ENGINEERING APPROVAL SUBDIVISION CHECKLIST

Y N N/A Residential Planned Unit Development

☐ ☐ ☐ 1. Name of proposed development 24.5.4.7.1

☐ ☐ ☐ 2. Name of developer 24.5.4.7.2

☐ ☐ ☐ 3. Signature of Civil Engineer, Seal 24.5.4.8; *R.S.*37:696-*LAC*19-3:(10.2, 10.3,10.4)

☐ ☐ ☐ a. Plat required 24.5.4.6.5; *R.S.*33:5051

☐ ☐ ☐ b. Specifications received 24.5.3.3

☐ ☐ ☐ 4. Vicinity map 24.5.4.7.4

☐ ☐ ☐ 5. Located by Township, Range and Section 24.5.4.3.7.*E*

☐ ☐ ☐ a. Section, Township, Range, City Limits, and/or Parish Boundaries which abut or cross the proposed subdivision 24.5.4.7.8

☐ ☐ ☐ 6. Date, scale (1" = 200' minimum suggested) and north arrow 24.5.4.7.5

☐ ☐ ☐ 7. Preliminary approval granted and written staff comments submitted 24.5.3.3.

8. Development Improvements Residential

☐ ☐ ☐ a. Proposed street names 24.5.4.7.6

☐ ☐ ☐ b. Lot and block numbers 24.5.4.7.6

☐ ☐ ☐ c. Alignment of existing streets, rights-of-way, easements, and servitudes which join or cross the proposed subdivision shown 24.5.4.7.7

1. Right-of-way

☐ ☐ ☐ a. 40’ for subsurface 50’ for open ditch 24.7.6.1.3

☐ ☐ ☐ 1. Blocks ≤ 600’ in length 24.7.6.3

2. Roadway

☐ ☐ ☐ a. Street jogs with centerline offsets of less than 125' avoided 24.7.6.1.5

☐ ☐ ☐ b. Test cylinders (2,750 psi @ 7 days or 4,000 psi @ 28 days) & 2 per 500' of pavement 24.7.6.1.9, 24.7.6.1.10

☐ ☐ ☐ 1. Open ditch – 6” thick, 20’ wide PCC pavement or equivalent asphaltic concrete design. 24.7.1.2.1

a. Shoulder

1. 4’ wide thick compacted aggregate 24.7.1.2.1
2. 3’ paved 24.7.1.2.1

☐ ☐ ☐ 2. Curb and Gutter (Required in City Limits) – 6” thick, 27’ wide from back-to-back of curb PCC pavement or equivalent asphaltic concrete design. Curb must be roll-over not less than 12” in width and 4” in height and/or barrier type curb not less than 6” in width and 6” in height 24.7.1.2.1

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d. Cul-de-sacs & Turnarounds

☐ ☐ ☐ 1. Cul-de-sacs as per A.A.S.H.T.O. specifications (1984) inside radius ≥ 35' 24.7.6.1.6 (no median)

☐ ☐ ☐ 2. Turnarounds 80' wide by 40' each side of centerline 24.7.6.1.6

☐ ☐ ☐ e. Plans use current LADOTD construction standards 24.7.6.1.10

☐ ☐ ☐ f. Street and Traffic signs as per "Louisiana Manual on Uniform Traffic Control Devices" 24.7.6.1.7

☐ ☐ ☐ g. Profiles of all streets 24.5.4.8.3

☐ ☐ ☐ h. No more than one lot created at the end of a stubout cross street 24.7.6.3.1

i. Lots

☐ ☐ ☐ 1. Lot size shall be sufficient to provide front setback lines of 20', except, where provisions are made to allow for off-street vehicular parking behind the front setback line, the front setback may be reduced to 10'. This setback shall not be part of the servitude of passage or road right-of-way 24.7.1.4.3

☐ ☐ ☐ 2. Lot size shall be sufficient to provide space for residence and off-street parking in single-family and multi-family residential areas consisting of two(2) parking spaces per dwelling unit. Sufficient commonly owned off-street parking shall be provided to provide at least 2 parking spaces per dwelling unit 24.7.1.4.4

☐ ☐ ☐ 3. Minimum width 25' 24.7.1.4.5

☐ ☐ ☐ 4. Minimum residential lot size shall be 2000 sq. ft. with 200 square feet used for recreation area, which shall not be used for parking 24.7.1.4.5

☐ ☐ ☐ 5. Primary means of access is a publicly dedicated street, alley, or on a non-publicly dedicated passageway for vehicular traffic 24.7.1.5

☐ ☐ ☐ 6. If subdivision involves new street construction: No primary access is an arterial, major or collector street 24.7.1.5

j. Special Requirements

1. Town houses

☐ ☐ ☐ a. No more than 4 residential units under 1 roof 24.7.1.4.6.1.*a*

☐ ☐ ☐ b. No more than 8 units adjoining 24.7.1.4.6.1.*a*

☐ ☐ ☐ c. Does not exceed a density of 12 residential units per 1 acre, with no lots less than 3,600 sq. ft. 24.7.1.4.6.1.*b*

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2. Condominiums

☐ ☐ ☐ a. No portion of a building or accessory structure in or related to one group of contiguous dwelling units located closer than 15' to any portion of another building or accessory structure related to another group of contiguous dwelling units 24.7.1.4.6.2.*a*

☐ ☐ ☐ b. Does not exceed a density of 20 residential units per 1 acre 24.7.1.4.6.2.*b*

☐ ☐ ☐ c. 20% of total development allocated for open space to be accessible to all condominium residents 24.7.1.4.6.2.*c*

3. Zero lot line and cluster housing

☐ ☐ ☐ a. No side yard adjacent to a public or private right of way 24.7.1.5.6.3.*a*

b. No architectural feature of any structure projects over property line 24.7.1.4.6.3.*b*

☐ ☐ ☐ c. 5' common area open space or open private servitude of passage maintained along the property line of each lot opposite the property line along which a structure wall is to be constructed, for the maintenance and repair of the wall and/or dwelling unit on the adjoining lot 24.7.1.4.6.3.*c*

☐ ☐ ☐ d. Does not exceed a density of 8 residential units per 1 acre 24.7.1.4.6.3.*d*

9. Drainage

☐ ☐ ☐ a. Flood hazard area 24.5.5.9.*H*

☐ ☐ ☐ b. Existing contours at one (1) foot intervals or less shown on final drainage plan 24.5.4.8

☐ ☐ ☐ c. All lots graded to drain to the street or to major drainage arteries as defined by the SDDM 24.7.1.2.6

d. Rights-of-way

☐ ☐ ☐ 1. Definition 22-186

☐ ☐ ☐ 2. Construction in right-of-way without consent 22-189

☐ ☐ ☐ 3. Storm drainage pipe shall be located within street right-of-way, special outfall or interconnection right-of-way may be required 24.7.1.2.6

