

# Attachment F



**Harris & Associates®**

June 8, 2023

Erich Rauber, PE, GE  
Senior Civil Engineer  
Public Works, Facilities, and Parks  
County of Monterey  
1441 Schilling Place, 2<sup>nd</sup> Floor.  
Salinas, CA 93901

## **Amendment #1 - Engineering Design Services for Drainage Improvements along Lake Place and Valley Greens Circle within County Service Area (CSA) #25-Carmel Valley Golf and Country Club**

Dear Mr. Rauber,

On May 8, 2023, Harris & Associates (Harris) and County of Monterey (County) performed a site visit for the CSA #25-Pavement Improvements Project. During the field investigation, the County requested that Harris provide additional design services for drainage improvements along Lake Place and Valley Greens Circle. Therefore, this Amendment #1 has been developed to address the additional scope of services as requested by the County.

### **PROJECT UNDERSTANDING**

Findings from the initial field investigation with County staff on May 8, 2023, we identified an existing 18-inch diameter culvert crossing behind 8068 and 8069 Lake Place. The drainage area along Lake Place cannot flow to the existing catch basin because of non-existent curb & gutter and overgrown landscape blocking the drainage path. The existing catch basin and culvert is supposed to direct drainage to an existing pond located 375 feet west of the Lake Place culvert.

We also identified drainage issues between 1017 and 7033 Valley Greens Circle and between 7006 and 7094 Valley Greens Circle. The existing curb and gutter along these locations include low points which prevent stormwater from properly draining to the storm drain structures.

Harris will perform a drainage analysis and recommend storm drain improvements to these two drainage locations.

## SCOPE OF WORK

The following outlines our scope of work, as we understand it today. Please note that our effort will be billed on a Time and Materials basis, not to exceed the budgeted amount without prior approval.

## TASK 1 – PROJECT MANAGEMENT

### TASK 1.1 –PROJECT MANAGEMENT

Project Management responsibilities will involve preparation and maintenance of the Project scope, schedule, budget, and resource management regarding the storm drain improvements along Lake Place and Valley Greens Circle. A brief progress report will accompany each monthly Harris invoice. It will discuss budget, schedule, and “next steps”.

### TASK 1.2 –PROJECT MEETINGS

This task includes meetings with County staff and others as appropriate throughout design process to discuss the design of the storm drain improvements along Lake Place and Valley Greens Circle.

#### *Assumptions*

- *Two (2) design review meetings at 90% Submittal and Final (100%) Submittal.*

#### *Deliverables*

- *Meeting Agenda for each meeting.*
- *Meeting Minutes for each meeting.*

## TASK 2 – PRELIMINARY ENGINEERING

### TASK 2.1 – FIELD INVESTIGATION

Harris will perform a field investigation for the following locations:

1. Existing 18-inch diameter culvert crossing Lake Place behind 8068 and 8069 Lake Place residential lots and surrounding drainage area.
2. Valley Greens Circle between 1017 Valley Greens Circle and 7033 Valley Greens Circle.
3. Valley Greens Circle between 7006 Valley Greens Circle and 7094 Valley Greens Circle.

During the field investigation, Harris will gather the following information:

- Identify drainage areas tributary to existing storm drains systems to perform a local drainage analysis.
- Locate existing storm drain catch basins, pipes, culverts, and swales associated with the areas identified above. Take measurements, identify sizes, and look for structural deficiencies.
- Take measurements of roadway widths, curb & gutter widths, widths of shoulders, length of roadways, and dimensions of existing concrete work and roadway affected by storm drain improvements.
- Locate surface utility covers, manholes, vaults, and monuments within the selected drainage analysis to identify as “protect in place” or “adjust to grade” on project plans.

### ***Deliverables***

- *Field Notes, Measurements, and photos taken by Harris staff.*

### ***Assumptions***

- *One (1) day of field investigation is assumed.*
- *One (1) day of office work compiling and analyzing the field data.*

## **TASK 2.2 – TOPOGRAPHIC MAPPING**

Our subconsultant *Whitson Engineers* will provide supplemental survey for the three drainage areas identified below:

1. Drainage area tributary to existing 18-inch diameter culvert crossing Lake Place behind 8068 and 8069 Lake Place residential lots (To include existing storm drain system at this location).
2. Valley Greens Circle between 1017 Valley Greens Circle and 7033 Valley Greens Circle.
3. Valley Greens Circle between 7006 Valley Greens Circle and 7094 Valley Greens Circle.

