

# Alaska Department of Transportation & Public Facilities

## Design Process and ADA Standards for Curb Ramps in Central Region

Steven Rzepka, P.E.

March 28, 2019

Our mission is to ***Keep Alaska Moving*** through service and infrastructure.



# Housekeeping Items

- WebEx
- Sign In Sheet
- Safety Minute
- Exits
- Restrooms
- Questions



# Outline

- Background & Goals
- CR ADA Standards
- Curb Ramp Survey Instructions  
& Inspection Forms
- Curb Ramp Design Process
- Questions



# Background & Goals

## Background

- Curb Ramp Survey Instructions and Inspection Forms (Version 1.0) were used by field staff in 2018

## Goals for This Year

- Update Instructions and Inspection Forms (Version 2.0)
  - From comments received from field staff
  - To better collect data on existing curb ramps
- Establish a design process for all projects to follow
- Define deliverables to the Civil Rights Office (CRO) and Construction
- Create a system of accountability to ensure process is followed



# CR ADA Standards

## **Where do the CR ADA Standards come from?**

- DOT&PF Adopted Standards
  - 2006 US DOT ADA Standards for Transportation Facilities
  - 2010 US DOJ ADA Standards for Accessible Design
- DOT&PF Best Practice Guidance
  - 2011 Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG)
- Other
  - Construction Industry Tolerances
  - Engineering Judgement





Alaska Department of  
Transportation & Public Facilities

# Survey Instructions & Inspection Forms

March 28, 2019

Our mission is to **Keep Alaska Moving** through service and infrastructure.



# Disclaimer

The Central Region ADA Curb Ramp Survey Instructions and Inspection Forms were developed by the DOT&PF Central Region ADA Working Group. The purpose of these documents is to establish a clear and consistent process for measuring curb ramps for ADA compliance within Central Region.

They were developed to address the majority of situations that will be encountered in the field. These documents are not a full replacement of the currently adopted DOT&PF standards for ADA, only a summary of those parts most frequently encountered in curb ramp design and construction. Site specific situations may fall outside the scope of these documents and will necessitate usage of additional sections of the ADA standards and the application of engineering judgement. It is the responsibility of the Engineer to familiarize themselves with the adopted Standards.



# Equipment Needed

- 24" Electronic (Smart) level
- Tape Measure
- Broom
- Blank Curb Ramp Inspection Forms
  - One per curb ramp



# Degree of Accuracy In Measurement

## Minimums and Maximums

The minimum and maximum values listed in these documents are determined from the 2006 and 2010 ADA Standards and supplemented by PROWAG. Per these documents, there is zero tolerance below or above those respective values

## Degree of Accuracy

- Inches – to the nearest inch (1")
  - Vertical Changes in Level – to the nearest one-eighth (1/8")
- Feet – to the nearest tenth (0.1')
- Percentage – to the nearest tenth (0.1%)



# Procedure – Key Points

- Calibrate electronic level per manufacturer's instructions
- Clear surface of any loose material
- Take one measurement per feature on Inspection Form
  - In the middle of the feature
  - Parallel or Perpendicular to the direction of travel
  - Should be representative of the entire feature
    - Supplemental measurements allowed to verify that it is representative
  - Use engineering judgement
- Answer questions at the bottom of the Inspection Form

# Curb Ramp Inspection Forms

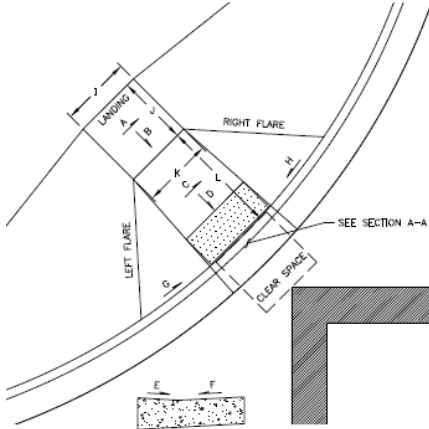
## Three Types of Curb Ramps

- Perpendicular

PROJECT NAME: \_\_\_\_\_  
PROJECT NUMBER: \_\_\_\_\_  
PRIMARY STREET: \_\_\_\_\_  
SECONDARY STREET: \_\_\_\_\_  
LEVEL MAKE/MODEL: \_\_\_\_\_

MARK LOCATION OF RAMP AND DRAW ARROW TO INDICATE DIRECTION OF NORTH

N



SECTION A-A  
CURB RAMP  
CURB AND GUTTER

	MEASURED	CR ADA STANDARD
A		2.0% MAX
B		2.0% MAX
C		2.0% MAX
D		8.3% MAX
E		8.3% MAX
F		5.0% MAX
G		10.0% MAX
H		10.0% MAX
I		36" MIN
J		36" MIN
K		36" MIN
L		15.0" MAX

1. IS THE CURB RAMP CONSTRUCTED OF STABLE, FIRM, AND SLIP RESISTANT MATERIALS? ☐ YES ☐ NO

2. ARE ANY VERTICAL CHANGES IN LEVEL LESS THAN 1/4" FOR ALL SURFACES AND GRADE BREAKS OF THE CURB RAMP? ☐ YES ☐ NO

3. IS THE TRANSITION BETWEEN THE CURB AND THE GUTTER PAN SMOOTH? ☐ YES ☐ NO

4. ARE ALL GRADE BREAKS PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN? ☐ YES ☐ NO

5. ARE RAMPS, LANDINGS, AND GUTTER LINES DRAINING PROPERLY? ☐ YES ☐ NO

6. IF DRAINAGE GRATES ARE LOCATED WITHIN THE PEDESTRIAN ACCESS ROUTE, DOES THE GRATE PROHIBIT PASSAGE OF A SPHERE GREATER THAN 1/2" IN DIAMETER? ARE ELONGATED OPENINGS PLACED SO THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL? ☐ YES ☐ NO ☐ N/A

7. DOES A 24" DETECTABLE WARNING TILE STRIP EXTEND THE FULL WIDTH OF THE CURB RAMP OPENING AND ARE THE TRUNCATED DOMES ORIENTED FOR THE PREDOMINATE DIRECTION OF TRAVEL? ☐ YES ☐ NO ☐ N/A

8. IF MARKED CROSSWALKS ARE USED, IS A 48" X 48" CLEAR SPACE PROVIDED BEYOND THE BOTTOM GRADE BREAK, WITHIN THE PEDESTRIAN CROSSING, AND WHOLLY OUTSIDE THE PARALLEL VEHICLE LANE? ☐ YES ☐ NO ☐ N/A

9. DOES THE CURB RAMP COMPLY WITH CR ADA STANDARDS, AS OUTLINED ABOVE? IF THE ANSWER IS NO, COORDINATE WITH THE ENGINEER OF RECORD TO PROVIDE ADDITIONAL DOCUMENTATION DESCRIBING WHY. ☐ YES ☐ NO

PRINTED NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

VERSION 2.0

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
CENTRAL REGION  
**PERPENDICULAR  
CURB RAMP**

# Curb Ramp Inspection Forms

## Three Types of Curb Ramps

- Perpendicular
- Parallel

PROJECT NAME: \_\_\_\_\_  
 PROJECT NUMBER: \_\_\_\_\_  
 PRIMARY STREET: \_\_\_\_\_  
 SECONDARY STREET: \_\_\_\_\_  
 LEVEL MAKE/MODEL: \_\_\_\_\_

MARK LOCATION OF RAMP AND DRAW ARROW TO INDICATE DIRECTION OF NORTH

N

SECTION A-A  
CURB RAMP  
CURB AND GUTTER

	MEASURED	CR ADA STANDARD
A		8.3% MAX
B		2.0% MAX
C		2.0% MAX
D		2.0% MAX
E		8.3% MAX
F		2.0% MAX
G		8.3% MAX
H		9.0% MAX
I		48" MIN
J		15.0' MAX
K		48" MIN
L		60" MIN
M		48" MIN
N		15.0' MAX

- IS THE CURB RAMP CONSTRUCTED OF STABLE, FIRM, AND SLIP RESISTANT MATERIALS?  
☐ YES ☐ NO
- ARE ANY VERTICAL CHANGES IN LEVEL LESS THAN 1/4" FOR ALL SURFACES AND GRADE BREAKS OF THE CURB RAMP?  
☐ YES ☐ NO
- IS THE TRANSITION BETWEEN THE CURB AND THE GUTTER PAN SMOOTH?  
☐ YES ☐ NO
- ARE ALL GRADE BREAKS PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN?  
☐ YES ☐ NO
- ARE RAMP, LANDINGS, AND GUTTER LINES DRAINING PROPERLY?  
☐ YES ☐ NO
- IF DRAINAGE GRATES ARE LOCATED WITHIN THE PEDESTRIAN ACCESS ROUTE, DOES THE GRATE PROHIBIT PASSAGE OF A SPHERE GREATER THAN 1/2" IN DIAMETER? ARE ELONGATED OPENINGS PLACED SO THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL?  
☐ YES ☐ NO ☐ N/A
- DOES A 24" DETECTABLE WARNING TILE STRIP EXTEND THE FULL WIDTH OF THE CURB RAMP OPENING AND ARE THE TRUNCATED DOMES ORIENTED FOR THE PREDOMINATE DIRECTION OF TRAVEL?  
☐ YES ☐ NO ☐ N/A
- IF MARKED CROSSWALKS ARE USED, IS A 48" X 48" CLEAR SPACE PROVIDED BEYOND THE BOTTOM GRADE BREAK, WITHIN THE PEDESTRIAN CROSSING, AND WHOLLY OUTSIDE THE PARALLEL VEHICLE LANE?  
☐ YES ☐ NO ☐ N/A
- DOES THE CURB RAMP COMPLY WITH CR ADA STANDARDS, AS OUTLINED ABOVE? IF THE ANSWER IS NO, COORDINATE WITH THE ENGINEER OF RECORD TO PROVIDE ADDITIONAL DOCUMENTATION DESCRIBING WHY.  
☐ YES ☐ NO

