# Sanitary Sewer Overflow (SSO) Control and Wastewater Facilities Program

# Right-of-Way Map/ Real Estate Requirements

City of Baton Rouge/Parish of East Baton Rouge Department of Public Works



Submitted by CH2MHILL

Prepared by: Geoff Wilson Reviewed by: Greg Breaux Approved by: Jennifer Baldwin

> Revision 5 September 2011

# **Revision Control Log**

Revision	Date Issued	Description of Changes	Pages Affected
1	10/2009	Revision of Program requirements	All
2	4/2010	Revision of Program requirements	All
3	9/2010	Revision of Program requirements	All
4	4/2011	Revisions to Appendix A	Appendix A
5	9/2011	Revision of Program requirements	All

## Contents

Sectio	n		Page
Revis	ion C	Control Log	iii
1.	Intr	roduction	1-1
2.	Ger	neral	2-1
	2.1	Servitude Dimensions	2-1
	2.2	Apparent Right-of-Way	2-1
	2.3	Property Surveys	
	2.4		
3.	Rig	ht-of-Way Maps	
	3.1		
4.	Del	liverables	
	4.1	Delivery Schedule	4-1
5.		nd Acquisition Flowchart	

#### Attachments

- Servitude Dimension Guidelines Α
- Right-of-Way Map Checklists В
- C
- Sample Maps Right-of-Way Mapping Fee Template D

## 1. Introduction

This document provides requirements for the preparation of right-of-way maps for land acquisition on projects associated with the City of Baton Rouge/Parish of East Baton Rouge (C-P) Sanitary Sewer Overflow (SSO) Control and Wastewater Facilities Program. These requirements are provided to encourage consistency in the design approach used by various Engineers/Land Surveyors.

This document also provides guidelines to be utilized by the Engineer/Land Surveyor to determine the minimum dimensions of the servitude(s) required for project construction, access and maintenance, both temporary and permanent.

#### 2. General

Where land acquisition is required, right-of-way maps shall be prepared for Program projects. These maps shall be prepared in accordance with the Louisiana Department of Transportation and Development (LaDOTD) Location and Survey Manual, as supplemented by these Requirements.

Implementation of these Requirements will require the participation of the following Program Manager (PM) and C-P Department of Public Works (DPW) staff:

- DPW Project Manager (DPW PM)
- Program Project Manager (PPM)
- Program Land Manager (PLM)
- Right-of-Way Map Manager (RMM)

#### 2.1 Servitude Dimensions

The Engineer/Land Surveyor shall utilize the guidelines provided in Attachment A to determine the minimum dimensions of the servitude(s) required for project construction, access and maintenance. The guidelines provide dimensions for both temporary and permanent servitudes that will be required for the project.

#### 2.2 Apparent Right-of-Way

As part of the Base Engineering Contract, the Engineer/Land Surveyor shall be responsible for identifying the apparent right-of-way for the project while performing the topographic survey.

#### 2.3 Property Surveys

All property surveys shall be performed by a Professional Land Surveyor licensed in the State of Louisiana. Property surveys are defined as location of property corners and boundaries as identified in Louisiana Revised Statute Title 37 Chapter 8 and the Louisiana Administrative Code Title 46 Part LXI. Property surveys shall be conducted in accordance with *LaDOTD Location and Survey Manual* — Chapter II, Property Survey.

#### 2.4 Project Needs

The Program includes a multitude of projects with varying real estate needs. These needs will be determined by the Engineer/Land Surveyor in consultation with the aforementioned PPM and DPW staff.

The Engineer/Land Surveyor shall have the apparent right-of-way set and preliminary real estate needs established by the 15% design milestone for pipeline and pump station projects. Negotiations for right-of-way mapping and fees shall begin at the 30% design milestone.

## 3. Right-of-Way Maps

Depending on the needs of the project, right-of-way and/or servitude maps shall be prepared for the project. All maps shall be submitted on the standard 22"x 34" border provided, but printed on 24"x 36" sheets of paper in accordance with the checklists in Attachment B where contiguous right-of-way needs occur. Sample maps are included in Attachment C to maintain consistency in the design approach for the Program. The AutoCAD title blocks will be provided to the Engineer/Land Surveyor by the PPM.

#### 3.1 Right-of-Way Map Development

The different stages of right-of-way map development follow.

Base Right-of-Way Maps — Base right-of-way maps shall include the existing right-of-way lines as determined in the property survey and the required right-of-way/servitude lines. These lines shall be overlaid on aerial photography along with existing owner's names and tract designations shown. Metes and bounds are not required at this stage. The intent of these maps is to allow review and approval of the required right-of-way/servitude lines in advance of preparing detailed right-of-way maps. Requirements are detailed in the checklists in Attachment B.

**Acquisition Set Right-of-Way Maps** – Acquisition set right-of-way maps shall include fully detailed parcels overlaid on aerial photography. Distances to relevant features shall be dimensioned. These maps will be used by the PLM during the appraisal and acquisition process to aid in discussions and negotiations with the land owners. Requirements are detailed in the checklists in Attachment B.

**Recordation Set Right-of-Way Maps** — Recordation set right-of-way maps shall be prepared upon request of the PLM. These maps shall be legible maps acceptable to be recorded in the Clerk of Court's office. Requirements are detailed in the checklists in Attachment B.