Harris will use the Topographic Map provided by *Whitson Engineers* to develop base maps, perform drainage analysis, and prepare storm drain improvements.

### ***Deliverables***

- *Whitson Engineers to provide Topographic Survey in Civil 3D format.*
- *Harris to develop for base maps for locations listed above based on Topographic Survey.*
- *Whitson Engineers to provide monument preservation services to preserve or replace existing monuments affected during the construction phase.*
- *As part of Whitson Engineers scope of work, Storm and Sewer facilities will be dipped and inverts provided as part of the survey.*

### ***Assumptions***

- *Harris and Whitson Engineers will not perform potholing of existing utilities.*
- *Harris and Whitson Engineers will not perform test borings of existing structural road sections.*
- *Topographic survey will provide existing surface elevations along with invert and pipe size information for existing storm drain infrastructure.*
- *Whitson Engineers will not provide post construction corner records.*
- *Whitson Engineers will exclude construction staking.*

## **TASK 2.3 – MONUMENT PRESERVATION**

Our subconsultant *Whitson Engineers* will perform monument preservation services for the monuments disturbed during the pavement improvements.

### ***Deliverables***

- *Whitson Engineers will review existing control data and establish new control as needed for this task.*
- *Whitson Engineers will conduct field survey to locate existing field control and street centerline monuments (up to 9 monuments total).*

- *Whitson Engineers will set additional reference monuments outside the limits of construction, to be used for reestablishment of the centerline monuments if disturbed by construction activities.*
- *Whitson Engineers to prepare pre-construction corner records and submit to the County of Monterey for recordation.*

#### **Assumptions**

- *Harris and Whitson Engineers will not perform potholing of existing utilities.*
- *Harris and Whitson Engineers will not perform test borings of existing structural road sections.*
- *Whitson Engineers will not provide post construction corner records.*
- *Whitson Engineers will exclude construction staking.*

### **TASK 2.6 – DRAINAGE ANALYSIS FOR LAKE PLACE AND VALLEY GREENS CIRCLE**

Harris will perform a drainage analysis for the following locations listed below:

1. Drainage area tributary to existing 18-inch diameter culvert crossing Lake Place behind 8068 and 8069 Lake Place residential lots (To include existing storm drain system at this location).
2. Valley Greens Circle between 1017 Valley Greens Circle and 7033 Valley Greens Circle.
3. Valley Greens Circle between 7006 Valley Greens Circle and 7094 Valley Greens Circle.

Harris will use field data and topographic survey prepared by *Whitson Engineers* to identify drainage issues caused by sags in pavement, low points in gutters, deficiencies with existing catch basins/ culverts. During this phase, Harris will perform localized drainage calculations to confirm if existing drainage structures are properly sized and will recommend improvements. Harris will analyze the existing swale west of Lake Place to confirm drainage is allowed to drain to the existing pond 375 feet west of Lake Place. If the swale is not functioning properly, Harris will recommend grading improvements to adjust the flowline of the swale.

#### **Deliverables**

- *Harris will prepare localized drainage calculations for the three locations listed above. Harris will perform Rational Method Calculations for the 10-year storm to determine if existing drainage structures are sized appropriately to meet the County of Monterey storm drain design standards. If drainage structures are required, Harris will recommend and design storm drain improvements.*
- *Harris will prepare a technical memorandum summarizing the local drainage calculations.*

#### **Assumptions**

- *The Drainage analysis is only for the three locations listed above.*

## TASK 3 – 90% SUBMITTAL

### TASK 3.5 – 90% DRAINAGE IMPROVEMENTS (LAKE PLACE & VALLEY GREENS CIRCLE)

Based upon the initial kick off meeting, field investigation, and base map compilation, Harris will develop and submit additional storm drain improvement plans for the following locations:

1. Drainage area tributary to existing 18-inch diameter culvert crossing Lake Place behind 8068 and 8069 Lake Place residential lots (To include existing storm drain system at this location).
2. Valley Greens Circle between 1017 Valley Greens Circle and 7033 Valley Greens Circle.
3. Valley Greens Circle between 7006 Valley Greens Circle and 7094 Valley Greens Circle.

