

EXHIBIT D

MAJOR DRAINAGEWAY PLANNING STUDIES
REPORT CHECKLIST

Instructions:

1. Engineer shall submit a completed copy of this checklist with all draft and final reports for each milestone.
2. For the Baseline Hydrology and Alternatives Analysis submittals, include placeholders for all of the report sections that will be populated in future submittals.
3. For deviations from checklist, include a separate sheet with numbered comments and write the corresponding number in the “Note #” column.
4. Clearly label Sections and Subsections (bold items in checklist) in report.

REPORT SECTIONS		Baseline Hydrology	Alternatives Analysis	Conceptual Design	Note #
PRELIMINARIES	Cover Sheet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Project Title (from Agreement)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Project Sponsors List, including logos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Engineer’s Name/Address	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Date (Month & Year)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	“DRAFT” stamp (on all except final Conceptual Design Report)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Transmittal Letter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Signed and sealed by Engineer transmitting report to District	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Table of Contents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Section titles and page numbers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	List of Tables (number, title, and location in report)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	List of Figures (number, title, and location in report)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	List of Appendices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	EXECUTIVE SUMMARY	Purpose and Objective	N/A	N/A	<input type="checkbox"/>
Describe reasons for investigation of drainage and flood control problems		N/A	N/A	<input type="checkbox"/>	
Planning Process		N/A	N/A	<input type="checkbox"/>	
Brief overview of planning process including public meetings		N/A	N/A	<input type="checkbox"/>	
Project Area Description		N/A	N/A	<input type="checkbox"/>	
General Project Area description		N/A	N/A	<input type="checkbox"/>	
Reference to Vicinity Map and Watershed Map		N/A	N/A	<input type="checkbox"/>	
Brief summary of Project Area hydrology: Compare existing and future land use conditions peak flows for both existing infrastructure and proposed improvements		N/A	N/A	<input type="checkbox"/>	
Brief summary of Project Area hydraulics: Compare existing and future land use conditions and existing infrastructure floodplains		N/A	N/A	<input type="checkbox"/>	
Alternative Analysis		N/A	N/A	<input type="checkbox"/>	
Brief summary of categories and alternatives considered		N/A	N/A	<input type="checkbox"/>	
Master Plan		N/A	N/A	<input type="checkbox"/>	
Brief summary of the plan on a reach-by-reach basis		N/A	N/A	<input type="checkbox"/>	
Explanation of costs and benefits of Master Plan		N/A	N/A	<input type="checkbox"/>	
Implementation priorities		N/A	N/A	<input type="checkbox"/>	
Tables		N/A	N/A	<input type="checkbox"/>	
Project participants and their affiliations		N/A	N/A	<input type="checkbox"/>	
Hydrology reconciliation with previous studies showing peak flows at key locations from all studies		N/A	N/A	<input type="checkbox"/>	
Master Plan Cost Estimate Summary – detailed cost estimate of master plan by reach with costs split out by jurisdiction	N/A	N/A	<input type="checkbox"/>		