#### 4. Deliverables

Deliverables will be determined based on the specific needs of each project. Deliverables shall include Base Maps, Acquisition Maps, and Recordation Maps. Final CAD files and completed checklists shall be submitted along with pdf copies of the signed and sealed hard copy maps. Also, cogowin (or equivalent) program input and output files shall be provided with each acquisition parcel.

#### 4.1 Delivery Schedule

The schedule for the preparation of deliverables as part of these Requirements shall be as follows:

- 1. Apparent right-of-way lines shall be surveyed during the topographic survey and established by 15% design phase completion.
- The PLM will participate in the 15% phase construction plan review for real estate impacts and needs. This review will be initiated by the PPM. At this time, final pipeline routing, and/or pump station site selection will be approved and preliminary real estate requirements determined.
- 3. At the 30% design milestone, the Engineer/Land Surveyor shall prepare a list of properties by the C-P Planning Commission Lot Identification Number that will require Phase II abstracts, including permanent and temporary servitudes.
- 4. The Engineer/Land Surveyor shall begin preparing a fee proposal for right-of-way mapping at the completion of the 30% design phase milestone for submittal to the PPM. A template to be used by the Engineer/Land Surveyor for determining fees is included as Attachment D. The RMM and/or PLM will assist the PPM in reviewing the Engineer/Land Surveyor's proposal for right-of-way/servitude map preparation. Once the scope and fee is approved, the Engineer's Contract will be amended for the right-of-way mapping work.
- 5. The PLM will order Phase II title abstracts within 14 days of request by the Engineer/Land Surveyor.
- 6. The PLM will provide Phase II titles to the PPM for distribution to the Engineer/Land Surveyor upon receipt and no later than the 60% design phase completion.
- 7. Base right-of-way maps shall be submitted to the PPM within 30 days of the 60% design phase milestone. Accompanying the base right-of-way map submittal shall be a completed, sealed, signed, and dated checklist and a key map (or spreadsheet) indicating the status of all required title work.
  - **Base Right-of-Way Map Submittal** Engineer/Land Surveyor shall submit base maps and checklists to PPM as stated above. The PPM will send 3 11x17 sets to the PLM along with an electronic copy of the submittals.. The PLM will transmit the necessary copies to the RMM for review. Once reviewed, the RMM will send the comments to the PLM who