PRINTED NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

VERSION 2.0

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 CENTRAL REGION  
**PARALLEL  
 CURB RAMP**

# Curb Ramp Inspection Forms

## Three Types of Curb Ramps

- Perpendicular
- Parallel
- Directional

PROJECT NAME: \_\_\_\_\_  
 PROJECT NUMBER: \_\_\_\_\_  
 PRIMARY STREET: \_\_\_\_\_  
 SECONDARY STREET: \_\_\_\_\_  
 LEVEL MAKE/MODEL: \_\_\_\_\_

MARK LOCATION OF RAMP AND DRAW ARROW TO INDICATE DIRECTION OF NORTH

SECTION A-A  
 CURB RAMP  
 CURB AND GUTTER

SEE SECTION A-A

SEE SECTION A-A

	MEASURED	CR ADA STANDARD
A		2.0% MAX
B		2.0% MAX
C		8.3% MAX
D		2.0% MAX
E1		5.0% MAX
E2		2.0% MAX
F		2.0% MAX
G		8.3% MAX
H		5.0% MAX
I		48" MIN
J		SEE QUESTION 8
K		48" MIN
L		15.0' MAX
M		SEE QUESTION 9

1. IS THE CURB RAMP CONSTRUCTED OF STABLE, FIRM, AND SLIP RESISTANT MATERIALS? ☐ YES ☐ NO
2. ARE ANY VERTICAL CHANGES IN LEVEL LESS THAN 1/4" FOR ALL SURFACES AND GRADE BREAKS OF THE CURB RAMP? ☐ YES ☐ NO
3. IS THE TRANSITION BETWEEN THE CURB AND THE GUTTER PAN SMOOTH? ☐ YES ☐ NO
4. ARE ALL GRADE BREAKS PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN? ☐ YES ☐ NO
5. ARE RAMPS, LANDINGS, AND GUTTER LINES DRAINING PROPERLY? ☐ YES ☐ NO
6. IF DRAINAGE GRATES ARE LOCATED WITHIN THE PEDESTRIAN ACCESS ROUTE, DOES THE GRATE PROHIBIT PASSAGE OF A SPHERE GREATER THAN 1/2" IN DIAMETER? ARE ELONGATED OPENINGS PLACED SO THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL? ☐ YES ☐ NO ☐ N/A
7. DOES A 24" DETECTABLE WARNING TILE STRIP EXTEND THE FULL WIDTH OF THE CURB RAMP OPENING AND ARE THE TRUNCATED DOMES ORIENTED FOR THE PREDOMINATE DIRECTION OF TRAVEL? ☐ YES ☐ NO
8. FOR MEASUREMENT J, IS THE VALUE EITHER (i) AT LEAST 60" IF A CONSTRAINT EXISTS AT THE BACK OF SIDEWALK WHAT WOULD INHIBIT TURNING, OR (ii) AT LEAST 48" IF NO CONSTRAINTS EXIST? ☐ YES ☐ NO
9. IS THE DETECTABLE WARNING TILE STRIP INSTALLED AT A LOCATION CONSISTENT WITH THE MEASUREMENT M REQUIREMENT? ☐ YES ☐ NO
10. IS MARKED CROSSWALKS ARE USED, IS A 48" X 48" CLEAR SPACE PROVIDED BEYOND THE BOTTOM GRADE BREAK, WITHIN THE PEDESTRIAN CROSSING, AND WHOLLY OUTSIDE THE PARALLEL VEHICLE LANE? ☐ YES ☐ NO ☐ N/A
11. DOES THE CURB RAMP COMPLY WITH CR ADA STANDARDS, AS OUTLINED ABOVE? IF THE ANSWER IS NO, COORDINATE WITH THE ENGINEER OF RECORD TO PROVIDE ADDITIONAL DOCUMENTATION DESCRIBING WHY. ☐ YES ☐ NO

PRINTED NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

VERSION 2.0

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 CENTRAL REGION  
**DIRECTIONAL  
 CURB RAMP**



