

# Project Delivery Network Deliverables

## Aesthetics/ Landscaping (A)

### 1A1 – Assess Project Aesthetics and Landscaping

- Preliminary Aesthetics and Landscaping Assessment Form
- QC Documentation

### 2A1 – Develop Aesthetics and Landscape Conceptual Design

- Project Aesthetic and Landscape Conceptual Design Package
- QC Documentation

### 3A1 – Complete Aesthetics and Landscape Design

- Final Aesthetics Plan
- Landscape/Irrigation/Site Design
- Aesthetics/Landscape Cost Estimate
- Aesthetic/Landscape Agreement
- QC Documentation

### 4A1 – Complete Erosion and Sediment Control Plans and Documents

- Erosion and Sediment Control Plans
- Erosion and Sediment Control Cost Estimate
- Erosion and Sediment Control Project Documents
- QC Documentation

### 4A2 – Complete Aesthetics, Landscape, and Irrigation Site Plans and Documents

- Landscape/Irrigation/Site Plan Sheets
- Landscape/Irrigation/Site Plan Cost Estimate
- Landscape/Irrigation/Site Plan Documents
- QC Documentation

### 5A1 – Prepare SWPPP Package for Construction

- SWPPP Package
- QC Documentation

## Survey/Mapping (B)

### 1B1 – Develop Base Mapping/Existing Surface

- Survey Control Sheet (includes .dgn and .pdf files)
- Base Mapping (includes .dgn file)
- Additional Base Mapping
- Base Mapping File Certification
- Original Field Data
- QC Documentation

## ITS (ATMS) – (C)

### 1C1 – Assess ITS (ATMS) Needs

- Project ITS Scoping Summary
- QC Documentation

### 3C1 – Develop ITS (ATMS) Components Design

- Preliminary ITS (AT) Plan Sheets
- ITS Cost Estimate
- QC Documentation

### 4C1 – Complete ITS (ATMS) Plans and Documents

- ITS (AT) Plan Sheets
- ITS Cost Estimate
- ITS Project Documents
- QC Documentation

## Environmental (E)

### 1E1 – Assess Environmental Needs (CATX)/Review Commitments (EA/EIS)

- Project Commitment Report
- Environmental Scoping Summary
- QC Documentation

### 2E1 – Analyze Environmental Resources

- Environmental Resource Locations
- Environmental Clearance Memos
- QC Documentation

### 3E1 – Write Categorical Exclusion Document

- Prepare Categorical Exclusion
- Conduct Public Hearing (if necessary)
- QC Documentation

### 4E1 – Prepare/Submit Permit(s)

- Permit Application(s)
- QC Documentation

### 4E2 – Obtain Categorical Exclusion Approval

- Approved Categorical Exclusion
- QC Documentation

### 5E1 – Obtain Environmental Permit(s)

- Approved Permit(s)

## CMGC (F)

### 1F1 – Obtain CMGC Contractor

- Contractor Request for Letters of Interest
- Contractor Request for Proposals
- Responses to Request for Clarifications
- Selection Team Presentation
- Executed Contractor Preconstruction Contract

### 2F1 – CMGC Geometry Constructability Review

- Constructability Review Comment Form

### 2F2 – CMGC Geometry Risk Workshop

- Risk Register
- Mitigation Strategies

### 2F3 – CMGC Geometry OPCC Estimate

- Bid Item List
- Reconciled Quantities
- Estimating Assumptions Document
- Opinion of Probable Construction Cost Estimate

### 3F1 – CMGC PIH Constructability Review

- Constructability Review Comment Form

### 3F2 – CMGC PIH Risk Workshop

- Risk Register
- Mitigation Strategies

### 3F3 – CMGC PIH OPCC Estimate

- Bid Item List
- Reconciled Quantities
- Estimating Assumptions Document
- Opinion of Probable Construction Cost Estimate

### 4F1 – CMGC PS&E Constructability Review

- Constructability Review Comment Form

### 4F2 – CMGC PS&E Risk Workshop

- Risk Register
- Mitigation Strategies

### 4F3 – CMGC PS&E OPCC Estimate

- Bid Item List
- Reconciled Quantities
- Estimating Assumptions Document
- Opinion of Probable Construction Cost Estimate

### 5F1 – CMGC PS&E OPCC Estimate

- Bid Item List
- Reconciled Quantities
- Bid Assumptions Document
- Electronic Bid System Pricing Input

