



Draft Design Management Plan Appendix 3.B

Prepared by

F.H. Paschen, Ragnar Benson, Milhouse, BOWA Joint Venture



RED LINE EXTENSION MAINLINE DESIGN BUILD (RLE-MLDB)
PROJECT





Revision History

ISSUE AND REVISION RECORD

REVISION	DATE	AUTHOR	CHECKER	APPROVER	DESCRIPTION
0	4/15/2024	Brian Sides			







TABLE OF CONTENTS

Issue and F	Revision Record	. 2
Table of Co	ntents	. 3
Acronyms		. 5
2.4.2 D€	esign Work Organization	. 9
2.4.2.B	Design Packages	. 9
2.4.2.B.1	Design Package Overview And Philosophy	9
2.4.2.B.2	Design Package Segments	10
2.4.2.B.3	Full Design Package Breakdown	11
2.4.2.B.4	Design Quality Process	13
2.4.2.b.4.1	QC Reviews	13
2.4.2.b.4.2	Interdisciplinary Reviews	14
2.4.2.b.4.3	Segment Design Package Manager and Lead Designer Reviews	14
2.4.2.b.4.4	Conflict Escalation Protocol	14
2.4.2.b.4.5	Constructability Reviews	14
2.4.2.b.4.6	QA Process	14
2.4.2.b.4.7	Client Reviews	15
2.4.2.b.4.8	Benefits of Our Approach	
2.4.2.C	Design Stages	
2.4.2.C.1	Concept Stage	16
2.4.2.C.2	Intermediate Stage	17
2.4.2.C.3	Final Stage	17
2.4.2.C.4	IFP Stage	18
2.4.2.C.5	IFC Stage	18
2.4.2.D	Work Packages	18
2.4.2.E	Temporary and Permanent Design	19
2.4.2.E.1	Bridge Structures	19
2.4.2.E.2	Systems	19
2.4.2.E.2.1	Temporary	19
2.4.2.E.2.2	Staging and Phasing	19
2.4.3 De	esign Approach	20





2.4.3.1	Team & Approach	20
2.4.3.G	Formal Design Reviews	23
2.4.3.H	Over-the-Shoulder Reviews	23
2.4.3.1	Peer Reviews	23
2.4.3.J	Roles and Responsibilities of Design Team	23
2.4.4	Sustainable Design	24
2.4.5	Lead Designer	24
2.4.6	Responsible Professionals	
2.4.7	Specifications	26
2.4.8	Design Submittals	27
2.4.9	Mock-ups & Samples	28
2.4.10	Interface Management	
2.4.11	Design Schedule	29
2.4.12	Comments and Disposition	30
2.4.13	Design Issues and Resolution	30
2.4.14	Design Variations	31
2.4.15	Design Revisions	31
2.4.16	Construction Phase Design Services by Designer	32
Appendi	x1	A38





ACRONYMS

APTA	American Public Transportation Association
C&M	Construction & Maintenance
CAD	Computer Aided Design
CDOT	Chicago Department of Transportation
CEL/CIL	Certifiable Elements and Items List
СНА	Chicago Housing Authority
CIP	Cast in Place
CN	Canadian National
CPD	Chicago Park District
CQMS	Contractor's Quality Management System
CR	Constructability Review
CRM	Comment Resolution Meeting
CROE	Contractor Right of Entry
CSI	Construction Specifications Institute
CSP	Certified Safety Professional
CSSCP	Contractor's Safety & Security Certification Plan
СТА	Chicago Transit Authority
DBIA	Design Build Institute of America
DBMS	Design Build Management System
DBT	Design Build Team
DCCC	Design Criteria Conformance Checklist
DOB	Department of Buildings





DOT	Department of Transportation
DPD	Department of Planning & Development
DQAM	Design Quality Assurance Management
DQMP	Design Quality Management Plan
DWM	Department of Water Management
FDOT	Florida Department of Transportation
FHP	F.H. Paschen
FHP JV	F.H. Paschen, Ragnar Benson, Milhouse, BOWA Joint Venture
FMECA	Failure Modes, Effects, and Criticality Analysis
FTA	Federal Transportation Authority
GPR	Geotechnical Planning Reports
GS	Guideway Segment
ICC	Illinois Commerce Commission
IDOT	Illinois Department of Transportation
IDR	Interdisciplinary Review
IFC	Issued for Construction
IFP	Issued for Permit
IHB	Indiana Harbor Belt
J	Jacobs
JLK	Johnson Lasky Kindelin
JV	Joint Venture
LF	Linear Feet
LNTP	Limited Notice to Proceed
LOD	Level of Development





MAJV	Mass./Aldridge Joint Venture
MOT	Maintenance of Traffic
MTA	Metropolitan Transportation Authority
NCR	Non-conformance Report
NICTD	Northern Indiana Commuter Transportation District
NS	Norfolk Southern
NTP	Notice to Proceed
OUC	Office of Underground Construction
PE	Professional Engineer
PHA	Preliminary Hazard Analysis
PSQCP	Project Specific Quality Control Plan
QA	Quality Assurance
QC	Quality Control
RB	Ragnar Benson
RFI	Request for information
RFP	Request for Proposal
RLE	Red Line Extension
ROW	Right of Way
RSI	Rail Structure Interaction
SCC	Safety Certification Checklist
SE	Structural Engineer
SEP	Subsurface Exploration Plan
SOIL	
SOM	Skidmore, Owings & Merrill





SSC	Safety & Security Certification
SSCAP	Signal System Certification Approach Plan
SSCP	Safety and Security Certification Plan
SSCVR	Safety and Security Certification Verification Report
SSDR	System Safety Delivery Report
SSHA	Sub-System Hazard Analysis
SSRC	Safety and Security Review Committee
STIP	Signals Test & Inspection Plan
TIC	Testing, Inspection & Commissioning
TS	TranSmart
TSSS	Transit Safety & Security Solutions
TUN	Temporary Use Notice
TVA	Threat and Vulnerability Assessment
UPRR	Union Pacific Railroad
WBS	Work Breakdown Structure
WRP	Water Reclamation Plant