

# DESIGN PROCESS OUTLINE (DPO)

**Nebraska Department of Transportation, Roadway Design Division**  
(Abbreviations may be found at the end of the DPO)

## Resources

### Accessing Highway Plans in OnBase:

[Software Documentation - USER - ONBASE - AS BUILT - Accessing Highway Plans in OnBase](#)

### Design Model Guidelines – Template Drop Interval:

[Software Documentation - USER - POWER GEOPAK SS10 - GENERAL - NDOT - Modeling Design Guidelines](#)

### OnBase MS4 Determination User Guide:

[Software Documentation - USER - ONBASE - MS4 PROJECT - MS4 Determination User Guide](#)

### NDOR PIH Day to Day Instruction Manual:

[Software Documentation - USER - ONBASE - PLAN IN HAND WORKFLOW –](#)

## NDOT Forms

<b>Form NDOT-53</b>	Probable Class of NEPA Action Form <a href="#">\\dotfs\Public\DOTForms\ndot53.pdf</a>
<b>Form NDOT-65</b>	Request for Agreement <a href="#">\\dotfs\Public\DOTForms\ndot65.dotx</a>
<b>Form NDOT-66</b>	Custom Special Plan Request Sheet <a href="#">\\dotfs\Public\DOTForms\ndot66.dotx</a>
<b>Form NDOT-67</b>	Concrete Box Culvert Request Sheet <a href="#">\\dotfs\Public\DOTForms\ndot67.dotx</a>
<b>Form NDOT-73</b>	Highway Improvement Programming Request <a href="#">\\dotfs\Public\DOTForms\ndot73.dotx</a>
<b>Form NDOT-76</b>	Principal Controlling Design Criteria <a href="#">\\dotfs\Public\DOTForms\ndot76.dotx</a>
<b>Form NDOT-150</b>	Survey Request <a href="#">\\dotfs\Public\DOTForms\ndot150-electronic version.dotx</a>
<b>Form NDOT 280</b>	PS&E Required Sheet <a href="#">\\dotfs\Public\DOTForms\ndot280.dotx</a>
<b>Form NDOT-290</b>	Waterway Permit Data Sheet <a href="#">\\dotfs\Public\DOTForms\ndot290.dotx</a> Instructions <a href="#">\\dotfs\Public\DOTForms\ndot290-Instructions.pdf</a>
<b>Form NDOT-312</b>	Request for Crash Summary <a href="#">\\dotfs\Public\DOTForms\ndot312.docx</a>
<b>Form NDOT-356</b>	Request for Public Involvement <a href="#">\\dotfs\Public\DOTForms\ndot356.dotx</a>
<b>Form NDOT-693</b>	Plan Sheet Request Form <a href="#">\\dotfs\Public\DOTForms\ndot693.dotx</a>

## PHASE 1: PROGRAM - PAYROLL ACTIVITY 5100

## PHASE 2: PLANNING - PAYROLL ACTIVITY 5200

### INITIAL PROJECT REVIEW AND SETUP (Clarity Task 5282)

#### Request Information:

- **RD Designer** - Request that **District Maintenance** inspect the culverts on the project

#### Information Available:

- Signed "Highway Improvement Programming Request" (Form NDOT-73)
  - Bridge Data (**Bridge** Task Code 5241)
  - Planning Traffic Engineering Recommendations (**Traffic** Task Code 5256)
  - Planning Pavement Determination (**M&R** Task Code 5258)
  - Project Planning Document (part of signed Form NDOT-73)
  - Initial Purpose & Need Statement (from Planning Document)
  - Initial Project Description (from Planning Document)
  - Lighting Appraisal (Task Code 5274)
  - Planning Project Considerations (if available)
- Bridge Hydraulic Study (**Bridge** Task Code 5246)
- Planning Environmental Review (**Project Development Division (PDD)** Task Code 5247)
- Wetland Delineation (**PDD** Task Code 5264)
- T&E Habitat Evaluation (**PDD** Task Code 5273)
- As-Built Plans
- Aerial Survey (Task Code 5237)
- Ortho Photo (Task Code 5244)
- Clarity Schedule (**Program Management Section** Task Code 5254)
- Cultural Resource Identification and Evaluation (Historic Project Review) (**PDD** Task Code 5268)
- Preliminary Erosion Control & Landscape Review (**PDD Roadside Development & Compliance Unit (RDC)** Task Code 5278)

#### Actions:

1. **RD Designer** - Review As-Built Plans
2. **RD Designer** - Review Survey, request additional survey if/as required (Form NDOT-150, [\\dotfs\Public\DOTForms\ndot150-electronic version.dotx](https://dotfs\Public\DOTForms\ndot150-electronic version.dotx))
3. **RD Designer** - Review **FEMA** Flood Plain Maps (<https://msc.fema.gov/portal/home>)
4. **RD Unit Head** - Review the Clarity schedule
5. **RD Designer** - Check Task 5282 done in Clarity when Initial Project and Setup is completed

#### Deliverables:

- Project Sheet Setup

## **PREP PRINCIPLE CONTROLLING CRITERIA (Clarity Task 5281)**

### **Information Available:**

- Approved Project Initiation (“Highway Improvement Programming Request”, Form NDOT-73) and Planning Document
- Traffic Counts, Design Year Traffic Data (from **Strategic Planning Division – Traffic Analysis**) Do not request if the Traffic Counts in Form NDOT-73 are current (four years old or less)
- As-Built Plans
- Nebraska Minimum Design Standards (MDS)
- Roadview Explorer/Google Earth

### **Actions:**

1. **RD Designer** - Determine the Design Standard and Typical Section using *MDS* and the Roadway Design Manual (RDM), Chapters Five and Six (<https://dot.nebraska.gov/media/11455/h-chap-5-interchanges.pdf>) (<https://dot.nebraska.gov/media/11483/i-chapter-6-cross-sections.pdf>)
2. **RD Designer with RD Unit Head** - Complete Form NDOT-76 “Roadway Design – Principle Controlling Design Criteria” ([\\dotofs\Public\DOTForms\ndot76.dotx](https://dot.nebraska.gov/media/11481/d-chap-1-design-standards.pdf)), and route for signatures (*RDM* Chapter One, Section 9) (<https://dot.nebraska.gov/media/11481/d-chap-1-design-standards.pdf>)
3. **RD Designer** - After Form NDOT-76 has been returned with signatures, request any design exceptions or relaxations that may be required (*RDM* Chapter One, Section 10) (<https://dot.nebraska.gov/media/11481/d-chap-1-design-standards.pdf>)
4. **RD Designer** - Upload signed Form NDOT-76 to OnBase
5. **RD Designer** - Check Task 5281 done in Clarity after Form NDOT-76 uploaded to OnBase

### **Deliverables:**

- Signed NDOT-76

## PLANNING ALIGNMENT (Clarity Task 5240)

### Information Available:

- Survey

### Actions:

1. **RD Designer** - Review Bridge Determination, provide comments (detour, phasing, construction challenges)
2. **RD Designer** - Create Roadway Alignment
3. **RD Designer** - Review Practical Design recommendations (from Form NDOT-73) and additional recommendations (e.g. use-in-place guardrail, buttress), 3R or Maintenance recommendation
4. **RD Designer** - Notify **PDU/ Bridge/ & ROW** that the alignment file is available
5. **RD Designer** - Check Task 5240 done in Clarity after notifications sent

### Deliverables:

- Alignment File
- Bridge Determination comments
  - Detour, phasing, construction challenges
  - Bridge width recommendation
- Practical Design Strategy
  - Buttress decision (**District Project Delivery Engineer**)
  - Guardrail decision
  - 3R or Maintenance recommendation (**RD Unit Head**)
- Horizontal & Vertical alignments for new Bridge(s)/ Concrete Box Culvert(s)
- "Plan Sheet Request Form" (Form NDOT-693) to **PDU**  
[\(\dotfs\Public\DOTForms\ndot693.dotx\)](\\dotfs\Public\DOTForms\ndot693.dotx)

## PROJECT COORDINATION MEETING 20 (Clarity Task 5290)

### Information Available:

- Form NDOT-73
- Approved "Probable Class of NEPA Action" (Form NDOT-53) - **Required**

### Actions:

1. **RD Designer** – Request Project Coordination Meeting 20 (*RDM* Appendix K)
2. **RD Hydraulics** – Schedule/ Conduct PCM 20 (*RDM* Appendix K)
3. **RD Designer** - Check Task 5290 done in Clarity after PCM 20 is held
4. **RD Hydraulics** - Upload PCM 20 Minutes to OnBase
5. **RD Hydraulics** - Send Notifications that the PCM 20 Minutes are available (*RDM* Appendix K)

### Deliverables:

- PCM 20 Minutes

## ROADWAY BASE FILES (PDU Clarity Task 5235)

### Information Available:

- As-Built Plans
- Ground Survey
- Alignment file (RD Clarity Task 5240)
- Culvert Books