# Curb Ramp Inspection Forms

## Fill out header information

Complete this in the office prior to field visit when possible

PROJECT NAME: \_\_\_\_\_

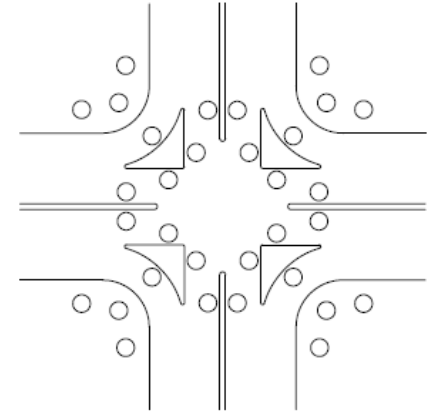
PROJECT NUMBER: \_\_\_\_\_

PRIMARY STREET: \_\_\_\_\_

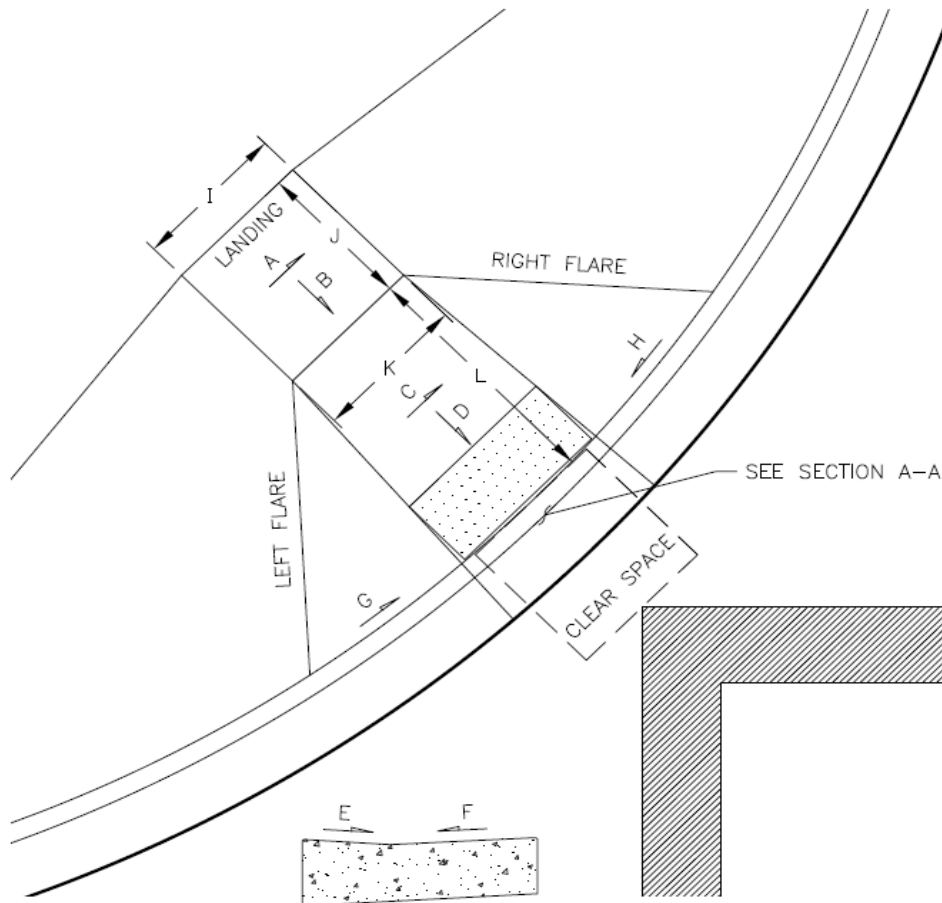
SECONDARY STREET: \_\_\_\_\_

LEVEL MAKE/MODEL: \_\_\_\_\_

MARK LOCATION OF  
RAMP AND DRAW  
ARROW TO INDICATE  
DIRECTION OF NORTH



# Perpendicular Curb Ramp

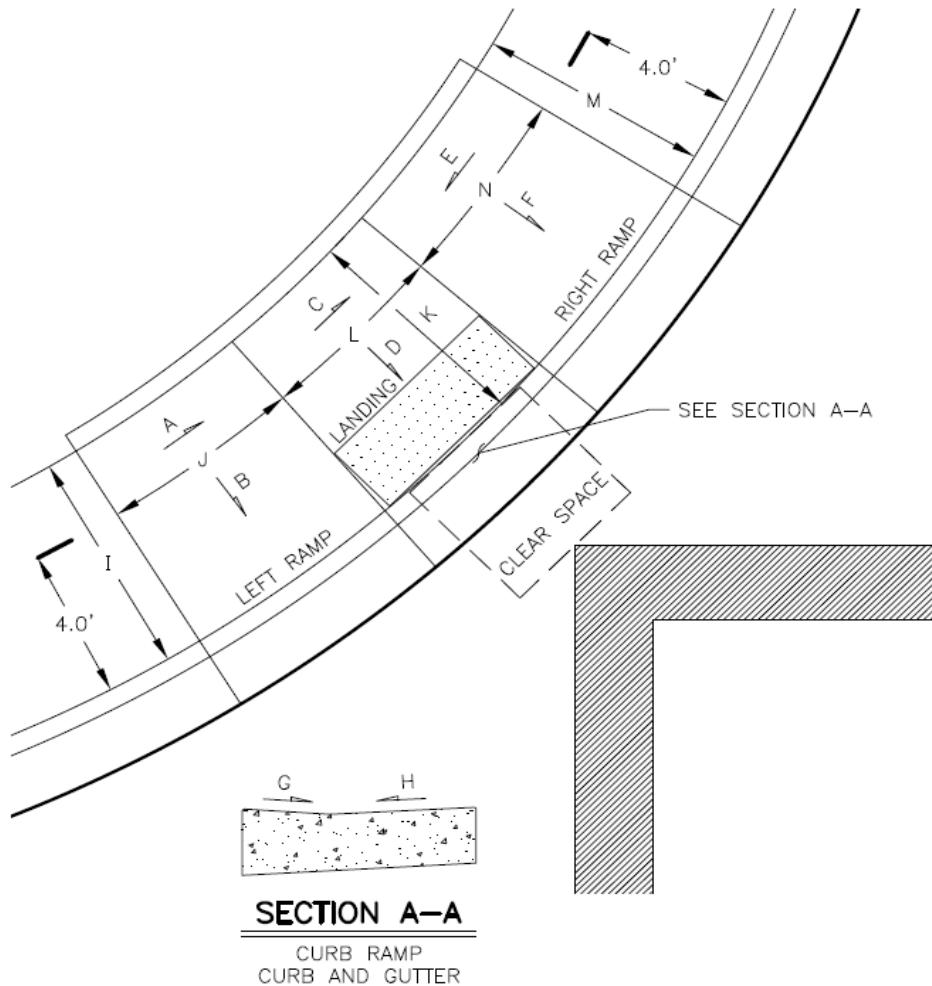


## SECTION A-A

CURB RAMP  
CURB AND GUTTER

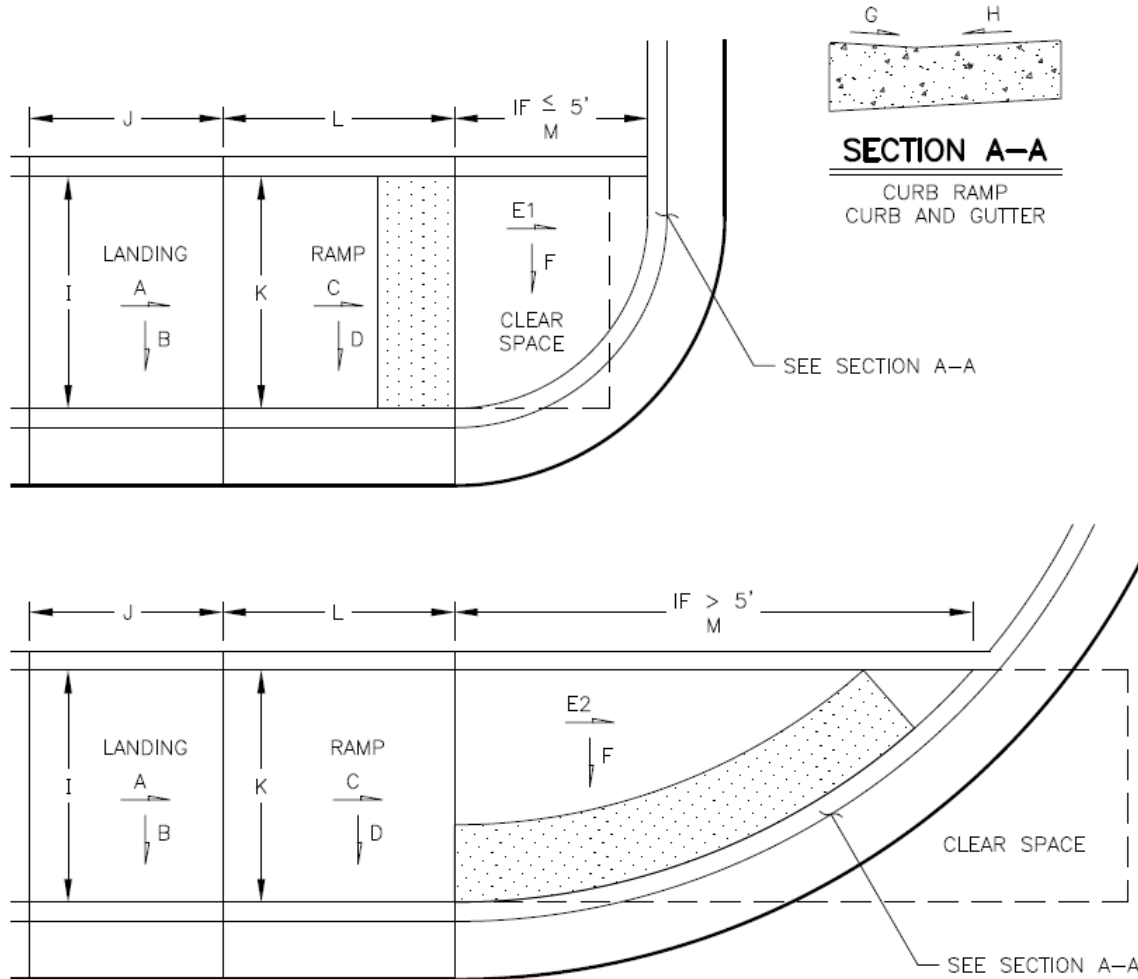
	MEASURED	CR ADA STANDARD
A		2.0% MAX
B		2.0% MAX
C		2.0% MAX
D		8.3% MAX
E		8.3% MAX
F		5.0% MAX
G		10.0% MAX
H		10.0% MAX
I		36" MIN
J		36" MIN
K		36" MIN
L		15.0' MAX

# Parallel Curb Ramp



	MEASURED	CR ADA STANDARD
A		8.3% MAX
B		2.0% MAX
C		2.0% MAX
D		2.0% MAX
E		8.3% MAX
F		2.0% MAX
G		8.3% MAX
H		5.0% MAX
I		48" MIN
J		15.0' MAX
K		48" MIN
L		60" MIN
M		48" MIN
N		15.0' MAX

# Directional Curb Ramp



	MEASURED	CR ADA STANDARD
A		2.0% MAX
B		2.0% MAX
C		8.3% MAX
D		2.0% MAX
E1		5.0% MAX
E2		2.0% MAX
F		2.0% MAX
G		8.3% MAX
H		5.0% MAX
I		48" MIN
J		SEE QUESTION 8
K		48" MIN
L		15.0' MAX
M		SEE QUESTION 9

# Curb Ramp Inspection Forms

## Answer questions at the bottom of the Inspection Form

1. IS THE CURB RAMP CONSTRUCTED OF STABLE, FIRM, AND SLIP RESISTANT MATERIALS? ☐ YES ☐ NO
2. ARE ANY VERTICAL CHANGES IN LEVEL LESS THAN 1/4" FOR ALL SURFACES AND GRADE BREAKS OF THE CURB RAMP? ☐ YES ☐ NO
3. IS THE TRANSITION BETWEEN THE CURB AND THE GUTTER PAN SMOOTH? ☐ YES ☐ NO
4. ARE ALL GRADE BREAKS PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN? ☐ YES ☐ NO
5. ARE RAMPS, LANDINGS, AND GUTTER LINES DRAINING PROPERLY? ☐ YES ☐ NO
6. IF DRAINAGE GRATES ARE LOCATED WITHIN THE PEDESTRIAN ACCESS ROUTE, DOES THE GRATE PROHIBIT PASSAGE OF A SPHERE GREATER THAN 1/2" IN DIAMETER? ARE ELONGATED OPENINGS PLACED SO THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL? ☐ YES ☐ NO ☐ N/A
7. DOES A 24" DETECTABLE WARNING TILE STRIP EXTEND THE FULL WIDTH OF THE CURB RAMP OPENING AND ARE THE TRUNCATED DOMES ORIENTED FOR THE PREDOMINATE DIRECTION OF TRAVEL? ☐ YES ☐ NO
8. FOR MEASUREMENT J, IS THE VALUE EITHER (i) AT LEAST 60" IF A CONSTRAINT EXISTS AT THE BACK OF SIDEWALK WHAT WOULD INHIBIT TURNING, OR (ii) AT LEAST 48" IF NO CONSTRAINTS EXIST? ☐ YES ☐ NO
9. IS THE DETECTABLE WARNING TILE STRIP INSTALLED AT A LOCATION CONSISTENT WITH THE MEASUREMENT M REQUIREMENT? ☐ YES ☐ NO
10. IS MARKED CROSSWALKS ARE USED, IS A 48" X 48" CLEAR SPACE PROVIDED BEYOND THE BOTTOM GRADE BREAK, WITHIN THE PEDESTRIAN CROSSING, AND WHOLLY OUTSIDE THE PARALLEL VEHICLE LANE? ☐ YES ☐ NO ☐ N/A
11. DOES THE CURB RAMP COMPLY WITH CR ADA STANDARDS, AS OUTLINED ABOVE? IF THE ANSWER IS NO, COORDINATE WITH THE ENGINEER OF RECORD TO PROVIDE ADDITIONAL DOCUMENTATION DESCRIBING WHY. ☐ YES ☐ NO



# Curb Ramp Inspection Forms

**Answer questions at the bottom of the form**

These two questions only show up on the  
Directional Ramp Inspection Form

8. FOR MEASUREMENT J, IS THE VALUE EITHER (i) AT LEAST 60" IF A CONSTRAINT EXISTS AT THE BACK OF SIDEWALK WHAT WOULD INHIBIT TURNING, OR (ii) AT LEAST 48" IF NO CONSTRAINTS EXIST?