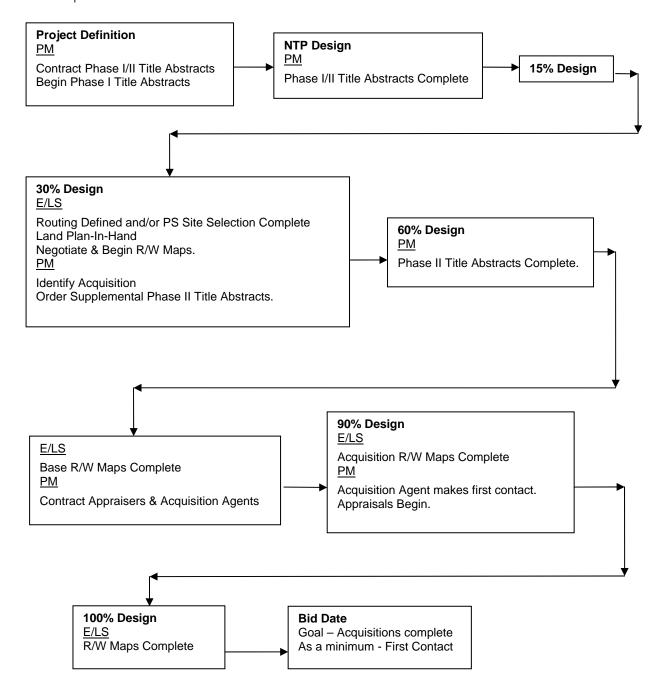


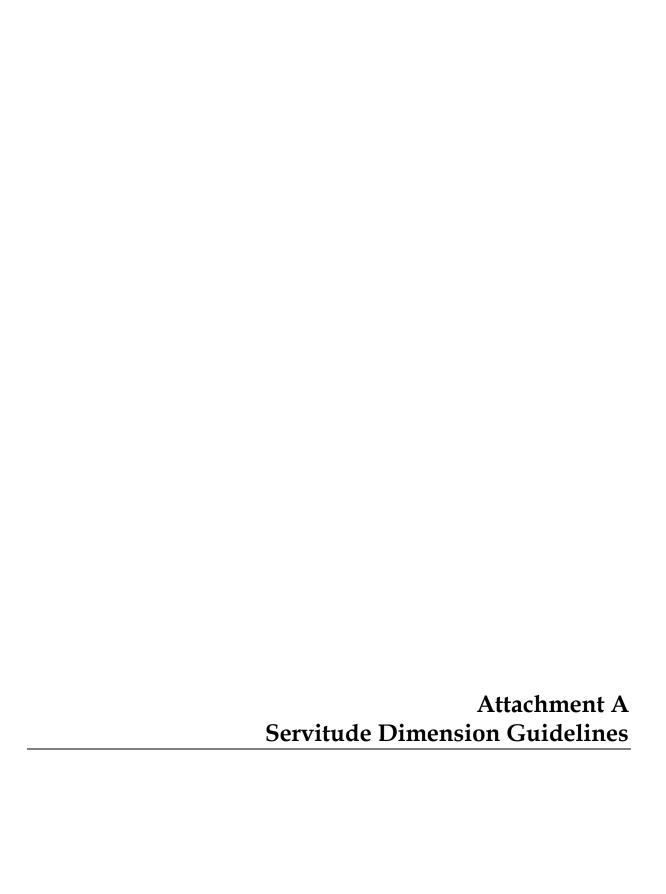
- will review and send to the PPM. The PPM will send them to the Engineer/Land Surveyor.
- 8. Acquisition Set Maps shall be submitted to the PPM by the 90% completion of design milestone for review by the RMM. Accompanying the acquisition right-of-way map submittal shall be a completed, sealed, signed, and dated checklist and cogowin (or equivalent) input and output files. Accompanying the submittal shall be a key map (or spreadsheet) indicating the status of all required title work.
  - **Acquisition Set Right-of-Way Map Submittal** Engineer/Land Surveyor shall submit acquisition set maps and checklists to PPM as stated above. The PPM will send 3 11x17 sets to the PLM along with an electronic copy of the submittals.. The PLM will transmit the necessary copies to the RMM for review. Once reviewed, the RMM will send the comments to the PLM who will review and send to the PPM. The PPM will send them to the Engineer/Land Surveyor. The Engineer/Land Surveyor shall incorporate comments and submit as above until approved. Once approved, the Engineer/Land Surveyor shall submit Final Acquisition Maps that are signed, sealed, and dated to the PPM.
- 9. Recordation set right-of-way maps shall be submitted to the PPM upon request of the PLM.
  - **Recordation Set Right-of-Way Map Submittal** Upon request, the Engineer/Land Surveyor shall transmit final maps to the PPM for handling with C-P Parish Attorney and copy the PLM and DPW PM. One original half-scale set of maps shall be submitted.

## 5. Land Acquisition Flowchart

Exhibit 1 summarizes the schedule for deliverables and the overall land acquisition process and includes the responsibilities of the PM and the Engineer/Land Surveyor (E/LS).

**EXHIBIT 1**Land Acquisition Flowchart





#### BTR SSO Program - Servitude Dimension Guidelines

Equipment used for calculations: 1.450E Cat Rubber Tired Backhoe with General Purpose Bucket – 8' wide, 1.75 cu. yds., 17'3" digging depth. 5. John Deere 450C LC Track Hoe with 3.06 cu. Yd. bucket. 12'5" wide with digging depth of 23'10"

Standard OSHA Section 5 Section 2 Part 7 benching used with Soil classification of B at 1:1 slope for general calculations and slope can vary depending upon soil classification -.

The guidelines for gravity sewer, force mains, etc. are below but this is not an all-inclusive list. Each jurisdiction will have it's own specific language and requirements including flow rates, separations, slopes, installation, compaction, etc.

Sewer Force Main servitudes: Minimum width with no less than 7.5 ft. on each side of main. If parallel to public right of way then width may be reduced. Servitude must extend 7.5 ft. beyond main terminus.

Sewer Gravity Main servitudes: Minimum width with no less than 7.5 ft on each side of main. If parallel to public right of way then width may be reduced. Servitude must extend 12.5 ft beyond main terminus. Horizontal separations that must be maintained include 100 ft from any private or public water supply source. 50 ft. from any normal high water. 10 ft. from any other stream or lake. 25 ft. from private wells. Where these separations cannot be maintained then DIP with water main equivalent joints must be used. Depth must be a minimum of 4 ft. from top of pipe to finished subgrade in roadways.

Air Release Valve Servitude: Minimum of 5.0 ft. on each side of Air Release Valve.

Concrete curb/gutter/toe of slope in urban areas. Shall be located outside of controlled access highway right-o-way except where approved. Protected by 6 ft. temporary servitude. Bore pits 20 ft. x 30 ft. off at pipe.

Open Cut

Temp. Const.

Permanent

**Shielded** 

Open Cut

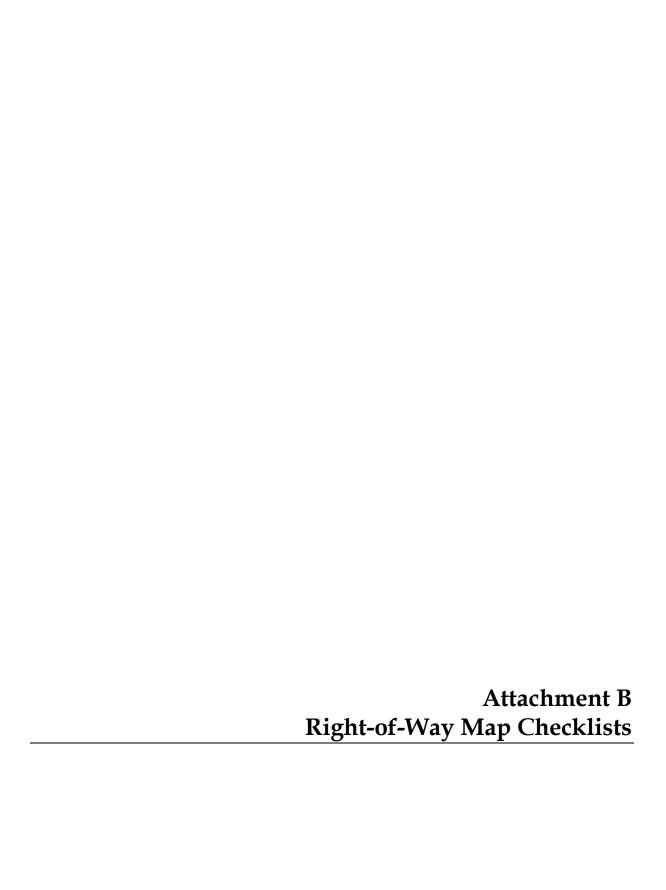
Temp. Const.