4. Servitudes not adjacent to roadway:

☐ ☐ ☐ a. 15' on both sides of ditch that is less than 4' in depth and less than 18' in width plus width of ditch 24.7.6.2.2.*i*

☐ ☐ ☐ b. 15' on one side and 20' on the other side of a ditch greater than or equal to 4' in depth or greater than or equal to 18' in width plus width of ditch 24.6.2.2.*i.i*

☐ ☐ ☐ c. Can right-of-way be accessed

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e. Complies with the T.P.C.G. Storm Drainage Design Manual as per 24.7.6.2.6

IV. HYDROLOGY

A. Rainfall

☐ ☐ ☐ Desgined for 25-year, 24-hour duration as defined by TP40 (Exhibit 3)

☐ ☐ ☐ Discharge limited to 10-year, 24-hour pre-development unless downstream improvements are made as to not cause adverse impacts (Exhibit 4)

B. Hydrologic Data: Preliminary Plan

☐ ☐ ☐ Vicinity Map

☐ ☐ ☐ Topographic Map

☐ ☐ ☐ Aerial photographs

☐ ☐ ☐ Stream flow records

☐ ☐ ☐ Historical high water elevations

☐ ☐ ☐ FEMA 100 year flood elevation

☐ ☐ ☐ Soil types

☐ ☐ ☐ Land use

☐ ☐ ☐ Slope

☐ ☐ ☐ Surface infiltration

☐ ☐ ☐ Storage

☐ ☐ ☐ C. Coordination: Maximum stage elevation furnished or approved by Terrebonne Parish Engineering Division

D. Runoff Computation, Hydrograph Development and Modeling:

☐ ☐ ☐ 1. Rational Method

☐ ☐ ☐ Drainage area no greater than 150 acres

☐ ☐ ☐ c value taken from Exhibit 5

☐ ☐ ☐ DOTD HYDR6020 and HYDR6000 used for storm drain and inlet spacing

☐ ☐ ☐ 2. Soil Conservation Service (SCS) Method (NRCS) (TR-55)

☐ ☐ ☐ Curve Number (CN) taken from Exhibit 5

☐ ☐ ☐ Type III, 24-hour rainfall distribution

☐ ☐ ☐ Shape factor 256

☐ ☐ ☐ 3. Unit Hydrograph Method (HEC-1, SWMM, TR-20)

E. Flood Routing:

☐ ☐ ☐ 1. Stream Flow Routing

☐ ☐ ☐ 2. Reservoir Routing

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☐ ☐ ☐ F. Land Use

☐ ☐ ☐ G. Datum: Elevation referenced to the latest Parish adopted Vertical Datum

☐ ☐ ☐ H. Gage Reading (Historic Data) at major drainage artery

V. HYDRAULIC DESIGN

A. Storm Design Requirements:

1. Existing site plan:

☐ ☐ ☐ Minimum scale 1”=100’

☐ ☐ ☐ Drainage features

☐ ☐ ☐ 1 foot contours

☐ ☐ ☐ Utilities

☐ ☐ ☐ Roads

☐ ☐ ☐ Structures

☐ ☐ ☐ Impervious areas

☐ ☐ ☐ Flood encroachment areas

2. Proposed site plan:

☐ ☐ ☐ Minimum scale 1”=100’

☐ ☐ ☐ Streets

☐ ☐ ☐ Utilities

☐ ☐ ☐ Drainage features

☐ ☐ ☐ Lot lines

☐ ☐ ☐ Lot grading

☐ ☐ ☐ Discharge canals

☐ ☐ ☐ Location of major drainage artery

3. Plan/Profile Sheets

☐ ☐ ☐ Drainage

☐ ☐ ☐ Horizontal Scale 1”=50’ minimum

☐ ☐ ☐ Vertical Scale 1”=5’ minimum

Roads

☐ ☐ ☐ Horizontal Scale 1”=40’ minimum

☐ ☐ ☐ Vertical Scale 1”=4’ minimum

Geometric layout

☐ ☐ ☐ Centerline

☐ ☐ ☐ Roadway stations

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☐ ☐ ☐ Finished centerline slopes (0.35% minimum curb and gutter)

☐ ☐ ☐ Points of vertical intersection

Drainpipes

☐ ☐ ☐ Size

☐ ☐ ☐ Type

☐ ☐ ☐ Invert elevation

Structures & Utility lines

☐ ☐ ☐ Size

☐ ☐ ☐ Type

☐ ☐ ☐ Invert elevation

☐ ☐ ☐ Top elevation

☐ ☐ ☐ Finished grade at right-of-way

☐ ☐ ☐ Hydraulic gradient

☐ ☐ ☐ Tailwater elevation

☐ ☐ ☐ Ditch flow lines

☐ ☐ ☐ Utility lines

☐ ☐ ☐ Dimension of all servitudes

☐ ☐ ☐ North arrow

☐ ☐ ☐ Legend

4. Drainage Map/Hydraulic Computations

Drainage Map

☐ ☐ ☐ All drainage features

☐ ☐ ☐ Right-of-ways and servitudes

☐ ☐ ☐ Tributary areas

☐ ☐ ☐ Watershed boundaries

☐ ☐ ☐ Structure reference numbers

☐ ☐ ☐ Discharge points

☐ ☐ ☐ North arrow

☐ ☐ ☐ Legend

Hydraulic Computations

☐ ☐ ☐ Design criteria

☐ ☐ ☐ Rounded to nearest 0.10 foot

☐ ☐ ☐ Maximum stages at all nodes

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☐ ☐ ☐ Tailwater elevation

☐ ☐ ☐ Graphic representation of surface and subsurface flow

☐ ☐ ☐ Statement of no adverse impact

☐ ☐ ☐ Maximum flows (pre vs. post)

☐ ☐ ☐ Volume runoff (pre vs. post)

☐ ☐ ☐ Hydrographs at discharge points (pre vs. post) (Exhibit 6)

☐ ☐ ☐ Runoff factors

☐ ☐ ☐ Time of concentration

☐ ☐ ☐ Land slope

☐ ☐ ☐ Onsite elevation determined by routing flows from downstream tailwater elevation

5. Typical roadway section

☐ ☐ ☐ Roadway width

☐ ☐ ☐ Roadway thickness

☐ ☐ ☐ Shoulder width

☐ ☐ ☐ Ditch dimensions

☐ ☐ ☐ Ditch side slopes

☐ ☐ ☐ Location of all utilities

☐ ☐ ☐ Subsurface drainage location

☐ ☐ ☐ Right-of-way width

☐ ☐ ☐ Transverse road slopes

6. Lot drainage

☐ ☐ ☐ Storm drain pipe located within street right-of-way

☐ ☐ ☐ Special servitude for interconnection or outfall purposes within subdivision

☐ ☐ ☐ All lots inside the Urban Services District and Urban Planning Area graded to drain to the street or to a Major Drainage Artery (Exhibit 1)

☐ ☐ ☐ All lots inside Rural Subdivisions graded to drain to the street or to a Major Drainage Artery (Exhibit 1)
Outside the Urban Services District and Urban Planning Area the HTRPC can allow a portion to drain to the rear if:

☐ ☐ ☐ Drainage is to be perpetually privately maintained, or

☐ ☐ ☐ i. Drainage to the rear already exists or is to be dedicated; however, the percentage may not exceed 60% of the total depth of lots up to 225’ deep, or that portion greater than 135’ on lots greater than 225’ deep

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unless a greater percentage is required to comply with items ii or iii below.