### Actions:

1. **PDU** - Create Environmental Feature File and Environmental Notes File
2. **PDU** - Create Construction Notes File
3. **PDU** - Create Culvert Prelim Notes
4. **PDU** - Create Draft Topography File
5. **PDU** - Create Location Map
6. **PDU** - Notify the **RD Unit Head, Roadway Designer**, and the **PDU Supervisor** that the Roadway Base Files are available

### Deliverables:

- Environmental Feature File and Environmental Notes File
- Construction Notes File
- Culvert Prelim Notes
- Draft Topography File
- Location Map (In OnBase – NDOT RD DESIGN PLANS/NDOT RD LOCATION MAP)

## PHASE 3: DESIGN - PAYROLL ACTIVITY 5300

### ROADWAY DESIGN (Clarity Task 5350)

#### Request Information:

- **RD Designer** - Earthwork Balance Factor from the **DE**
- **RD Designer** - Crash Reports (May be in OnBase). "Crash Study Request Form" (Form NDOT-312, [\\dotfs\Public\DOTForms\ndot312.dotx](https://dotfs\Public\DOTForms\ndot312.dotx)): Available Reports: List of Crashes, Crash Diagram, Spot Map, Crash Rate Analysis, Crash Reports, & Crash Summary. Consult with the **Traffic Analysis Section** prior to submitting Form NDOT-312. This report is for **NDOT** use only & shall not be shared with the general public. (**Traffic** Task Code 5256)
- **RD Designer** - **District/City** review of property access during construction (ADA compliant?) (*RDM* Chapter Sixteen, Section 12) (<https://dot.nebraska.gov/media/11465/s-chap-16-ada.pdf>)
- **RD Designer** - Request Bridge Special Investigations (e.g. allowable CBC parapet height, is bridge rail compliant with current standards)

#### Information Available:

- Signed Form NDOT-76 (**RD** Clarity Task Code 5281)
- Approved Design Relaxations/Exceptions
- Correspondence File
- Roadway Base Files (**PDU** Clarity Task Code 5235)
- Roadview Explorer
- Approved Pavement Determination (**M&R** Task Code 5364)
- Bridge Data Sheet (TS&L) (**Bridge** Task Code 5346)
- Right-of-Way Ownership Plans (**R.O.W.** Task Code 5348)
- Roadside Stabilization Appraisals (**PDD RDC** Task Code 5362)

**Actions:**

1. **RD Designer** - e-mail the **Local Assistance Rail Highway Liaison Manager** with the Project Control Number, Project Number, Designer, and Designers' Phone Number
2. **RD Designer** - Preliminary Design
  - Design vertical and horizontal alignments
  - Design intersections/frontage roads; check geometry with **Traffic**
  - Preliminary Phasing
  - Perform preliminary earthwork computations
  - Review design for grade raise, grading, guardrail, etc. if a Floodway/Floodplain is near the project
3. **RD Designer** - Drainage Design
  - Request **District** provide a list of known drainage concerns
  - Verify culvert labeling for size and material based on culvert survey sheets and project as-built plans
  - Delineate and compute drainage areas
  - Determine Q values and size drainage structures
  - Preliminary design of culverts, storm sewers, special ditches and median drains
4. **RD Designer** - ROW/Access Control
  - Check for Right-of-Way Permits in OnBase (NDOT ROW PM Permit – Occupancy)
  - Present access control recommendations to **Access Control Group** (*RDM* Chapter Fifteen, Section 3.A) (<https://dot.nebraska.gov/media/11462/r-chap-15-row.pdf>)
  - Verify with **ROW Design Engineer** that the ROW survey is adequate
5. **RD Designer** - Draft Covenant Agreements – City/County: “Request for Agreement” (Form NDOT-65, [\dotfs\Public\DOTForms\ndot65.dotx](https://dot.nebraska.gov/media/11462/r-chap-15-row.pdf)) (Include Stormwater Treatment Facilities (STFs) for MS4-Maintenance of STFs, if required. See the *Drainage Manual*, Chapter Three, Section 7.A.5) ([f-chapter-3-stormwater-treatment.pdf \(nebraska.gov\)](https://dot.nebraska.gov/media/11462/r-chap-15-row.pdf))
6. **RD Designer** - Conduct FHWA Oversight Coordination Meeting #1 (Task Code 5382) (RBP for Design only)
7. **RD Designer** - Back-up Roadway Design to ProjectWise
8. **RD Designer** - Send notice that Activity 5350 is done:
 

• <b>RD Unit Head</b>	• <b>PDD RDC Supervisor</b>
• <b>RD Lighting Unit Head</b>	• <b>Traffic Engineer</b>
• <b>Bridge Designer</b>	• <b>Highway Construction Scheduling Manager in Construction</b>
• <b>DE</b>	
• <b>PDU Unit Head</b>	
9. **RD Designer** - Check Task 5350 done in Clarity after notifications sent

**Additional Information/Actions by Others:**

- **Traffic:** Studies, Signals, Signing, etc.
- **RD Hydraulics:** Review of Stormwater Pipes, Culverts, Non-Bridge size CBCs, and STFs as requested by Roadway Designer
- **RD Utilities:** Utility Survey
- **PDD RDC:** Review “Stormwater Treatment Form B – STFs” (In OnBase), Pre-PIH Review (**PDD** Task Code 5362)
- **Rail/Highway Liaison:** Preliminary Plan Review (**Local Assistance** Task Code 5358)
- **M&R:** Soils Investigation
- **M&R:** Retaining Walls/Settlement

- “Survey Request” (Form NDOT-150): For Hydraulic Surveys or missing items (e.g. sewers, water lines, center pivot, utilities, or to extend cross-sections or pavement shots)
- **R.O.W.:** Relocation Concept Study (**R.O.W.** Task Code 5356)
- District Program Evaluation (**Project Scheduling & Program Management** Task Code 5327)
- **District:** Detour location/ADA access during construction (*RDM* Chapters Fourteen, Section 6 and Sixteen, Section 12)  
(<https://dot.nebraska.gov/media/11461/q-chap-14-traffic.pdf>)  
(<https://dot.nebraska.gov/media/11465/s-chap-16-ada.pdf>)

#### **Reviews:**

- **RD Designer** - PIH Plans with **RD Unit Head**
- **RD Designer** - Avoidance & Minimization Review w/**PDD Environmental Section Manager**
- **RD Designer** - Ditch grades and erosion control methods with the **PDD RDC Supervisor**
- **RD Designer** - Sidewalk design with **Traffic Engineer & Traffic Analysis Engineer**, discuss crossing/signal/push button placement
- **RD Designer** - Special information from support units and other divisions
- **RD Designer** - Covenant Relinquishment Agreement (CRA) for revising (*RDM* Appendix B, NDOT OI 60-13) (<https://dot.nebraska.gov/media/11466/ua02-appendix-b.pdf>) (include Stormwater Treatment Facilities (STFs) for MS4 – Maintenance of STFs, if required. See the *Drainage Manual*, Chapter Three, Section 7.A.5) (<f-chapter-3-stormwater-treatment.pdf> ([nebraska.gov](https://dot.nebraska.gov)))
- **RD Unit Head** - Design for content and quality

#### **Deliverables:**

- PIH Plan Set and Cross-Sections
- Agreements
- Control Access Letter (*RDM* Chapter Fifteen, Exhibit 15.2)  
(<https://dot.nebraska.gov/media/11462/r-chap-15-row.pdf>)
- kmz for Utilities

### **ALTERNATIVE DESIGN ANALYSIS (Clarity Task 5366)**

**(Task will be added to Schedule as triggered by wetlands impacts, etc.)**

#### **Information Available:**

- Planning Document
- Signed NDOT-76 (**RD** Clarity Task Code 5281)
- Roadway Base Files (**PDU** Clarity Task Code 5235)
- Alignment File
- Google Earth

#### **Actions:**

1. **RD Designer** - Conduct Alternative Design Analysis
2. **RD Designer** - Send selected alignment through **RD Unit Head** to **PDD**, **Photogrammetry** in **PDD**, and **RD PDU** to update survey (offsets, culvert data, & data sheets) & input file to **Assistant R.O.W. Design Engineer**
3. **RD Designer** - Check Task 5366 done in Clarity after transmittals

#### **Deliverables:**

- Selected Roadway Alignment

## PRELIMINARY T&E CHECKLIST (Clarity Task 5395)

### Information Available:

- Form NDOT-73
- Project Details
- Preliminary Design
- Definition for T&E Items ("<L:\Forms\Threatened & Endangered Species\2-Matrix Activity Definitions 122116.pdf>")