REPORT SECTIONS		Baseline Hydrology	Alternatives Analysis	Conceptual Design	Note #
EXECUTIVE SUMMARY (CONT.)	Figures	N/A	N/A	<input type="checkbox"/>	
	Vicinity Map showing watershed location within District boundary (can be included on Watershed Map figure)	N/A	N/A	<input type="checkbox"/>	
	Watershed Map including jurisdictional boundaries	N/A	N/A	<input type="checkbox"/>	
	Master Plan Schematic showing proposed improvements	N/A	N/A	<input type="checkbox"/>	
SECTION 1 – INTRODUCTION	Authorization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Identify District and Engineer as contracting parties and identify other sponsors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Agreement number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Notice to Proceed date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Purpose and Scope	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe original scope of Project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Include all actions taken by District and Sponsors that modified, limited, or expanded the scope	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe amendments to the scope with reference to agreement number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Planning Process				
	Describe how the Project evolved and how the decisions made by the sponsors and District resulted in the recommendations contained in the study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe specific goals and objectives for the Master Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Provide summary of progress meetings and other coordination with District, sponsors, and other interested parties (reference Meeting Minutes in Appendix A)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe public meetings, their purpose, dates, methods of advertisement, minutes, and attendance roster (reference material in Appendix A)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Mapping and Surveys	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe mapping source (i.e. mapping firm, USGS, local governments, other)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Scale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Contour interval	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Datum (horizontal and vertical)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Date of mapping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Data Collection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Discuss maps, plans, reports, and other information obtained from District, Sponsors, and other agencies (reference Data Collected table in narrative)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Acknowledgements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Acknowledge participants and their role in the Project (reference Project Participants table in narrative)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Tables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	List of Data Collected: maps, plans, or reports used for Project including title, date, and author	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	List of Project Participants and their affiliations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Figures (none)					
SECTION 2 – STUDY AREA DESCRIPTION	Project Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe Project limits (reference Watershed Map in narrative)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe Project's watershed size	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe jurisdictions and major landmarks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	List Project Reuse watershed number(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Describe hydrologic features	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

REPORT SECTIONS		Baseline Hydrology	Alternatives Analysis	Conceptual Design	Note #
SECTION 2 – STUDY AREA DESCRIPTION (CONTINUED)	Describe NRCS hydrologic soil classification (reference Soils Map in Appendix B)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe percent of watershed currently developed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	List highest and lowest watershed elevation, average slope, and watershed shape	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Land Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe existing land use types (reference Existing Land Use Map in Appendix B) and how information was obtained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe future land use types (reference Future Land Use Map in Appendix B) and how information was obtained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Discuss how imperviousness values were determined based on land use types (reference Land Use table in narrative)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Discuss overall existing watershed imperviousness (reference Existing Imperviousness Map)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Discuss overall future watershed imperviousness (reference Future Imperviousness Map)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Reach Description	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe drainageway by reach (reference Reach figure) with reference to typical channel cross sections and photographs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe problem areas as discovered by observation or anecdotal information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Identify all major crossings including street name, street type and structure type and size (reference Major Crossing Structure Inventory table)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Flood History	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Provide information on past flooding events, bridge scour or stream stability, including stream gage data, literature citations, newspaper articles, anecdotal information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Environmental Assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe potential wetland and riparian zones within the Project Area (reference Wetland and Riparian Inventory in Appendix E)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe flora, fauna and threatened or endangered species identified within the Project Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Tables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Land Uses with assigned impervious values	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Major Crossing Structure Inventory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Figures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vicinity Map showing watershed location within District boundaries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Watershed Map including jurisdictional boundaries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>All other Tables and Figures to be included in Appendix B</i>					
SECTION 3 – HYDROLOGIC ANALYSIS	Overview	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe general process for developing and routing hydrographs through Project Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe CUHP and/or SWMM models used, including version number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe all calculations, references, and modeling used to develop the hydrology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Design Rainfall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe the design rainfall used and source of point rainfall values and distributions (reference Point Rainfall table in narrative and Rainfall Distribution table in Appendix B)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Describe any area corrections used (reference Rainfall Area Correction Factors table in narrative)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