**Sloped** 

	Servitude	Servitude	Servitude	Comments
Pipe Diameter and Depth	Feet	Feet	Feet	
8 Inches to 16 Inches	Preferred Width	Minimum Width		See note 1
0 – 6 Feet Deep	25	17	15	
6 – 10 Feet Deep	25	17	15	
10 – 14 Feet Deep	30	17	20	
14 – 20 Feet Deep	30	17	20	
Greater than 20 Feet Deep	40	20	25	See note 2
Total width of servitude may include existing	g if available.			
	Sloped	Shielded	Permanent	
18 Inches to 30 Inches				
0 – 6 Feet Deep	36	23	15	
6 – 10 Feet Deep	36	23	20	
10 – 14 Feet Deep	36	23	20	
14 – 20 Feet Deep	36	23	25	
Greater than 20 Feet Deep	42	23	25	See note 2
36 Inches to 42 Inches				
0 – 6 Feet Deep	40	27	20	
6 – 10 Feet Deep	40	27	20	
10 – 14 Feet Deep	40	27	25	
14 – 20 Feet Deep	40	27	25	
Greater than 20 Feet Deep	44	27	35	See note 2
48 Inches to 54 Inches				
0 – 6 Feet Deep	40	28	25	
6 – 10 Feet Deep	40	28	25	
10 – 14 Feet Deep	40	28	30	
14 – 20 Feet Deep	40	28	30	
Greater than 20 Feet Deep	46	28	35	See note 2

<sup>1.</sup> Design Consultant should attempt to obtain the "Preferred": width for all construction servitudes. If, due to site specific restrictions this is not possible, then the "Minimum" width should be obtained. Note that the Land Team will have input into the final width of any servitudes obtained.

<sup>2.</sup> Sloping, benching or shields shall be in accordance with OSHA Standards Subpart P-Excavations



## Base Right-of-Way Map Checklist

The base right-of-way map set shall conform to all standards described in the LaDOTD *Location and Survey Manual* dated April 1, 1987, as amended by the following checklist.

Enter YES, NO, or N/A (not applicable) only. All "NO" entries shall be corrected or justified in detail.

Title Page
Vicinity Map
Location Map (including scale and North Arrow)
C-P Project Number (s)
C-P Project Name
Station Number at start and end of Project (Phase)
Date
Sheet Index
Title Block (including)
Revision Block
Firm Logo
Firm Address
C-P Project Title, Number
Project File Block (including)
Parish
Project Number
Sheet Number
Title Page prominently identified as "BASE RIGHT-OF-WAY MAPS"
Individual Right-of-Way Sheets
Title Block
C-P Project Number
C-P Project Name
Parish
Date
Scale
Drawn by
Computed by
Sheet Number
Field Book No
Project File Block (upper right corner)
Project Number
Parish
1 411011



## General

	Map Dimensions - 22"x34" border printed on 24"x36" paper
	Map Scale 1" = $100'$ , 1" = $50'$ , 1" = $30'$ or 1" = $20'$ (1"= $40'$ shall not be used)
	Produce $\frac{1}{2}$ scale (11" x 17") right-of-way maps for recording purposes.
	Map legible at ½ scale.
	Caption (including)
	Land District
	Township/Range
	Section Number(s)
	Section Line(s) Shown/Labeled
	Property Lines Shown
Ma	ips
	Each map prominently identified as "BASE RIGHT-OF-WAY MAPS"
	Legend for all lines and symbols for all features shown
	Found or set Pipes/Iron Rods/Monuments identified
	Baseline Line Shown/Labeled
	North Arrow
	Bearing Base
	Right-of-way Lines Shown/Labeled
	Major Station Numbers, Normally every 500 feet, PCs, PTs, and PIs
	Major Station Ticks on Center Line every 500 feet
	Minor Station Ticks on centerline every 100'
	Tangent Bearings and Curve Data Shown for Baseline Only
	PI Station
	Delta Angle
	Degree of Curvature
	Tangent Length
	Length of Curve
	Radius of Curve
	Chord Bearing and Chord Distances on Curves (Along Parcel Lines Only)
	Station Ties
	All Property Corners
	Leader Lines for all PCs, PT, and PIs
	Property Owners
	Subdivision Name(s)
	Square/Block Identifier
	Lot Identifier
	Intersecting Streets
	Right(s)-of-Way Intersection Station and Offset
	Preliminary Stamp with Surveyor's Name and License Number and Date (also
	include the following statement: "This document is not to be used for construction,
	hidding recordation conveyance sales or as the basis for the issuance of a permit



\_\_\_\_\_Parcel Numbering Sequence. (As described in Section 3.05 of Location and Survey Manual and as supplemented by the following Parcel Identification Legend)
\_\_\_\_\_Railroad crossings tied to Railroad Mile Posts

All "NO" entries shall be corrected or justified in detail.

