

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

(Links to NDOT Forms not available outside of NDOT, contact your Consultant Coordinator)

Form NDOT-53: Probable Class of NEPA Action Form

[\\dotfs\Public\DOTForms\ndot53 \(Probable Class of NEPA Action\).pdf](#)

Form NDOT-65: Request for Agreement

[\\dotfs\Public\DOTForms\ndot65 \(Request for Agreement\).dotx](#)

Form NDOT-66: Custom Special Plan Request Sheet

[\\dotfs\Public\DOTForms\ndot66 \(Custom Special Plan Request Sheet\).dotx](#)

Form NDOT-67: Concrete Box Culvert Request Sheet

[\\dotfs\Public\DOTForms\ndot67 \(Concrete Box Culvert Request Sheet\).dotx](#)

Form NDOT-73: Highway Improvement Programming Request

[\\dotfs\Public\DOTForms\ndot73 \(Hwy Improvement Programming Request\).dotx](#)

Form NDOT-76: Principal Controlling Design Criteria

[\\dotfs\Public\DOTForms\ndot76 \(Roadway Design - Principal Controlling Design Criteria \(1\)\).dotx](#)

Form NDOT-150: Survey Request

[\\dotfs\Public\DOTForms\ndot150-electronic version \(Survey Request\).dotx](#)

Form NDOT 280: PS&E Required Sheet

[\\dotfs\Public\DOTForms\ndot280 \(P. S. & E. Required Sheet\).dotx](#)

Form NDOT-290: Waterway Permit Data Sheet

[\\dotfs\Public\DOTForms\ndot290 \(Waterway Permit Data Sheet\).dotx](#)

Instructions

[\\dotfs\Public\DOTForms\ndot290-Instructions \(Waterway Permit Data Sheet Instr\).pdf](#)

Form NDOT-312: Request for Crash Summary

[\\dotfs\Public\DOTForms\ndot312 \(Crash Study Req Form\).docx](#)

Form NDOT-356: Request for Public Involvement

[\\dotfs\Public\DOTForms\ndot356 \(Request for Public Involvement\).dotx](#)

Form NDOT-693: Plan Sheet Request Form

[\\dotfs\Public\DOTForms\ndot693 \(Plan Sheet Req Form\).dotx](#)

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 from the **PDD Proj. Scoping Section Survey Proj. Mgr.** (cc the **PDD Hwy. Total Station Survey Coord.**) (Form NDOT-150, [\\dotfs\Public\DOTForms\ndot150-electronic version \(Survey Request\).dotx](https://dotfs.Public.DOTForms.ndot150-electronic-version(SurveyRequest).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/gzjcutpj/h-chap-5-interchanges.pdf>) (<https://dot.nebraska.gov/media/y42m4rse/i-chapter-6-cross-sections.pdf>)
2. **RD Designer with RD Unit Head** - Complete Form NDOT-76 “Roadway Design – Principle Controlling Design Criteria” (\\dotfs\Public\DOTForms\ndot76 (Roadway Design - Principal Controlling Design Criteria (1)).dotx), and route for signatures (*RDM* Chapter One, Section 9) (<https://dot.nebraska.gov/media/pprlptr1/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/pprlptr1/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 \(Plan Sheet Req Form\).dotx\)](\\dotfs\Public\DOTForms\ndot693 (Plan Sheet Req Form).dotx)

PROJECT COORDINATION MEETING 20 (Clarity Task 5290)

<L:\Forms\PCM Templates 03-19-2024>

Information Available:

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

Actions:

1. **RD Designer** – Schedule PCM 20 (via Direct Scheduling)
2. **All Meeting Participants** – Enter information into PCM 20 template prior to the meeting (via Direct Entry)
3. **Environmental Project Manager (EPM)** – Lead meeting
4. **RD Designer** - Check Task 5290 done in Clarity after PCM 20 is held
5. **All Meeting Participants** – Review PCM 20 template for accuracy
6. **EPM** - Upload PCM 20 template to OnBase as final two weeks after meeting

Deliverables:

- PCM 20 template

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 \(Crash Study Req Form\).docx](#)): 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/ri0mbooss/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/eftdv4vl/r-chap-15-row.pdf>)
 - Verify with **ROW Design Engineer** that the ROW survey is adequate
5. **RD Designer** – Pedestrian Access During Construction
 - Estimate the time of closure of pedestrian access during construction
 - Request **District** investigate the need for access during construction for pedestrians with disabilities (*RDM* Chapter Sixteen, Section 12.A) (<https://dot.nebraska.gov/media/ri0mboss/s-chap-16-ada.pdf>)
6. **RD Designer** - Draft Covenant Agreements – City/County: “Request for Agreement” (Form NDOT-65, [\dotfs\Public\DOTForms\ndot65 \(Request for Agreement\).dotx](https://dot.nebraska.gov/media/mecfz1tv/f-chapter-3-stormwater-treatment.pdf)) (Include Stormwater Treatment Facilities (STFs) for MS4-Maintenance of STFs, if required. See the *Drainage Manual*, Chapter Three, Section 7.A.5) (<https://dot.nebraska.gov/media/mecfz1tv/f-chapter-3-stormwater-treatment.pdf>)
7. **RD Designer** - Conduct FHWA Oversight Coordination Meeting #1 (Task Code 5382) (RBP for Design only)
8. **RD Designer** - Back-up Roadway Design to ProjectWise
9. **RD Designer** - Send notice that Activity 5350 is done:

• RD Unit Head	• PDD RDC Supervisor
• RD Lighting Unit Head	• Traffic Engineer
• Bridge Designer	• Highway Construction Scheduling Manager in Construction
• DE	
• PDU Unit Head	
10. **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), request survey if/as required from the **PDD Proj. Scoping Section Survey Proj. Mgr.** (cc the **PDD Hwy. Total Station Survey Coord.**)
- **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/rtdiyr4c/q-chap-14-traffic.pdf>
<https://dot.nebraska.gov/media/ri0mboss/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/4okpnkpf/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) (<https://dot.nebraska.gov/media/mecz1tv/f-chapter-3-stormwater-treatment.pdf>)
- **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/eftdv4vl/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 (Form NDOT-173)
- Preliminary Design
- Definition for T&E Items (<L:\Forms\Threatened & Endangered Species\2 - Activity Definitions - 2-17-2023.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 \(Waterway Permit Data Sheet\).dotx](\\dotfs\Public\DOTForms\ndot290 (Waterway Permit Data Sheet).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. (<https://dot.nebraska.gov/media/mecfz1tv/f-chapter-3-stormwater-treatment.pdf>), (<https://dot.nebraska.gov/media/4qvbh4cm/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) (<https://dot.nebraska.gov/media/mecfz1tv/f-chapter-3-stormwater-treatment.pdf>)
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) (<https://dot.nebraska.gov/media/mecfz1tv/f-chapter-3-stormwater-treatment.pdf>)
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/4okpnkpf/ua02-appendix-b.pdf>) for STFs for MS4 – Maintenance of STFs, if required. (*Drainage Manual*: Chapter Three, Sections 7.A.3 & 7.A.5) (<https://dot.nebraska.gov/media/mecfz1tv/f-chapter-3-stormwater-treatment.pdf>)
- **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/yqnpzkog/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/2azdbrxz/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/2azdbrxz/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)

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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
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
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/yqnpzkog/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) (<https://dot.nebraska.gov/media/mecfz1tv/f-chapter-3-stormwater-treatment.pdf>)
- Preliminary Relinquishment Agreements (Including STFs for MS4 – Maintenance of STFs, if required. See the *Drainage Manual*, Chapter Three, Section 7.A.5) (<https://dot.nebraska.gov/media/mecfz1tv/f-chapter-3-stormwater-treatment.pdf>)

Actions:

1. **RD Designer** - Review [PIH Checklist](#) and send invitations (*RDM* Chapter Eleven, Exhibit 11.2) (<https://dot.nebraska.gov/media/ygnpzkgog/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
- Project Details (Form NDOT-173)
- Planning Document
- PIH Notes

Actions:

1. **RD Designer** - Update if/as required
2. **RD Designer** - Send notice of updates:
 - **Super Team Members**
 - **Bridge Engineer**
 - **M&R Pavement Designer**
 - **PDD Environmental Documents Unit (EDU) NEPA Specialist**
 - **PDD TRU 404/ Wetlands Biologist**
 - **PDD RDC Noise & Air/ HazMat Coordinator**
 - **PDD TRU Cultural Resources/ Section 106 Coordinator**
 - **PDD TRU T&E Biologist**
 - **PDD RDC Erosion Control Designer**
 - **Communications Public Involvement Specialist**
 - **RD Utilities Coordinator**
 - **FHWA District Transportation Engineer (if required)**
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) (<https://dot.nebraska.gov/media/mecfz1tv/f-chapter-3-stormwater-treatment.pdf>)

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) (<https://dot.nebraska.gov/media/mecfz1tv/f-chapter-3-stormwater-treatment.pdf>)
- **RD Designer** – Coordinate MS4 Treatment STF Plan Labeling with **PDU** (See the *Drainage Manual*, Chapter Three, Section 8.D) (<https://dot.nebraska.gov/media/mecfz1tv/f-chapter-3-stormwater-treatment.pdf>)
- **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)

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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**)
- Updated Project Description/ Project Details/ Purpose & Need (Clarity Task 5396)

Actions:

1. **RD Designer** - Schedule PCM 35 (via Direct Scheduling)
2. **All Meeting Participants** – Enter information into PCM 35 template prior to the meeting (via Direct Entry)
3. **Environmental Project Manager (EPM)** – Lead meeting
4. **RD Designer** - Check Task 5331 done in Clarity after PCM 35 is held
5. **All Meeting Participants** – Review PCM 35 template for accuracy
6. **EPM** - Upload PCM 35 template to OnBase as final two weeks after meeting
7. **RD Designer** – If required, send Letter of Notification to City (*RDM* Chapter Seventeen, Section 10.E.2) (<https://dot.nebraska.gov/media/irrnud5/t-chapter-17-3r.pdf>)

Deliverables:

- PCM 35 template

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/yqnpzkog/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 5) (<https://dot.nebraska.gov/media/1skdrunf/p-chap-13-planning-and-proj-development.pdf>)
- Final EIS - Record Of Decision (ROD) (PDD EDU Task Code 5480) (*RDM* Chapter Thirteen, Section 5) (<https://dot.nebraska.gov/media/1skdrunf/p-chap-13-planning-and-proj-development.pdf>)

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 \(faa.gov\)](https://www.faa.gov/notice-criteria-tool)), 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/kfmqgvlp/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) (<https://dot.nebraska.gov/media/mecfz1tv/f-chapter-3-stormwater-treatment.pdf>)
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/2azdbrxz/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 Request additional survey if/as required from the **PDD Proj. Scoping Section Survey Proj. Mgr.** (cc the **PDD Hwy. Total Station Survey Coord.**) (Form NDOT-150, [\dotfs\Public\DOTForms\ndot150-electronic version \(Survey Request\).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*) (<https://dot.nebraska.gov/media/hglamgk3/j-chap-7-earthwork.pdf>)

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 Special Plans** by completing:
 - Box Culverts using the Concrete Box Culvert Request Sheet (Form NDOT-67, [\dotfs\Public\DOTForms\ndot67 \(Concrete Box Culvert Request Sheet\).dotx](#))
 - Retaining Walls, Headwalls etc., using the Custom Special Plan Request Sheet (Form NDOT-66, [\dotfs\Public\DOTForms\ndot66 \(Custom Special Plan Request Sheet\).dotx](#))
2. **RD Designer** - Transmit Form(s) to **Bridge Special Plans**
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/yqnpzkog/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) (<https://dot.nebraska.gov/media/mecz1tv/f-chapter-3-stormwater-treatment.pdf>)

Actions:

1. **District** – Pedestrian access review confirmation (*RDM* Chapter Sixteen, Section 12.A) (<https://dot.nebraska.gov/media/ri0mboss/s-chap-16-ada.pdf>)
2. **RD Designer** - Back-up Design to ProjectWise (include culvert sections)
3. **RD Designer** - Transmit asphalt surfacing areas to **M&R**
4. **RD Designer** - Send notice that Design Plans are available (*RDM* Chapter Eleven, Exhibit 11.2) (<https://dot.nebraska.gov/media/yqnpzkog/n-chapter-11-plan-prep.pdf>)
5. **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/2azdbrxz/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)

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Information Available:

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

Actions:

1. **RD Designer** - Schedule PCM 50 (via Direct Scheduling)
2. **All Meeting Participants** – Enter information into PCM 50 template prior to the meeting (via Direct Entry)
3. **Environmental Project Manager (EPM)** – Lead meeting
4. **RD Designer** - Check Task 5510 done in Clarity after PCM 50 is held
5. **All Meeting Participants** – Review PCM 50 template for accuracy
6. **EPM** - Upload PCM 50 templates to OnBase as final two weeks after meeting

Deliverables:

- PCM 50 template

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.K) (<https://dot.nebraska.gov/media/yqnpzkog/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

PLANS VERIFICATION FOR PS&E PACKAGE

(Clarity Task 57__)

Information Available:

- Design Detail Plans (PDU Clarity Task Code 5532)

Actions:

1. **RD Designer – M&R**
 - Verify Typical Cross-Sections & station ranges are accurate
 - Verify General Information Sheets (Drives / Intersections)
 - Verify superelevation correction quantities
 - Verify surfacing under guardrail quantities
 - Verify curb and flume quantities
 - Verify mailbox turnouts
2. **RD – Traffic Engineering**
 - Verify Phasing Plans are correct
3. **RD – RSU**
 - Verify pipes are correct
 - Verify curb and flume is correct
 - Verify special ditches are designed with flow arrows
4. **RD Designer – Notify M&R Highway Materials and Tests Manager, RDC Supervisor, RDC Erosion Control Designer, Bridge Design Section Head, RD ITS/Lighting Unit Head, RD Lighting Engineer, and Traffic Engineering Signing and Marking Engineer** that the 5700 Plans are available.
5. **RD Designer – Check Task 57__ done in Clarity** after the 5700 Plans are uploaded to OnBase

Deliverables:

- 5700 Plans

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)

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/yqnpzkog/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) (<https://dot.nebraska.gov/media/mecfz1tv/f-chapter-3-stormwater-treatment.pdf>)
- 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) (<https://dot.nebraska.gov/media/mecfz1tv/f-chapter-3-stormwater-treatment.pdf>)

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 \(P. S. & E. Required Sheet\).dotx](\\dotfs\Public\DOTForms\ndot280 (P. S. & E. Required Sheet).dotx)) and *RDM* Chapter Eleven, Exhibit 11.1 (<https://dot.nebraska.gov/media/yqnpzkog/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.E) (<https://dot.nebraska.gov/media/2azdbrxz/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.E) (<https://dot.nebraska.gov/media/2azdbrxz/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/2azdbrxz/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

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/2azdbrxz/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

PROJECT COORDINATION MEETING 70 (Clarity Task 5770)

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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** - Schedule PCM 70 (via Direct Scheduling)
2. **All Meeting Participants** – Enter information into PCM 70 template prior to the meeting (via Direct Entry)
3. **Environmental Project Manager (EPM)** – Lead meeting
4. **RD Designer** - Check Task 5770 done in Clarity after meeting held
5. **All Meeting Participants** – Review PCM 70 template for accuracy
6. **EPM** - Upload PCM 70 template to OnBase as final two weeks after meeting

Deliverables:

- PCM 70 template

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 \(Request for Agreement\).dotx](\\dotfs\Public\DOTForms\ndot65 (Request for Agreement).dotx)) (Include Stormwater Treatment Facilities (STFs) for MS4 – Maintenance of STFs, if required. See the *Drainage Manual*, Chapter Three, Section 7.A.5) (<https://dot.nebraska.gov/media/mecz1tv/f-chapter-3-stormwater-treatment.pdf>)
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/eftdv4vl/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** - Notify **RD Unit Head, Roadway Designer** and the **PDU Supervisor** that the **PS&E** Letting 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 7) (<https://dot.nebraska.gov/media/yqnpzkog/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 7.A) (<https://dot.nebraska.gov/media/yqnpzkog/n-chapter-11-plan-prep.pdf>)
5. **PDU** - Make the revisions to the plans (*RDM* Chapter Eleven, Section 7) (<https://dot.nebraska.gov/media/yqnpzkog/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 7) and be dated after the project is executed (approximately one month after the letting date) (<https://dot.nebraska.gov/media/yqnpzkog/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 7) (<https://dot.nebraska.gov/media/yqnpzkog/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

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