REPORT SECTIONS		Baseline Hydrology	Alternatives Analysis	Conceptual Design	Note #
SECTION 3 – HYDROLOGIC ANALYSIS (CONTINUED)	Subwatershed Characteristics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe subwatershed characteristics and how they were determined (reference CUHP Input table and Subwatershed figure in Appendix B)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Discuss number of subwatersheds, range and average size of subwatershed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Hydrograph Routing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe flow-routing element types and geometries for existing and future land use, existing infrastructure conditions (reference SWMM Routing Map and SWMM Schematic figures in Appendix B)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe all existing detention facilities modeled, including stage-storage-discharge relationships (reference Detention Rating Curve tables in Appendix B)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe flow diversion relationships for all diversions (reference Flow Diversions table in Appendix B)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Previous Studies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Discuss hydrologic results presented in previous studies and regulatory models	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Results of Analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Discuss results of hydrologic analysis; reconcile any deviations from flows presented in previous studies to within 10% (reference Previous Studies Reconciliation table in narrative)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Provide results of hydrologic analysis presenting peak flows and volumes (reference Peak Flow table and Runoff Volume table in Appendix B)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Provide hydrographs at key locations representing peak flows for both existing and future conditions (reference Hydrograph figures in Appendix B)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Provide peak flow profiles along the drainageway centerline for both existing and future conditions (reference Peak Flow Profile figures in Appendix B)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Provide typical samples of hydrologic model (reference sample SWMM table in Appendix B)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Tables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Point Rainfall for each flood return period	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Rainfall Area Correction Factors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Previous Studies Hydrology Reconciliation showing peak flows at key locations from all studies and percent difference	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Figures (none in narrative)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>All other Tables and Figures to be included in Appendix B</i>					
SECTION 4 – HYDRAULIC ANALYSIS	Evaluation of Existing Facilities	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe procedures used to evaluate capacity of existing road crossings, channels, storm sewers and detention	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Discuss development of HEC-RAS models used to delineate existing infrastructure conditions floodplains (reference HEC-RAS Cross Sections in Appendix C)	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Discuss how Manning's n-values were determined; include photographs of typical channel sections used to determine values	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Discuss results of hydraulic model, including types and number of structures in the existing and future conditions floodplain (reference Existing Conditions and Future Conditions Floodplain figures in Appendix C)	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Discuss existing drainage facilities, providing a brief description of physical condition and estimated capacity related to future hydrology	N/A	<input type="checkbox"/>	<input type="checkbox"/>	

REPORT SECTIONS		Baseline Hydrology	Alternatives Analysis	Conceptual Design	Note #
	discharges (reference Existing Facilities table in narrative)				
SECTION 4 – HYDRAULIC ANALYSIS (CONTINUED)	Flood Hazards	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe existing and potential future drainage, erosion, water quality and flood hazard problems by reach and/or problem area (reference Drainage Problem Areas figure in Appendix C)	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Previous Analyses	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Explain difference from previous hydraulic analyses of existing facilities and floodplain delineation	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Tables	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Existing Facilities table showing estimated capacity	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Figures (none in narrative)	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	<i>All other Tables and Figures to be included in Appendix C</i>				
SECTION 5 – ALTERNATIVE ANALYSIS	Alternative Development Process	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe the process for identifying, screening and evaluating alternatives for each reach	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Criteria and Constraints	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe the drainage system, design storm criteria and strategy used to evaluate problems and alternatives	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Alternative Categories	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe categories evaluated for each reach (i.e., Maintenance Only, Structural Improvements, Stream Restoration, Engineered Channel, and Regional Detention)	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Pre-screen categories for each reach to determine feasibility (reference Pre-Screening Matrix table in narrative)	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Alternative Hydraulics	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe the hydraulic calculations performed to define, size and justify alternatives and improvements	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Alternative Costs	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe the process for determining quantities and costs for each component of the alternative plans, including capital, operations and maintenance, right-of-way acquisition, and contingencies	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe basis for unit costs (reference Unit Costs table in narrative)	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Alternative Plans	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe the alternatives studied on a reach-by-reach basis	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe how each alternative affects or is affected by the existing and proposed land uses, existing wetlands and riparian zones, environmental conditions and recreational features	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe how each alternative may prevent or mitigate damages for identified problem areas and how they can be integrated with community needs or desires	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Discuss operation and maintenance requirements of each plan	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe explicit detention criteria used for detention alternatives	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Reference reach-by-reach Alternative Plan Cost Estimate table in narrative	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Reference Alternative Plan figures in narrative	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Qualitative Evaluation Procedure	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe evaluation parameters, weighting factors and ranking procedures used to qualitatively evaluate alternatives	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Discuss the level of protection in terms of flood frequency provided by each alternative	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
Discuss advantages and disadvantages of each alternative including a comparison of each alternative to the others (reference Summary Evaluation Matrix in narrative)	N/A	<input type="checkbox"/>	<input type="checkbox"/>		