#### Parcel Identification Legend

Parcel # XX-XX

Fee simple less mineral rights

Parcel # XX-XX-C-X

Temporary servitude for construction activities

Parcel # XX-XX-D-X

Permanent servitude for the specific purpose of drainage activities

Parcel # XX-XX-S-X

Permanent servitude for the specific purpose of constructing and maintaining sewer facilities

Parcel # XX-XX-M-X

Permanent, multi-purpose servitude for all public purposes including, but not limited to, drainage, sewer, utilities, and

Parcel #XX-XX-A-X Permanent servitude of access

sloping

# Recordation Set and Acquisition Set Right-of-Way Map Checklist

The right-of-way recordation set shall conform to all standards set out in the LaDOTD publication *Location and Survey Manual* dated April 1, 1987 as amended by the following checklist.

Enter YES, NO, or N/A (not applicable) only. All "NO" entries shall be corrected or justified in detail.

Title Page
Vicinity Map
Location Map (including scale and North Arrow)
C-P Project Number (s)
C-P Project Name
Station Number at start and end of Project (Phase)
Date
Sheet Index
Title Block (including)
Revision Block
Firm Logo
Firm Address
C-P Project Title, Number and Route Number (If Applicable)
Project File Block (including)
Parish
Project Number
Sheet Number
Individual Right-of-Way Sheets
Title Block
C-P Project Number
C-P Project Name
Parish
 Date
Scale
Drawn by
Computed by
Sheet Number
Field Book No
Project File Block (upper right corner)
Project Number



 _Parish
 _Sheet No

## General

Map Dimensions - 22"x34" border printed on 24"x36" paper	
Map Scale $1'' = 100'$ , $1'' = 50'$ , $1'' = 30'$ or $1'' = 20'$ ( $1'' = 40'$ shall not be used)	
Produce ½ scale (11" x 17") Right-of-Way maps for recording purposesMap legible at ½ scale.	
Nap legible at 72 scaleCaption (including)	
Land District	
Township/Range	
Section Number(s)	
Section Line(s) Shown/Labeled	
Property Lines Shown	
Servitude Lines, recorded and apparent, shown/labeled	
Mane	
Maps	
Legend for all lines and symbols for all features shown	
Found or set Pipes/Iron Rods/Monuments identified	
Baseline Line Shown/Labeled	
North Arrow	
Bearing Base	
State Plane Scale Factor and Theda Angle	
Right-of-Way Lines Shown/Labeled	
State Plane Coordinates at Match Lines	
Major Station Numbers, Normally every 500 feet, PCs, PTs, and PIs	
Major Station Ticks on Center Line every 500 feet	
Minor Station Ticks on centerline every 100'	
Curve Data Shown	
PI Station (Centerline Only)	
Delta Angle	
Degree of Curvature (For Main Centerline Curve Data)	
Tangent Length	
Length of Curve	
Radius of Curve	
Chord Bearing and Chord Distances on Curves (Along Parcel Lines On	ly)
Station Ties	
All Property Corners	
Leader Lines for all PCs, PT, and PIs	
Property Owners	
Tract Area based upon relevant method (deed, plat, calculations, etc.)	



Subdivision Name(s)
Square/Block Identifier
Lot Identifier
Intersecting Streets
Right(s)-of-Way Intersection Station & Offset
Surveyor's Seal, Signature and Date
Parcel Numbering sequence. (As described in Section 3.05 of "Location and Survey
Manual" and as supplemented by Parcel Identification Legend below)Acquisition Block
Parcel Number
Owner's Name
Acquisition (date)-Original & Bundle
Areas in Acres (If greater than 0.75 Acres) or Square Feet (If less than 0.75
Acres)
Railroad crossings tied to Railroad Mile Posts
Supplemental Residual Maps (large residual areas) typical
1"=1000' scale
1 - 1000 30010
Baseline of proposed project
Property Line (If entire Parcel is not shown on the body or individual Right-of-Way
Map)
Ownerships of Parcels where tract areas are shown on the residual
Approximate area of tract and method of determination Station Number every 1000 feet (closer for short projects)
Station Number every 1000 feet (closer for short projects)Section, Township & Range
Appropriate Land District(s)
Map Dimensions - 22"x34" border printed on 24"x36" paper
Notes
Special Maps may be 8.5"x 14" "Legal" Size where isolated and special conditions warrant
The Right-of-Way Acquisition Set shall include all information on the Recordation Set and
the following information:
Title Page prominently identified as "ACQUISITION SET"
Each map prominently identified as "ACQUISITION SET"
Superimpose maps on aerial photography
Distances from proposed right-of-way to existing structures
Depict and fully describe all existing structures, paving and topographic features
within 100 feet of required right-of-way (may be amended to 50 feet for urban
conditions)
Surveyor's Seal, Signature and Date
All "NO" entries shall be corrected or justified in detail.