## Geotechnical (G)

### 1G1 – Conduct Preliminary Geotechnical Investigation

- Preliminary Geotechnical Investigation
- Preliminary Work Plan (Scope)
- QC Documentation

### 3G1 – Conduct Geotechnical Investigation

- Subsurface Exploration Plan
- Subsurface Exploration Location Sketch
- Submit Samples for Testing
- QC Documentation

### 3G2 – Conduct Geotechnical Testing

- Individual Soil Test Results
- Soil Test Summary
- QC Documentation

### 3G3 – Complete Foundation Type Memo

- Structure Foundation Type Memo
- QC Documentation

### 4G1 – Complete Geotechnical Design and Draft Report

- Geotechnical Design
- Draft Geotechnical Report
- QC Documentation
- Independent Report Review

### 4G2 – Develop Geotechnical Project Documents

- Geotechnical Soil Data Plan Sheets
- Geotechnical Special Provisions
- Geotechnical Detail Plan Sheets
- QC Documentation

#### 4G3 – Finalize Geotechnical Report

- Geotechnical Comment Resolution Form (as needed)
- QC Documentation
- Final Geotechnical Report

#### Structure Hydraulics (H)

#### 2H1 – Develop Initial Structure Hydraulics

- Draft Structure Hydraulics Report
- Preliminary Structure Hydraulics Cost Estimate
- QC Documentation

#### 4H1 – Complete Structure Hydraulic Design

- Structure Hydraulic Design
- Structure Hydraulic Report
- Structure Hydraulic Cost Estimate
- QC Documentation

#### Right-of-Way Design (J)

#### 1J1 – Identify Existing Right-of-Way

- Existing ROW MicroStation File (ex\_row.dgn)
- Property Owner Spreadsheet
- QC Documentation

#### 4J1 – Identify Right-of-Way Needs

- Updated Property Owner Spreadsheet w/ Dates for Delivery
- Updated ROW Estimate
- QC Documentation

#### 4J2 – Develop Right-of-Way Plans and Documents

- ROW Summary
- MicroStation Files (geo-referenced ROW.dgn and ROW\_Takes.dgn)
- Final ROW Plans
- ePM Upload
- ProjectWise Upload
- QC Documentation

#### Right-of-Way Region (K)

#### 4K1 – Conduct Right-of-Way Review

- ROW Plan Review
- ROW Deed Review
- ROW Document Review

#### Right-of-Way Acquisition (L)

#### 4L1 – Conduct Right-of-Way Appraisals

- Appraisal
- Or
- Administrative Compensation Estimates (ACE)/Waiver Evaluation

#### 4L2 – Review Appraisals

- Updated ROW Estimate
- Approval to Acquire

#### 4L3 – Acquire Right-of-Way

- Purchase Contract
- Property Deed
- Order of Occupancy
- Documentation of Relocation
- Updated ROW Budget

#### 5L1 – Deliver Right-of-Way Certification

- Signed ROW Certification

#### 6L1 – ROW with Limitations

- 6L1 Task Inserted in MS Project Schedule
- 5L1 Signed ROW Certification

#### Materials (M)

#### 2M1 – Develop Pavement Design and Report

- Pavement Design Report
- QC Documentation

#### Public Involvement (P)

#### 1P1 – Develop Initial Public Involvement (PI) Plan

- Initial PI Plan
- QC Documentation

#### 4P1 – Revise/Implement Public Involvement Plan

- Revised PI Plan
- PI Status Summary for each review meeting
- PI Transition Handoff Package (PS&E Stage only)
- QC Documentation

#### Roadway Hydraulics (Q)

#### 1Q1 – Assess Existing Drainage Conditions

- Preliminary Drainage Summary
- QC Documentation

#### 2Q1 – Develop Initial Drainage Design

- Initial Drainage Design Layout (for Initial Roadway Model 2R1)
- Preliminary Drainage Cost Estimate
- QC Documentation

#### 3Q1 – Complete Drainage Design

- Drainage Design
- Preliminary Drainage Plan and Profile Sheets
- Drainage Cost Estimate
- QC Documentation

#### 4Q1 – Complete Drainage Plan Sheets and Documents

- Drainage Plan Sheets
- Drainage Cost Estimate
- Drainage Project Documents
- Drainage Report
- QC Documentation

#### Roadway (R)

#### 1R1 – Develop Roadway Scope

- Preliminary Footprint Review Drawing
- Preliminary Roadway Cost Estimate
- QC Documentation