REPORT SECTIONS		Baseline Hydrology	Alternatives Analysis	Conceptual Design	Note #
SECTION 5 – ALTERNATIVE ANALYSIS (CONTINUED)	Tables	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Alternative Pre-Screening Matrix – determines feasibility of categories on reach-by-reach basis	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Unit Costs – list of unit costs	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Alternative Plan Cost Estimates – reach-by-reach cost estimates including capital, operations and maintenance, right-of-way acquisition, and contingencies	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Alternative Summary Evaluation Matrix	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Figures	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Alternative Plans - Schematic drawings of each alternative plan showing proposed improvements, jurisdictional boundaries, street names and reaches	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
SECTION 6 – RECOMMENDED PLAN	Plan Description	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe the alternative recommended by Engineer, including the rationale for arriving at the recommendation and whether each reach can or cannot be considered independently from the overall plan (reference Recommended Plan figure and Cost Estimate table in narrative)	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe problem areas and how the recommended plan may prevent or mitigate damages.	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Provide reference to legal opinion provided by District and include in Appendix D.	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Water Quality Impacts	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe how the recommended plan affects or mitigates stormwater quality impacts on the receiving system	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Operations and Maintenance	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe operations and maintenance aspects and costs of the recommended plan	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Environmental and Safety Assessment	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Describe how the recommended alternative will affect the environmental character and public safety of each reach of the drainageway and how it will fit into the community being served	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Tables	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Recommended Plan Cost Estimate – Itemize and summarize costs for recommended plan	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Figures	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Recommended Plan - Schematic drawing of recommended plan showing proposed improvements, jurisdictional boundaries, street names and reaches.	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
SECTION 7 – CONCEPTUAL DESIGN	Plan Development Overview	N/A	N/A	<input type="checkbox"/>	
	Describe any modifications to the Selected Plan at the direction of the Sponsors and District (reference Selected Plan letter in Appendix A)	N/A	N/A	<input type="checkbox"/>	
	Describe how the master plan may prevent or mitigate drainage problems and damages	N/A	N/A	<input type="checkbox"/>	
	Address rationale for special recommendations	N/A	N/A	<input type="checkbox"/>	
	Reference Master Plan Cost Estimate Summary table and Master Plan Schematic figure	N/A	N/A	<input type="checkbox"/>	
	Master Plan Description	N/A	N/A	<input type="checkbox"/>	
	Describe the Master Plan on a reach-by-reach basis (see EPlan Guidelines)	N/A	N/A	<input type="checkbox"/>	
	Detailed Reach Cost Estimate – updated cost estimate on reach-by-reach basis using UD-Cost spreadsheet (see EPlan Guidelines)	N/A	N/A	<input type="checkbox"/>	

