

# Memo

**To:** City Council  
**From:** Bryan Myrkle, Director of Community Development  
**Date:** July 23, 2015  
**Re:** Change of Scope approval – runway rehabilitation project

---

As City Council members no doubt remember, the city is undertaking a rehabilitation project for the concrete runway at the Charlotte airport.

This work was originally estimated to cost nearly \$250,000, but the low bid was so much less than this, that it presents an opportunity to do a similar rehabilitation to the adjacent parallel taxiway. This taxiway is the same age, material and condition as the runway itself, but was excluded from the original project due to the anticipated cost.

Furthermore, airport manager Todd Cotter recently asked for an evaluation of our runway's alignment with its actual magnetic declination. It was his experience that the actual compass heading in planes approaching the runway was different than the 2/20 heading our runway has been designated with since it was constructed.

Councilmembers may not be aware of this, but there is a natural phenomenon known as magnetic, or polar, drift. From Wikipedia: "**Polar drift** is a geological phenomenon caused by variations in the flow of molten iron in Earth's outer core, resulting in changes in the orientation of Earth's magnetic field, and hence the position of the magnetic north and south poles."

This drifting of the magnetic poles has been significant-enough over the years, that the 2/20 heading, while no doubt accurate at the time it was originally designated, is no longer accurate. Our runway's actual designation should now be 3/21. A correct runway designation is

especially helpful to student pilots learning at our airport, and also transient pilots who may be landing here for the first time.

The change in project scope presented for you here would allow for the additional work of rehabilitating the taxiway and changing the runway designation through the use of new pavement markings and signage. It would also remain within the original cost estimate for the project. Please note that the City of Charlotte is responsible for only 5% of the cost of the project, as this is being paid for from the city's airport funding allocation from MDOT and the FAA.

We have already received approval from the MDOT Bureau of Aeronautics to add these items to our project, but need approval from City Council, as well.

I have included here for your information and reference:

- A complete copy of my letter to MDOT Aero that explains the requested changes in more detail
- An estimate of the probable cost of the revised project
- A proposed amendment for engineering services
- Detailed scope of work/services changes
- A copy of MDOT's email approving the changes
- A copy of the MDOT contract modification form

I am seeking your approval for these changes to the project. Should you have any questions about this, please contact me at (517) 543-8853.



# city of CHARLOTTE

July 17, 2015

To: Betsy Stuedle  
MDOT Bureau of Aeronautics  
2700 Port Lansing Road  
Lansing, MI 48906-2160

From: Bryan Myrkle  
City of Charlotte  
111 E. Lawrence Avenue  
Charlotte, MI 48813

Re: Request for Change in Scope – Runway 2/20 Joint Repair

Dear Ms. Stuedle –

The City of Charlotte would like to request a change in the scope of our project repairing joints to Runway 2/20.

This project was originally estimated to cost \$247,700, but unexpectedly favorable bid results led to significantly lower costs than anticipated. We believe this provides an opportunity to similarly repair the adjacent parallel taxiway that services the runway. It is of the same age, material and condition; and we believe its repair would be a solid and long-lasting investment in the airport infrastructure.

It seems unlikely that the city will get a similar opportunity to repair the taxiway at this cost, and because there is a very experienced airport contractor involved, we have high expectations for quality on this project. There are no other construction projects anticipated at the airport for a long time, so this really represents our best opportunity.

At the same time you are considering this change order, we would like to request your consideration of an additional change. It was recently brought to the city's attention that, due to changes in magnetic declination, 2/20 is no longer an accurate designation for this runway. Its more appropriate designation is 3/21. We would like to include the re-numbering of this runway as an additional scope of work for this project. This would include both signage and runway markings.

The City understands that the issue of magnetic declination should have been raised at an earlier time. However, we also think that this change order is a potentially good time to address it.

The City also understands that these changes may require an additional level of approval and administration that has the potential to further delay the project start. While this is not desirable, we believe the results will be worth the effort.

We appreciate any consideration you can give to this request. Attached here for your reference is an estimate of probable cost for the revised project, as well as a proposed amendment for engineering services, and detailed scope of work/services changes.

Sincerely,

A handwritten signature in black ink, appearing to read "Bryan Myrkle", enclosed within a large, loopy oval shape.

