

ENGINEERING APPROVAL SUBDIVISION CHECKLIST

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|--------------------------|--------------------------|--------------------------|--|
| Y | N | N/A | Urban Service District & Urban Planning Area |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Name of proposed development 24.5.4.7.1 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Name of developer 24.5.4.7.2 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Signature of Civil Engineer, Seal 24.5.4.8; R.S.37:696-LAC19-3:(10.2, 10.3,10.4) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | a. Plat required 24.5.4.6.5; R.S.33:5051 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | b. Specifications received 24.5.3.3 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4. Vicinity map 24.5.4.7.4 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 5. Located by Township, Range and Section 24.5.4.3.7.E |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | a. Section, Township, Range, City Limits, and/or Parish Boundaries which abut or cross the proposed subdivision 24.5.4.7.8 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 6. Date, scale (1" = 200' minimum suggested) and north arrow 24.5.4.7.5 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 7. Preliminary approval granted and written staff comments submitted 24.5.3.3. |
| | | | 8. Development Improvements Residential |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | a. Proposed street names 24.5.4.7.6 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | b. Lot and block numbers 24.5.4.7.6 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | a. City/residential - no street less than 40' 24.7.6.1.3 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Blocks \leq 600' in length 24.7.6.3 |
| | | | 2. Roadway |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | a. Street jogs with centerline offsets of less than 125' avoided 24.7.6.1.5 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | b. City - 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 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. General - 6" thick, 27' wide from back-to-back of curb PCC pavement or equivalent asphaltic concrete design with curb and gutter. 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 24.7.1.1.1 |
| | | | d. Cul-de-sacs & Turnarounds |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Cul-de-sacs as per A.A.S.H.T.O. specifications (1984) inside radius \geq 35' 24.7.6.1.6 (no median) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Turnarounds 80' wide by 40' each side of centerline 24.7.6.1.6 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | e. Plans use current LADOTD construction standards 24.7.6.1.10 |

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| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | f. Street and Traffic signs as per “Louisiana Manual on Uniform Traffic Control Devices” 24.7.6.1.7 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | g. Profiles of all streets 24.5.4.8.3 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | h. No more than one lot created at the end of a stubout cross street 24.7.6.3.1 |
| | | | i. Lots |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Lot size shall be sufficient to provide set back to conform to the Urban Service District Zoning Code 24.7.1.1.2 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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 24.7.1.1.3 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Minimum residential lot size shall be 6000 sq. ft. if connected to a sewerage disposal system (public or private) that is approved by the state department of health and hospitals 24.7.1.1.4 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4. All lots must front along a public roadway or a servitude of passage 24.7.1.1.4 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 5. All lots shall contain adequate footage and depth to enclose a 50’ square, none of which may encroach upon a public road right-of-way or access servitude to adjacent property 24.7.1.1.4 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 6. Minimum frontage width of a lot or servitude of passage is 25’ 24.7.1.1.4 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 7. Primary means of access is a publicly dedicated street, alley, or on a non-publicly dedicated passageway for vehicular traffic 24.7.1.5 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 8. If subdivision involves new street construction: No primary access is an arterial, major or collector street 24.7.1.5 |
| | | | 9. Drainage |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | a. Flood hazard area 24.5.5.9.H |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | b. Existing contours at one (1) foot intervals or less shown on final drainage plan 24.5.4.8 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Definition 22-186 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Construction in right-of-way without consent 22-189 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4. Servitudes not adjacent to roadway: |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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 |

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- Y N N/A Urban Service District & Urban Planning Area
- 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
- e. Complies with the T.P.C.G. Storm Drainage Design Manual as per 24.7.6.2.6

IV. HYDROLOGY

A. Rainfall

- Designed 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

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| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Unit Hydrograph Method (HEC-1, SWMM, TR-20) |
| | | | E. Flood Routing: |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Stream Flow Routing |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Reservoir Routing |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | F. Land Use |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | G. Datum: Elevation referenced to the latest Parish adopted Vertical Datum |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | H. Gage Reading (Historic Data) at major drainage artery |
| | | | V. HYDRAULIC DESIGN |
| | | | A. Storm Design Requirements: |
| | | | 1. Existing site plan: |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Minimum scale 1"=100' |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Drainage features |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1 foot contours |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Utilities |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Roads |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Structures |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Impervious areas |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Flood encroachment areas |
| | | | 2. Proposed site plan: |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Minimum scale 1"=100' |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Streets |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Utilities |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Drainage features |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Lot lines |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Lot grading |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Discharge canals |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Location of major drainage artery |
| | | | 3. Plan/Profile Sheets |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Drainage |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Horizontal Scale 1"=50' minimum |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Vertical Scale 1"=5' minimum |
| | | | Roads |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Horizontal Scale 1"=40' minimum |

