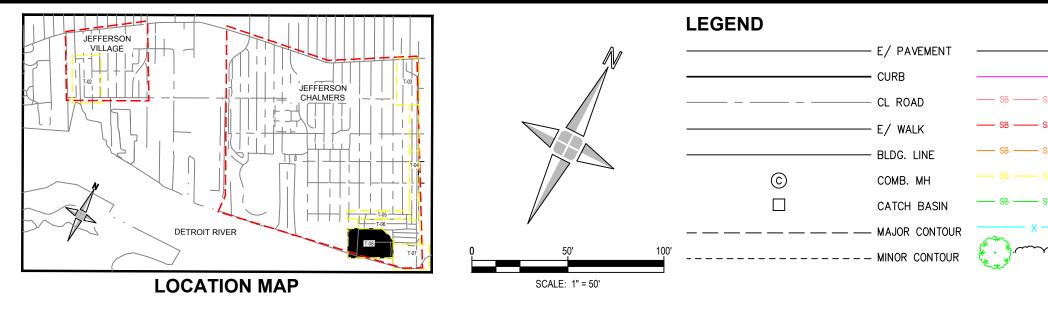
DATE:	ISSUE:
3/13/2020	RFQ FOR SUPPORTIVE SERVICES
Developed Fo	or:
C	City of Detroit
	Building Authority
	nird Street, Suite 328 etroit, MI 48226
(;	313) 224-0174

## MARINER PARK

2020 Temporary Flood Mitigation Plan

> City of Detroit Wayne County MICHIGAN

Date:	03-12-2020
Scale:	1" = 50'
Sheet:	T-07
Project:	19676.10D







			NC	DTES
PRIVATE PARCELS			1.	FLOOD PROTE
PUBLIC PARCELS		STUDY AREA		FIPS 2113 FEE
- SB SB SB PROPOSED SANDBAGS: 18-	-INCH HEIGHT	AREA OF INTEREST	2.	DRONE AERIAL
- SB SB PROPOSED SANDBAGS: 24-		PROPOSED BARRIER: SINGLE CONFIGURATION OF 24-INCH BLADDER	3.	DRONE AERIAL
- 35 - 35 - FROPUSED SANDBAGS. 24-		FROPOSED BARRIER. SINGLE CONFIGURATION OF 24-INCH BEADDER	4.	DRONE AERIAL
– SB – SB – SB – PROPOSED SANDBAGS: 36–	-INCH HEIGHT	PROPOSED BARRIER: SINGLE CONFIGURATION OF 36-INCH BLADDER		ALL OTHER A
- SB SB PROPOSED SANDBAGS: 42-	-INCH HEIGHT	PROPOSED BARRIER: SINGLE CONFIGURATION OF 42-INCH BLADDER	6.	ALL WORK, ES
- SB SB PROPOSED SANDBAGS: 54-		PROPOSED BARRIER: 2-1 CONFIGURATION OF 36-INCH BLADDERS TO 54-INCH HEIGHT		CITY EMERGEN
				THE CITY'S DI
X — EXISTING FENCING		PROPOSED EARTHEN BERM (4:1)	7.	EXTRA SANDB
TREES AND TREE LINES			8.	THE PROVIDED
				CARE SHALL I
			9.	ELEVATIONS IN

# MATCHLINE SHEET T-06 (BOTTOM)

DTECTION MEASURES MUST BE INSTALLED TO A TOP ELEVATION OF 580.00 (MAP PROJECTION: NAD 1983 STATEPLANE MICHIGAN SOUTH FEET; WESTERN HEMISPHERE; VERTICAL DATUM: NAVD 88).

RIAL IMAGERY FOR HARDING CANAL WAS PERFORMED IN THE SPRING OF 2019.

RIAL IMAGERY FOR ASHLAND AND SCRIPPS STREETS WAS PERFORMED IN DECEMBER 2019. RIAL IMAGERY FOR HARBOR ISLAND AND KLENK ISLAND STREETS WAS PERFORMED IN SUMMER 2019.

R AERIAL IMAGERY WAS PROVIDED BY MICROSOFT CORPORATION, DIGITALGLOBE, CNES, DISTRIBUTION AIRBUS DS.

ESPECIALLY THAT PERTAINING TO RELOCATION OF PERSONAL PROPERTY, MUST BE COORDINATED WITH PROPERTY OWNERS. DURING A GENCY, SHOULD A MOVEABLE OBJECT BE ENCOUNTERED ALONG A BLADDER/SANDBAG ALIGNMENT, THE OBJECT SHALL BE MOVED AT DISCRETION.

