



NORTH CAROLINA

Department of Transportation



Navigating FEMA Regulated Streams

Submitting Projects For FEMA Approval

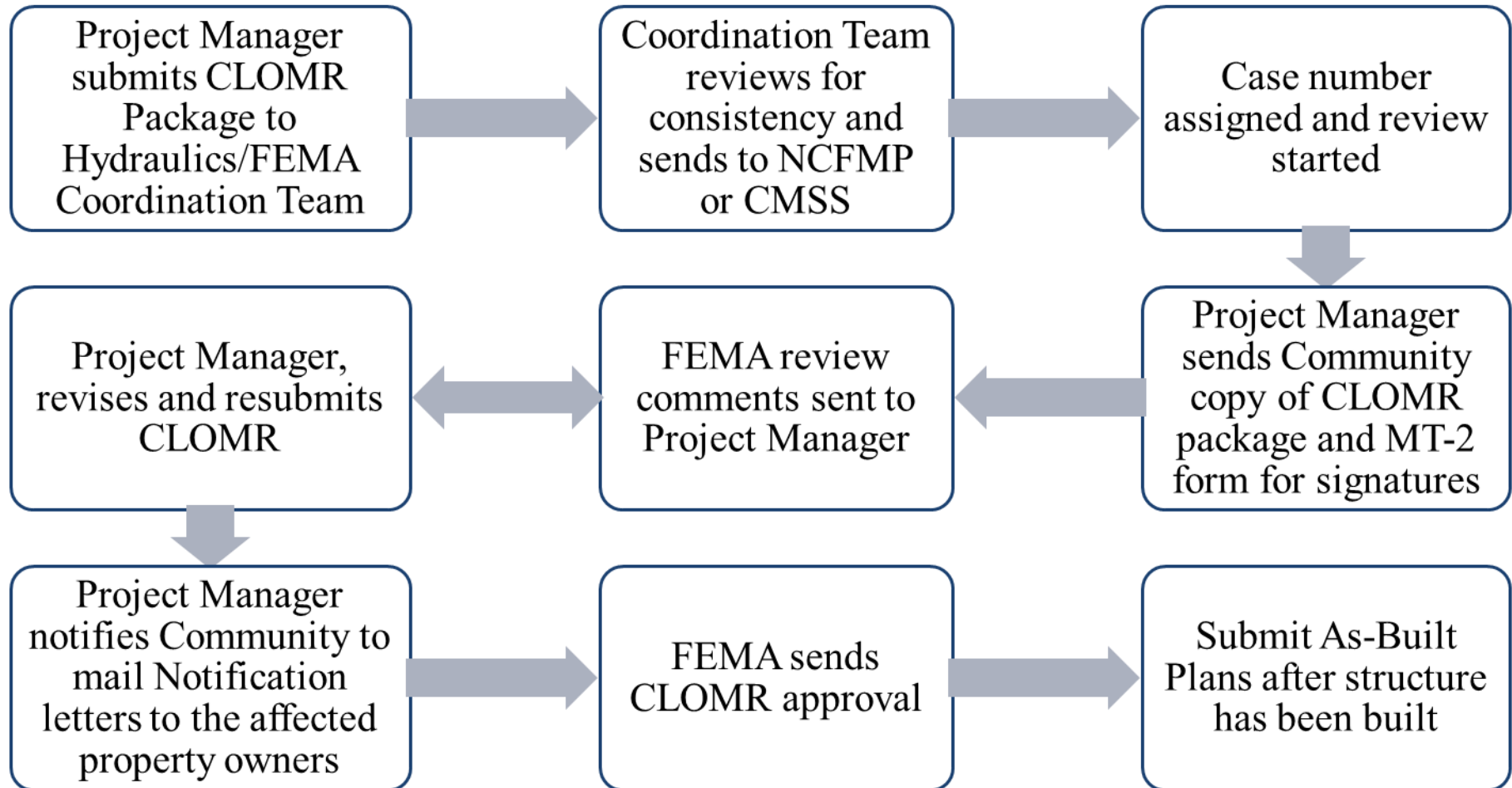
Types of Submittals

- CLOMR
- MOA
- Small Pipe Replacement
- Roadway Improvements
- Emergency Replacement

Conditional Letter of Map Revision (CLOMR) – Major Impacts

- A request for FEMA to review the proposed project and determine if it would meet the minimum NFIP standards prior to beginning of construction.
- In effect it is a guarantee that if the project is built as submitted, that a Letter of Map Revision (LOMR) will be issued when the project is completed.
- "As-Built" certification and other data must be submitted to support the revision request within six months of the completion of the structure.