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| Y | N | N/A | Urban Service District & Urban Planning Area |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Vertical Scale 1"=4' minimum |
| | | | Geometric layout |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Centerline |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Roadway stations |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Finished centerline slopes (0.35% minimum curb and gutter) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Points of vertical intersection |
| | | | Drainpipes |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Size |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Type |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Invert elevation |
| | | | Structures & Utility lines |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Size |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Type |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Invert elevation |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Top elevation |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Finished grade at right-of-way |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Hydraulic gradient |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Tailwater elevation |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Ditch flow lines |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Utility lines |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Dimension of all servitudes |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | North arrow |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Legend |
| | | | 4. Drainage Map/Hydraulic Computations |
| | | | Drainage Map |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | All drainage features |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Right-of-ways and servitudes |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Tributary areas |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Watershed boundaries |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Structure reference numbers |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Discharge points |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | North arrow |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Legend |

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| | | | Hydraulic Computations |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Design criteria |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Rounded to nearest 0.10 foot |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Maximum stages at all nodes |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Tailwater elevation |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Graphic representation of surface and subsurface flow |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Statement of no adverse impact |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Maximum flows (pre vs. post) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Volume runoff (pre vs. post) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Hydrographs at discharge points (pre vs. post) (Exhibit 6) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Runoff factors |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Time of concentration |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Land slope |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Onsite elevation determined by routing flows from downstream tailwater elevation |
| | | | 5. Typical roadway section |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Roadway width |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Roadway thickness |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Shoulder width |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Ditch dimensions |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Ditch side slopes |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Location of all utilities |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Subsurface drainage location |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Right-of-way width |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Transverse road slopes |
| | | | 6. Lot drainage |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Storm drain pipe located within street right-of-way |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Special servitude for interconnection or outfall purposes within subdivision |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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: |

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| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Drainage is to be perpetually privately maintained, or |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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 unless a greater percentage is required to comply with items ii or iii below. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ii. Where the size limitation of the roadside ditches will be exceeded |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | iii. Where the size of the curb and gutter drainage pipe exceeds 36" in diameter |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 7. Reference standard plan details of all drainage structures |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 8. Existing cross sections at maximum 100' intervals showing: |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Roadway |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Ditch |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Lot grades |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 9. Time of concentration |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | a. Rational method |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | b. SCS LAG method |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 10. South of the South Terrebonne Development Zone |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Minimum roadway elevation +3.5' |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Minimum lot elevation +2.0' |
| | | | B. Closed Storm Drainage System |
| | | | 1. Minimum sizes |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 15" minimum diameter |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 8" minimum diameter for restrictor pipe |
| | | | 2. Minimum Service Life |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Diameter less than 48" 50 year service life |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Diameter greater than or equal to 48" 70 years |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Side drain 30 years |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Sized to operate full with a minimum self cleansing velocity |
| | | | 4. Slopes |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Maximum slope 10 ft/sec |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Outlet protection for velocity above 10 ft/sec |
| | | | 5. Manholes or catch basins |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Located at all changed in vertical and horizontal direction |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Maximum Spacing (LaDOTD Hydraulics Manual), but shall not exceed 250' |

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

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| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4. Outlet protection for velocity above 10 ft/sec |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 5. n value taken from Exhibit 8 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 6. Entrance loss coefficients in conformance with LaDOTD Hydraulics Manual |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 7. Minimum vertical distance of 6" from bottom of pavement to top of drain pipe |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 8. All drainpipes under roadway joined in conformance with LaDOTD Type 3 joints |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 9. Minimum servitude for drain pipe |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Diameter less than 42" = 15' |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Diameter 42" and greater = 20' |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 10. Roadside ditches |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3:1 side slope |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Maximum depth of 3'-6" |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 11. Ditch centerline not less than 12' from edge of roadway |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 12. Minimum longitudinal ditch invert slope = 0.001 ft/ft |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 13. Minimum road right-of-way with open ditch = 60' |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 14. LaDOTD HYDR1140 used to determine normal depth of flow in channel |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 15. Minimum width of ditch bottom 2' |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 16. n for channels taken from Exhibit 8 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 17. Water surface profile computed and shown on final drawings |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 18. Culvert sizes |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Future driveway sizes shown on plat |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Culverts sized as though entire subdivision was subsurface |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 19. Other model with prior approval |

VI. SYSTEM STORAGE

A. Detention Facilities:

- | | | | |
|--------------------------|--------------------------|--------------------------|-------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Greater than 1 acre |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Compensatory storage |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Type |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Open basin or pond |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Roof top storage |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Parking lot ponding |