NDBAGS SHALL BE MADE AVAILABLE IN ORDER TO CORRECT ANY SEEPAGE OCCURING AT BLADDER CONNECTIONS OR ELSEWHERE. IDED WORKSHEETS PORTRAY AN ASSUMED LAYOUT OF BLADDERS, SIZED ACCORDING TO THE ELEVATIONS AT THAT LOCATION. SPECIAL LL BE UTILIZED TO ENSURE THAT DEVIATIONS FROM THAT LAYOUT MEET THE REQUIRED TOP ELEVATION OF 580.00. 9. ELEVATIONS IN LEGEND ARE GENERAL RANGES USED TO DETERMINE REQUIRED BLADDER SIZES. PROPOSED BLADDER SIZES MAY BE LARGER THAN WHAT IS NEEDED TO GET TO A TOP ELEVATION OF 580.00.

giffels **=** webster

Engineers Surveyors Planners Landscape Architects

28 West Adams Road Suite 1200 Detroit, MI 48226 p (313) 962-4442 f (313) 962-5068 www.giffelswebster.com

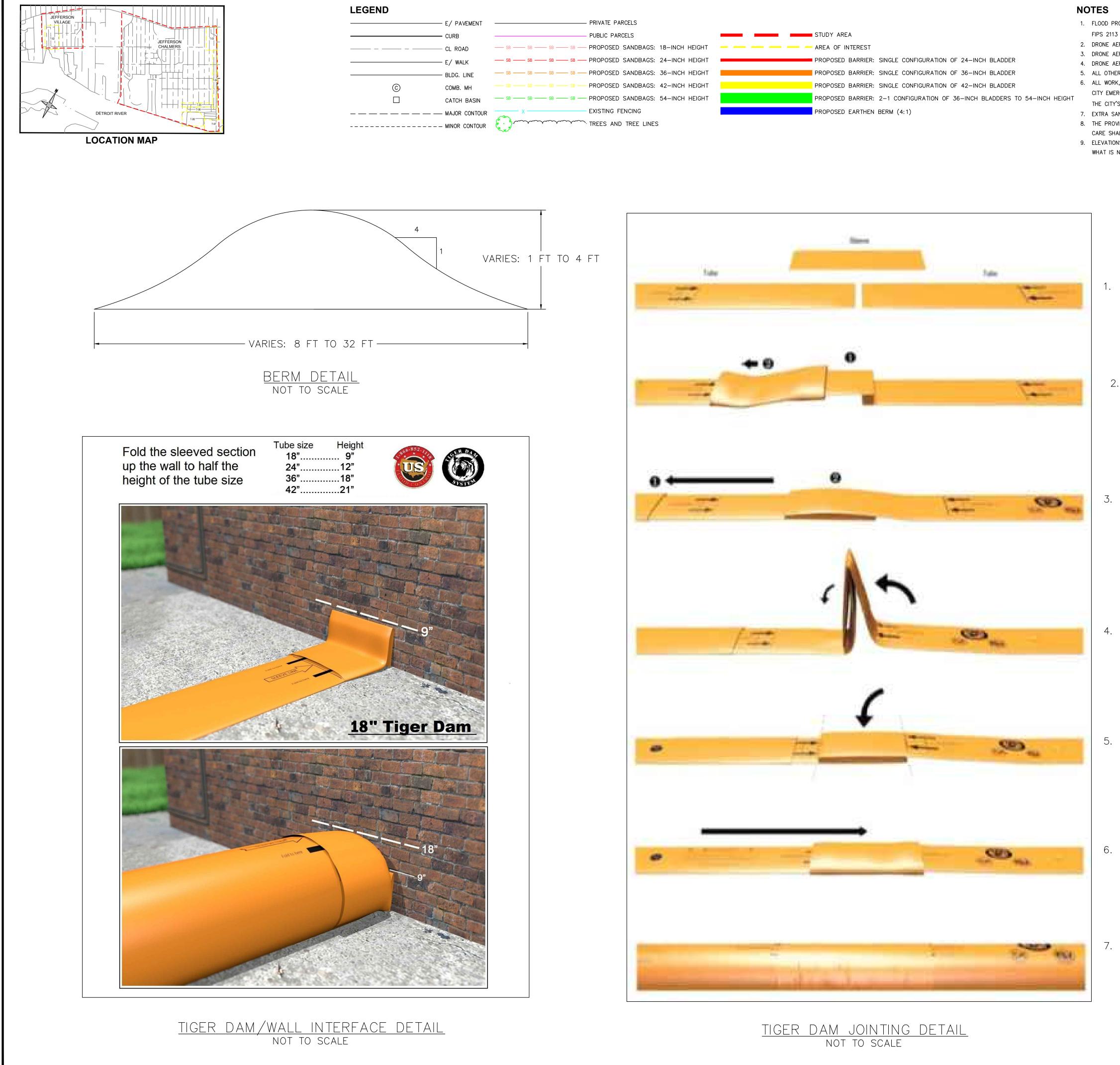
Executive:	S.C.
Manager:	M.K.
Designer:	J.B.
Quality Control:	B.K.