☐ ☐ ☐ ii. Where the size limitation of the roadside ditches will be exceeded

☐ ☐ ☐ iii. Where the size of the curb and gutter drainage pipe exceeds 36” in diameter

☐ ☐ ☐ 7. Reference standard plan details of all drainage structures

☐ ☐ ☐ 8. Existing cross sections at maximum 100’ intervals showing:

☐ ☐ ☐ Roadway

☐ ☐ ☐ Ditch

☐ ☐ ☐ Lot grades

9. Time of concentration

☐ ☐ ☐ a. Rational method

☐ ☐ ☐ b. SCS LAG method

☐ ☐ ☐ 10. South of the South Terrebonne Development Zone

☐ ☐ ☐ Minimum roadway elevation +3.5’

☐ ☐ ☐ Minimum lot elevation +2.0’

B. Closed Storm Drainage System

1. Minimum sizes

☐ ☐ ☐ 15” minimum diameter

☐ ☐ ☐ 8” minimum diameter for restrictor pipe

2. Minimum Service Life

☐ ☐ ☐ Diameter less than 48” 50 year service life

☐ ☐ ☐ Diameter greater than or equal to 48” 70 years

☐ ☐ ☐ Side drain 30 years

☐ ☐ ☐ 3. Sized to operate full with a minimum self cleansing velocity

4. Slopes

☐ ☐ ☐ Maximum slope 10 ft/sec

☐ ☐ ☐ Outlet protection for velocity above 10 ft/sec

5. Manholes or catch basins

☐ ☐ ☐ Located at all changed in vertical and horizontal direction

☐ ☐ ☐ Maximum Spacing (LaDOTD Hydraulics Manual), but shall not exceed 250’

Pipe Diameter	3-7 ft/sec	8-12 ft/sec	13-20 ft/sec
15”	150’	250’	300’
18”	300’	350’	400’

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24” – 36”	400’	450’	500’
42” and larger	600’	650’	700’

☐ ☐ ☐ 6. n value taken from Exhibit 8

☐ ☐ ☐ 7. Minimum vertical distance of 6” from bottom of pavement to top of drain pipe

☐ ☐ ☐ 8. All drainpipes under roadway joined in conformance with LaDOTD Type 3 joints

☐ ☐ ☐ 9. Catch basins, manholes and grate inlets in conformance with LaDOTD standard plans

10. Minimum servitude for drain pipe

☐ ☐ ☐ Diameter less than 42” = 15’

☐ ☐ ☐ Diameter 42” and greater = 20’

11. Inlet spacing

☐ ☐ ☐ LaDOTD HYDR6000 used

☐ ☐ ☐ Gutter flow less than 10 cfs

☐ ☐ ☐ Width of flooding less than 8’

☐ ☐ ☐ Spacing less than 250’

12. Pipe size and hydraulic grade line

☐ ☐ ☐ LaDOTD HYDR6020 used

☐ ☐ ☐ Maximum hydraulic clearance at gutter line of 0.2’ above gutter grade

☐ ☐ ☐ Design sketches of numbered structures & drainage areas provided

☐ ☐ ☐ 13. Other model with prior approval

C. Open Storm Drainage System

1. Minimum sizes

☐ ☐ ☐ 15” minimum diameter

☐ ☐ ☐ 8” minimum diameter for restrictor pipe

2. Minimum Service Life

☐ ☐ ☐ Cross drains 50 year service life

☐ ☐ ☐ All Storm drain pipe 70 years

☐ ☐ ☐ Side drain 30 years

☐ ☐ ☐ 3. Pipes installed in major drainage arteries shall be sized for a maximum allowable headwater of 0.5’ or 1.0’ below the edge of roadway whichever is less

☐ ☐ ☐ 4. Outlet protection for velocity above 10 ft/sec

☐ ☐ ☐ 5. n value taken from Exhibit 8

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☐ ☐ ☐ 6. Entrance loss coefficients in conformance with LaDOTD Hydraulics Manual

☐ ☐ ☐ 7. Minimum vertical distance of 6” from bottom of pavement to top of drain pipe

☐ ☐ ☐ 8. All drainpipes under roadway joined in conformance with LaDOTD Type 3 joints

9. Minimum servitude for drain pipe

☐ ☐ ☐ Diameter less than 42” = 15’

☐ ☐ ☐ Diameter 42” and greater = 20’

10. Roadside ditches

☐ ☐ ☐ 3:1 side slope

☐ ☐ ☐ Maximum depth of 3’-6”

☐ ☐ ☐ 11. Ditch centerline not less than 12’ from edge of roadway

☐ ☐ ☐ 12. Minimum longitudinal ditch invert slope = 0.001 ft/ft

☐ ☐ ☐ 13. Minimum road right-of-way with open ditch = 60’

☐ ☐ ☐ 14. LaDOTD HYDR1140 used to determine normal depth of flow in channel

☐ ☐ ☐ 15. Minimum width of ditch bottom 2’

☐ ☐ ☐ 16. n for channels taken from Exhibit 8

☐ ☐ ☐ 17. Water surface profile computed and shown on final drawings

18. Culvert sizes

☐ ☐ ☐ Future driveway sizes shown on plat

☐ ☐ ☐ Culverts sized as though entire subdivision was subsurface

☐ ☐ ☐ 19. Other model with prior approval

VI. SYSTEM STORAGE

A. Detention Facilities:

☐ ☐ ☐ 1. Greater than 1 acre

☐ ☐ ☐ 2. Compensatory storage

3. Type

☐ ☐ ☐ Open basin or pond

☐ ☐ ☐ Roof top storage

☐ ☐ ☐ Parking lot ponding

☐ ☐ ☐ Underground storage

☐ ☐ ☐ Uninhabited areas

☐ ☐ ☐ Designated as raw land

4. Drainage Plan

☐ ☐ ☐ Plan

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☐ ☐ ☐ Profile

☐ ☐ ☐ Cross Section

Pipes & Structures

☐ ☐ ☐ Size

☐ ☐ ☐ Length

☐ ☐ ☐ Invert

☐ ☐ ☐ Design volume

☐ ☐ ☐ Grades

☐ ☐ ☐ Bottom Elevation

☐ ☐ ☐ Maximum stage elevation

☐ ☐ ☐ 5. Onsite system designed to handle both on-site runoff and conveyance through the site of off-site runoff