### Actions:

1. **RD Designer** - Complete preliminary T&E Checklist
2. **RD Designer** - Upload preliminary T&E Checklist to OnBase
3. **RD Designer** - Notify **PDD Technical Resources Unit (TRU) Supervisor & T&E Biologist** that the preliminary T&E Checklist is available
4. **RD Designer** - Check Task 5395 done in Clarity after notifications sent

### Deliverables:

- Preliminary T&E Checklist

## PRELIMINARY WATERWAY PERMIT DATA SHEET

### (Clarity Task 5353)

### Information Available:

- Survey Base Plan including Wetland (E) Sheets (**PDU** Task Code 5235)
- Wetland Delineation (**PDD** Task Code 5264)
- Preliminary Limits of Construction (L.O.C.s)

### Actions:

1. **RD Designer** - Determine impacts to wetlands based on preliminary L.O.C.s and wetland delineation
2. **RD Designer** - Complete the preliminary "Waterway Permit Data Sheet" (Form NDOT-290, <\\dotfs\Public\DOTForms\ndot290.dotx>) and justification for impacted wetlands and/or channel changes (why avoidance was not possible)
3. **RD Designer** - Work with **PDU** to show wetland impacts
4. **RD Designer** - Upload preliminary "Waterway Permit Data Sheet" to OnBase
5. **RD Designer** - Send notice that preliminary "Waterway Permit Data Sheet" is available in OnBase to the **PDD TRU Supervisor & 404/Wetlands Biologist**
6. **RD Designer** - Check Task 5353 done in Clarity after the preliminary "Waterway Permit Data Sheet" uploaded to OnBase

### Deliverables:

- Aerial Wetland (E) Sheets, showing impacts
- Preliminary "Waterway Data Sheet" (NDOT Form 290)



## STORMWATER TREATMENT WITHIN MS4 COMMUNITIES

(Clarity Task \_\_\_\_ ) (Task will be added to the Schedule if the project is in a MS4 Community)

### Resources:

[Software Documentation - USER - ONBASE - MS4 PROJECT - MS4 Determination User Guide](#)

### Request Information:

- **RD Designer** - Soils information for MS4 Stormwater Treatment Facility (STF) sites from **M&R Geotechnical Engineer**

### Information Available:

- “Stormwater Treatment Form A – Project Evaluation” (In OnBase)

### Actions:

1. **RD Designer** - Review the Preliminary Project Evaluation section of the “Stormwater Treatment Form A – Project Evaluation” and complete the Additional Project Evaluation section if necessary (In OnBase).
2. **RD Designer** - If Stormwater Treatment Facilities need to be considered for the project, complete “Stormwater Treatment Form B - STFs”, (In OnBase and in the *Drainage Manual*, Chapter Three, Section 4 and Appendix M). Consult **RD Hydraulics Engineer** as required. ([f-chapter-3-stormwater-treatment.pdf \(nebraska.gov\)](#)), (<https://dot.nebraska.gov/media/9982/g13-appendix-m.pdf>)
3. **RD Designer** - Meet w/ **RD Hydraulics & PDD RDC** to review “Stormwater Treatment Form B – STFs”
4. **RD Designer** – Preliminary design of MS4 Treatment Facilities (*Drainage Manual*: Chapter Three, Section 7) ([f-chapter-3-stormwater-treatment.pdf \(nebraska.gov\)](#))
5. **RD Designer** - Request that **PDD Agreements** include MS4 language & exhibits in the City agreement (*Drainage Manual*: Chapter Three, Sections 7.A.3 & 7.A.5) ([f-chapter-3-stormwater-treatment.pdf \(nebraska.gov\)](#))
6. **RD Designer** - Upload completed “Stormwater Treatment Form B – STFs” & support documentation to OnBase
7. **RD Designer** - Check Task \_\_\_\_ done in Clarity after Form B is uploaded to OnBase

### Reviews:

- **RD Designer** - Agreement (*RDM* Appendix B, DOT OI 45-5) (<https://dot.nebraska.gov/media/11466/ua02-appendix-b.pdf>) for STFs for MS4 – Maintenance of STFs, if required. (*Drainage Manual*: Chapter Three, Sections 7.A.3 & 7.A.5) ([f-chapter-3-stormwater-treatment.pdf \(nebraska.gov\)](#))
- **RD Designer** - MS4 Stamp on Title Sheet/ MS4 Treatment Tabular/ Index Sheet/ Build Notes

### Deliverables:

- **RD Designer** - “Stormwater Treatment Form B - STFs”
- **RD Hydraulics** – Project Map, Plan Sheet(s), or Aerial showing Stormwater Outfall locations (Stormwater Outfall Mapping)

## **PDU DESIGN FILES (PIH PLANS) (PDU Clarity Task 5354)**

### **Information Available:**

- Survey Base Files
- Preliminary Build Notes
- Preliminary Drainage Notes
- Preliminary Limits of Construction
- Preliminary Guardrail Design
- Typical Roadway Cross-Sections
- Drainage Structure Cross-Sections

### **Actions:**

1. **PDU** - Create PIH Sheet Files (*RDM* Chapter Eleven, Exhibit 11.1) (<https://dot.nebraska.gov/media/11460/n-chapter-11-plan-prep.pdf>)
2. **PDU** - Compile Design Files (PIH Plans) and upload to OnBase
3. **PDU** - Notify **RD Unit Head**, **Roadway Designer** and the **PDU Supervisor** that the Design Files (PIH Plans) are available
4. **PDU** - Check Task 5354 done in Clarity after the Design Files (PIH Plans) are uploaded to OnBase

### **Deliverables:**

- Design Files (PIH Plans) (In OnBase – NDOT RD DESIGN PLANS/NDOT RD PRELIMINARY PLANS)

## **STATUS 30 COST ESTIMATE (Clarity Task 5368)**

### **Information Available:**

- PIH Plans (PDU Clarity Task Code 5354)

### **Actions:**

1. **RD Designer** - Check with **RD Unit Head** for funding split (e.g. **City, Railroad**) (*RDM* Chapter Twelve, Sections 2.C & 2.G) (<https://dot.nebraska.gov/media/11468/o-chap-12-cost-estimating.pdf>)
2. **RD Designer** - Quantify project items
3. **RD Designer** - Input quantities into AASHTOWare
4. **RD Designer** - Mark design complete in AASHTOWare, this will transmit the estimate quantities to the **Construction Division Highway Estimating Unit**
5. **RD Designer** - Check Task 5368 done in Clarity after transmittal of estimate quantities to the **Construction Division Highway Estimating Unit**

### **Reviews:**

- **RD Designer** - “Cost Estimate Checklist” (*RDM* Chapter Twelve, Exhibit 12.8) (<https://dot.nebraska.gov/media/11468/o-chap-12-cost-estimating.pdf>)
- **RD Unit Head** - Review of estimated quantities, before transmittal via AASHTOWare

### **Deliverables:**

- Estimated quantities for Status 30 Cost Estimate

## **PRELIMINARY MITIGATION PLANS (Clarity Task \_\_\_\_\_)**

### **Information Available:**

- Preliminary Waterway Permit Data Sheet (Form NDOT-290)
- Roadway Design (Clarity Task 5350) - PIH Plans
- Preliminary Limits of Construction
- Preliminary Grading
- Sensitive Areas from **PDD**
- Preliminary Mitigation areas
- Preliminary Structures (drop pipe, etc.) – plans and sections
- Preliminary Channel cross-sections (if required)
- Wetland Mitigation Strategy (**PDD Environmental Section** Task Code 5390)

### **Actions:**

1. **RD Designer** - Upload Preliminary Mitigation Design Plans to OnBase
2. **RD Designer** - Notify the **PDD TRU Supervisor** and **404/Wetlands Biologist** that the Preliminary Mitigation Plans are available
3. **RD Designer** - Check Task \_\_\_\_\_ done in Clarity after Preliminary Mitigation Plans uploaded to OnBase

### **Reviews:**

- **RD Hydraulics** – Review of Mitigation Design Plans for water source/ budget

### **Deliverables:**

- Preliminary Mitigation Design Plans
- PIH Plans

## **PROJECT COORDINATION MEETING 30 (Clarity Task 5315)**

### **Information Available:**

- PIH Plans
- Preliminary Limits of Construction
- Sensitive Areas from **PDD** (Coordinate with **PDD**)
- Preliminary T&E Checklist (In OnBase)
- Preliminary Utility Inspection Report (**RD Utilities Unit** Task Code 5374)
- Wetland Mitigation Strategy (**PDD Environmental Section** Task Code 5390)

### **Request Information:**

- **RD Designer** - Status 30 Estimate from the **Construction Division Highway Estimating Unit**
- **RD Designer** - Working Days from the **Highway Construction Scheduling Manager** in **Construction**