#### 2R1 – Model Initial Roadway Design

- Maintenance/Preconstruction Site Visit Certification Form
- Recommended Alignments Review Drawing

- Design Exceptions, Design Waivers, and Deviation from Standards Forms (if necessary)
- Roadway Cost Estimate
- QC Documentation

#### 3R1 – Complete Roadway Design

- Preliminary Roadway Plan and Profile Sheets
- Preliminary Typical Section Plan Sheets
- Design Exceptions, Design Waivers, and Deviation from Standards Forms (if necessary)
- Test Level 5 Barrier Warrants/Approval Request Form (if necessary)
- Roadway Cost Estimate
- QC Documentation

#### 3R2 – Complete Signing and Striping Design

- Preliminary Signing and Striping Plan Sheets
- Overhead Sign Locations (as necessary)
- Preliminary MOT Plan Sheets
- Signing, Striping, and MOT Cost Estimates
- QC Documentation
- Region and State Approvals (as necessary)

#### 3R3 – Complete Signal and Lighting Layout Designs

- Preliminary Signal Plan Sheets
- Preliminary Lighting Plan Sheets
- Cooperative Agreements (if applicable)
- Request for ROW
- Signal Cost Estimate
- Lighting Cost Estimate
- QC Documentation
- Design Acceptance

#### 4R1 – Complete Roadway Plans and Documents

- Roadway Plan and Profile Sheets
- Roadway Cost Estimate
- Roadway Project Documents
- QC Documentation

#### 4R2 – Complete Signing and Striping Plans and Documents

- Signing and Striping Plan Sheets
- MOT Plan Sheets
- Signing, Striping, and MOT Cost Estimate
- Signing, Striping, and MOT Project Documents
- QC Documentation
- Overhead Sign Approval

#### 4R3 – Complete Signal and Lighting Plans and Documents

- Signal Plan Sheets
- Lighting Plan Sheets
- Signal and Lighting Cost Estimate
- Signal and Lighting Project Documents
- QC Documentation
- Signal and Lighting Design Approval

#### 6R1 – Design Support During Construction

- Addendums during Advertisement
- Response to RFI's
- Updated plan sheets and/or Specifications for FDC's and NDC's
- Coordination Meetings

## Structures (S)

### **1S1 – Identify Preliminary Structure Type**

- Draft Structure Type Selection Report
- Documentation of Quality Procedures (defined in Chapter 5 of the SDDM)

### **3S1 – Develop Structure Type Selection Report (TSR) and Seismic Design Strategy Report**

- Structure Type Selection Report (TSR)
- Seismic Design Strategy Report (Preliminary)
- Documentation of Quality Procedures (defined in Chapter 5 of the SDDM)

### **3S2 – Develop Situation and Layout (S&L) for Culverts**

- S&L Plan Sheets
- S&L Sheet Guidelines and Checklist for a Culvert
- Documentation of Quality Procedures (defined in Chapter 5 of the SDDM)

### **3S3 – Develop Situation and Layout (S&L) for Rehabilitation**

- S&L Plan Sheets
- S&L Sheet Guidelines and Checklist for a Rehabilitation
- Documentation of Quality Procedures (defined in Chapter 5 of the SDDM)

### **3S4 – Develop Situation and Layout (S&L) for Retaining Walls**

- S&L Plan Sheets
- S&L Sheet Guidelines and Checklist for a Retaining Wall
- Documentation of Quality Procedures (defined in Chapter 5 of the SDDM)

### **3S5 – Develop Situation and Layout (S&L) for Bridge**

- S&L Plan Sheets
- S&L Sheet Guidelines and Checklist for a New Bridge or Widening
- Documentation of Quality Procedures (defined in Chapter 5 of the SDDM)

### **3S6 – Situation and Layout (S&L) Acceptance**

- Structural Documentation Package
- Form: S&L\_ACC: S&L Acceptance (3S6) – Signed by UDOT Structures Design Manager

### **4SA – Design and Detail Bridge**

- Superstructure Design Calculations
- Superstructure Plans
- Substructure Design Calculations
- Substructure Plans
- S&L Sheet Checklist
- Seismic Design Strategy Report (Final)
- Load Rating Package
- Documentation of Quality Procedures (defined in Chapter 5 of the SDDM)

### **4SM – Design and Detail Culverts**

- Culvert Design Calculations
- Culvert Plans

- S&L Sheet Guidelines and Checklist for a Culvert
- Load Rating Package
- Documentation of Quality Procedures (defined in Chapter 5 of the SDDM)