☐ ☐ ☐ 6. Designed to anticipate, enable and minimize future maintenance needs

☐ ☐ ☐ 7. Multiple uses encouraged

☐ ☐ ☐ 8. Visual impacts considered

☐ ☐ ☐ 9. Adequate access for maintenance personnel

☐ ☐ ☐ 10. Maximum depth of parking lot detention 8”

☐ ☐ ☐ 11. Slopes for parking lot detention no less than 1% no more than 3%

☐ ☐ ☐ 12. Flood surface elevation of parking lot detention at least 1’ below the lowest habitable floor elevation of building within 50’ of the detention area

13. Detention pond slopes

☐ ☐ ☐ Interior slope does not exceed 2:1

☐ ☐ ☐ Exterior slope does not exceed 3:1

☐ ☐ ☐ 14. Single lot = private ownership

☐ ☐ ☐ Methods, procedures and guarantees, including appropriate documentation, that the facilities will be perpetually maintained so as to function as designed and not result in nuisances or health hazards

15. Pond dimensions

☐ ☐ ☐ If depth is less than 3’ deep minimum width = 6’

☐ ☐ ☐ If depth is 3’ or deeper minimum width = 15’

☐ ☐ ☐ 16. Landscaped for aesthetic purposes and to stabilize banks

☐ ☐ ☐ Seeding and sodding

☐ ☐ ☐ No floatable or erodible material (bark mulch) in interior

☐ ☐ ☐ 17. Failure of owner to maintain will be cause for Parish to perform work and bill

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owner

☐ ☐ ☐ 18. Parish maintained pond control structures that do not abut a public right-of-way should be accessible by a 15’ minimum right-of-way to allow vehicle access

☐ ☐ ☐ 19. Control structures designed and constructed to operate automatically as much as possible

☐ ☐ ☐ 20. Designed with 1’ of freeboard above the elevation of the design flood (except parking lot ponds)

21. Pond design

☐ ☐ ☐ Dry - Sloped no flatter than 0.3% toward drainage outlet

☐ ☐ ☐ Wet – “low flow” channel installed with lining at minimum 0.3% slope

☐ ☐ ☐ 22. Wet pond bottom elevation 1.5 ft below normal low water elevation if constructed flat

☐ ☐ ☐ 23. “Flow through” pond has well defined low flow channel

☐ ☐ ☐ 24. Ponds maintained by parish greater than 4’ in depth have fence and locked gate (12’ min.) unless considered a recreational amenity and approved by the Planning Commission

25. Design Volume

☐ ☐ ☐ Shown on plans

☐ ☐ ☐ Storage measured from the on-site 25 year stage elevation to a maximum depth of the pump drawdown elevation

☐ ☐ ☐ Wet and dry basins designed so that the portion of their bottom area, which is intended to be dry, shall have standing water no longer than 48 hours for all runoff events equal to or less than the 25-year event

☐ ☐ ☐ 26. Hydraulic losses and structural integrity considered in closed systems on private property

☐ ☐ ☐ 27. Written restriction on final plat stating that no structure, fill or obstructions shall be located within any drainage easement or delineated flood plain

☐ ☐ ☐ 28. All publicly maintained facilities located in a recorded drainage servitude including any necessary for access

☐ ☐ ☐ 29. All stumps within ponds flush with design invert

☐ ☐ ☐ 30. No stumps in the slope/bank

VII. EROSION AND SEDIMENT CONTROL

A. Design:

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☐ ☐ ☐ 1. Required on all proposed developed sites of one acre or greater

☐ ☐ ☐ 2. Incorporated into excavation, construction and post-construction

☐ ☐ ☐ 3. Provisions for interception of all potential silt-laden runoff made before initial clearing and grading

☐ ☐ ☐ 4. Erosion control and storm water pollution plan provided

☐ ☐ ☐ 5. Erosion protection provided for all disturbed areas

☐ ☐ ☐ B. Maintenance agreement provided before building permit is obtained

C. Best Management Practices:

☐ ☐ ☐ 1. Existing vegetation preserved where feasible and disturbed portions stabilized as soon as practicable

☐ ☐ ☐ 2. Structural practices to divert flows from exposed soild, store flows, or otherwise limit runoff and the discharge of pollutants from the site to the extent feasible

☐ ☐ ☐ 3. Prevention of the discharge of building materials into the Parish storm sewers or waters of the United States

☐ ☐ ☐ 4. Provide general good housekeeping measures to prevent and contain spills

☐ ☐ ☐ 5. Implementation of proper waste disposal and waste management techniques

☐ ☐ ☐ 6. Timely maintenance of vegetation, erosion and sediment control measures

VIII. SERVITUDE REQUIREMENTS AND DEDICATION

A. Ditches not adjacent to a roadway

☐ ☐ ☐ 1. Ditch less than or equal to 4’ deep or 18’ wide 15’ on both sides

☐ ☐ ☐ 2. Ditch greater than 4’ deep and/or 18’ wide 15’ on one side and 20’ on the other

☐ ☐ ☐ 3. Parallel ditches minimum 20’ crown between

☐ ☐ ☐ 4. Ditch adjacent to roadway not greater than 3.5’ and 23’ wide

5. Minimum servitude for drain pipe

☐ ☐ ☐ Diameter less than 42” = 15’

☐ ☐ ☐ Diameter 42” and greater = 20’

☐ ☐ ☐ B. Letter Of No Objection required for work in parish right-of-way or parish property

☐ ☐ ☐ C. Developer’s responsibility to record any necessary servitude that are needed to connect a development site with an approved point of discharge

☐ ☐ ☐ f. City – Subsurface drainage requires, i.e. culverts and catch basins 24.7.1.1.1

☐ ☐ ☐ g. Minimum size and grade of culverts denoted and profiles of all ditches submitted 24.5.4.8.2,3

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☐ ☐ ☐ - Proposed culverts fit within ditch

☐ ☐ ☐ h. Building of bulkheads on Bayou Black (permit) 6-6

10. Utilities

a. Water

☐ ☐ ☐ 1. Fire hydrants – spacing ≤ 500’ 24.7.6.1.8

☐ ☐ ☐ 2. Approval letter from Waterworks 24.5.4.6.7, 24.7.5.6

b. Gas

☐ ☐ ☐ 1. Gas mains 2” I.D. 3’ deep 24.7.5.4.1

☐ ☐ ☐ 2. Servitude for gas main provided 24.7.5.4.2

☐ ☐ ☐ 3. Approval letter from Gas Utility 24.5.4.6.7

c. Electricity

1. Light Standards 22-51

☐ ☐ ☐ a. Standards, “cobra head” or decorative type of appropriate height style and lamping 24.7.5.2