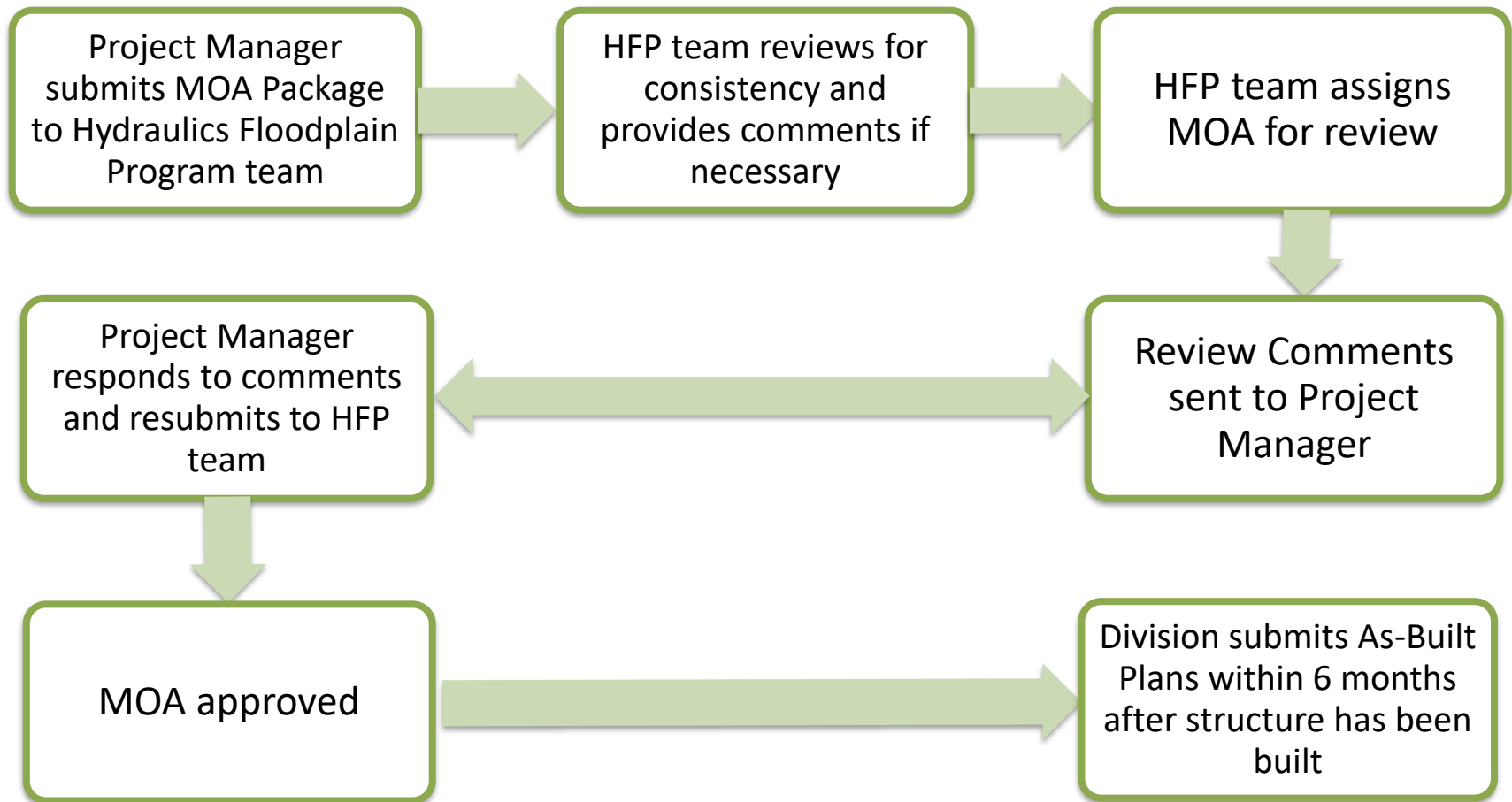
Simplified CLOMR Flowchart



Memorandum of Agreement (MOA) – Minor Impacts

- The Memorandum of Agreement (MOA) between NCDOT and NCFMP is a specialized Map Revision protocol that ensures compliance with Federal and State Regulations while streamlining the LOMR process for the management of no-rise, decreases or increases in the Base Flood Elevation (BFE) and associated flood map changes.