## Parcel Identification Legend

Parcel # XX-XX Fee simple less mineral rights

Parcel # XX-XX-C-X Temporary servitude for construction activities

Parcel # XX-XX-D-X Permanent servitude for the specific purpose of drainage

activities

Parcel # XX-XX-S-X Permanent servitude for the specific purpose of constructing

and maintaining sewer facilities

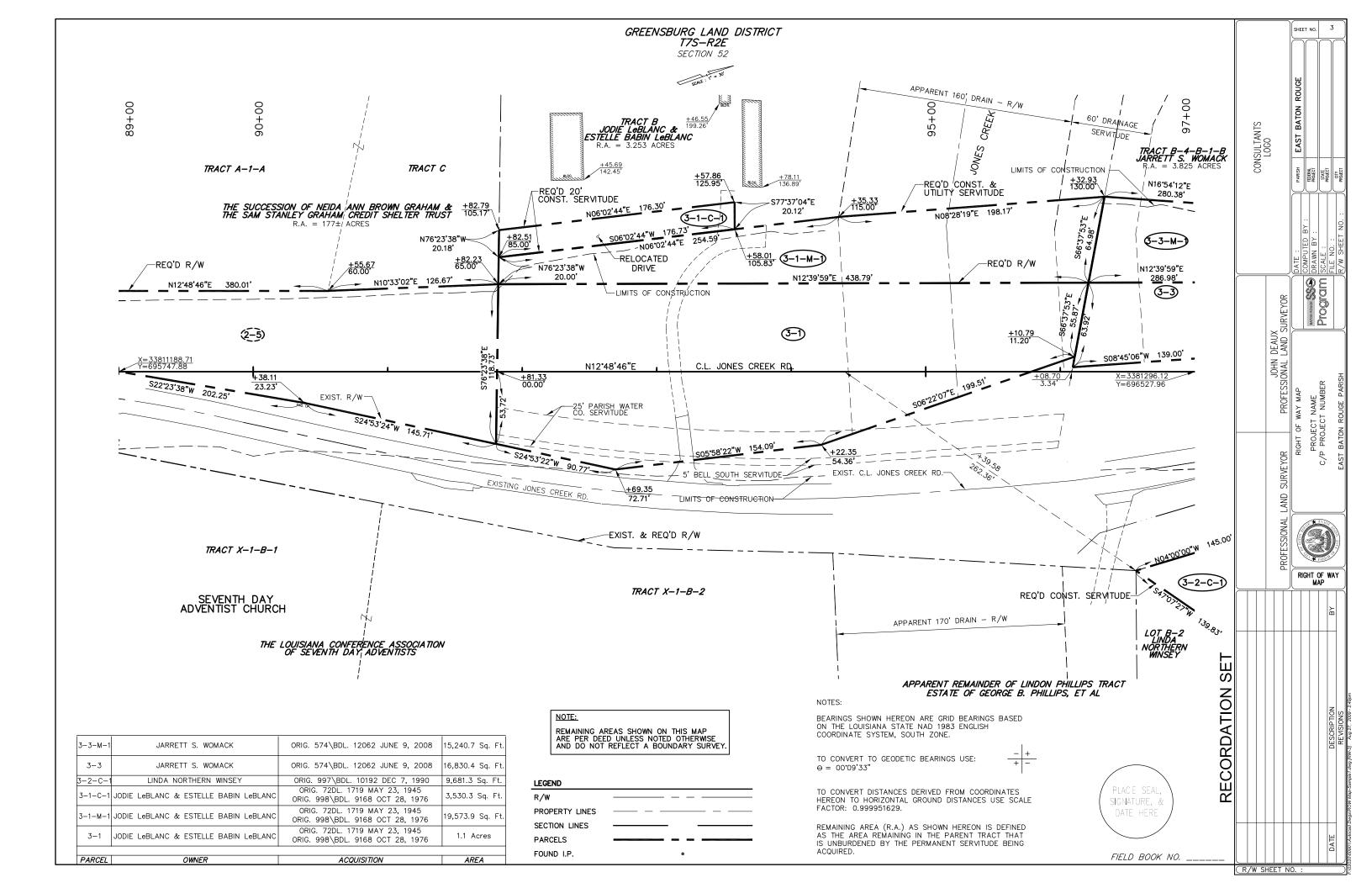
Parcel # XX-XX-M-X Permanent, multi-purpose servitude for all public purposes