☐ ☐ ☐ b. Easements 24.7.5.2

☐ ☐ ☐ c. Location, spacing (spacing 300’ > x > 150’ and one at each intersection within street right of way) 24.7.5.2

☐ ☐ ☐ d. Approval from TPCG Utilities

☐ ☐ ☐ 2. Approval Letter from Electric Utility 24.5.4.6.7

d. Sewerage

☐ ☐ ☐ 1. Sewerage collection system provided 24.7.5.5

☐ ☐ ☐ 2. Approval letter from Department of Health and Hospitals 24.5.4.6.7

☐ ☐ ☐ 3. Approval letter from TPCG Pollution Control 24.5.4.6.7

☐ ☐ ☐ 4. Easements 24.7.5.1

☐ ☐ ☐ e. General servitudes 24.7.5.1

☐ ☐ ☐ 11. Benchmarks: brass or aluminum disk located in the street near the centerline of each road intersection shown on engineering plan 24.7.6.4

☐ ☐ ☐ a. Location

☐ ☐ ☐ b. Description

☐ ☐ ☐ c. Elevation msl

_____ Datum used

12. Miscellaneous compliance

☐ ☐ ☐ a. Drawings showing final alignment of streets and sewerage, method of sewerage disposal and/or tie-in with existing collective systems, lagoons, lift stations, force mains, etc. 24.5.4.8

ENGINEERING APPROVAL SUBDIVISION CHECKLIST

Y	N	N/A	Residential Planned Unit Development
			b. Sidewalks 24.7.6.5
☐	☐	☐	1. Within street right-of-way
☐	☐	☐	2. Parallel to the street
			3. Placement
☐	☐	☐	a. Abut the curb – 5’ in width
☐	☐	☐	b. Separated from curb – 4’ in width
			4. Thickness
☐	☐	☐	a. 4” thick typical
☐	☐	☐	b. 6” thick at points of vehicle crossings with welded wire fabric
☐	☐	☐	5. PCC concrete with compressive strength of 4000 psi

Recommended Runoff Coefficients For Subdivisions

Description of Area	Runoff Coefficients
Business	
Downtown	0.80
Neighborhood	0.50
Residential	
Single-family	0.50
Multi-units, detached	0.50
Multi-units, attached	0.65
Residential (suburban)	0.50
Apartment	0.60
Industrial	
Light	0.65
Heavy	0.75
Parks, cemeteries	0.40
Playgrounds	0.25
Railroad yard	0.30
Unimproved	0.20

EXHIBIT NO. 1

Period of Recurrence in Years to
Determine the Design Discharge

TRIBUTARY AREA IN ACRES	UNIMPROVED	OPEN SPACE FOR PUBLIC AND INDUSTRIAL USE	RESIDENTIAL	INDUSTRIAL	COMMERCIAL AREAS
UP TO 150	10	10	10	25	25
150 TO 3,000	25	25	25	50	50
OVER 3,000	100	100	100	100	100

EXHIBIT NO. 2

Use TPR 40 and HDR 35 published by the U.S.N.O.A.A.

MAJOR DRAINAGE ARTERIES

TERREBONNE PARISH, LOUISIANA

Bayou Black
Bayou Blue
Bayou Cane
Bayou Chauvin
Bayou Dularge
Bayou Grand Caillou
Bayou LaCache
Bayou Petit Caillou
Bayou Point Au Chien
CCC Ditch
Chacahoula Bayou
Company Canal
Donner Canal
Falgout Canal
Gulf Intracoastal Waterway
Hanson Canal
Little Bayou Black
Marmande Canal
Minors Canal
Ouiski Bayou
Ringo-Cocke Canal
Six Foot Ditch
St. Louis Bayou
St. Louis Canal
Terrebonne-Lafourche Drainage Canal
Also include any forced drainage pumping station feeder channel.