We have estimated the Sheet count for this additional scope of work to be the following:

- **Lake Place - Drainage Improvement Plan Sheets (2) to include the following:**
  - Two (2) Plan and Profile Sheets at 1" = 20' scale
- **Valley Greens Circle - Drainage Improvement Plan Sheets (2) to include the following:**
  - Two (2) Plan and Profile Sheets at 1" = 20' scale

**Total = up to 4 Plan Sheets**

As part of Task 3.5, Harris will develop 90% specifications and 90% OPPC for the additional storm drain improvements at Lake Place and Valley Center Circle.

#### ***Deliverables***

- *Electronic copy of 90% Design Plans in PDF format.*
- *Electronic copy in pdf format of 90% Contract Documents and Technical Specifications*
- *Electronic copy in pdf format of 90% Opinion of Probable Construction Cost.*
- *All construction plans will be prepared in a format compatible with the County's preferred AutoCAD format.*
- *Plans will be reviewed in house by Harris QA/QC Manager prior to submittals.*

## TASK 4 – 100% SUBMITTAL

### TASK 4.5 – 100% DRAINAGE IMPROVEMENTS (LAKE PLACE & VALLEY GREENS CIRCLE)

Based upon comments received from the County to the 90% Design Submittal, Harris will address the comments, revise, and submit 100% Final plans for the County to issue for bid.

As part of Task 4.5, Harris will develop 100% specifications and 100% OPCC for the additional storm drain improvements at Lake Place and Valley Center Circle.

#### ***Deliverables***

- *Electronic copy in pdf format of Final (100%) Plans (Signed & Stamped).*
- *Two (2) full size hard copies of Final (100%) Plans (Signed & Stamped).*
- *Electronic copy in pdf format of 100% Contract Documents and Technical Specifications*
- *Electronic copy in pdf format of 100% Opinion of Probable Construction Cost.*
- *Plans will be reviewed in house by Harris QA/QC Manager*

## SCHEDULE

Harris will schedule survey by *Whitson Engineers* as soon as we get a notice to proceed by the County. Upon receiving the topographic survey, Harris will prepare and submit the 90% Submittal within 2 weeks.

## FEE ESTIMATE

The not to exceed time and materials cost estimate for performing the tasks described above is **\$60,028**. A detailed level of effort is provided in **Attachment 1**.

The Harris team is ready to deliver this important task. Please note that the required contracting documents will follow 1-2 days from receiving the Notice to Proceed. Please feel free to contact me directly should you have any questions regarding this scope of work and cost estimate.

Sincerely,

Harris & Associates, Inc.



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**Attachment 1** – Fee Estimate