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| Y | N | N/A | Urban Service District & Urban Planning Area |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Underground storage |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Uninhabited areas |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Designated as raw land |
| | | | 4. Drainage Plan |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Plan |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Profile |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Cross Section |
| | | | Pipes & Structures |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Size |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Length |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Invert |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Design volume |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Grades |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Bottom Elevation |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Maximum stage elevation |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 5. Onsite system designed to handle both on-site runoff and conveyance through the site of off-site runoff |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 6. Designed to anticipate, enable and minimize future maintenance needs |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 7. Multiple uses encouraged |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 8. Visual impacts considered |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 9. Adequate access for maintenance personnel |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 10. Maximum depth of parking lot detention 8" |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 11. Slopes for parking lot detention no less than 1% no more than 3% |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Interior slope does not exceed 2:1 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Exterior slope does not exceed 3:1 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 14. Single lot = private ownership |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | If depth is less than 3' deep minimum width = 6' |

ENGINEERING APPROVAL SUBDIVISION CHECKLIST

- | | | | |
|--------------------------|--------------------------|--------------------------|--|
| Y | N | N/A | Urban Service District & Urban Planning Area |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | If depth is 3' or deeper minimum width = 15' |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 16. Landscaped for aesthetic purposes and to stabilize banks |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Seeding and sodding |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | No floatable or erodible material (bark mulch) in interior |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 17. Failure of owner to maintain will be cause for Parish to perform work and bill owner |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 19. Control structures designed and constructed to operate automatically as much as possible |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 20. Designed with 1' of freeboard above the elevation of the design flood (except parking lot ponds) |
| | | | 21. Pond design |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Dry - Sloped no flatter than 0.3% toward drainage outlet |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Wet – “low flow” channel installed with lining at minimum 0.3% slope |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 22. Wet pond bottom elevation 1.5 ft below normal low water elevation if constructed flat |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 23. “Flow through” pond has well defined low flow channel |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Shown on plans |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Storage measured from the on-site 25 year stage elevation to a maximum depth of the pump drawdown elevation |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 26. Hydraulic losses and structural integrity considered in closed systems on private property |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 27. Written restriction on final plat stating that no structure, fill or obstructions shall be located within any drainage easement or delineated flood plain |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 28. All publicly maintained facilities located in a recorded drainage servitude including any necessary for access |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 29. All stumps within ponds flush with design invert |

ENGINEERING APPROVAL SUBDIVISION CHECKLIST

Y N N/A Urban Service District & Urban Planning Area

30. No stumps in the slope/bank

VII. EROSION AND SEDIMENT CONTROL

A. Design:

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 soil, 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

ENGINEERING APPROVAL SUBDIVISION CHECKLIST

- | Y | N | N/A | Urban Service District & Urban Planning Area |
|-------------------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | f. City – Subsurface drainage requires, i.e. culverts and catch basins 24.7.1.1.1 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | g. Minimum size and grade of culverts denoted and profiles of all ditches submitted 24.5.4.8.2,3 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | - Proposed culverts fit within ditch |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | h. Building of bulkheads on Bayou Black (permit) 6-6 |
| 10. Utilities | | | |
| a. Water | | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Fire hydrants – spacing \leq 500’ 24.7.6.1.8 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Approval letter from Waterworks 24.5.4.6.7, 24.7.5.6 |
| b. Gas | | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Gas mains 2” I.D. 3’ deep 24.7.5.4.1 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Servitude for gas main provided 24.7.5.4.2 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Approval letter from Gas Utility 24.5.4.6.7 |
| c. Electricity | | | |
| 1. Light Standards 22-51 | | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | a. Standards, “cobra head” or decorative type of appropriate height style and lamping 24.7.5.2 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | b. Easements 24.7.5.2 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | c. Location, spacing (spacing 300’ > x > 150’ and one at each intersection within street right of way) 24.7.5.2 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | d. Approval from TPCG Utilities |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Approval Letter from Electric Utility 24.5.4.6.7 |
| d. Sewerage | | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Sewerage collection system provided 24.7.5.5 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Approval letter from Department of Health and Hospitals 24.5.4.6.7 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Approval letter from TPCG Pollution Control 24.5.4.6.7 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4. Easements 24.7.5.1 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | e. General servitudes 24.7.5.1 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | a. Location |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | b. Description |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | c. Elevation msl |
| Datum used | | | |
| 12. Miscellaneous compliance | | | |

ENGINEERING APPROVAL SUBDIVISION CHECKLIST

- | Y | N | N/A | Urban Service District & Urban Planning Area |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | b. Sidewalks 24.7.6.5 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Within street right-of-way |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Parallel to the street |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Placement |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | a. Abut the curb – 5’ in width |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | b. Separated from curb – 4’ in width |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4. Thickness |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | a. 4” thick typical |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | b. 6” thick at points of vehicle crossings with welded wire fabric |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 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

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

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.

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