### **4S1 – Design and Detail Rehabilitation**

- Structure Rehabilitation and/or Preservation Design Calculations
- Structure Rehabilitation and/or Preservation Plans
- S&L Sheet Guidelines and Checklist for a Rehabilitation
- Load Rating Package
- Documentation of Quality Procedures (defined in Chapter 5 of the SDDM)

### **4S2 – Design and Detail Overhead Sign/VMS Structure**

- Sign Structure Design Calculations
- Sign Structure Plans
- Documentation of Quality Procedures (defined in Chapter 5 of the SDDM)

### **4S3 – Design and Detail Retaining Walls**

- Wall Design Calculations
- Wall Plans
- S&L Sheet Guidelines and Checklist for a Retaining Wall
- Documentation of Quality Procedures (defined in Chapter 5 of the SDDM)

### **4S4 – Complete Structure Project Documents**

- Engineer's Estimate
- Structure Project Documents
- Railroad Company Submittal Package (if applicable)
- Documentation of Quality Procedures (defined in Chapter 5 of the SDDM)

### **5S1 – Deliver Final Structure Acceptance**

- Structural Documentation Package
- Form: PSE\_ACC: Final Structure Acceptance (5S1) – Signed by UDOT Structures Design Manager
- Inventory Documentation Package

### **6S1 – Structure Construction Services**

- Working Drawing Reviews and/or Approvals
- Construction Responses
- Construction Revisions on Contract Plan Sheets
- Final Structure Inspection
- As-Built Plans
- Documentation of Quality Procedures (defined in Chapter 5 of the SDDM)

## Traffic and Safety (T)

### **1T1 – Assess Capacity and Safety Needs**

- Updated OSR
- Preliminary Capacity Summary
- Prioritized List of Safety Improvements
- Initial Capacity and Safety Improvements Cost Estimate
- Methods and Assumptions Document
- QC Documentation

### **2T1 – Develop Initial Capacity Analysis**

- Draft Traffic Analysis Report
- QC Documentation

### **3T1 – Finalize Capacity Analysis**

- Access Justification Report (if applicable)
- Interchange Justification Report (if applicable)
- Final Traffic Analysis Report
- QC Documentation

### **5T1 – Deliver Traffic and Safety Certification**

- Region Traffic and Safety Certification

## Utilities (U)

### **2U1 – Utility and Railroad Identification**

- Utility and Railroad Companies Contact List
- Depiction of Utility Facilities/Subsurface Utility Engineering (SUE) Level B,C, and D
- Authorization for Design Expenditures
- Documentation of Railroad Diagnostic Review (as necessary)
- QC Documentation

### **3U1 – Identify Potential Utility Conflicts**

- Preliminary Utility Conflict Matrix/Summary
- Initial Utility Company Cost Estimate(s)
- QC Documentation

### **3U2 – Initial Design Utility Coordination**

- Revised Utility Conflict Matrix/Summary
- Utility Company Plans, Schedules, and Cost Estimates Request
- QC Documentation

### **3U3 – Identify Utility Depth (SUE Level A)**

- SUE Level A File
- SUE Mapping File Certification

### **3U4 – Complete Utility and Railroad Designs**

- Preliminary Utility Relocation Plan Sheets
- Grade Separation Structure 30% 5%L Submittal Package
- 100% At-Grade Railroad Crossing Surface and Warning Device Plans
- Utility Relocation/At-Grade Railroad Crossing Cost Estimate
- QC Documentation

### **4U1 – Final Design Utility Coordination**

- Utility Company Plans, Schedules, and Cost Estimates

### **4U2 – Prepare and Obtain Utility and Railroad Agreements and Permits**

- Executed Individual Utility Agreements
- Executed Cooperative Agreements with Municipalities and Service Districts
- Executed Railroad Agreements and Licenses
- Wireline, Pipeline, and License Applications
- Authorizations to Proceed with Work for Utility Companies
- QC Documentation

#### 4U3 – Complete Utility and Railroad Plans and Documents

- Utility Relocation Plan Sheets
- Grade Separation Structure 100% Plan Submittal
- At-Grade Railroad Crossing Plan Sheets
- Utility Relocation/At-Grade Railroad Crossing Cost Estimate
- Utility Relocation/At-Grade Railroad Crossing Project Documents
- QC Documentation