**Attachment 2** – *Whitson Engineers* Scope and Fee

<p style="text-align: center;"><b>County of Monterey</b>  <b>Engineering Design Services for Pavement Improvements at CSA #25</b>  <b>FEE ESTIMATE</b></p> <div>  <b>Harris &amp; Associates</b> </div>						
Task/Subtask	Harris & Associates				Sub-Consultants	Subtotals
	Principal In Charge <i>Frank Lopez</i> \$300.00	QA/QC Manager <i>Randy Berry</i> \$285.00	Project Manager <i>Christian Mercado</i> \$180.00	Design Engineer <i>Chris Martinez</i> \$140.00	Survey <i>Whitson Engineers</i> LS	
<b>Engineering Design Services</b>						
<b>Task 1 Project Management</b>						
1.1 Project Management	1	0	8	0		\$1,740
1.2 Projects Meetings (2 assumed)	0	0	4	0		\$720
Subtotal Hours =	1	0	12	0		13
<b>Task 1 Subtotal (\$)</b> =	<b>\$300</b>	<b>\$0</b>	<b>\$2,160</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,460</b>
<b>Task 2 Preliminary Engineering</b>						
2.1 Field Investigation	0	0	8	8		\$2,560
2.2 Topographic Mapping	0	0	4	6	\$13,740	\$15,300
2.3 Monument Preservation	0	0	0	0	\$14,140	\$14,140
2.6 Drainage Analysis (Lake Place/Valley Greens)	2	0	8	24		\$5,400
Subtotal Hours =	2	0	20	38		60
<b>Task 2 Subtotal (\$)</b> =	<b>\$600</b>	<b>\$0</b>	<b>\$3,600</b>	<b>\$5,320</b>	<b>\$27,880</b>	<b>\$37,400</b>
<b>Task 3 90% Submittal</b>						
3.5 Drainage Improvements (Lake Place/Valley Greens)	0	2	24	40		\$10,490
Subtotal Hours =	0	2	24	40		66
<b>Task 3 Subtotal (\$)</b> =	<b>\$0</b>	<b>\$570</b>	<b>\$4,320</b>	<b>\$5,600</b>	<b>\$0</b>	<b>\$10,490</b>
<b>Task 4 100% Submittal</b>						
4.5 Drainage Improvements (Lake Place/Valley Greens)	1	2	12	24		\$6,390
Subtotal Hours =	1	2	12	24		39
<b>Task 4 Subtotal (\$)</b> =	<b>\$300</b>	<b>\$570</b>	<b>\$2,160</b>	<b>\$3,360</b>	<b>\$0</b>	<b>\$6,390</b>
<b>Total Hours by Classification =</b>	<b>4</b>	<b>4</b>	<b>68</b>	<b>102</b>		<b>178</b>
<b>Total (\$) by Classification =</b>	<b>\$1,200</b>	<b>\$1,140</b>	<b>\$12,240</b>	<b>\$14,280</b>	<b>\$27,880</b>	<b>\$56,740</b>
<b>Direct Expenses</b>			<b>\$500</b>		<b>\$0</b>	<b>\$500</b>
<b>Total (\$)</b> =			<b>\$29,360</b>		<b>\$27,880</b>	<b>\$29,360</b>
<b>Total Harris</b>						<b>\$29,360</b>
<b>Total Subs</b>						<b>\$27,880</b>
<b>Sub Markup (10%)</b>						<b>\$2,788</b>
<b>Total =</b>						<b>\$60,028</b>





March 3, 2023

Job No.: 4624.00

**ATTACHMENT A****SCOPE OF SERVICES**

To Provide Surveying Services for:

**Monterey County – CSA 25  
Phase 2 – Carmel Valley Gold and Country Club Drive  
Pavement Rehabilitation**

**Task 1 –Topographic Mapping - Valley Greens Drive**

- 1.1 Research record maps, layout record right-of-way. Research and tie into a published vertical Datum
- 1.2 Locate and tie into existing field control and verify record right-of-way location. Please note: This will not constitute a full boundary survey of the subject parcels.
- 1.3 Conduct a topographic survey for areas shown on the attached exhibit including:
  - Obtain design level topographic mapping for the area shown on the attached exhibits.
  - Locate and collect all curbs, flowline and lip of gutters, valley gutter, sidewalk (including 1 foot behind back of walk), driveways (including first 5 feet of driveway) and sidewalk score marks.
  - Locate and collect visible utility features (valves, cleanouts, manholes, inlets, vaults, pipe outlets, drainage channels, poles, hydrant, street light, traffic signals, etc.) Storm and sewer facilities will be dipped and inverts provided as part of the survey.
  - Locate all fences, retaining walls and identify materials and sizes within the limits described above
  - Spot elevations of:
    - a. Corners and entrances to buildings
    - b. All site features
    - c. Top and bottom of walls and steps (every 25 feet)
    - d. Top and bottom of curb (every 25 feet)
    - e. Road centerline and edge (with station points every 25 feet)
    - f. Trees over 4-inches (indicate size)
  - Locate and label walls within the property limits
  - Locate signs, bollards, gates and inground site furniture
- 1.4 Set a site benchmark at each area.
- 1.5 Prepare a topographic map of the areas shown on the attached exhibit including all topographic features and elevations at a 1' contour interval.
- 1.6 Provide Client with CAD file in AutoCAD Civil3D, field notes and sketches, point listings. Please note that pdf sheets of the survey files are excluded from this scope.