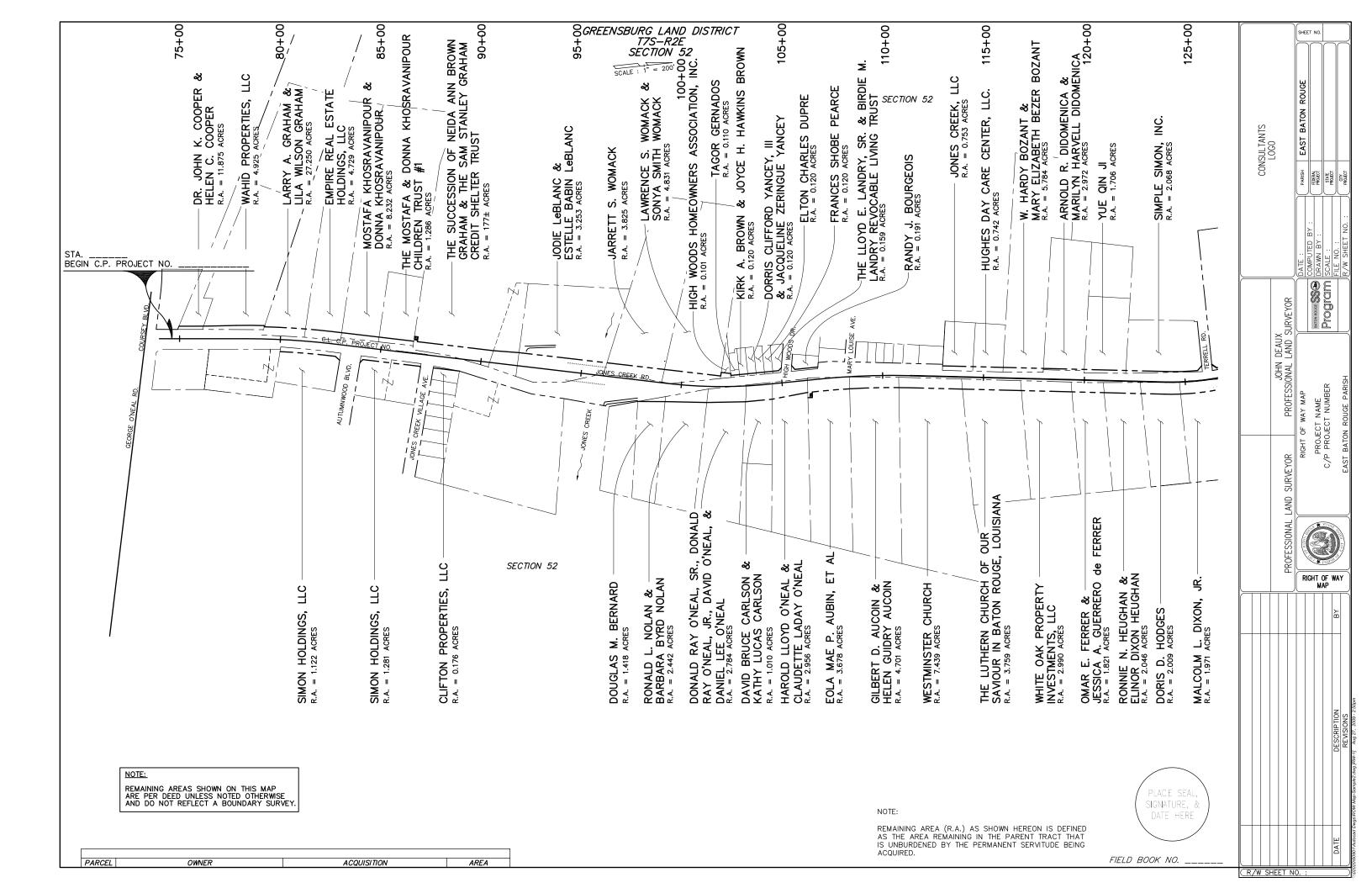
including, but not limited to, drainage, sewer, utilities, and