### **Actions:**

1. **RD Designer** - Confirm/ Update Project Description, Project Details, Purpose & Need
2. **RD Designer** – Schedule/ Conduct PCM 30 (*RDM* Appendix K)
3. **RD Designer** - Create kmz file
4. **RD Designer** - Check Task 5315 done in Clarity after PCM 30 is held
5. **RD Designer** - Upload PCM 30 Minutes to OnBase
6. **RD Designer** - Send Notifications that the PCM 30 Minutes are available (*RDM* Appendix K)
7. **RD Designer** - Review plans with **RD Utilities Unit**

### **Deliverables:**

- PCM 30 Minutes

## **PLAN-IN-HAND PLAN DISTRIBUTION (Clarity Task 5317)**

### **Information Available:**

- PIH Plans (PDU Clarity Task Code 5354)
- Project Cross-Sections
- Culvert Cross-Sections
- ROW Ownership Plans (if available)

### **Actions:**

1. **RD Designer** - Send notice that PIH Plans are available (*RDM* Chapter Eleven, Exhibit 11.2) (<https://dot.nebraska.gov/media/11460/n-chapter-11-plan-prep.pdf>)
2. **RD Designer** - Check Task 5317 done in Clarity after notification of PIH Plans availability

## **SEND QUANTITIES TO CONSTRUCTION (Clarity Task 5319)**

### **Information Available:**

- Quantities

### **Actions:**

1. **RD Designer** - Send quantities to the **Highway Construction Scheduling Manager in Construction**
2. **RD Designer** - Check Task 5319 done in Clarity after notification of PIH Plans availability and transmittal of quantities

## PLAN-IN-HAND VISIT (Clarity Task 5380)

### Information Available:

- Status 30 Cost Estimate
- PCM 30 Notes (In OnBase)
- PIH Plans (**PDU** Clarity Task Code 5354)
- Survey Culvert Sheets
- Project Cross-Sections
- Culvert Cross-Sections
- ROW Ownership Plans (if available)
- Preliminary Bridge Hydraulics data sheets
- Bridge Determination
- Pavement Determination
- Reservation Lands/Allotments (from **ROW**)
- Railroad Company TS&L approval (**Local Assistance** Task Code 5384)
- Completed MS4 Form A (In OnBase)
- Completed “Stormwater Treatment Form B – STFs” (In OnBase)
- Stormwater Outfall Mapping (In OnBase)
- Preliminary Project Agreements (Including STFs for MS4 – Maintenance of STFs, if required. See the *Drainage Manual*, Chapter Three, Section 7.A.5) (<f-chapter-3-stormwater-treatment.pdf> ([nebraska.gov](http://nebraska.gov)))
- Preliminary Relinquishment Agreements (Including STFs for MS4 – Maintenance of STFs, if required. See the *Drainage Manual*, Chapter Three, Section 7.A.5) (<f-chapter-3-stormwater-treatment.pdf> ([nebraska.gov](http://nebraska.gov)))

### Actions:

1. **RD Designer** - Review PIH Checklist (in OnBase) and send invitations (*RDM* Chapter Eleven, Exhibit 11.2) (<https://dot.nebraska.gov/media/11460/n-chapter-11-plan-prep.pdf>)
2. **RD Designer** - Hold PIH Visit
3. **RD Designer** - Upload the labeled “PIH Set” (with comments/changes) in OnBase at “NDOT RD Plan-in-Hand Plans”
4. **RD Designer** - Check Task 5380 done in Clarity

### Deliverables:

- “PIH Set” of plans with field notes

## **SCOPE (PIH) REPORT (Clarity Task 5388)**

### **Resources:**

[Software Documentation - USER - ONBASE - PLAN IN HAND WORKFLOW –](#)

### **Information Available:**

- PIH Set of plans with field notes

### **Actions:**

1. **RD Unit Head** - Conduct post PIH field inspection review with **RD** personnel (de-briefing)
2. **RD Unit Head** - Review the Planning Document and respond to all of the items where it is indicated that resolution will occur at the plan-in-hand
3. **RD Designer** - Review any changes to the project with the **PDD Environmental Section Manager**
4. **RD Designer** - Fill out the Scope (PIH) Report in OnBase and submit it to the **Unit Head** for routing
5. **RD Unit Head** – Route the Scope (PIH) Report, along with a signed DR-76, for review
6. **RD Designer** - Revise the routed Scope (PIH) Report as required
7. **RD Designer** - Submit revised Scope (PIH) Report to the **Unit Head** for distribution
8. **RD Designer** - Check Task 5388 done in Clarity after the Scope (PIH) Report is distributed

### **Deliverables:**

- Approved Scope (PIH) Report

## **CONFIRM/UPDATE PROJECT DESCRIPTION\ PROJECT DETAILS\ PURPOSE & NEED (Clarity Task 5396)**

### **Information Available:**

- Approved Form NDOT-73
- Planning Document
- PIH Notes

### **Actions:**

1. **RD Designer** - Update if/as required
2. **RD Designer** - Send notice of updates:
 

• <b>Super Team Members</b>	• <b>PDD TRU Cultural Resources/ Section 106 Coordinator</b>
• <b>Bridge Engineer</b>	• <b>PDD TRU T&amp;E Biologist</b>
• <b>M&amp;R Pavement Designer</b>	• <b>PDD RDC Erosion Control Designer</b>
• <b>PDD Environmental Documents Unit (EDU) NEPA Specialist</b>	• <b>Communications Public Involvement Specialist</b>
• <b>PDD TRU 404/ Wetlands Biologist</b>	• <b>RD Utilities Coordinator</b>
• <b>PDD RDC Noise &amp; Air/ HazMat Coordinator</b>	• <b>FHWA District Transportation Engineer (if required)</b>
3. **RD Designer** - Check Task 5396 done in Clarity after notifications sent

### **Deliverables:**

- Updated Project Description/ Project Details/ Purpose & Need

## **FINAL T&E CHECKLIST (Clarity Task \_\_\_\_)**

### **Information Available:**

- Preliminary T&E Checklist (In OnBase)

### **Actions:**

1. **RD Designer** - Update/Finalize T&E Checklist
2. **RD Designer** - Upload Final T&E Checklist to OnBase
3. **RD Designer** - Notify **PDD TRU Supervisor & T&E Biologist** that the Final T&E Checklist is available
4. **RD Designer** - Check Task \_\_\_\_ done in Clarity after Final T&E Checklist uploaded to OnBase

### **Deliverables:**

- Final T&E Checklist

## **WATERWAY PERMIT DATA SHEET (Clarity Task 5589)**

### **Information Available:**

- Aerial Wetland (E) Sheets
- Final Mitigation Plans (if available)
- Design Detail Plans
- Preliminary "Waterway Permit Data Sheet" (NDOT Form 290, in OnBase)

### **Actions:**

1. **RD Designer** - Review preliminary "Waterway Permit Data Sheet"
2. **RD Designer** - Update/ Finalize "Waterway Permit Data Sheet" & Aerial Wetland (E) Sheets
3. **RD Designer** - Upload final "Waterway Permit Data Sheet" & Aerial Wetland (E) Sheets to OnBase
4. **RD Designer** - Send notice that the final "Waterway Permit Data Sheet" is available in OnBase to the **PDD TRU Supervisor & 404/Wetlands Biologist**
5. **RD Designer** - Check Task 5589 done in Clarity after the final "Waterway Permit Data Sheet" is uploaded to OnBase

### **Deliverables:**

- Final "Waterway Permit Data Sheet"
- Final Aerial Wetland (E) Sheets, showing impacts

## **FINALIZE STORMWATER TREATMENT WITHIN MS4 COMMUNITIES (Clarity Task \_\_\_\_ ) (Task will be added to the Schedule if the project is in a MS4 Community)**

### **Resources:**

[Software Documentation - USER - ONBASE - MS4 PROJECT - MS4 Determination User Guide](#)

### **Request Information:**

- **RD Designer** - MS4 landscaping design from **PDD RDC** (if applicable) (See the *Drainage Manual*, Chapter Three, Section 8.A) ([f-chapter-3-stormwater-treatment.pdf \(nebraska.gov\)](#))

### **Information Available:**

- “Stormwater Treatment Form B - STFs” (In OnBase)
- Stormwater Outfall Mapping (In OnBase)

### **Actions:**

- **RD Designer** - Complete MS4 Treatment STF design (See the *Drainage Manual*, Chapter Three, Section 8) ([f-chapter-3-stormwater-treatment.pdf \(nebraska.gov\)](#))
- **RD Designer** – Coordinate MS4 Treatment STF Plan Labeling with **PDU** (See the *Drainage Manual*, Chapter Three, Section 8.D) ([f-chapter-3-stormwater-treatment.pdf \(nebraska.gov\)](#))
- **RD Designer** - Check Task \_\_\_\_ done in Clarity after MS4 Treatment STF design and Plan Labeling completed