Simplified MOA Flowchart



Determination of MOA Type

MOA Type	Study Type	Change in Rounded BFE	Approval Authority	Additional Information
1	Any	Decrease $\leq 0.1'$	SHE	Rounded BFE increases of 0.1 ft. and above are not permitted. Must confirm that there are no
2a [†]	Any	Decrease $> 0.1'$ to $< 0.5'$	SHE	Must confirm that there are no structures impacted by a BFE increase in the hundredths.
2b	Any	Decrease $\geq 0.5'$	NCFMP	Rounded BFE increases of 0.1 ft. and above are not permitted. Must confirm that there are no structures impacted by a BFE increase in the hundredths.
2c	Study with incomplete, erroneous or missing data	6 section analysis showing no BFE increase from existing to proposed conditions.	NCFMP	NCFMP Concurrence Required
2d [†]	Limited	Increase $\geq 0.1'$ to $< 0.5'$	SHE	The MOA narrative must confirm that there are no structures impacted by an increase greater than 0.00 ft.
2e	Limited	Increase $\geq 0.5'$ to ≤ 1.0	NCFMP	The MOA narrative must confirm that there are no structures impacted by an increase greater than 0.00 ft.

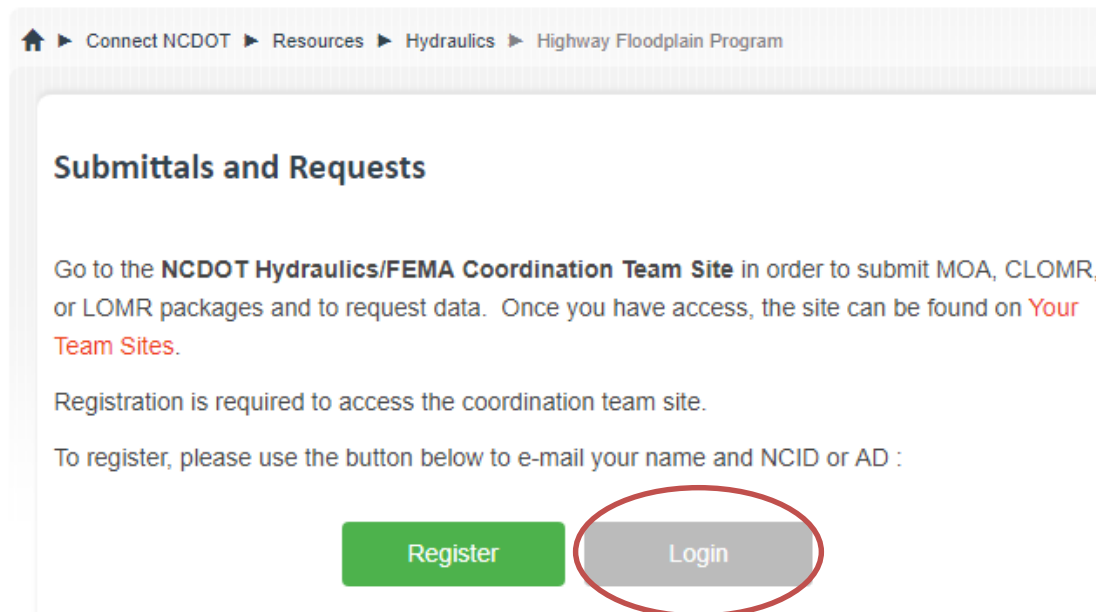
† If a project qualifies for both a 2a and a 2d, MOA type is determined by the maximum absolute change in BFE; if equal, submit as type 2d

Determination of MOA Type

MOA Type	Study Type	Change in Rounded BFE	Approval Authority	Additional Information
2f	Limited	Increase > 1.0' & within ROW	NCFMP	Only applies if increase stays within ROW. FMP and SHE approval required.
2g	Detailed	Increase > 0.0 & within ROW	NCFMP	Only applies if increase stays within DOT ROW. FMP and SHE approval required.
3a	Approved CLOMR	n/a	NCFMP	Submit As-Built Plans for previously approved CLOMRs for which the DFIRM mapping is still current.
3b	Approved CLOMR	n/a	NCFMP	Submit As-Built Plans for previously approved CLOMRs for which the FIRM mapping has been modified since the issuance of the CLOMR approval.
3c	Any	Pre-application consultation when CLOMR is required or the published flood data are scientifically or technically incorrect	NCFMP	Engineer may initiate a pre-application consultation to discuss H&H design issues with a NCFMP representative.
4a	Approved MOA or CLOMR	n/a	NCFMP	Utilize when As-Built plans deviate from the design plans and flood models, which may result in a BFE and MOA type change and LOMR.