**Mo Co CSA 25 – Pavement Rehab – Phase 2**

**Task 2 –Topographic Mapping – Lake Place**

- 1.7 Research record maps, layout record right-of-way. Research and tie into a published vertical Datum
- 1.8 Locate and tie into existing field control and verify record right-of-way location. Please note: This will not constitute a full boundary survey of the subject parcels.
- 1.9 Conduct a topographic survey for areas shown on the attached exhibit including:
  - Obtain design level topographic mapping for the area shown on the attached exhibit.
  - Topography to include the flowline of the channel from Lake place to the pond as shown on the attached exhibit.
  - Locate and collect all curbs, flowline and lip of gutters, valley gutter, sidewalk (including 1 feet behind back of walk), driveways (including first 5 feet of driveway) and sidewalk score marks.
  - Locate and collect visible utility features (valves, cleanouts, manholes, inlets, vaults, pipe outlets, drainage channels, poles, hydrant, street light, traffic signals, etc.) Storm and sewer facilities will be dipped and inverts provided as part of the survey.
  - Locate all fences, retaining walls and identify materials and sizes within the limits described above
  - Spot elevations of:
    - g. Corners and entrances to buildings
    - h. All site features
    - i. Top and bottom of walls and steps (every 25 feet)
    - j. Top and bottom of curb (every 25 feet)
    - k. Road centerline and edge (with station points every 25 feet)
    - l. Trees over 4-inches (indicate size)
  - Locate and label walls within the property limits
  - Locate signs, bollards, gates and inground site furniture
- 1.10 Set a site benchmark at each area.
- 1.11 Prepare a topographic map of the areas shown on the attached exhibit including all topographic features and elevations at a 1' contour interval.
- 1.12 Provide Client with CAD file in AutoCAD Civil3D, field notes and sketches, point listings. Please note that pdf sheets of the survey files are excluded from this scope.

**Task 3 –Monument Preservation**

- 2.1 Review existing control data from above and establish new control as needed for this task.
- 2.2 Conduct a field survey to locate existing field control and street centerline monuments (up to 9 monuments total)
- 2.3 Set additional reference monuments outside the limits of construction, to be used for reestablishment of the centerline monuments if disturbed by construction activities.
- 2.4 Prepare pre-construction corner records and submit to the County of Monterey for recordation

**Exclusions:**

The following work is specifically excluded from the Scope of Services:

1. Utility surveys other than described in the above scope.
2. Post construction corner records
3. Setting of monumentation post construction.
4. Design Services
5. Construction Staking
6. Any work not specifically included in the above Scope of Services.

Please note that upon your request, we could provide the above services at an additional cost.

**Payment & Provisions:**

Our fee for the services described in the above Scope of Services will be:

<b>Task 1 –Topographic Mapping – Valley Greens Dr.</b>	<b>\$ 7,935.</b>
<b>Task 2 –Monument Preservation – Lake Place</b>	<b>\$ 5,805.</b>
<b>Task 3 –Monument Preservation</b>	<b>\$ 14,140</b>

Progress billings will be on a percent complete basis as work is being completed.  
Authorized Additional Services and Construction Support will be on a time and materials basis in accordance with the rates shown on the Surveying Cost Estimate.

## Budget Estimate

Mo Co CSA 25 Mapping - Phase 2  
Carmel, CA

5/24/2023  
Job No.: 4624.00

TASK 1 Valley Greens										
DESCRIPTION	PE	SCE	CE	AE1	AE2	LS	FSC1	FSC2	TOTAL	COST
1.1 Control				3		2		1	6	\$ 1,205
1.2 Topographic Mapping								12	12	\$ 4,440
1.3 Data Reduction				10		1			11	\$ 1,735
1.4 PM / QA/QC						3			3	\$ 555
Subtotal	0	0	0	13	0	6	0	13	32	\$ 7,935
Rate	\$ 250	\$ 205	\$ 185	\$ 155	\$ 135	\$ 185	\$ 220	\$ 370		
Cost	\$ -	\$ -	\$ -	\$ 2,015	\$ -	\$ 1,110	\$ -	\$ 4,810		
								Subtotal		\$ 7,935
								Reimbursable Expenses		
								<b>TOTAL TASK 1</b>		<b>\$ 7,935</b>