☐ YES

☐ NO

9. IS THE DETECTABLE WARNING TILE STRIP INSTALLED AT A LOCATION CONSISTENT WITH THE MEASUREMENT M REQUIREMENT?

☐ YES

☐ NO



# Vertical Changes in Level

## **Within the Pedestrian Circulation Path**

- (1/2") maximum
- If between (1/4") and (1/2"), beveled with a slope not greater than 50%

## **Part of Pedestrian Access Route**

- (1/4") maximum



Alaska Department of  
Transportation & Public Facilities

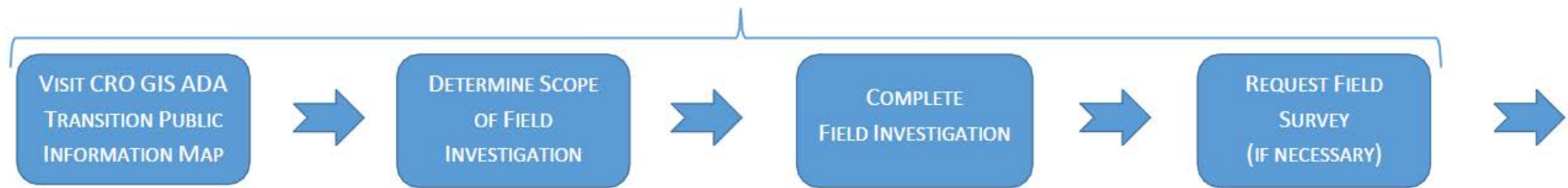
# Curb Ramp Design Process

March 28, 2019

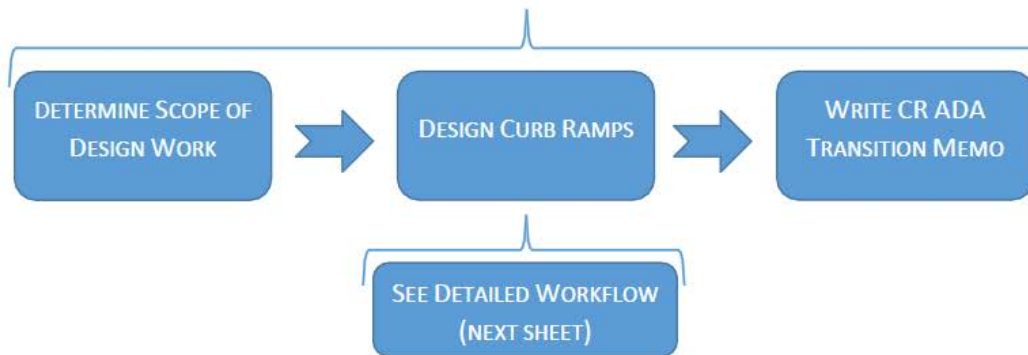
Our mission is to **Keep Alaska Moving** through service and infrastructure.