EXHIBIT NO. 14

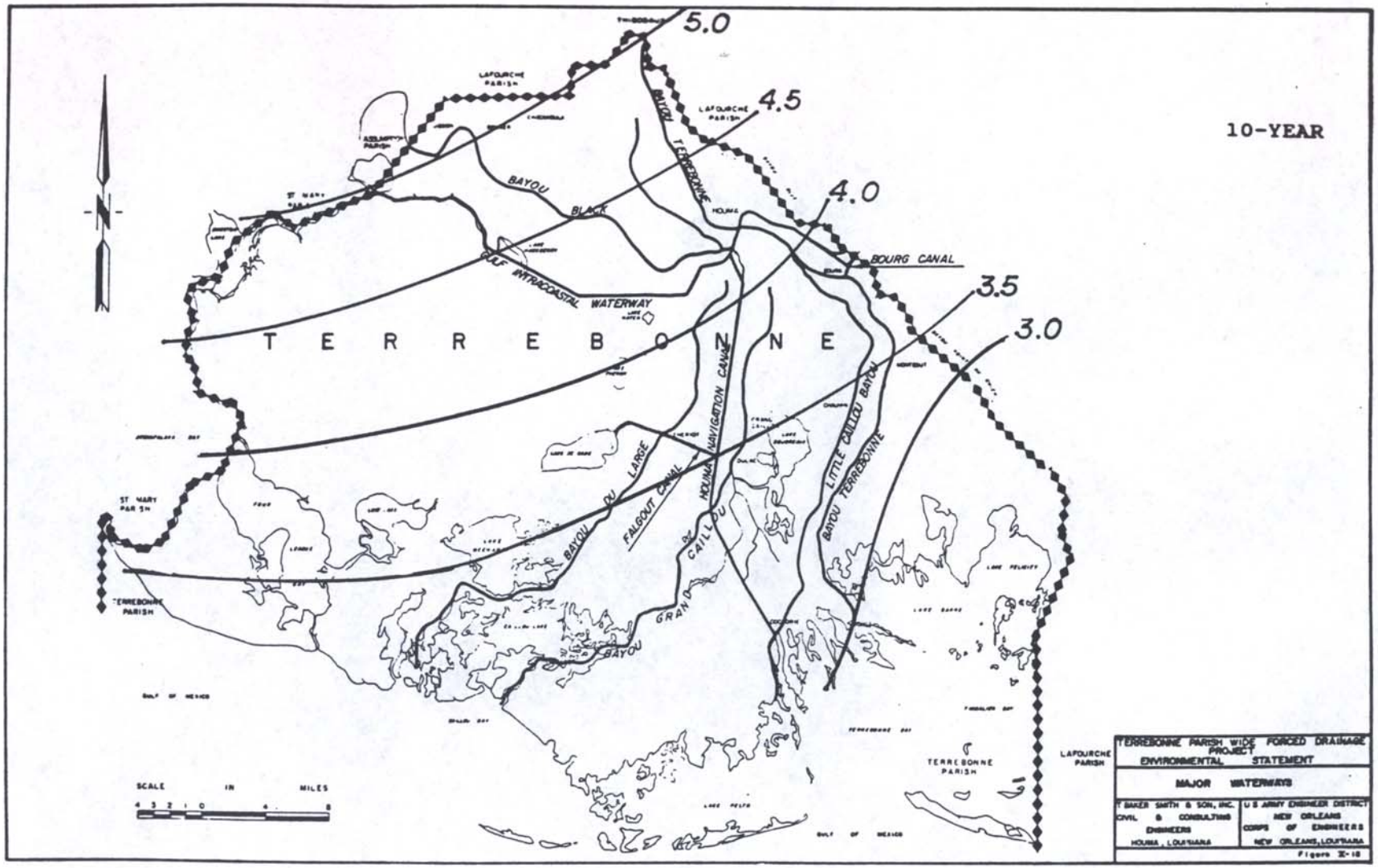
FLOOD ELEVATIONS RESULTING FROM EXTRA-TROPICAL DESIGN STORM

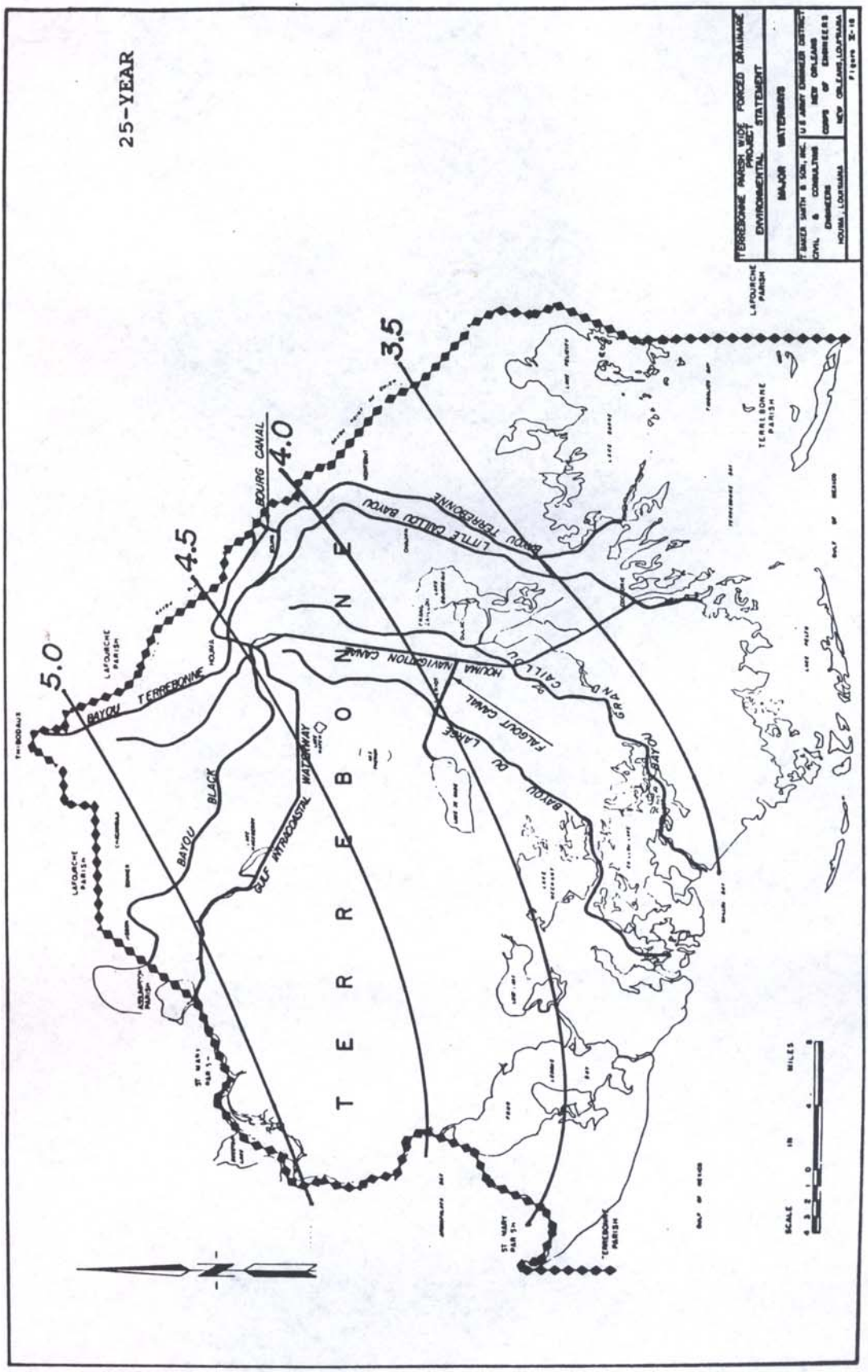
PROJECT NAME	LEVEE MIN EL	100YR MAX EL	25 YR MAX EL	10 YR MAX EL	5 YR MAX EL	2 YR MAX EL
1-1A (Bonanza)	4.30	4.21	3.31	2.47	1.76	0.15
1-2 (Ashland)	6.00	3.84	3.59	3.29	3.14	2.74
1-3 (Industrial Blvd)	4.92	3.47	2.50	1.33	0.33	-4.00
1-5 (Bayou Chauvin)	5.00	4.48	3.62	3.02	2.10	0.00
1-7 (Baroid)	6.00	6.45	6.20	5.97	5.64	5.13
1-8 (M&L)	5.10	6.80	6.00	5.22	4.69	3.26
2-1A (Schriever)	1.24	2.92	2.05	1.34	1.22	1.15
2-1B (Summerfield)	10.00	2.59	2.19	1.66	1.33	0.65
3-1B (Boudreaux)	3.00	1.19	1.00	1.00	0.85	0.67
3-1C (Boudreaux)	3.70	2.12	1.67	1.31	1.15	1.02
4-1 (Pnt Aux Chien)	4.00	1.58	1.24	1.02	0.95	0.00
4-2A (Smithridge)	5.00	4.47	4.09	3.80	3.50	3.02
4-7 (Bourg)	4.20	4.73	3.95	3.34	2.85	1.60
4-MONTE (Montegut)	5.00	2.23	1.71	1.26	1.08	1.01
5-1A (Chauvin)	2.50	1.68	1.33	1.08	1.00	0.92
5-1B (Chauvin)	1.10	1.19	1.00	0.91	0.75	0.50
6-1 (Gibson)	4.30	1.16	1.01	0.88	0.74	0.51
6-2A (Donner)	4.20	4.20	4.20	4.20	3.53	0.00
8-2 (Bayou Dularge)	2.80	2.52	1.65	1.16	1.01	1.00
D-38 (Concord Rd)	3.67	3.33	2.40	1.00	0.42	-0.80
D-39 (Barataria)	10.00	6.83	6.26	5.73	5.36	1.87
D-40 (Cenac St)	3.00	1.74	1.47	1.27	1.18	1.04
D-41 (Williams St)	5.00	4.98	4.21	3.49	-1.20	-3.00
HOUMA LAKE S.A.	-	2.03	1.60	1.20	1.04	0.73
OUISKI BAYOU S.A.	-	0.94	0.74	0.60	0.51	0.38
TIGER BAYOU S.A.	-	1.40	0.81	0.65	0.60	0.41
COTEAU-ST LOUIS S.A.	-	2.34	1.82	1.42	1.20	0.82
BULL RUN S.A.	-	1.44	1.12	0.90	0.70	0.50