TASK 2 Lake Place										
DESCRIPTION	PE	SCE	CE	AE1	AE2	LS	FSC1	FSC2	TOTAL	COST
2.1 Control				2		2		1	5	\$ 1,050
2.2 Topographic Mapping								8	8	\$ 2,960
2.3 Data Reduction				8		1			9	\$ 1,425
2.4 PM / QA/QC						2			2	\$ 370
Subtotal	0	0	0	10	0	5	0	9	24	\$ 5,805
Rate	\$ 250	\$ 205	\$ 185	\$ 155	\$ 135	\$ 185	\$ 220	\$ 370		
Cost	\$ -	\$ -	\$ -	\$ 1,550	\$ -	\$ 925	\$ -	\$ 3,330		
								Subtotal		\$ 5,805
								Reimbursable Expenses		\$ -
								<b>TOTAL TASK 2</b>		<b>\$ 5,805</b>

TASK 3 Monument Preservation										
DESCRIPTION	PE	SCE	CE	AE1	AE2	LS	FSC1	FSC2	TOTAL	COST
3.1 Control							2		2	\$ 440
3.2 Locate Monuments							4		4	\$ 880
3.3 Set additional monuments outside limits of construction							18			
3.4 Prepare Pre-construction corner records				36		10			46	\$ 7,430
3.5 PM/QA/QC					1	7			8	\$ 1,430
Subtotal	0	0	0	36	1	17	24	0	60	\$ 10,180
Rate	\$ 250	\$ 205	\$ 185	\$ 155	\$ 135	\$ 185	\$ 220	\$ 370		
Cost	\$ -	\$ -	\$ -	\$ 5,580	\$ 135	\$ 3,145	\$ 5,280	\$ -		
								Subtotal		\$ 14,140
								Reimbursable Expenses		
								<b>TOTAL TASK 3</b>		<b>\$ 14,140</b>
								<b>TOTAL FEE (Tasks 1-3)</b>		<b>\$ 27,880</b>

T43		
PE	Principal Engineer	\$ 250
SCE	Senior Civil Engineer	\$ 205
SLS	Senior Land Surveyor	\$ 205
CE	Civil Engineer	\$ 185
LS	Land Surveyor	\$ 185
SAE	Senior Associate Engineer / Surveyor	\$ 175
AE1	Associate Engineer / Surveyor	\$ 155
AE2	Assistant Engineer / Surveyor	\$ 135
SET	Senior Engineering/Survey Technician	\$ 130
ET	Engineering/Survey Technician	\$ 125
EA	Engineering Aide	\$ 70
AS	Administrative Support	\$ 75
FSC1	Field Survey Crew/1M	\$ 220
FSC2	Field Survey Crew/2M	\$ 370



Provide Survey for the following area to include the following:

1. CL Pavement
2. Lip of gutter
3. C&G (TC, FL)
4. Sidewalk (front and back)
5. Catch Basins at following locations: (To include TC, grate, pipe size, inverts)
  - 7006 Valley Greens Circle
  - 7005 Valley Greens Circle

Obtain x,y,z coordinates of terminus of culvert invert, take photo(s) of same.





# Untitled Map

Write a description for your map.

## Legend

Provide Survey for the following area to include the following:

1. CL Pavement
2. Lip of gutter
3. C&G (TC, FL)
4. Sidewalk (front and back)

Google Earth

Image Landsat / Copernicus

400 ft





Please Provide Survey of the following area to include:

1. Pavement Shots
2. TC, FL, LIP, AC BERM
3. Edge of Pavement
4. Culvert Headwall Dimensions
5. Culvert Pipe Size and FL
6. Curb and Gutter
7. Face of Walk and Back of Walk

Provide survey ground shots for existing dirt road entry into the golf course. Extend 20 feet past EP.

Provide FL of channel from culvert to pond.  
Provide XYZ Coordinates of outfall and photos.



JER: In addition to the above, obtain the following;

- Invert EI. of culvert at headwall along with approx. thickness of debris
- Invert EI. of culvert at DI