# Design Process Flowchart – Page 1

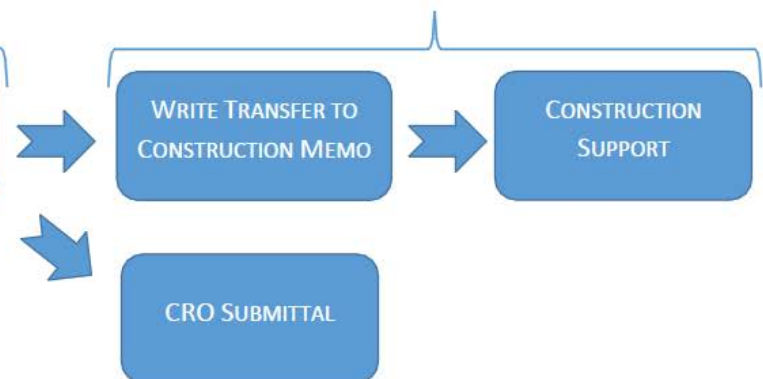
## INVESTIGATION OF EXISTING CURB RAMPS



## DESIGN

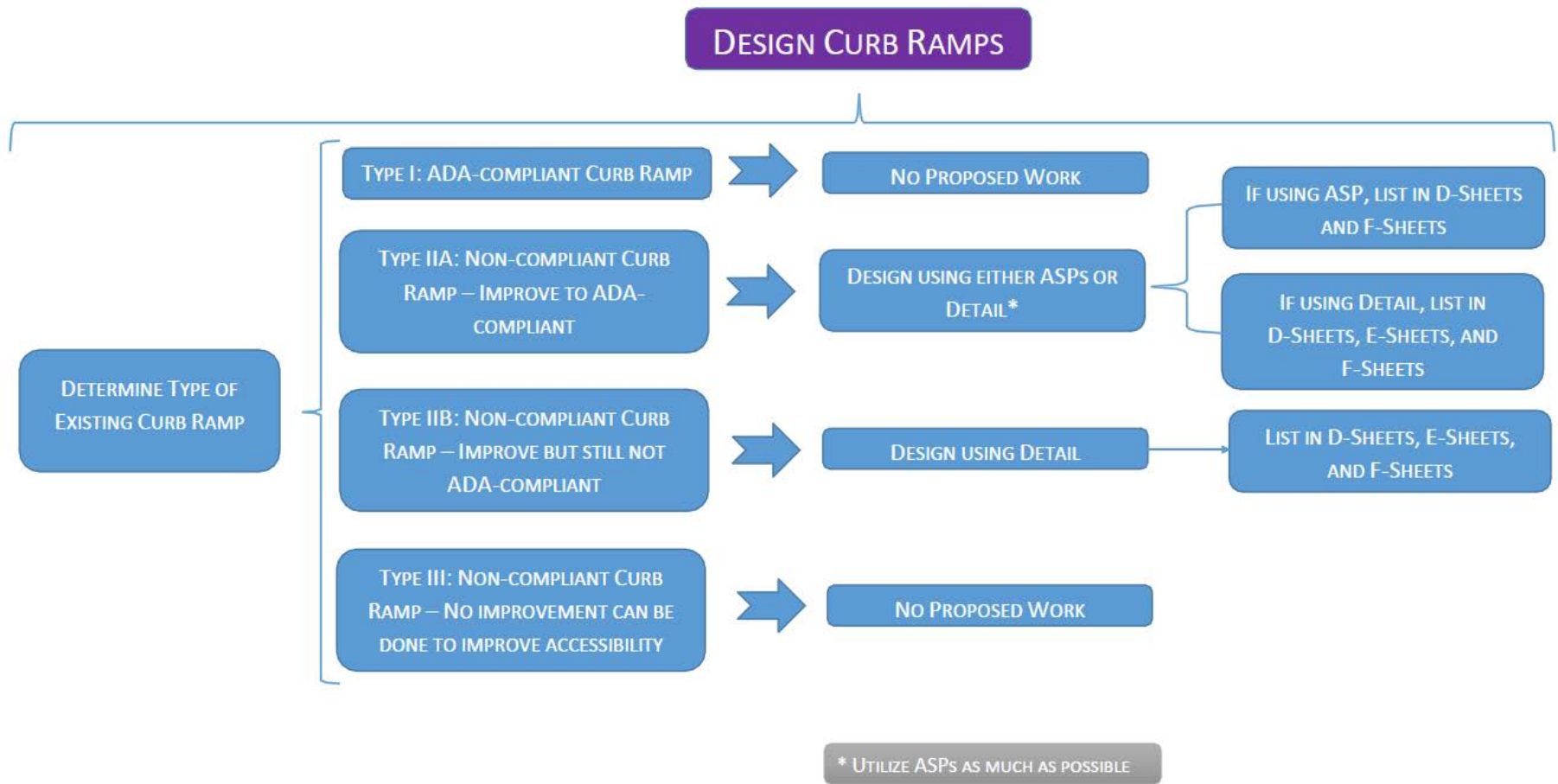


## KNOWLEDGE TRANSFER



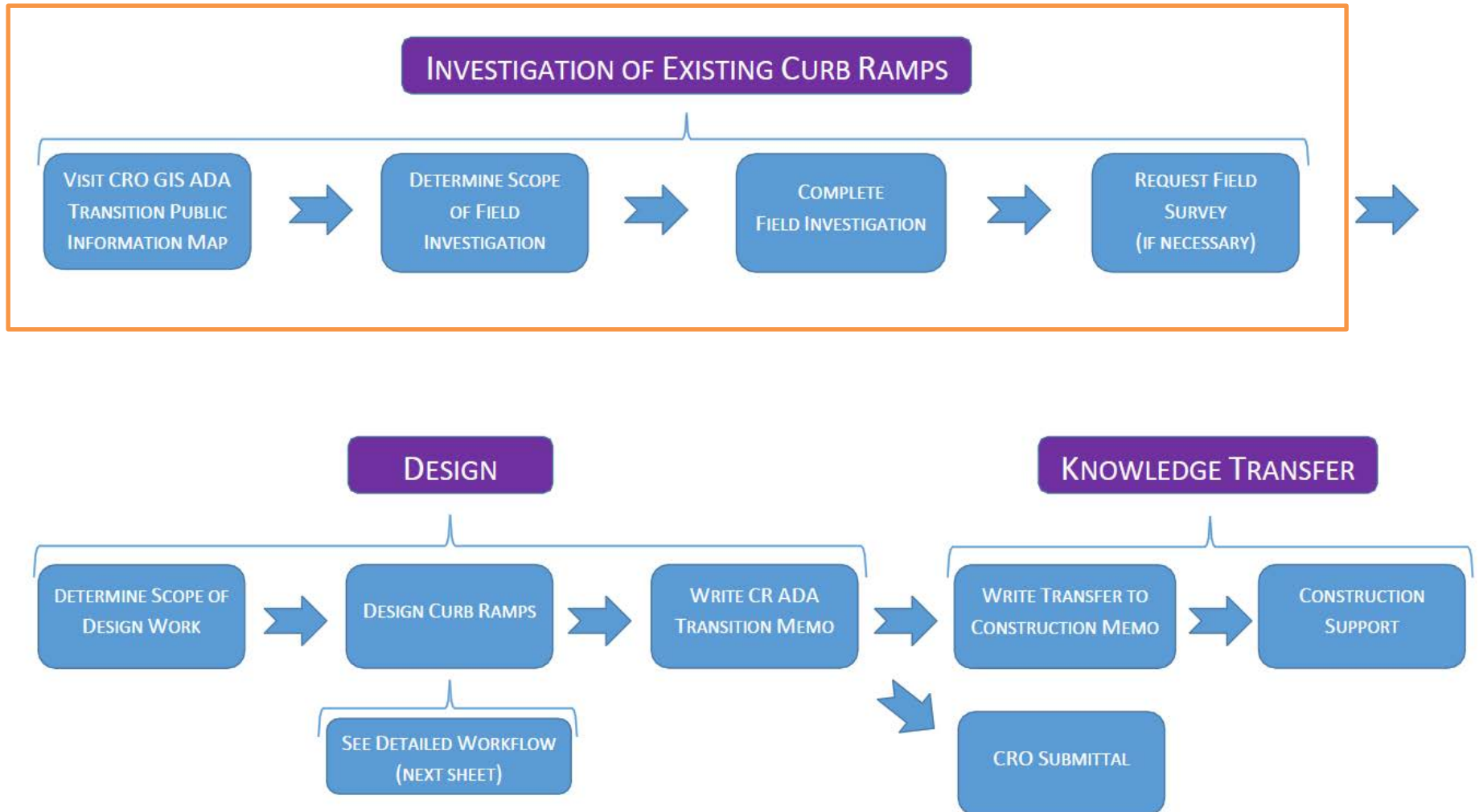


# Design Process Flowchart – Page 2





# Design Process Flowchart – Page 1



# Investigation of Existing Curb Ramps

VISIT CRO GIS ADA  
TRANSITION PUBLIC  
INFORMATION MAP

DETERMINE SCOPE  
OF FIELD  
INVESTIGATION

COMPLETE  
FIELD INVESTIGATION

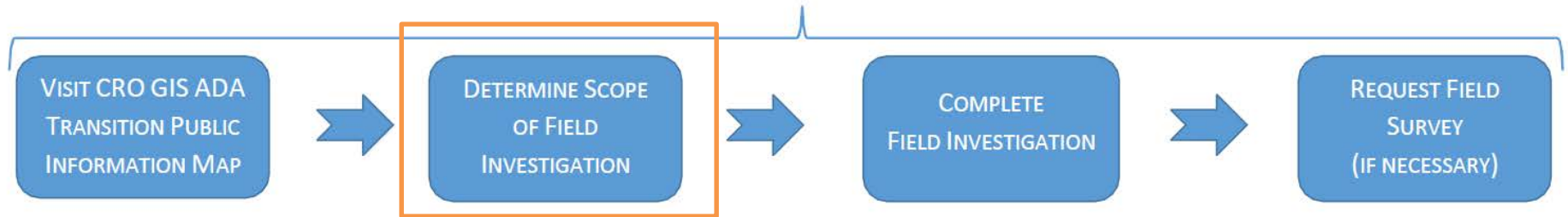
REQUEST FIELD  
SURVEY  
(IF NECESSARY)

## Visit CRO GIS ADA Transition Public Information Map

Link: <http://akdot.maps.arcgis.com/apps/MapSeries/index.html?appid=d709163ec4f6483abb909e03bb9e1ff8>

- Maintained by the Civil Rights Office
- Information populated by historical Curb Ramp Inspection Forms
- Recommended to re-inspect curb ramp if survey wasn't completed on a Version 1.0 or newer form

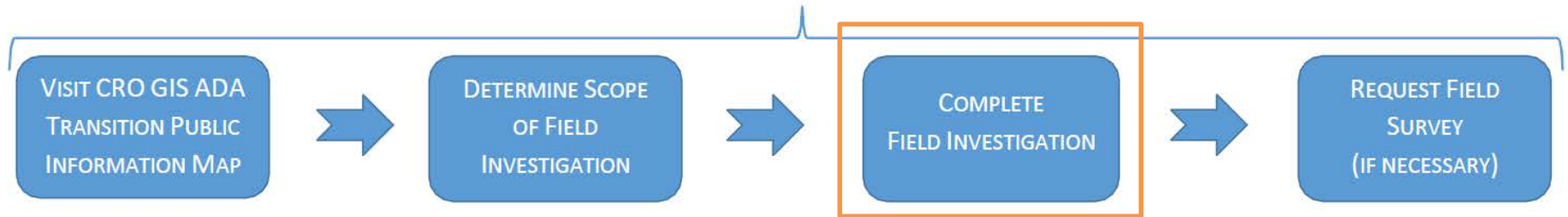
# Investigation of Existing Curb Ramps



## Determine Scope of Field Investigation

- How many ramps need to be measured?
- How many ramps need to be visually inspected?
  - These are the ramps that the CRO has an Inspection Form (Version 1.0 or newer) on file stating the ramp is fully compliant
  - Need to ensure that nothing had changed since that inspection

# Investigation of Existing Curb Ramps

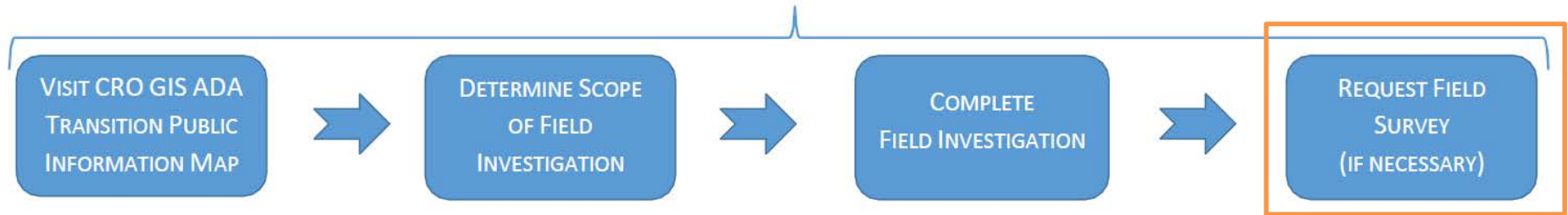


## Complete Field Investigation

- Recommend doing this early on in the design process
- Use the Survey Instructions and Inspection Forms
- The CRO has created a Curb Ramp Inspection Video