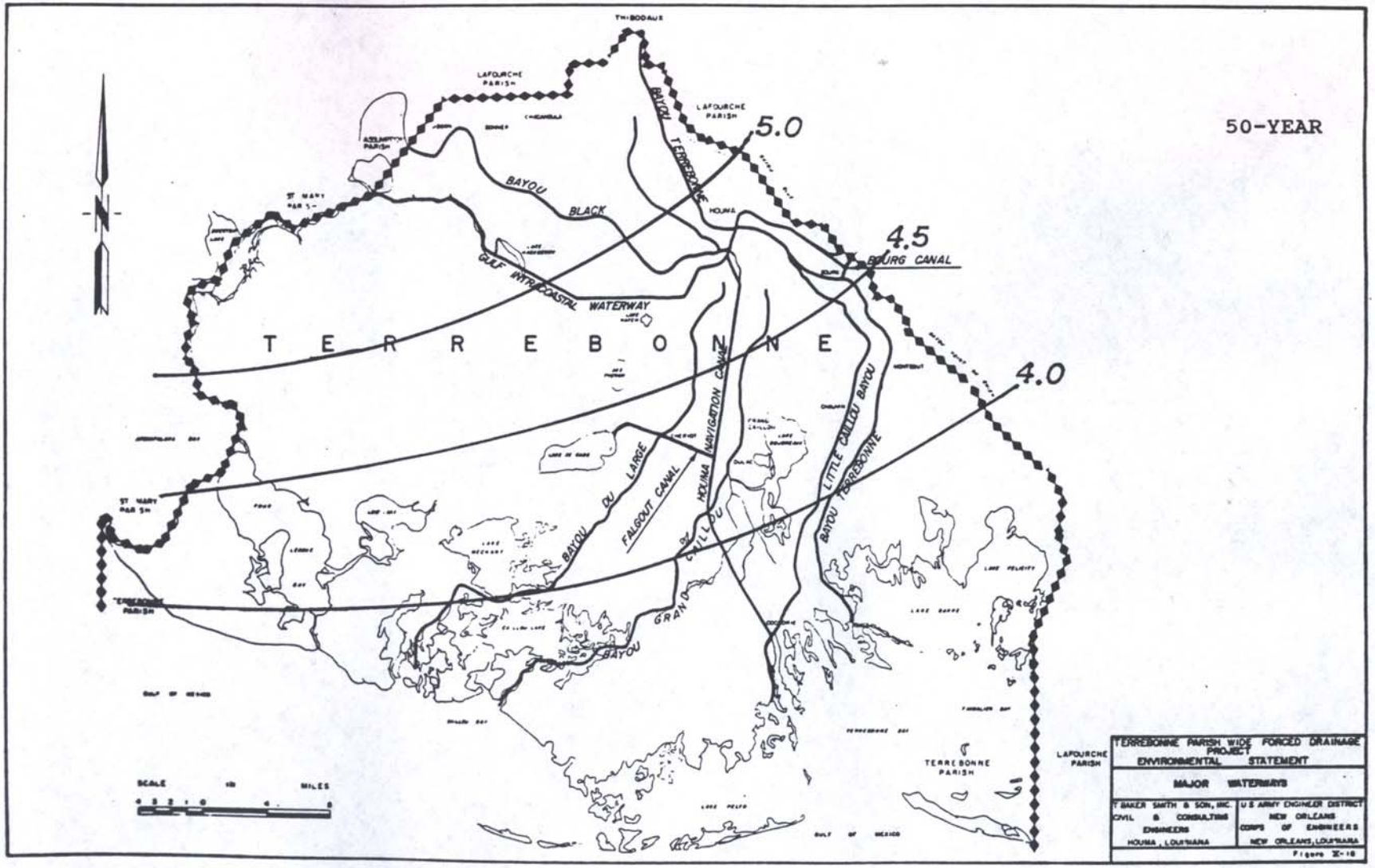
TABLE 4-3. Extra-tropical storm peak pump station reservoir flood elevations.