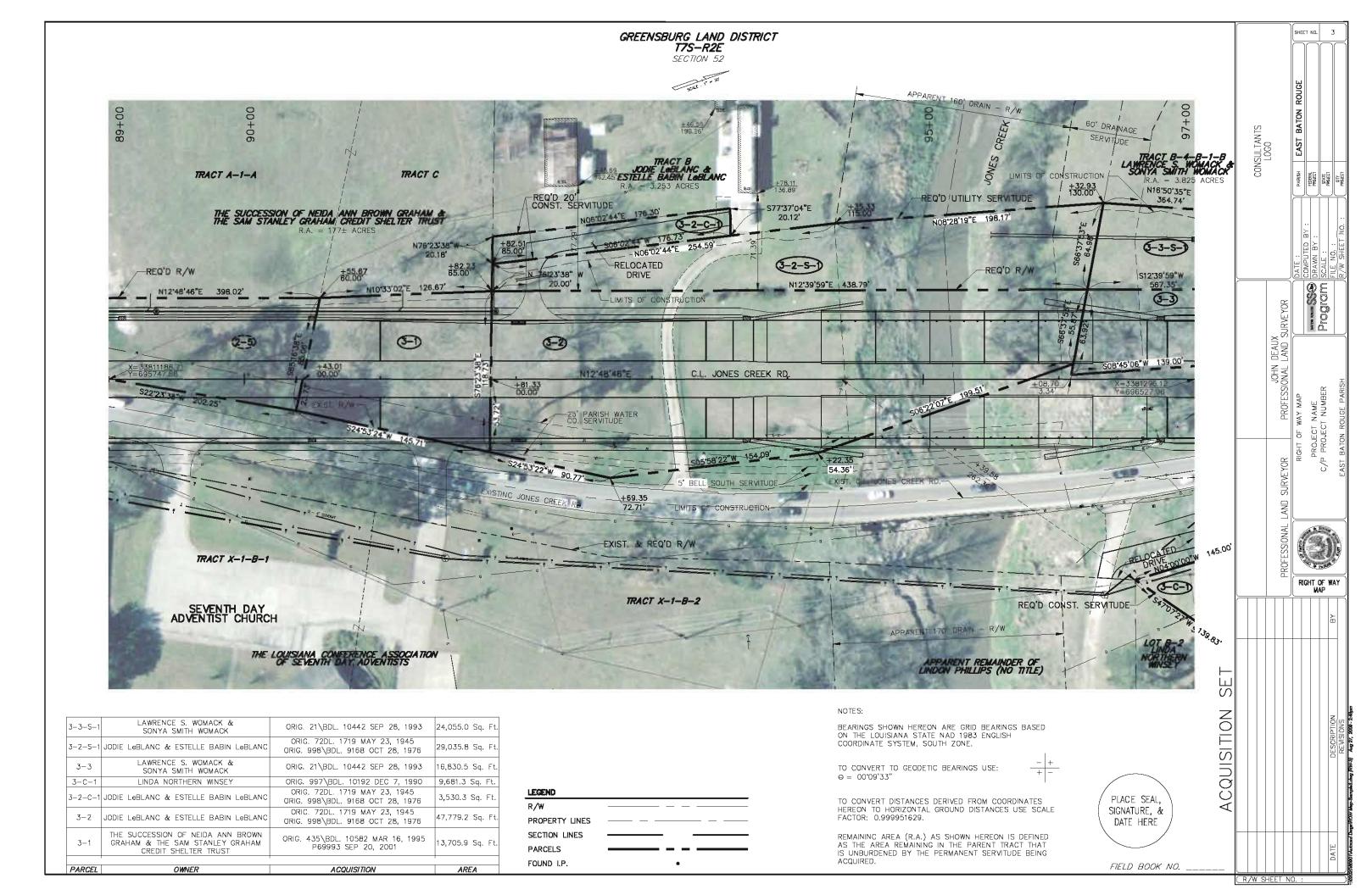
sloping

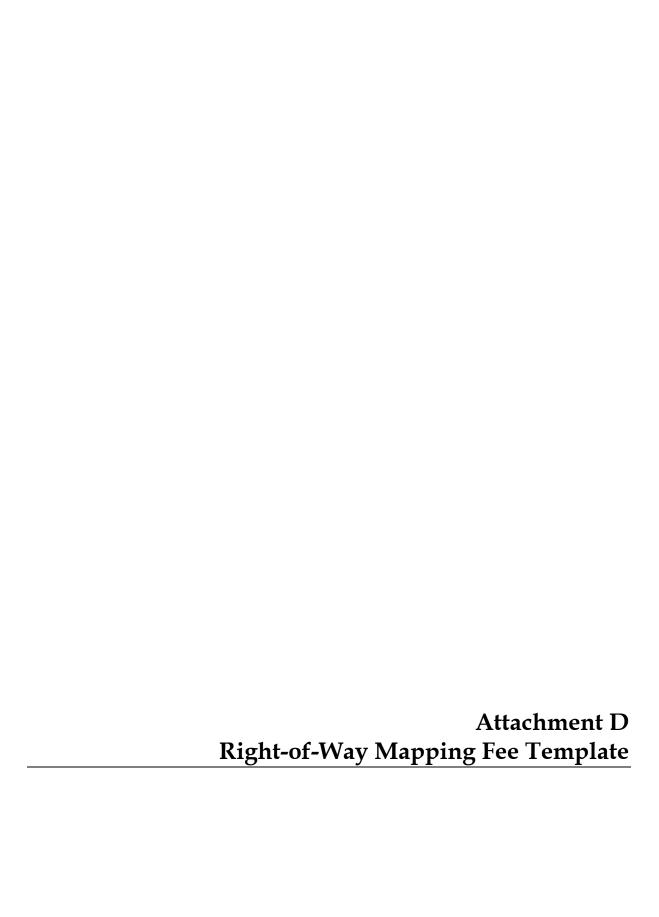
Parcel #XX-XX-A-X Permanent servitude of access











# Project Name CP Project No.

Right of Way Maps & Property Survey

#### MAN HOUR ESTIMATE

# OF SHEETS	SHEET DESCRIPTION	3-M SURVE		PRO. CLI		DRA	FTER	DESIG	NER/E.I	ENG./ SURV	LAND EYOR	SUPER	VISOR	PRINO	CIPAL	ТОТ	ALS
			TOTAL	PER SHT	TOTAL	PER SHT	TOTAL	PER SHT	TOTAL	PER SHT	TOTAL	PER SHT	TOTAL	PER SHT	TOTAL	PER SHT	TOTAL
1	Project Control and Administration	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	7
1	Reestablish Survey Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	7
1	Property Survey	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	7
1	Coordinate Title Work	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	7
1	ROW Recordation Maps (1"=20')	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	7
1	ROW Acquisition Maps (1"=20')	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	7
1	ROW Base Maps (1"=20')	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	7
7	TOTAL HOURS		7		7		7		7		7		7		7		49

## Project Name CP Project No. Right of Way Maps & Property Survey

Surveying			Rate		
Three (3) man party	7 crew hours	s @	\$5.00	=	\$35.00
Four (4) man party	crew hours	s @	\$10.00	=	\$0.00
Five (5) man party	crew hours	; @	\$15.00	=	\$0.00
Project Clerk	7 hours	@	\$20.00	=	\$140.00
Drafter	7 hours	@	\$25.00	=	\$175.00
Designer/E.I	7 hours	@	\$20.00	=	\$140.00
Eng./Land Surveyor	7 hours	@	\$15.00	=	\$105.00
Supervisor	7 hours	@	\$10.00	=	\$70.00
Principal	7 hours	@	<b>\$5.00</b>	=	\$35.00
	DIRECT PAYRO	OLL COST			\$700.00
	Payroll Additives	0.00%			\$0.00
	Overhead	0.00%			\$0.00
	Total Direct and	Indirect Cost			\$700.00
	Profit (15%)		\$105.00		
	Direct Expenses (S	See Below)			\$0.00
	LUMP SUM FEE	E			<u>\$805.00</u>

#### DIRECT EXPENSES

(List those items not included as a part of Overhead)