Link: <https://www.youtube.com/watch?v=sInlCMR-g78>

# Investigation of Existing Curb Ramps

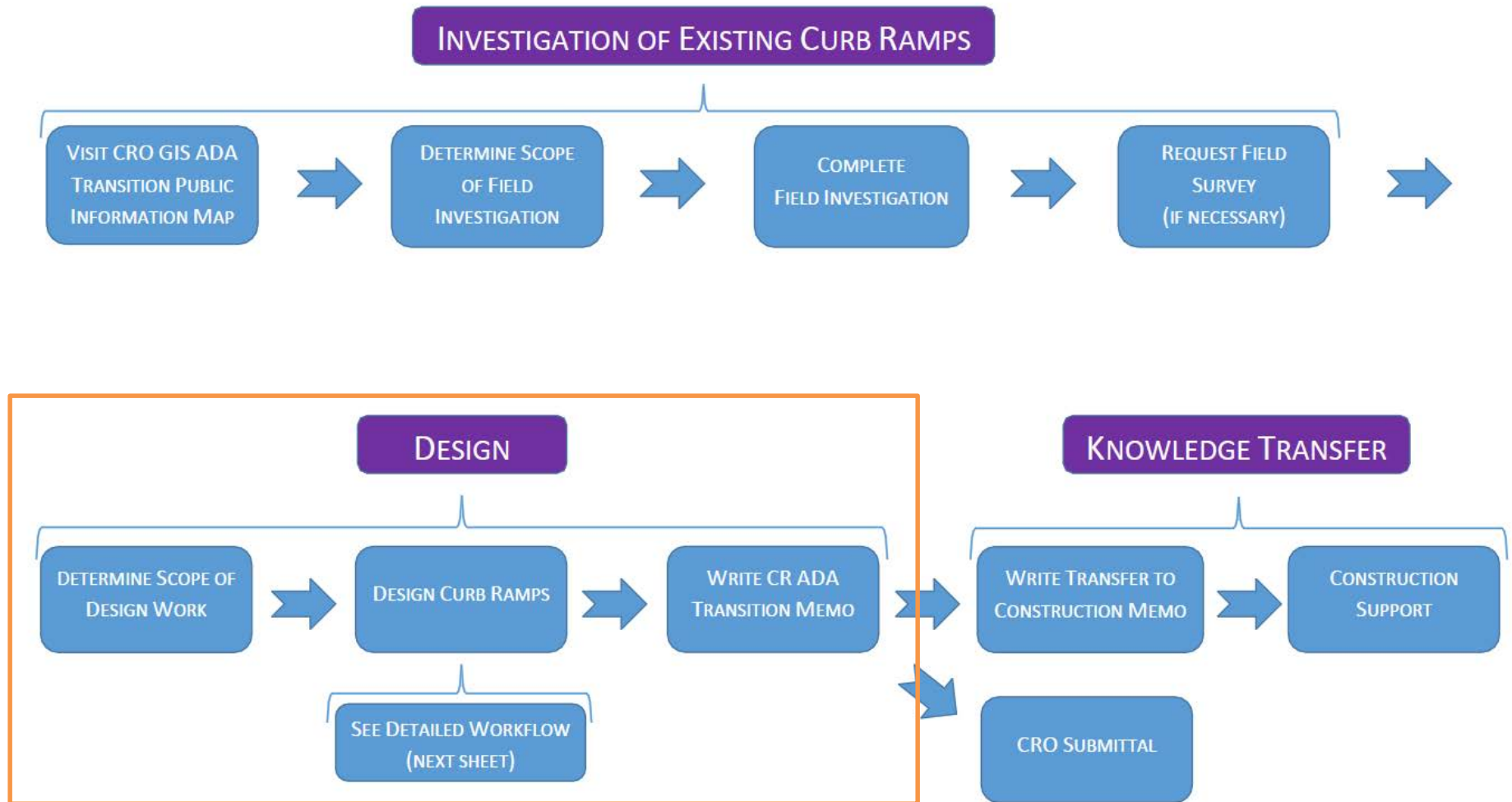


## Request Field Survey (If Necessary)

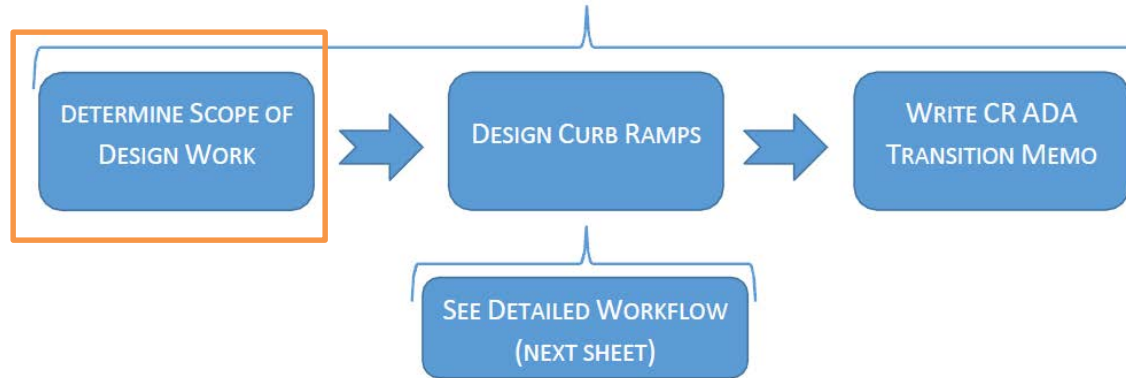
- For curb ramps that have unique features, challenging topography, etc
- Fill out a Survey Request Form (for in-house staff)



# Design Process Flowchart – Page 1



# Design

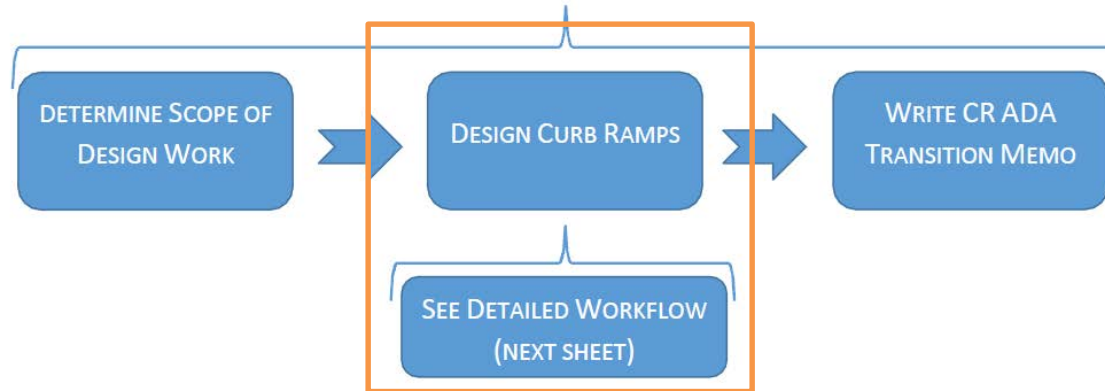


## Determine Scope of Design Work

Determine which ramps are:

- ADA-compliant and will not require design efforts
- Not ADA-compliant and will require design effort

# Design



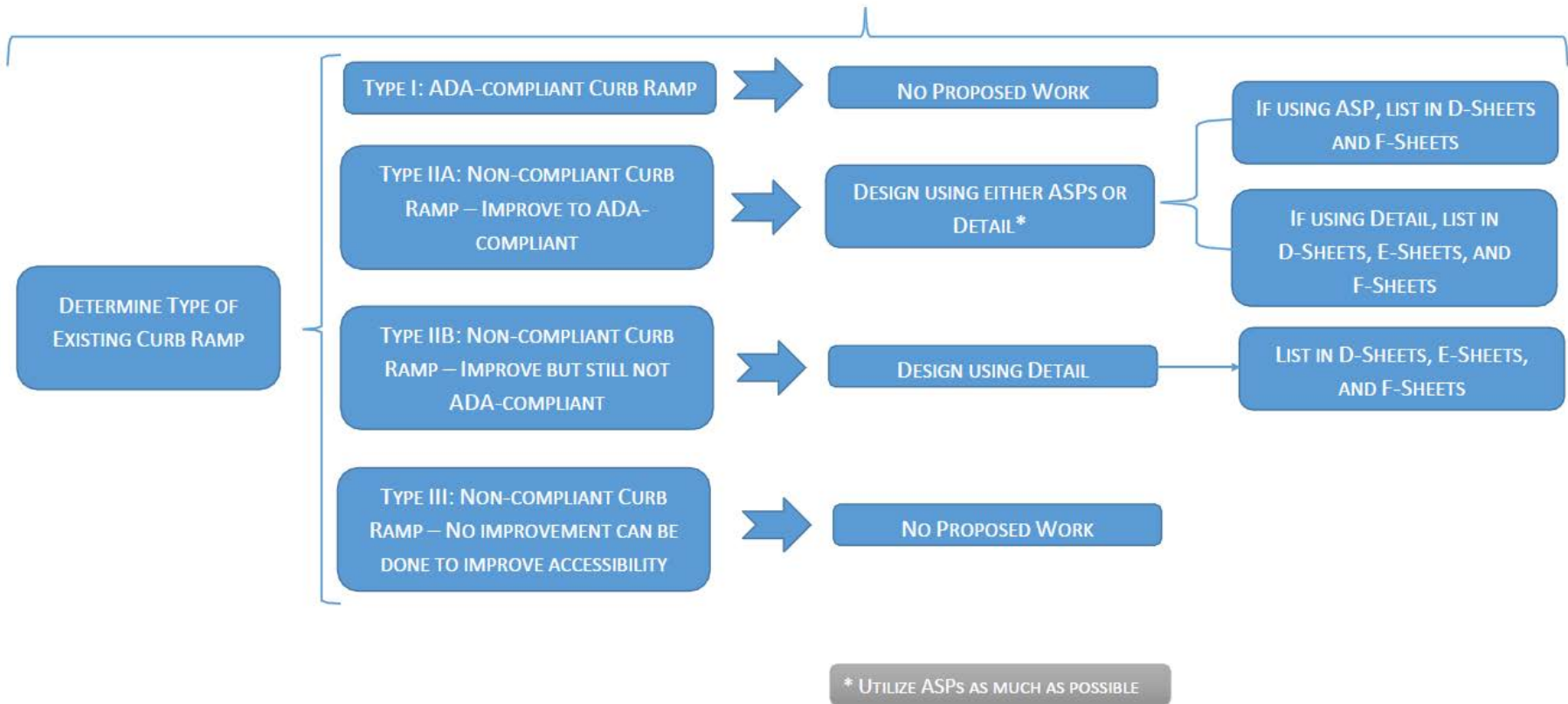
## Design Curb Ramps

...and into the black hole of design we go!