Bryan Myrkle  
City of Charlotte, Michigan

## Estimate of Probable Cost

Owner:

City of Charlotte / Fitch H. Beach Municipal Airport

Project Title:

Runway 2/20 Joint Repair + Change Order 1 (Parallel Taxiway & Magnetic Declination Shift)

Date:

July 17, 2015

Project #:

2140595

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
1000400	Mobilization and General Conditions	1	LS	\$6,500.00	\$6,500.00
1000410	Safety and Security	1	LS	\$5,000.00	\$5,000.00
6057001	Misc. - Remove and Replace Concrete Joint Sealant - Type I	1400	LFT	\$2.00	\$2,800.00
6057001	Misc. - Remove and Replace Concrete Joint Sealant - Type II	35000	LFT	\$2.00	\$70,000.00
5017011	Misc. - 5"+ Concrete Pavement Panel Replacement, Reinforced	90	SYD	\$65.00	\$5,850.00
8007010	Misc. - Concrete Spall Repair	100	SFT	\$50.00	\$5,000.00
8007010	Misc. - Concrete Diamond Grinding	1125	SFT	\$13.00	\$14,625.00
6200517	Airport Pavement Marking, Solid, Black	4005	SFT	\$0.37	\$1,481.85
6200534	Airport Pavement Marking, Solid, White, With Reflective Beads	12500	SFT	\$0.50	\$6,250.00
6200534	Airport Pavement Marking, Solid, White, With Reflective Beads	-516	SFT	\$0.50	-\$258.00
6057001*	Misc. - Remove and Replace Concrete Joint Sealant - Type II	28700	LFT	\$2.00	\$57,400.00
6200517*	Airport Pavement Marking, Solid, Black	11005	SFT	\$0.37	\$4,071.85
6200517**	Airport Pavement Marking, Solid, Black	1300	SFT	\$0.37	\$481.00
6200535*	Airport Pavement Marking, Solid, Yellow, With Reflective Beads	11969	SFT	\$0.58	\$6,942.02
6200540**	Remove Airport Pavement Marking	2141	SFT	\$3.04	\$6,508.64
1007051**	Misc. - Marking Removal Equipment Mobilization	1	LS	\$903.21	\$903.21
1257051**	Misc. - Runway 3/21 & 15/33 Signage Panels	1	LS	\$3,696.38	\$3,696.38

**Subtotal Construction: \$197,251.95**

Engineering \$13,500.00

Construction Administration \$22,500.00

Supplemental CA \$7,000.00

**Total \$240,251.95**

Estimated \$247,700

* Additional work for taxiway sealing	\$68,413.87
** Additional work for runway designation change	\$11,589.23

**AMENDMENT NO. 2**

**TO:** Agreement for Professional Engineering Service Dated January 12, 2015.

**BETWEEN:** City of Charlotte

AND

Prein&Newhof

**LOCATION:** Fitch H. Beach Airport, Charlotte, MI

**PROJECT:** C18: Runway 2/20 – Concrete Joint Repair

**PURPOSE:** Establish fees for supplemental construction phase services for the project. Scope of work for this amendment are further described in Attachment E to this Amendment. The fixed fee for construction phase services shall be seven thousand dollars (\$7,000.00). A breakdown of the fee (for informational purposes) is included as Attachment C to this Amendment.