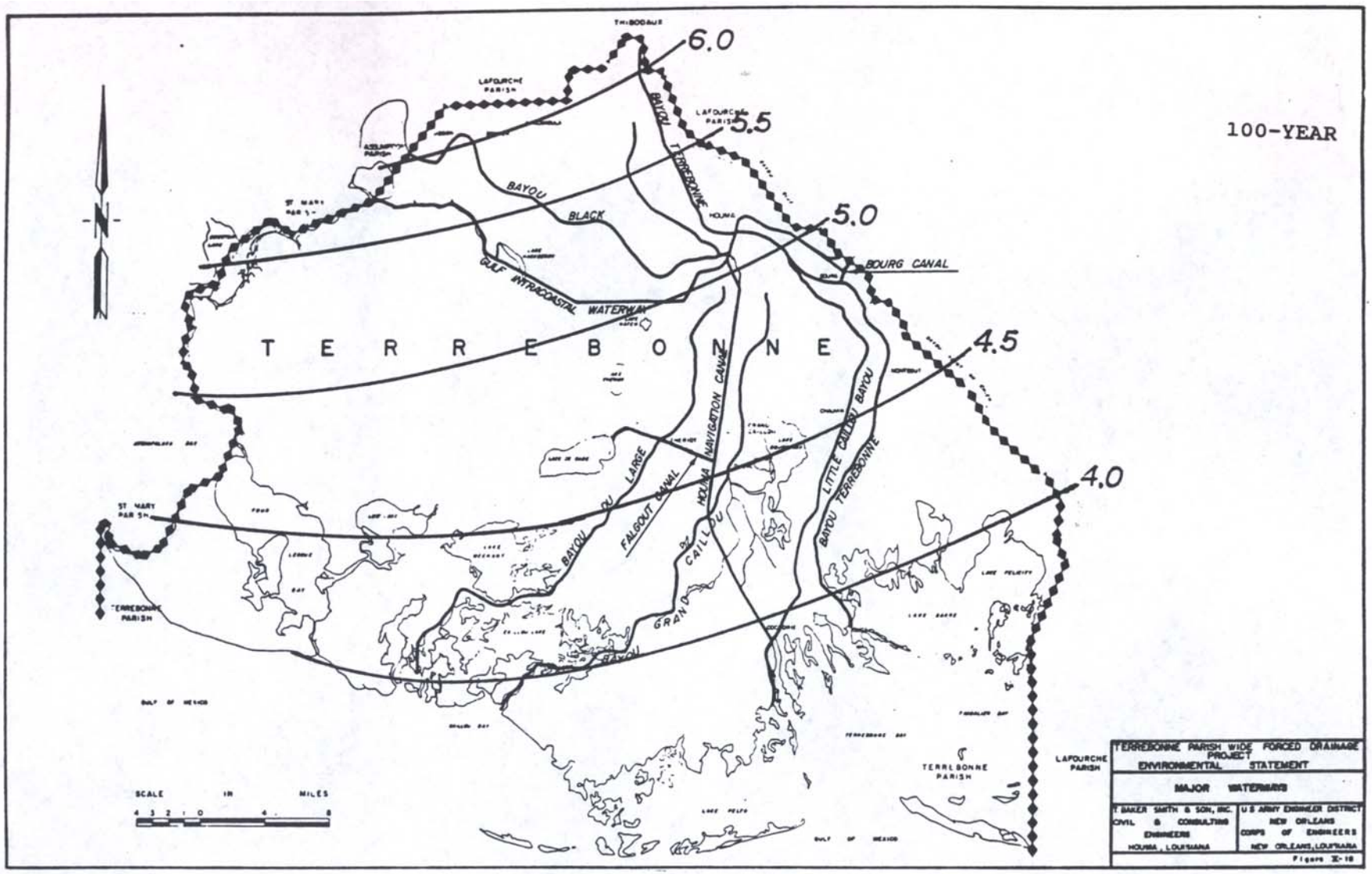
Check with Engineering Division to see if these elevations have changed.

5-YEAR
TERREBONNE PARISH WIDE FORCED DRAINAGE PROJECT
ENVIRONMENTAL STATEMENT
MAJOR WATERWAYS
BAKER SMITH & SON, INC. CIVIL & CONSULTING ENGINEERS
HOUMA, LOUISIANA
U.S. ARMY ENGINEER DISTRICT NEW ORLEANS CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA
Figure 2-10
4.0
3.5
3.0
2.5
BAYOU TERREBONNE
BAYOU BLACK
GULF INTRACOASTAL WATERWAY
BOURG CANAL
LITTLE CAILLOU BAYOU
BAYOU TERREBONNE
HOUMA NAVIGATION CANAL
BAYOU CAILLOU
FALGOUT CANAL
BAYOU DU LARGE
GRAND BAYOU
T E R R E B O N N E
LAFOURCHE PARISH
TERREBONNE PARISH
ST. MARY PAR. S.
SCALE IN MILES


10-YEAR
5.0
4.5
4.0
3.5
3.0
TERREBONNE
BAYOU BLACK
GULF INTRACOASTAL WATERWAY
BOURG CANAL
BAYOU TERREBONNE
HOUMA NAVIGATION CANAL
FALGOUT CANAL
BAYOU DU LARGE
GRAND CAILLOU
LITTLE CAILLOU BAYOU
BAYOU TERREBONNE
LAFOURCHE PARISH
ST MARY PAR SH
TERREBONNE PARISH
SCALE IN MILES
4 3 2 1 0 4 8
TERREBONNE PARISH WIDE FORCED DRAINAGE PROJECT
ENVIRONMENTAL STATEMENT
MAJOR WATERWAYS
T BAKER SMITH & SON, INC.
CIVIL & CONSULTING ENGINEERS
HOUMA, LOUISIANA
U S ARMY ENGINEER DISTRICT
NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA
Figure E-10


25-YEAR
TERREBONNE PARISH WIDE FORCED DRAINAGE PROJECT
ENVIRONMENTAL STATEMENT
MAJOR WATERWAYS
T. BAKER SMITH & SON, INC. CIVIL & CONSULTING ENGINEERS HOUMA, LOUISIANA
U.S. ARMY ENGINEER DISTRICT NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA
Figure 2C-10
TERREBONNE
BAYOU
BLACK
BAYOU
LITTLE CAILLOU BAYOU
BAYOU TERREBONNE
BOURG CANAL
NAVIGATION CANAL
HOUMA
FALGOUT CANAL
LAKE
BAYOU DU
CAILLOU
GRAND
GULF INTRACOASTAL WATERWAY
5.0
4.5
4.0
3.5
LAFOURCHE PARISH
TERREBONNE PARISH
ST. MARY PARISH
SCALE IN MILES


50-YEAR
5.0
4.5
4.0
BAYOU BLACK
GULF INTRACOASTAL WATERWAY
HOUMA NAVIGATION CANAL
FALGOUT CANAL
BAYOU DU LARGE
BAYOU TERREBONNE
LITTLE CAILLOU BAYOU
GRAND CAILLOU
BAYOU
LAFOURCHE PARISH
TERREBONNE PARISH
ST MARY PAR
SCALE
MILES
TERREBONNE PARISH WIDE FORCED DRAINAGE PROJECT
ENVIRONMENTAL STATEMENT
MAJOR WATERWAYS
T BAKER SMITH & SON, INC.
CIVIL & CONSULTING ENGINEERS
HOUMA, LOUISIANA
U S ARMY ENGINEER DISTRICT
NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA
Figure II-10


6.0
5.5
5.0
4.5
4.0
100-YEAR
T E R R E B O N N E
BAYOU BLACK
GULF INTRACOASTAL WATERWAY
BOURG CANAL
HOUMA NAVIGATION CANAL
FALGOUT CANAL
BAYOU TERREBONNE
LITTLE CAILLOU BAYOU
BAYOU DU LARGE
GRAND CAILLOU
LAFOURCHE PARISH
TERREBONNE PARISH
ST MARY PAR SH
SCALE IN MILES
TERREBONNE PARISH WIDE FORCED DRAINAGE PROJECT
ENVIRONMENTAL STATEMENT
MAJOR WATERWAYS
T BAKER SMITH & SON, INC. CIVIL & CONSULTING ENGINEERS HOUMA, LOUISIANA
U S ARMY ENGINEER DISTRICT NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA
Figure X-18