[https://e3.365dm.com/18/04/768x432/skynews-black-hole-black-holes\\_4273211.jpg?20180404154022](https://e3.365dm.com/18/04/768x432/skynews-black-hole-black-holes_4273211.jpg?20180404154022)

# Design Curb Ramps





# Type I Curb Ramps

## Type I Curb Ramps

Ramps already meet the CR ADA Standards and will not require any work with the project

- Plan Location
  - None
- Documentation in the CR ADA Transition Memo
  - If previously measured, confirmation they were visually inspected to ensure that no changes have occurred
  - If newly measured, attach the Inspection Form



# Type IIA Curb Ramps

## Type IIA Curb Ramps

Ramps that currently do not meet the CR ADA Standards, but can be brought into full compliance with the project

- Design to use the Alaska Standard Plans (ASP) I-21 and I-22 whenever possible
- Provide E-sheet detail when design cannot be completed using the ASPs
- Plan Location
  - D-, E- (if applicable), F-sheets
- Documentation in the CR ADA Transition Memo
  - Attach the Inspection Form for the existing curb ramp



# D-sheet Summary Table

## CURB RAMP - 608.0006.0000

SHEET	STATION	OFFSET	QUANTITY	TYPE	ASP	DETAIL	REMARKS
E9	97+65	55 LT	1	PARALLEL CURB RAMP	X		SEWARD HIGHWAY
E9	98+08	58 LT	1	PERPENDICULAR CURB RAMP	X		SEWARD HIGHWAY
E9	98+32	49 LT	1	PERPENDICULAR CURB RAMP	X		SEWARD HIGHWAY
E9	98+34	11 RT	1	MEDIAN DOUBLE CURB RAMP CROSSING		X	SEWARD HIGHWAY
E9	98+34	14 LT	1	MEDIAN DOUBLE CURB RAMP CROSSING		X	SEWARD HIGHWAY
E2	102+27	54 LT	1	PARALLEL CURB RAMP		X	EB O'MALLEY ROAD
E2	102+76	54 LT	1	PARALLEL CURB RAMP		X	EB O'MALLEY ROAD
E2	105+42	57 LT	1	PARALLEL CURB RAMP		X	EB O'MALLEY ROAD
E2	105+84	67 LT	1	PARALLEL CURB RAMP		X	EB O'MALLEY ROAD
F1	107+79	63 RT	1	PERPENDICULAR CURB RAMP	X		OLD SEWARD HIGHWAY
F1	109+19	64 LT	1	PARALLEL CURB RAMP		X	OLD SEWARD HIGHWAY
PAY ITEM QUANTITY:				11			



# Type IIB Curb Ramps

## Type IIB Curb Ramps

Ramps that currently do not meet the CR ADA Standards, cannot be brought into full compliance with the project, but improvements to accessibility can be made

- Provide E-sheet detail of design
- Complete a Technical Infeasibility Design Waiver Memo
- Plan Location
  - D-, E-, F-sheets
- Documentation in the CR ADA Transition Memo
  - Attach the Inspection Form for the existing curb ramp
  - Attach copy of the Technical Infeasibility Design Waiver Memo



# Type III Curb Ramps

## Type III Curb Ramps

Ramps that currently do not meet the CR ADA Standards, cannot be brought into full compliance with the project, and no improvements to accessibility can be made

- Complete a Technical Infeasibility Design Waiver Memo
- Plan Location
  - None
- Documentation in the CR ADA Transition Memo
  - Attach the Inspection Form for the existing curb ramp
  - Attach copy of the Technical Infeasibility Design Waiver Memo



# Technical Infeasibility Design Waiver Memo

- Required for each Type IIB or Type III curb ramp within project limits where existing physical constraints prevent the design of a fully ADA-compliant curb ramp
- Requires signature of the Preconstruction Engineer
- Original to be filed in the Design Study Report
- Include copy with the CR ADA Transition Memo

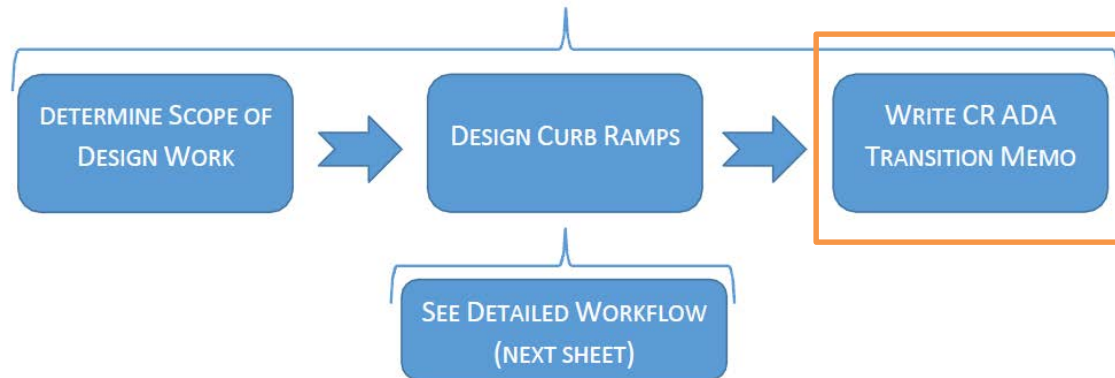


# Existing Physical Constraints

Where existing physical constraints make it impracticable for altered elements, spaces, or facilities to fully comply with the requirements for new construction, compliance is required to the extent practicable within the scope of the project. Existing physical constraints include, but are not limited to, underlying terrain, right-of-way availability, underground structures, adjacent developed facilities, drainage, or the presence of a notable natural or historic feature. (2011 PROWAG R202.3.1)



# Design



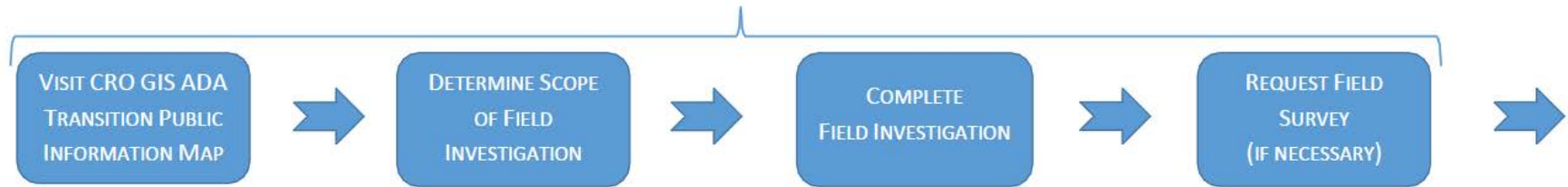
## Write CR ADA Transition Memo

This memo is documentation of the status of the curb ramps within the project limits

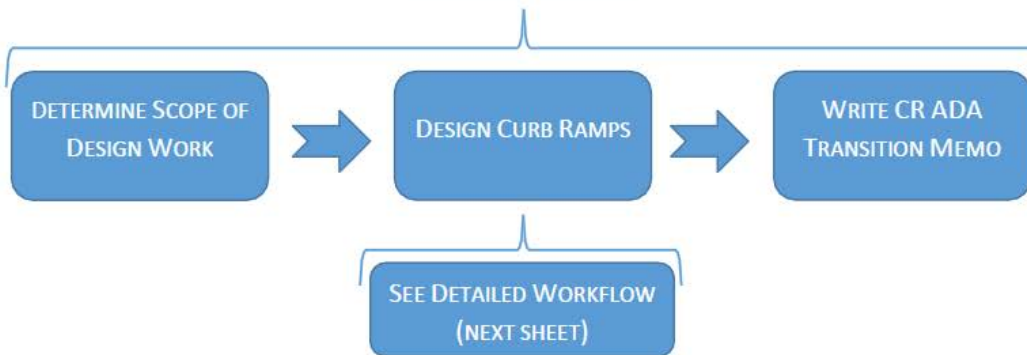
Attach Inspection Form for all existing curb ramps within the project limits