**ACCEPTED BY SPONSOR**

---

Authorized Representative

Date

Signature of Witness

**ACCEPTED BY CONSULTANT**

---

James A. Cook, Chairman

Date

Signature of Witness

**ATTACHMENT "C"**  
**ESTIMATED MAN HOUR ASSIGNMENTS AND COSTS**

P&N No: 2140595

**FITCH H. BEACH AIRPORT**  
**CHARLOTTE, MICHIGAN**  
Project No. B-26-0018-1713  
Contract No. FM 23-02-C17

**AMENDMENT 2: SUPPLEMENTAL CONSTRUCTION PHASE SERVICES: Runway 2/20 – Concrete Joint Repair**

	PROJECT PRINCIPAL	PROJECT MANAGER	SENIOR ENGINEER	ENGINEER	SURVEYOR	SURVEY CREW	TECHNICIAN	CLERICAL	TOTAL	EXPENSES	AMOUNT PERSONNEL	TOTAL AMOUNT BY TASK
TASK I Parallel Taxiway Sealing & Remarking		8	4						12	\$ 4,085.11	\$ 472.00	\$ 5,508.65
TASK II Magnetic Declination Changes		8	4						12	\$ 67.80	\$ 472.00	\$ 1,491.34
TASK III										\$ -	\$ -	\$ -
TASK IV										\$ -	\$ -	\$ -
TASK V										\$ -	\$ -	\$ -
TASK VI										\$ -	\$ -	\$ -
TASK VII										\$ -	\$ -	\$ -
TASK VIII										\$ -	\$ -	\$ -
TOTALS		16	8						24	\$ 4,152.91	\$ 944.00	\$ 7,000.00
HOURLY RATES	\$ 68.00	\$ 40.00	\$ 38.00	\$ 25.00	\$ 38.00	\$ 54.00	\$ 30.00	\$ 20.00				
AMOUNT PERSONNEL	\$ -	\$ 640.00	\$ 304.00	\$ -	\$ -	\$ -	\$ -	\$ -	944.00			
OVERHEAD	\$ -	\$ 1,098.94	\$ 522.00	\$ -	\$ -	\$ -	\$ -	\$ -	1,620.94			
PROFIT 11%	\$ -	\$ 191.28	\$ 90.86	\$ -	\$ -	\$ -	\$ -	\$ -	282.14			
TOTAL PERSONNEL CHARGES	\$ -	\$ 1,930.23	\$ 916.86	\$ -	\$ -	\$ -	\$ -	\$ -	2,847.09			
OUT OF POCKET EXPENSES	ITEM I	ITEM II	ITEM III	ITEM IV	ITEM V	ITEM VI	ITEM VII	ITEM VIII	ITEM IX	ITEM X		
COMMERCIAL CARRIER	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Total Expenses
VEHICLE MILES	120	120										\$ -
MILES X \$0.565	\$ 67.80	\$ 67.80	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				\$ 135.60
NUMBER OF PEOPLE DAYS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				\$ -
PEOPLE DAYS X \$80.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				\$ -
MATERIALS & SUPPLIES	\$ 65.31	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				\$ 65.31
PRINTING	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				\$ -
SOMAT Engineering	\$ 3,952.00											\$ 3,952.00
TOTAL	\$ 4,085.11	\$ 67.80	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	TOTAL EXPENSES	\$ 4,152.91
											TOTAL CONTRACT =	\$ 7,000.00

## ATTACHMENT "E"

### **Scope of Work/Services Supplemental Construction Phase Services Runway 2/20 – Concrete Joint Repair Fitch H. Beach Airport**

#### **General**

The project includes Construction Phase (2) services listed in Article 1 of the Contract as amended in "Construction Phase Scope of Work".

- 1) Due to better than anticipated bid results, the airport is able to include joint sealing and remarking work on the parallel taxiway after the contractor finishes the existing runway scope of work.
- 2) Upon further investigation, as requested by Airport Staff, it was determined and confirmed with MDOT Aero that the runway numbers for all runways must be changed due to "magnetic north drift" (aka – shifting magnetic declination).

#### **Construction Phase Scope of Work**

Professional services fees are based on a construction schedule of 3 additional calendar days of work based upon construction schedules for full time work identified by the contractor. Fees are further based on the following:

##### **Task 1 – Parallel Taxiway Sealing & Marking**

1. Plan development and calculations for additional work
2. Supplemental contractor coordination and project administration
3. Supplemental onsite inspection and onsite meeting.
4. No additional survey or materials testing are anticipated.

##### **Task 2 – Magnetic Declination Changes to Airport Runways**

1. Quantity calculations and plan changes.
2. Assistance with Airport signage replacement acquisition
3. FAA coordination to update publications and approaches to new numbers
4. No additional construction schedule time is anticipated with this work.





Bryan Myrkle &lt;bmyrkle@charlottemi.org&gt;

---

## Request for Change in Scope

---

**Steudle, Betsy (MDOT)** <SteudleB@michigan.gov>

Mon, Jul 20, 2015 at 8:34 AM

To: Bryan Myrkle &lt;bmyrkle@charlottemi.org&gt;

Cc: "Hopper, Amanda (MDOT)" &lt;HopperA@michigan.gov&gt;, "Nelesen, Bob" &lt;bnelesen@preinnewhof.com&gt;, "gguetschow@charlottemi.org" &lt;gguetschow@charlottemi.org&gt;

Bryan,

I have reviewed your request letter dated 7/17/15 and concur with adding the following work to subgrant #1914, "Rehabilitate Runway 2/20 (concrete joint repair) – construction":

1. Rehabilitate Taxiway – parallel (concrete joint repair) – construction
2. Rehabilitate Runway 2/20 – remarking to designation 3/21 including change to sign panels for 3/21

Once Amanda confirms what's needed for a supplemental transfer, I will include on the 9/16/15 MAC meeting since over 15% of original transfer. Once the MAC has approved the supplemental transfer, I will process a Change Request in AERO PM and initiate the Sponsor Contract amendment.

You are able to commence work on the original project budget at any time but likely won't have the additional funds executed for use until early October.

Nice meeting with you and Greg on Friday.