Professional Seal:



07 Ч MATCHLINE

DATE: ISSUE: 3/13/2020 RFQ FOR SUPPORTIVE Developed For: City of Detroit Detroit Building Authority 1301 Third Street, Suite 328 Detroit, MI 48226 (313) 224-0174 ANGEL PARK AND **RIVERFRONT-**LAKEWOOD EAST PARK 2020 Temporary Flood Mitigation Plan City of Detroit Wayne County MICHIGAN 03-12-2020 Date: Scale: 1" = 50' T-08 Sheet: Project: 19676.10D



giffels 1. FLOOD PROTECTION MEASURES MUST BE INSTALLED TO A TOP ELEVATION OF 580.00 (MAP PROJECTION: NAD 1983 STATEPLANE MICHIGAN SOUTH FIPS 2113 FEET; WESTERN HEMISPHERE; VERTICAL DATUM: NAVD 88). webster 2. DRONE AERIAL IMAGERY FOR HARDING CANAL WAS PERFORMED IN THE SPRING OF 2019. 3. DRONE AERIAL IMAGERY FOR ASHLAND AND SCRIPPS STREETS WAS PERFORMED IN DECEMBER 2019. 4. DRONE AERIAL IMAGERY FOR HARBOR ISLAND AND KLENK ISLAND STREETS WAS PERFORMED IN SUMMER 2019. Engineers 5. ALL OTHER AERIAL IMAGERY WAS PROVIDED BY MICROSOFT CORPORATION, DIGITALGLOBE, CNES, DISTRIBUTION AIRBUS DS. 6. ALL WORK, ESPECIALLY THAT PERTAINING TO RELOCATION OF PERSONAL PROPERTY, MUST BE COORDINATED WITH PROPERTY OWNERS. DURING A Surveyors CITY EMERGENCY, SHOULD A MOVEABLE OBJECT BE ENCOUNTERED ALONG A BLADDER/SANDBAG ALIGNMENT, THE OBJECT SHALL BE MOVED AT Planners THE CITY'S DISCRETION. Landscape Architects 7. EXTRA SANDBAGS SHALL BE MADE AVAILABLE IN ORDER TO CORRECT ANY SEEPAGE OCCURING AT BLADDER CONNECTIONS OR ELSEWHERE. 8. THE PROVIDED WORKSHEETS PORTRAY AN ASSUMED LAYOUT OF BLADDERS, SIZED ACCORDING TO THE ELEVATIONS AT THAT LOCATION. SPECIAL CARE SHALL BE UTILIZED TO ENSURE THAT DEVIATIONS FROM THAT LAYOUT MEET THE REQUIRED TOP ELEVATION OF 580.00. 28 West Adams Road 9. ELEVATIONS IN LEGEND ARE GENERAL RANGES USED TO DETERMINE REQUIRED BLADDER SIZES. PROPOSED BLADDER SIZES MAY BE LARGER THAN Suite 1200 WHAT IS NEEDED TO GET TO A TOP ELEVATION OF 580.00. Detroit, MI 48226 p (313) 962-4442 f (313) 962-5068 www.giffelswebster.com S.C. Executive: M.K. Manager: Designer J.B. Quality Control: B.K. 1. UNROLL AND LAY TUBES FLAT. Professional Seal: 2.1. LIFT TUBES UP (1) AND SLIDE SLEEVE ONTO THE TUBE (2). 3. SLIDE SLEEVE OUT OF THE WAY (1) AND OVERLAP BOTH TUBES EQUALLY (2) TO THESE FIGURES: Know what's below. Call before you dig. A. 18" – 2 FEET B. 24" – 3 FEET C. 36" – 6 FEET DATE: ISSUE: 3/13/2020 RFQ FOR SUPPORTIVE D. 42" – 8 FEET 4. FOLD THE OVERLAPPED SECTION OVER TO CREATE AN S-FOLD. 5. ENSURE THE "FOLD TO" ARROWS ARE ALIGNED TO EDGES OF S-FOLD. Developed For: City of Detroit Detroit Building Authority 1301 Third Street, Suite 328 Detroit, MI 48226 (313) 224-0174 6. SLIDE LIKE SLEEVES OVER TO COVER ENTIRE FOLD. SLEEVE SHOULD BE PLACED SUCH THAT AN EQUAL AMOUNT EXISTS ON BOTH SIDES. ENSURE TUBE IS FLAT UNDERNEATH SLEEVE. DETAILS 2020 Temporary Flood 7. ENSURE TUBES LOCK TOGETHER BY FIRST FILLING UP Mitigation Plan ONE END HALFWAY, THEN FILLING THE OTHER TUBE HALFWAY TO MATCH, AND FINALLY, FINISH FILLING City of Detroit BOTH TUBES. Wayne County MICHIGAN 03-12-2020 Date: Scale: NOT TO SCALE D-01 Sheet: Project: 19676.10D