### **Reviews:**

- MS4 Form B – “Stormwater Treatment Facilities” review by **RD Unit Head**

### **Deliverables:**

- Final MS4 Treatment STF design

## **DESIGN L.O.C.s TO ROW (Clarity Task 5389)**

### **Information Available:**

- L.O.C.s (including perm & temp easements)
- Phasing
- Construction features (light poles, curb ramps & sidewalk, signals, clearing & grubbing, channel cleanout, etc.)
- Signed PIH Report

### **Actions:**

1. **RD Designer** - e-mail **ROW Design Engineer** (c.c. the **Superteam**) that the L.O.C. file is available
2. **RD Designer** - Check Task 5389 done in Clarity after the e-mail is sent

### **Deliverables:**

- L.O.C. file



## **FINAL MITIGATION PLANS (Clarity Task 5518)**

### **Information Available:**

- Final Waterway Permit Data Sheet (Form NDOT-290) (if available)
- L.O.C.s
- Grading
- Mitigation areas
- Seeding and planting
- Structures (drop pipe, etc.) – plans and sections
- Channel cross-sections (if required)
- Wetland Mitigation Strategy (**PDD Environmental Section** Task Code 5390)

### **Actions:**

1. **RD Designer** - Incorporate **Army Corps of Engineers** comments into final mitigation plans
2. **RD Designer** - Upload Mitigation Plans to OnBase
3. **RD Designer** - Notify the **PDD TRU Supervisor** and **404/Wetlands Biologist** that the Mitigation Plans are available
4. **RD Designer** - Check Task 5518 done in Clarity after notifications

### **Deliverables:**

- Mitigation Plans
- Design Plans

## **PROJECT COORDINATION MEETING 35 (Clarity Task 5331)**

### **Information Available:**

- Status 30 Cost Estimate
- Final NDOT Form 290 (In OnBase - **RD**) - **Required**
- Final L.O.C.s (Google .kmz file – **RD**) - **Required**
- Final Scope (PIH) Report (In OnBase - **RD**) - **Required**
- Updated Public Involvement Plan (**Communications**)
- Updated T&E Checklist (In OnBase – **RD**)

### **Actions:**

1. **RD Designer** - Request Project Coordination Meeting 35 (*RDM* Appendix K)
2. **RD Hydraulics** – Schedule/ Conduct PCM 35 (*RDM* Appendix K)
3. **RD Designer** - Check Task 5331 done in Clarity after meeting held
4. **RD Hydraulics** - Upload PCM 35 Minutes to OnBase
5. **RD Hydraulics** - Send Notifications that the PCM 35 Minutes are available (*RDM* Appendix K)
6. **RD Designer** – If required, send Letter of Notification to City (*RDM* Chapter Seventeen, Section 10.E.2) (<https://dot.nebraska.gov/media/11463/t-chapter-17-3r.pdf>)

### **Deliverables:**

- PCM 35 Minutes

## **DESIGN PREP FOR PUBLIC MEETING (Clarity Task 5338)**

**(If Required - Communications Division will contact the designer)**

### **Information Available:**

- A request from the **External Affairs Manager** in the **Communications and Public Policy Division**
- Design Plans
- Design changes/ updates

### **Actions:**

1. **RD Designer** - Update Design Plans
2. **RD Designer** - Back-up Design Plans to ProjectWise
3. **RD Designer** - Send notice Activity 5338 is done:
  - **RD Unit Head**
  - **PDU Unit Head**
  - **External Affairs Manager** in **Communications**
4. **RD Designer** - Check Task 5338 done in Clarity after notifications sent

### **Deliverables:**

- Design Plans

## **PHASE 4: ENVIRONMENTAL APPROVAL -**

**PAYROLL ACTIVITY 5400 (Required for Environmental Class I and Class III projects, not required for Environmental Class II (Categorical Exclusion (CE) projects)**

### **FUNCTIONAL DESIGN (Clarity Task 5428)**

(NOTE: Send a note to inform the **PDU Unit Head** if this activity will *not* be done by PDU).

### **Information Available:**

- Functional Design Plans/Prep Public Meeting (**PDU Task Code 5432**) - ***Only if a Public Hearing will be held***

### **Actions:**

1. **RD Designer** - Schedule a meeting with the **City, County, Irrigation District**, etc. to determine conflicts and if rehabilitation will be a part of the project
2. **RD Designer** - Request that **PDU** plot Functional Plans (See *RDM* Chapter Eleven, Exhibit 11.1) (<https://dot.nebraska.gov/media/11460/n-chapter-11-plan-prep.pdf>) - ***Only if a Public Hearing will be held***
3. **RD Designer** - Check Task 5428 done in Clarity after notifications sent
4. **RD Designer** - Back-up Functional Design to ProjectWise
5. **RD Designer** - Send notice that Activity 5400 is done to:
  - **RD PDU Unit Head**
  - **RD Unit Head**
  - **Traffic Engineer**
  - **Clarity**
  - **Highway Project Scheduling/ Program Coordinator** in the **Project Scheduling & Program Management Division**

### **Deliverables:**

- Functional Design

## **FLOODPLAIN CERTIFICATION (RD)**

### **(RD Hydraulics Clarity Task 5485)**

#### **Information Available:**

- As-built Plans
- Bridge Determination
- Culvert Data (including cross-sections if available)
- Design Plans (most recent available)
- GIS Data
  - Aerials
  - Land Use
  - Lidar
  - Soil Data
  - Topography Maps
- **FEMA** Floodplain Mapping
- Location Map
- Pavement Determination
- Project Description

#### **Actions:**

1. **RD Hydraulics** - Create FIRMettes covering project extents
2. **RD Hydraulics** - Create Floodplain PQS Memorandum
3. **RD Hydraulics** - Hydrology Study at Floodplain Locations
4. **RD Hydraulics** - Create Floodplain Memorandum
5. **RD Hydraulics** - Create Floodplain Certification Document
  - a) Generate Floodplain Memo
  - b) Provide Floodplain Certifications
  - c) Add FIRMette Maps
  - d) Add Location Map
  - e) Add other documents (as necessary)
6. **RD Hydraulics** - Upload Floodplain Certification Document to OnBase
7. **RD Hydraulics** - Notify **RD Designer, RD Unit Head, and PDD TRU 404/ Wetlands Biologist** that the Floodplain Certification Document is complete and available in OnBase
8. **RD Hydraulics** - Check Task 5485 done in Clarity after notification sent

#### **Deliverables:**

- Floodplain Professional Qualified Staff (PQS) Memo
- Floodplain Certification Document

## PHASE 5: PLAN DETAILS - PAYROLL ACTIVITY 5500

### ROADWAY DESIGN DETAILS (Clarity Task 5508)

#### Information Required *Before* Beginning Roadway Design Details

##### (Federal-Aid Projects):

- Final EA – Finding Of No Significant Impact (FONSI) (PDD EDU Task Code 5482) (See *RDM* Chapter Thirteen, Section 4) ([p-chap-13-planning-and-proj-development.pdf \(nebraska.gov\)](#))
- Final EIS - Record Of Decision (ROD) (PDD EDU Task Code 5480) (*RDM* Chapter Thirteen, Section 4) ([p-chap-13-planning-and-proj-development.pdf \(nebraska.gov\)](#))
- *Or*
- Project identified as a CE (See NDOT Form-53 in OnBase)

##### Information Available:

- Final Pavement Determination (M&R Task Code 5406)
- Final Bridge Data Sheet (Bridge Task Code 5410)
- Soils Foundation Report (M&R Task Code 5452)
- Soils, Situation, and Subgrade Report (M&R Task Code 5450)
- Lighting Layout (RD Lighting Unit Task Code 5422)
- Lighting Design (RD Lighting Unit Task Code 5429)
- Lighting Comps & Specs (RD Lighting Unit Task Code 5453)
- Traffic Engineering Review (Traffic Task Code 5464)
- Approved 4(f) Statement (PDD Task Code 5476)
- Roadway Floodplain Certification (RD Hydraulics Unit Task Code 5485)
- Bridge Floodplain Certification (Bridge Task Code 5488)
- Final Noise Report (PDD Task Code 5407b)
- Project Approval from Highway Commission and Governor