REPORT SECTIONS		Baseline Hydrology	Alternatives Analysis	Conceptual Design	Note #
	Links to Master Plan Map and Master Plan Profile figures in Appendix G and H respectively	N/A	N/A	<input type="checkbox"/>	
SECTION 7 – CONCEPTUAL DESIGN (CONTINUED)	Prioritization and Phasing	N/A	N/A	<input type="checkbox"/>	
	Discuss priority of improvements, specifically how they are interrelated to other improvements, which are independent, which need to be implemented first and which need to be implemented as a system to avoid transferring damage potential to other reaches	N/A	N/A	<input type="checkbox"/>	
	Water Quality Impacts	N/A	N/A	<input type="checkbox"/>	
	Describe how the plan affects or mitigates stormwater quality impacts on the receiving system	N/A	N/A	<input type="checkbox"/>	
	Operations and Maintenance	N/A	N/A	<input type="checkbox"/>	
	Describe operations and maintenance aspects and costs of master plan	N/A	N/A	<input type="checkbox"/>	
	Environmental and Safety Assessment	N/A	N/A	<input type="checkbox"/>	
	Describe how the recommended alternative will affect the environmental character and public safety of each reach of the drainageway and how it will fit into the community being served	N/A	N/A	<input type="checkbox"/>	
	Tables	N/A	N/A	<input type="checkbox"/>	
	Master Plan Cost Estimate Summary – detailed cost estimate of master plan by reach with costs split out by jurisdiction	N/A	N/A	<input type="checkbox"/>	
	Detailed Reach Cost Estimate – updated cost estimate on reach-by-reach basis	N/A	N/A	<input type="checkbox"/>	
	Figures	N/A	N/A	<input type="checkbox"/>	
	Master Plan Schematic showing proposed improvements	N/A	N/A	<input type="checkbox"/>	
	<i>Master Plan Map and Master Plan Profile are included in Appendix G and H respectively</i>				
SECTION 8– REFERENCES	List of all references used for report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
APPENDICES	Appendix A – Project Correspondence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Minutes of progress meetings and public meetings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Summary of comments from Sponsors for each draft report and response of how each comment was addressed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Selected Plan letter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Any other pertinent correspondence documenting planning process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Appendix B – Hydrologic Analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Reach map	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Soils Conditions map	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Land Use maps (existing and future)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Design Rainfall Distribution table for each flood return period	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	CUHP Input table (subwatershed hydrologic characteristics, including area, length, centroid length, imperviousness, time of concentration, pervious and impervious storage, and initial, final and decay rate for infiltration)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Subwatershed figure showing boundaries, ID, area, existing and future percent imperviousness for each subwatershed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	SWMM Routing Map with aerial image in background	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	SWMM Schematic with major crossings labeled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Detention Rating Curve tables showing stage-storage-discharge relationships for all detention facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Flow-diversion tables for all flow diversions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Peak flows along drainageway for all return periods for existing and	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

REPORT SECTIONS		Baseline Hydrology	Alternatives Analysis	Conceptual Design	Note #
	future land use conditions, including station, routing element, channel reach, and landmark				
APPENDICES (CONTINUED)	Runoff volumes and accumulated drainage areas at same locations as for peak flow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Hydrographs at key locations for existing and future peak flows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Peak Flow Profiles along drainageway centerline for existing and future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Sample SWMM (100-yr) output report with full input included	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Any other hydrology tables and figures not included in Section 3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Appendix C – Hydraulic Analysis	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Drainage Problem Areas figure – Map depicting drainage problem areas, including peak flow for each problem area location	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	HEC-RAS sections illustrating design storm flood elevations	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Floodplain maps delineating the existing and future land use, existing infrastructure 100-year floodplains	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Any other hydraulic analysis tables and figures not included in Section 4	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Appendix D – Legal Opinion	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Copy of standard legal opinion provided by District	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Appendix E – Wetland and Riparian Inventory	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Maps showing the results of wetland and riparian inventory	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Appendix F – Alternatives Analysis	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Other alternatives analysis tables and figures not included in Section 5, including SWMM and/or HEC-RAS modeling results for alternatives	N/A	<input type="checkbox"/>	<input type="checkbox"/>	
	Appendix G – Master Plan Maps	N/A	N/A	<input type="checkbox"/>	
	Figure illustrating master plan improvements in plan view(see EPlan Guidelines for required elements)	N/A	N/A	<input type="checkbox"/>	
	Appendix H – Master Plan Profiles	N/A	N/A	<input type="checkbox"/>	
	Figure illustrating master plan improvements in profile view (see EPlan Guidelines for required elements)	N/A	N/A	<input type="checkbox"/>	
	Appendix I – Conceptual Design Information	N/A	N/A	<input type="checkbox"/>	
	Typical channel section details	N/A	N/A	<input type="checkbox"/>	
	Large scale drawings of detention ponds or other areas showing more detailed information	N/A	N/A	<input type="checkbox"/>	
Any other master plan details (i.e. drop structures, check structures, outlet structures)	N/A	N/A	<input type="checkbox"/>		
Any additional Conceptual Design supporting information	N/A	N/A	<input type="checkbox"/>		