# Design Process Flowchart

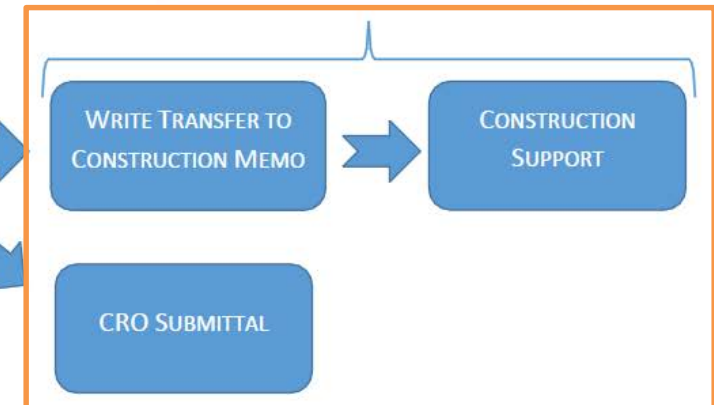
## INVESTIGATION OF EXISTING CURB RAMPS



## DESIGN



## KNOWLEDGE TRANSFER

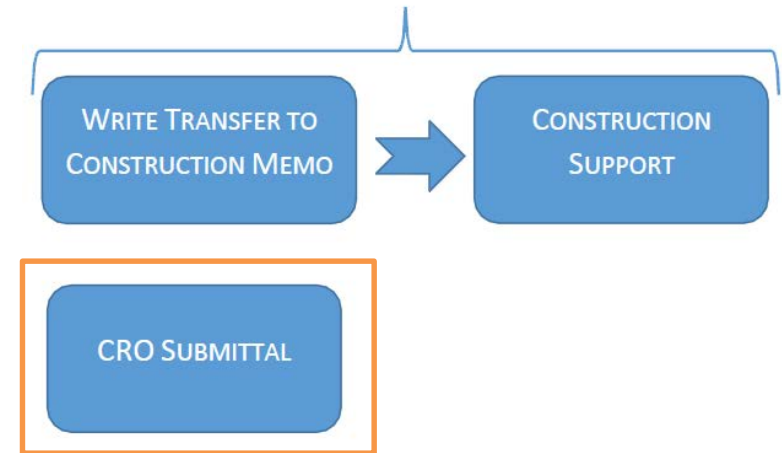


# Knowledge Transfer

## CRO Submittal

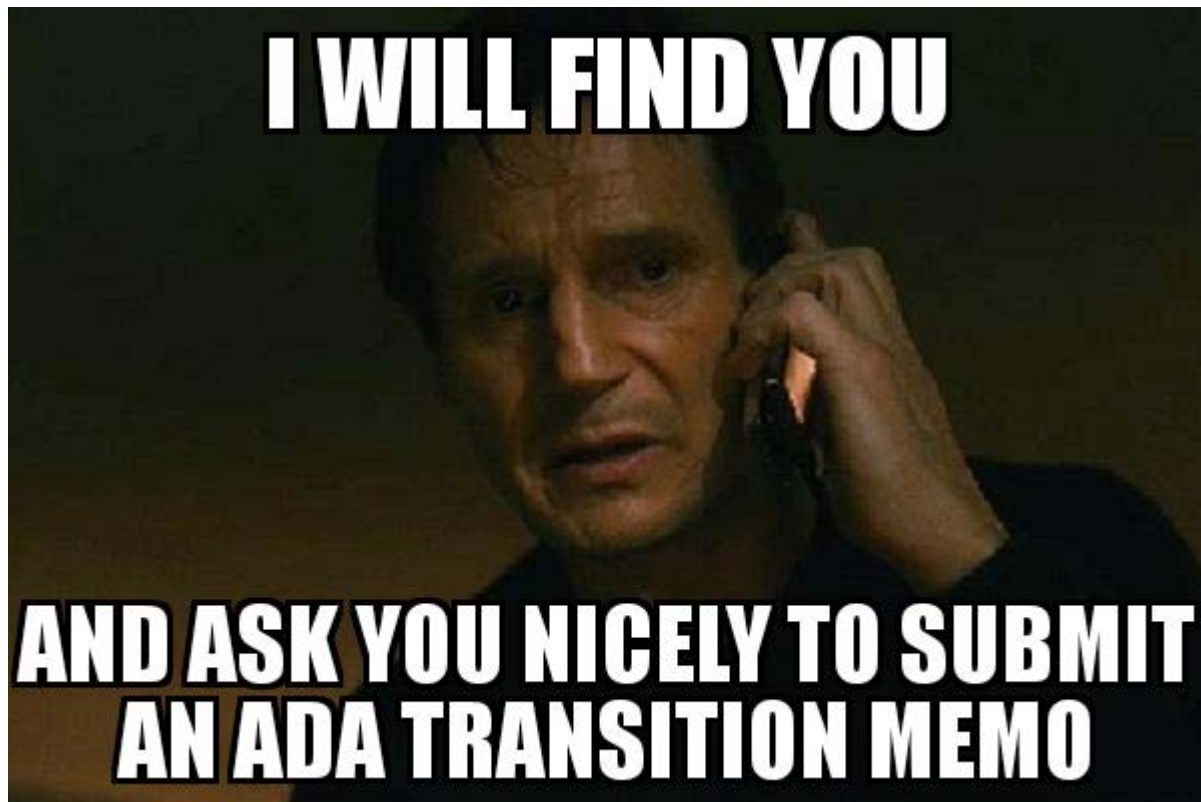
Submit the CR ADA Transition Memo to the CRO

- CRO uses the information to populate their GIS website and track which ramps are scheduled to be fixed
- Provide digital copies of the memo to:
  - Steven Rzepka, P.E., CR Hwy Design ADA Coordinator
  - David Lee, CR Construction Office Engineer



# Ensuring Compliance in Design

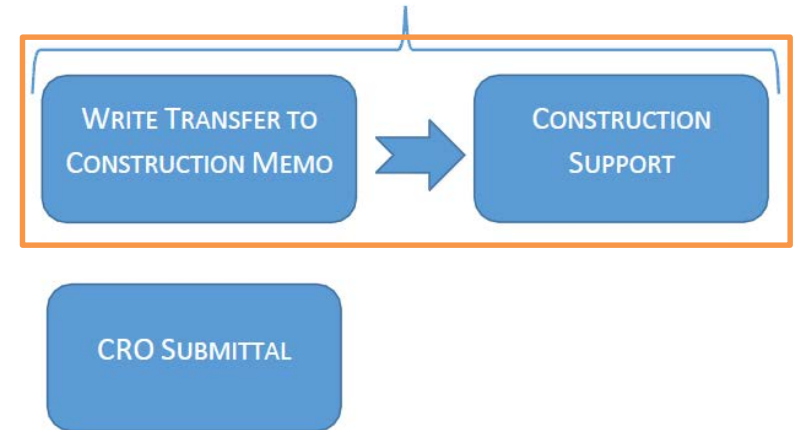
Once a year, the ADA Coordinator will compare the CR ADA Transition Memos received against the Advertised Projects list and make sure Project Managers have submitted to the CRO if the project contained curb ramps. If not...



# Knowledge Transfer

## Transfer to Construction Memo

- Attach CR ADA Transition Memo
- Construction uses this as reference material for why ramps are or are not included in the project.





# Section 608 Special Provision

## 608-3.03 CURB Ramps

### Add the following:

Use a 24" electronic level to measure slopes for curb ramps. Calibrate the electronic level per the manufacturer's instructions.\*

\*This is draft language. Official publication will come through typical CR Specifications Update process.

Sect 608: CR608.1.2

Related Sect/Sp: 401/CR401, 608/CR608.1.2, 703/CR703.1

CR6081. Use CR6081 where work includes either HMA pathways, medians or both. Include only the item included in the project: "Construct HMA pathways;" "Construct HMA medians;" or "Construct HMA pathways and medians."

If there are no sidewalks or curb ramps replace the first sentence as in, "Replace the first sentence with the following" instead of "Add the following."

CR6082. Use CR6082 for exposed aggregate concrete, colored concrete, painted HMA, pattern imprinted concrete and HMA. CR6082 and CR6082 combined with CR6081 and E61 are included in the ALLSPECIALS folder available to be added to the project specials.

**608-1.01 DESCRIPTION.** Add the following:

Construct asphalt (HMA) pathways and medians.

**608-2.01 MATERIALS.** Delete paragraph number 2 and substitute the following:

2. Asphalt (HMA)  
Asphalt Binder, PG 52-28 ..... Subsection 702-2.01  
Aggregate, Type II or III ..... Subsection 703-2.04  
  
Mix Design Requirements (ATM 417)  
Marshall Stability, pounds, min. .... 1000  
Percent Voids, Total Mix ..... 2-5  
Compaction, Blows/side ..... 50

**608-3.03 CURB RAMPS.** Add the following:

Use a 24" electronic level to measure slopes for curb ramps. Calibrate the electronic level per the manufacturer's instructions.

Add the following Subsection 608-3.05:

**608-3.05 ASPHALT PATHWAYS AND MEDIANS.** Construct pathways and medians according to Subsection 608-3.02, Asphalt Sidewalks.

**608-4.01 METHOD OF MEASUREMENT.** Add the following:

Asphalt Pathways, and Medians are measured by the ton of HMA.

Additional HMA used for matching existing surfaces, such as paved parking lots behind a new sidewalk/pathway, will be included in the measurement of the related asphalt Pay Item.

**608-5.01 BASIS OF PAYMENT.** Add the following:

Asphalt binder is subsidiary to related asphalt Pay Items.

Embankment and bed course materials will be furnished, placed, and paid under Sections 203 and 301, respectively.

Add the following Pay Items:

<u>Pay Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
608(7)	Asphalt Pathway	Ton
608(8)	Asphalt Medians	Ton

CR608.1-022015





# Implementation Schedule

Projects that have not held their PS&E Review by **April 1, 2019:**

- Full implementation of this design process

Projects that have completed their PS&E Review, but have not yet advertised by **April 1, 2019:**

- Update Plans (D-, E-, & F-sheets)
- Complete and submit CR ADA Transition Memo to the CRO
  - Curb ramps do not need to be inspected per the Survey Instructions with new Inspection Forms attached, but an explanation of the design process used should be included



## Up Next

**This is an evolving process, anticipated future work includes...**

- Review and updates to these forms based on comments received during 2019
- Pedestrian Access Route Survey Instructions and Inspection Forms



# Access to the Files

## Internal

Link: <\\dot.soa.alaska.gov\shared\AVI\LIB\HighwayDesignMasters\DesignGuidance\ADA>

## External

Link: <http://www.dot.state.ak.us/creg/design/highways/ADA/>



# Questions & Comments

## **Contact Information**

Steven Rzepka, P.E.

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(907) 269-0592