##### Request Information:

- RD Designer - Request large tree/stump counts from the District

##### Actions:

1. **RD Designer** - Make changes, if required, as the result of the Noise Report – Keep **R.O.W. Design, Lighting, Traffic, Wetlands**, etc. informed.
2. **RD Designer** - Revise design according to Public Information Meeting (if held), the PIH inspection, and the approved Scope (PIH) Report comments
3. **RD Designer** - Complete FAA Form 7460-1 (<https://www.faa.gov/forms/index.cfm/go/document.information/documentID/186273>) if required (see [Notice Criteria Tool \(faa.gov\)](#)), and transmit to the **NDOT Aeronautics Division** a *minimum of 45 days* before work starts. See the *RDM*, Chapter Ten, Section 3 (<https://dot.nebraska.gov/media/11456/m-chapter-10-misc-design-issues.pdf>)
4. **RD Designer** - Prepare design geometry, grades, jointing diagrams and cross-sections for driveways, intersections, frontage roads, etc.
5. **RD Designer** - Prepare plans and notes for Stormwater Treatment Facilities (STFs) (See the *Drainage Manual*, Chapter Three, Section 8) ([f-chapter-3-stormwater-treatment.pdf \(nebraska.gov\)](#))
6. **PDU** - Prepare geotechnical plans (wick drains, instrumentation, etc.)
7. **RD Designer** - Begin writing Special Provisions (*RDM* Chapter Twelve, Section 7.G.2) (<https://dot.nebraska.gov/media/11468/o-chap-12-cost-estimating.pdf>)
8. **RD Designer** - Conduct FHWA Oversight Coordination Meeting #2 (Task Code 5560) (RBP for Design only)

9. **RD Designer** - Send phasing plans to **Traffic** for use in producing traffic control plans
10. **RD Designer** - Back-up roadway design to ProjectWise & Send notice Clarity Task 5508 is done to **PDU**
11. **RD Designer** - Transmit early acquisition Design Detail Plans to **R.O.W.** (when applicable)

**Additional Information/Action by Others:**

- District Plan Review (**Proj. Sched. & Prog. Mgmt. Task** Code 5580)
- **RD: Utilities**
- Additional Survey (Form NDOT-150, [\dotfs\Public\DOTForms\ndot150-electronic version.dotx](#)): For Hydraulic Surveys or missing items (e.g. water lines, center pivot, sewer pipe, utilities, or to extend cross-sections or pavement shots)
- **R.O.W.**

**Reviews:**

- **RD Hydraulics** – MS4 Treatment STFs
- **RD Designer** - Check of lighting pole locations
- **RD Designer** - Requests & changes recommended in the **District L.O.C.** Plan Review
- **RD Designer** - Hearing Plans, transcript, notes, and comments
- **PDD RDC Supervisor** - Erosion control w/cross-sections and MS4 Treatment STFs (**PDD RDC Task Code 5572**)
- **PDD RDC Supervisor** – Landscape Plan Review (**PDD RDC Task Code 5574**)
- **RD Designer** - “Earthwork Checklist” (*RDM* Chapter Seven, Exhibit 7.16) ([Chapter Seven \(nebraska.gov\)](#))

**Deliverables:**

- Design Detail Plans

**RD REQUEST BRIDGE SPECIAL PLANS (Clarity Task 5516)**

**(If Required)**

**Information Available:**

- L.O.C.s (RD Clarity Task 5508)
- Culvert X-Sects

**Actions:**

1. **RD Designer** - Request Special Plans from **Bridge Design and Special Projects Section Engineer** by completing:
  - Box Culverts using the Concrete Box Culvert Request Sheet (Form NDOT-67, [\dotfs\Public\DOTForms\ndot67.dotx](#))
  - Retaining Walls, Headwalls etc., using the Custom Special Plan Request Sheet (Form NDOT-66, [\dotfs\Public\DOTForms\ndot66.dotx](#))
2. **RD Designer** - Transmit Form(s) to **Bridge Design and Special Projects Section Engineer**
3. **RD Designer** - Check Task 5516 done in Clarity after transmittal of forms

**Deliverables:**

- NDOT Request Forms

## **PDU PLAN DETAILS (DESIGN DETAIL FILES)**

### **(PDU Clarity Task 5532)**

#### **Information Available:**

- PDU Design Files
- Limits of Construction (from **Roadway Designer**, Clarity Task 5389)
- Design changes/ updates

#### **Actions:**

1. **PDU** - Create the Design Detail Sheet Files (*RDM* Chapter Eleven, Exhibit 11.1) (<https://dot.nebraska.gov/media/11460/n-chapter-11-plan-prep.pdf>)
2. **PDU** - Notify **RD Unit Head**, **Roadway Designer** and the **PDU Supervisor** that the Design Detail Files are available
3. **PDU** - Check Task 5532 done in Clarity after the Design Detail Files are uploaded to OnBase

#### **Deliverables:**

- Design Detail Plans (In OnBase – NDOT RD DESIGN PLANS/NDOT RD FINAL DESIGN PLANS)

## **DESIGN DETAIL REVIEW (Clarity Task 5576)**

#### **Information Available:**

- Design Detail Plans (**PDU** Task Code 5532)
- Final Landscape Design & Specifications (**PDD RDC** Task Code 5568)
- Roadside Stabilization Erosion Control Design (**PDD RDC** Task Code 5528)
- Final Pavement Determination (**M&R** Task Code 5406)
- Bridge Design Details/Plans (**Bridge** Task Code 5520)
- Special Plans from Bridge (**Bridge** Task Code 5540)
- Bridge Plans & Specifications (**Bridge** Task Codes 5556 & 5544)

#### **Reviews:**

- **RD Unit Head** - Design for content and quality
- **RD Designer** - Design Detail Plans with **RD Unit Head**
- **RD Designer** - Review Bridge Plans, verify vertical clearance
- **RD Designer** - Conduct traffic review (pavement marking plans, special plans, signals, etc.). Tell **Traffic** if the project has centerline and/or edge line rumble strips – this may change the type of striping specified/required on the project.
- **RD Designer** - MS4 Treatment STF labeling on PS&E Plans with **RD Unit Head** (See the *Drainage Manual*, Chapter Three, Section 8.D) (<f-chapter-3-stormwater-treatment.pdf> ([nebraska.gov](http://nebraska.gov)))

#### **Actions:**

1. **RD Designer** - Back-up Design to ProjectWise (include culvert sections)
2. **RD Designer** - Transmit asphalt surfacing areas to **M&R**
3. **RD Designer** - Send notice that Design Plans are available (*RDM* Chapter Eleven, Exhibit 11.2) (<https://dot.nebraska.gov/media/11460/n-chapter-11-plan-prep.pdf>)
4. **RD Designer** - Check Task 5576 done in Clarity after notification of Design Plans availability

#### **Deliverables:**

- Design Detail Plans Set

## **STATUS 45 COST ESTIMATE (Clarity Task 5584)**

(Done concurrently with Clarity Task 5576)

### **Information Available:**

- Design Detail Plans (PDU Clarity Task Code 5532)
- Status 30 Cost Estimate

### **Actions:**

1. **RD Designer** - Quantify project items
2. **RD Designer** - Input quantities into AASHTOWare
3. **RD Designer** - Mark design complete in AASHTOWare, this will transmit the estimate quantities to the **Construction Division Highway Estimating Unit**
4. **RD Designer** - Check Task 5584 done after transmittal of estimate quantities to the **Construction Division Highway Estimating Unit**

### **Reviews:**

- **RD Designer** - "Cost Estimate Checklist" (*RDM* Chapter Twelve, Exhibit 12.8) (<https://dot.nebraska.gov/media/11468/o-chap-12-cost-estimating.pdf>)
- **RD Unit Head** - Review of estimated quantities, before transmittal via AASHTOWare

### **Deliverables:**

- Estimated quantities for Status 45 Cost Estimate

## **PROJECT COORDINATION MEETING 50 (Clarity Task 5510)**

**(Added to schedule as required, determined at PCM 35)**

### **Information Available:**

- Required Design Modifications from PCM 35
- Appraisal Plans
- Status 45 Cost Estimate

### **Actions:**

1. **RD Designer** - Request Project Coordination Meeting 50 (*RDM* Appendix K)
2. **RD Hydraulics** – Schedule/ Conduct PCM 50 (*RDM* Appendix K)
3. **RD Designer** - Check Task 5510 done in Clarity after PCM 50 is held
4. **RD Hydraulics** - Upload PCM 50 Minutes to OnBase
5. **RD Hydraulics** - Send Notifications that the PCM 50 Minutes are available (*RDM* Appendix K)

### **Deliverables:**

- PCM 50 Minutes

## PHASE 6: R.O.W. - PAYROLL ACTIVITY 5600

### DESIGN PLANS TO UTILITY UNIT (Clarity Task 5614)

(Approximately One Week after Clarity Task 5576)

#### Information Available:

- Right-of-Way Appraisal Plans (ROW Task Code 5612)
- Limits of Construction

#### Actions:

1. **RD Designer** - Request that **PDU** plot the Utility Plans
2. **RD Designer** - Check the Utility Plans for sufficient detail (*RDM* Chapter Eleven, Section 4.J.1) (<https://dot.nebraska.gov/media/11460/n-chapter-11-plan-prep.pdf>)
3. **RD Designer** - Notify the **RD Utility Coordinator** that the Utility Plan Set is available in OnBase – NDOT RD Utility Plans
4. **RD Designer** - Contact the **RD Utility Coordinator** and discuss the project
5. **RD Designer** - Check Task 5614 done in Clarity after plans transmitted to **RD Utility Coordinator**