**From:** Bryan Myrkle [mailto:bmyrkle@charlottemi.org]

**Sent:** Friday, July 17, 2015 4:13 PM

**To:** Steudle, Betsy (MDOT)

**Cc:** Hopper, Amanda (MDOT); Nelesen, Bob

**Subject:** Request for Change in Scope

[Quoted text hidden]



Michigan Department of Transportation

**Contract Modification**

7/23/2015 2:14 PM

FieldManager 5.1a

**Contract: 23218-121471, Concrete and joint repair**

Cont. Mod. Number	Revision Number	Cont. Mod. Date	Electronic File Created	Net Change	Awarded Contract Amount
1		7/23/2015	Yes	\$79,745.10	\$117,506.85
Route		Managing Office		District	Entered By
		MDOT Aero		06	Stephanie L Green
Contract Location					
Fitch H. Beach Municipal Airport, city of Charlotte, Eaton C					

**Short Description**

Parallel Taxiway &amp; Magnetic Declination Shift

**Description of Changes****Increases / Decreases**

Item Description	Item Code	Prop. Line	Proj. Line	Project	Catg.	Item Type	Quantity Change	Unit	Unit Price	Dollar Value
Airport Pavement Marking, Solid, Black	6200517	0060	0080	121471A	0001	Original	12,305.000	Sft	0.37000	\$4,552.85
Reason: 11,005 SFT for Add'l work taxiway sealing; 1,300 SFT for Add'l work for runway designation change.										
Arpt Pymt Marking, Solid, White, W/Beads	6200534	0070	0090	121471A	0001	Original	-516.000	Sft	0.50000	\$-258.00
Misc. Remove and Replace Concrete Joint Sealant - Type II	6057001	0050	0040	121471A	0001	Original	28,700.000	Lft	2.00000	\$57,400.00
Reason: Add'l Work for taxiway sealing										

**Total Dollar Value: \$61,694.85****New Items**

Item Description	Item Code	Prop. Line	Proj. Line	Project	Catg.	ItemType	Proposed Quantity	Unit	Unit Price	Dollar Value
Arpt Pymt Marking, Solid, Yellow, W/Beads	6200535	0095	0095	121471A	0001	Extra	11,969.000	Sft	0.58000	\$6,942.02
Reason: Add'l work for taxiway sealing										



## Contract Modification

## New Items

Item Description	Item Code	Prop. Line	Proj. Line	Project	Catg.	ItemType	Proposed Quantity	Unit	Unit Price	Dollar Value
Misc. Marking Removal Equipment Mobilization	1007051	0105	0105	121471A	0001	Extra	1.000	LS	903.21000	\$903.21

Reason: Add'l work for runway designation change.

Misc. Runway 13/31 & 15/33 Signage Panels	1257051	0110	0110	121471A	0001	Extra	1.000	LS	3,696.38000	\$3,696.38
---	---------	------	------	---------	------	-------	-------	----	-------------	------------

Reason: Add'l work for runway designation change.

Remove Airport Pavement Marking	6200540	0100	0100	121471A	0001	Extra	2,141.000	Sft	3.04000	\$6,508.64
---------------------------------	---------	------	------	---------	------	-------	-----------	-----	---------	------------

Reason: Add'l work for runway designation change

Total Dollar Value: **\$18,050.25**

## Project / Category Summary

Project/Catg	Project/Category Description	Federal Number	Project Status	Finance System	Control Section	Dollar Value
121471A	Concrete and joint repair	B-26-0018-1713	MDOT Oversight	FM	23218	
0001	Federal, State, Local					\$79,745.10

Total: **\$79,745.10**

Total Net Change Amount: **\$79,745.10**

**Contract Modification**

If authorized, the contractor agrees to do the work outlined above under the direction of the Engineer, and to accept as payment in full the basis of payment as indicated. Prime Contractor, you are authorized and instructed as the contractor to do the work described herein in accordance with the terms of your contract.

Prime Contractor: Interstate Sealant & Concrete, Inc.		Recommended by Construction Engineer: Jack Rick - University Region	
Signature _____	Date _____	Signature _____	Date _____
Prepared by Project Engineer:		Authorized by Managing Office Manager:	
Signature _____	Date _____	Signature _____	Date _____
Prepared by Consultant Project Manager:		Authorized by Region Construction Engineer:	
Signature _____	Date _____	Signature _____	Date _____
Recommended by Local Agency:		Authorized by Bureau of Field Services:	
Signature _____	Date _____	Signature _____	Date _____
Authorized by Airport Sponsor:		Authorized by Airports Division:	
Signature _____	Date _____	Signature _____	Date _____
<b>FEDERAL PARTICIPATION - ACTION BY F.H.W.A.</b>			
___ Approved ___ Not Eligible ___ See Letter Dated _____		_____ (Signature) (Date)	
<b>FEDERAL PARTICIPATION - ACTION BY F.A.A.</b>			
___ Approved ___ Not Eligible ___ See Letter Dated _____		_____ (Signature) (Date)	