Submittal Location

- From Hydraulics Connect site go to the [Highway Floodplain Program](#) page and select **Login**.
- All Division, SMU and PMU personnel should have access to the site. Consultant Firms will need to Register for access.



Connect NCDOT ▶ Resources ▶ Hydraulics ▶ Highway Floodplain Program

Submittals and Requests

Go to the **NCDOT Hydraulics/FEMA Coordination Team Site** in order to submit MOA, CLOMR, or LOMR packages and to request data. Once you have access, the site can be found on [Your Team Sites](#).

Registration is required to access the coordination team site.

To register, please use the button below to e-mail your name and NCID or AD :

[Register](#) [Login](#)

If you have any issues please let [Jerry Snead](#) or [Brian Radakovic](#) know.

Highway Floodplain Program Coordination Site

MOA, CLOMR and LOMR Submittals

Use the Buttons below to submit initial and response packages as a Zip file or Link to the files on the Preconstruction Site . (don't forget to include the Transmittal Form)

[Zip Submittal](#)[Link Submittal](#)

Flood Insurance Data Request

Requests for FIS models and data not available on the FRIS website

[Data Request](#)

Small Pipe Maintenance

Submit pipe replacement/maintenance package for compliance with the NFIP

[Pipe Submittal](#)

Additional Resources

[Submit As-Built Plans for FEMA Compliance](#)[FRIS- Flood Risk Information System](#)[NFIP-National Flood Insurance Program](#)

MOA Review Comment- Coordination Form

Recently, there has been an increase of MOA review comments concerning the [FEMA Coordination Documentation Form](#) such as "...The row titles and responses under GENERAL INFORMATION section in the FEMA Coordination Documentation Form should match the latest FEMA Form template found on the NCDOT Hydro Connect website." Please ensure the most up-to-date [Coordination form](#) is being used for all MOA submittals.

Change in NCDOT definition of "No-Rise"

Effective immediately (as of 2/16/17), per NCFMP, NCDOT's definition of "No-Rise" (in Section 15.9 of the 2016 *Guidelines*) must be revised to no longer include up to a 0.1 ft. increase; rather, the "No-Rise" condition to qualify for a Type 1 MOA submittal must be no change in BFE (0.0 ft.) or a decrease of 0.1 ft. (with rounding to tenth of foot). An increase of 0.1 ft. or greater would require a

MOA/CLOMR/LOMR Submittals

- It is the responsibility of the submitting engineer to make sure all required data is provided. Current requirements can be found on the HFP [website](#))
 - [MOA Submittal Package Requirements](#)
 - [CLOMR Submittal Checklist](#)

MOA/CLOMR/LOMR Submittals

- Submittal packages can be submitted as a zip file or by placing a link to the package on the Preconstruction site
- After submitting a form will pop up for you to fill out; once complete, select “Save” (see next slide)

Small Pipe Maintenance

- NCFMP involvement for small pipe maintenance in a designated FEMA Flood Hazard Area is required.
- The submittal data required depends on the type of change to the pipe flow area and/or the type of change in the roadway grade. (See HFP website for details.)

Roadway Improvements within FEMA Regulated Floodplains

- A qualified hydraulics engineer must review the improvements and prepare any required documents to ensure compliance with the regulations. See guidance on HFP website.
- Roadway improvements may include:
 - Resurfacing
 - Roadway cross section modification
(e.g. guardrail, sidewalk, curb & gutter)
 - Hydraulic structure modification
(e.g. pipe lining, culvert extension for widening)

Emergency Replacement

- Follow the protocol in the 2016 Guidelines for Drainage Studies and Hydraulic Design, Chapter 15, Section 15.8 Replacement of Emergency Flood-Damaged Structures.
- This protocol only applies to emergency replacements. For the Division-managed STIP projects and the routine maintenance tasks, the Divisions' staff should follow the MOA to ensure full compliance with the NFIP.

Thank you!

- References

- Memorandum of Agreement (MOA) between NCDOT and NCFMP as modified August 12, 2016
- NCDOT *2016 Guidelines for Drainage Studies and Hydraulic Design*, Chapter 15 Floodplain Management
- Title 44 parts 59, 60, 65 and 70, Code of Federal Regulations (CFR)

- Websites:

- [FRIS-Flood Risk Information System](#)
- [NCDOT Highway Floodplain Program Connect Site](#)
- [NCDOT Highway Floodplain Program Coordination Site](#)

- Any questions? Contact:

- Jerry Snead, PE, CFM – jsnead@ncdot.gov (919) 707-6752
- Brian Radakovic, PE – bmradakovic@ncdot.gov (919) 707-6747