#### Deliverables:

- Utility Plan Set

### R.O.W. REVIEW MEETING (Clarity Task 5610)

#### Information Available:

- Preliminary R.O.W. design

#### Reviews:

- Preliminary R.O.W design with **ROW Design**

#### Actions:

1. **ROW Design** – Schedule/ Conduct R.O.W. Plan Review Meeting
2. **RD Designer** - Attend R.O.W. Plan Review Meeting
3. **RD Designer** - Transmit meeting notes to **RD Unit Head**
4. **RD Designer** – Check Task 5610 done in Clarity after notes transmitted to **RD Unit Head**

#### Deliverables:

- Meeting notes of proposed changes to Roadway/ROW designs

### APPRAISAL PLANS REVIEW (Clarity Task 5620) (If Required)

#### Information Available:

- Right-of-Way Appraisal Plans (**R.O.W.** Task Code 5612)
- Improvements in the Part Taken Memo from **ROW Appraiser** (the estimate must include items in the ROW to be removed)

#### Actions:

1. **RD Designer** - Review Appraisal Plans and L.O.C.s
2. **RD Designer** - Review meeting notes and actions from the R.O.W. Plans Review Meeting (Clarity Task 5610) to ensure work is being accomplished
3. **RD Designer** - e-mail **ROW Design** stating either good to go or with attached changes
4. **RD Designer** - Check Task 5620 done in Clarity after sending the e-mail
5. **RD Designer** – Attend Pre-Negotiations Meeting with **ROW Negotiator**. Attendance by **RD Designer** and **RD Unit Head** *is required*

#### Deliverables:

- e-mail to **ROW Design**



## PHASE 7: PLAN PACKAGE - PAYROLL ACTIVITY 5700

### PDU PLAN PACKAGE DESIGN MODIFICATION FOR PS&E (PDU Clarity Task 5765)

#### Information Available:

- Design Detail Plans (PDU Clarity Task Code 5532)
- Design changes/ updates (Task 5705)
- Plan files from other **Divisions / Consultants**

#### Actions:

1. **PDU** - Create PS&E Plans
2. **PDU** - Notify **RD Unit Head, Roadway Designer** and the **PDU Supervisor** that the PS&E Plans are available
3. **PDU** - Check Task 5765 done in Clarity after the PS&E Plans are uploaded to OnBase

#### Deliverables:

- PS&E Preliminary Plan Package without Standards (In OnBase – NDOT CNST PS&E Submittals/ NDOT CNST Prelim Plans)
- PS&E Plan Package with Standards (In OnBase – NDOT CNST PS&E Submittals/ NDOT CNST PS&E Plans)

### STATUS 50 COST ESTIMATE

#### Information Available:

- NDOT CNST PS&E Prelim Plans (**PDU** Clarity Task Code 5765) (In OnBase – NDOT CNST PS&E Submittals/ NDOT CNST Prelim Plans)
- Status 45 Cost Estimate

#### Actions:

1. **RD Designer** - Quantify project items
2. **RD Designer** - Input quantities into AASHTOWare
3. **RD Designer** - Mark design complete in AASHTOWare, this will transmit the estimate quantities to the **Construction Division Highway Estimating Unit**

#### Reviews:

- “Cost Estimate Checklist” (*RDM* Chapter Twelve, Exhibit 12.8)  
(<https://dot.nebraska.gov/media/11468/o-chap-12-cost-estimating.pdf>)
- Review of estimated quantities by **RD Unit Head** before transmittal via AASHTOWare

#### Deliverables:

- Estimated quantities for Status 50 Cost Estimate

## PLAN PACKAGE DESIGN MODIFICATION (Clarity Task 5705)

### Request Information:

- **RD Designer** - Ask the **DCE** whether “Construction Surveying” and “Re-establish Property Corners” will be performed by State forces or bid as part of the contract

### Information Available:

#### Roadway Design - PDU:

- Preliminary PS&E Plan Package (contains the plans listed in *RDM* Chapter Eleven, Exhibit 11.1 (<https://dot.nebraska.gov/media/11460/n-chapter-11-plan-prep.pdf>), except for the Standard Plans). (In OnBase – NDOT CNST PS&E Submittals/ NDOT CNST Prelim Plans)

#### Materials and Research:

- Pavement Determination Verification (**M&R** Task Code 5655)
- Pavement Design Special Provisions (**M&R** Task Code 5730)
- Soil Reports & Compaction Requirements (**M&R** Task Code 5670)

#### Bridge:

- Bridge Comps & Special Provisions

#### Traffic:

- Traffic Comps & Special Provisions

#### Right-of-Way:

- ROW Certificate (**ROW** Task Code 5666)

#### Local Assistance – Rail Highway Liaison:

- Railroad Special Provisions
- Railroad Agreement or Info Letter (**Local Liaison RR** Task Code 5644)
- Railroad Easement or Info Letter (**Local Liaison RR** Task Code 5644)
- Railroad Utility License

#### Project Development – Environmental Section:

- Seeding Special Provisions
- Erosion Control Special Provisions
- Green Sheet (**PDD** Task Code 5740)
- CE Re-evaluation (**PDD** Task Code 5634)
- 404 Permit (**PDD** Task Code 5634)
- Floodplain Permit (**PDD** Task Code 5634a)

#### Project Development – Agreements Section:

- Project Agreements (including City/County, Miscellaneous, TERO) (**PDD Agreements Section** Task Code 5715)  
(Including Stormwater Treatment Facilities (STFs) for MS4 – Maintenance of STFs, if required. See the *Drainage Manual*, Chapter Three, Section 7.A.5) (<f-chapter-3-stormwater-treatment.pdf> ([nebraska.gov](http://nebraska.gov)))
- Relinquishment Agreements (**PDD Agreements Section** Task Code 5710)  
(Including Stormwater Treatment Facilities (STFs) for MS4 – Maintenance of STFs, if required. See the *Drainage Manual*, Chapter Three, Section 7.A.5) (<f-chapter-3-stormwater-treatment.pdf> ([nebraska.gov](http://nebraska.gov)))

#### Roadway Design – Lighting Unit:

- Lighting Comps & Special Provisions (**RD** Task Code 5453)

#### Roadway Design - Utilities Unit:

- Status of Utilities (**RD** Task Code 5735). Sent directly to **Contracts** by Utilities Unit
- NDOT Utilities

**Actions:**

1. **RD Designer** - Check Plan Package for completeness, including plans from other Divisions (See the PS&E Required Sheet, NDOT Form 280 ([\dotfs\Public\DOTForms\ndot280.dotx](https://dotfs.Public\DOTForms\ndot280.dotx)) and *RDM* Chapter Eleven, Exhibit 11.1 (<https://dot.nebraska.gov/media/11460/n-chapter-11-plan-prep.pdf>), for what's required)
2. **RD Designer** - Check status of Agreements
3. **RD Designer** - Complete design details and computations (e.g. guardrail)
4. **RD Designer** - Complete Special Provisions and Special Prosecution & Process
5. **RD Designer** - Calculate % of work on railroad right-of-way within 50 feet of the centerline of the nearest railroad track (*RDM* Chapter Twelve, Section 1) (<https://dot.nebraska.gov/media/11468/o-chap-12-cost-estimating.pdf>)
6. **RD Designer** - Calculate % of work on railroad right-of-way outside of the first 50 feet from the centerline of the nearest railroad track (*RDM* Chapter Twelve, Section 1) (<https://dot.nebraska.gov/media/11468/o-chap-12-cost-estimating.pdf>)
7. **RD Designer** - Calculate and split out quantities per Funding Group (*RDM* Chapter Twelve, Sections 2.C & 2.G) (<https://dot.nebraska.gov/media/11468/o-chap-12-cost-estimating.pdf>)
8. **RD Designer** - Complete PS&E Forms: PS&E Required Sheet (Form NDOT Form 280), Length Sheet (Form NDOT Form 415), Grading Item Summary Sheet (Form NDOT Form 064E)
9. **RD Designer** - Cross-check all construction notes with the computations
10. **RD Designer** - Review PS&E Plan Package with **RD Unit Head** and **RD PDU Unit Head**. Review the project plans (including those from **Bridge, Traffic, R.O.W., M&R**, etal) for uniformity of appearance and completeness, verify that the plans contain the required information to construct the project.
11. **RD Designer** - Assemble a list of required Standard and Standardized Special Plans, with the correct revision number, and upload to OnBase (NDOT CNST PS&E Submittals - NDOT CNST Comp File)
12. **RD Designer** - Check Task 5705 done in Clarity after the Signed Plan Package is uploaded to OnBase