#### 5U1 – Deliver Utility Certification

- Utility Certification

#### 6U1 – Utility Construction Services

- Advance Relocation of Utilities
- Coordination Meetings

#### Meetings (V)

##### 1V1 – Kickoff Meeting

- Kickoff Meeting Agenda
- Kickoff Meeting Notes
- Project Communications Plan
- Draft Project Definition Document (PDD)

##### 1V2 – Scoping Meeting

- Scoping Meeting Agenda
- Scoping Review Material
- Scoping Meeting Notes
- Risk Register
- Mitigation Strategies
- Revised Project Scope, Schedule, and Budget
- Internal Preconstruction Engineering (PE) Budget
- Project Definition Document

##### 2V1 – Geometry Review Meeting

- Geometry Review Meeting Agenda
- Geometry Review Package
- Geometry Review Meeting Notes
- Geometry Review Comment Resolution Form

##### 3V1 – Plan-in-Hand Review Meeting

- Plan-in-Hand Meeting Agenda
- Plan-in-Hand Review Package
- Plan-in-Hand Meeting Notes
- Plan-in-Hand Review Comment Resolution Form

##### 4V1 – Plans, Specifications, & Estimate (PS&E) Review Meeting

- PS&E Meeting Agenda
- PS&E Review Package
- PS&E Meeting Notes
- PS&E Review Comment Resolution Form

#### 5V1 – Comment Resolution Review Meeting

- Final Comment Resolution Form
- Revised Plan Sheets and Documents (as needed)
- QC Documentation

#### 6V1 – Post Construction Conference

- Lessons Learned Document

#### Design Leader (Y)

##### 1Y1 – Develop Project Design Criteria (PDC)

- PDC Form
- QC Documentation
- Signed PDC Form

##### 1Y2 – Prepare/Compile Scoping Review Package

- Scoping Review Package
- Maintenance/Preconstruction Site Visit Certification Form
- Maintenance/Preconstruction Site Visit Comment Resolution Form (if used)
- Project Definition Document (PDD)
- QC Documentation

##### 2Y1 – Prepare/Compile Geometry Review Package

- Geometry Review Package
- QC Documentation

##### 3Y1 – Prepare/Compile Plan-in-Hand Review Package

- Geometry Review Comment Resolution Form
- User Costs (for Price + Time Bidding)
- Plan-in-Hand Review Package
- QC Documentation

##### 4Y1 – Prepare/Compile PS&E Review Package

- Plan-in-Hand Review Comment Resolution Form
- PS&E Review Package
- QC Documentation

##### 5Y1 – Incorporate PS&E Review Comments

- Final Comment Resolution Form
- Final Project Cost Estimate
- QC Documentation
- Final Plan Set and Project Documents

#### Project Management (Z)

##### 1Z1 – Project Setup

- Draft Project Definition Document
- Project Set-Up

##### 1Z2 – Obtain Consultants

- Executed Consultant Contract(s)
- Federal-aid Agreement (if applicable)

##### 1Z3 – Develop Draft Transportation Management Plan (TMP)

- Draft Transportation Management Plan (TMP)

##### 1Z4 – Hold Right-of-Way Strategy Meeting

- ROW Acquisition Strategy
- Initial ROW Cost Estimate

##### 1Z5 – Set Preliminary Design Activity Hours and Durations

- Preliminary Activity Durations and Hours in Project Management Office (PMO)

##### 1Z6 – Conduct Risk Workshop

- Risk Register
- Mitigation Strategies

##### 3Z2 – Value Engineering (VE) Study

- Executive VE Consultant Contract
- VE Study Report

##### 3Z3 – Obtain CEM Consultant(s)

- Executed CEM Consultant Contract
- Federal-aid Agreement Modification (if applicable)

##### 3Z4 – Constructability Review

- Constructability Review Comment Form

##### 4Z1 – Finalize Transportation Management Plan (TMP)

- Completed 00555 Prosecution and Progress Section 1.11 Limitations of Operations
- Transportation Management Plan (TMP)

##### 4Z2 – Retain Construction Public Involvement (PI) Consultant

- Draft Scope of Work
- Negotiated Contract

##### 5Z1 – Project Management

- Team Meetings and Meeting Notes
- Updated Project Schedule
- Processed Invoices
- Contract Modifications

##### 5Z2 – Prepare, Submit, and Process for Advertisement

- Signed ROW Certification
- Structural Documentation Package (including Acceptance of Structure – UDOT Structures Division)
- Region Traffic Certification
- Utility Certification
- Complete Advertising Package
- Biddable Project on UDOT Website