**Deliverables:**

- Standard and Standardized Special Plans list
- Signed Plan Package

**PROJECT COORDINATION MEETING 70 (Clarity Task 5770)****Information Available:**

- NDOT CNST Prelim Plans (In OnBase – NDOT CNST PS&E Submittals/ NDOT CNST Prelim Plans) - **RD** – **Required**
- Signed NEPA Document (In OnBase – **PDD EPU**) – **Required**
- Green Sheet (Draft acceptable) (In OnBase – **PDD EDU**) – **Required**

**Actions:**

1. **RD Designer** - Request Project Coordination Meeting 70 (*RDM* Appendix K)
2. **RD Hydraulics** – Schedule/ Conduct PCM 70 (*RDM* Appendix K)
3. **RD Designer** - Check Task 5770 done in Clarity after meeting held
4. **RD Hydraulics** - Upload PCM 70 Minutes to OnBase
5. **RD Hydraulics** - Send Notifications that the PCM 70 Minutes are available (*RDM* Appendix K)

**Deliverables:**

- PCM 70 Minutes

## PLANS PACKAGE SUBMITTAL (Clarity Task 5790)

### Information Available:

- PS&E Plan Package (In OnBase – NDOT CNST PS&E Submittals/ NDOT CNST PS&E Plans)

### Actions:

1. **RD Designer** - Send e-mail to PS&E Turn-in Group regarding PS&E Plans Package availability
2. **RD Designer** - Check Task 5790 done in Clarity after e-mail sent

## PHASE 8: LETTING - PAYROLL ACTIVITY 5800

### Actions:

1. **RD Designer** - If required, prepare and submit Supplemental City Financial Agreement to **DE** for signatures, use the **PS&E** quantity and unit prices (Request for Agreement, Form NDOT-65, [\\dotfs\Public\DOTForms\ndot65.dotx](https://dotfs\Public\DOTForms\ndot65.dotx)) (Include Stormwater Treatment Facilities (STFs) for MS4 – Maintenance of STFs, if required. See the *Drainage Manual*, Chapter Three, Section 7.A.5) ([f-chapter-3-stormwater-treatment.pdf](https://www.nebraska.gov/f-chapter-3-stormwater-treatment.pdf) ([nebraska.gov](https://www.nebraska.gov)))
2. **RD ADE** - If required, Public Interest Letter to **FHWA** (submit to **Deputy Director Engineering** before **FHWA** Approval and Ads Sent Out Date, see Letting Schedule) (*RDM* Chapter Fifteen, Section 6.A) (<https://dot.nebraska.gov/media/11462/r-chap-15-row.pdf>)

### Deliverables:

- Final City Financial Agreement
- Public Interest Letter for advertisement.

## PDU PS&E CORRECTIONS (PDU Clarity Task 5845)

### Information Available:

- Construction Plans
- Blue-lined Plans and comments from **PS&E** (through the **Roadway Designer**) (**PS&E** Task 5830)
- Plan files from other **Divisions / Consultants**

### Actions:

1. **PDU** - Make the **PS&E** corrections
2. **PDU** - If SWPPP required, submit Temp. erosion control plans to **PDD RDC** (after blue-lines complete)
3. **PDU** - e-mail PS&E Turn-in Group that plans are available
4. **PDU** - Check Task 5845 done in Clarity after the PS&E Letting Plans are uploaded to OnBase

### Deliverables:

- PS&E Letting Plans

## BLUE LINES SUBMITTED TO PS&E (Clarity Task 5850)

### Information Available:

- Blue-lined Plans and comments from **PS&E** (PS&E Task 5830)
- **PDU** PS&E Corrections (**PDU** Clarity Task Code 5845)

### Reviews:

- **RD ADE/ RD Unit Head** - Processed **PS&E** changes

### Actions:

1. Seal, sign, and date of PS&E Letting Plans by responsible **Engineer**
2. **RD Designer** - If required, notify **PS&E** that blue line corrections have been made
3. **RD Designer** - Check Task 5850 done in Clarity after PS&E Letting Plans uploaded to OnBase

### Deliverables:

- Signed, sealed and dated PS&E Letting Plans

## PHASE 9: BEGIN CONSTRUCTION PHASE - PAYROLL ACTIVITY 5900

### Actions:

1. **RD Designer** - Attend pre-construction meeting
2. **RD Designer** - Make revisions, if required, as the result of **Construction** recommendations
3. **RD Designer** - Review the revision with the **PDD Environmental Project Management Unit (EPMU) Environmental Project Manager** (*RDM* Chapter Eleven, Section 8) (<https://dot.nebraska.gov/media/11460/n-chapter-11-plan-prep.pdf>)
4. **RD Designer** - Acquire *written* **FHWA** approval for RBPs for Construction on the National Highway System before revisions are submitted to **Construction** (*RDM* Chapter Eleven, Section 8.A) (<https://dot.nebraska.gov/media/11460/n-chapter-11-plan-prep.pdf>)
5. **PDU** - Make the revisions to the plans (*RDM* Chapter Eleven, Section 8) (<https://dot.nebraska.gov/media/11460/n-chapter-11-plan-prep.pdf>)
6. **PDU** - Revisions processed between the PS&E turn-in and the letting date must follow the revision process (*RDM* Chapter Eleven, Section 8) and be dated after the project is executed (approximately one month after the letting date) (<https://dot.nebraska.gov/media/11460/n-chapter-11-plan-prep.pdf>)
7. **RD Designer** - Update MS4 Form B – “Stormwater Treatment Facilities” if/as necessary
8. **RD Designer** - Prepare the reports for the project (After **PS&E** corrections made), if requested by **District**:
  - a. Slope Stake
  - b. Blue top
  - c. Paving Grades
9. **RD Designer** - Place the reports requested by **District** in OnBase under “Construction Reports” & Notify the **District Project Manager**

### Deliverables:

- Design revisions to **PDU**
- Revised plans and Revision Letter to **Construction** (*RDM* Chapter Eleven, Section 8) (<https://dot.nebraska.gov/media/11460/n-chapter-11-plan-prep.pdf>)
- Project reports to **District**, if requested

## **CREATE AS-BUILT PLANS (PDU Clarity Task 59\_\_)**

### **Information Available:**

- Notification from **Contracts** that the project has been awarded
- PS&E Letting Plans with plan revisions
- Plan files from other **Divisions/ Consultants**

### **Actions:**

1. **PDU** - Combine the .dgn files for **District** to create the As-Built Plans
2. **PDU** - Notify the **District Construction Engineer, RD Unit Head**, and the **PDU Supervisor** that the As-Built .dgn files are available
3. **PDU** - Update if/as plan revisions occur
4. **PDU** - Check Task 59\_\_ done in Clarity after the .dgn files are copied from the active folder to the District As-Built folder in ProjectWise

### **Deliverables:**

- .dgn files for the As-Built Plan

## Abbreviations

<b>ADA</b>	Americans With Disabilities Act
<b>ADE</b>	Roadway Design Assistant Design Engineer
<b>Bridge</b>	Bridge Division
<b>CA</b>	Covenant Agreement
<b>CADD</b>	Computer Aided Drafting and Design
<b>CICS</b>	Customer Information Control System
<b>Communications</b>	Communications Division
<b>Construction</b>	Construction Division
<b>CRA</b>	Covenant Relinquishment Agreement
<b>DCE</b>	District Construction Engineer
<b>DE</b>	District Engineer
<b>DPO</b>	Design Process Outline
<b>EA</b>	Environmental Assessment
<b>EA</b>	Environmental Assessment
<b>EDU</b>	Environmental Documents Unit in PDD
<b>EPMU</b>	Environmental Project Management Unit in PDD
<b>FEMA</b>	Federal Emergency Management Agency
<b>FHWA</b>	Federal Highway Administration
<b>FONSI</b>	Finding Of No Significant Impact
<b>FRA</b>	Final Relinquishment Agreement
<b>M&amp;R</b>	Materials and Research Division
<b>NDOT</b>	Nebraska Department of Transportation
<b>NRD</b>	Natural Resource District
<b>PDD</b>	Project Development Division
<b>PDU</b>	Plan Development Unit in Roadway Design
<b>PIH</b>	Plan-In-Hand
<b>PM</b>	Project Manager
<b>PS&amp;E</b>	Plans, Specifications, and Estimates Section in Construction
<b>PSS</b>	Project Scheduling System
<b>RBP</b>	FHWA Risk Based Project
<b>RD</b>	Roadway Design Division
<b>RDC</b>	Roadside Development & Compliance Unit in PDD
<b>RDM</b>	<u>Roadway Design Manual</u>
<b>ROD</b>	Record of Decision
<b>ROW</b>	Right Of Way Division
<b>SWPPP</b>	Stormwater Pollution Prevention Plan
<b>Traffic</b>	Traffic Engineering Division
<b>TRU</b>	Technical Resources Unit in PDD

